

# Wild Atlantic Way Discovery Points

## Ecological Study of Visitor Movement Areas 2016

Prepared for:  
CAAS Ltd.

by

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## Statement of Authority

This report was compiled by Dr Patrick Crushell, Dr Peter Foss, and Mr Brendan Kirwan on behalf of Wetland Surveys Ireland Ltd.

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Of particular relevance to this project, Dr Crushell has been involved in a number of national and regional surveys of semi-natural habitat including field surveys throughout Ireland on behalf of NPWS and various local authorities. See [www.WetlandSurveysIreland.com](http://www.WetlandSurveysIreland.com) for further details on project experience.

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Of particular relevance to this project, Dr Foss has been involved in a number of national and regional surveys of semi-natural habitat including field surveys throughout Ireland on behalf of NPWS and various local authorities. See [www.fossenvironmentalconsulting.com](http://www.fossenvironmentalconsulting.com) for further details.

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## 1 Introduction and background

Wetland Surveys Ireland Ltd. were commissioned by CAAS Ltd. to undertake detailed ecological baseline surveys at fifteen discovery points on the Wild Atlantic Way (see Table 1.1; Figure 1.1).

The aim of the ecological study was to collect baseline ecological information on sites in order to inform an assessment of visitor impacts associated with the current level and pattern of use of each site. The data collected during the survey should prove useful as a baseline for any future ecological monitoring at the sites.

Prior to the ecological study, a visitor monitoring survey examined the types, spatial patterns, and intensity of existing visitor activities at and adjacent to each of the Discovery Points (CAAS 2016). This visitor monitoring survey informed the design of the ecological study so that baseline ecological conditions at each site could be investigated in areas known to receive; maximum, moderate, minimum, and no loading.

### 1.1 Study aims

The main aims of the ecological study included:

- Describe the existing ecological characteristics of areas at and in proximity to Discovery Points;
- Provide baseline ecological data against which future monitoring of potential visitor related impacts can be undertaken;
- Undertake a condition assessment of semi-natural habitats in those areas in proximity to each individual discovery point, and where degradation is recorded, elucidate on the likely causative factors taking into consideration the known visitor behaviour at each site;
- Determine, using evidence based data, those sites where current use or future development of discovery points are / or could potentially lead to significant ecological effects on habitats / species of conservation concern. This determination will make particular reference to habitats / species of conservation concern and areas designated for nature conservation (SAC / SPA / NHA);
- Make recommendations with regards the need for improved visitor management at particular sites based on the outcome of the study; and
- Make recommendations with regard to the benefit of undertaking future ecological monitoring at individual sites.

**Table 1.1: Wild Atlantic Way Discovery Points surveyed as part of the study**

Site Name	Site Survey Code	County	Grid Coordinates (ITM)
Lisfannon Beach	WAW16	Donegal	633283 928055
Rosguill	WAW17	Donegal	609867 942286
Gola Island	WAW18	Donegal	577101 927126
Malainn Bhig	WAW19	Donegal	549831 879960
Elly Beach	WAW20	Mayo	463741 825715
Inishkea South Island	WAW21	Mayo	455707 821119
Scatterry Island	WAW22	Clare	497478 652540
Castlegregory Beach	WAW23	Kerry	462529 613978
Brandon Point	WAW24	Kerry	452593 617324
Blasket Interpretation Centre	WAW25	Kerry	431475 600771
Rossbeigh Strand	WAW26	Kerry	464445 590984
Mountain Stage	WAW27	Kerry	460411 589058
Dooneen	WAW28	Cork	457762 546036
Garnish Point	WAW29	Cork	450745 541925
Barley Cove	WAW30	Cork	477182 525923



Figure 1.1: Discovery Points along the Wild Atlantic Way surveyed during 2016

## **2 Methods**

The methods followed during the ecological field survey were based on the standard approach to vegetation description and analysis by use of representative vegetation quadrats (or relevés). In all, 122 quadrats were recorded during the survey. The various parameters recorded at each quadrat location are described in Section 2.3 below. One site, Garnish Point was revisited in 2016 after a similar visitor impact survey was undertaken in 2015. A comparison of the outcome of both surveys is presented in in this report.

### **2.1 Quadrat selection**

A visitor behaviour survey undertaken during summer 2016 examined the types, spatial patterns and intensity of existing visitor activities at and adjacent to each Discovery Point (CAAS 2016). This work served to direct the ecologists to areas known to receive maximum (core movement areas), moderate (secondary movement areas), and minimum and no loading (control areas).

The locations of quadrats representative of each of these three categories were chosen based on the outcome of the visitor surveys prior to the commencement of ecology surveys.

### **2.2 Desktop review**

A desktop review of ecological datasets was undertaken with a view to determining known sensitive ecological receptors at each discovery point. This included a review of NPWS designated site datasets. Field maps were prepared which showed the location of each of the pre-assigned quadrat locations and designated site boundaries (where relevant).

### **2.3 Field survey methods**

#### **2.3.1 Quadrat recording**

Quadrats of the different vegetation types on the site were recorded in a specially designed digital database (FileMaker Pro software application) running on a GPS enabled field computer. The location of each of the quadrats was determined with the assistance of field maps and GIS software running on the GPS enabled field computer.

Once located, a wooden frame was laid down (orientated according to cardinal points) to indicate the extent of the quadrat (1m X 1m). All plant species within the quadrat were recorded and cover abundance value applied. The Domin scale of cover abundance was used during the study as follows:

- +: 1 individual, no measureable cover
- 1: <4% cover, with few individuals
- 2: <4% cover, with several individuals
- 3: <4% cover, with many individuals
- 4: 4-10% cover
- 5: 11-25% cover
- 6: 26-33% cover
- 7: 34-50% cover
- 8: 51-75% cover
- 9: 76-90% cover
- 10: 91-100% cover

A range of physical attributes were also recorded within each quadrat (e.g. slope, aspects, grazing impacts, soil type, soil/peat depth, substrate stability, cover and height values for different plant groups etc.).

A photographic record of each quadrat was taken in a north, south, east, and west direction, as well a view vertically down onto each quadrat. Photographs were geotagged to facilitate their incorporation into a GIS. Additional photographs were also taken at regular intervals during the field survey to assist with subsequent interpretation and to record features in the wider landscape.



General survey target notes were recorded on a GPS enabled field computer running GIS software application (ESRI Collector for ArcGIS). These notes referred to features of interest within the site and areas adjacent to quadrats.

During the course of the survey habitats present at each site were classified according to Fossitt (2000) and where relevant according to Annex I of the EU Habitats Directive. Guidance in determining whether or not a habitat type may correspond to an EU Annex I type was sought from a variety of sources including European Commission (2013), O'Neill *et al.* (2013), Perrin *et al.* (2013), Barron *et al.* (2011), Ryle *et al.* (2009), and Fossitt (2000).

### 2.3.2 Habitat condition assessment

An assessment of habitat condition was undertaken for each quadrat using a five point scale from good to bad as outlined in Table 2.1. The key criteria used when determining condition included; the presence (and abundance) or absence of indicator species, damage to vegetation (grazed, trampled, broken stems, etc.), erosion features, and presence and percentage cover of bare soil.

Table 2.1 Condition assessment of terrestrial habitats

Ranking	Assessment	Description
1	Good	No evidence of any negative impact on habitats or other ecological features
2	Fair	Localised degree of negative impact, but slight and capable of rapid recovery
3	Doubtful	Widespread degree of negative impact, but slight and capable of rapid recovery
4	Poor	Localised negative impact, requiring intervention to allow full recovery
5	Bad	Widespread negative impact, requiring intervention to allow full recovery

### 2.3.3 Nomenclature

During the field survey, attention was paid to the possible occurrence of plant species which are considered to be rare in both a national and local context (Scannell and Synnott 1987) with particular emphasis on plant species listed in the Irish Red Data Book for vascular plants (Curtis and McGough 1988), the Flora Protection Order (2015), and Annex II of the E.U. Habitats Directive.

Plant species nomenclature in this report follows Parnell & Curtis (2012) for vascular plants, Atherton (2010) for mosses and liverworts, and Whelan (2011) for lichens. Moss species were mostly only keyed out to whether they belonged to the acrocarpous or pleurocarpous groups. Some mosses, liverworts, and higher plants not readily identified in the field were collected and keyed out at a later time using appropriate keys.

### 2.3.4 Survey Limitations

The survey was constrained by trampled vegetation, and over grazing which led to difficulties in the identification of floral species in some instances. The surveys were carried out over the autumn period (early September to mid October 2016), a sub-optimal time for the identification of certain plant groups (e.g. grasses, sedges, spring flowering species). Quadrat locations were recorded using portable GPS units which have an accuracy of up to 5 metres. It is considered that, by referring to the GPS co-ordinates together with quadrat photographs, it should be possible to re-locate quadrats to a high degree of accuracy during any future monitoring surveys.

## 3 Results

This section of the report presents the outcome of the survey on a site by site basis. The results of the survey in relation to each site is presented under the following headings: site description, ecological constraints, baseline ecology, assessment of visitor impact, and recommendations.

In all, 122 quadrats were recorded during the survey. Information gathered during the survey of quadrats informed the individual site reports presented in this section. The original data pertaining to each of the 122 quadrats is presented in Appendix 1.

### 3.1 Lisfannon Beach, County Donegal

#### 3.1.1 Site Description

Lisfannon Beach is located at the southern end of the Inishowen Peninsula approximately 4km south of Buncrana on the eastern shore of Lough Swilly, county Donegal.



Plate 3.1: Lisfannon Beach, County Donegal

The site comprises a sandy beach and narrow dune system with a small freshwater wetland at the land-ward side (to the east).

Lisfannon Beach is a popular recreational beach and is lifeguard patrolled during the summer season. There is a surfaced car park along with toilet facilities, there are also several bins located at each exit to the beach. Interpretative facilities and dog litter bins are provided. At this site there is a Wild Atlantic Way sign in place. Recreation is the main land-use pressure at the site.

#### 3.1.2 Ecological Constraints

The Lisfannon Beach Discovery Point occurs within the Lough Swilly cSAC and SPA, and the Lough Swilly including Big Isle, Blanket Nook and Inch Lake pNHA (see Table 3.1 and Figure 3.1). No habitats listed as qualifying features for the Lough Swilly cSAC occur at Lisfannon Beach Discovery Point. However, two Annex I habitats of the EU Habitats Directive occur in proximity to the discovery point; marram dunes (white dunes), and fixed dunes (grey dunes). Dune systems are vulnerable to impacts that may arise from visitor use (such as trampling which in turn may lead to erosion).

It is considered that those habitats that occur within proximity to the discovery point are of low value to the bird species listed as special conservation interests of the Lough Swilly SPA. The following species are noted by NPWS (2011)<sup>1</sup> as using Lisfannon (Subsite 0A482, which includes a much wider area of the estuary than the discovery point alone) for foraging and roosting during a 2009-10 waterbird survey programme:

- Common Gulls (roosting)
- Great Crested Grebe (roosting)
- Dunlin (foraging and roosting)
- Brent Geese (foraging)
- Ringed Plover (foraging)
- Oystercatcher (foraging and roosting)

The extensive intertidal areas west of the discovery point are likely to be important to foraging water birds during winter.

Table 3.1: Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
002287	Lough Swilly cSAC	Site Specific Conservation Objectives. Version 1.0 (NPWS 2011)	The Discovery Point occurs within the cSAC.	<u>Annex I Habitat</u> Estuaries [1130] Lagoons* [1150] Atlantic salt meadows [1330] Molinia grasslands [6410]

<sup>1</sup> NPWS (2011) Lough Swilly Special Protection Area. Conservation Objectives Supporting Document. April 2011.

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
				Old oak woodlands [91A0] <u>Annex II Species</u> Otter [1355]
004075	Lough Swilly SPA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2011)	The Discovery Point occurs within the SPA.	<u>Annex I Bird Species</u> Whooper Swan [A038] Dunlin (Calidris alpina) [A149] Sandwich Tern [A191] Common Tern [A193] <u>Twenty other water bird species that are likely to use intertidal zone.</u> Wetland and Waterbirds [A999]
0166	Lough Swilly including Big Isle, Blanket Nook and Inch Lake pNHA	NA	The Discovery Point occurs within the pNHA.	<u>Sensitive Habitats</u> Estuaries Lagoons Salt marsh Old oak woodlands <u>Sensitive Species</u> Waterfowl

[\*priority habitat]

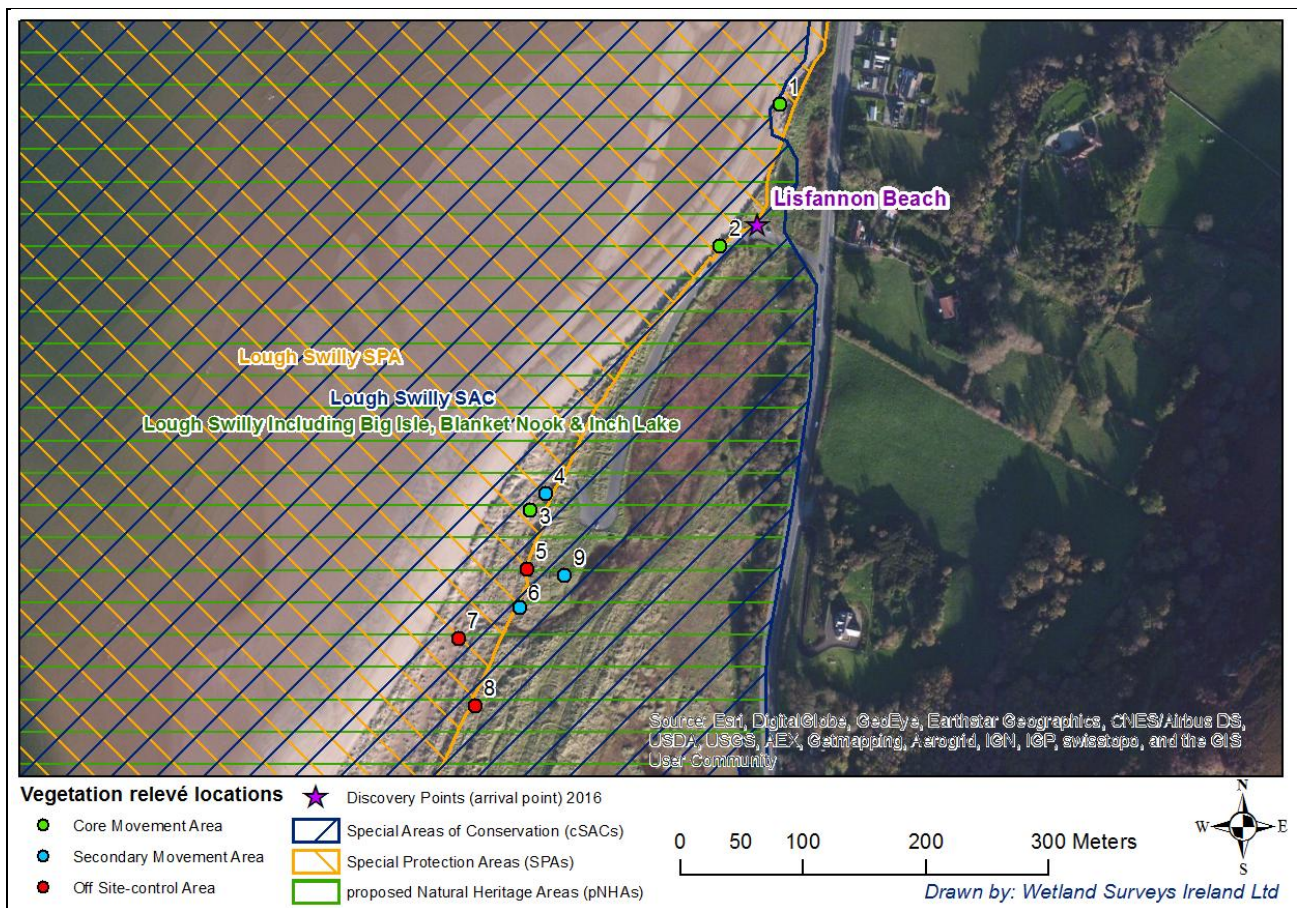


Figure 3.1: Lisfannon Beach Discovery Point. The location of quadrats and designated sites is indicated.

### 3.1.3 Baseline Ecology of study area

A total of nine quadrats were located at Lisfannon Beach as summarised in Table 3.2.

The data collected during the survey indicates that the offsite control areas are in good condition, and are undisturbed by visitors to the Discovery Point. Secondary movement areas show some minor localised

visitor impacts along unpaved paths. Core movement areas show moderate visitor impacts along unpaved paths through dunes to beach.

The main habitats in the area include the sandy intertidal beach (LS2 Sandshores), and an intact dune system (including examples of both marram and fixed dunes). A small freshwater wetland comprising wet grassland, scrub, and reed swamp occurs to the east of the dune system.

Marram and fixed dunes are both listed on Annex I of the EU Habitats Directive but are not a qualifying habitat for the Lough Swilly SAC. The data collected during the survey indicates that the dune habitats removed from the core visitor areas are in good condition while those areas in proximity are somewhat degraded by trampling caused by visitor pressure. Analysis of historical aerial photography and other mapping sources suggest that the dune system at Lisfannon is expanding. This is also confirmed by the presence of embryonic dunes occurring between the high water mark and the main dune complex.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.2: Summary details of each quadrat recorded at Lisfannon Beach**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
2	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
3	Core Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	Recreation	Poor
4	Secondary Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
5	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good
6	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Recreation	Poor
7	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
8	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good
9	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Recreation	Poor

### **3.1.4 Preliminary assessment of visitor impact**

Adverse localised impacts on the site observed during the 2016 ecology survey included trampling of sand dune vegetation and compaction of soil on informal tracks. In the worst affected areas on the site the surface is bare of vegetation (access tracks to beach and some informal paths in dunes used extensively by dog walkers). Extensive network of informal paths throughout dunes system.

Overall the dune system is in good condition and expanding. There does not appear to be any noticeable impacts to the inter-tidal sandy shore habitat. Some disturbance to water birds foraging in the inter-tidal zone is likely, although the highest visitor numbers would not coincide with the period when water birds are at their highest concentration (i.e. during winter).

In conclusion, there is inadequate visitor management in the area to cater for the current level of use by visitors. Should visitor numbers increase without appropriate management then adverse impacts are likely to increase in severity.

#### **3.1.4.1 Lough Swilly cSAC Conservation Objectives**

SSCOs for the Lough Swilly SAC have been published by NPWS (2011)<sup>2</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level. As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach.

While this study has identified localised direct impacts on dune habitat, this does not conflict with the conservation objectives for the site as set out by NPWS 2011. The impacted habitat is not listed as a QI for the site. A review of the SSCOs has determined that the level of use of the site by visitors is not currently impacting on the European site in view of the site's conservation objectives.

#### **3.1.4.2 Lough Swilly SPA Conservation Objectives**

SSCOs for the Lough Swilly SPA have been published by NPWS (2011). This document sets targets for a range of attributes for each Special Conservation Interests (SCI) that are used to define favourable conservation condition at the site level.

The attributes and associated targets common to most SCIs include the following:

- Population trend - Long term population trend stable or increasing
- Distribution - No significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach. Potential impacts on the SPA primarily relate to potential disturbance to Special Conservation Interests for which the site is selected. There is a high level of recreational activity such as walking (including with dogs) that could give rise to disturbance impacts.

Disturbance impacts could potentially affect the favourable conservation condition at the site level by decreasing the range of areas used by waterbird species. This could in turn have an effect on the populations of waterbirds using the site.

A previous disturbance assessment presented in NPWS (2011)<sup>3</sup> has identified moderate disturbance impacts to waterbirds at Lisfannon from a range of activities including recreation.

Potential disturbance impacts are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.1.5 Recommendations**

Visitor activities at this site are having a minor adverse impact on dune system due to trampling on informal pathways. Consideration should be given to preventing further damage by controlling / managing visitor access on the more sensitive dune areas.

Future ecological monitoring is recommended.

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<sup>2</sup> NPWS (2011) Conservation Objectives: Lough Swilly SAC 002287 and Lough Swilly SPA 004075. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>3</sup> NPWS (2011) Lough Swilly Special Protection Area. Conservation Objectives Supporting Document. April 2011.

### 3.2 Rosguill, County Donegal

#### 3.2.1 Site Description

Rosguill is a peninsula located north-west of Carrickart in north-west county Donegal.



Plate 3.2: Rosguill, County Donegal

The discovery point comprises a small lay-by at the northern tip of the peninsula. There is sufficient space for approximately 10 cars.

To the north of the surfaced car park heathland slopes down to the exposed rocky shore. Access to the north is prevented by sheep fencing. To the south the land rises steeply supporting heath and rocky outcrops. This area is unenclosed and accessible to visitors. The heathland that occurs in the in the area is subject to sheep grazing.

There are no facilities at the discovery point. A Wild Atlantic Way sign and interpretation panel have recently been erected (un-finished).

#### 3.2.2 Ecological Constraints

The Rosguill Discovery Point occurs within the Tranarossan and Melmore Lough cSAC and pNHA, and the Horn Head to Fanad Head SPA, (see Table 3.3 and Figure 3.2). Sea cliffs habitat [1230] occur along the coastline 150m north-west of the discovery point. Discrete pockets of dry heath [4030] occur in association with outcropping rock on the hillsides. No habitats listed as qualifying interests of the cSAC occur in close proximity to the discovery point. Although wet heath [4010], an EU Annex I habitat, is present throughout the area surrounding the discovery point, it is not a qualifying interest of the SAC.

No bird species for which the Horn Head to Fanad Head SPA is designated were recorded during the field visit in October 2016, though suitable foraging / resting habitat for chough occurs in the area.

Table 3.3 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000194	Tranarossan and Melmore Lough cSAC/pNHA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2015)	Discovery Point occurs within the SAC / pNHA	<u>Thirteen marine, coastal, freshwater, and terrestrial Annex I habitats. The only habitats relevant to the discovery point are:</u> Sea cliffs [1230] Dry heaths [4030] <u>Annex II Species</u> Petalwort [1395]

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
004194	Horn Head to Fanad Head SPA	Generic Version. Version 5.0 (NPWS 2016)	Discovery Point occurs within the SPA	<p><u>Annex I species:</u>                      Chough [A346]                      Peregrine Falcon [A103]                      Guillemot [A199]</p> <p><u>Other species:</u>                      Barnacle Goose [A045]                      Fulmar [A009]                      Cormorant [A017]                      Shag [A018]                      Kittiwake [A188]                      Razorbill [A200]                      Greenland White-fronted Goose [A395]</p>

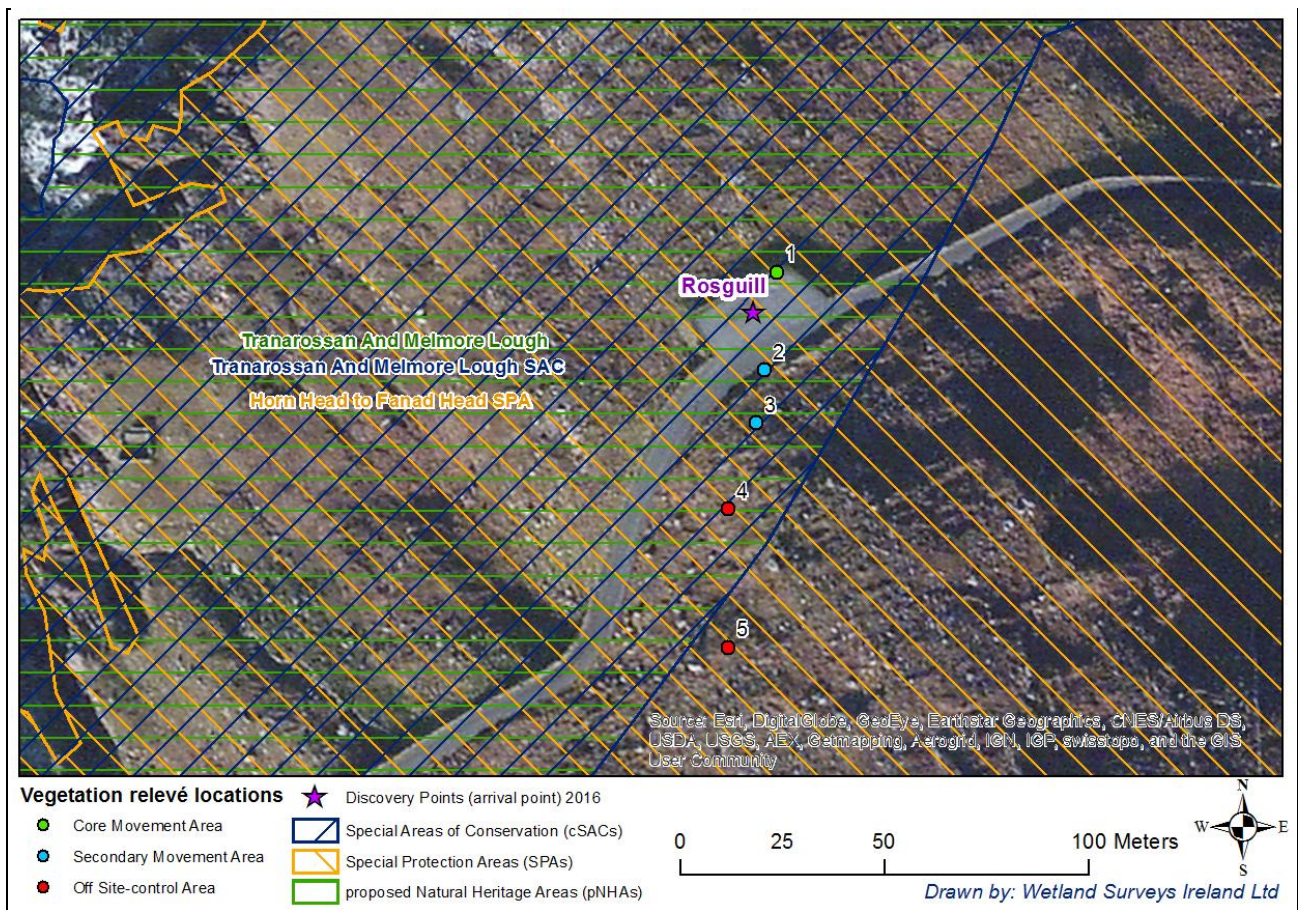


Figure 3.2: Rosguill Discovery Point. The location of quadrats and designated sites is indicated.

### 3.2.3 Baseline Ecology of study area

A total of five quadrats were located at Rosguill as summarised in Table 3.4.

Then principal habitat that dominates the hillside to the north and south of the lay-by is wet heath (HH3) grading into dry heath (HH1) in places in association with outcropping siliceous rock (ER2). The heath habitat is vulnerable to trampling due to visitor activity. The layby itself is surfaced and surrounded by a low wall. A narrow margin grassy verge (GS2) habitat occurs between the wall and the fence to the north of the lay-by.

The data collected during the survey indicates that the heathland habitats removed from the secondary movement area is in good condition. The heathland in the secondary visitor area is degraded as evident by high cover of bare peat and some evidence of erosion.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.4: Summary details of each quadrat recorded at Rosguill**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	GS2 Dry meadows and grassy verges	NA	None	Good
2	Secondary Movement Area	HH3 Wet heath	Wet Heath [4010]	Recreation/Grazing	Fair
3	Secondary Movement Area	HH3 Wet heath	Wet Heath [4010]	Grazing - sheep	Bad
4	Off Site-control Area	HH3 Wet heath	Wet Heath [4010]	Grazing - sheep	Good
5	Off Site-control Area	HH3 Wet heath	Wet Heath [4010]	Grazing - sheep	Poor

### 3.2.4 Preliminary assessment of visitor impact

During the survey litter and household refuse was present in the area immediately surrounding the layby.

The heathland to the north of the lay-by is fenced off and not easily accessible to visitors. To the south, localised impacts are evident throughout the heathland that is identified as a secondary movement area. Impacts include trampling of herbaceous vegetation and compaction of peat soil. In the worst affected areas bare peat and underlying sub-soil / rock have been exposed. There are few identifiable desire lines.

It is not clear whether the impacts are a result of trampling by visitors or moderate intensity sheep grazing. Based on the good condition of surrounding adjoining habitat which is also subject to grazing, it is concluded that the habitat degradation is most likely caused by the combined effects of visitor trampling and sheep grazing.

In conclusion, the heathland to the south of the lay-by is easily accessed by visitors as there is no fence line. It is inconclusive as to whether the heathland in this area is degraded by visitor access, sheep grazing, or a combination of both. Should visitor numbers increase without appropriate management then such impacts can be expected to become more severe.

#### 3.2.4.1 Tranarossan and Melmore Lough cSAC Conservation Objectives

SSCOs for the Tranarossan and Melmore Lough cSAC have been published by NPWS (2015)<sup>4</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

As outlined above, the areas used by most visitors to the discovery point include the heathland slopes to the south of the discovery point lay-by. This study has identified localised direct impacts on heath habitat, a variant of which (dry heath) is listed as a QI for the site. The impacted area includes a mosaic of wet and dry heath occurring in association with exposed siliceous rock. The combined effects of grazing and visitor trampling is having an adverse impact on the habitat as evident by increased cover of bare peat (physical structure) and altered vegetation composition and structure. It is concluded that visitor use of the area is having a minor adverse effect on the site in view of the site's conservation objectives.

<sup>4</sup> NPWS (2015) Conservation Objectives: Tranarossan and Melmore Lough SAC 000194. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.



#### **3.2.4.2 Horn Head to Fanad Head SPA Conservation Objectives**

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>5</sup> as follows:

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

The species for which the site is designated are mostly restricted to coastal and marine habitats that occur > 0.1km from the discovery point. Access to these areas is not possible from the discovery point due to presence of fencing. Based on the habitats present at and in close proximity to the layby it is considered highly unlikely these species interact with (or utilise) the area.

It is therefore concluded that the use of the site as a discovery point is not having any effect on the site in view of the site's conservation objectives.

#### **3.2.5 Recommendations**

Visitor activities at this site are likely to be having a minor adverse impact on wet heath due to trampling. Consideration should be given to preventing further damage by controlling / managing visitor access to these sensitive areas.

Future ecological monitoring is recommended.

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<sup>5</sup> NPWS (2016) Conservation objectives for Horn Head to Fanad Head SPA [004194]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

### 3.3 Gola Island, County Donegal

#### 3.3.1 Site Description

Gola Island is located approximately 2km north-west and off-shore of Bunbeg, County Donegal.



Plate 3.3: Gola Island, County Donegal

During the summer months a regular ferry operates to the island from nearby Magheragallan. The island has been uninhabited since the 1960s although a small number of houses are occupied during summer months.

The island supports a range of habitats including grassland, heath, cutover bog, sand dunes, a small lake, coastal cliffs, and sandy beaches. Visitors tend to disperse around much of the island with highest concentrations visiting

the beach in the south and the area to the west of the lake where there is evidence of overnight camping. There is a network of laneways that provide access to much of the island.

All grassland and heath areas within the site appear to be grazed by sheep.

#### 3.3.2 Ecological Constraints

Gola Island occurs within Gweedore Bay and Islands cSAC and pNHA, and the West Donegal Islands SPA (see Table 3.5 and Figure 3.3). One Annex I habitat for which the cSAC is designated occurs in proximity to the Discovery Point; marram dunes (white dunes). Wet heath which is also an Annex I listed habitat also occurs within the environs of the visitor area but is not listed as a qualifying interest of the SAC. These habitats would be sensitive to potential impacts associated with visitor activities in the area. No suitable habitat for those species listed as qualifying features for the cSAC occurs within the environs of the discovery point.

The West Donegal Coast SPA contains nationally important breeding populations of chough. Chough are likely to forage on grassland habitats in proximity to the discovery point location adjacent to visitor access routes and would be sensitive to disturbance. Chough were recorded in the western part of the island during the October 2016 survey.

Table 3.5 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
001141	Gweedore Bay and Islands cSAC/pNHA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2015)	Discovery Point occurs within the SAC/NHA	<u>Seventeen marine, coastal, freshwater, and terrestrial Annex I habitats. The habitats of most relevance are:</u> Perennial vegetation of stony banks [1220] Embryonic shifting dunes [2110] Marram dunes (white dunes) [2120] Fixed dunes (grey dunes) [2130] Machair* [21A0] Dry heaths [4030] <u>Annex II Species</u> Marsh fritillary [1065] Otter [1355] Petalwort [1395] Slender Naiad [1833]
004150	West Donegal Coast SPA	Generic Version. Version 5.0 (NPWS 2016)	Discovery Point occurs within the SPA	<u>Annex I Bird Species</u> Peregrine [A103] Chough [A346] <u>Other Bird Species</u> Fulmar [A009] Cormorant [A017] Shag [A018] Herring Gull [A184] Kittiwake [A188] Razorbill ( <i>Alca torda</i> ) [A200]

[\*priority habitat]

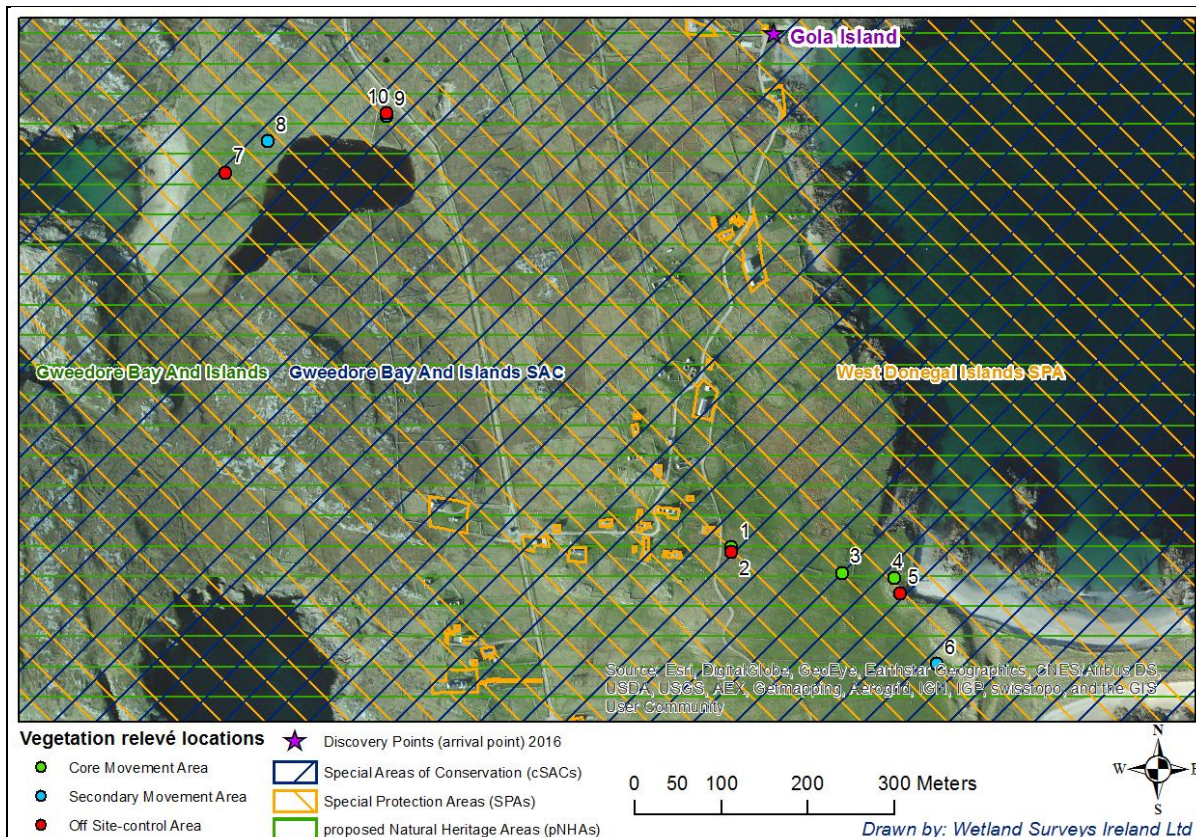


Figure 3.3: Gola Island Discovery Point. The location of quadrats and designated sites is indicated.

### 3.3.3 Baseline Ecology of study area

A total of 10 quadrats were located at Gola Island as summarised in Table 3.6 below.

The island supports a wide range of habitats including semi-improved grassland, dunes (fixed and marram), wet grassland, wet heath, sea cliffs, and lake. Those areas that are most visited by visitors are the beaches, dunes and grasslands. Dunes and wet heath constitute habitats that are most sensitive to visitor effects.

The data collected during the survey confirms that the dune, heathland, and grassland habitats are generally in good condition although a combination of visitor trampling and possibly grazing is, in places, causing minor local disturbance.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.6: Summary details of each quadrat recorded at Gola Island**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	GS4 Wet grassland	NA	Recreation	Fair
2	Off Site-control Area	GS4 Wet grassland	NA	Grazing - sheep	Good
3	Core Movement Area	GS4 Wet grassland	NA	Grazing - sheep	Fair
4	Core Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	Recreation/Grazing	Fair
5	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
6	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
7	Off Site-control Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
8	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Fair
9	Secondary Movement Area	HH3 Wet heath	Wet Heath [4010]	Recreation/Grazing	Poor
10	Off Site-control Area	HH3 Wet heath	Wet Heath [4010]	Grazing - sheep	Good

### 3.3.4 Preliminary assessment of visitor impact

Adverse impacts on the site observed during the 2016 ecology survey included very minor trampling of wet heath vegetation on informal track near the lake on the island, and some camp fire sites near the lake.

No discernible impacts were identified elsewhere on the island.

In conclusion, visitors are having a minor adverse impact on the ecology of the area. Should visitor numbers increase without appropriate management then such impacts can be expected to become more severe especially on wet heath and grassland area near the lake.

#### 3.3.4.1 Gweedore Bay and Islands cSAC Conservation Objectives

SSCOs for the Gweedore Bay and Islands cSAC have been published by NPWS (2015)<sup>6</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

<sup>6</sup> NPWS (2015) Conservation Objectives: Gweedore Bay and Islands SAC 001141. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Impacts associated with visitors was restricted to a small section of wet heath and a grassland area to the west of the lake. None of these habitats correspond with QIs of the designated site. It is considered that the minor adverse effects recorded are not having any indirect effect on QIs of the SAC that occur in the surroundings (based on the conservation objectives as published by NPWS). It is therefore concluded that the use of the site as a discovery point is not having any effect on the designated site in view of the site's conservation objectives.

#### **3.3.4.2 West Donegal Coast SPA Conservation Objectives**

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>7</sup> as follows:

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

The species for which the site is designated typically nest on sea cliff habitat that is sufficiently removed from those areas subject to visitor pressures that potential disturbance to nesting birds is unlikely.

The minor habitat impacts on terrestrial habitats may potentially affect the distribution of Chough on the island by causing local displacement from suitable foraging habitat (semi-improved grassland).

Potential impacts on bird species of the SPA are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.3.5 Recommendations**

Visitor activities at this site are having a very minor negative impact on wet heathland and grassland areas near the lake due to trampling on informal pathways and camp fires associated with overnight camping. Consideration should be given to preventing further damage by controlling / managing visitor access in this area.

In the event of increased visitor numbers, then future ecological monitoring is recommended.

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<sup>7</sup> NPWS (2016) Conservation objectives for West Donegal Coast SPA [004150]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

### 3.4 Malainn Bhig, County Donegal

#### 3.4.1 Site Description

Malainn Bhig is a small sandy bay located 6km south-west of Glencolmkillie in County Donegal. Malainn Bhig also known as Malinbeg is a southwest facing bay surrounded by high, horseshoe shaped cliffs. The Bay is accessed by a steeply sloping series of concrete steps.



Plate 3.4: Malainn Bhig, County Donegal

The headland on the Western side of the Bay has the remains of fortifications beyond which Rathlinn O’Birne Island is just visible. The headland to the south east rises, parallel with the coastline to the top of Sliabh Liag Mountain.

There are no toilet facilities available for visitor use. There is interpretive information situated just beside the gate at the entrance to the steps which gain access to the beach. At this site there is a Wild Atlantic Way

sign in place. All grassland and heath areas within the site are grazed by sheep.

#### 3.4.2 Ecological Constraints

The Malainn Bhig Discovery Point occurs immediately adjacent to the Slieve League cSAC and pNHA, and the West Donegal Coast SPA (see Table 3.7 and Figure 3.4). Sea cliffs, listed as qualifying features for the SAC, surround the beach to the east, north, and south.

The West Donegal Coast SPA contains nationally important breeding populations of chough. Chough were recorded during the 2016 survey. Approximately six individuals were recorded foraging amongst the cliff-top habitat at the site. Breeding chough would be sensitive to disturbance impacts. Other species for which the SPA is designated are also likely to breed amongst cliff habitat in the area.

Table 3.7 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000189	Slieve League cSAC/pNHA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2015)	The Discovery Point occurs immediately adjacent to the cSAC/pNHA	<u>Annex I Habitats:</u> Reefs [1170] Sea cliffs [1230] Wet heath [4010] Alpine and subalpine heath [4060] Hydrophilous tall herb [6430] Blanket bog (active)* [7130] Siliceous scree [8110] Calcareous rocky slopes [8210] Siliceous rocky slopes [8220]
004150	West Donegal Coast SPA	Generic Version. Version 5.0 (NPWS 2016)	Discovery Point occurs immediately adjacent to the SPA	<u>Annex I Bird Species</u> Peregrine [A103] Chough [A346] <u>Other Bird Species</u> Fulmar [A009]

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
				Cormorant [A017] Shag [A018] Herring Gull [A184] Kittiwake [A188] Razorbill [A200]

[\*priority habitat]

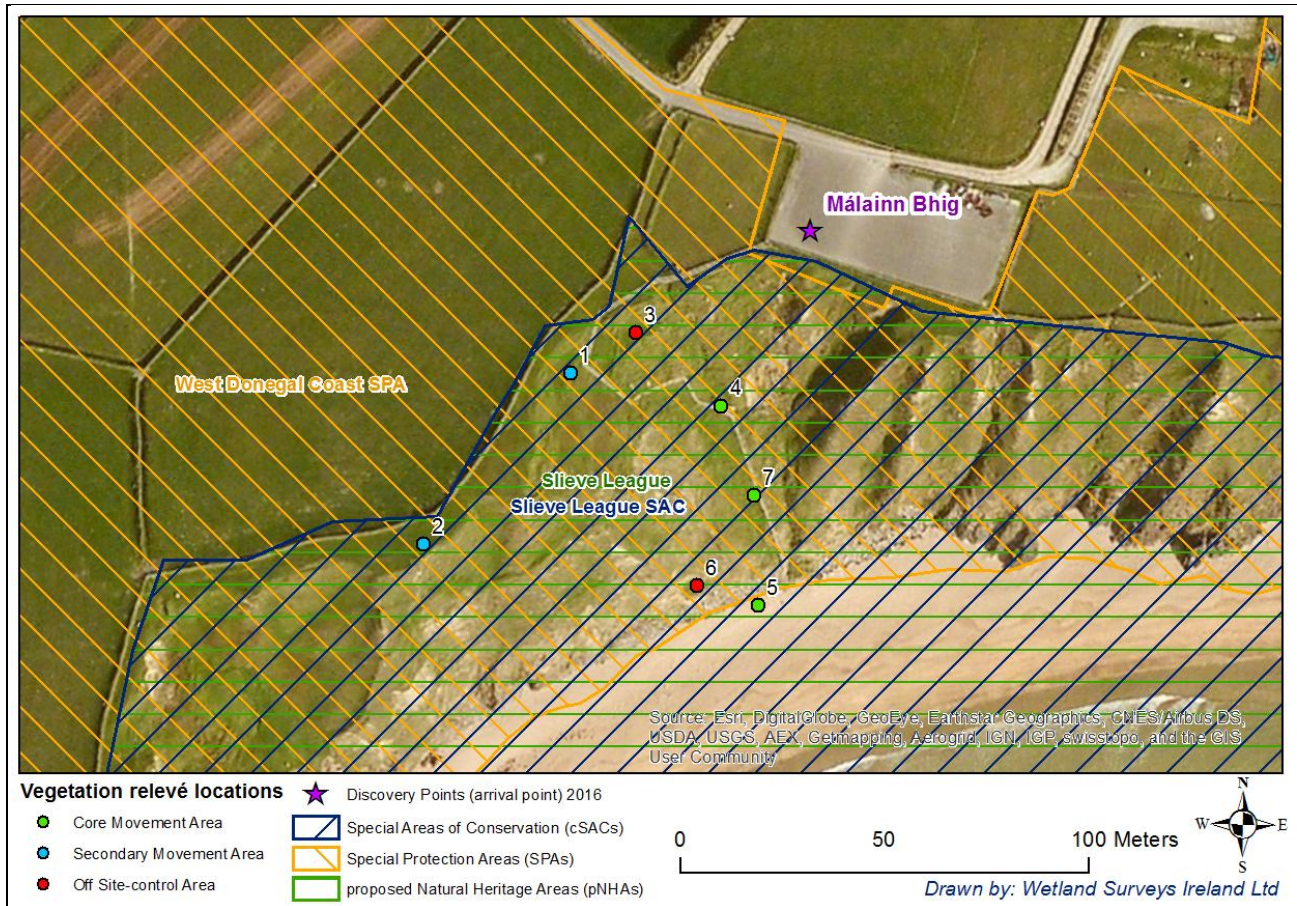


Figure 3.4: Malainn Bhig Discovery Point. The location of quadrats and designated sites is indicated.

### 3.4.3 Baseline Ecology of study area

A total of seven quadrats were located at Malainn Bhig as summarised in Table 3.8 below.

Semi-improved maritime grassland (GS1) occurs along the cliff-top. This habitat is subject to significant grazing pressure by sheep where the slope is minimal. There is little evidence of visitors affecting this area.

Elsewhere, the steeper sedimentary sea cliff habitat (CS3) is not subject to any significant grazing or visitor pressures. Visitors are generally confined to the narrow surfaced path leading to the beach.

A number of spring fed areas along the base of the cliff correspond with the priority EU habitat 'petrifying springs with tufa formation' [7220].

The beach is exposed and subject to intense wave action. No discernible impacts due to visitor access on the beach were noted. Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.8: Summary details of each quadrat recorded at Malainn Bhig**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Fair
2	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
3	Off Site-control Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
4	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Poor
5	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
6	Off Site-control Area	CD3 Sedimentary sea cliffs	Sea cliffs [1230]	Grazing - sheep	Good
7	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Fair

#### 3.4.4 Preliminary assessment of visitor impact

Only minimal impacts of visitors on the ecology of the area were noted during the 2016 ecology survey. Most visitors remain within the confines of the surfaced car park and concrete stepped pathway to the beach.

Localised visitor trampling and erosion of grassland vegetation was observed near picnic table at top of cliffs and on grassy areas adjacent to the main concrete pathway down to the beach around a bench and level platform area.

In conclusion, there is adequate visitor management in the area to cater for the current level of use by visitors. Should visitor numbers increase without appropriate management then adverse impacts could potentially occur.

##### 3.4.4.1 Slieve League cSAC Conservation Objectives

SSCOs for the Slieve League cSAC have been published by NPWS (2015)<sup>8</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

As outlined above, the areas used by most visitors are adjacent to sea cliff habitat, a QI for the site. The current study describes the vegetation communities that occur in those areas frequented by visitors. The data collected during the study suggests that current levels of visitor use is not having an adverse effect on the site in view of the site's conservation objectives. Minor impacts were noted amongst grassland habitat that is somewhat removed from the cliff habitat.

##### 3.4.4.2 West Donegal Coast SPA Conservation Objectives

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>9</sup> as follows:

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

<sup>8</sup> NPWS (2015) Conservation Objectives: Conservation Objectives: Slieve League SAC 000189. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>9</sup> NPWS (2016) Conservation objectives for West Donegal Coast SPA [004150]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.



The species for which the site is designated are mostly restricted to coastal and marine habitats that are somewhat removed from the discovery point and areas inaccessible to most visitors (cliff habitat). However, potential for disturbance to nesting and foraging birds is possible.

Potential disturbance impacts are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.4.5 Recommendations**

Based on the outcome of the current study, no adverse impacts on the ecology of the area are occurring.

Future ecological monitoring is not recommended.

Monitoring potential disturbance impacts on bird species of the West Donegal Coast SPA is recommended.

### 3.5 Elly Beach, County Mayo

#### 3.5.1 Site Description

Elly Beach occurs on the eastern side of the Mullet Peninsula, 10km south west of Belmullet town, County Mayo.



Plate 3.5: Elly Bay, County Mayo

Blacksod Bay is a 16km bay that is bounded on its western side by the Mullet Peninsula. The entire Mullet peninsula is covered with low sand dunes.

Elly Beach occurs on the sheltered eastern side of the Mullet Peninsula. The beach currently holds 'blue flag' status. A narrow strip of sand dunes occur between the beach and the main road leading south to Blacksod. The beach is a popular location for water sports and is located beside Colaiste Uisce Adventure Centre.

There is a small car-park with picnic tables and interpretative signs. There are no toilet facilities situated in the car park. At this site there is a Wild Atlantic Way sign in place. There is no grazing on the site.

#### 3.5.2 Ecological Constraints

The Elly Beach Discovery Point occurs within the Mullet/Blacksod Bay Complex cSAC / pNHA, and the Blacksod Bay / Broadhaven SPA (see Table 3.9 and Figure 3.5). One Annex I habitat for which the cSAC is designated for occurs within proximity to the discovery point; marram dunes (white dunes). Marram dunes are sensitive to adverse impacts such as trampling from visitors.

The Blacksod Bay / Broadhaven SPA is designated for eleven birds of conservation concern, a number of which are likely to utilise those habitats that occur in close proximity to the discovery point. NPWS (2014)<sup>10</sup> report that Elly Bay (Subsite OD479 surveyed as part of 2009-10 waterbird survey programme) is an important site for the following species in particular:

- Great Northern Diver - foraging
- Ringed Plover - roosting
- Sanderling - roosting
- Bar-tailed Godwit - foraging and roosting
- Curlew - foraging and roosting

The intertidal habitat is likely to provide significant foraging habitat for coastal birds while the upper shore is likely to be used as a roost site.

Table 3.9 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000470	Mullet/Blacksod Bay Complex cSAC/pNHA	Site Specific Conservation Objectives. Version 1.0	The Discovery Point occurs immediately adjacent to the cSAC/pNHA.	<u>Annex I Habitats:</u> Tidal mudflats [1140] Large shallow inlets and bays [1160] Reefs [1170]

<sup>10</sup> NPWS (2014) Blacksod Bay/Broadhaven Special Protection Area. Conservation Objectives Supporting Document. November 2014.

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
		(NPWS 2014)		Salicornia mud [1310] Marram dunes (white dunes) [2120] Fixed dunes (grey dunes) [2130] Decalcified dune heath [2150] Machair* [21A0] Natural eutrophic lakes [3150] Alkaline fens [7230] <u>Annex II Species</u> Otter {1355} Petalwort [1395]
004037	Blacksod Bay/Broadhaven SPA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2014)	The Discovery Point occurs immediately adjacent to the SPA.	<u>Annex I Bird Species</u> Great Northern Diver [A003] Dunlin [A149] Bar-tailed Godwit [A157] Sandwich Tern [A191] <u>Other Bird Species</u> Light-bellied Brent Goose [A046] Common Scoter [A065] Red-breasted Merganser [A069] Ringed Plover [A137] Sanderling [A144] Curlew [A160]

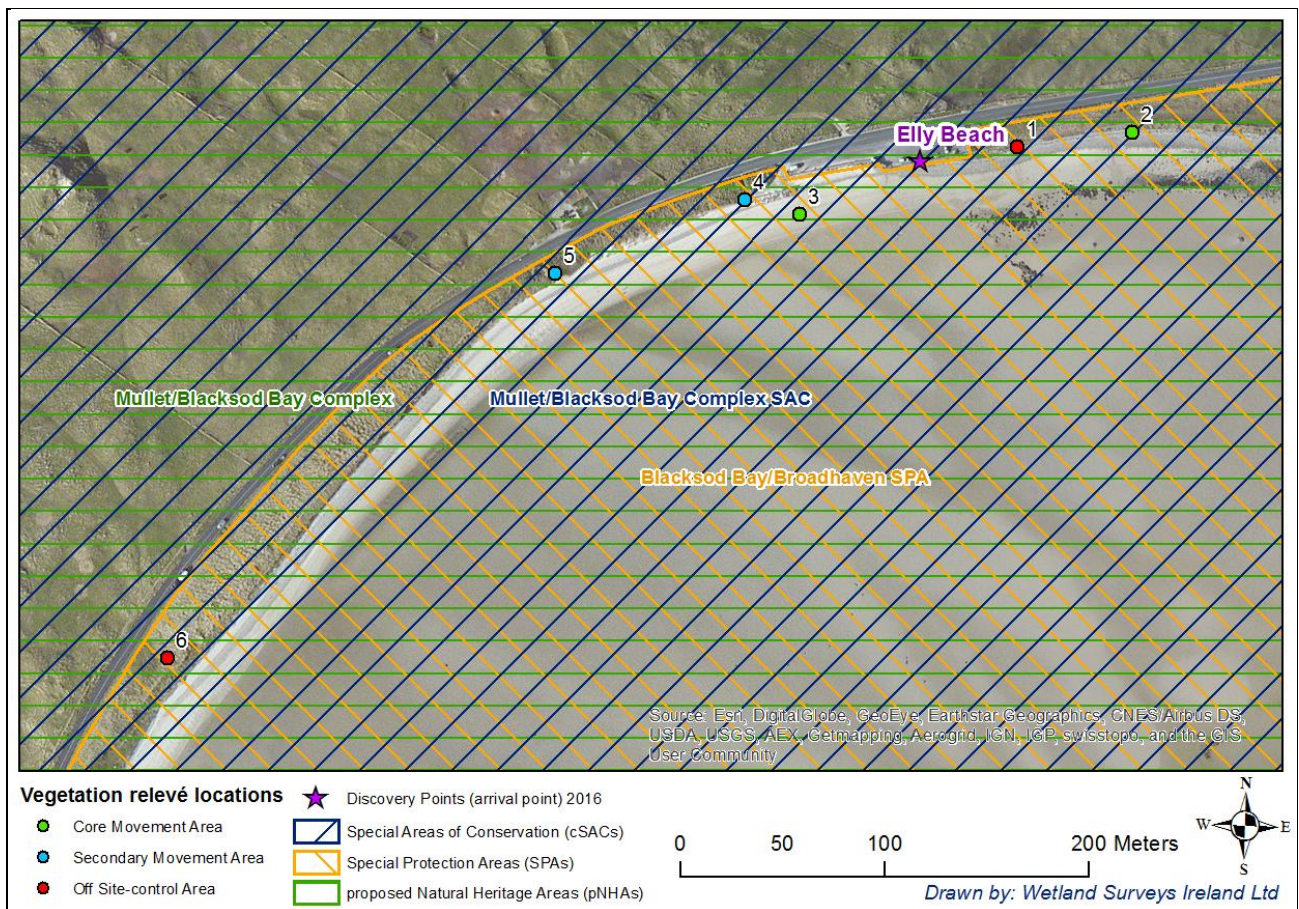


Figure 3.5: Elly Beach Discovery Point. The location of quadrats and designated sites is indicated.

### 3.5.3 Baseline Ecology of study area

A total of six quadrats were located at Elly Beach as summarised in Table 3.10. The main habitats in the area include sandshores (LS2), marram dunes (CD2), and shingle and gravel shores (LS1).

The data collected during the survey indicates that the terrestrial habitats are in good condition and are not subject to any discernible impacts due to visitor use.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.10: Summary details of each quadrat recorded at Elly Beach**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Off Site-control Area	GS2 Dry meadows and grassy verges	NA	None	Good
2	Core Movement Area	LS1 Shingle and gravel shores	NA	None	Good
3	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
4	Secondary Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
5	Secondary Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
6	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good

### 3.5.4 Preliminary assessment of visitor impact

No discernible impacts of visitors on the ecology of the area were noted during the 2016 ecology survey. Most visitors remain within the confines of the surfaced car park, the paths leading to the beach and the beach area itself.

In conclusion, there is adequate visitor management in the area to cater for the current level of use by visitors. Should visitor numbers increase without appropriate management then adverse impacts could potentially occur.

#### 3.5.4.1 Mullet/Blacksod Bay Complex cSAC Conservation Objectives

SSCOs for the Mullet/Blacksod Bay Complex cSAC have been published by NPWS (2014)<sup>11</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

Based on the outcome of the current study it can be concluded that the use of the discovery point by visitors is not currently impacting the site in view of the site's conservation objectives.

#### 3.5.4.2 Blacksod Bay/Broadhaven SPA Conservation Objectives

SSCOs for the Blacksod Bay/Broadhaven SPA have been published by NPWS (2014)<sup>12</sup>. This document sets targets for a range of attributes for each Special Conservation Interests (SCI) that are used to define favourable conservation condition at the site level.

<sup>11</sup> NPWS (2014) Conservation Objectives: Mullet/Blacksod Bay Complex SAC 000470. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>12</sup> NPWS (2014) Conservation Objectives: Blacksod Bay/Broad Haven SPA 004037. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

The attributes and associated targets common to most SCIs include the following:

- Population trend - Long term population trend stable or increasing
- Distribution - No significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

Additional attributes are relevant to breeding species relating to breeding sites, prey availability etc.

As outlined above, the areas used by most visitors to the discovery point include the upper intertidal sandy beach. Potential impacts on the SPA primarily relate to potential disturbance to Special Conservation Interests for which the site is selected. Recreational activity such as walking (including with dogs) could give rise to disturbance impacts.

Disturbance impacts could potentially affect the favourable conservation condition at the site level by decreasing the range of areas used by waterbird species. This could in turn have an effect on the populations of waterbirds using the site.

A previous disturbance assessment presented in NPWS (2014)<sup>13</sup> has identified low disturbance impacts to waterbirds at Elly Bay.

Potential disturbance impacts are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

### **3.5.5 Recommendations**

Based on the outcome of the current study, no adverse impacts on the ecology of the area are occurring.

Future ecological monitoring is not recommended.

Monitoring potential disturbance impacts on bird species of the Blacksod Bay/Broadhaven SPA is recommended.

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<sup>13</sup> NPWS (2014) Blacksod Bay/Broadhaven Special Protection Area. Conservation Objectives Supporting Document. November 2014.

### 3.6 Inishkea South Island, County Mayo

#### 3.6.1 Site Description

Inishkea Island South is located 5km off the coast west of the Mullet Peninsula in County Mayo. The island has a low-lying cover of machair vegetation in the northern part, but is characterised by a heath covered ridge and hill (70m O.D.) to the south.



Plate 3.6: Inishkea South Island, County Mayo

The island is an important breeding site for a population of grey seals and a range of seabird species.

In addition Inishkea South is the main wintering site for Barnacle Goose in Ireland and holds internationally important numbers.

The island is uninhabited and only small numbers of visitors visit during summer when frequent boat trips are available, weather permitting. The boat trip takes around 35 minutes from Blacksod

Pier. At Iniskea the boat lands at a sheltered harbour and pier, which leads onto a white sandy beach that is overlooked by the ruins of a deserted village.

All grassland and heath areas within the site are generally heavily grazed by sheep.

#### 3.6.2 Ecological Constraints

Inishkea South Island Discovery Point occurs within the Inishkea Islands cSAC/pNHA and the Inishkea Islands SPA (see Table 3.11 and Figure 3.6).

The cSAC is designated for machair, which occurs in the north-eastern part of the island. Based on data from CAAS (2016), this area is not subject to significant visitor pressures.

The island is of high value to an important population of grey seals, an Annex I species for which the cSAC is designated. There are a number of important haul out sites towards the south of the island that are of high value for breeding, resting, and moulting at different periods during the year. In Ireland, these sites are remote from human habitation and interference, being on uninhabited islands or remote beaches grey seals are vulnerable to disturbance during periods in which time is spent ashore by individuals or groups of animals. Grey seals would be most vulnerable to disturbance during the breeding (August - December) and moulting periods (December to April). Any activities that could lead to disturbance at these sites could significantly affect the population (NPWS 2015<sup>14</sup>).

Wet heath, an Annex I habitat, occurs throughout much of the island, particularly on higher ground. This habitat is vulnerable to impacts from visitors such as trampling.

The island is of high importance to breeding and wintering birds. The Inishkea Islands SPA is of ornithological importance as it supports an internationally important population of barnacle goose during winter, nationally important populations of four other species of wintering waterbird and breeding populations of six wader species. A number of the species that regularly occur are listed on Annex I of the

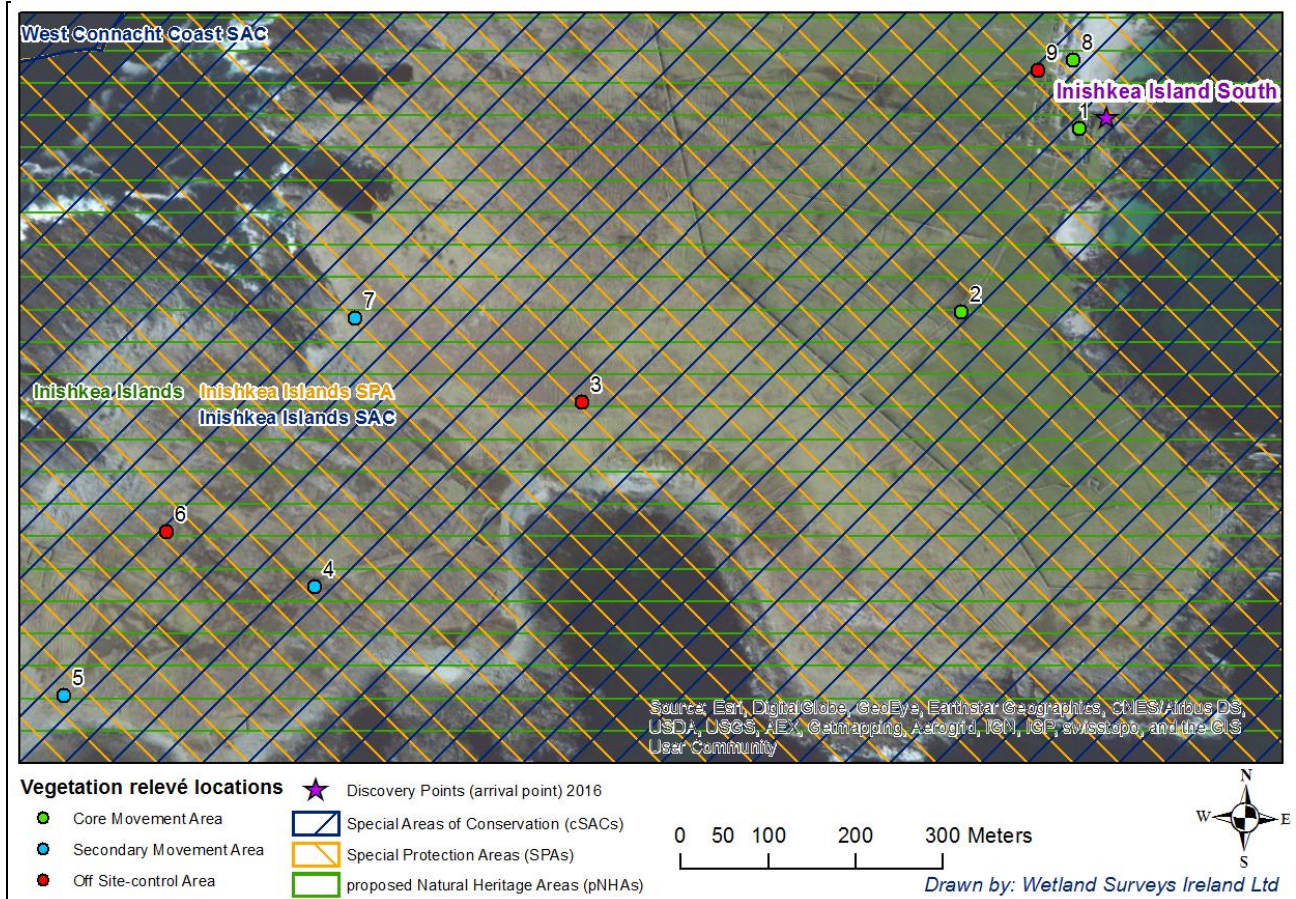
<sup>14</sup> NPWS (2015) Conservation Objectives: Inishkea Islands SAC 000507. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

E.U. Birds Directive, notably barnacle goose, storm petrel, dunlin (subsp. schinzii), arctic tern, common tern and little tern. The presence of corncrake, great northern diver, golden plover, peregrine and chough, also Annex I species, is of note. The Inishkea Islands are a Wildfowl Sanctuary.

Many of these species would be vulnerable to disturbance, particularly the populations of breeding waders.

**Table 3.11 Designated sites in proximity and relevant sensitive ecological receptors**

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000507	Inishkea Islands cSAC/pNHA	Site Specific Conservation Objectives. Version 1. (NPWS 2015)	The discovery point occurs within the SAC / pNHA.	<u>Annex I Habitat:</u> Machair* [21A0] <u>Annex II Species:</u> Grey Seal [1364] Petalwort [1395]
004004	Inishkea Islands SPA	Generic Version 5.0 (NPWS 2016)	Discovery Point occurs within the SPA.	<u>Annex I Bird Species:</u> Arctic tern [A194] Little tern [A195] Dunlin [A466] <u>Other Bird Species</u> Shag [A018] Barnacle Goose [A045] Ringed Plover [A137] Sanderling [A144] Purple Sandpiper [A148] Turnstone [A169] Common Gull [A182] Herring Gull [A184]



**Figure 3.6: Inishkea South. The location of quadrats and designated sites is indicated.**

### 3.6.3 Baseline Ecology of study area

Nine vegetation quadrats were recorded at Inishkea South as summarised in Table 3.12.

The data collected during the survey confirms that the heathland and grassland habitats are in good condition although grazing is, in places, causing minor local degradation.

The survey was undertaken during the grey seal breeding season. Large numbers of seals with recently born pups were observed hauled out on remote shores in the south of the island.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.12: Summary details of each quadrat recorded at Inishkea South Island**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Fair
2	Core Movement Area	PF2 Poor fen and flush	NA	Recreation/Grazing	Good
3	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]	Grazing - sheep	Good
4	Secondary Movement Area	HH3 Wet heath	Wet Heath [4010]	Recreation/Grazing	Good
5	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
6	Off Site-control Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
7	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good
8	Core Movement Area	LS2 Sandshores	NA	Recreation/Grazing	Good
9	Off Site-control Area	GS1 Dry calcareous and neutral grassland	NA	Grazing - sheep	Good

### 3.6.4 Preliminary assessment of visitor impact

Adverse localised minor impacts on the site observed during the 2016 ecology survey included trampling of wet heath / grassland vegetation on informal track / road leading south west from harbour on the island, and some camp fire sites near the harbour. The impacted habitats are of relatively low value.

In conclusion, visitors are having a minor adverse impact on the ecology of the area. Should visitor numbers increase without appropriate management then such impacts can be expected to become more severe especially on wet heath / grassland areas along the road / trackway south west of harbour.

Potential disturbance to fauna including the population of grey seals and breeding waders was noted. Assessment of such impacts would require more thorough investigation during appropriate season(s).

#### 3.6.4.1 Inishkea Islands cSAC Conservation Objectives

SSCOs for the Inishkea Islands cSAC have been published by NPWS (2015)<sup>15</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

<sup>15</sup> NPWS (2015) Conservation Objectives: Inishkea Islands SAC 000507. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.



Following a review of the conservation objectives for the site it is concluded that visitor use of the site is not currently conflicting with the conservation objectives for two of the three QIs for the site; Machair, or Petalwort, both of which occur in areas well removed from areas subject to visitor pressures.

However, as highlighted above, potential disturbance impacts on the Grey Seal population is beyond the scope of the current study.

#### **3.6.4.2 Inishkea Islands SPA Conservation Objectives**

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>16</sup> as follows:

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

Potential disturbance impacts to bird species are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.6.5 Recommendations**

Based on the outcome of the current study, no significant adverse impacts on the ecology of terrestrial habitats in the area are identified.

Recommend that potential effects of disturbance to sensitive fauna populations (seals and breeding waders) should be subject to further investigation during appropriate seasons.

Future ecological monitoring is recommended in the event of increased visitor numbers.

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<sup>16</sup> NPWS (2016) Conservation objectives for Inishkea Islands SPA [004004]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

### 3.7 Scatterry Island, County Clare

#### 3.7.1 Site Description

Scatterry Island is located in the Shannon Estuary, 3km south-west of Kilrush in County Clare. The island is a monastic settlement dating to the 6th century. It can be reached by boat from Kilrush pier.



Plate 3.7: Scatterry Island, County Clare

The Island became abandoned in 1978 with the last of its inhabitants leaving for the mainland. Ruins of the island along with 'The Street' and several churches remain.

There is a visitor centre on the Island and a guided tour can also be taken. Visitor numbers to the island range from 1200-2000 annually (OPW staff member pers. comm.).

There is no Wild Atlantic Way sign in place. Toilet facilities are available. There is no grazing on the site, other than that caused by a large

population of rabbits. Much of the island is now mostly abandoned farmland which is reverting to scrub due to the lack of grazing.

#### 3.7.2 Ecological Constraints

The Scatterry Island Discovery Point occurs within the Lower River Shannon cSAC, River Shannon and River Fergus Estuaries SPA, and the Scatterry Island pNHA (see Table 3.13 and Figure 3.7).

The island is surrounded by estuarine habitat. Habitat in the south-eastern parts of the island corresponds with Atlantic salt meadows, an Annex I listed habitat also listed as a qualifying interest of the cSAC. This habitat type is susceptible to impacts such as trampling by visitors to the island. A large coastal lagoon occurs on the north-eastern part of the island and corresponds to Annex I habitat (coastal lagoons), this habitat is removed from those areas visited by most tourists. No other habitats listed as qualifying interests for the cSAC occur in proximity to the discovery point.

The discovery point occurs within the River Shannon and River Fergus Estuaries SPA, a site of international importance with 21 bird species listed as special conservation interests including four Annex I listed species; whooper swan, golden plover, dunlin, and bar-tailed godwit. Most habitats of value to water birds (coastal and intertidal areas) are removed from the part of the island subject to greatest visitor numbers. The island was not included as a count sub-site during the 2010/2011 waterbird survey programme (NPWS 2012).<sup>17</sup>

Saltmarsh habitat provides foraging and breeding opportunities for a wide range of species listed as SCIs for the SPA. The habitat provides foraging and roost opportunities for waders, particularly when preferred mudflat habitat is covered by high tide.

Table 3.13: Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
002165	Lower River	Site Specific	The discovery point	Fourteen terrestrial, freshwater, and

<sup>17</sup> NPWS (2012). River Shannon and River Fergus Estuaries Special Protection Area. Conservation Objectives Supporting Document. September 2012.

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
	Shannon cSAC	Conservation Objectives. Version 1.0 (NPWS 2012)	occurs within the cSAC.	<u>marine Annex I habitats. The habitats of most relevance to the Discovery Point are:</u> Estuaries [1130] Perennial vegetation of stony banks [1220] Atlantic salt meadows [1330] Mediterranean salt meadows [1410] <u>Seven Annex II Species.</u>
004077	River Shannon and River Fergus Estuaries SPA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2012)	The discovery point occurs within the SPA.	<u>Annex I Bird Species</u> Whooper Swan [A038] Golden Plover [A140] Bar-tailed Godwit [A157] <u>Seventeen other water bird species and wetlands.</u>
001911	Scattery Island pNHA	NA	The discovery point occurs within the pNHA	<u>Sensitive habitats:</u> Saltmarsh Tidal lagoon

### 3.7.3 Baseline Ecology of study area

Nine vegetation quadrats were recorded at Scattery Island Discovery Point as summarised in Table 3.14.

The island mainly comprises abandoned farmland that was previously pasture but has developed into scrub thicket due to lack of grazing. In places, semi-natural grassland persists while the pathways around the island comprise mown amenity grassland, maintained by the OPW.

An area of salt march occurs at the southern extent of the island. There is no evidence of visitors using this area. A gravel embankment towards the shoreline is used as a pathway.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.14: Summary details of each quadrat recorded at Scattery Island**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Amenity Management	Good
2	Off Site-control Area	GS2 Dry meadows and grassy verges	NA	None	Good
3	Core Movement Area	GA2 Amenity grassland (improved)	NA	Amenity Management	Good
4	Off Site-control Area	GS4 Wet grassland	NA	None	Good
5	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Amenity Management	Good
6	Off Site-control Area	GS2 Dry meadows and grassy verges	NA	None	Good
7	Secondary Movement Area	CM1 Lower salt marsh	Atlantic salt meadows [1330]	None	Good
8	Secondary Movement Area	CM2 Upper salt marsh	NA	Recreation	Fair
9	Secondary Movement Area	GS1 Dry calcareous	NA	Recreation	Good

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
		and neutral grassland			

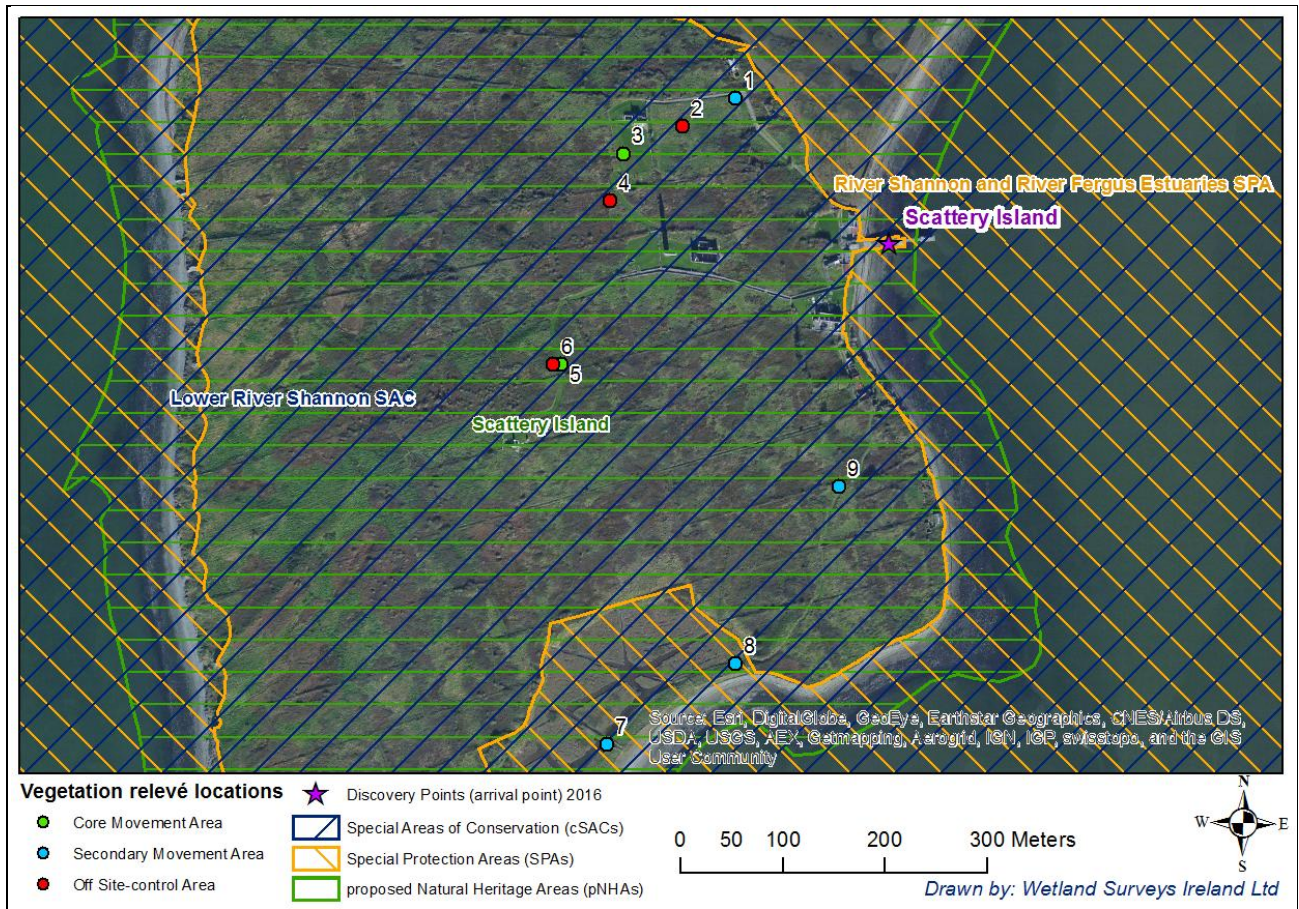


Figure 3.7: Scattery Island Discovery Point. The location of quadrats and designated sites is indicated.

### 3.7.4 Preliminary assessment of visitor impact

Negative impacts on the site observed during the 2016 quadrat survey were minimal and limited to some trampling of herbaceous vegetation on a narrow track behind a storm beach on upper saltmarsh vegetation at the south east of the island, along a route to the Martello Tower and lighthouse.

Visitor movements on the island are well managed by the OPW who ensure that people stay on mown and managed trackways throughout the monastic site.

Due to the absence of grazing on the island the majority of the island is dominated by bramble scrub and smaller stands of elderberry and willow scrub, which hinder the movement of visitors beyond mown paths.

Based on the relatively small numbers of visitors to the island and the locations most frequented it is considered highly unlikely that visitor use is impacting on water bird populations of the SPA.

#### **3.7.4.1 Lower River Shannon cSAC Conservation Objectives**

SSCOs for the Lower River Shannon cSAC have been published by NPWS (2012)<sup>18</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

Based on the outcome of the current study it can be concluded that the use of the discovery point by visitors is not currently impacting the site in view of the site's conservation objectives.

#### **3.7.4.2 River Shannon and River Fergus Estuaries SPA Conservation Objectives**

SSCOs for the River Shannon and River Fergus Estuaries SPA have been published by NPWS (2012)<sup>19</sup>. This document sets targets for a range of attributes for each Special Conservation Interests (SCI) that are used to define favourable conservation condition at the site level.

The species for which the site is designated are mostly restricted to coastal and marine habitats that are removed from the discovery point and areas subject to visitor pressures.

Although potential disturbance impacts are beyond the scope of the current study, based on habitat distribution and known habitat preferences of waterbird species it is considered highly unlikely that the use of the site as a discovery point is any effect on the site in view of the site's conservation objectives.

#### **3.7.5 Recommendations**

Based on the outcome of the current study, no adverse impacts on the ecology of the area are occurring.

The re-introduction of grazing on the island, as planned by the OPW, may result in changes to the dominant bramble vegetation covering much of the island. This may present an opportunities for to enhance the biodiversity value of the island. In the event that such changes in landuse are implemented then future ecological monitoring is recommended .

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<sup>18</sup> NPWS (2012) Conservation Objectives: Lower River Shannon SAC 002165. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>19</sup> NPWS (2012) Conservation Objectives: River Shannon and River Fergus Estuaries SPA 004077. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

### 3.8 Castlegregory Beach, County Kerry

#### 3.8.1 Site Description

Castlegregory Beach is located 1km north-west of Castlegregory village, and 21km due west of Tralee town in County Kerry.



Plate 3.8: Castlegregory Beach, County Kerry

The discovery point is located adjacent at a extensive relatively sheltered east facing beach. There is a narrow band of dunes running parallel to the beach, these back onto managed farmland.

The car park for the beach is set within the fore dune area and is close to the village of Castlegregory.

On site there are suitable facilities for visitors, there is ample parking at the beach, there is also parking a little further from the beach at the local GAA club.

There is no Wild Atlantic Way sign in place. There is no grazing occurring at the site.

There is no Wild Atlantic Way sign in

#### 3.8.2 Ecological Constraints

The Castlegregory Beach Discovery Point occurs within the Tralee Bay and Magharees Peninsula, West to Cloghane cSAC and pNHA, and the Tralee Bay Complex SPA (see Table 3.15 and Figure 3.8). Marram dunes (white dunes) is the main qualifying interest of the cSAC that occur at or in close proximity to the discovery point. Driftlines [1210] and tidal sandflats [1140] also occur in proximity.

The Tralee Bay Complex SPA is designated for the conservation of 22 bird species including four species listed as Annex I bird species on the EU Birds Directive; whooper swan, golden plover, dunlin, and bar-tailed godwit. Suitable habitat for foraging golden plover, sanderling, dunlin, black-headed gull, and common gull occurs in proximity to the discovery point, though gull species are the only species likely to occur during peak visitor season (summer).

Table 3.15: Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
002070	Tralee Bay and Magharees Peninsula, West to Cloghane cSAC / pNHA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2014)	Castlegregory Beach Discovery Point occurs within the cSAC / pNHA.	<u>Sixteen terrestrial and marine Annex I habitats. The habitat of most relevance to the Discovery Point are:</u> Marram dunes (white dunes) [2120] Tidal mudflats and sandflats [1140] Driftlines [1210] <u>Annex II Species</u> Otter [1355] Petalwort [1395]
004188	Tralee Bay Complex SPA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2014)	Castlegregory Beach Discovery Point occurs within the SPA.	<u>Annex I Bird Species</u> Whooper Swan [A038] Golden Plover [A140] Dunlin [A149] Bar-tailed Godwit [A157]

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
				<u>Eighteen other water bird species and wetlands</u>

### 3.8.3 Baseline Ecology of study area

Nine vegetation quadrats were recorded at Castlegregory Beach Discovery Point as summarised in Table 3.16.

A well maintained surfaced car park is set into the fore dune area. The surrounding dunes correspond with EU Annex I habitat marram dunes. There are some minor un-vegetated paths through the dune system caused by continual visitor trampling. The beach is resilient to any potential impacts by visitors.

The data collected during the survey indicates that the offsite control areas are in good condition, and are undisturbed by visitors to the Discovery Point. Secondary movement areas show some minor localised visitor and farming impacts along unpaved paths. Core movement areas show no visitor impacts.

A well maintained surfaced car park is set into the fore dune area. The surrounding dunes correspond with EU Annex I habitat marram dunes. There are some minor un-vegetated paths through the dune system caused by continual visitor trampling. The beach is resilient to any potential impacts by visitors.

The data collected during the survey indicates that the offsite control areas are in good condition, and are undisturbed by visitors to the Discovery Point. Secondary movement areas show some minor localised visitor and farming impacts along unpaved paths. Core movement areas show no visitor impacts.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.16: Summary details of each quadrat recorded at Castlegregory Beach**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
2	Core Movement Area	LR4 Mixed substrate shores	NA	Recreation	Good
3	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
4	Secondary Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	Recreation	Fair
5	Secondary Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	Recreation	Poor
6	Secondary Movement Area	CD1 Embryonic dunes	Embryonic shifting dunes [2110]	Recreation	Good
7	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
8	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
9	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good

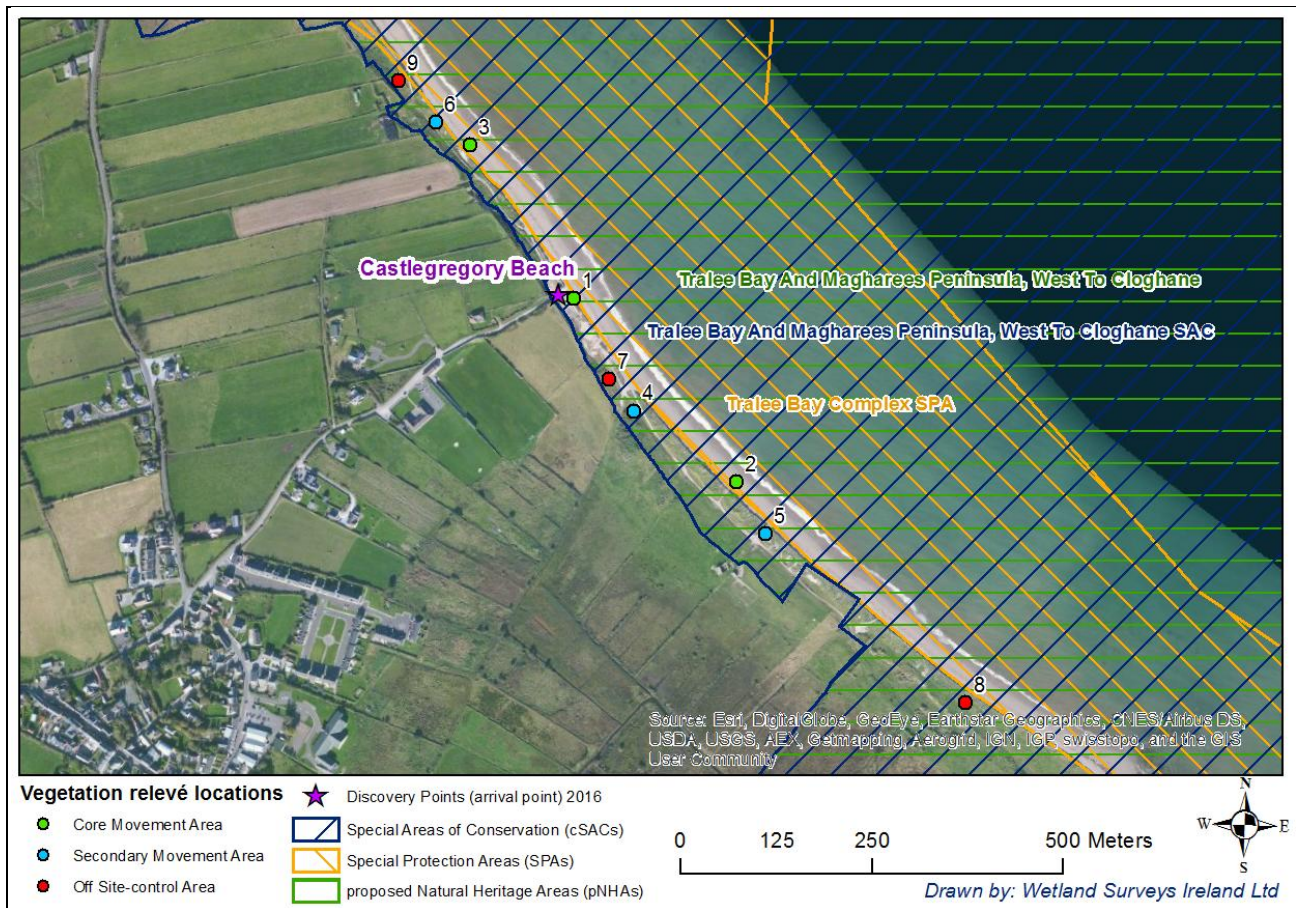


Figure 3.8: Castlegregory Beach. The location of quadrats and designated sites is indicated.

### 3.8.4 Preliminary assessment of visitor impact

Adverse localised impacts on the site observed during the 2016 ecology survey included trampling of sand dune vegetation and the compaction of soil on informal tracks that occur on the dunes surrounding the car park. In the worst affected areas on the site the surface is bare of vegetation (access tracks to beach and an informal farm track behind dunes, also used by dog walkers).

Minor trampling impacts on dunes due to pedestrian traffic to beach and foot traffic associated with dog walkers was observed.

In conclusion, visitors to the area are having a minor adverse impact on dune habitat to the north and south of the car park area.

#### 3.8.4.1 Tralee Bay and Magharees Peninsula, West to Cloghane cSAC Conservation Objectives

SSCOs for the Tralee Bay and Magharees Peninsula, West to Cloghane SAC have been published by NPWS (2014)<sup>20</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level. As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach.

The current study has identified minor localised impacts on marram dune habitat, which is listed as a QI for the site. Under the attributes 'habitat area' and 'habitat distribution' for this habitat, the targets in the SSCOs include:

- area stable or increasing, subject to natural processes'.

<sup>20</sup> NPWS (2014) Conservation Objectives: Tralee Bay and Magharees Peninsula, West to Cloghane SAC 002070. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.



- no decline, or change in habitat distribution, subject to natural processes<sup>1</sup>.

The effects of trampling may impact on the habitat area and distribution by making impacted areas more susceptible to erosion.

Similarly, the target under the attribute 'vegetation composition: typical species and sub-communities' in the SSCOs is to:

- maintain the presence of species-poor communities dominated by marram grass<sup>1</sup>.

The effects of trampling has reduced the local cover of typical species and sub-communities.

#### **3.8.4.2 Tralee Bay Complex SPA Conservation Objectives**

SSCOs for the Tralee Bay Complex SPA have been published by NPWS (2014)<sup>21</sup>. This document sets targets for a range of attributes for each Special Conservation Interests (SCI) that are used to define favourable conservation condition at the site level.

The attributes and associated targets common to most SCIs include the following:

- Population trend - Long term population trend stable or increasing
- Distribution - No significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach. Potential impacts on the SPA primarily relate to potential disturbance to Special Conservation Interests for which the site is selected. There is a high level of recreational activity such as walking (including with dogs) that could give rise to disturbance impacts.

Disturbance impacts could potentially affect the favourable conservation condition at the site level by decreasing the range of areas used by waterbird species. This could in turn have an effect on the populations of waterbirds using the site.

A previous disturbance assessment presented in NPWS (2014)<sup>22</sup> has identified high disturbance impacts to waterbirds from walking (incl. dogs) along the eastern shore of the Magheres Peninsula (count subsites OK504/505/506).

Potential disturbance impacts are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.8.5 Recommendations**

Based on the outcome of the current study, minor localised impacts on the ecology of the area were evident.

The site would benefit from improved visitor management.

Future ecological monitoring is recommended.

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<sup>21</sup> NPWS (2014) Conservation Objectives: Tralee Bay Complex SPA 004188. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>22</sup> NPWS (2011) Tralee Bay Complex Special Protection Area. Conservation Objectives Supporting Document. March 2014.

### 3.9 Brandon Point, County Kerry

#### 3.9.1 Site Description

Brandon Point is located approximately 2km north of Brandon village on the northern shore of the Dingle peninsula.



Plate 3.9: Brandon Point, County Kerry

Brandon Point is at the foot of Mount Brandon. The surfaced car park is located at the top of near vertical north facing sea cliffs.

An un-surfaced path leads westwards along the cliff-top traversing heath and grassland habitats.

All grassland and heath areas within the site are grazed by sheep

The Brandon Point car park has enough room for 10+ cars to park, but there are no facilities at the site itself. This area is used by locals for dolphin and whale watching. An information board on bird life at the headland is

present. There is no Wild Atlantic Way sign in place.

#### 3.9.2 Ecological Constraints

The Brandon Point Discovery Point occurs within Mount Brandon cSAC / pNHA, and Dingle Peninsula SPA (see Table 3.17 and Figure 3.9). Sea cliffs, wet and dry heath habitats (qualifying interests for the cSAC) occur at or in close proximity to the discovery point, these habitat types are vulnerable to trampling by visitors to the Discovery Point.

The Dingle Peninsula SPA is designated for the conservation of fulmar, chough, and peregrine falcon. Chough were recorded during the 2016 survey and are likely to utilise sea cliffs and grassland habitats in proximity to the discovery point for breeding, foraging, and resting. Peregrine falcon and fulmar are also likely to breed along suitable sea cliff habitats in proximity to the discovery point. These bird species would be vulnerable to disturbance impacts from visitors to the site although the cliff habitat is probably sufficiently removed that impacts to breeding birds are unlikely to occur.

Table 3.17: Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000375	Mount Brandon cSAC / pNHA	Site Specific Conservation Objectives. Version 1.0 (NPWS 2016)	The Brandon Point Discovery Point occurs within the cSAC / pNHA	<u>Eleven upland and peatland Annex I habitats. Those of most relevance include:</u> Sea cliffs [1230] Wet heath [4010] Dry heaths [4030] <u>Annex II Species</u> Freshwater Pearl Mussel [1029] Killarney Fern [1421]
004153	Dingle Peninsula SPA	Generic version 5.0 (NPWS 2016)	The Brandon Point Discovery Point occurs within the SPA.	<u>Annex I Bird Species</u> Peregrine falcon [A103] Chough [A346] <u>Other Bird Species</u> Fulmar [A009]

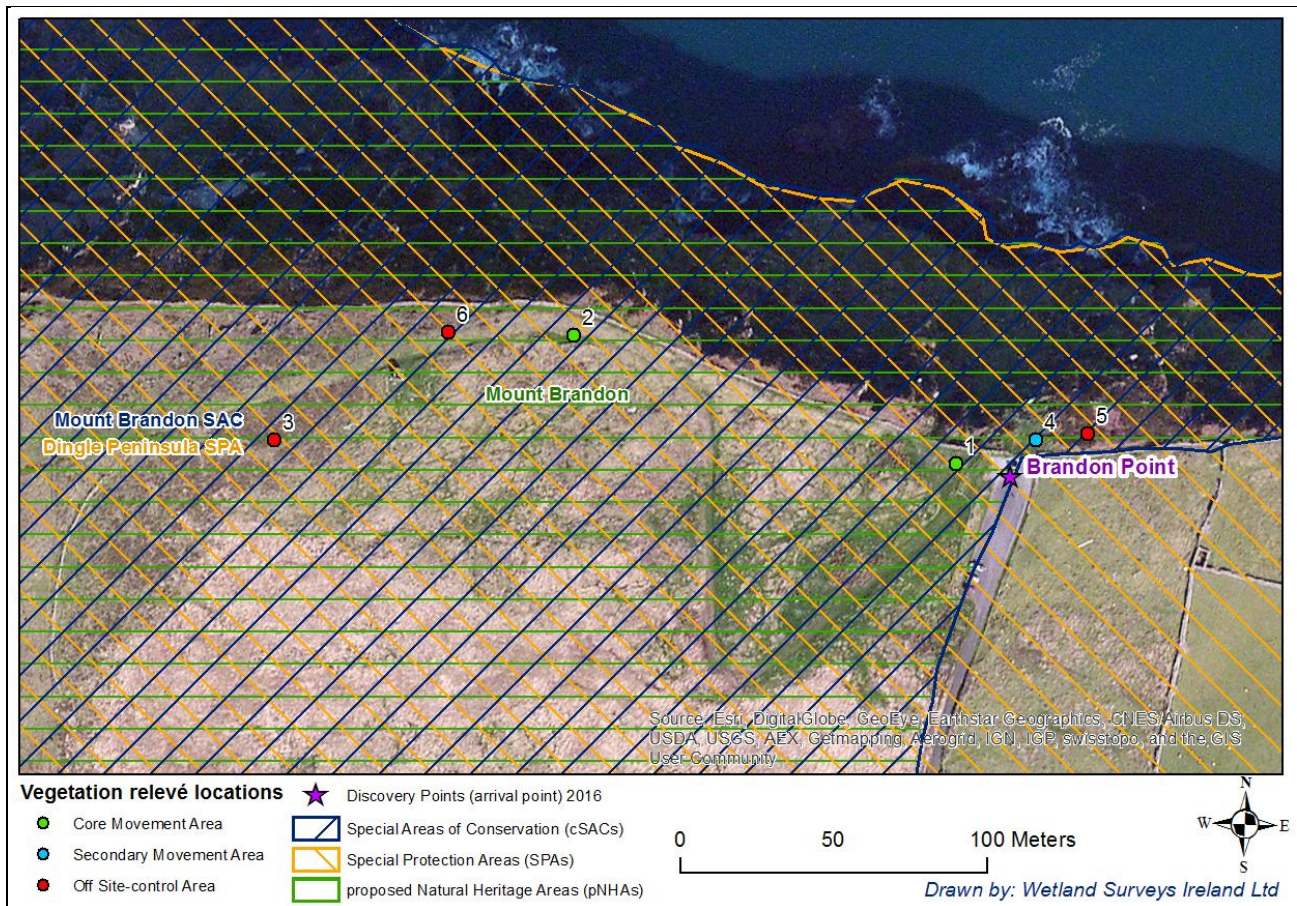


Figure 3.9: Brandon Point Discovery Point. The location of quadrats and designated sites is indicated.

### 3.9.3 Baseline Ecology of study area

Six vegetation quadrats were recorded at Brandon Point as summarised in Table 3.18. The main semi-natural habitats in the area include maritime grassland (GS1), dry heath (HH1) and sea cliffs (CS1 & CS3). In the managed areas of that site buildings and artificial surfaces (BL3) are present.

The data collected during the survey shows that the grassland and heath to the west of the site are managed for sheep grazing. The cliff-top habitats along the un-surfaced track are mostly in good condition with some degradation noted in the most heavily trafficked area. The more inaccessible areas on the cliff-top are in good condition as are the heathland habitats removed from the track.

Detailed quadrat data for the site is presented in Appendix 1.

Table 3.18: Summary details of each quadrat recorded at Brandon Point

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Fair
2	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation/Grazing	Fair
3	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]	Grazing – sheep	Good
4	Secondary Movement Area	GS1 Dry calcareous and neutral grassland	NA	Recreation	Fair
5	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]	None	Good

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
6	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]	Grazing – sheep	Good

### 3.9.4 Preliminary assessment of visitor impact

Negative localised impacts on the site observed during the 2016 ecology survey included minor trampling of low value grassland habitat along track north of the lay by near cliffs and on track leading westwards to hut. Bird nesting sites along the cliffs are sufficiently removed from visitor areas that disturbance impacts are unlikely to arise.

In conclusion, visitors are having a minor adverse impact on low value habitats of the area. No impacts on higher value habitats were recorded (heath and cliff habitats).

#### 3.9.4.1 Mount Brandon cSAC Conservation Objectives

SSCOs for the Mount Brandon cSAC have been published by NPWS (2016)<sup>23</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

The current study describes the vegetation communities that occur in those areas frequented by visitors. The data collected during the study suggests that current levels of visitor use is not having an adverse effect on the site in view of the site's conservation objectives. Minor impacts were noted amongst grassland habitat that does not correspond with Annex I habitat for which the site is selected. No impacts on Annex I habitats were observed.

#### 3.9.4.2 Dingle Peninsula SPA Conservation Objectives

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>24</sup> as follows:

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

The species for which the site is designated are mostly restricted to coastal and marine habitats that are somewhat removed from the discovery point and are inaccessible to most visitors (cliff habitat). However, potential for disturbance to nesting and foraging birds is possible.

Potential disturbance impacts are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

### 3.9.5 Recommendations

Based on the outcome of the current study, no significant adverse impacts on the ecology of the area are evident.

In the event of increased visitor numbers future ecological monitoring is recommended.

Monitoring potential disturbance impacts on bird species of the Dingle Peninsula SPA is recommended.

<sup>23</sup> NPWS (2016) Conservation Objectives: Mount Brandon SAC 000375. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>24</sup> NPWS (2016) Conservation objectives for Dingle Peninsula SPA [004153]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

### 3.10 Basket Interpretation Centre, County Kerry

#### 3.10.1 Site Description

The Basket Interpretation Centre is located at the western end of the Dingle peninsula in County Kerry, close to the village of Dun Chaoin.



Plate 3.10: Basket Interpretation Centre, County Kerry

The Centre is situated at the halfway point of the Sleah Head Drive. The centre is located amongst lowland agricultural grassland close to the shore and faces the Blasket Islands to the west.

The centre itself is a cultural museum that honours the unique community who lived on the Blaskets until their evacuation in 1953. The centre is one of the signature points on the Wild Atlantic Way, although no Wild Atlantic Way sign is present.

There is a designated walk available to visitors, although on the day of surveying many of the visitors only stayed at the centre itself. There is a large area for both cars, bicycles and tour buses to park, a visitor centre with restaurant and toilets. The grounds of the centre include managed grassland areas together with ornamental planting and flower beds situated around the large car park.

#### 3.10.2 Ecological Constraints

The Basket Interpretation Centre Discovery Point occurs within the Dingle Peninsula SPA (see Table 3.19 and Figure 3.10).

The habitats on site are of low value to special conservation interests of the SPA. The Blasket Islands cSAC occurs approximately 0.1km west of the discovery point and is unlikely to be affected by visitors to the Basket Interpretation Centre Discovery Point which is well managed to cater for large numbers of visitors.

Table 3.19 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
004153	Dingle Peninsula SPA	Generic version 5.0 (NPWS 2016)	The Discovery Point occurs within the Dingle Peninsula SPA.	<u>Annex I Bird Species</u> Peregrine falcon [A103] Chough [A346] <u>Other Bird Species</u> Fulmar
002172	Blasket Islands cSAC	Site Specific Conservation Objectives. Version 1.0 (NPWS 2014)	The Discovery Point occurs ca 0.1km east of the cSAC at its nearest point.	<u>Annex I Habitats</u> Reefs [1170] Sea cliffs [1230] Dry heaths [4030] Sea caves [8330] <u>Annex II Species</u> Harbour Porpoise Grey Seal



**Figure 3.10: Blasket Interpretation Centre Discovery Point. The location of quadrats and designated sites is indicated.**

### 3.10.3 Baseline Ecology of study area

Five vegetation quadrats were recorded at Blasket Interpretation Centre Discovery Point as summarised in Table 3.20.

The area subject to survey were within the grounds of the interpretative centre and are managed as amenity areas. Much of the site comprises surfaced car parking with modern buildings. Soft landscaping includes grassland areas that are mown regularly.

Two grassland areas to the east of the centre retain some heathland elements and continue to support a relatively species rich sward and are classed as humid acid grassland (GS3). Orchids have been recorded from this area in the past (Crushell pers. obs.). Elsewhere the grassland areas are intensively managed and have a species poor sward being subject to regular mowing and fertiliser application. An area of grassland to the north of the centre has recently been reseeded. The grass swards grows through a hard wearing plastic mesh which has been installed to reduce the effects of regular trampling.

The entire site is managed as an amenity area and no evidence of visitor impacts on the ecology of the site were noted.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.20: Summary details of each quadrat recorded at Blasket Interpretation Centre**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	GA2 Amenity grassland (improved)	NA	Amenity Management	Good
2	Core Movement Area	GA2 Amenity grassland (improved)	NA	Amenity Management	Good
3	Off Site-control Area	GS3 Dry-humid acid grassland	NA	Amenity Management	Good
4	Off Site-control Area	GS3 Dry-humid acid grassland	NA	Amenity Management	Fair
5	Off Site-control Area	GA2 Amenity grassland (improved)	NA	Amenity Management	Good

### 3.10.4 Preliminary assessment of visitor impact

No adverse impacts on the site were observed during the 2016 ecology survey.

The site is primarily managed as an amenity area and measures have been taken to reduce the effects of trampling on grassland areas. Some grassland areas retain a good suite of native species.

#### 3.10.4.1 Blasket Islands cSAC Conservation Objectives

SSCOs for the Mount Brandon cSAC have been published by NPWS (2014)<sup>25</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

The discovery point is located >0.1km from the cSAC at its nearest point. The qualifying interests of the SAC include marine and coastal habitats and species that are well removed from the interpretative centre. Based on a review of the SSCOs for the site and considering the results of the current monitoring it is confirmed that there are no adverse impacts on the cSAC due to the use of the discovery point.

#### 3.10.4.2 Dingle Peninsula SPA Conservation Objectives

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>26</sup> as follows:

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

The species for which the site is designated are mostly restricted to coastal and marine habitats that are somewhat removed from the discovery point and are inaccessible to most visitors (cliff habitat). It is considered unlikely that use of the interpretative centre is having any disturbance related impacts on species for which the SPA is designated.

### 3.10.5 Recommendations

This is a well managed visitor site with no impacts on ecological receptors noted.

It is recommended that the grassland areas within the site be managed to enhance the biodiversity value of the site (reduce fertiliser application and frequency of mowing).

<sup>25</sup> NPWS (2014) Conservation Objectives: Blasket Islands SAC 002172. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>26</sup> NPWS (2016) Conservation objectives for Dingle Peninsula SPA [004153]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

Future ecological monitoring is not recommended.

### 3.11 Rossbeigh Strand, County Kerry

#### 3.11.1 Site Description

Rossbeigh Strand is a Blue flag beach located about 1.6km from Glenbeigh on the Ring of Kerry. The sandy exposed beach is associated with a dune system on a sand spit extending north from the Iveragh peninsula. The beach is situated directly opposite Inch sand spit on the Dingle peninsula to the north.



Plate 3.11: Rossbeigh Strand, County Kerry

Rossbeigh Strand has ample parking for visitors on a heavily modified gravel bank. The sand dunes at Rossbeigh Strand are prone to damage due in part to the large footfall that occurs. The beach and dunes are used for horse riding on a regular basis.

Exposed sandy beach with loose rocky bank above high water mark, to the north is a spit with intact dune system that appears to be actively eroding. The back

beach comprises areas of salt marsh. There is no grazing on the site.

#### 3.11.2 Ecological Constraints

The Rossbeigh Strand Discovery Point occurs within the Castlemaine Harbour cSAC / pNHA, and the Castlemaine Harbour SPA (see Table 3.21 and Figure 3.11). Five Annex I habitat types for which the Castlemaine Harbour cSAC is designated occur within the Discovery Point environs; tidal mudflats, marram dunes (white dunes), fixed dunes (grey dunes), Atlantic salt meadows, and Mediterranean salt meadows (NPWS<sup>27</sup>). These habitats types are vulnerable to negative impacts arising from visitor activities.

The Castlemaine Harbour SPA is designated for sixteen birds of conservation concern. Though, a species listed on Annex I of the EU Birds Directive may potentially use dune grasslands for foraging. Significant numbers of water birds utilise the intertidal habitats during the winter months (NPWS 2011).

Table 3.21 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Code	Site	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000343		Castlemaine Harbour cSAC / pNHA	Site Specific Conservation Objectives (NPWS 2011)	The Discovery Point occurs within the cSAC / pNHA.	<u>Annex I Habitats</u> Estuaries [1130] Tidal mudflats [1140] Drift lines [1210] Perennial vegetation of stony banks [1220] Sea cliffs [1230] Salicornia mud [1310] Atlantic salt meadows [1330] Mediterranean salt meadows [1410] Embryonic shifting dunes [2110]

<sup>27</sup> NPWS (2011) Conservation Objectives: Castlemaine Harbour SAC 000343 and Castlemaine Harbour SPA 004029. Version 2.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.



NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
				Marram dunes (white dunes) [2120] Fixed dunes (grey dunes) [2130] Dunes with creeping willow [2170] Dune slacks [2190] Residual alluvial forests [91E0] <u>Annex II Species</u> Sea lamprey [1095] River lamprey [1099] Salmon [1106] Otter [1355] Petalwort [1395]
004029	Castlemaine Harbour SPA	Site Specific Conservation Objectives (NPWS 2011)	The Discovery Point occurs within the SPA.	<u>Annex I Bird Species</u> Bar-tailed Godwit [A157] Chough [A346] <u>Fifteen other water bird species and wetlands.</u>

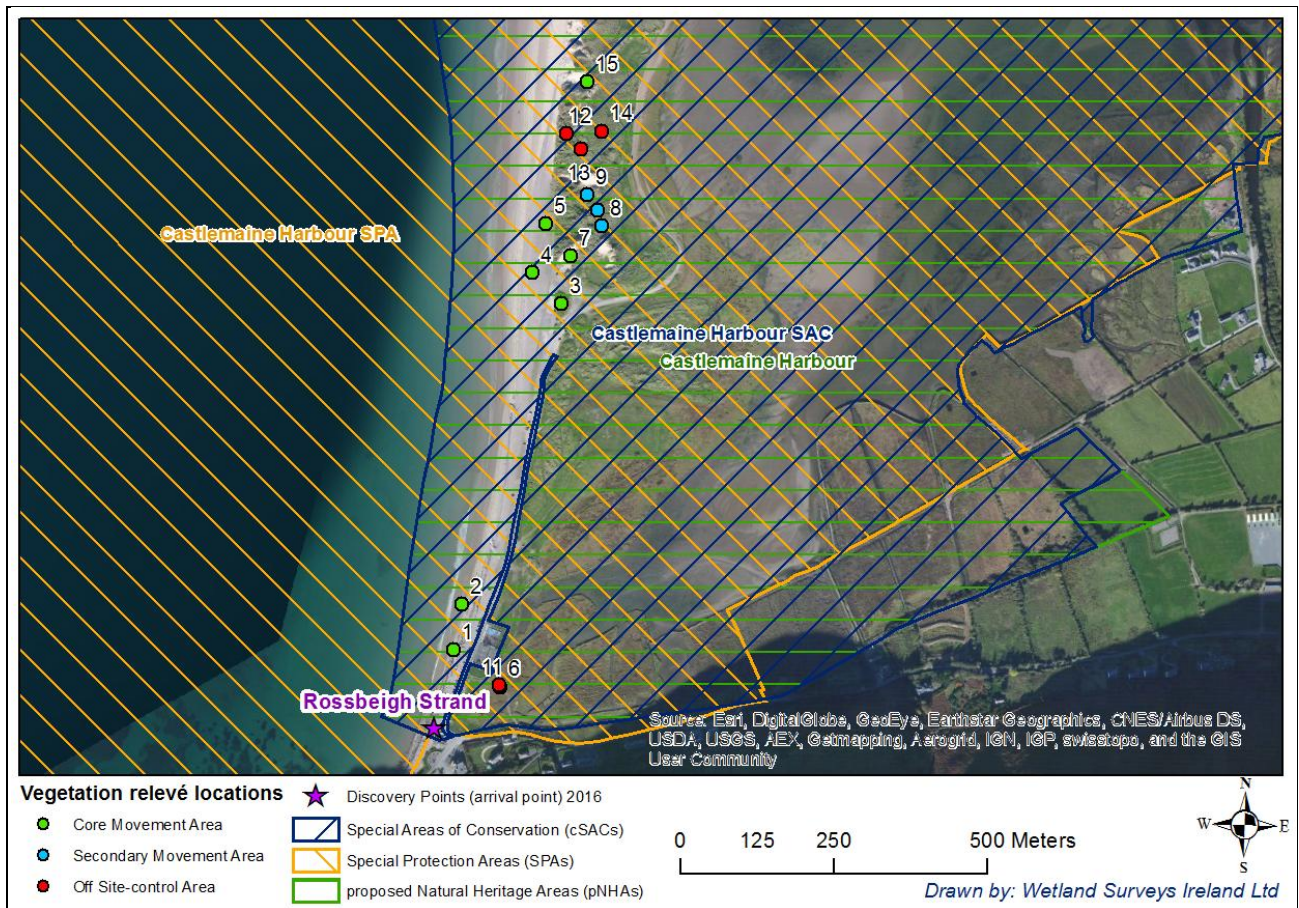


Figure 3.11: Rossbeigh Strand Discovery Point. The location of quadrats and designated sites is indicated.

### 3.11.3 Baseline Ecology of study area

Fifteen vegetation quadrats were recorded at Rossbeigh Strand as summarised in Table 3.22.

The exposed sandy beach is subject to significant wave action. The beach is used by high numbers of walkers throughout the year.

Salt marsh areas to the east of the main beach are relatively un-disturbed and in good condition although some habitat loss has occurred in the past due to development of recreational facilities. Visitors generally avoid the salt marsh area. The dune system shows signs of continued active erosion. A severe erosion event within the past decade resulted in the loss of a significant area of dune habitat towards the northern end of the spit. Recreational pressures exist throughout the dune system, although mostly concentrated towards the southern end where a dense network of un-surfaced paths exist.

The data collected during the survey indicates that the offsite control areas are in good condition, and are undisturbed by visitors to the Discovery Point. Secondary movement areas show some minor localised visitor impacts along unpaved paths. Core movement areas show moderate visitor impacts along unpaved paths through dunes to the beach.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.22: Summary details of each quadrat recorded at Rossbeigh Strand**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
01	Core Movement Area	CB1 Shingle and gravel banks	NA	None	Good
02	Core Movement Area	LR4 Mixed substrate shores	NA	Recreation	Good
03	Core Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Recreation	Fair
04	Core Movement Area	CB Shingle and gravel banks	NA	Recreation	Good
05	Core Movement Area	CB Shingle and gravel banks	NA	Recreation	Good
06	Secondary Movement Area	ED2 Spoil and bare ground	NA	Recreation	Good
07	Core Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	Recreation	Bad
08	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Fair
09	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Recreation	Poor
10	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Recreation	Poor
11	Off Site-control Area	CM2 Upper salt marsh	Atlantic salt meadows [1330]	None	Good
12	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good
13	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good
14	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good
15	Core Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Bad

### 3.11.4 Preliminary assessment of visitor impact

Trampling of vegetation and erosion of pathways is evident throughout much of the dune system. The effects of visitor access to the dunes is likely to be compounding the effects of natural erosion.

The salt marsh is largely undisturbed although some amenity development has encroached into the area. Vehicle access to back beach has caused a loss and some damage to coastal grasslands. The habitats most used by wintering birds are somewhat removed from visitor pressures. Potential impacts on breeding

waders.

In conclusion, visitors are having moderate adverse impact on the ecology of the area.

#### **3.11.4.1 Castlemaine Harbour cSAC Conservation Objectives**

SSCOs for the Castlemaine Harbour cSAC have been published by NPWS (2011)<sup>28</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level. As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach.

The current study has identified adverse impacts on marram and fixed dune habitat, which are listed as a QIs for the site. Under the attributes 'habitat area' and 'habitat distribution' for these habitat, the targets in the SSCOs include:

- area stable or increasing, subject to natural processes
- no decline subject to natural processes

The effects of trampling is likely to be impacting on the habitat area and distribution by making impacted areas more susceptible to erosion.

In relation to fixed dunes the target under the attribute 'vegetation structure: bare ground' in the SSCOs is to:

- Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes.

In places, the effects of recreational activities have resulted in bare ground developing along informal pathways through fixed dune habitat.

Similarly, in relation to marram dunes, the target under the attribute 'vegetation composition: typical species and sub-communities' in the SSCOs is to:

- maintain the presence of species-poor communities dominated by marram grass'.

The effects of trampling has reduced the local cover of typical species and sub-communities within this habitat.

#### **3.11.4.2 Castlemaine Harbour SPA Conservation Objectives**

SSCOs for the Castlemaine Harbour SPA have been published by NPWS (2011)<sup>26</sup>. This document sets targets for a range of attributes for each Special Conservation Interests (SCIs) that are used to define favourable conservation condition at the site level.

The attributes and associated targets common to most SCIs include the following:

- Population trend - Long term population trend stable or increasing
- Distribution - No significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation

As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach. Potential impacts on the SPA primarily relate to potential disturbance to Special Conservation Interests for which the site is selected. There is a high level of recreational activity such as walking (including with dogs) that could give rise to disturbance impacts.

Disturbance impacts could potentially affect the favourable conservation condition at the site level by decreasing the range of areas used by waterbird species. This could in turn have an effect on the populations of waterbirds using the site.

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<sup>28</sup> NPWS (2011) Conservation Objectives: Castlemaine Harbour SAC 000343 and Castlemaine Harbour SPA 004029. Version 2.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

A previous disturbance assessment presented in NPWS (2011)<sup>29</sup> has identified moderate disturbance impacts to waterbirds from recreational activities (sailboarding and wind surfing) at Rossbehy Creek (count subsites OK475).

Potential disturbance impacts are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

### **3.11.5 Recommendations**

Appropriate management and control of visitors in the dune area is required in order to avoid further damage.

Improved public awareness of sensitive areas would help together with measures aimed at directing visitors away from sensitive habitat. Soft engineering approaches aimed at rehabilitating the worst affected areas should be considered.

Future ecological monitoring is recommended.

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<sup>29</sup> NPWS (2011) Castlemaine Harbour Special Protection Area. Conservation Objectives Supporting Document. March 2011.

### 3.12 Mountain Stage, County Kerry

#### 3.12.1 Site Description

Mountain Stage is comprised of two lay-bys on the main Ring of Kerry route located approximately 6.6km west of Glenbeigh. The site overlooks Dingle Bay over to the Dingle peninsula. Both Rossbeigh and Inch



Plate 3.12: Mountain Stage, County Kerry.

beaches can be seen jutting into Dingle Bay to the right hand side of the layby. Behind the site (to the south) there are the remains of the old Great Southern and Western Rail line. There is a proposal to re-open this line as a greenway.

There are no visitor facilities at the Mountain Stage site.

The lay-by is set into a steep north facing slope which is mostly dominated by dry heath.

A low wall defines the northern extent of the car park. Visitors tend to cross this wall to admire the view to the north.

#### 3.12.2 Ecological Constraints

The Mountain Stage Discovery Point occurs within the Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment cSAC / pNHA, and the Iveragh Peninsula SPA (see Table 3.23 and Figure 3.12). One annex I habitat of the cSAC occurs within the environs of the discovery point, dry heath [4030]. Much of the heath is located on steeply sloping terrain that is not accessible to visitors and there is little evidence of grazing.

The Iveragh Peninsula SPA is designated for five bird species including two species listed on Annex I of the EU Birds Directive; peregrine falcon and chough. Both peregrine and chough are likely to utilise habitats in proximity to the discovery point location with potential nesting habitat occurring along the sea cliffs. Kittiwake, fulmar, and guillemot are likely to be confined to habitats removed from the discovery point location.

Table 3.23 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
000365	Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment cSAC	Generic version 5.0 (NPWS 2016)	The discovery point occurs within the cSAC.	Fourteen Annex I habitats and twelve Annex II species. The only habitat relevant to the discovery point is Dry heath [4030]. The Annex II species Kerry slug [1024] may occur in proximity.
004154	Iveragh Peninsula SPA	Generic version 5.0 (NPWS 2016)	The Discovery Point occurs within the SPA.	<u>Annex I Bird Species:</u> Peregrine [A103] Guillemot [A199] Chough [A346] <u>Other Bird Species:</u> Fulmar [A009]

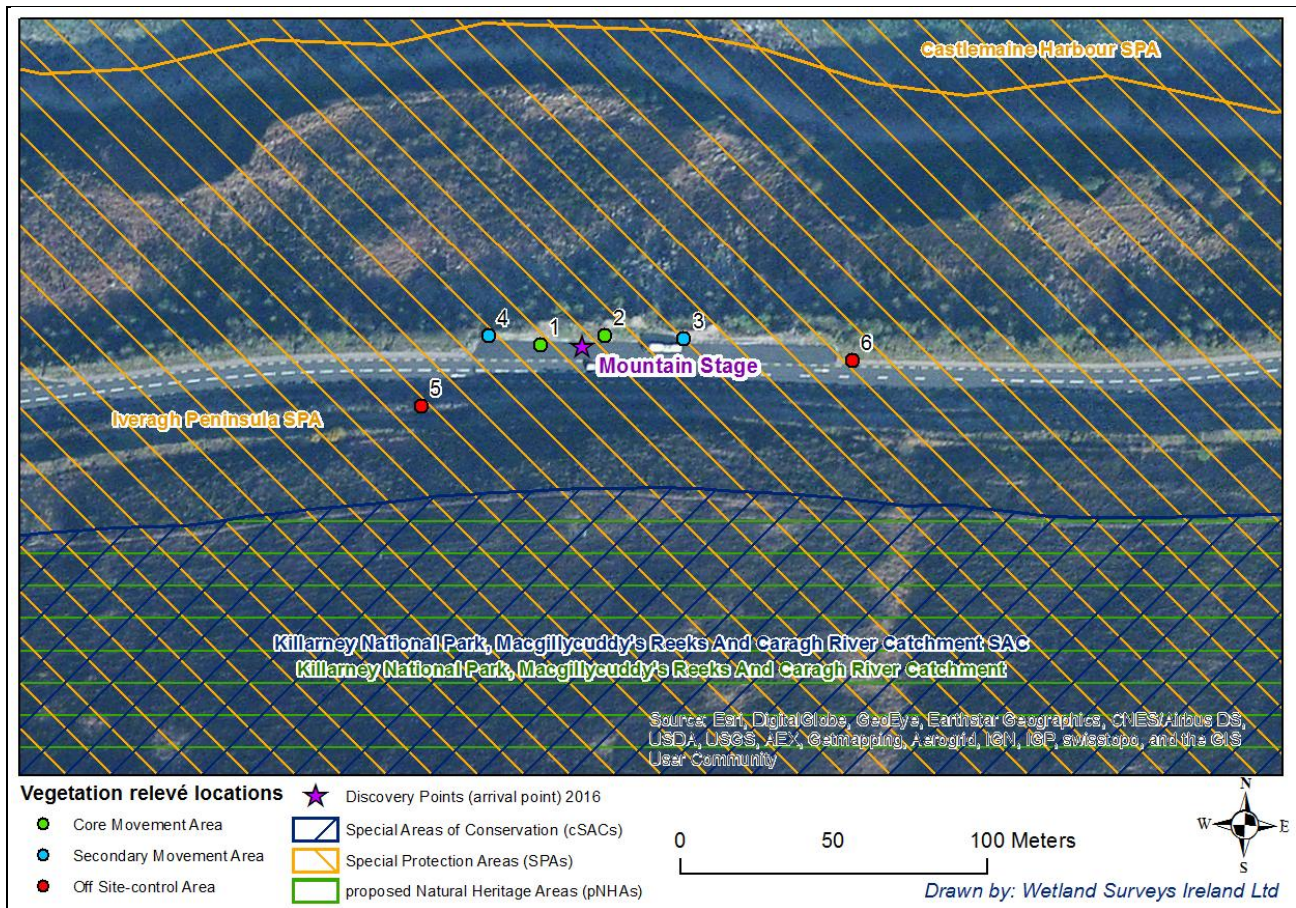


Figure 3.12: Mountain Stage Discovery Point. The location of quadrats and designated sites is indicated.

### 3.12.3 Baseline Ecology of study area

Six vegetation quadrats were recorded at Mountain Stage as summarised in Table 3.24.

The lay-by has an asphalt surfaced and is enclosed to the north by a low wall. The area to the north of the wall is heavily trampled and now corresponds with spoil and bare ground (ED2). Downslope to the north scrub and heather dominated heath occurs. To the south of the lay-by the mountain slopes are dominated by intact dry heath. No evidence of grazing.

Detailed quadrat data for the site is presented in Appendix 1.

Table 3.24: Summary details of each quadrat recorded at Mountain Stage

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Quality	Habitat	Landuse	Quadrat Condition Assessment
01	Core Movement Area	ED2 Spoil and bare ground	NA		Recreation	5
02	Core Movement Area	ED2 Spoil and bare ground	NA		Recreation	5
03	Secondary Movement Area	HH1 Dry siliceous heath	NA		Recreation	4
04	Secondary Movement Area	HH1 Dry siliceous heath	NA		Recreation	4
05	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]		None	2
06	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]		None	2

### 3.12.4 Preliminary assessment of visitor impact

Localised trampling of vegetation and exposure of bare soil to the north of lay-by is evident. The impact extends approximately 3-6m from the lay-by. This area is likely to have been previously disturbed due to

construction of the road and is of low ecological importance. The more sensitive heathland areas that surround the lay-by remain undisturbed. Steep slopes prevents access to these areas.

#### **3.12.4.1 Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment cSAC Conservation Objectives**

Generic Conservation Objectives for the SAC have been published (NPWS 2016)<sup>30</sup> as follows:

*To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.*

As outlined above the discovery point is located within the cSAC. However, most visitors are restricted to the road surface and some adjacent disturbed ground. The results of the current study indicate that the use of the lay-by as a discovery point is not having any effect on the designated site in view of the site conservation objectives.

#### **3.12.4.2 Iveragh Peninsula SPA Conservation Objectives**

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>31</sup> as follows:

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

The species for which the site is designated are mostly restricted to coastal and marine habitats that are somewhat removed from the discovery point and are inaccessible to most visitors (cliff habitat). It is considered unlikely that use of the lay-by is having any disturbance related impacts on species for which the SPA is designated.

#### **3.12.5 Recommendations**

Based on the outcome of the current study, habitats of low ecological value are impacted by visitor access causing trampling of vegetation and exposure of soil surface.

Provision of designated viewing platform to north of wall is recommended to prevent continued disturbance of habitat.

No further ecological monitoring is required at this managed site.

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<sup>30</sup> NPWS (2016) Conservation objectives for Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC [000365]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

<sup>31</sup> NPWS (2016) Conservation objectives for Iveragh Peninsula SPA [004154]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

### 3.13 Dooneen, County Cork

#### 3.13.1 Site Description

Dooneen is located approximately 1.3km northwest of Allihies village in County Cork. The site is a former copper mine that operated between 1812 and 1878.



Plate 3.13: Dooneen, County Cork

The discovery point comprises a surfaced lay-by on the western side of the main road. The surrounding habitats include heath and rock outcrops which slope down to an exposed shore with rocky cliffs to the west.

Old mine shafts and associated spoil heaps occur.

There is no grazing on the site.

#### 3.13.2 Ecological Constraints

At Dooneen the areas visited by visitors are largely within the Beara Peninsula SPA and adjacent to the Kenmare River cSAC see (see Table 3.25 and Figure 3.13).

The Beara Peninsula SPA is designated for the conservation of fulmar and chough (a species listed on Annex I of the EU Birds Directive). Suitable habitat for foraging chough occurs within the environs of the discovery point. Chough are sensitive to disturbance impacts that may arise from visitor activity at the discovery point.

The discovery point occurs immediately adjacent to the Kenmare River cSAC. Three habitats for which the site is designated occur within the environs of the discovery point; dry heath, calaminarian grasslands, and vegetated sea cliffs. Dry heath is vulnerable to negative impacts from visitor activity at the discovery point. The distribution of calaminarian grassland at the site is unclear although Holyoak and Lockhart (2011) do identify Doneen as a site that supports a small area of the habitat (0.34ha), they also state that the site supports the red data book liverwort *Cephaloziella massalongi*.

Vegetated sea cliffs are less vulnerable to adverse impacts arising from visitor activity at the discovery point due to their steep slopes making them inaccessible. Large shallow inlets and bays, sea caves, reefs also occur in close proximity to the discovery point. This habitat is unlikely to be impacted by visitor activity. No suitable habitat for those annex II species of the cSAC occur in proximity to the discovery point.

Table 3.25 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
004155	Beara Peninsula SPA	Generic version 5.0 (NPWS 2016)	The discovery point occurs within the SPA.	<u>Annex I Bird Species</u> Chough [346] <u>Other Bird Species</u> Fulmar [A009]
002158	Kenmare River cSAC	Site Specific Conservation Objectives. Version 1 (NPWS 2013)	The discovery point occurs adjacent to the cSAC.	<u>Designated for 11 Annex I habitats, three of which occur in proximity to the discovery point:</u>



NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
				Sea cliffs [1230] Dry heaths [4030] Calaminarian grasslands [6130]  <u>Designated for four Annex II Species, none of which are likely to occur at this site.</u>

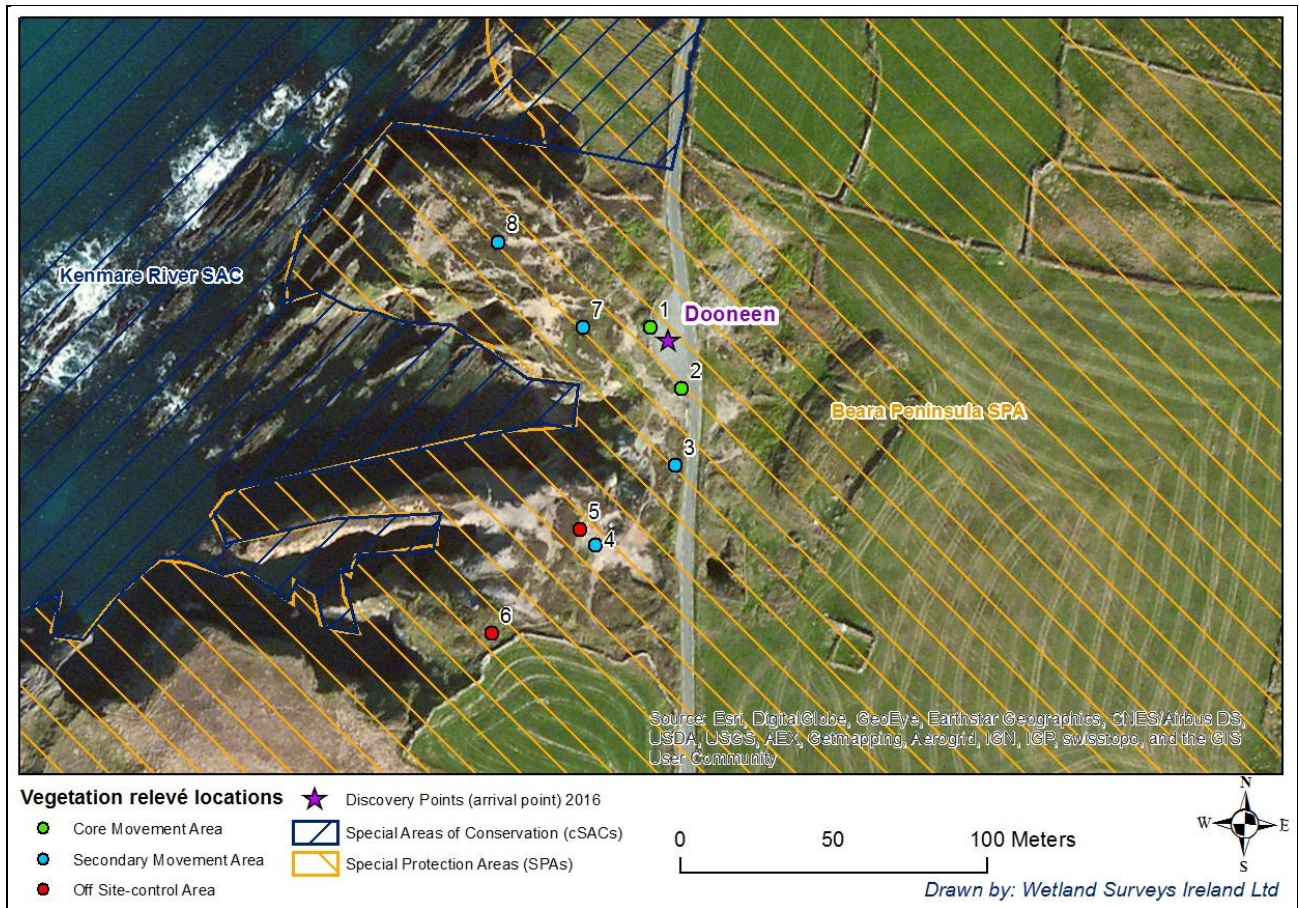


Figure 3.13: Dooneen Discovery Point. The location of quadrats and designated sites is indicated.

### 3.13.3 Baseline Ecology of study area

Eight vegetation quadrats were recorded at Dooneen as summarised in Table 3.26.

The area primarily supports dry heath vegetation with some areas of mine spoil that are likely to correspond with Calaminarian grassland as described by Holyoak and Lockhart (2011). This habitat can appear floristically dull with low vegetation cover but often support rare bryophyte species.

The data collected during the survey indicates that the offsite control and secondary movement areas are in good condition, and appear mostly undisturbed by visitors. The mine operations in the past are still evident by the sparse vegetation cover amongst old spoil, these areas support an unusual vegetation type and would require detailed bryophyte surveys to assess importance.

Detailed quadrat data for the site is presented in Appendix 1.

**Table 3.26: Summary details of each quadrat recorded at Dooneen**

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	ED3 Recolonising bare ground	NA	Amenity Management	Fair
2	Core Movement Area	ED3 Recolonising bare ground	NA	Amenity Management	Fair
3	Secondary Movement Area	ED3 Recolonising bare ground	Calaminarian grasslands [6130]	None	Good
4	Secondary Movement Area	ED3 Recolonising bare ground	Calaminarian grasslands [6130]	None	Good
5	Off Site-control Area	HH1 Dry siliceous heath	Calaminarian grasslands [6130]	None	Good
6	Off Site-control Area	HH1 Dry siliceous heath	Dry Heath [4030]	None	Good
7	Secondary Movement Area	HH1 Dry siliceous heath	Dry Heath [4030]	Recreation	Poor
8	Secondary Movement Area	HH1 Dry siliceous heath	Calaminarian grasslands [6130]	None	Good

Note: Calaminarian grassland [6130] habitat would require specialist bryophyte survey to confirm correspondence.

### 3.13.4 Preliminary assessment of visitor impact

Minor localised impacts on the site were recorded during the 2016 ecology survey. This was mostly confined to trampling of heath and grassland vegetation on a single informal track towards the headland west of the car park.

Should visitor numbers increase without appropriate management then such impacts can be expected to become more severe especially on heathland area on headland to the west of car park.

#### 3.13.4.1 Kenmare River cSAC Conservation Objectives

SSCOs for the Kenmare River cSAC have been published by NPWS (2013)<sup>32</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

As outlined above, the areas used by most visitors to the discovery point include the heathland areas to the west of the discovery point lay-by. This study has identified minor localised direct impacts on dry heath habitat, which is listed as a QI for the site. The effects of visitor trampling is having an adverse impact on the habitat as evident by increased cover of bare peat (physical structure) and altered vegetation composition and structure. It is concluded that visitor use of the area is having a minor adverse effect on the site in view of the site's conservation objectives.

#### 3.13.4.2 Beara Peninsula SPA Conservation Objectives

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>33</sup> as follows:

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

The species for which the site is designated are mostly restricted to coastal and marine habitats that are somewhat removed from the discovery point and are inaccessible to most visitors (cliff habitat). It is

<sup>32</sup>NPWS (2013) Conservation Objectives: Kenmare River SAC 002158. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>33</sup> NPWS (2016) Conservation objectives for Beara Peninsula SPA [004155]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

considered unlikely that use of the lay-by is having any disturbance related impacts on species for which the SPA is designated.

### **3.13.5 Recommendations**

Based on the outcome of the current study, minor localised impacts on the ecology of the area are occurring.

The area is known to be of importance to bryophytes. It is therefore important that any future works in the area be informed by specialist bryophyte surveys and ecological impact assessment.

Future ecological monitoring is recommended.

### 3.14 Garnish Point, County Cork

#### 3.14.1 Site Description

Garnish Point is located on the south-western tip of the Beara Peninsula in Co. Cork, and is the departure point for the cable car to Dursey Island. It is situated about 35 metres above sea level. Garnish point is separated from Dursey Island by a narrow sound known for its strong tides.



Plate 3.14: Car park at Garnish View.

At Garnish Point, the majority of the visitors remained in the car park and paved areas. Some visitors were observed to leave the vicinity of the car park and step onto grazed land/bare rock to take photos and/or cross the stile onto the trail. The area was popular for hikers who were observed to follow the way marked trails (un-surfaced paths). There is a car park, ticket office and toilet facilities at this point, as well as interpretative signs. The study area includes areas of wet

heathland, improved and semi-improved grassland and maritime grassland, as well as cliffs. The area around Garnish point is grazed by sheep, with the exception of the immediate area of the car park. Interpretive material is presented in the car park.

#### 3.14.2 Ecological Constraints

The Garnish Point Discovery Point occurs ca 140m from the Kenmare River SAC and within the Beara Peninsula SPA (see Table 3.27 and Figure 3.14). Dry heath, a qualifying habitat of Kenmare River SAC, occurs throughout much of the lands surrounding the car parks at Garnish Point. The heath occurs in association with semi-improved grassland. Sea cliffs also occur in proximity, some of which are likely to be of value to cliff nesting birds (including Chough), for which the Beara Peninsula SPA is designated. The discovery point also occurs within Garnish Point pNHA.

Table 3.27 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Site Code	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
002158	Kenmare River cSAC	Site Specific Conservation Objectives. Version 1 (NPWS 2013)	The Discovery Point occurs approximately 140m from the SAC.	<u>Designated for 11 Annex I habitats, two of which occur in proximity to the discovery point:</u> Dry heaths; and Sea cliffs <u>Four annex II species which are unlikely to occur in proximity to the discover point.</u>
004155	Beara Peninsula SPA	Generic version 5.0 (NPWS 2016)	The Discovery Point occurs within the SPA.	<u>Annex I Bird Species:</u> Chough ( <i>Pyrrhocorax pyrrhocorax</i> ) [A346] <u>Other Bird Species:</u> Fulmar ( <i>Fulmarus glacialis</i> ) [A009]
001986	Garnish Point pNHA	NA	The Discovery Point occurs within the pNHA	Coastal site with heath, semi-natural grassland and sea cliffs with significant bird populations.

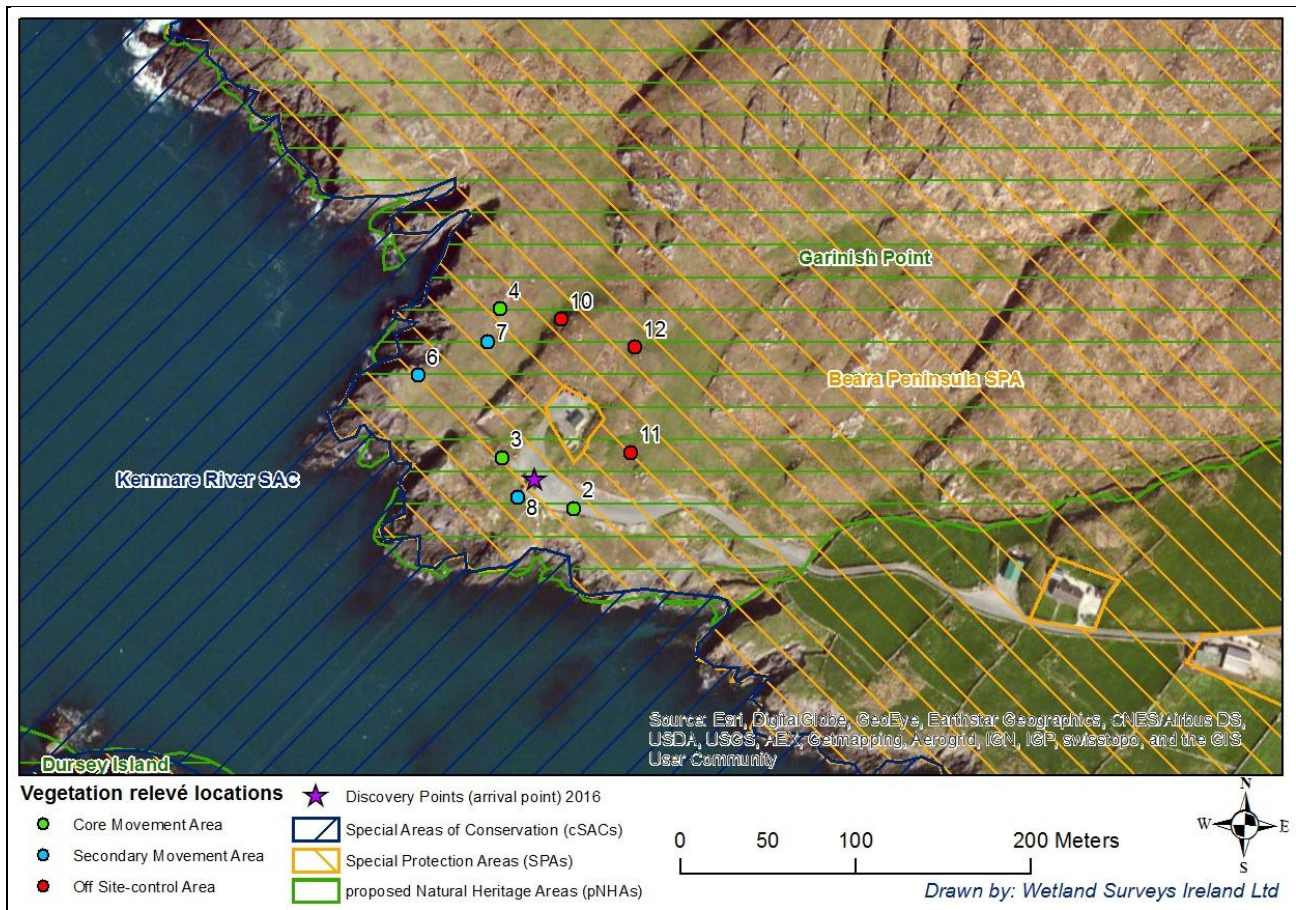


Figure 3.14: Garnish Point Discovery Point. The location of quadrats and designated sites is indicated.

### 3.14.3 Baseline Ecology of study area

Nine vegetation quadrats were recorded at Garnish Point as summarised in Table 3.28.

The main habitats in the area surrounding the car parks include dry-humid acid grassland (GS3) and dry heath (HH1) which are regularly traversed by visitors.

The data collected during the survey indicates that the offsite control areas are in good condition, and are relatively undisturbed by visitors to the discovery point. The survey indicates that core visitor areas are somewhat degraded by a combination of visitor pressure and grazing.

Detailed quadrat data for the site is presented in Appendix 1.

Table 3.28: Summary details of each quadrat recorded at Garnish Point

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
2	Core Movement Area	GS1 Dry calcareous and neutral grassland	NA	Amenity Management	Fair
3	Core Movement Area	ED1 Exposed sand, gravel or till	NA	Recreation	Poor
4	Core Movement Area	ED3 Recolonising bare ground	NA	Recreation/Grazing	Poor
8	Secondary Movement Area	HH1 Dry siliceous heath	Dry heath [4030]	Grazing - sheep	Good
6	Secondary Movement Area	GS3 Dry-humid acid grassland	NA	Grazing - sheep	Good
7	Secondary Movement Area	GS3 Dry-humid acid	NA	Grazing - sheep	Good

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
	Area	grassland			
8	Secondary Movement Area	HH1 Dry siliceous heath	Dry heath [4030]	Grazing - sheep	Good
10	Off Site-control Area	GS3 Dry-humid acid grassland	NA	Grazing - sheep	Good
11	Off Site-control Area	GS3 Dry-humid acid grassland	NA	Grazing - sheep	Good
12	Off Site-control Area	GS3 Dry-humid acid grassland	NA	Grazing - sheep	Good

### 3.14.4 Preliminary assessment of visitor impact

Negative impacts on the site observed during the 2016 quadrat survey included trampling of herbaceous and heath vegetation and the compaction of peat soil on informal tracks. The worst affected areas occur in proximity to the car park on the mainland, as well as desire lines leading from the main site car park. The trampling of vegetation in some of these informal paths has led to the creation of localised bare soil and erosion areas.

In conclusion, there is little visitor management in the area and the current level of use by visitors is having a minor impact on the sensitive ecology of the area. Should visitor numbers increase without appropriate management then such impacts can be expected to become more severe.

The impacts are of similar scale and magnitude as those recorded during the 2015 survey.

#### 3.14.4.1 Kenmare River cSAC Conservation Objectives

SSCOs for the Kenmare River cSAC have been published by NPWS (2013)<sup>34</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level.

As outlined above, the areas used by most visitors to the discovery point include the heathland areas to the west of the discovery point lay-by. This study has identified minor localised direct impacts on dry heath habitat, which is listed as a QI for the site. The effects of visitor trampling is having an adverse impact on the habitat as evident by increased cover of bare peat (physical structure) and altered vegetation composition and structure. It is concluded that visitor use of the area is having a minor adverse effect on the site in view of the site's conservation objectives.

#### 3.14.4.2 Beara Peninsula SPA Conservation Objectives

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>35</sup> as follows:

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

The species for which the site is designated are mostly restricted to coastal and marine habitats that are somewhat removed from the discovery point and are inaccessible to most visitors (cliff habitat).

However, it is possible that though foraging habitat (semi-improved grassland) is adversely impacted due to the effects of trampling.

<sup>34</sup>NPWS (2013) Conservation Objectives: Kenmare River SAC 002158. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

<sup>35</sup> NPWS (2016) Conservation objectives for Beara Peninsula SPA [004155]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

It is considered unlikely that use of the area by visitors may be causing local displacement of chough from an area of suitable foraging habitat. In addition, disturbance effects on nesting birds cannot be ruled out.

Potential impacts on bird species of the SPA are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.14.5 Recommendations**

Visitors are having a minor localised adverse impact at this site. Trampling of vegetation is restricted to the un-surfaced trails which are currently retaining a vegetation structure although any intensification of use by visitors is likely to lead to development of bare peat / soil and possible erosion issues.

Consideration should be given to the controlling / management of visitors to sensitive habitats.

Future ecological monitoring is recommended.

### 3.15 Barley Cove, County Cork

#### 3.15.1 Site Description

Barley Cove is located between two headlands on the Mizen Peninsula approximately 5km southwest of Goleen, County Cork. It comprises an exposed southwest facing sandy beach and associated dune system. There is a floating pontoon in place to manage visitor access and reduce impact on the natural surroundings (see opposite). Barley Cove currently has blue flag status.



Plate 3.15: Barley Cove, County Cork

There is a wooden walk way in place from the car park to the pontoon to ease the impact on the dunes.

There is a large car park with enough space for 20+ cars, toilet facilities and a shower are also in place for public use. At this site there is a Wild Atlantic Way sign in place, as well as a number of interpretative boards on wildlife and the dune habitat. There is no evidence of grazing on the site, other than by rabbits.

#### 3.15.2 Ecological Constraints

The Barley Cove Discovery Point occurs within the Barley Cove to Ballyrisode Point cSAC and pNHA, and the Sheep's Head to Toe Head SPA (see Table 3.29 and Figure 3.15). Six Annex I habitats for which the cSAC is designated occur within proximity to the discovery point; tidal mudflats, marram dunes (white dunes), fixed dunes (grey dunes), Atlantic salt meadows, Mediterranean salt meadows, and perennial vegetation of stony banks. Of these habitats, dunes are most sensitive to potential impacts from visitor use of the area.

The Sheep's Head to Toe Head SPA is designated for the protection of two bird species listed on Annex I of the EU Birds Directive; chough and peregrine falcon. The grasslands within the site are likely to be of value to chough as foraging and resting places.

Table 3.29 Designated sites in proximity and relevant sensitive ecological receptors

NPWS Code	Site	Site name	Conservation Objectives (October 2016)	Relationship with discovery point	Qualifying Interests / Sensitive Ecological Receptors
001040	Barley Cove to Ballyrisode Point	cSAC / pNHA	Site Specific Conservation Objectives. Version 1 (NPWS 2014)	The Discovery Point occurs within the cSAC / pNHA.	<u>Annex I Habitats</u> Tidal mudflats [1140] Perennial vegetation of stony banks [1220] Salicornia mud [1310] Atlantic salt meadows [1330] Mediterranean salt meadows [1410] Marram dunes (white dunes) [2120] Fixed dunes (grey dunes) [2130] Dry heaths [4030] <u>Annex II Species</u> Petalwort [1395]
004156	Sheep's Head to Toe Head	SPA	Generic version 5.0 (NPWS 2016)	The Discovery Point occurs within the SPA.	<u>Annex I Bird Species</u> Peregrine Falcon [A103] Chough [A346]



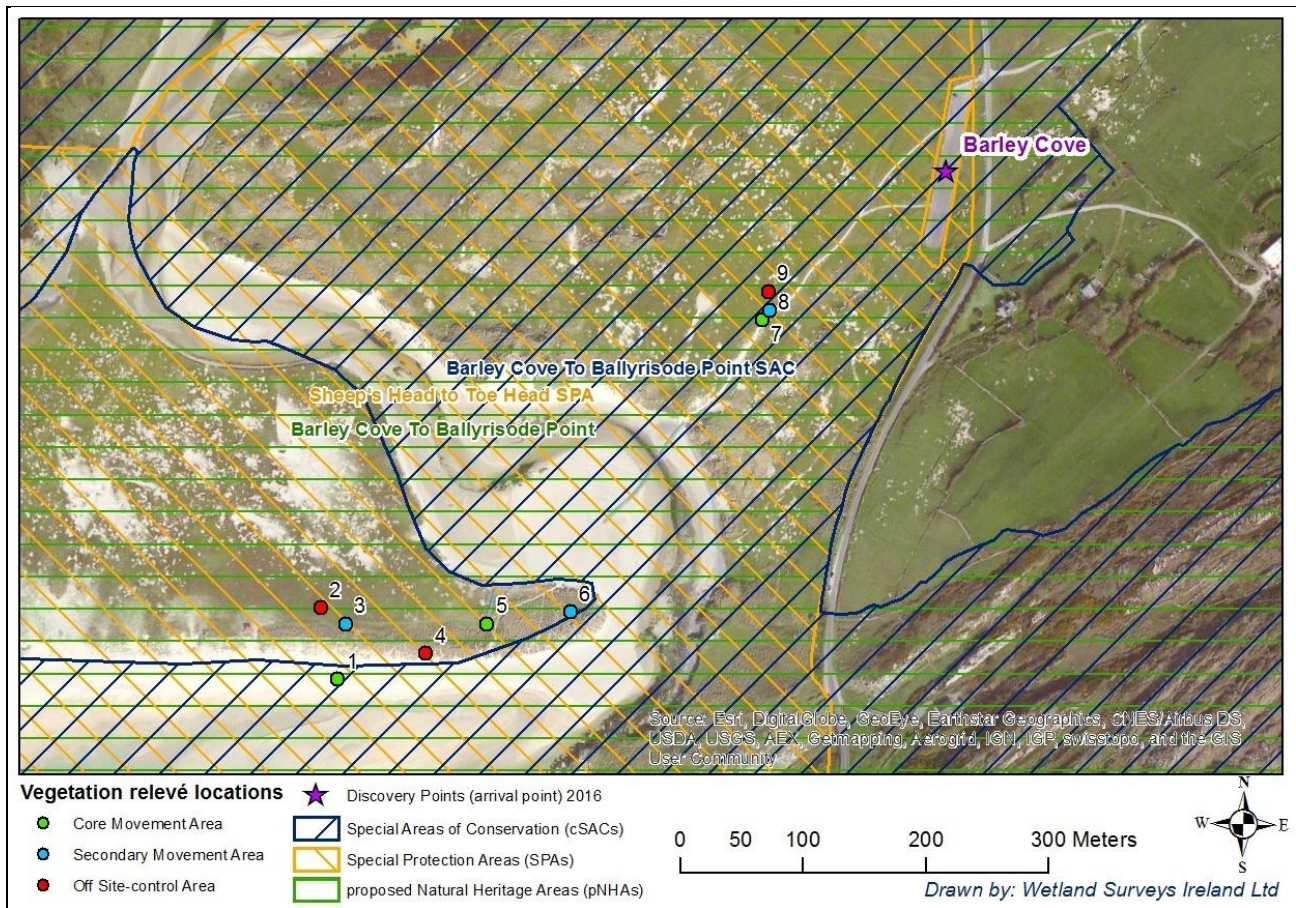


Figure 3.15: Barley Cove Discovery Point. The location of quadrats and designated sites is indicated.

### 3.15.3 Baseline Ecology of study area

Nine vegetation quadrats were recorded at Barley Cove as summarised in Table 3.30.

The principal habitat of the area is fixed dunes. There is a wooden boardwalk and floating pontoon in place to cater for visitors crossing dune habitat and a tidal river between the beach and the car park. The dune habitat is sensitive to trampling. The dunes are generally in good condition although some erosion due to recreational use was recorded.

Detailed quadrat data for the site is presented in Appendix 1.

Table 3.30: Summary details of each quadrat recorded at Barley Cove

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
1	Core Movement Area	LS2 Sandshores	NA	Recreation	Good
2	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good
3	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Recreation	Poor
4	Off Site-control Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Good
5	Core Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	Recreation	Poor
6	Secondary Movement Area	CD2 Marram dunes	Marram dunes (white dunes) [2120]	None	Fair

Quadrat Code	Quadrat Type	Quadrat Habitat Type	EU Habitat Quality	Landuse	Quadrat Condition Assessment
7	Core Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	Amenity Management	Fair
8	Secondary Movement Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Fair
9	Off Site-control Area	CD3 Fixed dunes	Fixed dunes (grey dunes) [2130]	None	Good

### 3.15.4 Preliminary assessment of visitor impact

The site is well managed from the car park, via a wooden boardwalk and floating pontoon over a tidal river as far as the dunes.

Adverse localised impacts on the site observed during the 2016 ecology survey included trampling of sand dune vegetation and the compaction of soil on informal tracks. In the worst affected areas on the site the surface is bare of vegetation (access tracks to beach). Impacts are especially notable in the dune area between the car park and the tidal river.

In conclusion, there is good but inadequate visitor management in the area to cater for the current level of use by visitors. Should visitor numbers increase without appropriate management then adverse impacts are likely to increase.

#### 3.15.4.1 Barley Cove to Ballyrisode Point cSAC Conservation Objectives

SSCOs for the Barley Cove to Ballyrisode Point cSAC have been published by NPWS (2014)<sup>36</sup>. This document sets targets for a range of attributes for each Qualifying Interest (QI) that are used to define favourable conservation condition at the site level. As outlined above, the areas used by most visitors to the discovery point include the sand dunes and intertidal sandy beach.

The current study has identified adverse impacts on marram and fixed dune habitat, which are listed as a QIs for the site. Under the attributes 'habitat area' and 'habitat distribution' for these habitat, the targets in the SSCOs include:

- area stable or increasing, subject to natural processes
- no decline, or change in habitat distribution, subject to natural processes

The effects of trampling is likely to be impacting on the habitat area and distribution by making impacted areas more susceptible to erosion.

In relation to fixed dunes the target under the attribute 'vegetation structure: bare ground' in the SSCOs is to:

- Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes.

In places, the effects of recreational activities have resulted in bare ground developing along informal pathways through fixed dune habitat.

Similarly, in relation to marram dunes, the target under the attribute 'vegetation composition: typical species and sub-communities' in the SSCOs is to:

- maintain the presence of species-poor communities dominated by marram grass'.

<sup>36</sup> NPWS (2014) Conservation Objectives: Barley Cove to Ballyrisode Point SAC 001040. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

The effects of trampling has reduced the local cover of typical species and sub-communities within this habitat.

#### **3.15.4.2 Sheep's Head to Toe Head SPA Conservation Objectives**

Generic Conservation Objectives for the SPA have been published (NPWS 2016)<sup>37</sup> as follows:

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

The species for which the site is designated (chough and peregrine falcon) nest amongst sea cliff habitat removed from the discovery point and are inaccessible to most visitors.

However, it is possible that chough foraging and resting habitat (semi-improved grassland) is adversely impacted due to the effects of trampling.

It is considered unlikely that use of the area by visitors may be causing local displacement of chough from areas of suitable foraging habitat.

Potential impacts on bird species of the SPA are beyond the scope of the current study and monitoring to gain an understanding of such impacts on the conservation objectives for the site is recommended.

#### **3.15.5 Recommendations**

Visitor activities at this site are having a minor adverse impact on dune system due to trampling on informal pathways. Consideration should be given to preventing further damage by controlling / managing visitor access to the beach.

Future ecological monitoring is recommended.

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<sup>37</sup> NPWS (2016) Conservation objectives for Sheep's Head to Toe Head SPA [004156]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

#### 4 Discussion and recommendations

Summary results of the survey in relation to each Discovery Point are presented in Table 4.1 below. Details that are presented include relevant designated sites, sensitive ecological features, impacts, and recommendations.

Of the fifteen sites surveyed all of them occur within or directly adjacent to sites designated for nature conservation. All of the sites surveyed are coastal sites. The features of ecological importance are remarkably consistent throughout most sites comprising coastal habitats (principally dune systems, dry heath, maritime grassland, and sea cliffs). Most of the discovery points are located within or nearby SPA sites designated for the protection of coastal sea birds, waterfowl, and waders.

Minimal and localised visitor impacts were observed at the majority of sites surveyed in 2015. These included:

Rosguill
Gola Island
Malainn Bhig
Elly Beach
Inishkea South Island
Scattery Island
Brandon Point
Basket Interpretation Centre
Mountain Stage
Dooneen

Visitor management at these ten sites ensures that sensitive habitats in the surroundings are safeguarded from potential impacts. In addition, it is considered that visitor activities at these sites do not result in any significant adverse ecological impacts, due in part to the pattern of use by visitors, short duration of stay, or currently low visitor numbers.

Those sites which showed more significant visitor impacts, often as a result of visitor use of fragile heath or dune areas for recreational activities such as walking, dog walking and horse riding included:

Lisfannon Beach
Castlegregory Beach
Rossbeigh Beach
Barley Cove
Garnish Point

At these five sites, some level of visitor impacts were noted on terrestrial habitats of ecological importance. These impacts are mainly associated with trampling of vegetation in areas regularly accessed by significant numbers of visitors. Such trampling may lead to exposure of bare soil/sand surfaces and thereby making the areas vulnerable to further erosion. The impacts are usually localised in nature and confined to the area being directly traversed. The impacted habitats are usually sand dunes, cliff-top maritime grassland and / or heathland areas.

A number of sites are located closeby areas used by large numbers of wintering waterbirds. These include; Lisfannon, Elly Beach, Inishkea South, Scattery Island, Castlegregory Beach, and Rossbeigh Strand. At most sites it is considered that the potential for significant displacement impacts is low. This conclusion is based on the following factors; the highest number of visitors occur during summer months when birds are at their summer breeding grounds, and the areas of most interest to wintering birds are intertidal mudflats and other wetlands that are sufficiently removed from those areas most frequently used by the majority of visitors. Despite these considerations, potential conflicts exist at Lisfannon and Rossbeigh Strand where recreational visitor numbers are likely to be significant even during winter and where there is an overlap between the area used by waterbirds and recreational visitors (i.e. inter-tidal beach). An assessment of

such impacts is beyond the scope of the current project but should be considered in any future monitoring programme.

Similarly some sites that are likely to be of value to breeding waders such as; Lisfannon, Elly Beach, Inishkea South, Gola Island, Castlegregory Beach, Rossbeigh Strand, and Barleycove Beach. At these sites wader species may nest on the upper sandy shores, gravel banks, or semi-natural grasslands which are also frequented by recreational users. An assessment of potential impacts on breeding waders at these sites is beyond the scope of the current project but should be considered in any future monitoring programme.

It is considered that the potential for cliff nesting sea bird colonies to be impacted is low, as the nest sites typically occur on the near vertical cliff faces that are inaccessible to most visitors and sufficiently removed that disturbance impacts would not occur. Most sea birds do not venture further inland than the coastal cliffs, spending most of their time foraging at sea.

Chough and Peregrine Falcon nest sites typically occur on sea cliffs and therefore impacts on these nesting birds are deemed unlikely. However, chough are known to utilise cliff-top habitats such as semi-improved maritime grassland for foraging. There is therefore potential for adverse impacts on chough due to displacement as a result of disturbance and habitat alteration. Incidental chough observations recorded from the current survey confirms that the species have not been displaced from these areas. Based on the current level of use of the sites surveyed it is considered that such impacts are highly unlikely to arise at any of the sites surveyed in 2016.

The key recommendations made during the current study relate to:

- Improve visitor management / controls: In those sites where ecological impacts have been recorded there is a requirement to improve visitor management. This can include (but not restricted to) such measures as:
  - Improved signage directing visitors away from sensitive areas;
  - Creation of surfaced pathways or raised boardwalks; and
  - Improved interpretation facilities informing visitors of the sensitivity of the area and appropriate behaviour / activities.

The choice of appropriate actions / measures will be site specific depending on the sensitivity and characteristics of the area.

- Ecological monitoring: In those sites where visitor pressures on ecological features have been recorded then further ecological monitoring is suggested. In other instances where there is an absence of sensitive ecological features in proximity to the Discovery Point and / or where visitor management is appropriate to the current and future levels of activity then monitoring is not recommended. Targeted monitoring of potential impacts on sensitive fauna (such as breeding and wintering birds) at particularly sensitive sites should be considered.

**Table 4.1: Summary results of ecological monitoring at WAW discovery points undertaken in 2016**

Discovery Point	Designated sites	Sensitive features	Ecological impacts <sup>38</sup>	Effects on Natura 2000 Conservation Objectives	Recommendation(s)
Lisfannon Beach	Lough Swilly cSAC Lough Swilly SPA Lough Swilly including Big Isle, Blanket Nook and Inch Lake pNHA	Coastal habitats (sand dunes)  Waders and wildfowl	Minor localised impacts on dunes	No adverse impacts on cSAC  SPA Monitoring required	Improve visitor management;  Further monitoring ((incl. SPA)
Rosguill	Tranarossan and Melmore Lough cSAC/pNHA Horn Head to Fanad Head SPA	Heathland habitat	Minor localised impacts on heath	Minor adverse impact on cSAC  No adverse impacts on SPA	Improve visitor management;  Further monitoring (incl. SPA)
Gola Island	Gweedore Bay and Islands cSAC/pNHA West Donegal Coast SPA	Coastal habitats (sea cliffs, wet heath, maritime grassland, sand dunes)  Seabirds	Minor localised impacts (desire lines) on heath and grassland	No adverse impacts on cSAC  SPA Monitoring required	Further monitoring in event of increased visitor numbers  SPA (birds) monitoring recommended
Malainn Bhig	Slieve League cSAC/pNHA West Donegal Coast SPA	Coastal habitats (maritime grassland, sea cliffs)  Cliff nesting birds	No discernible impacts identified	No adverse impacts on cSAC  SPA Monitoring required	SPA (birds) monitoring recommended
Elly Beach	Mullet/Blacksod Bay Complex cSAC/pNHA Blacksod Bay/Broadhaven SPA	Coastal habitats (sand dunes)  Breeding waders	No discernible impacts identified	No adverse impacts on cSAC  SPA Monitoring required	SPA (birds) monitoring recommended
Inishkea South Island	Inishkea Islands cSAC/pNHA Inishkea Islands SPA	Coastal habitats (sea cliffs, wet heath, maritime grassland, sand dunes);  Breeding waders, Barnacle geese, grey seals.	Minor localised impacts on low value habitats	No adverse impacts on habitats of cSAC  Grey Seal monitoring advised  SPA Monitoring required	Further monitoring in event of increased visitor numbers  Further targeted monitoring of impacts on fauna ((incl. SPA)
Scattery Island	Lower River Shannon cSAC River Shannon and River Fergus Estuaries SPA Scattery Island pNHA	Coastal habitats (salt marsh).	No discernible impacts identified Agricultural abandonment has impacted biodiversity value of island.	No adverse impacts on cSAC  No adverse impacts on SPA	Further monitoring in event that grazing livestock are re-introduced to assess effectiveness at enhancing biodiversity
Castlegregory Beach	Tralee Bay and Magharees	Coastal habitats (sand	Minor localised impacts on	Minor adverse impact on cSAC	Improve visitor management.

<sup>38</sup> This refers to potential impacts on terrestrial habitats. Potential impacts on birds and other fauna were not considered in detail.

*Wild Atlantic Way - Ecological Study of Visitor Movement Areas 2016*

Discovery Point	Designated sites	Sensitive features	Ecological impacts <sup>38</sup>	Effects on Natura 2000 Conservation Objectives	Recommendation(s)
	Peninsula, West to Cloghane cSAC / pNHA Tralee Bay Complex SPA	dunes).	dune habitat (QI of designated site)	SPA Monitoring required	Further monitoring (incl. SPA)
Brandon Point	Mount Brandon cSAC / pNHA Dingle Peninsula SPA	Coastal habitats (sea cliffs, maritime grassland, heathland)  Cliff nesting birds	Minor localised impacts on low value habitats	No adverse impacts on cSAC  SPA Monitoring required	Further monitoring (incl. SPA)
Basket Interpretation Centre	Dingle Peninsula SPA Basket Islands cSAC	None	None  No impacts on designated site QIs	No adverse impacts on cSAC  No adverse impacts on SPA	Enhance biodiversity value by appropriate management of grassland habitat
Rossbeigh Strand	Castlemaine Harbour cSAC / pNHA Castlemaine Harbour SPA	Coastal habitats (sand dunes and salt marsh);  Wintering birds, breeding waders	Moderate widespread impacts on coastal habitats (sand dunes, QI of designated site)	Adverse impact on cSAC (dune habitat)  SPA Monitoring required	Improve visitor management;  Rehabilitation;  Further monitoring (incl. SPA)
Mountain Stage	Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment cSAC Iveragh Peninsula SPA	Coastal habitats (dry heath)  Cliff nesting birds	Minor impact on low value habitat	No adverse impacts on cSAC  No adverse impacts on SPA	Improve visitor management
Dooneen	Beara Peninsula SPA Kenmare River cSAC	Coastal habitats (sea cliffs, grassland and dry heath);  Cliff nesting birds	Minor localised impacts on heath (QI of designated site)	Minor adverse impact on cSAC  SPA Monitoring required	Further monitoring (incl. SPA);  Specialist bryophyte input to planning of any future works
Garnish Point	Beara Peninsula SPA Garnish Point pNHA	Coastal habitats (sea cliffs, maritime grassland and dry heath);  Cliff nesting birds	Minor localised impacts on coastal habitats	Minor adverse impact on cSAC  SPA Monitoring required	Improved visitor management;  Further monitoring (incl. SPA)
Barley Cove	Barley Cove to Ballyrisode Point cSAC / pNHA Sheep's Head to Toe Head SPA	Coastal habitats (sand dunes);  Cliff nesting birds	Minor localised impacts on dune habitats (QI of designated site)	Minor adverse impact on cSAC  SPA Monitoring required	Improved visitor management;  Further monitoring (incl. SPA)

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**Appendix 1**

**Quadrat Data**

<b>Site Name</b>	<b>Site Survey Code</b>	<b>County</b>	<b>Page Number</b>
Lisfannon Beach	WAW16	Donegal	1
Rosguill	WAW17	Donegal	17
Gola Island	WAW18	Donegal	27
Malainn Bhig	WAW19	Donegal	47
Elly Beach	WAW20	Mayo	60
Inishkea South Island	WAW21	Mayo	71
Scattery Island	WAW22	Clare	89
Castlegregory Beach	WAW23	Kerry	107
Brandon Point	WAW24	Kerry	122
Blasket Interpretation Centre	WAW25	Kerry	134
Rossbeigh Strand	WAW26	Kerry	144
Mountain Stage	WAW27	Kerry	168
Dooneen	WAW28	Cork	180
Garnish Point	WAW29	Cork	196
Barley Cove	WAW30	Cork	214