

2019 Ecological Study of Visitor Movement Areas

ENVIRONMENTAL SURVEYING AND MONITORING OF THE WILD ATLANTIC WAY OPERATIONAL PROGRAMME

for:

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Section 1 Introduction and Background

CAAS were commissioned by Fáilte Ireland to undertake detailed ecological baseline surveys at fifteen¹ Discovery Points on the Wild Atlantic Way (see Figure 1.1 & Table 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 baseline for any future ecological monitoring at the sites.

Prior to the ecological study, a visitor observation survey examined the types, spatial patterns, and intensity of existing visitor activities at and adjacent to each of the Discovery Points². This visitor observation 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.

The focus of this ecological assessment is on flora composition, habitat condition and the use of birds and any other fauna observed on site as indicator species (where relevant).

All suggested remedial actions and recommendations made as a result of the Visitor Monitoring data and subsequent ecological assessments are to be considered with respect to all of the Policies and Objectives of the Wild Atlantic Way Operational Programme. Most notably Appendix V: Site Maintenance Guidelines. These guidelines provide robust measures to ensure any works that take place on site are designed and undertaken in an environmentally sensitive manner to ensure the protection of the ecological integrity of the site. Similarly, all remedial action must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all associated national regulations and relevant planning and consent processes as required.

1.1 Study Aims

The main aims of the ecological study include the following:

- Describe the existing ecological characteristics of areas at and in proximity to Discovery Points;
- Assess the potential for key species by focusing on ecological resource availability;
- 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 designated nature conservation sites (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.

¹ Note that a site referred to as Derrigimlagh Bog Signature Discovery Point was monitored in 2015 and this same site was monitored again in 2018. However, on review it has been discovered that this site is not in fact Derrigimlagh Bog Signature Discovery Point but a site further west at the Alcock and Browne memorial. As a result, Derrigimlagh Signature Discovery Point is included in the 2019 monitoring schedule.

² CAAS (2019) Visitor Observation Study Results: Environmental Surveying and Monitoring of the Wild Atlantic Way Operational Programme: Fáilte Ireland

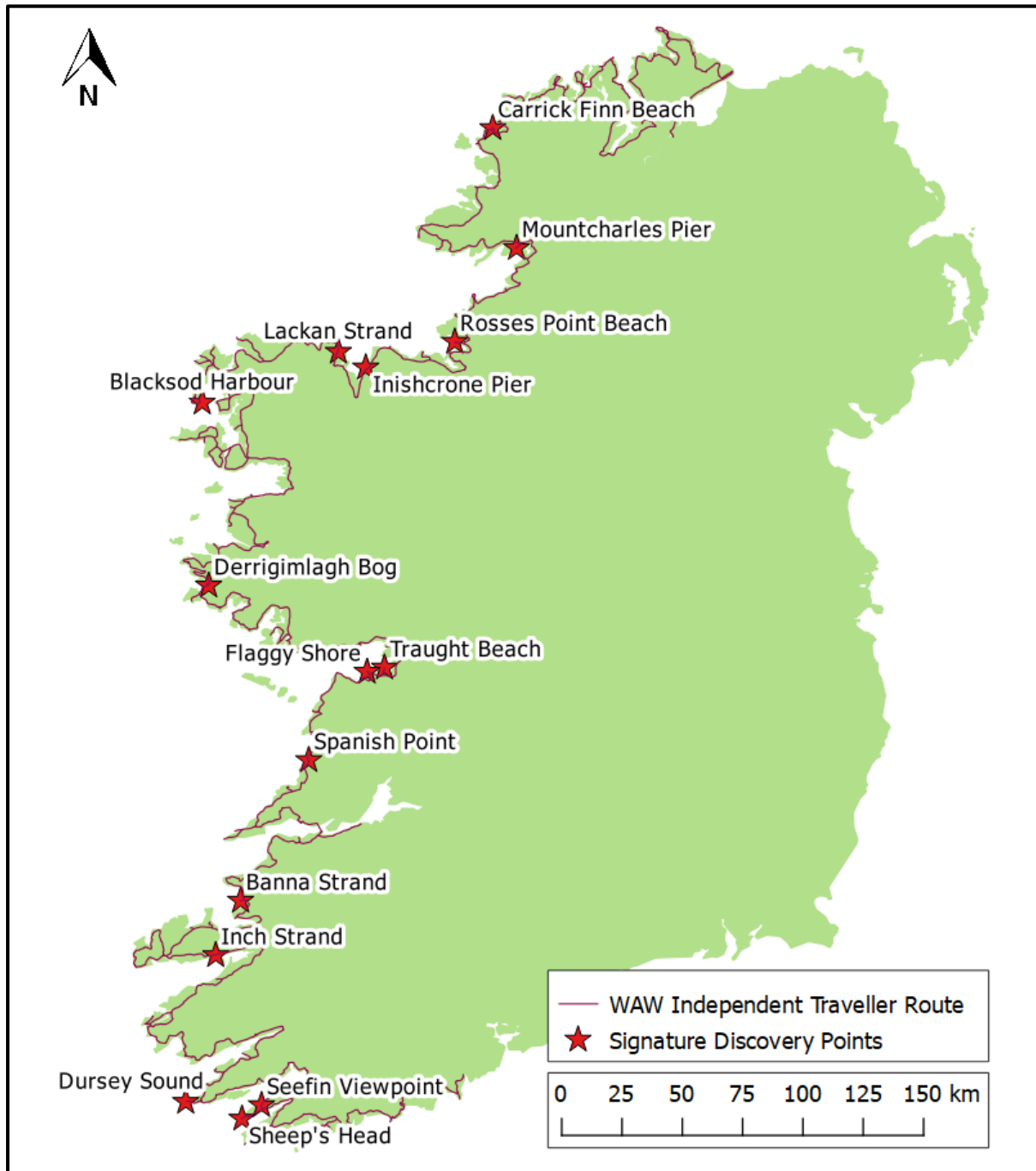


Figure 1.1 Discovery Points along the Wild Atlantic Way surveyed during 2019

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

| Site Name | County | Grid Coordinates (ITM) | |
|--------------------|---------------|-------------------------------|------------|
| Sheep's Head | Cork | 51.545875 | -9.826387 |
| Seefin Viewpoint | Cork | 51.595310 | -9.710842 |
| Dursey Sound | Cork | 51.610163 | -10.155192 |
| Inch Strand | Kerry | 52.141897 | -9.981500 |
| Banna Strand | Kerry | 52.338947 | -9.834602 |
| Spanish Point | Clare | 52.843028 | -9.433118 |
| Flaggy Shore | Clare | 53.156913 | -9.087879 |
| Traught Beach | Galway | 53.170903 | -8.986273 |
| Derrigimlagh Bog | Galway | 53.460631 | -10.022976 |
| Blacksod Harbour | Mayo | 54.099140 | -10.061838 |
| Lacken Strand | Mayo | 54.274180 | -9.256020 |
| Inishcrone Pier | Sligo | 54.220127 | -9.095890 |
| Rosses Point Beach | Sligo | 54.306928 | -8.574159 |
| Mountcharles Pier | Donegal | 54.630390 | -8.206151 |
| Carrickfinn Beach | Donegal | 55.037827 | -8.347060 |

Section 2 Methodology

2.1.1 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).

2.2 Flora Assessments

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. In all, 152 quadrats were recorded during the surveys. The various parameters recorded at each quadrat location are described in Section 3 below. In 2019 the focus of the survey was Discovery Points that fell within designated nature conservation sites (SAC/SPA/NHA). Dursey Sound³ is the control site and was revisited in 2019 after similar visitor impact surveys were undertaken in 2015, 2016, 2017 and 2018.

2.2.1 Quadrat Selection

A visitor behaviour survey undertaken during May, June and July 2019 examined the types, spatial patterns and intensity of existing visitor activities at and adjacent to each Discovery Point². Quadrats were selected by the ecologists within areas that were likely to receive maximum (core movement areas), moderate (secondary movement areas), and minimum or no loading (control areas).

The locations of quadrats were representative of each of these three categories and were later refined based on the outcome of the visitor surveys.

2.2.1.1 Quadrat Recording

Quadrats of the different vegetation types on the site were recorded in a specially designed digital database (Survey 123 and ESRI Collector for ArcGIS) 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 measurable 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; and
- 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, cover and height values for different plant groups etc.).

Photographic records of each habitat type were taken, which 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.

³ In 2015 and 2016 Dursey Sound was referred to as Garnish Point.

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).

2.2.1.2 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 |

2.2.1.3 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 Rose (2004) 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.

2.2.1.4 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 in May, June and July which is the optimum period however, some late flowering plants may not have been recorded. The GPS enabled field computer is accurate to within 5m.

Section 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, 152 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 152 quadrats is presented in Appendix I.

3.1 Sheep's Head, County Cork

3.1.1 Site Description

Sheep's Head is a narrow peninsula with a north-east to south-west orientation, bounded on the northern side by Bantry Bay and on the south side by Dunmanus Bay. The site extends from Ahakista in the east to the Sheep's Head lighthouse in the west. The Sheep's Head Discovery Point is located within the Sheep's Head Special Protection Area (SAC), the Sheep's Head to Toe Head Special Protected Area (SPA) and the Sheep's Head proposed National Heritage Area (pNHA). The site is designated for the protection of wet and dry heath, the Kerry slug (*Geomalacus maculosus*), the Peregrine falcon (*Falco peregrinus*) and Chough (*Pyrrhocorax pyrrhocorax*).



Plate 3.1 View over Lough Aikeen, Sheep's Head Way, County Cork

The Discovery Point is a carpark located south of 10km south-west of Kilcrohane, which acts as the trail head for the Sheep's Head Lighthouse looped walks (4km and 14km). The site is of interest to walkers, offering fantastic views over Dunmanus and Bantry Bays, and to bird-watchers. The Sheep's head site consists of single-lane road access, free parking for approx.

20 cars (12 marked spaces), but not for larger buses/coaches. There is a good indoor café, several outdoor picnic tables and a toilet block with wheelchair access. The café does not accept credit cards and mobile phone coverage is quite patchy at the site. The trail is waymarked but is rough under foot and is therefore unsuitable for buggies and wheelchairs. Beyond the carpark is a cul-de-sac to provide access to a cluster of dispersed private residences.

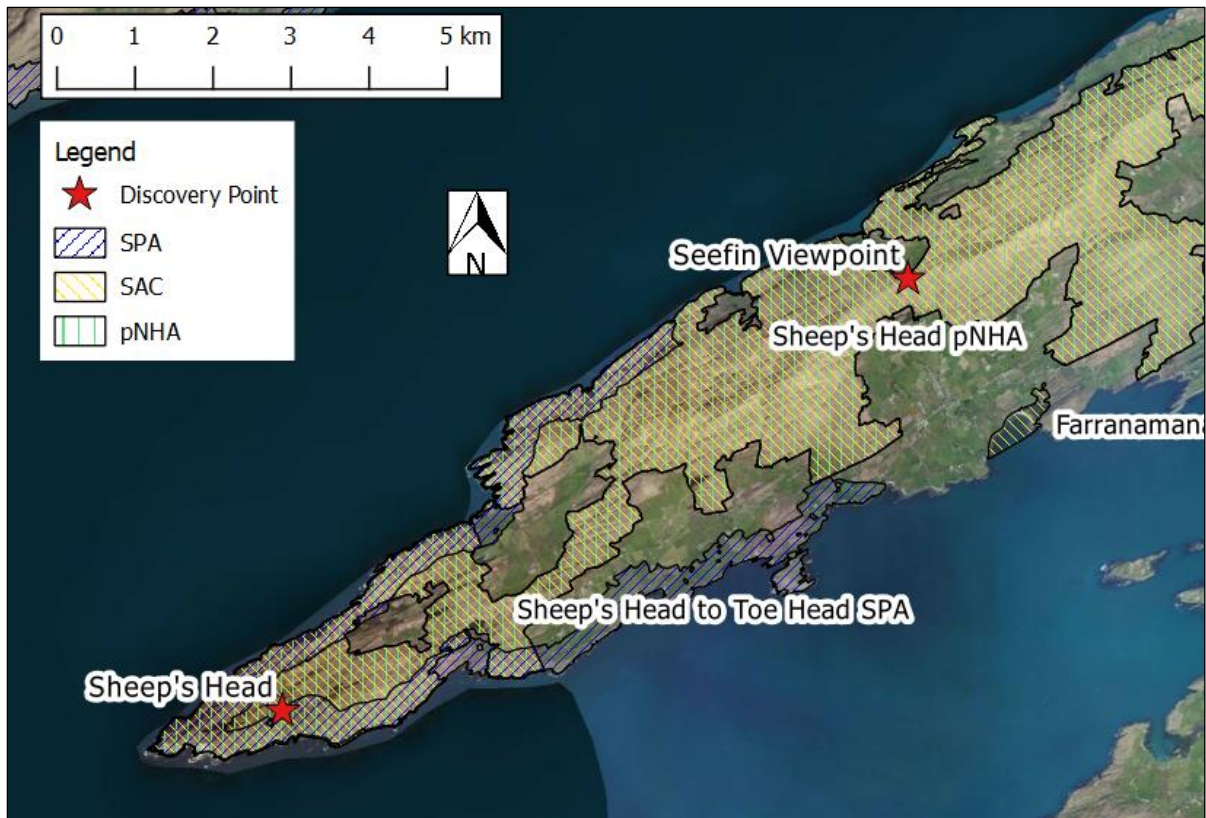


Figure 3.1 Site context map of the Sheep's Head Signature Discovery Point.

3.1.2 Ecological Constraints

The Sheep's Head Discovery Point carpark occurs within the Sheep's Head SAC, the Sheep's Head to Toe Head SPA and the Sheep's Head pNHA. Visitors walk along a 4km waymarked trail that leads towards the lighthouse and back, starting and ending at the carpark. The sites are designated for the protection of heath, the Kerry slug and sea birds that breed and forage on and around the cliffs.

Table 3.1 Designated sites in proximity to Sheep's Head and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|------------------------------|---------------------------------------|--|---|
| 000102 | Sheep's Head SAC | NPWS 2018 ⁴ | The Discovery Point occurs within the SAC. | <u>Designated for 2 Annex I habitats which occur in proximity to the Discovery Point:</u> Dry and wet heath. <u>One annex II species which is unlikely to occur in proximity to the Discovery Point.</u> Kerry Slug (<i>Geomalacus maculosus</i>) which occurs on open areas of rocky wet heath and grassland. Site is of high value for sea bird colonies that breed and forage around the cliffs. |
| 004156 | Sheep's Head to Toe Head SPA | NPWS 2018 ⁵ | The Discovery Point occurs within the SPA. | <u>Annex I Species:</u> Peregrine falcon (<i>Falco peregrinus</i>) [A103] Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346] <u>Other Bird Species:</u> Fulmar (<i>Fulmarus glacialis</i>) [A009] |
| NA | Sheep's Head pNHA | NA | The Discovery Point occurs within the pNHA | NPWS description from 000102 and 004156. |

⁴ NPWS (2018) Conservation objectives for Sheep's Head SAC [000102]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

⁵ NPWS (2018) Conservation objectives for Sheep's Head to Toe Head SPA [004156]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

3.1.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Sheep’s Head as summarised in Table 3.1 and their locations have been mapped in Figure 3.2.

The Sheep’s Head Way is a waymarked trail through the clifftop habitats. The main trail is particularly well-worn along its southern section, which runs from the carpark to the lighthouse via the sea cliffs overlooking Dunmanus Bay. This section receives the most visitor traffic and also appears to be subject to a higher level of grazing intensity. There are many well-worn trails departing from the main trail, both to optimal viewpoints (Plate 3.2 a) and also as a result of sheep and cattle grazing (Plate 3.2 b). Along these trails, there is evidence of erosion and soil compaction. In some cases, there is no vegetation present with incidences of 100% bare soil. Outside of these trails, the habitats were in good condition. The area is dominated by a mosaic of dry heath (HH1) and wet heath (HH3) containing typical species such as furze (*Ulex gallii*), ling (*Canula vulgaris*), cross-leaved heath (*Erica tetralix*), purple moor grass (*Molinia caerulea*), heath-spotted orchid (*Dactylorhiza maculate*) and heath milkwort (*Polygala serpyllifolia*) with some sphagnum mosses (*Sphagnum* spp.) and common cottongrass (*Eriophorum angustifolium*) in damper areas. The extreme cliff edge is dominated by sea pink (*Armeria maritima*) with other common species such as bent (*Agrostis* sp.) and rescue grasses (*Festuca* sp.), ribwort plantain (*Plantago lanceolata*) and Common mouse-ear (*Cerastium fontanum*) typical of dry humic grassland (GS3). This area in particular was heavily grazed and the sward was extremely short. The common lizard (*Zootoca vivipara*) was observed basking on rocky outcrops at the site.

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

Table 3.2 Summary details of each quadrat recorded at Sheep’s Head

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|--|--------------------|----------------------|------------------------------|
| QSHAG1 | Core | GS2 Grassy verge | N/A | Transport | Fair |
| QSHAG2 | Core | BL3 Artificial surface | N/A | Amenity/Recreation | N/A |
| QSHAG3 | Secondary | HH1/BL1 Dry heath/stone wall mosaic | Dry heath [4030] | Recreation | Fair |
| QSHAG4 | Tertiary | HH3 Wet heath | Wet heath [4010] | Recreation /grazing | Good |
| QSHAG5 | Secondary | HH3 Wet heath | Wet heath [4010] | Recreation /grazing | Poor |
| QSHAG6 | Tertiary | GS3 Dry humic grassland | N/A | Grazing/recreation | Fair |
| QSHAG7 | Tertiary | HH3 Wet heath | Wet heath [4010] | Grazing/recreation | Fair |
| QSHAG8 | Secondary | HH1 Dry heath | Dry heath [4030] | Grazing/recreation | Good |
| QSHAG9 | Secondary | GS3 Dry humic grassland | N/A | Recreation | Poor |
| QSHAG10 | Tertiary | BL1/GS2 stone wall/grassy verge mosaic | N/A | Recreation | Good |

⁶ Land use Definitions:

- Amenity – the inherent attraction of a site’s ecological features
- Recreation – the use of a site for activities which use existing features

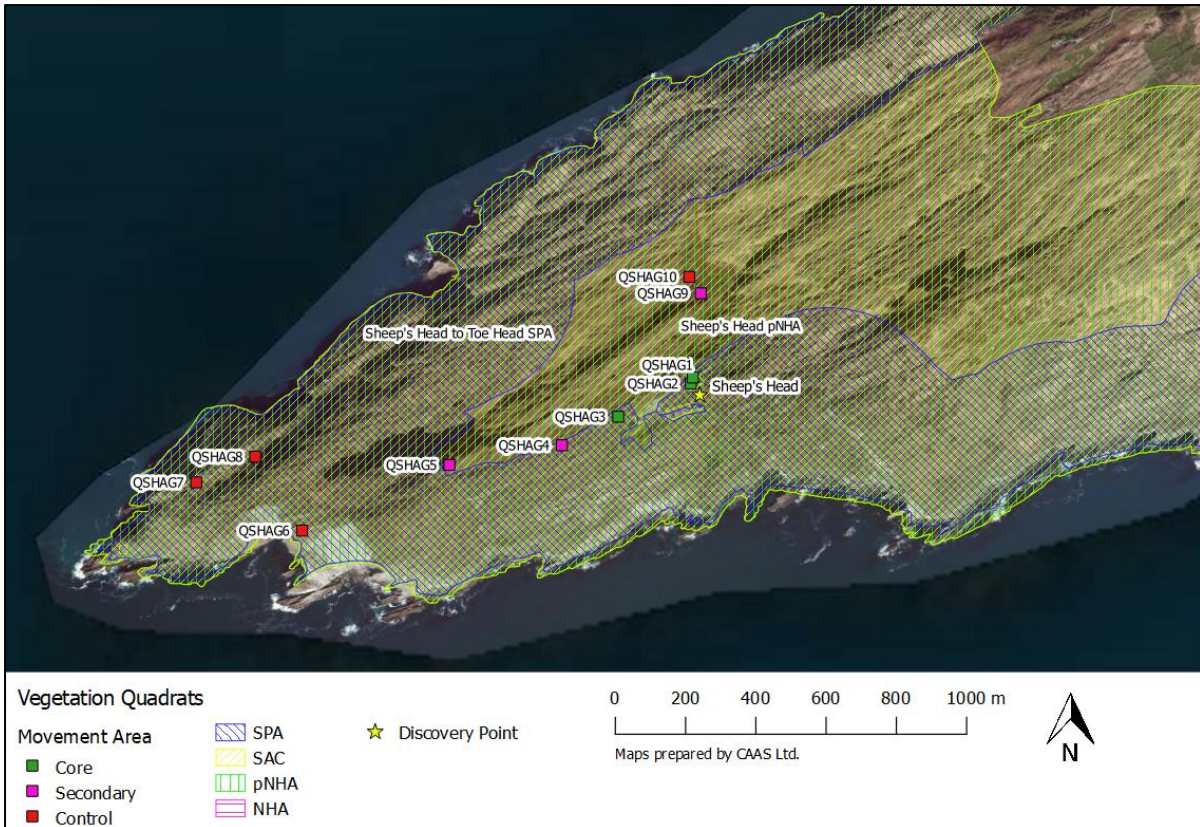


Figure 3.2 Sheep's Head Discovery Point. The location of quadrats and designated sites are indicated.



a) Erosion exposing peat substrate at Lough Aikeen viewing point and b) erosion adjacent to main walking trail.

3.1.4 Preliminary Assessment of Visitor Impact⁷

Visitors to Sheep's Head trafficked the Core zone 131 times and the Secondary zone 54 times. 27.9% of all visitor movements observed were within the secondary zone and less than 10 individuals entered the tertiary zone.

72% of visitors took part in activities which resulted in no identifiable effect on the site.

2.5% of visitors took part in activities that had a medium level effect to the site. This resulted from visitors leaving existing trails and marked paths. There were a few incidences of high-level activities such as heavy littering (2 incidences).

Visitors tended to depart from the official waymarked trail when visibility was good. There is damage to the vegetation evident through trampling causing erosion at key vantage points and adjacent to the waymarked trail where visitor movements are concentrated.

3.1.4.1 Sheep's Head SAC

The SSCOs for the site are Generic Version 6.0 and state the following objective:

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

The site is designated for wet and dry heath, which are considered to be in good condition. These habitats were identified to be present on site. Two Red-Listed species, pale dog-violet (*Viola lacteal*) and spotted rock-rose (*Tuberaria guttata*) are of note. The site is also designated for the Kerry slug. This species is associated with open areas of rocky wet heath and grassland. These species were not identified to be present on site, however, it was not the optimal flowering time for spotted rock-rose. The standard data form for the site details a list of pressures to include: paths and trackways, non-intensive grazing/stock feeding, fire and changes to agricultural landholdings. The first two pressures are evident in the visitor movement areas and there were some activities identified by the visitor monitoring data² that were identified to impact the habitats/species at the Discovery Point during the survey. In particular, visitors were observed walking off-trail in the vicinity of the lighthouse. The topography of the site limits visitors' access to the cliff face itself which is the key habitat feature for the sea bird colonies that breed and forage around the cliffs.

3.1.4.2 Sheep's Head to Toe Head SPA

The site is designated for the Peregrine (*Falco peregrinus*) and Chough (*Pyrrhocorax pyrrhocorax*) and is also noted to be an important site for birds such as Fulmar (*Fulmarus glacialis*), Herring Gull (*Larus argentatus*), Shag (*Phalacrocorax aristotelis*), Kittiwake (*Rissa tridactyla*), Black Guillemot (*Cephus grylle*) and Great Black-backed Gull (*Larus marinus*). Both chough and fulmar (*Fulmarus glacialis*) were recorded during the site visit. The standard data form for the site details a list of pressures to include: grazing and interspecific competition/predation. The main concentration of Choughs is found near the tip of the peninsula. Studies have shown that Chough forage mainly within 300 m inland of the clifftops used for breeding. A breeding pair of Peregrine falcons also occur within the site, but were not observed during the survey. Other bird species observed included wheatear (*Oenanthe oenanthe*), stonechat (*Saxicola torquatus*), skylark (*Alauda arvensis*) and rock pipit (*Anthus petrosus*).

Generic conservation objectives for the Sheep's Head to Toe Head SPA have been published by the NPWS. The main objective of the document is as follows:

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

⁷ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

Impacts associated with visitors were restricted to the core movement area outlined in the Visitor Observation Report. There are no potential roost features present within the restricted movement areas and interactions with site vegetation was only recorded directly adjacent to the carparking facilities and/or along the looped walking trail. These species were removed from the visitor movement areas and there were no activities identified by the visitor monitoring data that were identified to impact the birds at the Discovery Point during the survey. The topography of the site limits visitors' access to the cliff face itself which is the key habitat feature for the special conservation interest species.

3.1.4.3 Sheep's Head pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the site is covered by both the Sheep's Head SAC and the Sheep's Head to Toe Head SPA.

3.1.5 Recommendations

Visitor movements are concentrated along the main walking trail. However, they also occur at key vantage points off the main trail resulting in the removal of vegetation, soil compaction and exposure. Further damage should be avoided by controlling/ managing visitor access to the damaged areas.

Provisions to minimise impacts from trampling should be explored such as:

- The erection of information signage about the site's ecology and its sensitivity at the entrances to the walking trail.
- The erection of additional signage at the entrances to the walking trail area could provide guidance to visitors walking the trails to stick to the route provided and avoid unnecessary trampling of wet and dry heath.
- Erection of temporary moving trails to disperse trampling at vantage points sequentially or fixed marking of walkways (in addition to existing way-markers) to ensure a unified area is sacrificed to preserve all surrounding habitat.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). Additionally, all works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.2 Seefin Viewpoint, County Cork

3.2.1 Site Description

Seefin Viewpoint Discovery Point is located on Sheep's Head peninsula, Co. Cork. It is located within the Sheep's Head Special Protection Area (SPA) and the Sheep's Head proposed National Heritage Area (pNHA). The site is designated for the protection of wet and dry heath, the Kerry slug (*Geomalacus maculosus*), the Peregrine falcon (*Falco peregrinus*) and Chough (*Pyrrhocorax pyrrhocorax*).



Plate 3.3 The Seefin Viewpoint Discovery Point overlooking Bantry Bay.

There are two Discovery Points located on opposite sides of the road at the highest point between Kilcrohane and Bantry. The site offers fantastic views over Bantry Bay to the North and Dunmanus Bay to the south. It is an excellent starting place for walks and acts as a trailhead for the Peakeen Trail on the Sheep's Head Way. The site consists of free unmarked parking for cars and buses and a bike rack. There are informational boards on site but no other facilities such as toilets, bins, cafes *etc.* The habitats immediately surrounding the Discovery Point include areas of wet heathland.

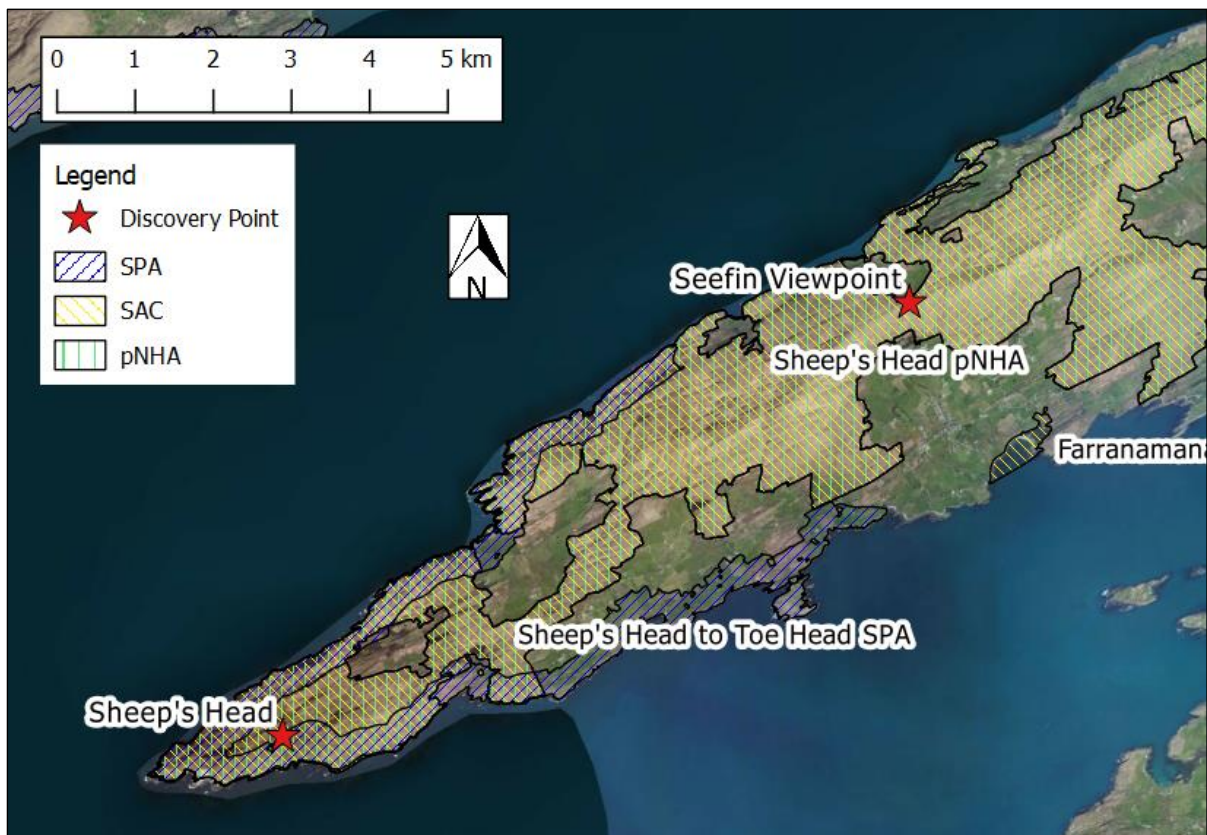


Figure 3.3 Site context map of the Seefin Viewpoint Signature Discovery Point.

3.2.2 Ecological Constraints

The Discovery Point occurs within the Sheep’s Head SAC which is designated for the protection of wet and dry heath and the Kerry slug (*Geomalacus maculosus*). It also occurs within the Sheep’s head pNHA. However, there is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site.

Table 3.3 Designated sites in proximity to Seefin Viewpoint and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|-------------------|---------------------------------------|--|---|
| 000102 | Sheep’s Head SAC | NPWS 2018 ⁴ | The Discovery Point occurs within the SAC. | Designated for 2 Annex I habitats which occur in proximity to the Discovery Point: Dry and wet heath. One annex II species which is unlikely to occur in proximity to the Discovery Point. Kerry Slug (<i>Geomalacus maculosus</i>) which occurs on open areas of rocky wet heath and grassland. Site is of high value for sea bird colonies that breed and forage around the cliffs. |
| NA | Sheep’s Head pNHA | NA | The Discovery Point occurs within the pNHA | NPWS description from 000102. |

3.2.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Seefin Viewpoint as summarised in Table 3.4 and their locations have been mapped in Figure 3.4.

The Peakeen Trail section of the Sheep’s Head Way passes NE-SW through the Seefin View Discovery Point. The trail is particularly well-worn in the vicinity of the two carparks. The area is dominated by wet heath (HH3) punctuated by rocky outcrops (ER1) containing typical species such as gorse/furze (*Ulex gallii*), heather/ling (*Canula vulgaris*), cross-leaved heath (*Erica tetralix*), heath rush (*Juncus squarrosus*), sedges (*Carex*), bryophytes, Reindeer lichen (*Cladonia portenosae*) and English stonecrop (*Sedum anglicum*). Colt’s foot (*Tussilago farfara*) was common along the edge of the walking trails. There is evidence of erosion and soil compaction at points along the trails (Plate 3.4a) and at the Discovery Point itself (Plate 3.4b). At these points there is little vegetation present, and incidences of 100% bare soil. During heavy rain the trails became waterlogged, increasing the risk of damage to vegetation and exposure/erosion of the peat substrate.

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

Table 3.4 Summary details of each quadrat recorded at Seefin Viewpoint

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Quality | Habitat | Landuse | Quadrat Condition Assessment |
|--------------|--------------|--|------------------|---------|--------------------|------------------------------|
| QSVAG1 | Core | BL3 Artificial surface | N/A | | Amenity | N/A |
| QSVAG2 | Core | BL3 Artificial surface | N/A | | Amenity | N/A |
| QSVAG3 | Core | HH3/ER1 wet heath/rocky outcrop mosaic | Wet heath [4010] | | Recreation/grazing | Poor |
| QSVAG4 | Tertiary | ER1 siliceous rocky outcrop | N/A | | Transport | Good |
| QSVAG5 | Secondary | HH3 Wet heath | Wet heath [4010] | | Recreation/grazing | Poor |
| QSVAG6 | Tertiary | GS2 Grassy verge | N/A | | Transport | Good |
| QSVAG7 | Secondary | HH3 Wet heath | Wet heath [4010] | | Recreation/grazing | Poor |
| QSVAG8 | Tertiary | HH3 Wet heath | Wet heath [4010] | | Recreation/grazing | Fair |
| QSVAG9 | Tertiary | HH3/ER1 wet heath/rocky outcrop mosaic | Wet heath [4010] | | Recreation | Good |
| QSVAG10 | Core | HH3 Wet heath | N/A | | Recreation | Poor |

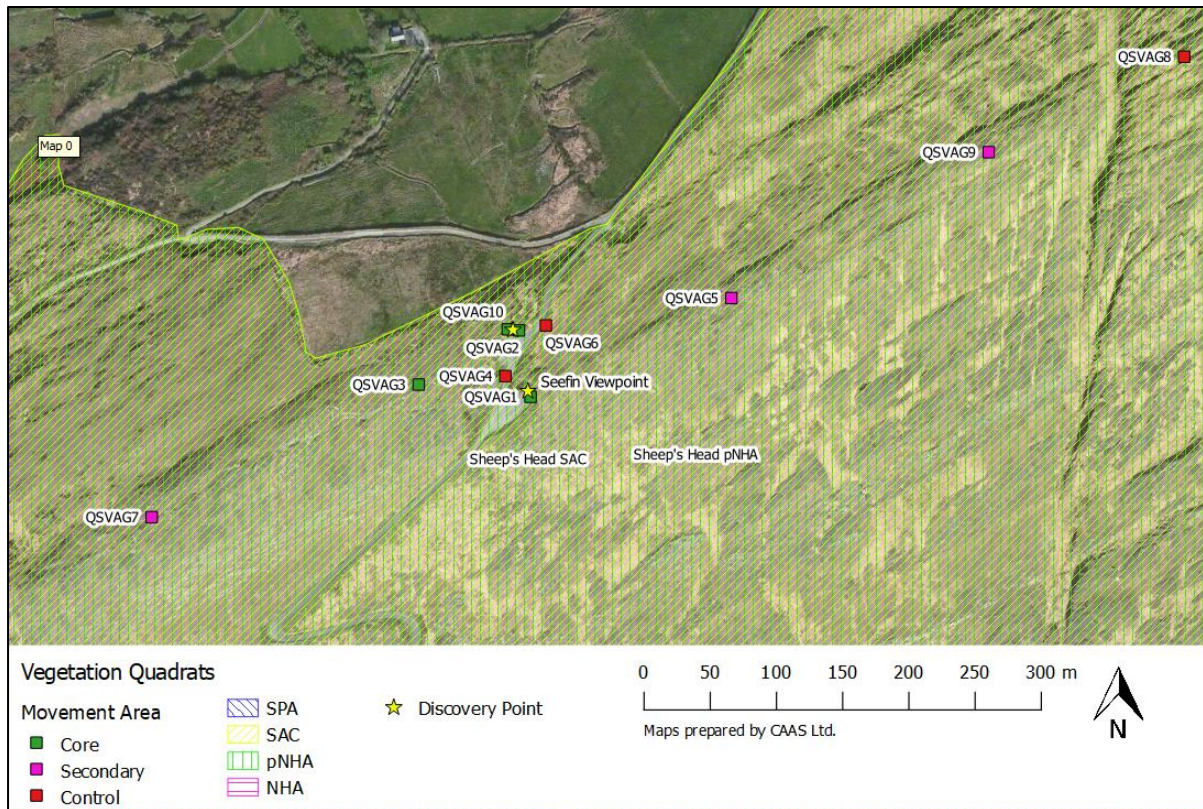
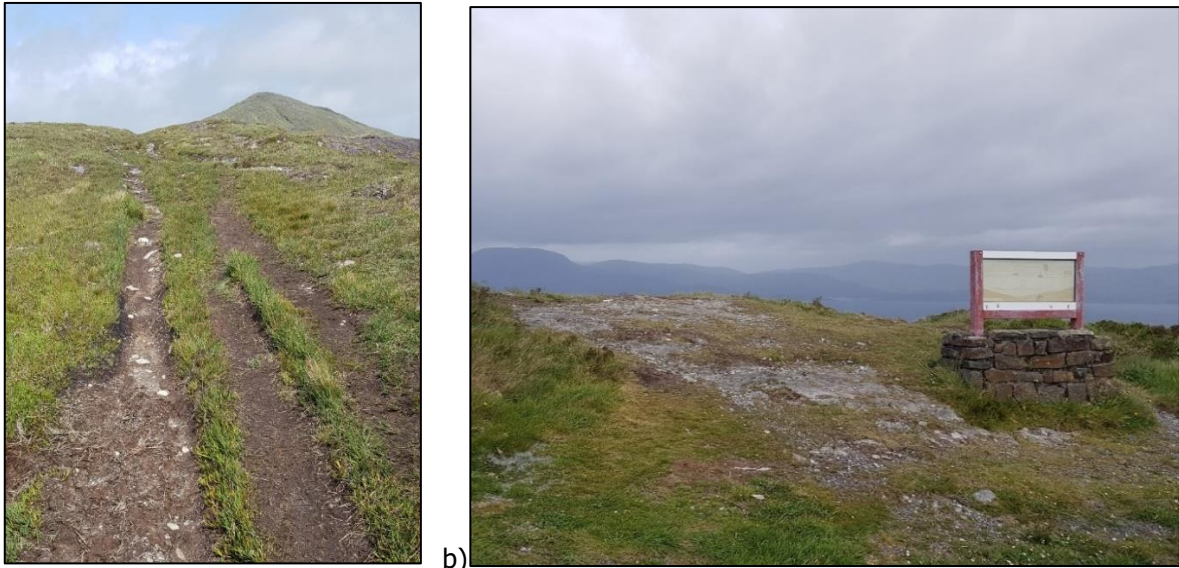


Figure 3.4 Seefin Viewpoint Discovery Point. The locations of designated sites are indicated. The location of quadrats and designated sites are indicated.



a) b)
Plate 3.4 a) Multiple desire lines along the Peakeen trail and b) erosion at a vantage point adjacent to the north-facing Discovery Point.

3.2.4 Preliminary Assessment of Visitor Impact⁸

Most visitors to Seefin Viewpoint trafficked both the Core (80 times) and Secondary Zones (63 times) and there were only 5 incidences where visitors entered the tertiary zone.

65% of visitors took part in activities that had no identifiable impacts to the site. 9% of visitors were observed to take part in activities that had a medium or high level environmental effect to the site. This was a result of off-trail walking, disturbance of wildlife and littering. The nature of low level of activities observed may be as a result of the poor weather and visibility that was apparent on the day of surveying.

Trampling and erosion was evident at prominent observation points. The trail was indistinct in some places, while in other places multiple parallel desire lines existed. Two individuals were observed urinating in the carpark. Consideration should be given to providing portable toilets on site.

3.2.4.1 Sheep's Head SAC

The SSCOs for the site are Generic Version 6.0 and state the following objective:

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

The site is designated for wet and dry heath, which are considered to be in good condition. Two Red-Listed species, pale dog-violet (*Viola lacteal*) and spotted rock-rose (*Tuberaria guttata*) are of note. The site is also designated for the Kerry slug (*Geomalacus maculosus*). This species is associated with open areas of rocky wet heath. Wet heath with rocky outcrops was the dominant habitat at this site. These species were not identified during the survey. However, the Kerry slug has been recorded during other surveys close to the Discovery Point⁹. The standard data form for the site details a list of pressures to include: paths and trackways, non-intensive grazing/stock feeding, fire and changes to agricultural landholdings. The visitor movement areas occurred within areas of wet heath. There were 3% of activities identified by the visitor monitoring data² that were identified to impact the habitats at the Discovery Point during the survey.

⁸ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

⁹ Mc Donnell, R.J. and Gormally, M.J. (2011). Distribution and population dynamics of the Kerry Slug, *Geomalacus maculosus* (Arionidae). Irish Wildlife Manuals, No. 54. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

3.2.4.2 Sheep's Head pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the site coincides with both the Sheep's Head SAC and the Sheep's Head to Toe Head SPA.

3.2.5 Recommendations

Because the site is very wet, visitor movements have high potential to have a negative impact if not managed appropriately. The site is currently not well managed and there is evidence of visitor movements having localised adverse impacts on vegetation and contributing to erosion of the peat substrate within both the core and secondary movement areas.

Provisions to minimise impacts from trampling should be explored such as:

- The erection of additional signage at the visitor parking area could provide guidance to visitors walking the trails behind the carparks to stick to the route provided and avoid unnecessary trampling of wet heath.
- Erection of temporary moving trails to disperse trampling across the site sequentially or fixed marking of walkways (in addition to existing way-markers) to ensure a unified area is sacrificed to preserve all surrounding habitat.
- Installation of portable toilet facilities at the site.

Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.3 Dursey Sound (previously named Garnish Point), County Cork

3.3.1 Site Description

Dursey Sound 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. Dursey Sound Discovery Point is separated from Dursey Island by a narrow sound known for its strong tides.



Plate 3.5 View of Dursey Sound and the cable car to Dursey Island.

Beyond the main visitor car parking is a prominent viewing point on the hill overlooking the cable car which runs from Lamb's Head to Dursey Island for tourists. The island is separated from the mainland by a narrow stretch of water called the Dursey Sound which has a very strong tidal race, with a reef of rocks in the centre of the channel which is submerged at high tides. Most of the site is underlain by Devonian sandstone, siltstone

and mudstone, with small areas of igneous rocks occur at Cod's Head, Dursey Island.

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

A planning application has been lodged with An Bord Pleanála for the replacement of the existing cableway system, which is approaching the end of its operational life, with a modern cableway system including a cable car station, small sheltered waiting area and welfare facilities on the Island and a cable car station, visitor centre, shop, cafe and welfare facilities on the mainland together with improved car parking facilities. A decision is due on the application in Spring of 2020.

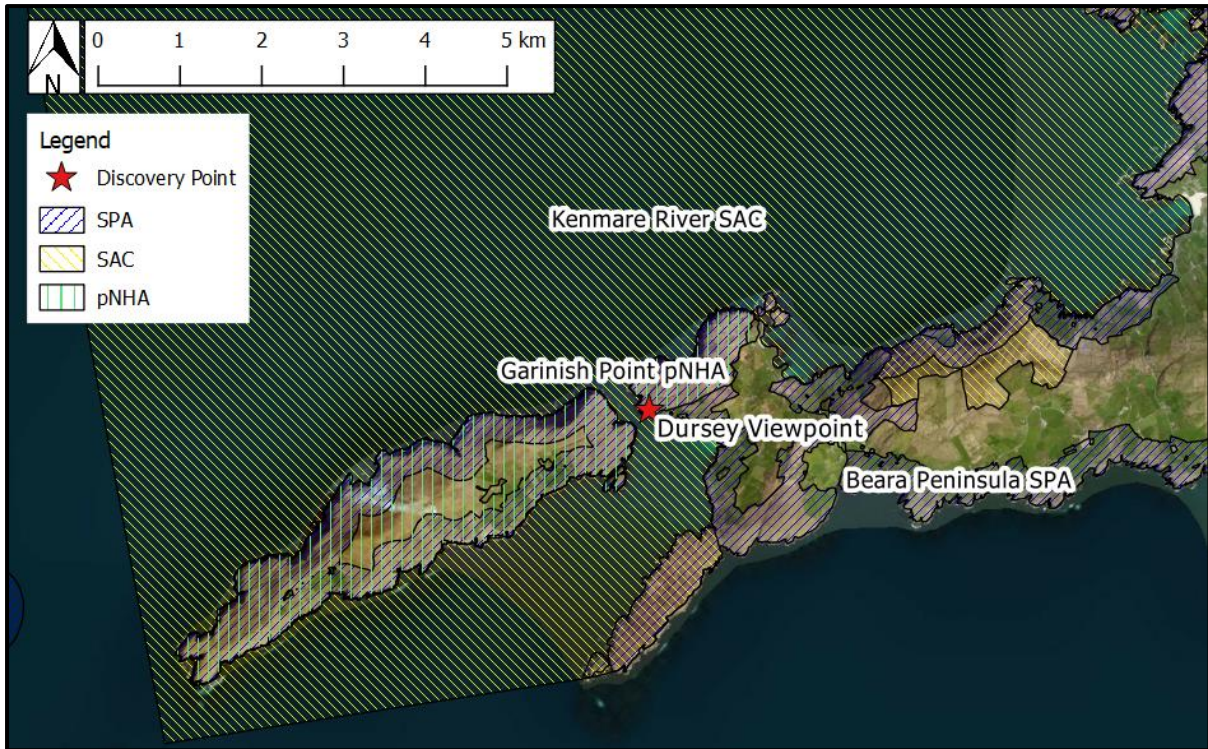


Figure 3.5 Site context map of the Dursey Sound Discovery Point.

3.3.2 Ecological Constraints

Dursey Sound has three European Sites within the receiving environment, one proposed Natural Heritage Area and no Natural Heritage Areas (Table 3.5). These sites have ecological characteristics for which they have been designated.

The Dursey Sound Discovery Point occurs ca 140m from the Kenmare River SAC and within the Beara Peninsula SPA. Dry heath, a qualifying habitat of Kenmare River SAC, occurs throughout much of the lands surrounding the car parks at Dursey Sound. 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 (*Pyrrhocorax pyrrhocorax*) for which the Beara Peninsula SPA is designated. The Discovery Point also occurs within Garnish Point pNHA.

Nearby the Bull and the Cow Rocks are home to a large breeding colony of Northern Gannets. The site consists of coastal grasslands, made up of short sward (due to sheep and cattle grazing) and patches of heath overlooking rugged rocky shore habitats and marine waters.

The site forms part of the Beara Peninsula SPA and Chough is listed as a feature of interest for the site. Dursey Island across the Dursey Sound is a well-known site for sea watching and for falls of migrant birds in spring and autumn (e.g. Black Redstart, Hoopoe, Ring Ouzel, Dusky Warbler, Grasshopper Warbler, Yellow-browed Warbler, Little Bunting, Short-eared Owl).

Table 3.5 Designated sites in proximity to Dursey Sound and relevant sensitive ecological receptors

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|-------------------|---------------------------------------|---|--|
| 002158 | Kenmare River SAC | NPWS 2013 ¹⁰ | The Discovery Point occurs approximately 140m from the SAC. | Designated for 11 Annex I habitats, two of which occur in proximity to the Discovery Point: Dry heaths; and Sea cliffs |

¹⁰ NPWS (2013) Conservation Objectives: Kenmare River SAC 002158. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

| | | | | |
|--------|---------------------|-------------------------|--|---|
| | | | | <u>Four annex II species which are unlikely to occur in proximity to the Discovery Point.</u> |
| 004155 | Beara Peninsula SPA | NPWS 2018 ¹¹ | The Discovery Point occurs within the SPA. | <u>Annex I Bird Species:</u> Chough (<i>Pyrrhonorax pyrrhonorax</i>) [A346] <u>Other Bird Species:</u> Fulmar (<i>Fulmarus glacialis</i>) [A009] |
| 001986 | Garnish Point pNHA | N/A | The Discovery Point occurs within the pNHA | NPWS Description from 004155 |

3.3.3 Baseline Ecology of study area

A total of eleven quadrats were located at Dursey Sound as summarised in

Table 3.6 and their locations have been mapped in Figure 3.6.

The site has high levels of trampling in the immediate vicinity of the carpark. There was evidence of improper disposal of building material in the vicinity of the carpark (Plate 3.6a). The surrounding habitat is a mosaic of dry-humid acid grassland [GS3] grading into dry siliceous heath [HH1] however grazing pressures limit the persistence of heath habitat. The effects of sheep and rabbit grazing were very evident (Plate 3.6b). The Garnish Head looped trail passes through these habitats and there is evidence of trampling and erosion in the immediate vicinity of the waymarked trail. These findings are comparative to the assessments undertaken on site from 2015 – 2018. The site is designated for the protection of Chough (*Pyrrhonorax pyrrhonorax*) and these were recorded foraging on the maritime grasslands. Other species recorded during the survey included wheatear (*Oenanthe oenanthe*), meadow pipits (*Anthus pratensis*), gannets (*Morus bassana*), cormorants (*Phalacrocorax carbo*) and oystercatchers (*Haematopus ostralegus*), rabbits (*Oryctolagus cuniculus*) and the common blue butterfly (*Polyommatus icarus*).

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

Table 3.6 Summary details of each quadrat recorded at Dursey Sound

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|---|--------------------|----------------------|------------------------------|
| QDSAG1 | Secondary | GS3 Dry-humid acid grassland | N/A | Amenity/Recreation | Fair |
| QDSAG2 | Core | ED2 Spoil and bare ground | N/A | Amenity/ Recreation | Doubtful |
| QDSAG3 | Secondary | GS3 Dry-humid acid grassland | N/A | Recreation/Grazing | Fair |
| QDSAG4 | Secondary | GS3/HH1 Dry siliceous heath/dry-humid acid grassland mosaic | Dry heath [4030] | Recreation/Grazing | Fair |
| QDSAG5 | Secondary | HH1 Dry siliceous heath | Dry heath [4030] | Recreation/Grazing | Good |
| QDSAG6 | Tertiary | GS3 Dry-humid acid grassland | N/A | Recreation/Grazing | Fair |
| QDSAG7 | Tertiary | HH1 Dry siliceous heath | Dry heath [4030] | Recreation/Grazing | Good |
| QDSAG8 | Tertiary | BL3 Buildings and artificial surfaces | N/A | Amenity/ Transport | N/A |
| QDSAG9 | Tertiary | GS3/HH1 Dry siliceous heath/dry-humid acid grassland mosaic | Dry heath [4030] | Amenity/Recreation | Good |
| QDSAG10 | Tertiary | GS3 Dry-humid acid grassland | N/A | Amenity/Recreation | Good |
| QDSAG11 | Core | GS3/ER1 Dry-humid acid grassland /exposed siliceous rock | N/A | Amenity/Recreation | Poor |

¹¹ NPWS (2018) Conservation objectives for Beara Peninsula SPA [004155]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

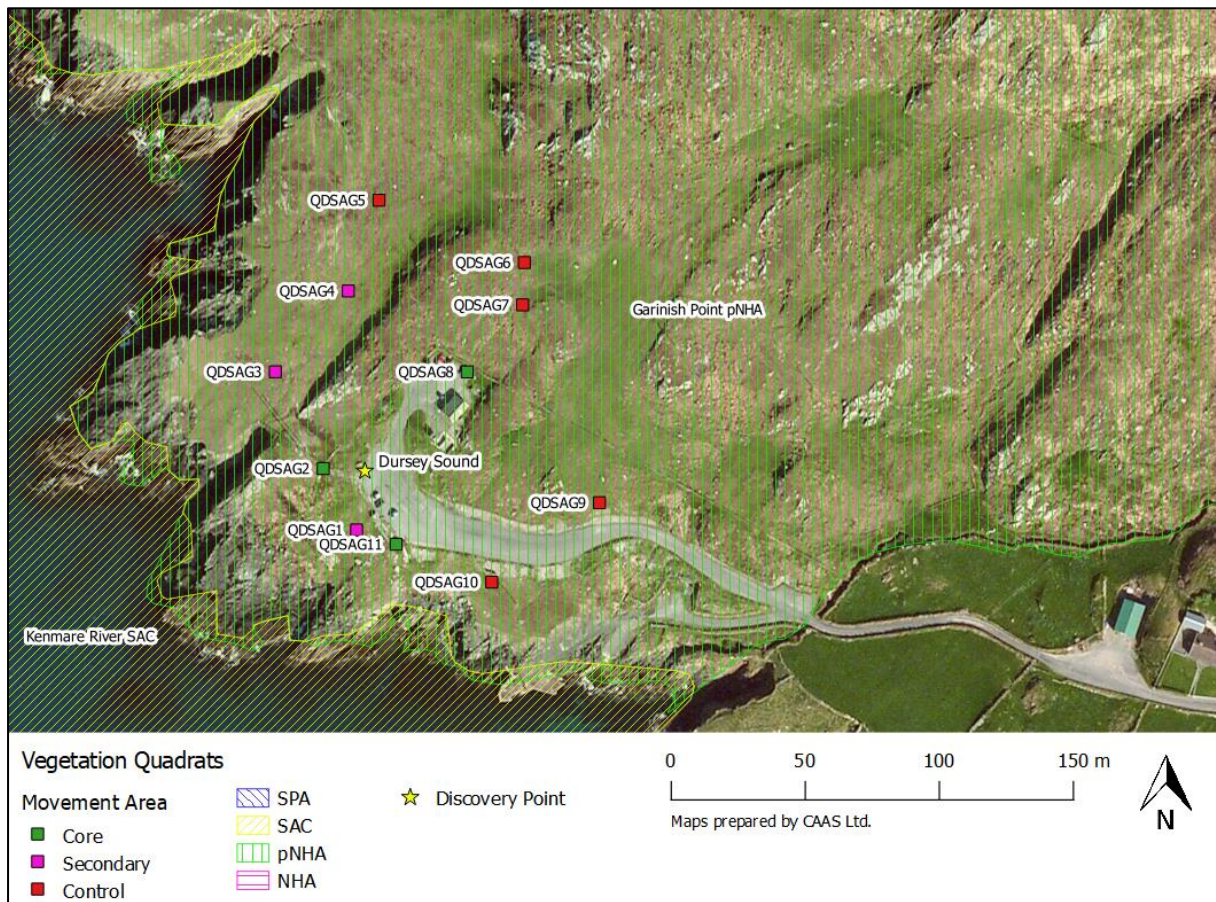
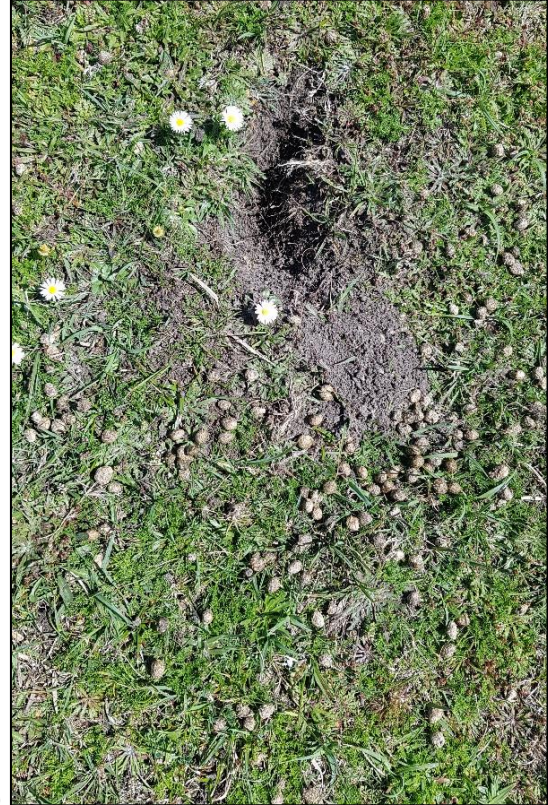


Figure 3.6 Dursey Sound Discovery Point. The location of quadrats and designated sites are indicated.



a) Plate 3.6 a) improper disposal of building waste material on site and b) evidence of the effects of rabbit grazing on grassland.

3.3.4 Preliminary Assessment of Visitor Impact¹²

Visitor movements were recorded in the Core, Secondary and Tertiary zones at Dursey Sound. The core zone was trafficked 244 times, while the secondary zone was trafficked 65 times and the tertiary zone was trafficked 6 times. Most visitors that entered the secondary zone did so to get a better view across to Dursey Island and by going off-trail while walking the Garnish Head looped trail.

87% of visitors took part in activities that resulted in no effect to the site. 11% took part in low level activities. These visitors left the car park to walk through areas where desire lines were evident in the vegetation. Most visitors that left marked trails did so to go to the cliff edge.

The site visit identified works in the vicinity of the stone seating area where a signage pole was being installed with active construction machinery. There was evidence of small-scale localised destruction of vegetation and improper disposal of building waste material on site (Plate 3.6a). From an assessment of the data from previous years these areas do not contain any rare or protected habitat features or species.

3.3.4.1 Kenmare River SAC

The SAC is designated for dry heaths and sea cliffs. Impacts arising from aquaculture, fishing, dumping of wastes and water pollution are the principal threats to the nature conservation interests of Kenmare River SAC. These activities were not recorded on site, except for one example of leisure fishing and one example of waste-dumping. Other on-site threats identified during the visitor monitoring² included visitor tramping and grazing by sheep and rabbits. The trampling effects were seen to have low impacts and were localised to within the immediate vicinity of the Discovery Point at specific pinch points. These effects are consistent with the results of all previous monitoring observations.

¹² This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

3.3.4.2 Beara Peninsula SPA & Garnish Point pNHA

The potential risks to local bird population of current levels of visitors using the site are mainly centred on the risk of increased disturbance to Choughs which use the maritime grasslands along the peninsula to feed and are also known to breed along the coast of the peninsula (Beara Peninsula SPA).

The Chough for which the SPA is designated are known to use the maritime grasslands along the peninsula to feed and are also known to breed along the coast of the peninsula (Beara Peninsula SPA). Visitor movements in the area have the potential to introduce low level disturbance effects to the species foraging areas; however, the visitor movement patterns indicate that the majority of visitors stay within the vicinity of the discovery point itself.

3.3.5 Recommendations

Visitors, including construction workers, continue to have minor localised adverse impact at this site which relate to vegetation compaction, with trampling being present at key pinch and vantage point locations.

As with previous years, provisions to minimise impacts from trampling should be explored such as:

- The erection of additional signage at the visitor parking area could provide guidance to visitors walking the trails behind the cable car station to stick to the paths provided and avoid unnecessary disturbance and/or trampling of dry heath and/or ground-nesting birds.
- Erection of temporary moving trails to disperse trampling across the site sequentially or fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat.

A planning application has been lodged with An Bord Pleanála for the replacement of the existing cableway system, which is approaching the end of its operational life, with a modern cableway system including a cable car station, small sheltered waiting area and welfare facilities on the Island and a cable car station, visitor centre, shop, cafe and welfare facilities on the mainland together with improved car parking facilities. A decision is due on the application in Spring of 2020.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.

These recommendations are in line with those identified as part of the monitoring program from all previous years 2015 – 2018.

3.4 Inch Strand, County Kerry

3.4.1 Site Description

Inch Strand is located on the southern side of the Dingle peninsula, Co. Kerry between Dingle Bay and Castlemaine Harbour. It is a 5km long sand spit.



The beach on the western edge is backed by extensive sand dunes which grade to grazed grassland and saltmarsh on the eastern side. The Inch Strand Discovery Point is located within the Castlemaine Harbour SAC, the Castlemaine Harbour SPA and the Castlemaine Harbour pNHA.

Plate 3.7 View from Inch Strand towards the Iveragh Peninsula.

The site is of interest to water sports enthusiasts, walkers and runners, and offers fantastic views of the Iveragh peninsula. The site comprises a surfaced carpark with marked spaces for approximately 60 cars and an ambulance bay. Cars are also allowed to park/drive on the beach for a distance of 1km. A bay for buses is on the main road. There are no bike parking facilities. The site includes a shop, a large restaurant/bar and picnic area with 30 tables. There are two surf schools operating out of repurposed shipping containers on the beach, and a lifeguard on duty. Interpretive signage is present. Public toilets and recycling facilities are available in the carpark. Beach Clean litter-bags and pickers and dog-waste bags were available.

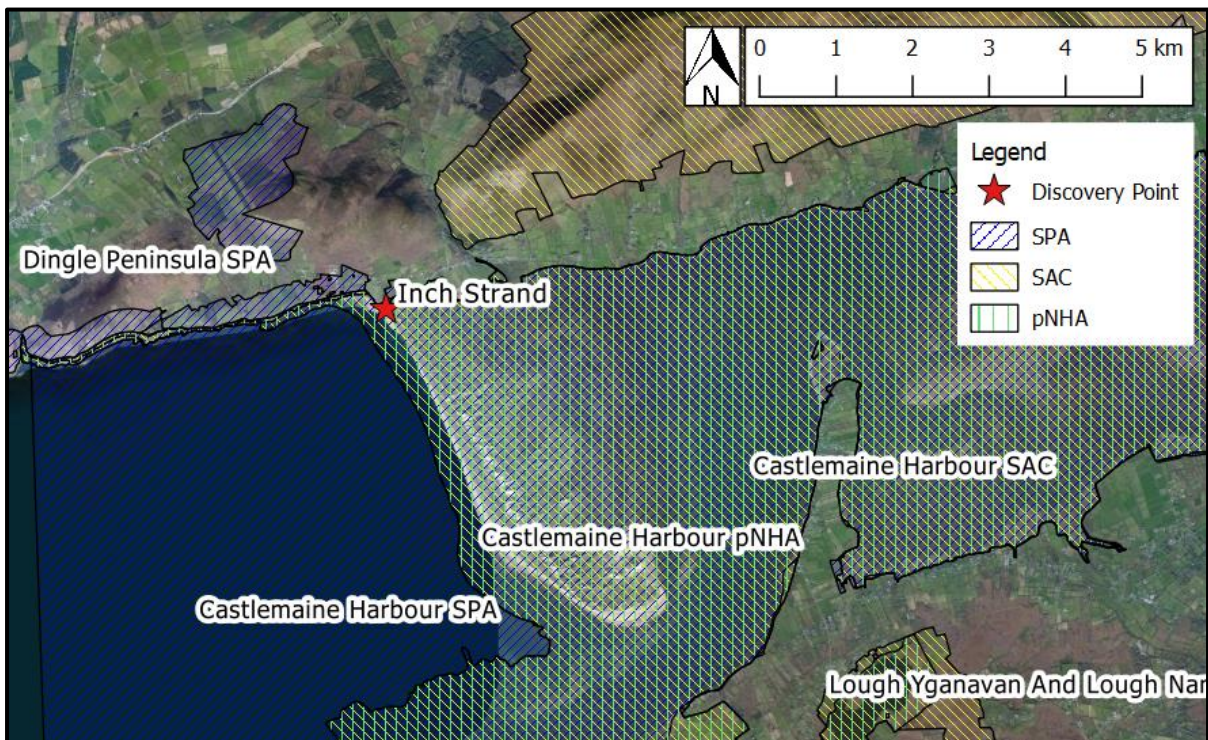


Figure 3.7 Site context map for the Inch Strand Discovery Point.

3.4.2 Ecological Constraints

The Inch Strand Discovery Point is located within the Castlemaine Harbour SAC, the Castlemaine Harbour SPA and the Castlemaine Harbour pNHA. The Castlemaine Harbour SAC is designated for fourteen habitats but Inch Strand in particular is known for its excellent sand dune system, which is the best remaining in the country. The Castlemaine Harbour SPA is designated for wetlands and associated waterbirds. The site also occurs within the Castlemaine Harbour pNHA. However, there is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. The majority of the visitor movements were contained within the core movement zones.

Table 3.7 Designated sites in proximity to Inch Strand and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|--------------------------|---------------------------------------|---|---|
| 000343 | Castlemaine Harbour SAC | NPWS 2012 ¹³ | The Discovery Point occurs within the SAC. | <u>Designated for 14 Annex I habitats, 6 of which occur in proximity to the Discovery Point:</u> Tidal mudflats and Sand shores [1140] Embryonic shifting dunes [2110] Marram dunes [2120] Fixed dunes [2130] Dunes with Creeping Willow [2170] Humid dune slacks [2190] <u>Five annex II species, one of which occurs in proximity to the Discovery Point.</u> Petalwort (<i>Petalophyllum ralfsii</i>) |
| 004029 | Castlemaine Harbour SPA | NPWS 2012 ⁹ | The Discovery Point occurs within the SPA. | <u>Annex I Bird Species:</u> Red-throated Diver (<i>Gavia stellata</i>) Great Nornern Diver (<i>Gavia immer</i>) Golden Plover (<i>Pluvialis apricaria</i>) Bar-tailed Godwit (<i>Limosa lapponica</i>) <u>Other Bird Species:</u> Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) Chough (<i>Pyrhocorax pyrrhocorax</i>) Wigeon (<i>Anas penelope</i>) Sanderling (<i>Calidris alba</i>) Wetlands & Waterbirds [A999] |
| NA | Castlemaine Harbour pNHA | N/A | The Discovery Point occurs within the pNHA. | NPWS description from 000343 and 004029. |

3.4.3 Baseline Ecology of study area

A total of eleven quadrats were located at Inch Strand as summarised in Table 3.8 and their locations have been mapped in Figure 3.8.

The habitats present on site included buildings and artificial surfaces (BL3), sand shores (LS2), embryonic, marram and fixed dunes (CD1/2/3) and dry calcareous neutral grassland (GS1). There are dune slacks (CD5) located on the sandspit but these are removed from the visitor movement zones. While most visitors were recorded on the sand shores, there was much evidence throughout the dune system of visitor use. The area of dunes around the carpark at the beach site has remnant fences and signs of recent recovery/establishment of dunes through collaborative effects from Kerry County Council and the NPWS. However, there were many strong desire-lines, old fire-pits (Plate 3.8a) and some littering and dog-fouling in the dunes, even in fenced-off areas. Additionally, the site was extremely florally diverse with many species throughout the site, including the bee orchid (*Ophrys apifera*) a Red Data Book species, which was recorded adjacent to desire lines (Plate 3.8b). Montbrecia (*Crocsmia x crocsmiiflora*), which is invasive, was also recorded on site. Other species recorded during the survey

¹³ 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.

included skylarks (*Alauda arvensis*), stonechat (*Saxicola torquata*), swallow (*Hirundo rustica*), rooks (*Corvus frugilegus*), jackdaws (*Corvus monedula*) and rabbits (*Oryctolagus cuniculus*). Some areas of the sand dunes had high concentrations of rabbit warrens. Dogs were often walked off-lead.

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

Table 3.8 Summary details of each quadrat recorded at Inch Strand

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|---|--|-------------------------------|------------------------------|
| QISAG1 | Tertiary | CD2 Marram dunes | White dunes [2120] | Grazing | Fair |
| QISAG2 | Tertiary | CD3 Fixed dunes | Fixed coastal dunes [2130] | Grazing | Good |
| QISAG3 | Secondary | CD1 Embryonic dunes | Embryonic shifting dunes [2110] | Amenity/recreation | Fair |
| QISAG4 | Core | LS2 Sand shores | N/A | Amenity/recreation | Good |
| QISAG5 | Core | CD1 Embryonic dunes | Embryonic shifting dunes [2110] | Amenity/recreation | Fair |
| QISAG6 | Core | CD2 Marram dunes | White dunes [2120] | None | Good |
| QISAG7 | Secondary | CD3 Fixed dunes | Fixed coastal dunes [2130] | None | Good |
| QISAG8 | Tertiary | CD2 Marram dunes | White dunes [2120] | None/occasional recreation | Fair |
| QISAG9 | Core | LS2 Sand shores | N/A | Amenity/recreation /transport | Good |
| QISAG10 | Core | BL3 Artificial surface | NA | Recreation | N/A |
| QISAG11 | Core | CD2/GS1 marram dune/dry calcareous neutral grassland mosaic | White dunes [2120]/important orchid sites [6210] | Amenity/recreation /grazing | Doubtful |



Figure 3.8 Inch Strand Discovery Point. The location of quadrats and designated sites are indicated.



a)



b)

Plate 3.8 a) the remains of fire pit constructed in the fixed dune habitat and b) Bee orchid (*Ophrys apifera*) a Red Data Book species, recorded adjacent to desire lines through the fixed dune habitat.

3.4.4 Preliminary Assessment of Visitor Impact¹⁴

The core zone at Inch Strand was trafficked 262 times, while the secondary zone was trafficked 73 times with only 7 incidences of movement in the tertiary zone.

62% of visitors to the site took part in activities that resulted in no identifiable environmental impacts. Medium level environmental impacts occurred due to visitors driving and parking on the sand and walking through dunes, this accounted for 18% of all environmental impacts recorded. Many dogs were walked off-lead. Other impacts observed included:

- Incidentally moving or knocking site materials;
- Transient disturbance, emissions, noise;
- Disturbance of wildlife;
- Addition/alteration of site features, transient emissions, noise;
- Desire lines or tracks visible on grass and leafy vegetation; and
- Direct interference with site material.

3.4.4.1 Castlemaine Harbour SAC

The site is designated for fourteen Annex I habitats, six of which occur in proximity to the Discovery Point: tidal mudflats and sand shores, embryonic shifting dunes, marram dunes, fixed dunes, dunes with Creeping Willow and dune slacks. The rare bryophyte, Petalwort (*Petalophyllum ralfsii*), an Annex II species, occurs in the dunes towards the very tip of Inch Strand. This was not recorded during the survey. Inch holds one of the largest and best remaining dune systems in the country. The conservation objectives focus on maintenance of community composition, structure and functionality, as well as the

¹⁴ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

area of many habitats within the SAC. The standard data form for the site details a list of pressures to include: walking/horse-riding/non-motorised vehicles, camping, removal of beach materials and leisure fishing. The effects observed in the visitor monitoring are localised and predominantly relate to vegetation compaction on the peripheries of or desire lines through the sand dune system. Most visitor movement occurred within the sand shore habitat.

3.4.4.2 Castlemaine Harbour SPA

Inch Strand, as part of the SPA, provides a range of good quality roosting and foraging habitats for passage and wintering waterbirds. The site is designated for Wetlands & Waterbirds [A999] including species such as Red-throated Diver (*Gavia stellata*), Great Nornern Diver (*Gavia immer*), Golden Plover (*Pluvialis apricaria*), Bar-tailed Godwit (*Limosa lapponica*), Light-bellied Brent Goose (*Branta bernicla hrota*), Wigeon (*Anas penelope*), Sanderling (*Calidris alba*). Whist not breeding within the site, Chough occur in nationally important numbers here and are regularly found on the sand dunes at Inch where feeding and flocking in groups of up to 60 individuals. The NPWS conservation objectives focus on maintenance of the favourable conservation condition of the bird species and wetland habitats within the SPA. The standard data form for the site details a list of pressures to include: outdoor sports and leisure activities, fertilisation, aquaculture and invasive species. The visitor movements patterns showed that visitors remained predominantly on the beach. However, there were some examples of people walking with dogs off-lead on the beach and in the sand dunes. There were also examples of vehicles being driven down the beach beyond the 1km limit. These activities have the potential to cause disturbance to foraging, breeding and overwintering birds.

3.4.4.3 Castlemaine Harbour pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the pNHA coincides with both the Castlemaine Harbour SAC and the Castlemaine Harbour SPA.

3.4.5 Recommendations

The Discovery Point is relatively well managed and well maintained. The assessment focused on the receiving environment of the Discovery Point which showed visitors had little adverse effects on the ecological features in its immediate area. Visitors do have minor localised adverse impact on the sand dune system which relate primarily to trampling, vegetation compaction and erosion. This is important beyond the area of successful dune restoration identified.

Provisions to minimise impacts from within the sand dune system and on the beach should be explored such as:

- The erection of additional signage at the visitor parking area could provide guidance to visitors walking the trails behind the beach to stick to existing and marked trails provided and avoid unnecessary disturbance and/or trampling of sand dunes and birds.
- Erection of temporary moving trails to disperse trampling across the sand dunes sequentially, or fixed marking of walkways, to ensure a unified area is sacrificed to preserve all surrounding habitat.
- A requirement to keep dogs on-lead within the sand dunes and also on the beach during winter when waders are foraging along the shoreline.
- Enforcement of the ban on driving and parking on the beach beyond the 1km point.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.5 Banna Strand, County Kerry

3.5.1 Site Description

Banna Strand is located 15km northwest of Tralee, Co. Kerry. It is a 5km stretch of beach backed by sand dunes. The Banna Strand Discovery Point is located directly adjacent to the Akeragh, Banna and Barrow Harbour SAC, the Tralee Bay Complex SPA and Akeragh, Banna and Barrow Harbour pNHA. The site is of interest for recreational activity and offers fantastic views of the Dingle peninsula and Mount Brandon to the south. The site includes a substantial paved car park with space for 100 cars. Further overflow parking is available behind the beach, where public toilet facilities are also available.



Plate 3.9 Banna Strand overlooking the Dingle Peninsula

The lands surrounding the carpark include a well-developed sand dune systems and improved grassland. Salt meadows occur landward of the dunes at Carrahane. The majority of visitors were observed to walk along the beach. Other activities included surfing, kite surfing and swimming. No/evidence of grazing was noted within the site during the 2019 survey, although cattle were grazed in the surrounding area.

The lands surrounding the carpark include a well-developed sand dune systems and improved grassland. Salt meadows occur landward of the dunes at Carrahane. The majority of visitors were observed to walk along the beach. Other activities included surfing, kite surfing and swimming. No/evidence of grazing was noted within the site during the 2019 survey, although cattle were grazed in the surrounding area.

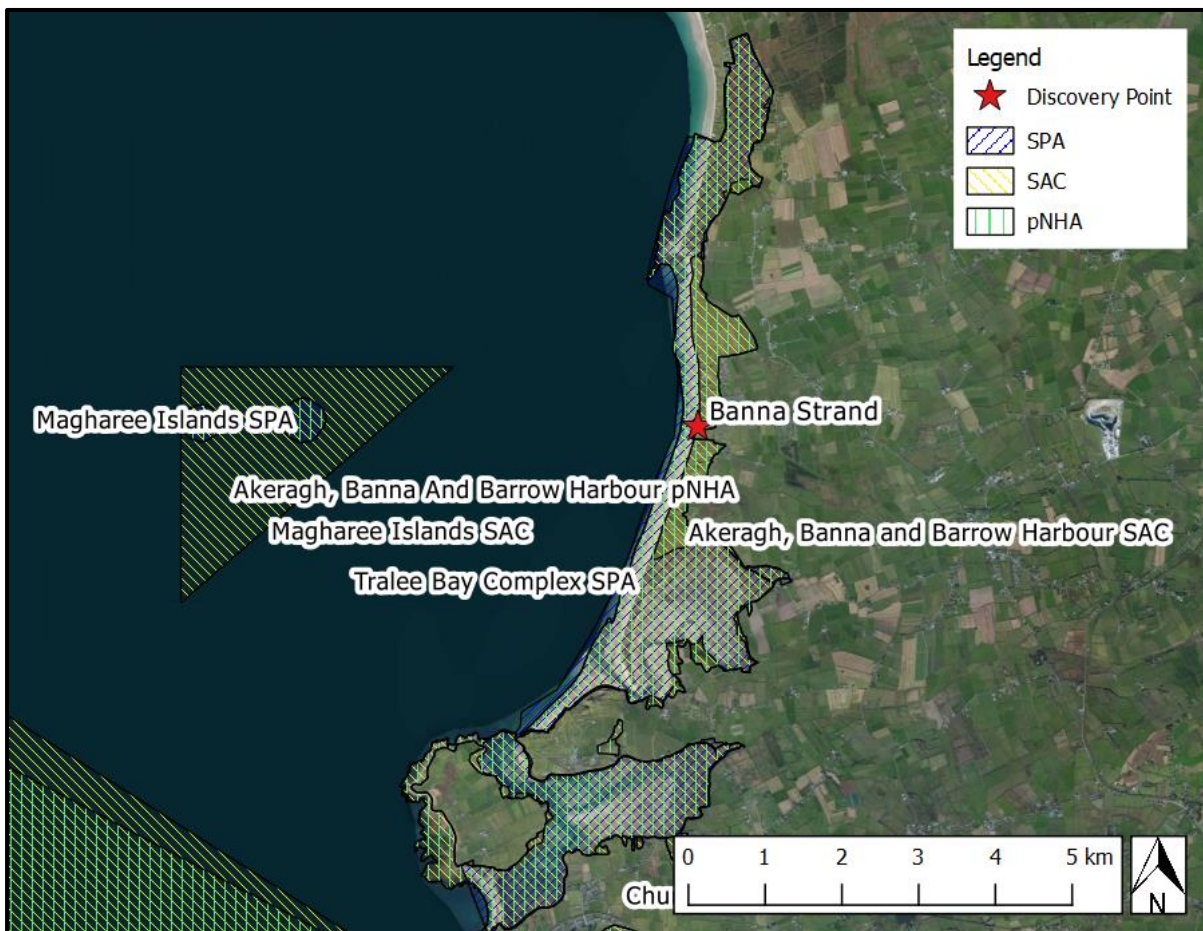


Figure 3.9 Site context map for the Banna Strand Discovery Point.

3.5.2 Ecological Constraints

The Banna Strand Discovery Point occurs within the Akeragh, Banna and Barrow SAC and Tralee Bay Complex SPA. (see Table 3.9 and Figure 3.10). The Akeragh, Banna and Barrow SAC is designated for 9 Annex I habitats and the sand dunes at Banna strand are considered especially interesting for their vegetation, with a number of rare and scarce plant species occurring in the different habitats. The Tralee Bay complex is designated for wetlands and waterbirds. It holds an assemblage of over 20,000 wintering waterbirds, and bird species of both international and national importance. The majority of the visitor movements were contained within the core movement zones.

Table 3.9 Designated sites in proximity to Banna Strand and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|--|---------------------------------------|---|--|
| 000332 | Akeragh, Banna and Barrow Harbour SAC | NPWS 2014 ¹⁵ | The Discovery Point is directly adjacent to the SAC. | <u>Designated for 9 Annex I habitats, 6 of which occur in proximity to the Discovery Point:</u> Embryonic shifting dunes [2110] Marram dunes [2120] Fixed dunes [2130] Humid dune slacks [2190] Atlantic Salt Meadows [1330] Mediterranean Salt Meadows [1410] |
| 004188 | Tralee Bay Complex SPA | NPWS 2014 ¹⁶ | The Discovery Point is directly adjacent to the SPA. | <u>Annex I Bird Species:</u> Golden Plover (<i>Pluvialis apricaria</i>) Bar-tailed Godwit (<i>Limosa lapponica</i>) Whooper Swan (<i>Cygnus cygnus</i>) <u>Other Bird Species:</u> Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) Wigeon (<i>Anas penelope</i>) Sanderling (<i>Calidris alba</i>) Wetlands & Waterbirds [A999] |
| NA | Akeragh, Banna and Barrow Harbour pNHA | N/A | The Discovery Point is directly adjacent to the pNHA. | NPWS description from 000332 and 004188. |

3.5.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Banna Strand as summarised in Table 3.10 and their locations have been mapped in Figure 3.6.

The site comprises an extensive strand backed by a well-developed sand dune system of embryonic, mixed and fixed dunes. It has high levels of trampling in the dunes in the immediate vicinity of the carpark and at intervals along the strand (Plate 3.10). The surveyed sections of dunes had less floral diversity and lower species richness than those at Inch Strand. There were no rare and scarce plant species of note recorded on site during the survey. However, typical sand dune species such as Lady's bedstraw (*Galium verum*), kidney vetch (*Anthyllis vulneraria*), Germander speedwell (*Veronica chamaedrys*), Sea holly (*Eryngium maritimum*), Sea bindweed (*Calystegia soldanella*) and Pyramidal orchid (*Anacamptis pyramidalis*) were recorded. Other species recorded included unidentified grasshoppers, six spot burnet moths (*Zygaena filipendulae*), and common blue (*Polyommatus icarus*) and small blue (*Cupido minimum*) butterflies, the latter of which is quite rare, having a very restricted range. The surrounding area is agriculturally dominated with cattle grazing being the predominant land use.

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

¹⁵ NPWS (2017) Conservation Objectives: Akeragh, Banna and Barrow Harbour SAC 000332. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

¹⁶ WS (2014) Conservation Objectives: Tralee Bay Complex SPA 004188. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Table 3.10 Summary details of each quadrat recorded at Banna Strand

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|------------------------------------|-----------------------------------|----------------------|------------------------------|
| QBSAG1 | Tertiary | CD3 Fixed dunes | Fixed coastal dunes [2130] | None | Good |
| QBSAG2 | Secondary | CD2 Marram dunes | White dunes [2120] | Recreation | Doubtful |
| QBSAG3 | Secondary | CD1 Embryonic dunes | Embryonic shifting dunes [2110] | Recreation | Good |
| QBSAG4 | Core | LS2 Sand shores | N/A | Amenity/recreation | Good |
| QBSAG5 | Core | CB1 Shingle/gravel bank | N/A | Amenity/recreation | Good |
| QBSAG6 | Core | CD1/2 Embryonic/marram dune mosaic | Embryonic/white dunes [2120/2110] | Recreation/transport | Good |
| QBSAG7 | Secondary | CD2 Marram dunes | White dunes [2120] | Recreation | Doubtful |
| QBSAG8 | Tertiary | CD3 Fixed dunes | Fixed coastal dunes [2130] | None | Fair |
| QBSAG9 | Secondary | CD1 Embryonic dunes | Embryonic shifting dunes [2110] | Recreation | Good |
| QBSAG10 | Core | LS2 Sand shores | N/A | Amenity/recreation | Good |

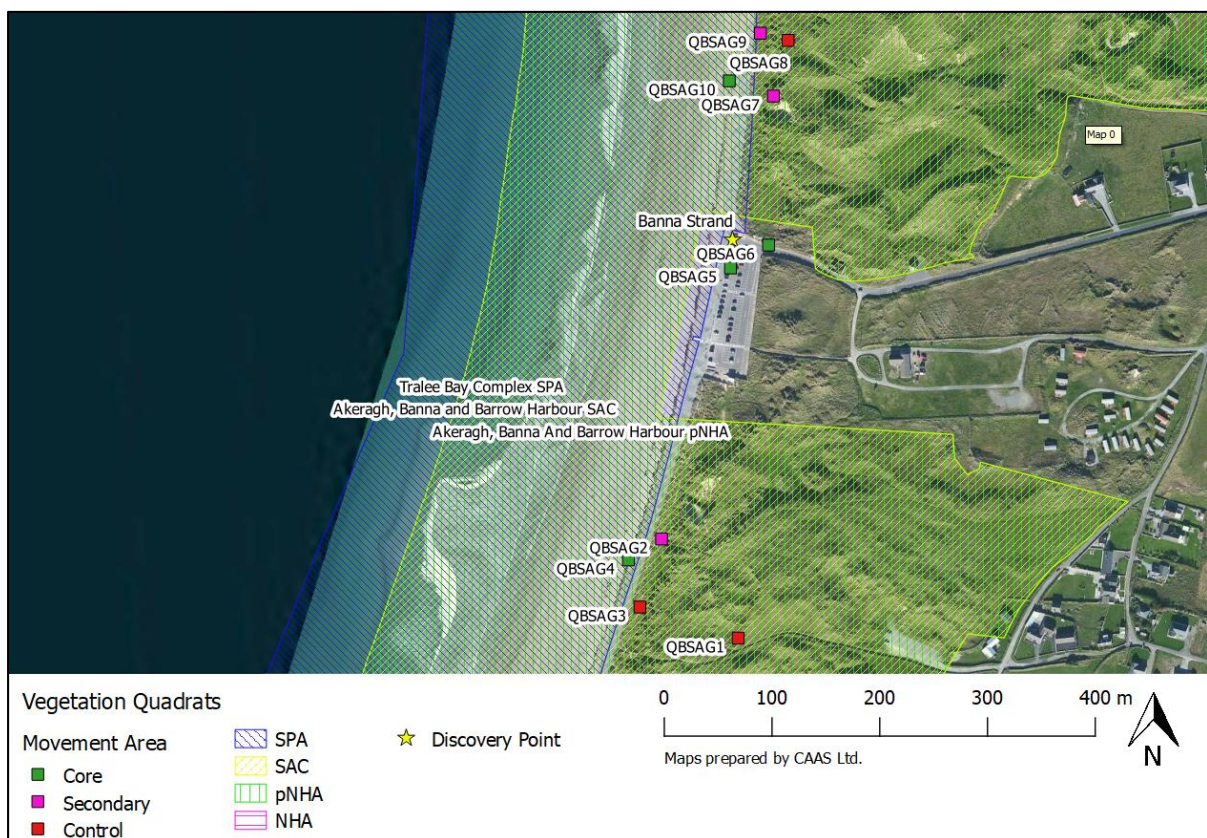


Figure 3.10 Banna Strand Discovery Point. The location of quadrats and designated sites are indicated.



Plate 3.10 Desire lines through the dune system at Banna Strand.

3.5.4 Preliminary Assessment of Visitor Impact¹⁷

The core zone of Banna Strand was trafficked 236 times, while the secondary zone was trafficked 17 times, this is a result of several different groups of children running and playing on the dunes, along with several people choosing to sit in the dunes instead of on the beach. Only 4 individuals were observed leaving the core and secondary zones.

85% of visitors took part in activities that had no environmental effect to the site. 4% of visitors took part in activities which resulted in visible desire lines on the dunes. There was evidence of regular visitor movement through the dune system (Plate 3.10).

3.5.4.1 Akeragh, Banna and Barrow Harbour SAC

The site is designated for nine Annex I habitats, six of which occur in proximity to the Discovery Point: Embryonic shifting dunes, marram dunes, fixed dunes, humid dune slacks, Atlantic salt meadows and Mediterranean salt meadows, with the latter two occurring landward of the dunes at Carrahanne. The site is of major ecological interest due to high levels of floral diversity, species richness and range of habitats available as well as its importance as a waterbird wintering site. The conservation objectives focus on maintenance of community composition, structure and functionality, as well as the area of the habitats within the SAC. The standard data form for the site details a list of pressures to include: walking/horse-riding/non-motorised vehicles, removal of beach materials and grazing. The effects observed in the visitor monitoring are localised and predominantly relate to vegetation compaction.

3.5.4.2 Tralee Bay Complex SPA

The Tralee Bay Complex SPA is designated for 22 bird species including three Annex I species; namely Golden Plover (*Pluvialis apricaria*), Bar-tailed Godwit (*Limosa lapponica*), Whooper Swan (*Cygnus cygnus*). The SPA supports over 20,000 wintering waterbirds including an internationally important population of Light-Bellied Brent Goose (*Branta bernicla hrota*). The NPWS conservation objectives focus on maintenance of the favourable conservation condition of the listed bird species and on the maintenance of the favourable conservation condition and area the wetland habitats within the SPA. The standard data form for the site details a list of pressures to include: walking/horse-riding/non-motorised vehicles, water sports, removal of beach materials and grazing. Many dogs were walked off-lead. Impacts associated with visitors were restricted to the secondary movement area outlined in the Visitor Observation Report.

¹⁷ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

3.5.4.3 Akeragh, Banna and Barrow Harbour pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the pNHA coincides with both the Akeragh, Banna and Barrow Harbour SAC and the Tralee Bay Complex SPA.

3.5.5 Recommendations

The Discovery Point is relatively well managed and well maintained. The assessment focused on the receiving environment of the Discovery Point which showed visitors had little adverse effects on the ecological features in its immediate area. Visitors do have a localised adverse impact on the sand dune system adjacent to the Discovery Point which relate primarily to trampling, vegetation compaction and erosion.

Provisions to minimise impacts within the sand dune system and on the beach should be explored such as:

- The erection of additional signage at the visitor parking area could provide guidance to visitors walking in the dunes behind the beach to stick to existing and marked trails provided and to avoid unnecessary disturbance and/or trampling of sand dunes and birds.
- Erection of temporary moving trails to disperse trampling across the site sequentially or fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat.
- Potentially restricting access as well as providing dune restoration and enforcement works at areas that are particularly sensitive or have existing damaged.
- A requirement to keep dogs on-lead within the sand dunes and also on the beach during winter when waders are foraging along the shoreline.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.6 Spanish Point, County Clare

3.6.1 Site Description

Spanish Point is located on the west coast of Co. Clare. It is a 500 m long beach backed by sand dunes and low rocky sea cliffs. It is bounded by a rocky shoreline to the north and the Annagh river outflow to the south. The Discovery Point is located directly adjacent to the Carrowmore to Spanish Point and Islands SAC, the Mid-Clare Coast SPA and the Carrowmore to Spanish Point and Islands pNHA. The site is of historical interest as it is where many soldiers of the Spanish Armada perished in 1588. It is of recreational interest to surfers, swimmers and walkers.



Plate 3.11 Spanish Point view looking north towards the Discovery Point

The site comprises a car park for approximately 100 cars, a bicycle parking stand, recently upgraded public toilet facilities, picnic tables, information signs and an observation deck overlooking the beach. The study area was a mosaic of sandy beach, shingle banks, sand dunes and sea cliffs.

The site comprises a car park for approximately 100 cars, a bicycle parking stand, recently upgraded public toilet facilities, picnic tables, information signs and an observation deck overlooking the beach. The study area was a mosaic of sandy beach, shingle banks, sand dunes and sea cliffs.



Figure 3.11 Site context map for the Spanish Point Discovery Point.

3.6.2 Ecological Constraints

The Spanish Point Discovery Point is within the Carrowmore to Spanish Point and Islands SAC, the Mid-Clare Coast SPA and the Carrowmore to Spanish Point and Islands pNHA.

The SAC is designated for four Annex I habitats features, two of which occur in close proximity to the Discovery Point; terrestrial petrifying springs with tufa formation [7220] and marine reefs [1170]. Petrifying springs have been afforded priority status on Annex I.

Table 3.11 Designated sites in proximity to Spanish Point and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|--|---------------------------------------|---|--|
| 001021 | Carrowmore to Spanish Point and Islands SAC | NPWS 2014 ¹⁸ | The Discovery Point is directly adjacent to the SAC. | <u>Four terrestrial and marine Annex I habitats. The only habitats relevant to the Discovery Point are:</u> Reefs [1170] Petrifying springs with tufa formation [7220] |
| 004182 | Mid-Clare Coast SPA | NPWS 2018 ¹⁹ | The Discovery Point is directly adjacent to the SPA. | <u>Annex I Species:</u> Cormorant (<i>Phalacrocorax carbo</i>) [A017] Barnacle Goose (<i>Branta leucopsis</i>) [A045] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Sanderling (<i>Calidris alba</i>) [A144] Purple Sandpiper (<i>Calidris maritima</i>) [A148] Dunlin (<i>Calidris alpina</i>) [A149] Turnstone (<i>Arenaria interpres</i>) [A169] <u>Other Species</u> Wetland and Waterbirds [A999] |
| N/A | Carrowmore to Spanish Point and Islands pNHA | N/A | The Discovery Point is directly adjacent to the pNHA. | NPWS description from 001021 and 004182 |

3.6.3 Baseline Ecology of study area

A total of eleven quadrats were located at Spanish Point as summarised in Table 3.12 and their locations have been mapped in Figure 3.12.

The habitats present on site are a mosaic of sand shore [LS2], shingle banks [CB1], sand dunes [CD1/2/3]. Petrifying springs with tufa formation [7220] are located in the cliff at both ends of the beach (at QSPAG6 & QSPAG10). The species present are typical of sand dune habitats such as marram grass (*Ammophila arenaria*), fescue grasses (*Festuca spp.*), Common bird's-foot trefoil (*Lotus corniculatus*) and mayweed (*Tripleurospermum martimum*). Sand martins (*Riparia riparia*) were recorded nesting in the cliffs at the southern end of the beach above the petrifying springs (at QSPAG6). Most visitors were observed walking along the beach, sunbathing, swimming & walking dogs. Many of the habitats are in good condition. However, where the sand dunes are not fenced off, many are in poor condition. There are worn trails from visitor movements through the sand dunes, fire pits, littering, and the face of some have completely collapsed (Plate 3.12a). 'Encampments' had been constructed on the dunes using rocks from the adjacent shingle bank (Plate 3.12b).

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

¹⁸ NPWS (2014) Conservation Objectives: Carrowmore Point to Spanish Point and Islands SAC 001021. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

¹⁹ NPWS (2014) Conservation Objectives: Mid-Clare Coast SPA 004182. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Table 3.12 Summary details of each quadrat recorded at Spanish Point

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|--|---|----------------------|------------------------------|
| QSPAG1 | Core | LS2 Sand shores | N/A | Recreation | Good |
| QSPAG2 | Secondary | CB1 Single/gravel banks | N/A | Recreation | Fair |
| QSPAG3 | Secondary | CD2 Marram dunes | White dunes [2120] | Recreation | Doubtful |
| QSPAG4 | Secondary | CD2 Marram dunes | White dunes [2120] | None | Good |
| QSPAG5 | Secondary | CD3 Fixed dunes | Fixed coastal dunes [2130] | Recreation | Fair |
| QSPAG6 | Core | LS2 Sand shores | N/A | Recreation | Good |
| QSPAG7 | Tertiary | GS2 Grassy verge | N/A | None | Good |
| QSPAG8 | Secondary | GA2 Amenity grassland | N/A | Recreation | Good |
| QSPAG9 | Core | LR4 Mixed substrata | N/A | Recreation | Good |
| QSPAG10 | Tertiary | CSI Rocky sea cliff with petrifying spring | Petrifying springs with tufa formation [7220] | None | Good |
| QSPAG11 | Core | BL3 Artificial surface | N/A | Recreation/amenity | N/A |

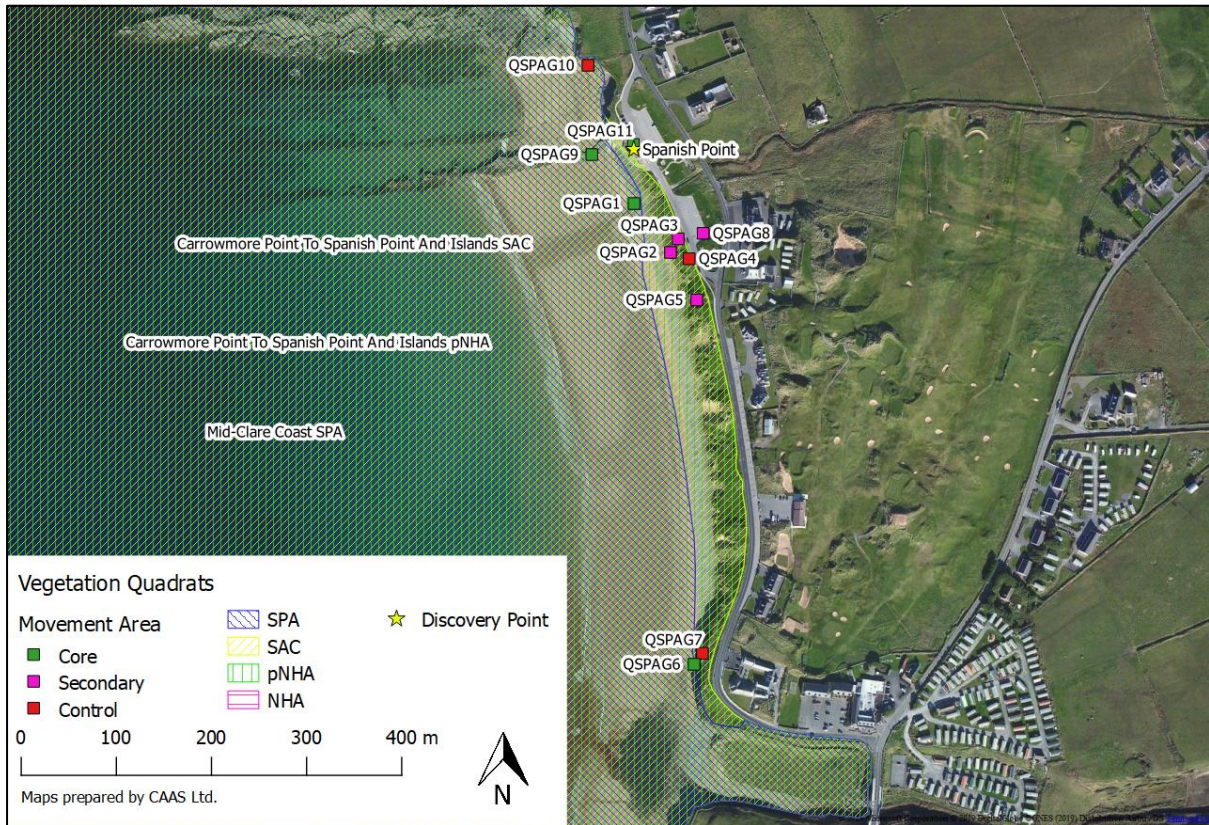


Figure 3.12 Spanish Point Discovery Point; quadrat locations and designated sites are indicated. ²⁰

²⁰ Petrified springs were located beside QSPAG6 and at QSPAG10. Sand martin nests were recorded in the cliff above QSPAG6.



a) Littering and erosion of sand dune system and b) 'encampment' on top of sand dunes.

3.6.4 Preliminary Assessment of Visitor Impact²¹

Visitors to the site trafficked the core zone 164 times and the secondary zone 42 times and there were only 7 incidences of visitors leaving the core and secondary movement zones.

Most visitors to the site (93%) took part in activities that resulted in no identifiable environmental effect.

7% of visitors to the site took part in activities that had medium level environmental impacts such as a group of children using a metal detector and digging up areas of the beach.

3.6.4.1 Carrowmore to Spanish Point and Islands SAC

The SAC is designated for four Annex I habitats features, two of which occur in close proximity to the Spanish Point Discovery Point; terrestrial petrifying springs with tufa formation²² and marine reefs. Species typical of tufa formations include the bryophytes *Palustriella commutata*, *Cratoneuron filicinum*, *Eucladium verticillatum*, *Leiocolea turbinata* and *Pellia endiviifolia*. Two areas were petrifying springs which were recorded at the site (at QSPAG6 & QSPAG10). Spanish point holds a high number of littoral reef communities (N = 13). The conservation objectives focus on the maintenance of community composition, structure and functionality as well of the area of the tufa formations and reef systems within the SAC. The standard data form for the site details a list of pressures to include: water sports, walking and horse-riding and leisure fishing. The NPWS site synopsis considers the small sand dune system at Spanish Point to be degraded due to overuse, and our survey is in agreement with this observation.

There was evidence of vegetation compaction and erosion in areas where the sand dunes are not fenced off. In these areas sand dunes are in poor condition. There are well-worn desire lines from visitor movements, fire pits, littering, and the face of some dunes have completely collapsed. Visitors had also constructed 'encampments' in the dunes using rocks from the adjacent shingle bank. However, where the dunes had been fenced off, the habitat is in good condition. Improved visitor management could reduce the effects in these areas.

3.6.4.2 Mid-Clare Coast SPA

The two special conservation interest species, Kittiwake (*Rissa tridactyla*) and Guillemot (*Uria aalge*), are known to use the cliffs for roosting. These species were not recorded during the survey, although

²¹ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

²² Lyons, M.D. & Kelly, D.L. (2016) Monitoring guidelines for the assessment of petrifying springs in Ireland. Irish Wildlife Manuals, No. 94. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Ireland.

sand martins (*Riparia riparia*) were observed nesting in the clifftops. The habitat features which are of importance for these species are removed from the visitor movement zones². The visitor movement patterns and activities observed have low level effects such as disturbance due to anthropogenic presence.

3.6.4.3 Carrowmore to Spanish Point and Islands pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the pNHA coincides with both the Carrowmore to Spanish Point Islands SAC and Mid-Clare Coast SPA.

3.6.5 Recommendations

The overall habitat condition is good, with the exception of the sand dunes between beach and the road. This site is very busy, although visitor numbers were low during our survey because it was outside of school holidays and the weather was poor. Nonetheless, the effect of visitor movements was clearly evident in the sand dunes, the majority of which were not fenced off, and therefore subject to trampling, compaction and erosion.

It is recommended that these areas are fenced off to allow for recovery of the fixed and marram dune habitats. Additionally, dune restoration works such as dune enforcement is recommended at this site. Some of the more regularly used and substantial desire-lines through these habitats could be marked to ensure a unified area is sacrificed to restore the surrounding habitat. Where this system is already in place, between the carpark and the beach, management appears to be working well.

Accordingly, provisions to minimise further impact and to restore sand dune habitats should be implemented such as:

- The erection of additional signage at the visitor parking area regarding the sensitivity of the sand dune habitats.
- The erection of additional signage at the top and bottom of dunes to provide guidance to visitors to stick to marked trails and to avoid unnecessary trampling of sand dunes.
- Further fencing off of dunes and fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.7 Flaggy Shore, County Clare

3.7.1 Site Description

The Flaggy Shore is located on the north coast of Co. Clare on the edge of the Burren, approximately eleven kilometres west of Kinvarra. The Discovery Point is located at a layby beside Newquay Beach,



Plate 3.13 View of the Flaggy Shore from the beach

although the Flaggy Shore itself extends for a few kilometres to the northwest along the shoreline. The site is located within the Galway Bay Complex SAC and pNHA, and the Inner Galway Bay SPA. The Flaggy Shore is known for its sculptured fossiliferous limestone pavements. The site is set against the backdrop of the Burren and gives lovely views over Galway Bay to the west and north.

The site does not have any facilities, other than a gravel layby that is used for parking. Informational signage is limited at the site, with no signs regarding the local geology or ecology. The small beach is attractive to local swimmers, and there is further parking available here. The wider area is attractive to walkers, dog-walkers and cyclists, and there is an 8km looped route that takes visitors along the shoreline before circling back around the headland, although the signage is damaged and in need of repair. Most visitors walked along the road. However, there were some desire lines through the vegetation between the road and the shore. The study area includes areas of rocky shore, grassy verges and a limited amount of amenity grassland.

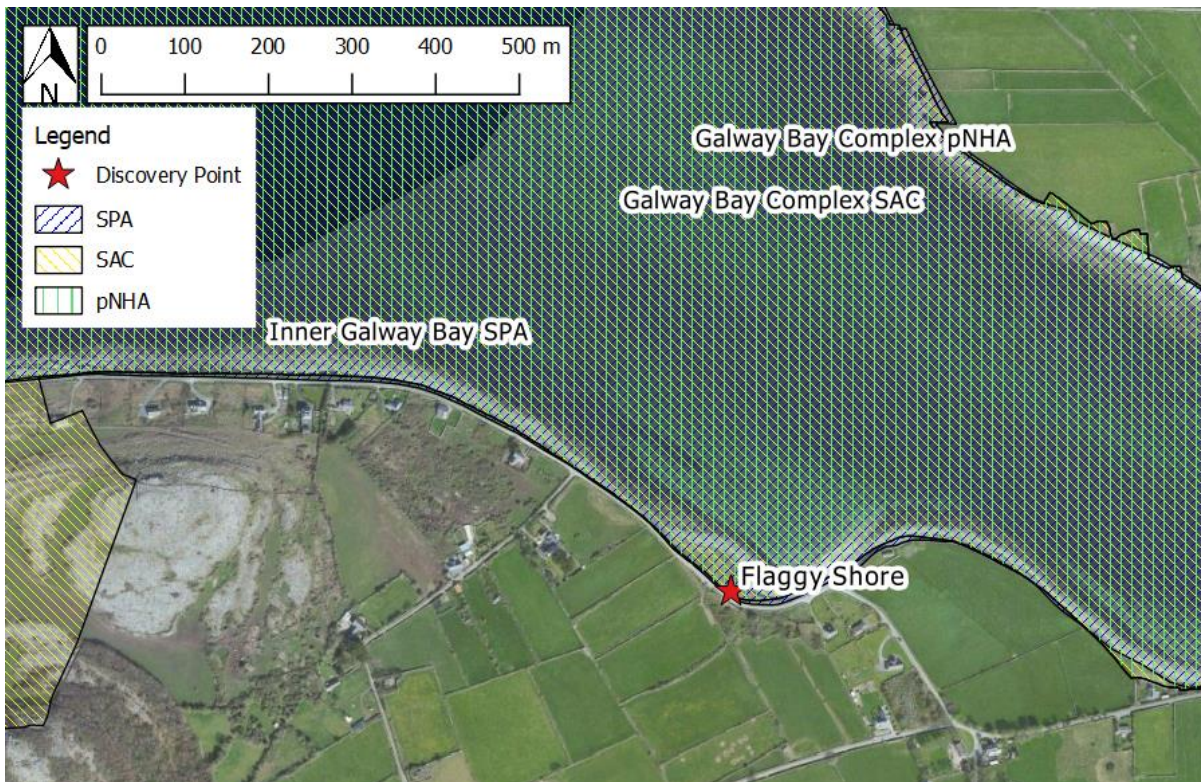


Figure 3.13 Site context map for the Flaggy Shore Discovery Point.

3.7.2 Ecological Constraints

The Flaggy Shore Discovery Point is located within the Galway Bay Complex SAC and pNHA, and the Inner Galway Bay SPA.

The SAC is designated for thirteen Annex I habitats features, five of which occur in close proximity to the Discovery Point: mudflats and sandflats not covered by seawater at low tide [1140], large shallow inlets and bays [1160], reefs [1170], perennial vegetation of stony banks [1220] and limestone pavement [8240], the latter being a priority habitat. The area is an important ornithological site, providing many diverse habitats that are suitable for breeding, foraging and roosting.

Table 3.13 Designated sites in proximity to Flaggy Shore and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|-------------------------|---------------------------------------|---|--|
| 000268 | Galway Bay Complex SAC | NPWS 2013 ²³ | The Discovery Point occurs within the SAC. | <u>Thirteen terrestrial and marine Annex I habitats.</u> <u>The only habitats relevant to the Discovery Point are:</u> Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Limestone pavement [8240] <u>Two annex II species, both of which occur in proximity to the Discovery Point.</u> Otter [1355] Harbour seal [1365] |
| 004031 | Inner Galway Bay SPA | NPWS 2013 ²⁴ | The Discovery Point occurs within the SPA. | <u>Annex I Bird Species:</u> Black-throated Diver (<i>Gavia arctica</i>) [A002] Great Northern Diver (<i>Gavia immer</i>) [A003] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Common Tern (<i>Sterna hirundo</i>) [A191] Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] Little Egret (<i>Rissa tridactyla</i>) [A026] |
| N/A | Galway Bay Complex pNHA | N/A | The Discovery Point occurs within the pNHA. | NPWS description from 000268 and 004031 |

3.7.3 Baseline Ecology of study area

A total of ten quadrats were located at the Flaggy Shore as summarised in Table 3.14 and their locations have been mapped in Figure 3.14.

The area surrounding the Flaggy Shore Discovery Point is dominated by agricultural grassland (GA1) and dry calcareous neutral grassland (GS1), the latter allowing for floral diversity in the receiving environment, and shingle banks and stony beaches (LS1/2). The Burren karstic limestone pavement (a priority habitat) extends into the sublittoral zone along the Flaggy Shore close to the Discovery Point (Plate 3.14a) and best example of a karstic lagoon (a priority habitat) in the country, Lough Muree, is located c. 2km to the west. The limestone contains coral and brachiopod fossils. The vegetation in the receiving environment is typical of frequently disturbed maritime habitats. There are records for two rare plant species, henbane (*Hyoscyamus niger*) and sea kale (*Cambris maritima*) in the wider area, although these were not recorded during the survey. Observed species included sea mayweed (*Tripleurospermum maritimum*), sea radish (*Raphanus raphanistrum*), sea beet (*Beta vulgaris spp. maritima*), common scurvygrass (*Cochlearia officinalis*), oraches (*Atriplex spp.*) and buck's horn plantain (*Plantago coronopus*). Some desire lines were evident through the vegetation between the road and the shoreline, and there was evidence of vehicular access to the beach (Plate 3.14b). The amenity

²³ NPWS (2013) Conservation Objectives: Galway Bay Complex SAC [000268]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

²⁴ NPWS (2013) Conservation Objectives: Inner Galway Bay SPA [004031]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

grassland behind the discovery point contained species such as shining crane's bill (*Geranium lucidum*), Germander speedwell (*Veronica chamaedrys*), daisy (*Bellis perennis*) and Hart's tongue fern (*Asplenium scolopendrium*). Visitors were observed sitting in this area. Terns (*Sterna spp.*) were observed foraging off-shore and wrens (*Troglodytes troglodytes*), linnets (*Carduelis cannabina*), and goldfinch (*Carduelis carduelis*) were recorded in the treeline surrounding the amenity grassland.

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

Table 3.14 Summary details of each quadrat recorded at Flaggy Shore

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|-----------------------------|---------------------------|----------------------|------------------------------|
| QFSAG1 | Core | BL3 Artificial surface | N/A | Carpark | N/A |
| QFSAG2 | Core | CB1 Shingle/gravel banks | N/A | Recreation/amenity | Fair |
| QFSAG3 | Core | LS2 Sand shores | N/A | Recreation/amenity | Good |
| QFSAG4 | Tertiary | CB1 Shingle/gravel banks | N/A | None | Good |
| QFSAG5 | Tertiary | LS1 Shingle/gravel shore | N/A | None | Good |
| QFSAG6 | Secondary | GA2 Amenity grassland | N/A | Recreation/amenity | Good |
| QFSAG7 | Secondary | GS2 Grassy verge | N/A | Recreation/amenity | Good |
| QFSAG8 | Core | BL3 Artificial surface | N/A | Recreation/amenity | Good |
| QFSAG9 | Secondary | LS2 Sand shores | N/A | Recreation/amenity | Good |
| QFSAG10 | Secondary | ER2 Exposed calcareous rock | Limestone pavement [8240] | Recreation/amenity | Good |

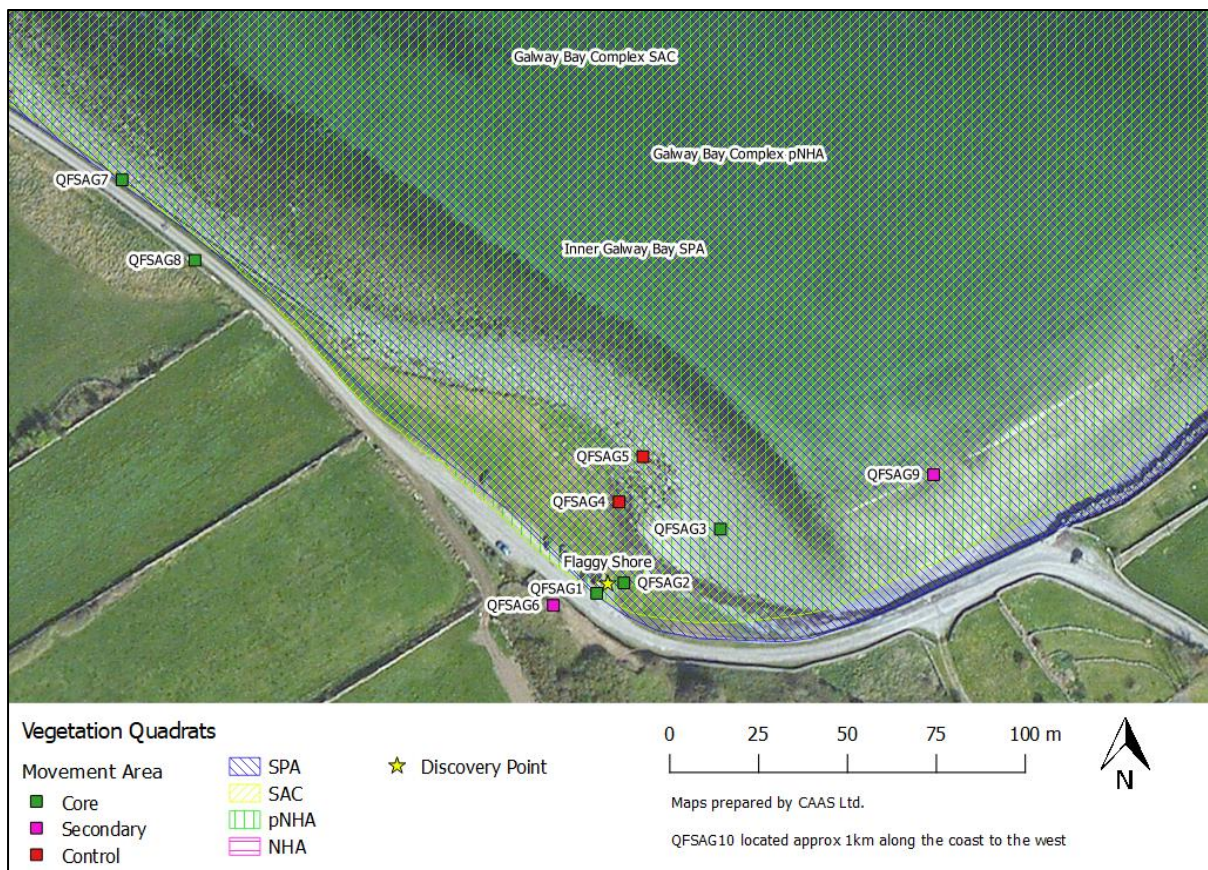


Figure 3.14 Flaggy Shore Discovery Point. The location of quadrats and designated sites are indicated. QFSAG10 is located on the rocky outcrops approx. 1km along the shore to the west.



a)



b)

Plate 3.14 a) fossiliferous biokarst c. 1km from the Discovery Point and b) tyre marks through vegetation onto beach.

3.7.4 Preliminary Assessment of Visitor Impact²⁵

All visitors to Flaggy Shore that were recorded stayed within the core or secondary zones.

91% of visitors took part in activities that resulted in no identifiable or low-level environmental effects to the site.

9% of visitors took part in activities that had a medium- or high-level environmental effect to the site such as leaving marked paths which resulted in visible desire lines in surrounding vegetation. Other impacts included:

- Disturbance of wildlife;
- Trampling herbaceous vegetation;
- Desire lines or tracks visible outside existing trail or marked path; and
- Direct interference with site material.

3.7.4.1 Galway Bay Complex SAC

The main conservation objectives published by the NPWS are to maintain or restore the favourable conservation condition of the habitats and species listed as Special Conservation Interests for this SAC. Five of the thirteen habitats for which the SAC has been designated occur in close proximity to the Discovery Point: mudflats and sandflats [1140], large shallow inlets and bays [1160], reefs [1170], perennial vegetation of stony banks [1220] and limestone pavements [8240]. The site also supports an important common seal colony and breeding otter population, although neither of these species were recorded during the survey. Visitor movements were mainly limited to the core movement zone. The effects observed in the visitor monitoring are localised and predominantly relate to vegetation

²⁵ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

compaction at convenient observation points over the shoreline along the road, and are areas of relatively low ecological value.

3.7.4.2 Inner Galway Bay SPA

Generic conservation objectives for the Inner Galway Bay SPA have been published by the NPWS. The main objective of the document is to maintain the favourable conservation condition of the bird species and wetland habitats listed as Special Conservation Interests for this SPA.

The visitor movement data showed that most visitors remained within the core movement zone which is removed from key breeding, foraging and roosting habitats. No wetland habitat occurs within the immediate receiving environment of the Discovery Point. No sources for effects that would disturb the bird species were identified, except off-lead dog-walking. There is potential for off-lead dogs to disturb over wintering seabirds foraging in the vicinity of the Discovery Point.

3.7.4.3 Galway Bay Complex pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the pNHA coincides with both the Galway Bay Complex SAC and Inner Galway Bay SPA.

3.7.5 Recommendations

The Flaggy Shore Discovery Point is a very quiet site, receiving a relatively low number of visitors. The areas which are subject to visitor movements have low species diversity and are of relatively low ecological value. No rare or protected species or habitats were recorded on site. Visitor movements are causing some trampling of vegetation between the road and shoreline. However, there are no ecological features of significance which are being impacted by visitor movements.

Consideration could be given to control/manage visitor movements to reduce trampling at observation points, *e.g.* by providing fixed "photo opportunity" platforms. The signage regarding the looped walk should be repaired and cleaned. There is also an opportunity to erect informational signage regarding the geology of the local area and to direct visitors to the excellent example of fossiliferous limestone biokarst that occurs c. 1km west of the Discovery Point.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

3.8 Traught Beach, County Galway

3.8.1 Site Description

The Traught Beach Discovery Point is located approximately 7km northwest of Kinvarra on the south coast of Co. Galway.



Plate 3.15 Traught Beach with carpark, lifeguard station and public toilets in the background.

The Discovery Point is located within the Galway Bay Complex SAC and pNHA, and the Inner Galway Bay SPA. The beach is a mixture of coarse grey sand and stone and is 400m wide. It is possible to walk along the coast line towards Rosshill for approximately 1km.

Despite not being a white sandy beach, Traught is popular with locals as well as visitors for walking, dog-walking and swimming. It

is very family-friendly. There is a carpark with approximately 50 marked spaces, with room for another 20-30 cars in an unmarked section, and some bike parking. The barrier can be opened to facilitate coach access. There are public toilet facilities, a lifeguard station, a shower, benches, litter-pickers and bins, picnic tables and good, albeit worn, informational signage. A concrete footpath runs between the carpark and the beach with two ramps giving wheelchair/buggy access to the beach.

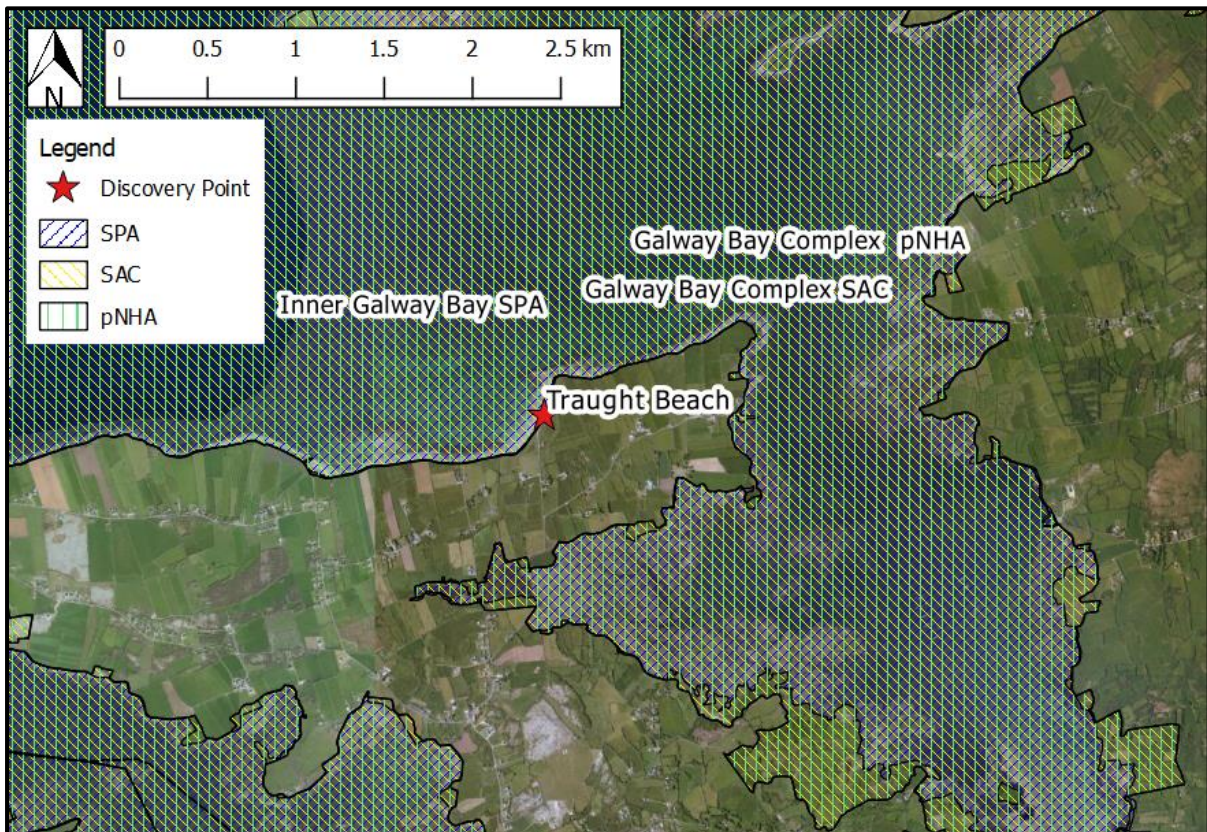


Figure 3.15 Site context map for the Traught Beach Discovery Point.

3.8.2 Ecological Constraints

Traught Beach Discovery Point is located within the Galway Bay Complex SAC and pNHA, and the Inner Galway Bay SPA.

The SAC is designated for thirteen Annex I habitats features, four of which occur in close proximity to the Discovery Point: mudflats and sandflats not covered by seawater at low tide [1140], large shallow inlets and bays [1160], reefs [1170], and perennial vegetation of stony banks [1220]. The area is an important ornithological site, providing many diverse habitats that are suitable for breeding, foraging and roosting.

Table 3.15 Designated sites in proximity to Traught Beach and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/ Sensitive Ecological Receptors |
|----------------|-------------------------|---------------------------------------|---|--|
| 000268 | Galway Bay Complex SAC | NPWS 2013 ²³ | The Discovery Point occurs within the SAC. | <u>Thirteen terrestrial and marine Annex I habitats. The only habitats relevant to the Discovery Point are:</u> Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] <u>Two annex II species, both of which occur in proximity to the Discovery Point.</u> Otter [1355] Harbour seal [1365] |
| 004031 | Inner Galway Bay SPA | NPWS 2013 ²⁴ | The Discovery Point occurs within the SPA. | <u>Annex I Bird Species:</u> Black-throated Diver (<i>Gavia arctica</i>) [A002] Great Northern Diver (<i>Gavia immer</i>) [A003] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Common Tern (<i>Sterna hirundo</i>) [A191] Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] Little Egret (<i>Rissa tridactyla</i>) [A026] |
| N/A | Galway Bay Complex pNHA | N/A | The Discovery Point occurs within the pNHA. | NPWS description from 000268 and 004031 |

3.8.3 Baseline Ecology of study area

A total of ten quadrats were located at Traught Beach as summarised in Table 3.16 and their locations have been mapped in Figure 3.16.

The study site comprises buildings and artificial surfaces (BL3), sand shores (LS2), shingle/gravel banks (CB1), some rocky shore (LR3) and dry calcareous grassland (GS1). The beach is a mixture of coarse grey sand and stone and is 400m wide. However, it is possible to walk along the coast line towards Rosshill for approximately 1km. The beach is backed by a shingle banks upon which there are typical maritime plant species. Immediately behind the beach are cattle pastures and dispersed housing. The vegetation in the receiving environment is typical of frequently disturbed maritime habitats. Observed species included sea mayweed (*Tripleurospermum maritimum*), sea radish (*Raphanus raphanistrum*), common scurvygrass (*Cochlearia officinalis*), bladder campion (*Silene vulgaris*) and silverweed (*Potentilla anserine*). Grassland species included common bird's-foot trefoil (*Lotus caniculatus*), yarrow (*Achillea millefolium*), Lady's bedstraw (*Galium verum*), marsh thistle (*Cirsium palustre*) and *Ranunculus* species. Other species recorded included terns (*Sterna sp.*), grey herons (*Ardea cinerea*), small white (*Pieris rapae*) and red admiral (*Vanessa atalanta*) butterflies.

There were strong desire lines through the vegetation along the shingle banks at the top of the beach (Plate 3.16a). Visitors were observed sitting and lying in these areas and there were remains of several old fire pits (Plate 3.16b). A group of adults were observed operating a drone over the beach on one survey day.

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

Table 3.16 Summary details of each quadrat recorded at Traught Beach

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|------------------------------|--------------------|----------------------|------------------------------|
| QTBAG1 | Core | LS2 Sand shores | N/A | Recreation | Good |
| QTBAG2 | Secondary | CB1 Shingle/gravel bank | N/A | Recreation | Fair |
| QTBAG3 | Secondary | CB1 Shingle/gravel bank | N/A | Recreation | Fair |
| QTBAG4 | Secondary | CB1 Shingle/gravel bank | N/A | Recreation | Fair |
| QTBAG5 | Core | LS2 Sand shores | N/A | Recreation | Good |
| QTBAG6 | Core | BL3 Artificial surface | N/A | Recreation | N/A |
| QTBAG7 | Secondary | LR3 Sheltered rocky shore | N/A | Recreation | Good |
| QTBAG8 | Tertiary | LR3 Sheltered rocky shore | N/A | Recreation | Good |
| QTBAG9 | Tertiary | GS1 Dry calcareous grassland | N/A | Grazing - cattle | Good |
| QTBAG10 | Tertiary | GS1 Dry calcareous grassland | N/A | Grazing - cattle | Fair |

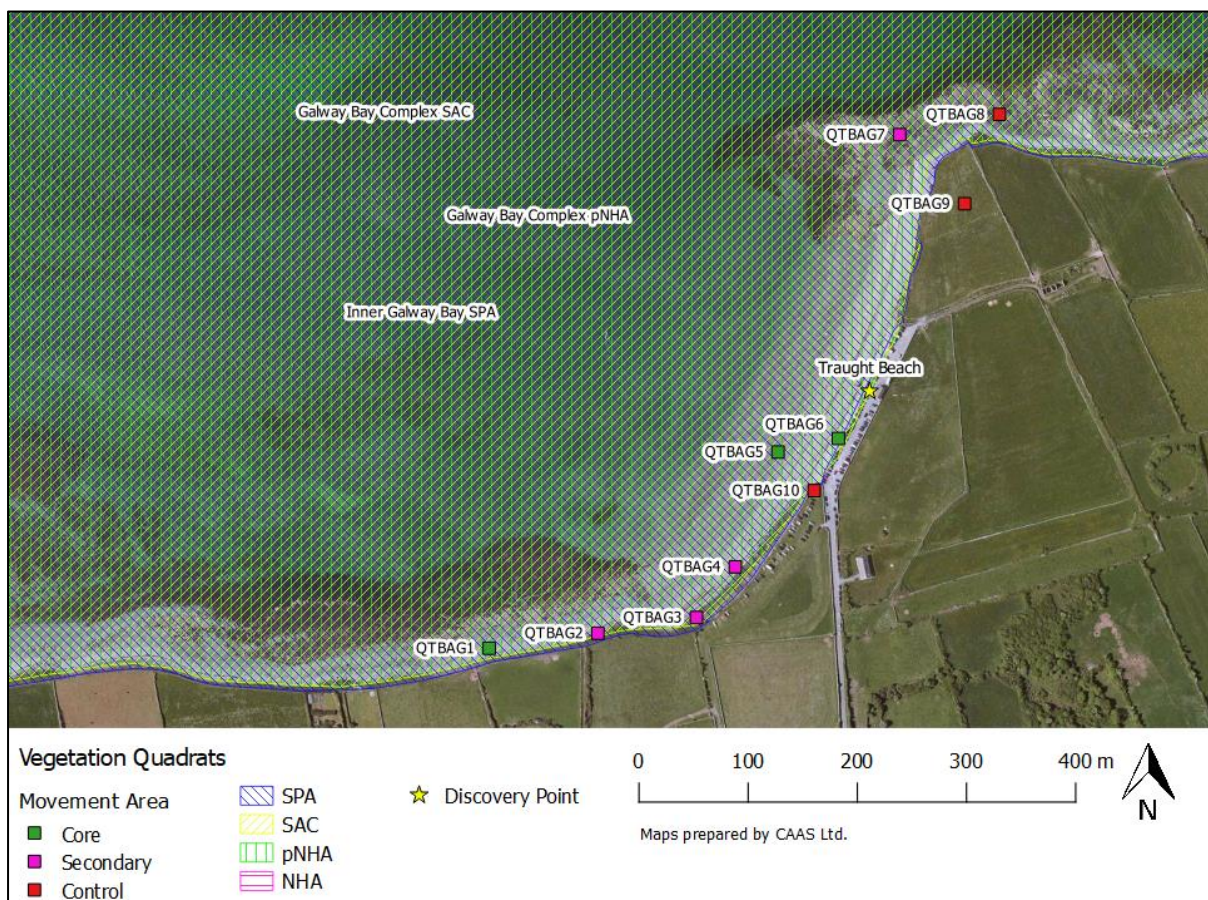
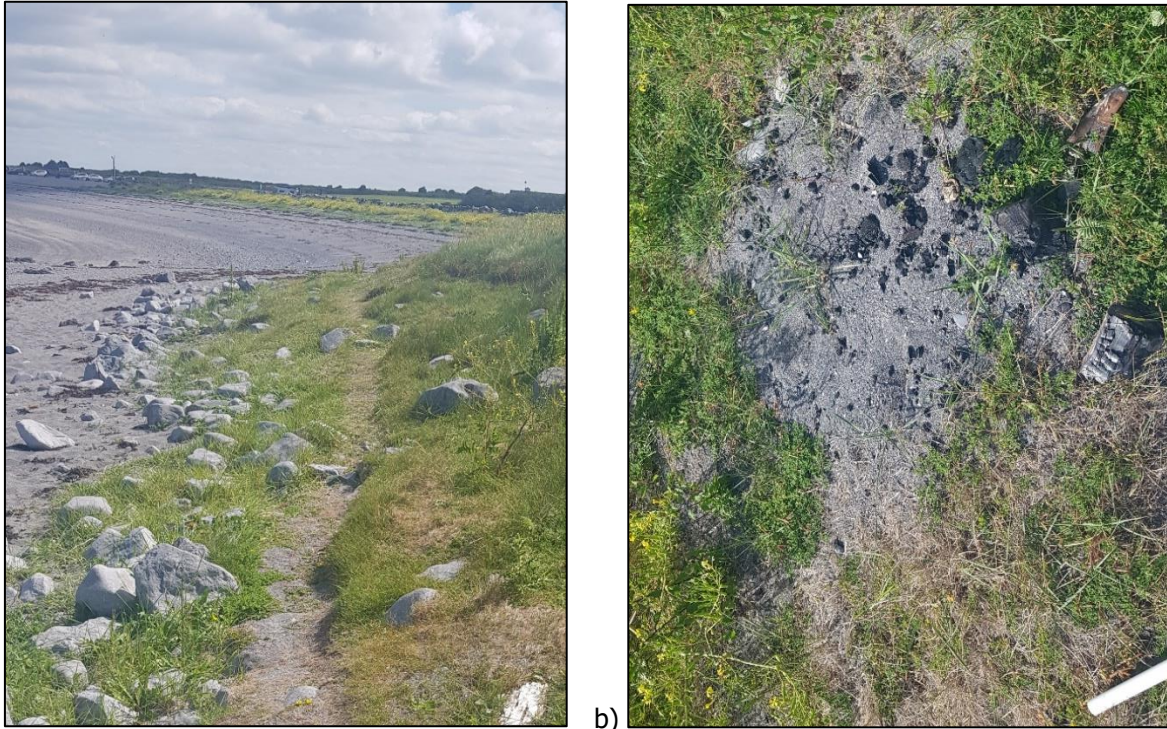


Figure 3.16 Traught Beach Discovery Point. The location of quadrats and designated sites are indicated.



a) b)
Plate 3.16 a) A strong desire line through vegetation at top of beach and b) the remains of fire in the vegetation.

3.8.4 Preliminary Assessment of Visitor Impact²⁶

The majority of visitors to the site stayed within the core zone of the beach car park and the beach itself.

90% of all visitors to the site took part in activities that resulted in no identifiable environmental impacts to the site.

10% of visitors took part in activities that had effects on the environment including walking on or creating desire lines, trampling vegetation. One group was recorded operating a drone over the beach.

3.8.4.1 Galway Bay Complex SAC

The main conservation objectives published by the NPWS are to maintain or restore the favourable conservation condition of the habitats and species listed as Special Conservation Interests for this SAC. Four of the thirteen habitats for which the SAC has been designated occur in close proximity to the Discovery Point: mudflats and sandflats [1140], large shallow inlets and bays [1160], reefs [1170] and perennial vegetation of stony banks [1220]. The site also supports an important common seal colony and breeding otter population, although neither of these species were recorded during the survey. Visitor movements were mainly limited to the core movement zone. The effects observed in the visitor monitoring are localised and predominantly relate to vegetation compaction in the stony banks.

3.8.4.2 Inner Galway Bay SPA

Generic conservation objectives for the Inner Galway Bay SPA have been published by the NPWS. The main objective of the document is to maintain the favourable conservation condition of the bird species and wetland habitats listed as Special Conservation Interests for this SPA.

The visitor movement data showed that tourists remain within the core movement zone which is removed from key breeding, foraging and roosting habitats. No wetland habitat occurs within the

²⁶ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

immediate receiving environment of the Discovery Point. A drone was observed operating in the area and this has high potential to disturb bird species. There is also potential for off-lead dogs to disturb overwintering seabirds that may forage along the shoreline in the vicinity of the Discovery Point.

3.8.4.3 Galway Bay Complex pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the pNHA coincides with both the Galway Bay Complex SAC and Inner Galway Bay SPA.

3.8.5 Recommendations

The areas within the Traught Beach Discovery Point site which are subject to visitor movements have low species diversity and are of relatively low ecological value. No rare or protected species or habitats were recorded on site. Visitor movements are causing some trampling of vegetation along the stony bank high along the shoreline. However, there are no ecological features of significance which are being impacted by visitor movements.

Consideration could be given to control/manage visitor movements to reduce trampling at these points, *e.g.* by providing fixed signage regarding trampling of vegetation, lighting of fires. Consideration should be given to regulating the use of drones in the area, particularly when at times when overwintering birds are likely to be present.

Designated fire pit or BBQ areas could be installed to control any potential risk of fire damage moving forward.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

3.9 Derrigimlagh Bog, County Galway

3.9.1 Site Description

Derrigimlagh Bog is located 4km south of Clifden in Connemara, Co. Galway. It comprises a 5km looped walking trail which takes visitors to points of interest. There are seven interactive interpretive stations



Plate 3.17 Interpretive station at Derrigimlagh Bog Signature Discovery Point overlooking the Twelve Bens.

that provide information on the rich history and ecology of the area. The site is the location of Marconi's wireless radio station, from which the first commercial transmission of Morse code across the Atlantic originated in 1907. It is also the landing site for the first non-stop transatlantic flight between the USA and Europe, made by Alcock and Brown in 1919. The site is surrounded by Atlantic blanket bog, and offers superb views of the Twelve Bens. The site is

attractive to both visitors and locals, who use the trail for sight-seeing, walking, dog-walking and running. The site is adjacent to the Connemara Bog Complex SAC, SPA and pNHA and lies approximately 1km east of the Slyne Head Peninsula SAC and pNHA.

The site was fully redeveloped and launched in July 2016. There is a large carpark with space for approximately 20-30 vehicles, though spaces are unmarked. There is also a bike rack. There are no other facilities on site, *e.g.* toilets, bins, café. On the evening of the pre-survey site inspection, there was a crepe van on site, however, this was not present on either day of the survey. The trail is a mixture of gravel road, rough trail and boardwalk. There are excellent interpretive signs for visitors.

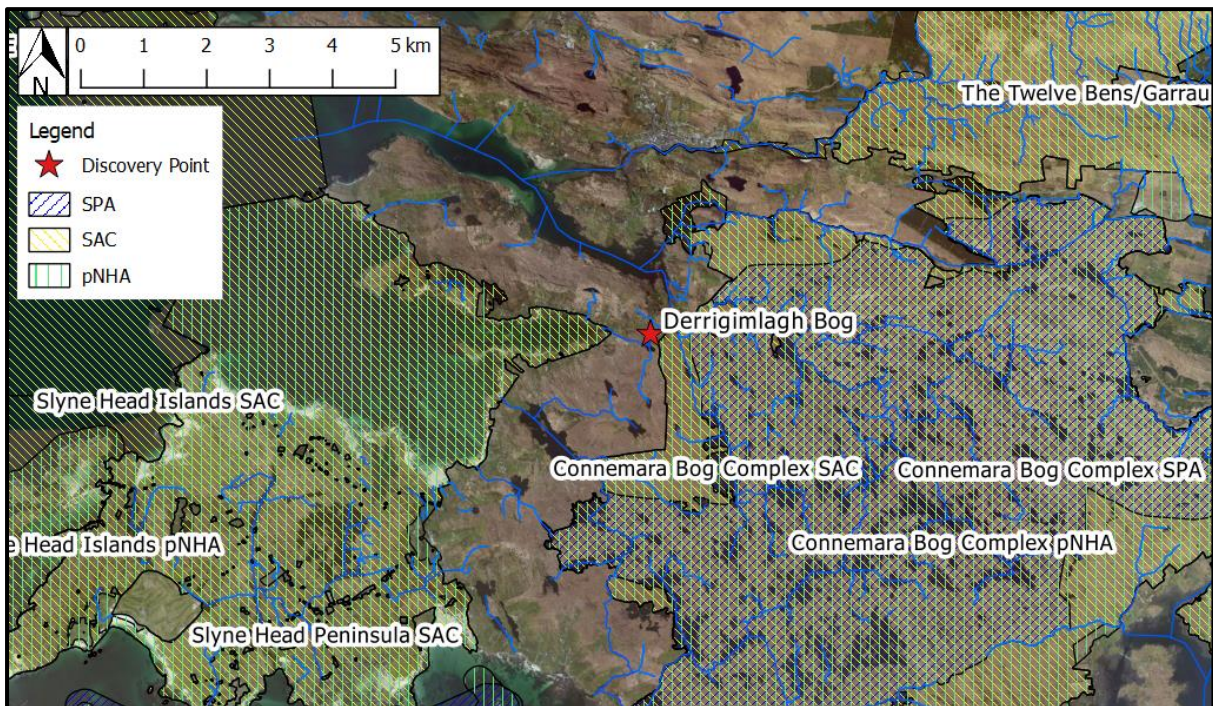


Figure 3.17 Site context map for the Derrigimlagh Bog Signature Discovery Point.

3.9.2 Ecological Constraints

The Derrigimlagh Bog Signature Discovery Point occurs immediately adjacent to the Connemara Bog Complex SAC, SPA and pNHA and lies approximately 1km east of the Slyne Head Peninsula SAC and pNHA. The conservation interest of the Connemara Bog Complex lies in the variety of habitat types and species it contains, including blanket bog (PB3), a priority habitat [7130], nine plant species protected under the Flora (Protection) Order, 2015, four Annex I bird species and two Annex II species. The Irish hare has also been recorded on site. The main threats to the area include peat-extraction, over-grazing, land drainage and reclamation. Slyne Head SAC and pNHA are located approximately 1km from the Discovery Point. However, none of the conservation interests for which this area is designated occur in proximity to the receiving environment of the Discovery Point, with the exception of patches of dry heath (HH1) which occurs in a mosaic with blanket bog.

Table 3.17 Designated sites in proximity to Derrigimlagh Bog and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/ Sensitive Ecological Receptors |
|----------------|----------------------------|---------------------------------------|---|---|
| 002034 | Connemara Bog Complex SAC | NPWS 2015 ²⁷ | The Discovery Point is 200m from the SAC. | <u>Fourteen terrestrial and marine Annex I habitats. The only habitats relevant to the Discovery Point are:</u> Blanket Bog [7130] Northern Atlantic wet heath [4010] European dry heath [4030] Natural dystrophic lakes [3160] <u>Annex II Species:</u> Marsh Fritillary <i>Euphydryas aurinia</i> [1065] Salmon <i>Salmo salar</i> [1106] Otter <i>Lutra lutra</i> [1355] |
| 004181 | Connemara Bog Complex SPA | NPWS 2018 ²⁸ | The Discovery Point is 600m from the SPA. | Cormorant (<i>Phalacrocorax carbo</i>) [A017] Merlin (<i>Falco columbarius</i>) [A098] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Common Gull (<i>Larus canus</i>) [A182] |
| N/A | Connemara Bog Complex pNHA | N/A | The Discovery Point is 200m from the pNHA | NPWS description from 002034 and 004181 |
| 002074 | Slyne Head Peninsula SAC | NPWS 2015 ²⁹ | The Discovery Point is 630m from the SAC. | <u>Eighteen terrestrial and marine Annex I habitats. The only habitat relevant to the Discovery Point is:</u> European dry heath [4030] <u>Annex II Species:</u> Petalwort <i>Petalophyllum ralfsii</i> [1395] Slender Naiad <i>Najas flexilis</i> [1833] |
| N/A | Slyne Head Peninsula pNHA | N/A | The Discovery Point is 630m from the pNHA | NPWS description from 002074 |

3.9.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Derrigimlagh Bog as summarised in Table 3.18 and their locations have been mapped in Figure 3.18.

The immediate vicinity of the Signature Discovery Point is a carpark (BL3) surrounded by a mosaic of dry humic acid grassland (GS3), blanket bog (PB3), dry heath (HH1), and rocky outcrop (ER1) and dystrophic lakes (3160). A 5km looped walking trail extends through the site, which comprises road and gravel pathway or paving with boardwalk over more sensitive areas. The first part of this trail also acts as access for farmers/turf cutters to the adjacent lands. Visitor interpretive stations (BL3) are located at various distances along the looped trail. The overall condition of the site is favourable, with very few visitor-created desire lines as paving and boardwalk directed visitors to most points of interest. However, one group was observed driving their car all the way down the trail to the site of the radio station, and walking off-trail. The area is heavily grazed by sheep (Plate 3.18a) and the wider area, *i.e.* the adjacent

²⁷ NPWS (2015) Conservation Objectives: Connemara Bog Complex SAC 002034. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

²⁸ NPWS (2018) Conservation objectives for Connemara Bog Complex SPA [004181]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

²⁹ NPWS (2015) Conservation Objectives: Slyne Head Peninsula SAC 002074. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

bog/heath, is subject to mechanical turf-cutting (Plate 3.18b). This has resulted in erosion and degradation of the surrounding landscape which is an eyesore for visitors, and ecologically unsound. Species recorded were typical of bog/heath habitats such as soft rushes (*Juncus effuses*), black bog rush (*Schoenus nigricans*), *Sphagnum* mosses, sundew (*Drosera rotundifolia*), cross-leaved heath (*Erica tetralix*), ling (*Canula vulgaris*) and bog pimpernel (*Lysimachia tenella*). Other species recorded included the Irish hare (*Lepus timidus hibernicus*), blackbird fledglings (*Turdus merula*), skylark (*Alauda arvensis*), meadow pipit (*Anthus pratensis*), water lobelia (*Lobelia dortmanna*) and white water-lilies (*Nymphaea alba*).

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

Table 3.18 Summary details of each quadrat recorded at Derrigimlagh Bog

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|---|--------------------|---|------------------------------|
| QDBAG1 | Core | GS3 Dry humic acid grassland | N/A | Recreation/transport/Access/grazing - sheep | Fair |
| QDBAG2 | Tertiary | PB3 Lowland blanket bog | N/A | Grazing – sheep | Good |
| QDBAG3 | Tertiary | HH1 Dry siliceous heath | N/A | Grazing – sheep | Fair |
| QDBAG4 | Core | BL3 Artificial surface | N/A | Recreation/transport/Access | N/A |
| QDBAG5 | Secondary | HH1/ER1 Dry heath/rocky outcrop mosaic | N/A | Transport/recreation | Fair |
| QDBAG6 | Secondary | HH1/PB3 Dry heath/blanket bog mosaic | N/A | Recreation/amenity | Fair |
| QDBAG7 | Secondary | BL3/ED3 Artificial surface/recolonising bare ground | N/A | Recreation/amenity | Fair |
| QDBAG8 | Secondary | BL3/ED3 Artificial surface/recolonising bare ground | N/A | Recreation/amenity | Fair |
| QDBAG9 | Core | BL3 artificial surface | N/A | Recreation/amenity | N/A |
| QDBAG10 | Core | ED3 Recolonising bare ground | N/A | Farm access/recreation | Good |

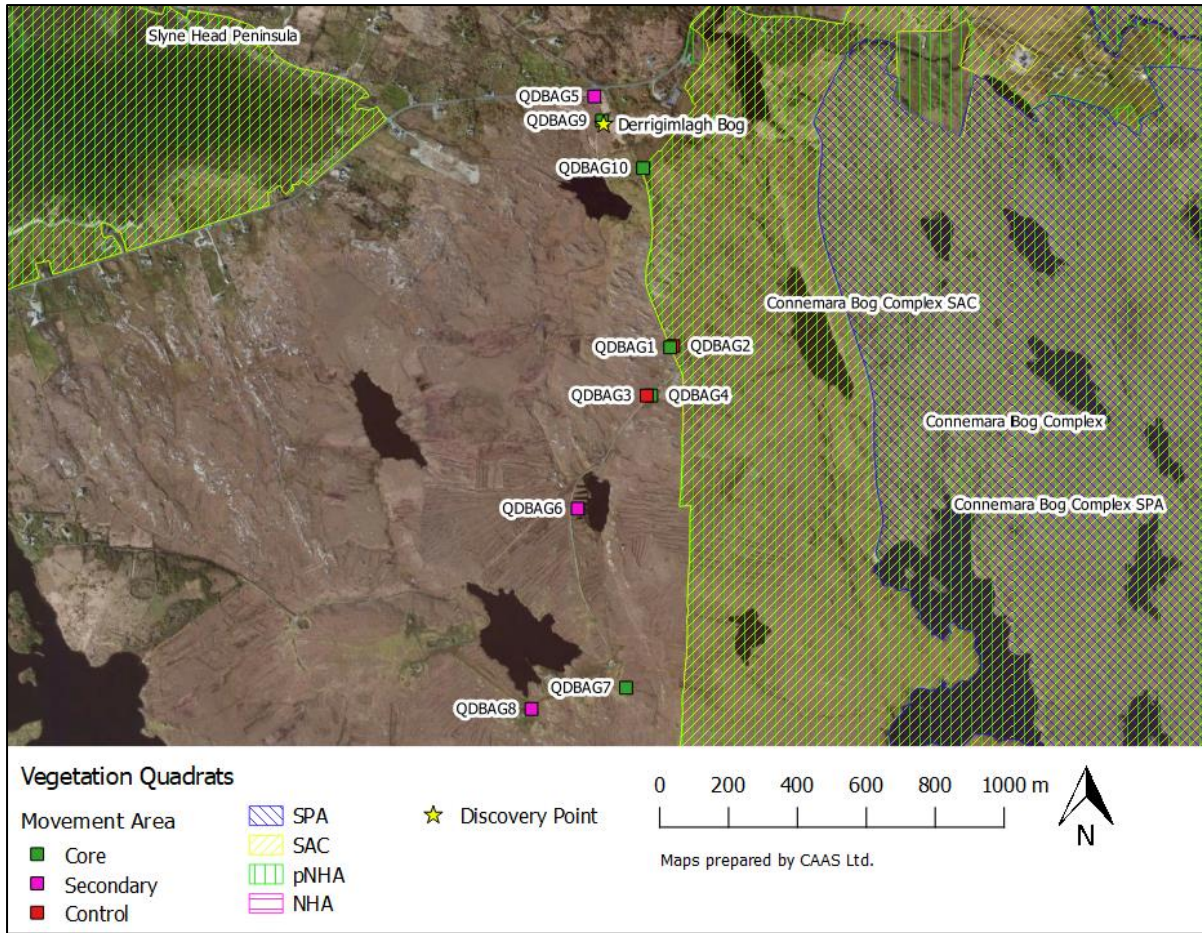


Figure 3.18 Derrigimlagh Bog Signature Discovery Point. The location of quadrats and designated sites are indicated.

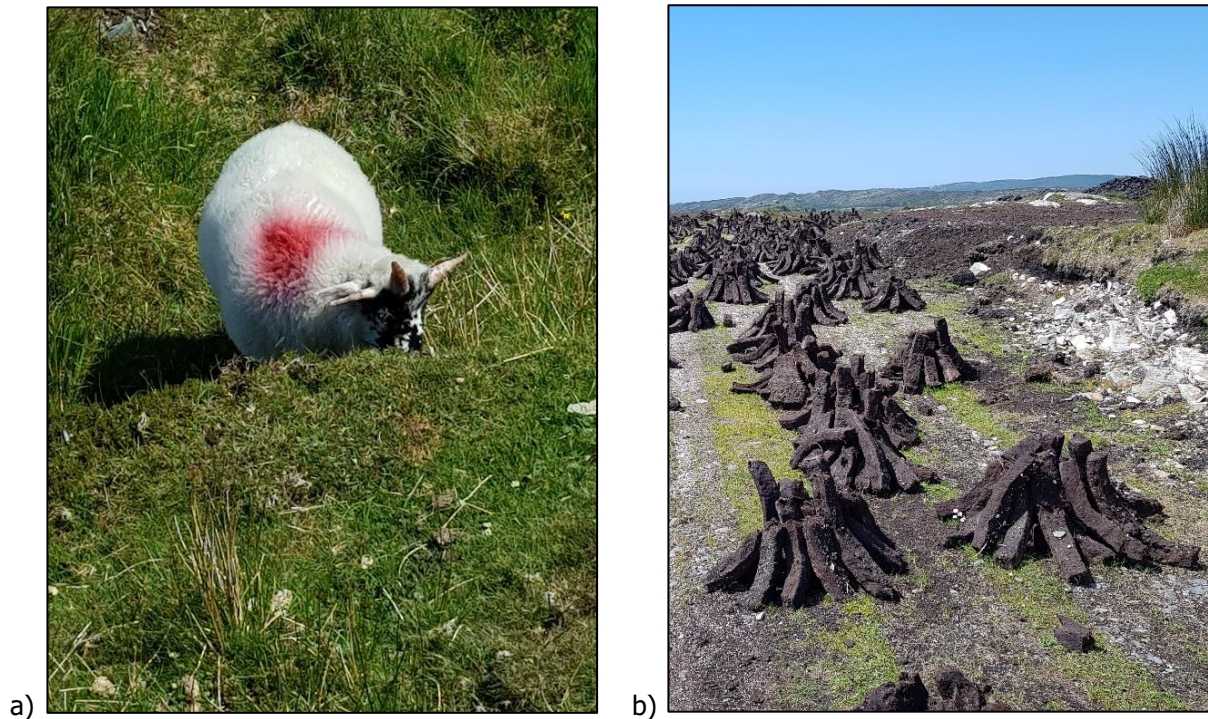


Plate 3.18 a) sheep grazing adjacent to looped walk and b) turf drying adjacent to looped walk.

3.9.4 Preliminary Assessment of Visitor Impact³⁰

The core zone at Derrigimlagh Bog was trafficked 153 times. There were no visitor movements in the secondary zone but there were 6 incidences of visitors leaving the path to better explore the site in the tertiary zone.

95% of all visitors took part in activities that had no identifiable environmental effect to the site. Low-level environmental effects occurred when people used existing desire lines. Medium-level environmental impacts were observed when visitors went outside of designated areas, creating new desire lines and trampling some herbaceous vegetation. In one case a group of visitors drove along the walking trail.

3.9.4.1 Connemara Box Complex SAC/SPA/pNHA

The conservation objectives produced by the NPWS in 2018 include the restoration of bog, heath and associated habitats and maintenance of the favourable status of natural dystrophic lakes and ponds, and maintenance of the favourable status of fauna within the designated areas.

There were no visitor activities identified that cause damage to the ecologically sensitive features of the designated sites. The predominant effects were low intensity trampling in localised areas directly adjacent to the looped trail and at some of the visitor information stations, which sit outside of the boundaries of the SAC/SPA and pNHA. However, there was heavy sheep grazing throughout the receiving environment of the Discovery Point. There was extensive mechanical peat extraction adjacent to the receiving environment of the Discovery Point and looped trail.

3.9.4.2 Slyne Head Peninsula SAC/pNHA

The site-specific threats identified by the NPWS for the site include walking and mechanical peat extraction. However, the Signature Discovery Point is located approximately 1km away from the SAC/pNHA. Though these activities were recorded in the vicinity of the Discovery Point, they were removed SAC/pNHA and there were no activities identified by the visitor monitoring data that were identified to impact birds during the survey.

3.9.5 Recommendations

The receiving area of the Signature Discovery Point is extremely well managed. None of the effects observed are thought to have any long-lasting effect. The site has a relatively high density of visitors, and there is some evidence of minor elements of erosion or compaction where visitors trample areas just adjacent to the trail and in the vicinity of some of the visitor information stations. Although the areas effected by grazing and peat extraction do not fall within the boundaries of the designated sites, they could be better managed by land-users to prevent further degradation of the bog/heath habitats.

It is also recommended that portable toilet facilities be included at the site.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

³⁰ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

3.10 Blacksod Harbour, County Mayo

3.10.1 Site Description

Blacksod Harbour is located approximately 20km south of Belmullet at the tip of the Mullet Peninsula, Co. Mayo. The Discovery Point lies adjacent to Blacksod Lighthouse, Blacksod Pier and a memorial garden for 3350 local people that emigrated to America and Canada in 1883 and 1884 on 15 voyages. The adjacent Blacksod Lighthouse has a rich history, including a key role in the D-Day landings of 6 June 1944. The site is also close the final location of Rescue 116 which crashed into Blackrock Lighthouse on 14th of March, 2017, during a rescue operation, when all crew were lost. The Discovery Point lies directly adjacent to the Mullet/Blacksod Bay Complex SAC and the Blacksod Bay/Broadhaven SPA.



Plate 3.19 Lighthouse at Blacksod Harbour

The site consists of an unsurfaced carpark with space for approximately 20 vehicles. There is a further small carpark with space for a few more cars on the opposite side of the memorial garden, and some parking along the pier. There are no bike parking facilities, toilet facilities or bins. There are several interpretive signs in the memorial garden and a single picnic bench. Excellent signage is available regarding the Blacksod Lighthouse and the Inishkea Islands on the wall adjacent to the lighthouse, which is separate to the Discovery Point itself. The nearest cafes/restaurants/toilet facilities are in Belmullet, a 30-minute drive away. The road between Belmullet and Blacksod Harbour is very good, and makes for a lovely drive, especially on a fair day. The site gives spectacular views over Achill Island, particularly the pier area.

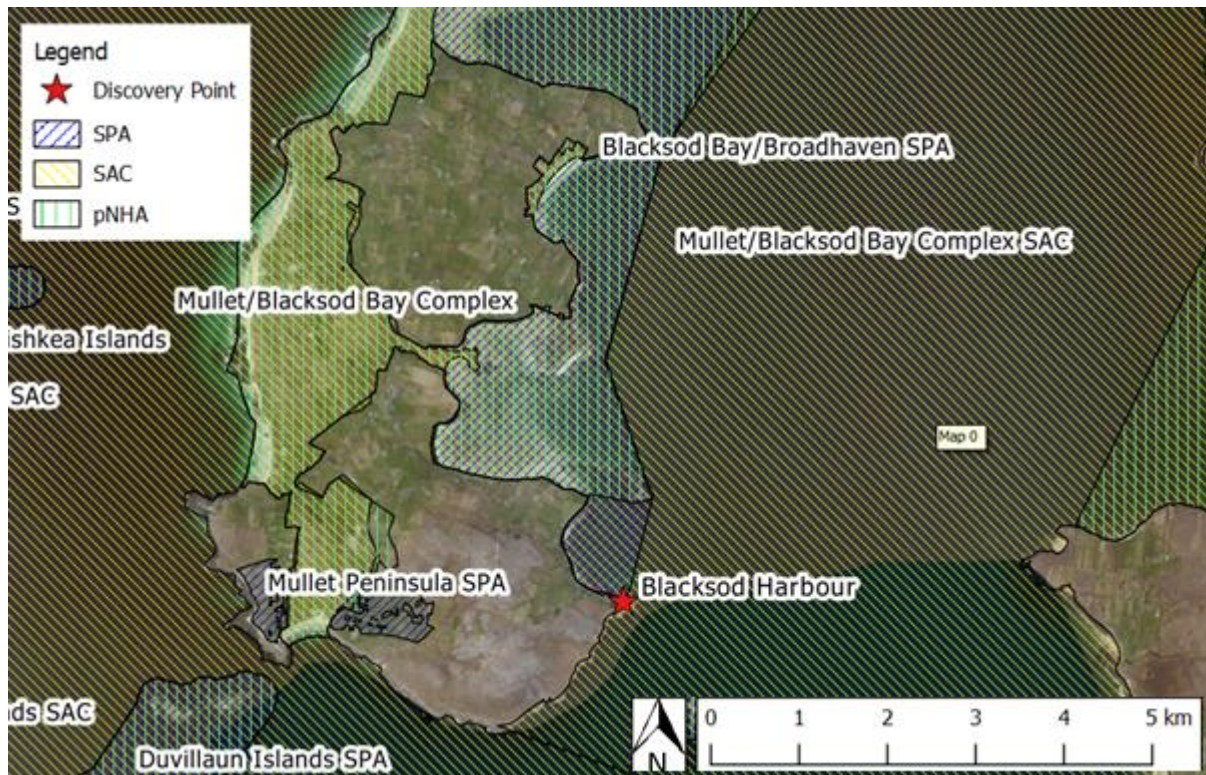


Figure 3.19 Site context map for the Blacksod Harbour signature Discovery Point.

3.10.2 Ecological Constraints

The Blacksod Harbour Discovery Point occurs immediately adjacent to the Mullet/Blacksod Bay Complex SPA and Blacksod Bay/Broad Haven SPA.

The SAC is designated for ten marine and terrestrial Annex I habitats, three of which occur in close proximity to the Discovery Point: mudflats and sandflats not covered by seawater at low tide [1140], large shallow inlets and bays [1160], reefs [1170]. The surrounding habitat is suitable for otter (*Lutra lutra*), an Annex II species for which the SAC is also designated. The SPA supports an excellent diversity of wintering waterfowl species and is one of the most important wetland complexes in the West of Ireland. Of particular note is the usage of the site by over 4% of the all-Ireland population of Ringed Plover (*Charadrius hiaticula*).

Table 3.19 Designated sites in proximity to Blacksod Harbour and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|---------------------------------|---------------------------------------|--|--|
| 000470 | Mullet/Blacksod Bay Complex SAC | NPWS 2014 ³¹ | The Discovery Point is directly adjacent to the SAC. | Ten terrestrial and marine Annex I habitats. The only habitats relevant to the Discovery Point are: Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Annex II Species: Otter <i>Lutra lutra</i> [1355] |
| 004037 | Blacksod Bay/Broad Haven SPA | NPWS 2014 ³² | The Discovery Point is directly adjacent to the SPA. | Great Northern Diver (<i>Gavia immer</i>) [A003] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Common Scoter (<i>Melanitta nigra</i>) [A065] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Dunlin (<i>Calidris alpina schinzii</i>) [A466] Wetland and Waterbirds [A999] |

3.10.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Blacksod Harbour as summarised in Table 3.20 and their locations have been mapped in Figure 3.20.

The area around the Blacksod Harbour Discovery Point is predominantly a built environment/artificial surfaces (BL3) and a pier (CC1) with patches of recolonising bare ground (ED3), amenity grassland (GA2). The area adjacent to the Discovery Point is a mixture of coastal habitats: sand shores (LS2), rocky shore (LR2) and shingle banks (CB1). There were no rare or protected species recorded on site. However, there was a lot of floral diversity given the nature of the site. However, given visitor numbers were so low, it is not surprising that there is so much recolonization occurring (Plate 3.20). The plant species recorded were common coastal and grassland species such as kidney vetch (*Anthyllis vulneraria*), sea spurrey (*Spergula sp.*), white and red clover (*Trifolium repens* & *T. pratense*), commons bird's-foot trefoil (*Lotus corniculatus*), ribwort and buck's horn plantain (*Plantago lanceolata* & *P. coronopus*), buttercups (*Ranunculus spp.*), perennial rye-grass (*Lolium perenne*), *Poa* and *Festuca* grass species. During the surveys, painted lady butterflies (*Cynthia cardui*), oystercatchers (*Haematopus ostralegus*), rock pipits (*Anthus petrosus*) and wheatears (*Oenanthe oenanthe*) were recorded at the site.

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

³¹ NPWS (2014) Conservation Objectives: Mullet/Blacksod Bay Complex SAC 000470. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

³² NPWS (2014) Conservation Objectives: Blacksod Bay/Broad Haven SPA 004037. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Table 3.20 Summary details of each quadrat recorded at Blacksod Harbour

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--------------|---|---|--|------------------------------|------------------------------|-----|--------------|------|--------|-----------|-----------------------|-----|--------------|------|--------|-----------|-----------------------|-----|--------------|------|--------|----------|--------------------------|-----|------|------|--------|-----------|-----------------|-----|--------------|------|--------|----------|------------------------------------|-----|------|------|---------|------|---------------------------------|-----|--|------|
| QBSAG1 | Core | BL3/ED3 Artificial surface/ recolonising bare ground | N/A | Carpark | Poor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG2 | Secondary | ED3 Recolonising bare ground | N/A | Recreational | Poor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG3 | Core | ED3 Recolonising bare ground | N/A </tr <tr> <td>QBSAG4</td> <td>Core</td> <td>ED3 Recolonising bare ground</td> <td>N/A</td> <td>Recreational</td> <td>Poor</td> </tr> <tr> <td>QBSAG5</td> <td>Secondary</td> <td>GA2 Amenity grassland</td> <td>N/A</td> <td>Recreational</td> <td>Good</td> </tr> <tr> <td>QBSAG6</td> <td>Secondary</td> <td>GA2 Amenity grassland</td> <td>N/A</td> <td>Recreational</td> <td>Good</td> </tr> <tr> <td>QBSAG7</td> <td>Tertiary</td> <td>CB1 Shingle/gravel banks</td> <td>N/A</td> <td>None</td> <td>Good</td> </tr> <tr> <td>QBSAG8</td> <td>Secondary</td> <td>LS2 Sand shores</td> <td>N/A</td> <td>Recreational</td> <td>Good</td> </tr> <tr> <td>QBSAG9</td> <td>Tertiary</td> <td>LR2 Moderately exposed rocky shore</td> <td>N/A</td> <td>None</td> <td>Good</td> </tr> <tr> <td>QBSAG10</td> <td>Core</td> <td>CC1 Seawalls, piers and jetties</td> <td>N/A</td> <td>Recreational/transport/ aquaculture</td> <td>Good</td> </tr> | QBSAG4 | Core | ED3 Recolonising bare ground | N/A | Recreational | Poor | QBSAG5 | Secondary | GA2 Amenity grassland | N/A | Recreational | Good | QBSAG6 | Secondary | GA2 Amenity grassland | N/A | Recreational | Good | QBSAG7 | Tertiary | CB1 Shingle/gravel banks | N/A | None | Good | QBSAG8 | Secondary | LS2 Sand shores | N/A | Recreational | Good | QBSAG9 | Tertiary | LR2 Moderately exposed rocky shore | N/A | None | Good | QBSAG10 | Core | CC1 Seawalls, piers and jetties | N/A | Recreational/transport/ aquaculture | Good |
| QBSAG4 | Core | ED3 Recolonising bare ground | N/A | Recreational | Poor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG5 | Secondary | GA2 Amenity grassland | N/A | Recreational | Good | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG6 | Secondary | GA2 Amenity grassland | N/A | Recreational | Good | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG7 | Tertiary | CB1 Shingle/gravel banks | N/A | None | Good | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG8 | Secondary | LS2 Sand shores | N/A | Recreational | Good | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG9 | Tertiary | LR2 Moderately exposed rocky shore | N/A | None | Good | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QBSAG10 | Core | CC1 Seawalls, piers and jetties | N/A | Recreational/transport/ aquaculture | Good | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

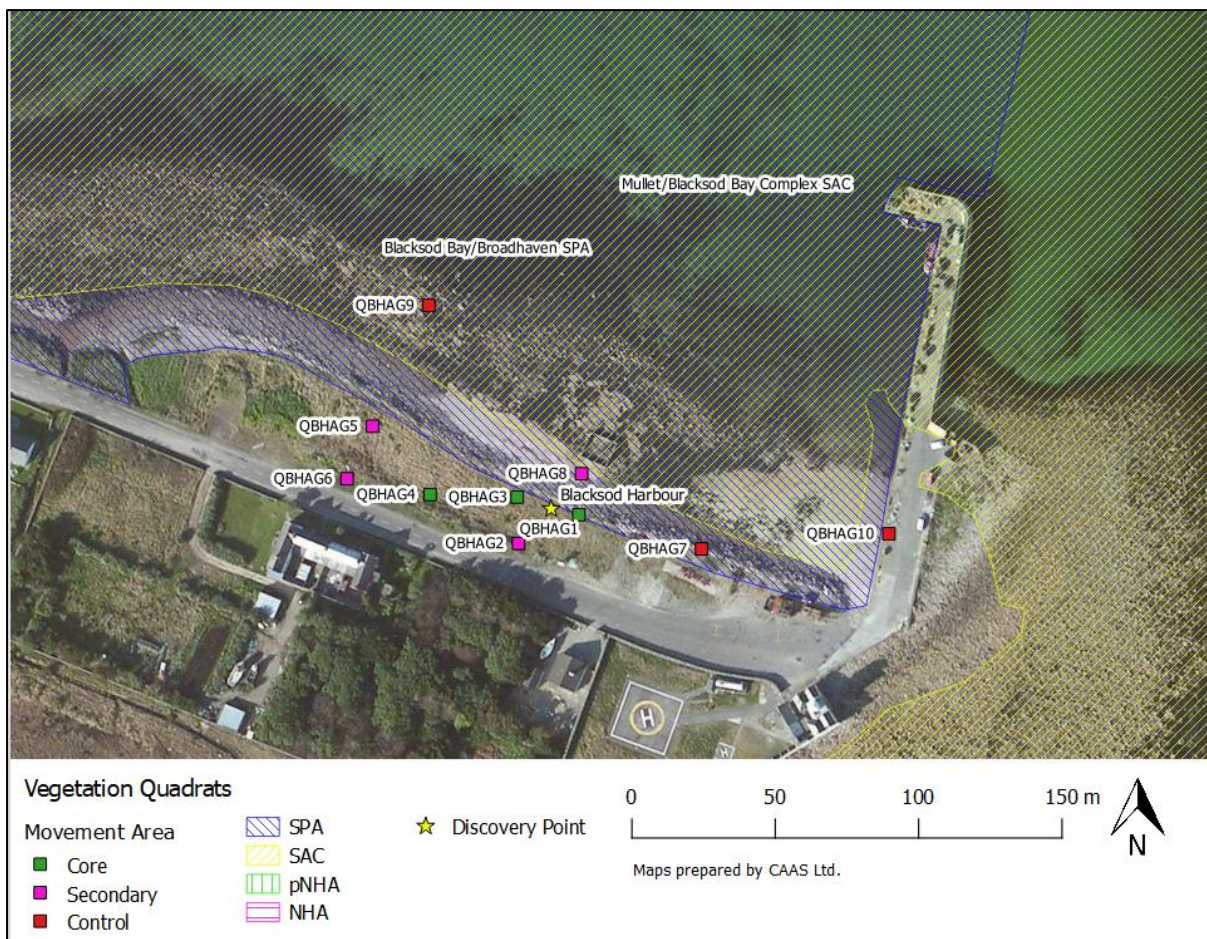


Figure 3.20 Blacksod Harbour Discovery Point. The location of quadrats and designated sites are indicated.



Plate 3.20 View from Discovery Point over Blacksod Pier showing encroachment of vegetation into gravel carpark area

3.10.4 Preliminary Assessment of Visitor Impact³³

This site was had some of the lowest visitor numbers of all the sites surveyed in 2019. The core zone was trafficked 16 times while the secondary zone was trafficked 27 times and only 1 incidence of visitor movements was recorded in the tertiary zone.

52% of visitors took part in activities that had no identifiable environmental impacts to the site. 17% took part in activities that had a low-level effect to the site. 29% took part in activities that had a medium level effect to the site such as climbing on monuments near the Discovery Point and 8 groups were recorded trampling vegetation in order to get a better view. There was one incidence of public urination at the site. The effects observed at Blacksod Harbour were not recorded to have any lasting effects to the habitats of the Discovery Point.

3.10.4.1 Mullet/Blacksod Bay Complex SAC

The main conservation objectives published by the NPWS are to maintain or restore the favourable conservation condition of the habitats and species listed as Special Conservation Interests for this SAC. Three of the ten habitats for which the SAC has been designated occur in close proximity to the Discovery Point: mudflats and sandflats not covered by seawater at low tide [1140], large shallow inlets and bays [1160] and reefs [1170]. The site also supports a breeding otter population, although neither of no evidence of this species was recorded during the survey. However, there were no activities identified that would affect the key features of the site. Visitor movements were mainly limited to the core and secondary movement zones and were removed from the key features. The effects observed in the visitor monitoring are localised and predominantly relate to vegetation compaction in the stony banks.

3.10.4.2 Blacksod Bay/Broad Haven SPA

The site is an important ornithological site for wintering waterfowl and breeding waders among other bird species. However, none of the species listed were recorded during the survey and there were no visitor activities identified that would affect the bird species and associated habitats listed for this site.

³³ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

3.10.5 Recommendations

Blacksod Harbour Discovery Point is an extremely quiet site, as evidenced by the encroachment of recolonising vegetation in the carpark and memorial garden. Further, the majority of visitors drove to, parked and walked on the pier, 100m beyond the Discovery Point. Most visitors read the signage that related to the lighthouse and Inishkea Islands rather than the signage at the Discovery Point and in the memorial garden. A concrete wall separates the memorial garden and Discovery Point from the road, and perhaps this makes it less obvious to visitors as a destination compared to the Lighthouse and pier. The lighthouse keeper, Vincent Sweeney, mentioned that plans were being discussed about starting visitor/public tours of Blacksod Lighthouse. The site would appear to have a lot of capacity to absorb visitor numbers with little impact to the qualifying interests and sensitive receptors of the designated sites.

Consideration could be given to improving the visibility of the Discovery Point as a point of interest for visitors through the erection of road signage on approach to the site.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

3.11 Lacken Strand, County Mayo

3.11.1 Site Description

Lacken Strand Discovery Point is located 8km northeast of Killala, Co. Mayo. It is located within the



Plate 3.21 Lacken Strand Discovery Point

Lacken Saltmarsh and Kilcummin Head SAC/pNHA and Killala Bay/Moy Estuary SPA. Lacken Strand is a shallow estuary that is approximately 1.5km long and 1km wide, where the Cloonalaghan river meets the sea. The rear of the strand and river mouth are fringed by saltmarsh, and the front of the strand is protected by large, well-established dune systems.

The Discovery Point is located on a short access road to the strand situated across from Lacken Church. The road is half

tarmacadam/half sand, and allows vehicular and other access on to the strand through the saltmarsh. The strand is used for walking, dog-walking, quad biking, powered paragliding, and horse-riding, with the annual Lacken Strand Horse Races taking place on the strand every May. Across the road is the Lacken Trailhead carpark. Walkers can follow either an 11km or an 8km looped trail up Lacken Hill, across bog and forestry, returning to the carpark via the coast road. The area is also of historical interest, in that French soldiers landed near here during the 1798 Rising.

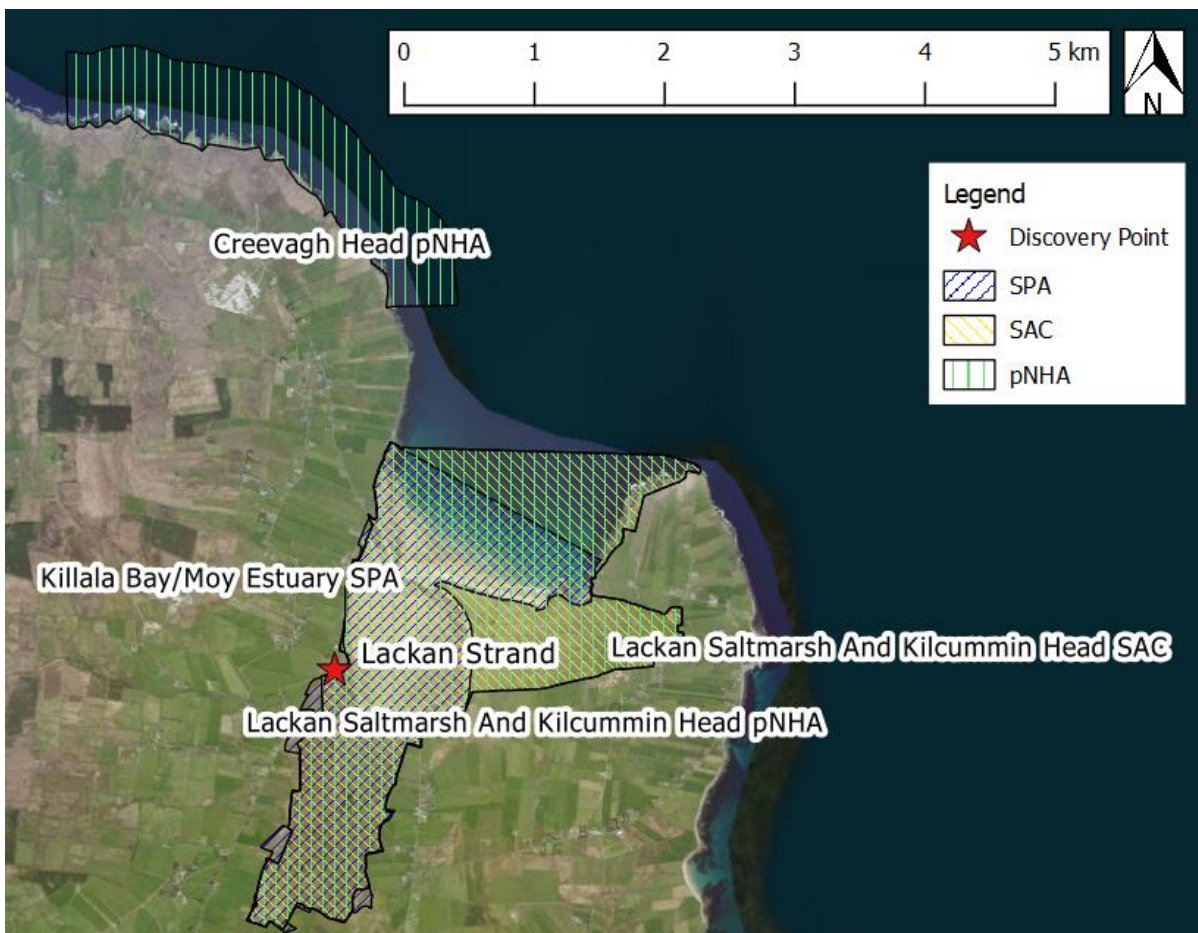


Figure 3.21 Site context map for the Lacken Strand Discovery Point.

3.11.2 Ecological Constraints

Lacken Strand Discovery Point is located within the Lacken Saltmarsh and Kilcummin Head SAC/pNHA and Killala Bay/Moy Estuary SPA.

The SAC is designated for five Annex I habitats features, two of which occur at the Discovery Point: Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] and Mediterranean salt meadows (*Juncetalia maritimi*) [1410]. These habitats are known to be sensitive to unsuitable grazing levels, invasion by common cordgrass (*Spartina anglica*), removal of beach materials, erosion, and intrusion by motorised vehicles. The area is an important ornithological site, providing many diverse habitats that are suitable for foraging and roosting. These species are known to be sensitive to disturbance due to human activities such as walking, dog-walking, horse-riding, leisure fishing.

Table 3.21 Designated sites in proximity to Mullaghmore Head and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|--|---------------------------------------|--|--|
| 000516 | Lacken Saltmarsh and Kilcummin Head SAC | NPWS 2016 ³⁴ | The Discovery Point is within the SAC. | Five Annex I habitats. The only habitats relevant to the Discovery Point are: Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] |
| 004036 | Killala Bay/Moy Estuary SPA | NPWS 2013 ³⁵ | The Discovery Point is within the SPA. | Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Wetland and Waterbirds [A999] |
| N/A | Lacken Saltmarsh and Kilcummin Head pNHA | N/A | The Discovery Point is within the pNHA | NPWS description from 000516 and 004036 |

3.11.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Lacken Strand as summarised in Table 3.22 and their locations have been mapped in Figure 3.22.

In the vicinity of the Discovery Point, Lacken Strand is dominated by lower and upper salt marsh (CM1/CM2) and sandy shores (LS2), which some embryonic dunes (CD1). Species recorded were typical for these habitats and included saltmarsh rush (*Juncus gerardi*), sea arrowgrass (*Triglochin maritima*), sea plantain (*Plantago maritima*), sea thrift (*Armeria maritima*), sea milkwort (*Glaux maritima*), sea pearlwort (*Sagina maritima*), sea aster (*Aster tripolium*), common saltmarsh grass (*Puccinellia maritima*), red fescue (*Festuca rubra*), Sand couch grass (*Elymus juncea*). Lax-flowered sea lavender (*Limonium humile*), which is considered rare on the west and north coasts, was also recorded close to the river mouth. The Irish hare (*Lepus timidus hibernicus*) was also recorded during the survey. Common cordgrass (*Spartina anglica*) was not recorded during the survey.

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

Table 3.22 Summary details of each quadrat recorded at Lacken Strand

³⁴ NPWS (2016) Conservation Objectives: Lackan Saltmarsh and Kilcummin Head SAC 000516. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

³⁵ NPWS (2013) Conservation Objectives: Killala Bay/Moy Estuary SPA 004036. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|------------------------|---------------------------------|----------------------|------------------------------|
| QLSAG1 | Secondary | CM2 Upper salt marsh | Atlantic salt meadow [1330] | Recreation/transport | Fair |
| QLSAG2 | Core | BL3 Artificial surface | N/A | Transport/recreation | Poor |
| QLSAG3 | Core | LS2 Sand shores | N/A | Transport/recreation | Good |
| QLSAG4 | Core | LS2 Sand shores | N/A | Transport/recreation | Good |
| QLSAG5 | Secondary | CD1 Embryonic dunes | Embryonic shifting dunes [2110] | Recreation/transport | Fair |
| QLSAG6 | Tertiary | CM1 Lower saltmarsh | Atlantic salt meadow [1330] | Recreation | Fair |
| QLSAG7 | Tertiary | CM1 Lower saltmarsh | Atlantic salt meadow [1330] | Recreation | Fair |
| QLSAG8 | Secondary | CD1 Embryonic dunes | Embryonic shifting dunes [2110] | Recreation | Good |
| QLSAG9 | Secondary | LS2 Sand shores | N/A | Recreation/transport | Good |
| QLSAG10 | Tertiary | CM1 Lower saltmarsh | Atlantic salt meadow [1330] | None | Good |

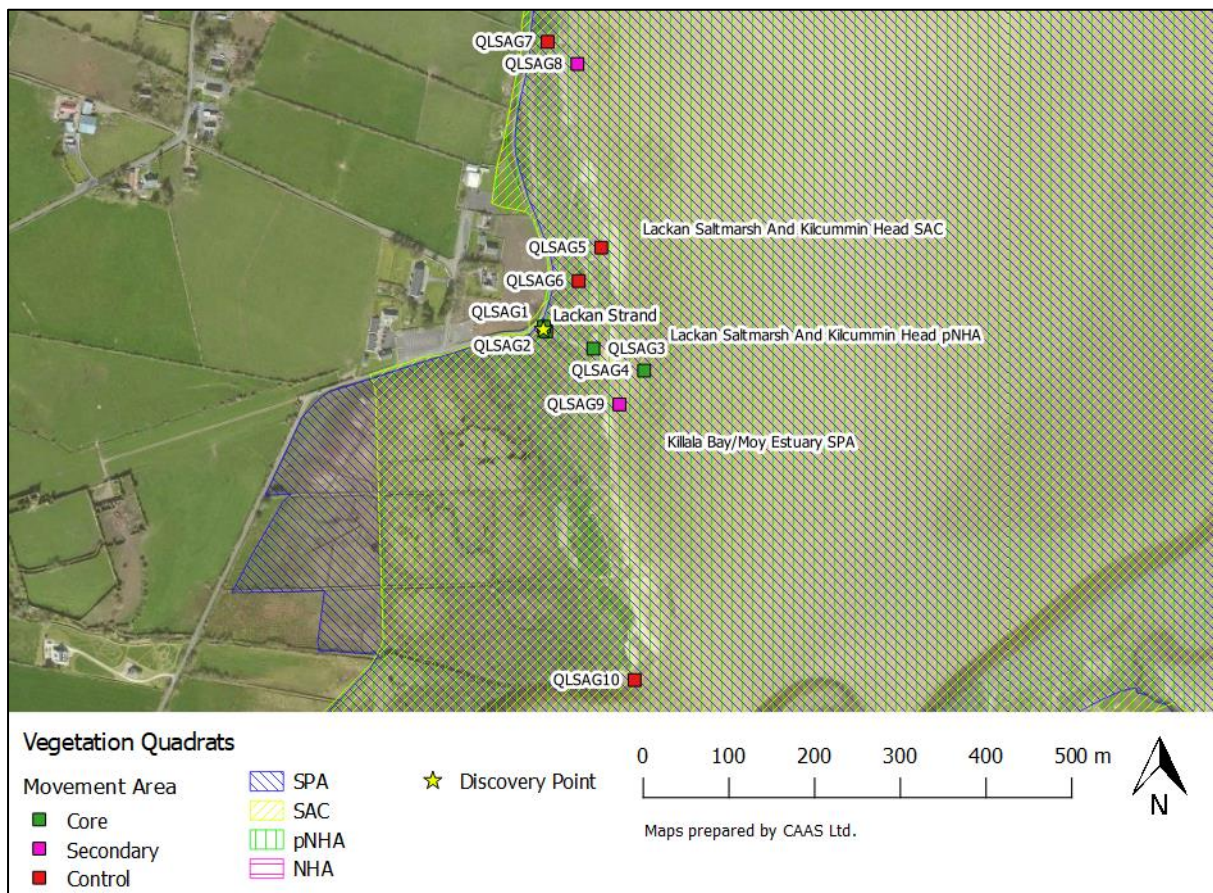


Figure 3.22 Lacken Strand Discovery Point. The location of quadrats and designated sites are indicated. Lax-flowered sea-lavender (*Limonium humile*) was recorded at QLSAG10.



Figure 3.23 Powered paragliders taking off from and landing on from saltmarsh at Lacken Strand.

3.11.4 Preliminary Assessment of Visitor Impact³⁶

Most of the movements recorded on site (60%) occurred in the secondary zone. The core zone was only trafficked 16 times at Lacken strand. This is because the beach itself is used as an unstructured carpark by tourists. There were also 8 incidences of visitor movements in the tertiary zone, *i.e.* the saltmarsh.

49% of visitors to the site took part in activities that resulted in no identifiable environmental impacts to the site. 9% of the visitors monitored took part in activities which had a low-level environmental effect to the site. 40% of the visitors monitored took part in activities which had a medium-level environmental effect to the site, activities included visitors parking on and driving and walking through the saltmarsh. A group of individuals engaged in powered paragliding using the saltmarsh for taking off and landing. These activities are having negative effects on the saltmarsh habitat present around the Discovery Point and have the potential to disturb bird species on Lacken Strand.

3.11.4.1 Lacken Saltmarsh and Kilcummin Head SAC/pNHA

The area was used for walking, dog-walking and horse-riding. Tyre tracks were visible on the strand, the embryonic dunes and the salt marsh. Cars were recorded driving into and parking on the saltmarsh. Several large tracks were well worn through the salt marsh from regular use. Quadbikes were also driven over the salt marsh. A group of people operating powered paragliders used the salt marsh for parking their vehicles, and taking off and landing their paragliders. Powered paragliding is apparently a regular activity at the site. There was some evidence that cattle had had access to the saltmarsh.

The visitor monitoring data identified that visitor activities are having effects to the vegetation present at the Discovery Point.

3.11.4.2 Killala Bay/Moy Estuary SPA

The area is an important ornithological site, providing many diverse habitats that are suitable for foraging and roosting activities. Waterbird species are known to be sensitive to disturbance due to human activities. The overarching conservation objective for Killala Bay/Moy Estuary SPA is to ensure that waterbird populations and their wetland habitats are maintained at, or restored to, favourable conservation condition. This includes, as an integral part, the need to avoid deterioration of habitats

³⁶ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

and significant disturbance; thereby ensuring the persistence of site integrity. The area was used for walking, dog-walking, horse-riding and powered paragliding. Powered paragliding is an extremely loud activity. The participants indicated that it was an activity they regularly engaged in at Lacken Strand, weather permitting. It is evident that vehicles regularly park on and drive over the salt marsh and vehicles regularly drive on/across the strand. These activities have the potential to disturb birds that overwinter in the area, as well as causing deterioration of the habitats.

The visitor monitoring data identified that visitor activities have the potential to effect the overwintering bird species that use the habitats around the Discovery Point, causing displacement and/or a reduction in numbers.

3.11.5 Recommendations

Although visitor numbers were the lowest recorded during the 2019 survey season (83 people), the types of activities observed at the site have great potential for habitat degradation and disturbance of species. Areas of trampling, compaction and erosion were evident in the salt marsh. While the sandy shore habitat is more resilient to the mechanical effects of motorised vehicles, the potential for pollution due oil or fuel spillages exists.

It is recommended that the salt marsh is fenced off to protect the upper and lower salt marsh habitats and allow for regeneration of damaged areas. This can be achieved using well placed large rocks, or other non-intrusive methods.

If necessary, some of the desire-lines regularly used by walkers through the salt marsh could be marked to ensure a unified area is sacrificed to restore the surrounding habitat, or a boardwalk constructed. Visitors preferentially parked on the access road, saltmarsh and beach rather than using the carpark across the road at the trail head. Vehicular access to the saltmarsh should be completely prevented, while on the beach it should be limited. Activities like off-lead dog walking and powered paragliding have great potential to cause disturbance to roosting and foraging birds.

Accordingly, provisions to minimise further impact and to restore salt marsh habitats should be implemented such as:

- A prohibition of vehicular access (cars, vans, quadbikes, scramblers, powered-paragliders *etc.*) to the salt marsh.
- Restriction of vehicular access to the strand.
- The erection of signage asking visitors to park at the trailhead carpark.
- The erection of signage regarding the ecology and sensitivity of the salt marsh habitats and of overwintering bird species.
- Fencing off of the salt marsh, and if necessary fixed marking of walkways through the salt marsh along existing desire lines to ensure a unified area is sacrificed to preserve all surrounding habitat.
- A requirement to keep dogs on leads when birds are over-wintering at the site.
- A prohibition of powered paragliding when birds are over-wintering at the site.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.12 Inishcrone Pier, County Sligo

3.12.1 Site Description

Enniscrone, Co. Sligo sits on Killala Bay and is approximately 50km west of Sligo town. Inishcrone/Enniscrone Pier is located to the north of the town centre, perpendicular to the sizable beach. The beach, which has blue flag status, stretches for 5km and is a very popular surfing and stand-up-paddle (SUP) destination.



Plate 3.22 Inishcrone (Enniscrone) Pier.

The Discovery Point is located at the top of the pier and sits just at the boundary of Killala Bay/Moy Estuary SPA. The beach and associated sand dunes fall within the Killala Bay/Moy Estuary SAC. The pier gives excellent views back towards the beach.

There is a carpark across the road from the pier as well as some street-parking and bike parking directly adjacent to the pier. There is a public toilet block with a shower, several benches and bins.

Signage at the site includes information on the local species birds and there are many notices regarding dog-fouling. A SUP rental/school business operates on site. There are no café or shops close to the site but it is only a ten-minute walk to the town centre. The area beside the pier is designated as a swimming area. A coastal walk begins at the top of the pier and extends north for 1km along the coastline before returning towards town. The pier and walking loop are extremely popular with swimmers, walkers, runners and dog-walkers. The Discovery Point is also notable for the limestone exposures to either side of the pier that contain 340-million-year-old solitary *Siphonophyllia (Caninia)* and colonial *Lithostrotion spp.* fossils.

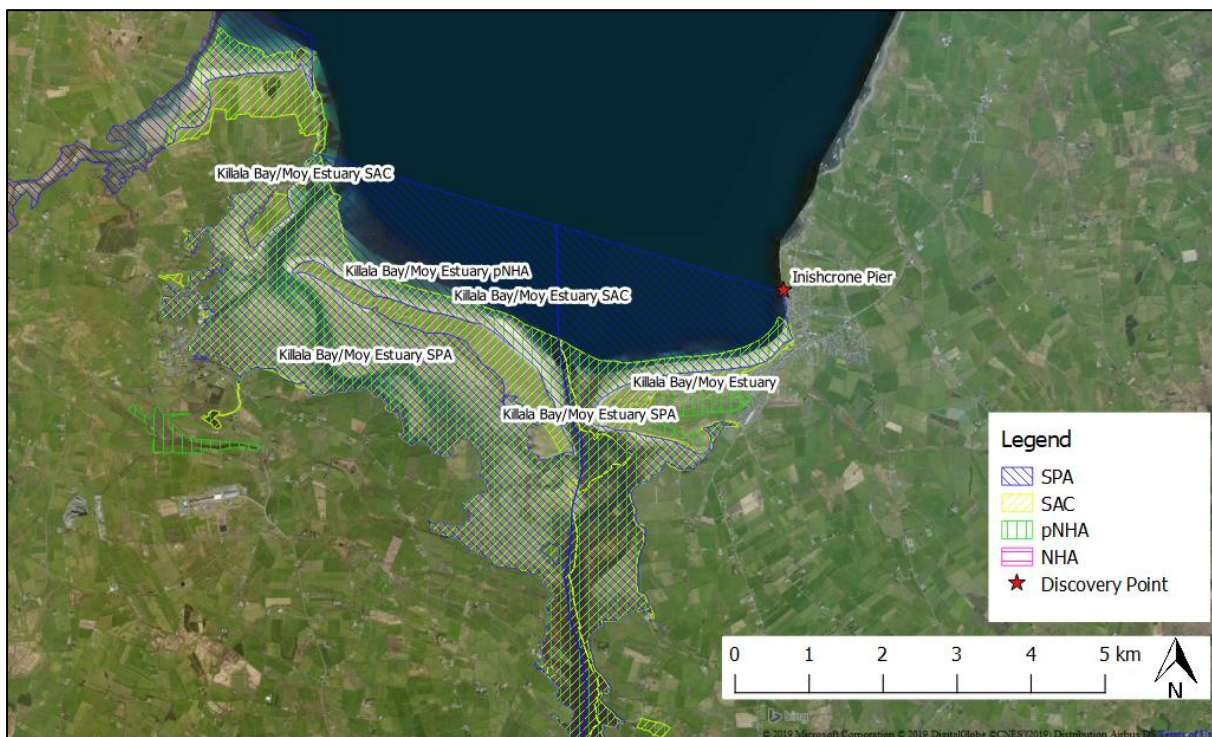


Figure 3.24 Site context map for the Inishcrone Pier Discovery Point.

3.12.2 Ecological Constraints

The Inishcrone Pier Discovery Point lies just within the boundary of the Killila Bay/Moy Estuary SPA and is approximately 600m beyond the boundary of the Killila Bay/Moy Estuary SAC.

The Killila Bay/Moy Estuary SPA is designated for the following species: Ringed Plover, Golden Plover, Grey Plover, Sanderling, Dunlin, Bar-tailed Godwit, Curlew and Redshank, and for Wetlands and Waterbirds. The site is very important for wintering waterfowl and provides excellent feeding grounds for the birds, as well as high-tide roosts. These species are sensitive to human disturbance.

The Killila Bay/Moy Estuary SPA is designated ten Annex I habitats. Only four of these occur in proximity to the Discovery Point: Mudflats and sandflats not covered by seawater at low tide [1140], embryonic shifting dunes [2110], shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] and fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]. Threats to the site identified by the NPWS include pollution and activities such as camping, walking and horse-riding. The receiving environment of the Discovery Point is removed from these habitats.

Table 3.23 Designated sites in proximity to Inishcrone Pier and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|-----------------------------|---------------------------------------|--|---|
| 004036 | Killila Bay/Moy Estuary SPA | NPWS 2013 ³⁵ | The Discovery Point is directly adjacent to the SPA. | <p><u>Annex I species:</u> Red-throated Diver (<i>Gavia stellata</i>) [A001] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p> <p><u>Other bird species:</u> Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Wetland and Waterbirds [A999]</p> |
| 000458 | Killila Bay/Moy Estuary SAC | NPWS 2012 ³⁷ | The Discovery Point is 400m away from the SAC. | <p><u>Ten Annex I habitats. The only habitats relevant to the Discovery Point are:</u> Mudflats and sandflats not covered by seawater at low tide [1140] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</p> |

3.12.3 Baseline Ecology of Study Area

A total of ten quadrats were located at Inishcrone Pier as summarised in Table 3.24 and their locations have been mapped in Figure 3.25.

Enniscrone Pier is dominated by the pier (CC1), artificial surfaces and buildings (BL3), amenity grasslands (GA2), and some coastal habitat: rocky (LR2/3) and sand shores (LS2) and stony banks (CB1). Nonetheless, the site was quite biodiverse. Terrestrial flora identified on site include red fescue (*Festuca rubra*), perennial rye-grass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), clovers (*Trifolium repens* & *T. pratense*), plantains (*Plantago lanceolata* & *P. coronopus*), common bird's-foot trefoil (*Lotus corniculatus*), sea mayweed (*Tripleurospermum maritimum*), colt's foot (*Tussliago farfara*), dandelion (*Taraxacus sp.*), common scurvy grass (*Cochlaeria officinalis*) and sea pearlwort (*Sagina maritima*). Marine species recorded included lugworm (*Arenicola marina*), coiled tubeworm (*Spirorbis spirorbis*), seaweeds (*Fucus vesiculosus*, *Enteromorpha intestinalis*, *Ulva lactuca*), periwinkles (*Littorina spp.*),

³⁷ NPWS (2012) Conservation Objectives: Killila Bay/Moy Estuary SAC 000458. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

barnacles (*Semibalanus balanoides*), common limpet (*Patella vulgata*), beadlet anemone (*Actinia equina*), common mussel (*Mytilus edulis*), flat topshell (*Gibbula umbilicas*), edible crab (*Cancer pagarus*) and common blenny (*Lipophrys pholis*). Twenty species of bird were identified during the survey, including Red Listed Redshank (*Tringa trotanus*) and Black-headed gulls (*Larus rindibundus*). A Sandwich tern (*Sterna sandvicensis*) with juvenile were also recorded during the survey. There were primarily recorded at the end of the pier and on rocky outcrops adjacent to the coastal walk. Sand and house martins (*Riparia riparia* & *Delichon urbicum*) were observed foraging around the end of the pier. The 340-million-year-old solitary *Siphonophyllia* (*Caninia*) and colonial *Lithostrotion spp.* fossils are found in rocky outcrops on either side of the pier (Plate 3.23).

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

Table 3.24 Summary details of each quadrat recorded at Inishcrone Pier

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Quality | Habitat | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|------------------------------------|------------|---------|----------------------|------------------------------|
| QIPAG1 | Core | BL3 Artificial surface | N/A | | Recreation | Good |
| QIPAG2 | Secondary | GA2 Amenity grassland | N/A | | Recreation | Good |
| QIPAG3 | Tertiary | CB1 Shingle/gravel banks | N/A | | None | Good |
| QIPAG4 | Tertiary | LR2 Moderately exposed rocky shore | N/A | | None | Good |
| QIPAG5 | Secondary | GA2 Amenity grassland | N/A | | Recreation | Good |
| QIPAG6 | Secondary | GA2 Amenity grassland | N/A | | Recreation | Good |
| QIPAG7 | Core | CC1 Sea walls, piers and jetties | N/A | | Recreation | Good |
| QIPAG8 | Core | CC1 Sea walls, piers and jetties | N/A | | Recreation | Good |
| QIPAG9 | Secondary | LS2 Sand shores | N/A | | Recreation | Good |
| QIPAG10 | Tertiary | LR3 Sheltered rocky shore | N/A | | None | Good |

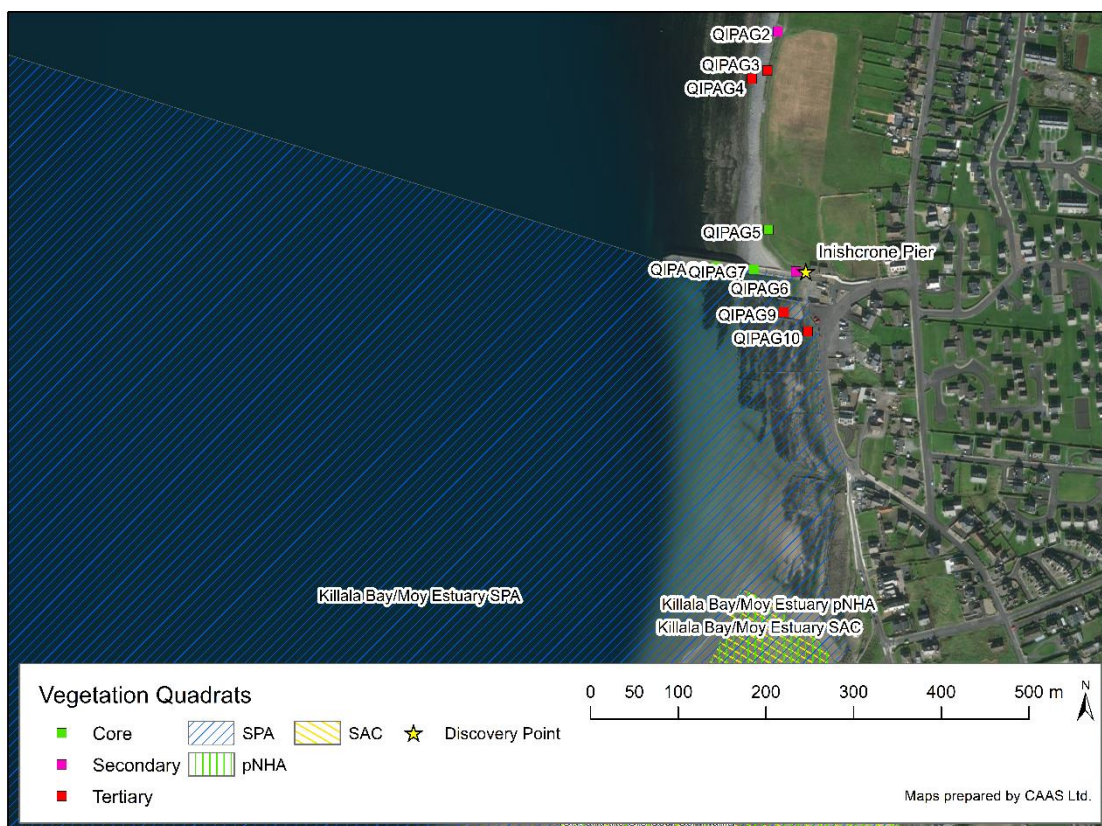


Figure 3.25 Inishcrone Pier Discovery Point. The location of quadrats and designated sites are indicated.



Plate 3.23 Solitary coral (*Siphonophyllia sp.*) in the rocky shore adjacent to Inishcrone Pier.

3.12.4 Preliminary Assessment of Visitor Impact³⁸

The core zone was trafficked 174 times while the secondary zone was trafficked 52 times. There was no trafficking of tertiary zones.

Most visitors (98%) took part in activities that had no identifiable environmental impacts to the site. Only 2% took part in activities that had a medium level effect introducing disturbance effects to wildlife.

Overall the activities and effects observed during the study had low levels of localised effects for the fauna at the Discovery Point.

3.12.4.1 Killala Bay/Moy Estuary SPA

The area is an important ornithological site, providing many diverse habitats that are suitable for foraging and roosting activities. The overarching conservation objective for Killala Bay/Moy Estuary SPA is to ensure that waterbird populations and their wetland habitats are maintained at, or restored to, favourable conservation condition. This includes, as an integral part, the need to avoid deterioration of habitats and significant disturbance; thereby ensuring the persistence of site integrity. Waterbird species are known to be sensitive to disturbance due to human activities. The receiving environment of the Discovery Point was used for swimming, SUP, walking, dog-walking, and running. These activities have the potential to disturb birds in the area, however, given the diversity of species recorded during the survey, this does not appear to be the case. Bird occurred off-shore and on rocky outcrops on the shoreline below the coast walk, and were therefore removed from areas of visitor movement.

The visitor monitoring data identified few visitor activities that have the potential to effect the bird species that use the habitats around the Discovery Point.

3.12.4.2 Killala Bay/Moy Estuary SAC

The Discovery Point at Inishcrone Pier is located 600m outside of the SAC boundary. The only habitat for which the SAC has been designated to occur within close proximity of the Discovery Point is mudflats and sandflats not covered by seawater at low tide [1140]. The visitor monitoring data identified no

³⁸ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

visitor activities that have the potential to affect this habitat. The sand dune habitats occur at a distance of at least 600m from the Discovery Point and the visitor monitoring data identified no visitor activities that have the potential to affect them.

3.12.5 Recommendations

Overall the site management is robust and the habitat condition is favourable. Therefore, there are no recommendations.

It is important to note that monitoring was undertaken at the Discovery Point itself and did not take place around the beach and sand dune habitats which are located at least 600m from the Discovery Point. This area receives a lot of visitors that engage in walking, dog-walking, running, surfing, body-boarding and SUPing. Horse-riding was observed along the beach. Although this area is not within the immediate receiving area of the Discovery Point, given the good condition of the sand dune system in the area, as identified by the NPWS, it is recommended that surveying is carried out in these habitats, as it is this amenity that is the primary attraction for visitors to Enniscrone.

3.13 Rosses Point Beach, Co. Sligo

3.13.1 Site Description

Rosses Point lies at the end of a peninsula, approximately 8km northwest of Sligo town, Co. Sligo. It is an undulating site, with two beaches sitting below low cliffs and sand dunes, separated by a small headland.



Plate 3.24 View overlooking beaches at Rosses Point Beach Discovery Point.

The Discovery Point lies within the Cummeen Strand/Drumcliff Bay SAC/pNHA and is adjacent to Cummeen Strand SPA. It sits on a high point overlooking the first beach, just off the road in an area of orchid-rich grassland, giving views over the first beach and the headland. The Rosses Point Coastal Way passes the Discovery Point. This 2.2km walk was relaunched in June 2018 and is waymarked with a series of interpretive panels that highlight aspects of the area's rich heritage including its geology, archaeology, biodiversity, maritime history and cultural connections. The site includes extensive parking, toilet facilities, a purpose-built swimming pier and a life guard station. It is extremely diverse with areas of orchid-rich grassland, juniper

scrub and petrifying springs, all of which are priority habitats. It also includes areas of sand dunes, vegetated sea cliffs and amenity grassland. Rosses Point is extremely popular with walkers, dog-walkers, runners, swimmers and other water-sports enthusiasts. There was evidence of trampling and erosion on the headland in between the two beaches, an area of orchid-rich grassland.



Figure 3.26 Site context map for the Rosses Point Beach Discovery Point.

3.13.2 Ecological Constraints

The Rosses Point Discovery Point occurs within the Cummeen Strand/Drumcliff Bay SAC/pNHA, and is adjacent to the Cummeen Strand SAC (see Table 3.25 and Figure 3.27).

Cummeen Strand/Drumcliff Bay SAC has been designated for eight Annex I habitats, seven of which occur in close proximity to the Discovery Point. Three of these are priority habitats: Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) [6210], *Juniperus communis* formations on heaths or calcareous grasslands [5130], Petrifying springs with tufa formation (*Cratoneurion*) [7220]. These habitats are sensitive to trampling. Recreational activities such as walking, horse-riding and camping have been identified as threats within the SAC.

Cummeen Strand SPA has been designated for overwintering waterbirds and their associated wetland habitats. These species are sensitive to disturbance by humans. However, the only visitor-related activity identified as a threat to the qualifying interests of this SPA is leisure fishing, but this was not observed during the survey.

Table 3.25 Designated sites in proximity to Rosses Point and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (August 2019) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|-----------------------------------|---------------------------------------|--|--|
| 000627 | Cummeen Strand/Drumcliff Bay SAC | NPWS 2013 ³⁹ | Discovery Point occurs within the SAC/pNHA | <p><u>Eight Annex I habitats, seven of which are relevant to the Discovery Point:</u></p> <p>Mudflats and sandflats not covered by seawater at low tide [1140] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]</p> <p><u>Relevant Annex II Species</u> <i>Phoca vitulina</i> (Harbour Seal) [1365]</p> |
| 004035 | Cummeen Strand SPA | NPWS 2013 ⁴⁰ | Discovery Point is adjacent to the SAC | <p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Wetland and Waterbirds [A999]</p> |
| N/A | Cummeen Strand/Drumcliff Bay pNHA | N/A | The Discovery Point occurs within the pNHA | NPWS description from 000627 |

3.13.3 Baseline Ecology of study area

A total of ten quadrats were located at Rosses Point as summarised in Table 3.26 and their locations have been mapped in Figure 3.27.

The habitats present on site included dry calcareous grassland (GS1), sand dunes (CD1/2/3), sand shores (LS2), rocky shores (LR3), amenity grassland (GA1) and built environment/artificial surfaces (BL3). There was an area of recolonising bare ground behind the Sligo Surf Lifesaving building. A

³⁹ NPWS (2013) Conservation Objectives: Cummeen Strand SPA 004035. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

⁴⁰ NPWS (2013) Conservation Objectives: Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC 000627. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

caravan park and large golf course we located behind the site. Rosses Point is an extremely biologically diverse site with all bar one of the habitats for which the SAC was designated occurring on site.

Species that were recorded on site include common spotted orchid (*Dactylorhiza fuchsia*), frog orchid (*Coeloglossum viridae*) (Plate 3.25a), pyramidal orchid (*Anacamptis pyramidalis*) yellowwort (*Blackstonia perfoliata*), fairy flax (*Linum catharticum*), burnet rose (*Rosa spinosissima*), harebell (*Campanula rotundifolia*), yellowrattle (*Ranunculus minor*) and juniper (*Juniperus communis*).

The management of the site is mixed. Some areas of calcareous orchid-rich grassland were extremely well-managed. In the vicinity of the Discovery Point, habitat had been sacrificed as designated walking areas through selective mowing, leaving adjacent areas either un-mowed or fenced off. Nonetheless, some unmanage desire lines were still present. However, the grassland habitat on the headland was completely unmanaged, and showed widespread signs of tramping and erosion with many well-worn desire lines (Plate 3.25b). The areas of juniper were not subject to visitor movement and appeared in good condition. An area of grassland directly adjacent to this habitat has been sacrificed as overflow parking.

A petrifying spring was identified in the cliffs at the first beach (Figure 3.27), but this again was not subject to visitor movements. Desire lines, both managed and unmanaged, were evident through the sand dunes behind the first beach. Parking by campervans outside of the designated car parks along the clifftop was common.

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

Table 3.26 Summary details of each quadrat recorded at Rosses Point.

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|---|-------------------------------|----------------------|------------------------------|
| QRPAG1 | Core | GA1 Amenity grassland (within GS1) | N/A | Recreation | Good |
| QRPAG2 | Core | GS1 Dry calcareous grassland | Important orchid sites [6210] | Recreation | Fair |
| QRPAG3 | Tertiary | GS1 Dry calcareous grassland | Important orchid sites [6210] | None | Good |
| QRPAG4 | Secondary | GS1 Dry calcareous grassland | Important orchid sites [6210] | Recreation | Doubtful |
| QRPAG5 | Tertiary | GS1 Dry calcareous grassland | Important orchid sites [6210] | None | Good |
| QRPAG6 | Secondary | CD3 Fixed dune | Grey dunes [2130] | Recreation | Fair |
| QRPAG7 | Secondary | GS1 Dry calcareous grassland | Important orchid sites [6210] | Recreation | Doubtful |
| QRPAG8 | Tertiary | BL3/ED3 artificial surface/ recolonising bare ground mosaic | N/A | None | Good |
| QRPAG9 | Tertiary | GS1 Dry calcareous grassland | Juniper Scrub [5130] | None | Good |
| QRPAG10 | Core | LS2 Sand shores | N/A | Recreation | Good |

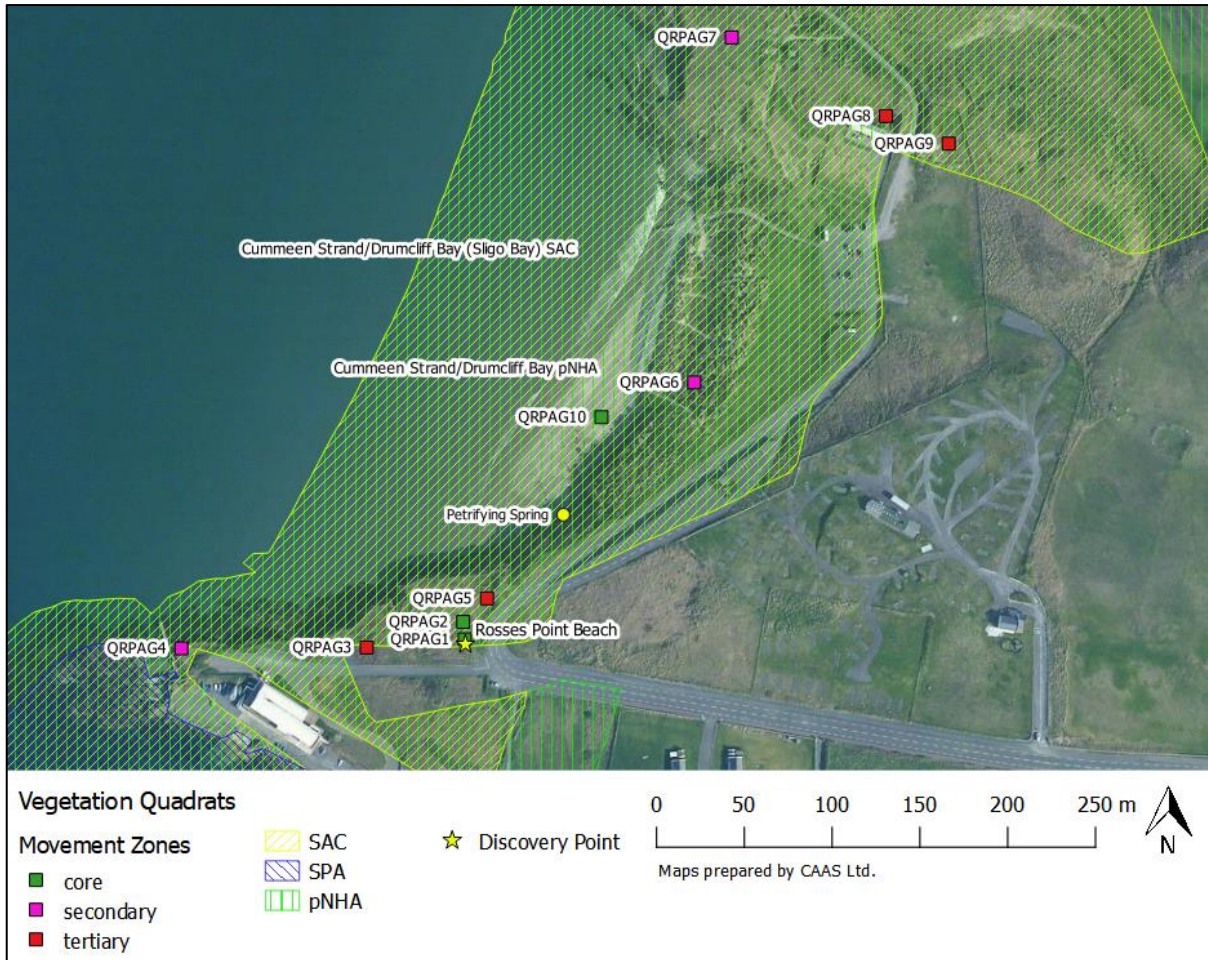


Figure 3.27 Rosses Point Beach Discovery Point. The location of quadrats and designated sites are indicated. The yellow circle indicates the position of a probable petrifying spring with tufa formation.



Plate 3.25 a) Frog orchid (*Coeloglossum viridae*) on calcareous grassland and b) trampling of vegetation and erosion on calcareous grassland between the two beaches

3.13.4 Preliminary Assessment of Visitor Impact⁴¹

The core zone was trafficked 167 times while the secondary zone was trafficked 56 times. There were 9 incidences of visitors moving beyond the secondary zone.

85% of visitors took part in activities that had no identifiable environmental impacts to the site. 11% of the impacts observed pertained to the use of existing desire lines and the remaining 4% of the impacts observed relate to creation of new desire lines, trampling of vegetation and transient effects.

3.13.4.1 Cummeen Strand/Drumcliff Bay SAC/pNHA

The habitats present on site are consistent with the designated features of the SAC with seven of the eight designated habitats occurring on site. The site was florally very biodiverse. The conservation objectives for this site are to either restore or maintain the favourable condition of its habitats and species. Visitor monitoring data showed that visitor movements were generally restricted to less sensitive habitat types and managed areas, with the exception of the expanse of calcareous grassland on the headland between both beaches. This area requires management that is similar to that employed around the Discovery Point. The topography of the site ensures that there is limited access to the cliff face where the petrifying spring occurs.

3.13.4.2 Cummeen Strand SPA

The Rosses Point Discovery Point occurs adjacent to the SPA. The conservation objectives detailed for the bird species for which the SPA has been designated are to maintain their favourable conservation condition. The Visitor monitoring data showed that visitor movements were directed away from the SPA rather than towards it, and that there were no visitors activities identified on site that are likely to affect the SPA.

3.13.5 Recommendations

The overall habitat condition is good, with the exception of the calcareous grasslands on the headland between the beaches (around QRPAG7) and a small area above the purpose-built swimming pier (at QRPAG4). This is a busy site with a high volume of visitor movements. Large proportions of the visitors remained on the existing paths and managed trails; due to the high visitor numbers there was significant damage observed outside of the managed areas. This was also evidenced by visible desire lines through both calcareous grasslands and sand dunes. The vegetation in these areas were subject to trampling, compaction and erosion. It is recommended that these areas are managed to allow for recovery of the habitats. Where management is already in place, e.g. adjacent to the Discovery Point, it appears to be working quite well.

Accordingly, provisions to minimise further impact and to restore habitats are recommended; such as:

- Extension of current grassland management, through mowing, to the headland area between the beaches. Consideration should be given to the use of fixed pathways or moving pathways demarcated by an ankle high rope border. This would facilitate the dispersal of impacts and facilitate the recovery of impacted areas.
- The erection of additional signage at the Discovery Point and visitor parking area regarding the ecology and sensitivity of the orchid-rich grassland habitat, and the sand dune system.
- The erection of additional signage to provide guidance to visitors to stick to marked trails and to avoid unnecessary trampling of grassland and sand dune vegetation.
- Fencing off of the marram and fixed dunes between existing, well-worn desire lines to ensure a unified area is sacrificed to preserve all surrounding habitat.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance

⁴¹ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

3.14 Mountcharles Pier, County Donegal

3.14.1 Site Description

Mountcharles Pier is located approximately 7.5km south west of Donegal town, Co. Donegal. The Discovery Point is directly adjacent to the Donegal Bay (Murvagh) SAC and pNHA and the Donegal Bay SAC which are designated for maritime and wetland habitats, various waterbirds and the harbour seal.



Plate 3.26 Aerial view of Mountcharles Pier

The site comprises a pier with an extensive sea wall running along the road, an unsurfaced carpark beside the pier and a private café with a small animal farm. There are two portable toilets on site but no bins, bike parking and limited informational signage.

The site is attractive for walkers, dog-walkers and cyclists, and many visitors

specifically came to visit the café. A sailing regatta took place from the pier on the first survey day.

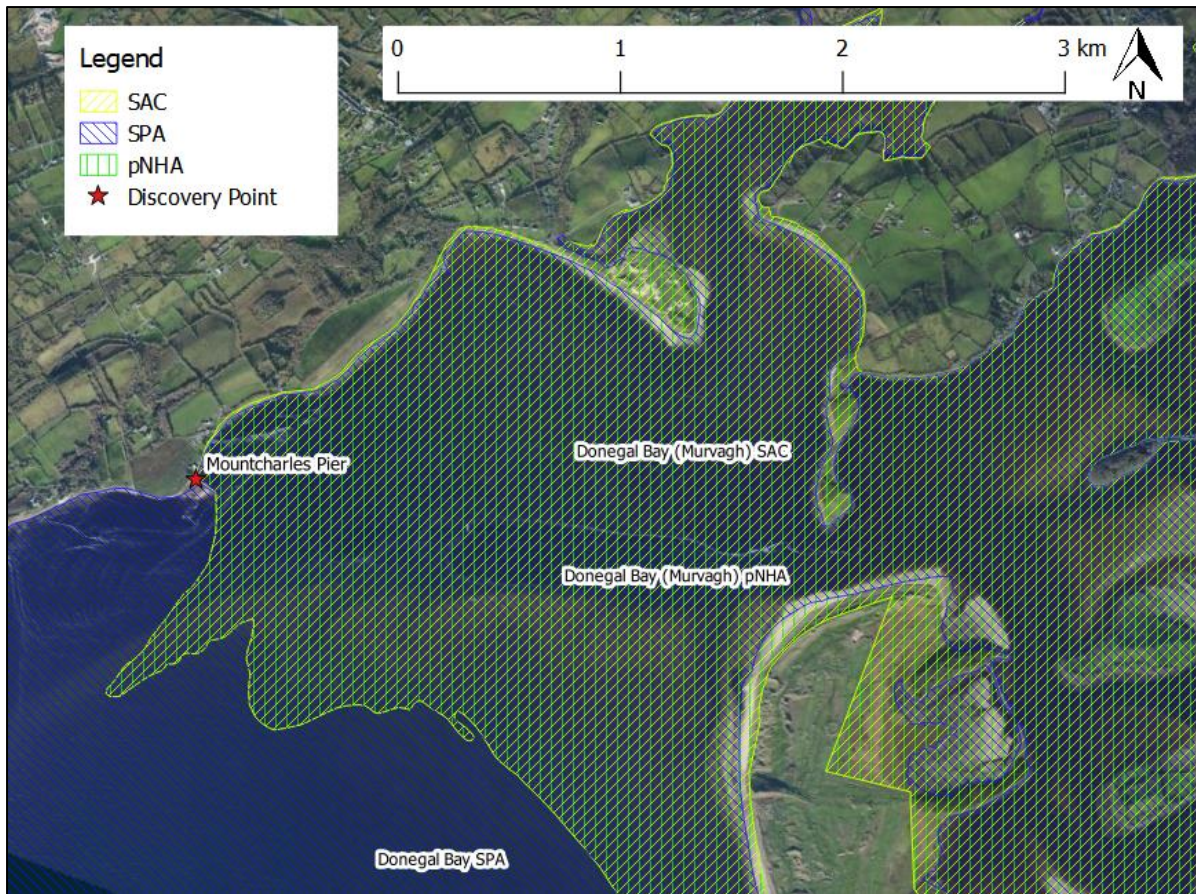


Figure 3.28 Site context map for Mountcharles Pier Discovery Point.

3.14.2 Ecological Constraints

The Mountcharles Pier Signature Discovery Point is directly adjacent to the Donegal Bay (Murvagh) SAC/pNHA and Donegal Bay SPA.

Most of the SAC/pNHA consists of intertidal habitats, but there are sand dune systems, including dune slacks, and saltmarsh along some parts of the shore. The site also supports an important harbour seal colony. The site is sensitive to boating, fishing and aquaculture, and grazing and recreational pressure on terrestrial habitats. The SAC is an extensive marine-dominated site designated for its excellent diversity of wintering waterbirds. It supports two species of international importance (Great Northern Diver and Light-bellied Brent Goose) and a two species of national importance (Common Scoter and Sanderling).

Table 3.27 Designated sites in proximity to Mountcharles Pier and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (Aug 2018) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|---------------------------|------------------------------------|---|---|
| 000133 | Donegal Bay (Murvagh) SAC | NPWS 2012 ⁴² | Discovery Point is directly adjacent to the SAC | <u>Annex I Habitats</u> Mudflats and sandflats [1140] Fixed coastal dunes (grey dunes) [2130] Dunes with <i>Salix repens</i> spp. <i>argentea</i> [2170] Humid dune slacks [2190] <u>Annex II Species</u> Harbour seal <i>Phoca vitulina</i> [1365] |

⁴² NPWS (2012) Conservation Objectives: Donegal Bay (Murvagh) SAC 000133. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

| | | | | |
|--------|----------------------------|-------------------------|--|---|
| 004151 | Donegal Bay SPA | NPWS 2012 ⁴³ | Discovery Point is directly adjacent to the SPA | Great Northern Diver (<i>Gavia immer</i>) [A003] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Common Scoter (<i>Melanitta nigra</i>) [A065] Sanderling (<i>Calidris alba</i>) [A144] Wetland and Waterbirds [A999] |
| NA | Donegal Bay (Murvagh) pNHA | N/A | Discovery Point is directly adjacent to the pNHA | NPWS description from 000133 |

3.14.3 Baseline Ecology of study area

A total of nine quadrats were located at Mountcharles Pier as summarised in Table 3.28 and their locations have been mapped in Figure 3.29.

Mountcharles Pier extends into Donegal Bay. It is surrounded primarily by improved pasture (GA1), but the habitat in the immediate vicinity of the Discovery Point is mainly recolonising bare ground (ED3), buildings and artificial surfaces (BL3) and limited amounts of shingle/gravel shores (LS1). Flora recorded were typical of these habitat types: Timothy (*Phleum pratense*), meadow-grass (*Poa sp.*), fescue grass (*Festuca spp.*), perennial rye-grass (*Lolium perenne*), sedges (*Carex sp.*), Daisy (*Bellis perennis*), clovers (*Trifolium spp.*), dandelion (*Taraxacus sp.*), wild carrot (*Daucus carota*), horsetail (*Equisetum sp.*), thistles (*Cirsium spp.*) and silverweed (*Potentilla anserina*). None of the habitats for which the SAC is designated occur within proximity of the Discovery Point. The harbour seal was not recorded during the survey, however, the harbour porpoise (*Phocoena phocoena*) was recorded. None of the bird species for which the SPA is designated were recorded during the survey. There were high incidences of exposed soil and there were clear signs of erosion present due to compaction. The compaction was identified primarily in the immediate vicinity of the carparking area.

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

Table 3.28 Summary details of each quadrat recorded at Mountcharles Pier

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Quality | Habitat | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|------------------------------|------------|------------|----------------------|------------------------------|
| QMCPAT1 | Core | ED3 Recolonising bare ground | N/A | Carpark | Carpark | Doubtful |
| QMCPAT2 | Core | ED3 Recolonising bare ground | N/A | Carpark | Carpark | Fair |
| QMCPAT3 | Core | ED3 Recolonising bare ground | N/A | Carpark | Carpark | Fair |
| QMCPAT4 | Core | ED3 Recolonising bare ground | N/A | None | None | Good |
| QMCPAT5 | Secondary | LS1 Shingle/gravel shores | N/A | Recreation | Recreation | Good |
| QMCPAT6 | Secondary | LS1 Shingle/gravel shores | N/A | Recreation | Recreation | Good |
| QMCPAT7 | Core | ED3 Recolonising bare ground | N/A | Amenity | Amenity | Fair |
| QMCPAT8 | Tertiary | ED3 Recolonising bare ground | N/A | None | None | Good |
| QMCPAT9 | Tertiary | ED3 Recolonising bare ground | N/A | None | None | Good |

⁴³ NPWS (2012) Conservation Objectives: Donegal Bay SPA 004151. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.



Figure 3.29 Mountcharles Pier Discovery Point. The location of quadrats and designated sites are indicated.

3.14.4 Preliminary Assessment of Visitor Impact⁴⁴

34.7% of the visitor movements observed were recorded outside of the core movement zone. Visitors moved within the core zone 120 times with the secondary zones being trafficked only 42 times and the tertiary zone was trafficked 22 times. All tertiary movements were long distance sea swimmers and boat activity.

97% of visitors to the site engaged in activities that resulted in low or no effects to the site. 3% recorded medium level effects with disturbance to wildlife. Overall the activities and effects observed during the study were not reported to result in any significant, long-term adverse effects to the site.

3.14.4.1 Donegal Bay (Murvagh) SAC/pNHA

The SAC is designated the following Qualifying Interests: mudflats and sandflats [1140], fixed coastal dunes (grey dunes) [2130], dunes with *Salix repens* spp. *argentea* [2170] and humid dune slacks [2190], none of which occur in close proximity to the Discovery Point. The site is also designated for the harbour seal; however, none were recorded during the survey and their moulting and resting sites do not occur in the vicinity of the Discovery Point.

Visitor monitoring data showed that visitor movements were generally restricted to less sensitive habitat types such as built surfaces (BL3). There was evidence of recolonised bare ground in the carparking area which indicates it is a relatively recent addition to the site.

⁴⁴ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

3.14.4.2 Donegal Bay SPA

The SPA is designated for Wetland and Waterbirds [A999], in particular the Great Northern Diver (*Gavia immer*) [A003], Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Common Scoter (*Melanitta nigra*) [A065] and Sanderling (*Calidris alba*) [A144]. This SPA is extensive and the receiving environment of the Discovery Point is removed from these species/wetland habitats. Visitor monitoring data showed that visitor movements were generally restricted to terrestrial habitats, and were unlikely to occur at an intensity that would cause disturbance for the wintering bird species.

3.14.5 Recommendations

As none of the habitats specified in the conservation objectives outlined for the SAC/SPA occur in proximity to the Discovery Point, visitor movements at Mountcharles Pier do not have a negative impact on these. However, there is clear evidence of damage occurring to the area of recolonising bare ground adjacent to the Discovery Point as a direct result of visitor movements. This is because the existing car parking facilities are not fit for purpose. While this is an area of relatively low ecological value, consideration should be given to providing surfaced parking facilities at the Discovery Point to prevent further damage.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

3.15 Carrickfinn Beach, County Donegal

3.15.1 Site Description

Carrickfinn Beach is a blue-flag beach located approximately 15km west of Gweedore, Co. Donegal. It is directly adjacent to Donegal airport. The beach itself is approximately 1km long and is backed by extensive sand dune and machair habitats.



Plate 3.27 View over Carrickfinn Beach

The Discovery Point is located within the Gweedore Bay and Islands SAC and pNHA and is surrounded by the West Donegal Coast SPA. The Discovery Point is located at the carpark behind the beach and is adjacent to the sand dunes and machair. The terrain is generally undulating with knolls of exposed rock. The site is underlain by Granodiorite, a basic igneous rock.

The facilities at the site comprise an unmarked but surfaced carpark with space for approximately 20-30 cars, two

portable toilets including one with disabled access, informational signage and a lifeguard station on the beach that is manned in the afternoons. The area is extremely popular for swimmers and for walkers, dog-walkers, runners that use the beach and unmarked trails through the dunes and machair.

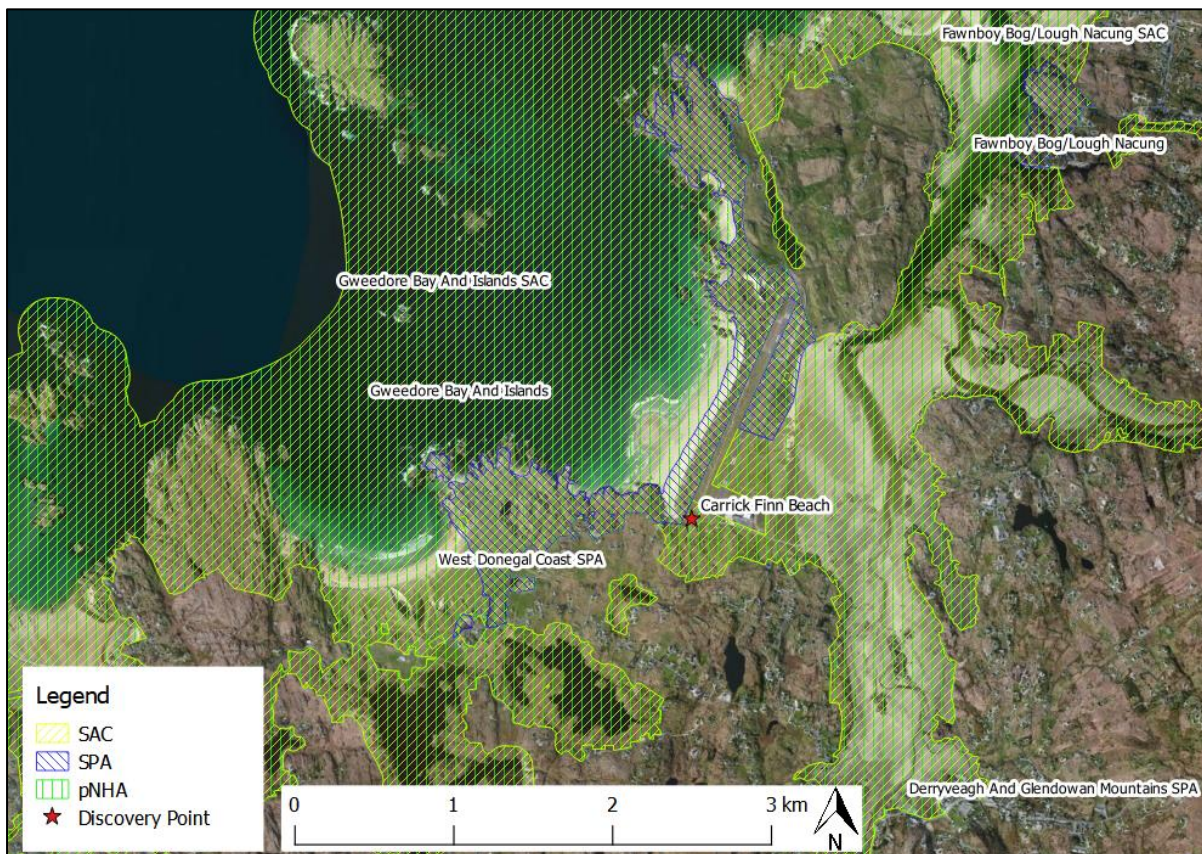


Figure 3.30 Site context map for the Carrickfinn Beach Discovery Point.

3.15.2 Ecological Constraints

The Carrickfinn Beach Discovery Point is located within the Gweedore Bay and Islands SAC and pNHA and is surrounded by the West Donegal Coast SPA. This site is of high conservation value due to the relatively unspoilt coastal habitats and the range of plant and animal species that these habitats support. The SAC is designated for 17 habitats, five of which occur in proximity to the Discovery Point, including machair, a priority habitat. The SPA is designated for internationally and nationally important populations of several bird species including the Chough (*Pyrrhocorax pyrrhocorax*) and the Peregrine (*Falco peregrinus*), both listed in Annex I of the E.U. Birds Directive.

Table 3.29 Designated sites in proximity to Carrickfinn Beach and relevant sensitive ecological receptor

| NPWS Site Code | Site name | Conservation Objectives (Aug 2018) | Relationship with Discovery Point | Qualifying Interests/Sensitive Ecological Receptors |
|----------------|-------------------------------|------------------------------------|---|---|
| 001141 | Gweedore Bay and Islands SAC | NPWS 2015 ⁴⁵ | The Discovery Point occurs within the SAC | <u>Annex I Habitats</u> Reefs [1170] Embryonic shifting dunes [2110] Marram (white) dunes [2120] Fixed coastal dunes (grey dunes) [2130] Machairs* [21A0] <u>Annex II Species</u> <i>Euphydrys aurinia</i> (Marsh Fritillary) [1065] <i>Lutra</i> (Otter) [1355] <i>Petalophyllum ralfsii</i> (Petalwort) [1395] <i>Najas flexilis</i> (Slender Naiad) [1833] |
| 004150 | West Donegal Coast SPA | NPWS 2018 ⁴⁶ | The Discovery Point is adjacent to the SPA. | Fulmar (<i>Fulmarus glacialis</i>) [A009] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Shag (<i>Phalacrocorax aristotelis</i>) [A018] Peregrine (<i>Falco peregrinus</i>) [A103] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Razorbill (<i>Alca torda</i>) [A200] Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346] |
| NA | Gweedore Bay and Islands pNHA | NA | Discovery Point occurs within the pNHA | NPWS description from 001141 and 004150. |

3.15.3 Baseline Ecology of study area

A total of ten quadrats were located at Carrickfinn Beach as summarised in Table 3.29 and their locations have been mapped in Figure 3.31.

Table 3.30 Summary details of each quadrat recorded at Carrickfinn Beach.

| Quadrat Code | Quadrat Type | Quadrat Habitat Type | EU Habitat Quality | Landuse ⁶ | Quadrat Condition Assessment |
|--------------|--------------|--|--|----------------------|------------------------------|
| QCBAG1 | Core | BL3 Artificial surface | N/A | Carpark | Good |
| QCBAG2 | Core | LS2/CD1 Sand shore/embryonic dune mosaic | Embryonic shifting dunes [2110] | Recreation | Fair |
| QCBAG3 | Core | LS2 Sand shore | N/A | Recreation | Fair |
| QCBAG4 | Secondary | CD1/2 Embryonic/marram dune mosaic | Embryonic shifting dunes [2110], Marram dunes [2120] | Recreation | Good |
| QCBAG5 | Secondary | CD3 Fixed dune | Fixed dunes [2130] | Recreation | Fair |
| QCBAG6 | Secondary | CD6 Machair | Machair (*in Ireland) [21A0] | Recreation | Fair |
| QCBAG7 | Tertiary | CD6 Machair | Machair (*in Ireland) [21A0] | Recreation | Good |
| QCBAG8 | Secondary | CD1 embryonic dune | Embryonic shifting dunes [2110] | Recreation | Fair |
| QCBAG9 | Tertiary | CD3 Fixed dune | Fixed dunes [2130] | None | Good |
| QCBAG10 | Tertiary | CD3 Fixed dune | Fixed dunes [2130] | Recreation | Good |

⁴⁵ NPWS (2015) Conservation Objectives: Gweedore Bay and Islands SAC 001141. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

⁴⁶ NPWS (2018) Conservation objectives for West Donegal Coast SPA [004150]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

The habitats present on site included embryonic, marram and fixed sand dunes (CD1/2/3), machair (CD6), sand shores (LS2), rocky shores (LR3), and built environment/artificial surfaces (BL3). The site is adjacent to Donegal Airport and there are a few dispersed residences and cattle pastures nearby. The site was extremely florally diverse. Species that were recorded on site included sand couch (*Elytrigia juncea*), marram grass (*Ammophila arenaria*), red fescue (*Festuca rubra*), sea sandwort (*Hohenya peploides*), sand sedge (*Carex arenaria*) pyramidal orchid (*Anacamptis pyramidalis*), kidney vetch (*Anthyllis vulneraria*), lady's bedstraw (*Galium verum*), common bird's-foot trefoil (*Lotus caniculatus*), fairy flax (*Linus catharticum*), eyebright (*Eurphrasia officinalis*), red bartisia (*Odontites verrus*), yellowrattle (*Rhinanthus minor*), wild thyme (*Thymus polytrichus*) and grass of Parnassus (*Parnassia palustris*). Other species observed included buoy barnacles (*Dosima fascicularis*), cinnabar moth caterpillars (*Tyria jacobaeae*), six spot burnet moths and larvae (*Zydaena filipendulae*), meadow pipits (*Anthus pratensis*), ravens with juveniles (*Corvus corax*), sand martins (*Riparia riparia*). Sand martins were observed nesting at the southern end of the beach (Figure 3.31). A probable petrified spring, a priority habitat, was recorded at the northern end of the beach (Figure 3.31). Otter (*Lutra lutra*) tracks were recorded along the rocky shore to the west of the beach (Plate 3.28a). A badger (*Meles meles*) latrine was recorded in the grass adjacent to the Discovery Point itself.

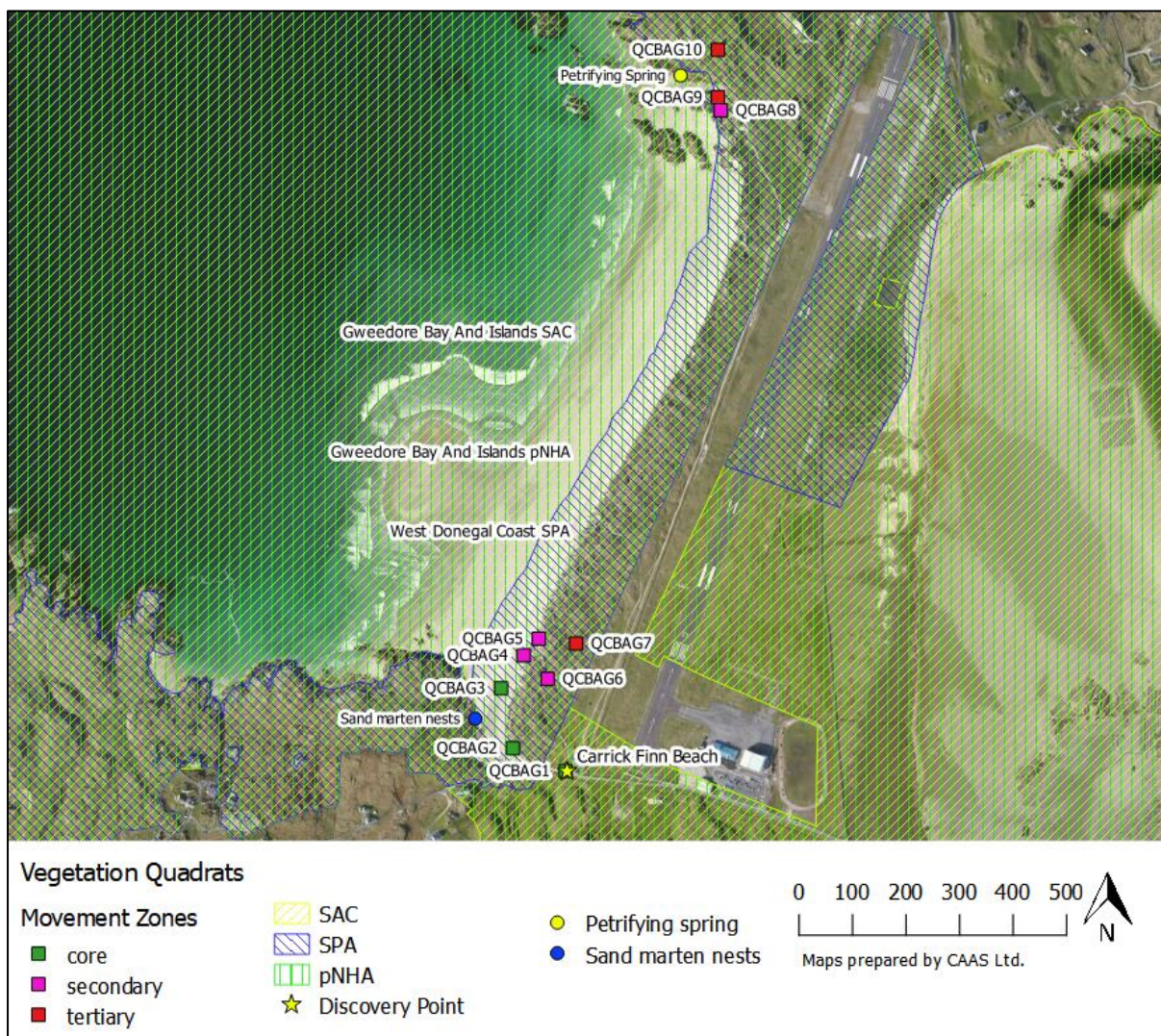


Figure 3.31 Carrickfinn Beach Discovery Point. The location of quadrats and designated sites are indicated. The yellow circle indicates the position of a probable petrifying spring with tufa formation, while the blue circle indicates the location of sand martin nests.

While the habitats on site were generally in good condition, some areas were not well managed, showing evidence of damage and erosion. Despite signage to the contrary, cars often parked and drove

over the fixed sand dunes and machair and there were many well-worn tracks through these systems (Plate 3.28b). The dunes and machair were heavily used by walkers/runners following many different desire lines throughout. Evidence of the use of portable barbeques and fire pits was observed in the sand dunes. Beach cleaning equipment was available from the lifeguard station when it was manned. In spite of this, there was a lot of dog-fouling on the beach and in the dunes. Detailed quadrat data for the site is presented in Appendix I.



a) b)
Plate 3.28 a) Otter (*Lutra lutra*) footprint in sand and b) car parked and visible tyre-tracks on machair

3.15.4 Preliminary Assessment of Visitor Impact⁴⁷

Visitors were recorded in the core zone 235 times; 33% of visitor movements observed were in the secondary zone (trafficked 122 times) when visitors left the core zone to walk along the sand dunes/machair and 14 groups went into the tertiary zone.

75% of visitors had no identifiable effect to the site and a further 10% had low levels of effects observed walking along existing desire lines. 9% of visitors observed moved along unmarked tracks creating desire lines. Further evidence of the trampling of herbaceous vegetation was apparent where visitors trafficked secondary zones (3% of all effects observed; 8 incidences). The remaining impacts observed were due to noise pollution and physical interactions with site materials.

3.15.4.1 Gweedore Bay and Islands SAC

The standard data form for the site details a list of pressures to include; aquaculture, discharges, paths & tracks, walking, horse-riding, erosion, camping, grazing, stock-feeding and removal of beach materials. The SAC is designated for 17 habitats, five of which occur in close proximity to the Discovery Point, namely; reefs [1170], embryonic shifting dunes [2110], marram dunes [2120], fixed dunes [2130] and machair* [21A0]. The SAC is also designated for four Annex II species, of which evidence for one, the otter (*Lutra lutra*) was recorded during the survey. Visitor monitoring data showed that visitor movements were generally restricted to less sensitive habitat types. However, there was degradation evident in the sand dunes and machair. Erosion was evidenced along paths and tracks in the sand dunes and machair as a result of walking, driving and horse-riding, all activities which were

⁴⁷ This classification system is specific to the visitor monitoring programme and any reference to effects or impacts within this report does not relate to similar terms within the Habitats Directive but to general activities and associated environmental effects as detailed in Appendix III of the Visitor monitoring report.

recorded during the survey. Cars often used the machair for parking, even when there was space in the designated carpark.

3.15.4.2 West Donegal Coast SPA

The SPA contains nationally important breeding populations of Chough, Peregrine and six seabird species; fulmar, cormorant, shag, herring gull, kittiwake and razorbill. The standard data form for the site details interspecific competition and predation as key pressures. Vegetated sea cliffs are the primary habitat of the site, and these do not occur within close proximity of the Discovery Point. None of the species listed were recorded during the survey and there were no visitor activities identified that would affect the bird species and associated habitats listed for this site.

3.15.4.3 Gweedore Bay and Islands pNHA

There is no data available on the NPWS website in relation to this designation and there is no information contained in the NPWS Site Synopsis Portfolio for pNHAs for the site. However, the area of the site is covered by both the Gweedore Bay and Islands SAC and the West Donegal Coast SPA.

3.15.5 Recommendations

Visitor movements are concentrated along the beach. However, they also occur along desire lines and driving tracks throughout the wider sand dune and machair habitats, resulting in the removal of vegetation, substrate compaction and erosion. Further damage should be avoided by better controlling/managing visitor access to the damaged areas.

Provisions to minimise impacts from visitor movements should be explored such as:

- The erection of information signage about sand dune and machair ecology and sensitivity.
- Erection of temporary moving trails to disperse trampling sequentially across dunes and machair, or fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat.
- The creation of a designated way-marked nature-trail along existing desire lines, with the inclusion of ecological information at key points along the trail.
- The erection of additional signage at the key entrances to the sand dunes/machair to provide guidance to visitors to stick to routes provided, thus avoiding destruction of vegetation.
- Fencing-off of the sand dune and machair areas at key points to prevent vehicular access, as the current signs are being ignored.
- Provision of beach-cleaning equipment (pickers, rubbish bags, dog-fouling bags) at the carpark that are available 24/7, rather than during very limited life-guarding hours.

Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.

Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.

Section 4 Discussion and Recommendations

In 2019, the focus of the survey was Discovery Points that fall within or lay directly adjacent to designated nature conservation sites (SACs/SPAs/NHAs), where visitor movements have potential for negative impact. Designated sites are designed to afford protection to the most vulnerable habitats and species listed in the Habitats Directive (Council Directive 92/43/EEC) and the Birds Directive (Council Directive 2009/147/EC), which together form the Natura 2000 network. European and national legislation places a collective obligation on Ireland to maintain or restore habitats and species within the Natura 2000 network at favourable conservation conditions. This involves conservation of habitats, preventing their deterioration, and avoiding disturbance to protected flora and fauna.

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.

All recommendations made as a result of the Visitor Monitoring data and subsequent ecological assessments are to be considered with respect to all of the Policies and Objectives of the WAW Operational Programme. Similarly, all works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. All suggested remedial actions or recommendations must comply with the Policies and Objectives of the WAW Operational Programme; most notably Appendix V: Site Maintenance Guidelines. These guidelines provide robust measures to ensure any works that take place on site are designed and undertaken in an environmentally sensitive manner to ensure the protection of the ecological integrity of the site.

Of the fifteen sites surveyed, fourteen of the sites occur within or directly adjacent to sites designated for nature conservation (SACs, SPAs). Derrigimlagh Bog did not have any overlapping or immediately adjacent designations, although it was located within several hundred meters of several designated sites. All of the sites surveyed are coastal sites, with the exception of Derrigimlagh Bog and Seefin Viewpoint. The habitats of ecological importance are remarkably consistent throughout most sites comprising coastal habitats (principally sand dunes, heath, and maritime grassland such as dry calcareous and neutral grasslands).

No discernible effects were only identified at three of the survey sites:

- Blacksod Harbour;
- Inishcrone Pier; and
- Mountcharles Pier.

The sensitive features of the relevant SACs and SPAs were removed from the receiving environment of these Discovery Points. However, there was clear evidence of damage to the low ecological value areas adjacent to the Discovery Point at Mountcharles Pier, due to the fact that that the carpark is not fit for purpose. Similarly, the effects observed at Blacksod Harbour were to areas of low ecological value.

Minimal and localised visitor impacts were observed at six sites surveyed in 2019. These included:

- Sheep's Head;
- Seefin Viewpoint;
- Banna Strand;
- Flaggy Shore;
- Dursey Sound; and
- Derrigimlagh Bog.

It is noted that the majority of impacts identified by the VOS monitoring at these sites were recorded to be low. More significant impacts, although recorded infrequently, related mainly to trampling of vegetation, soil compaction and erosion of protected habitats, and/or disturbance to wildlife. Further, damage to habitats at these sites was also noted during the ecological surveying and included well-worn desire-lines, fire pits, erosion *etc.* Recommendations have been made to prevent further damage to/facilitate the recovery of the protected habitats, species and ecological processes at these sites.

Further monitoring will facilitate an assessment of long-term pressures from annual visitor numbers to ensure they will not present future problems for these sites.

Seven sites surveyed in 2019 showed more significant visitor impacts. These included:

- Inch Strand;
- Spanish Point;
- Traught Beach;
- Lacken Strand;
- Rosses Point; and
- Carrickfinn Beach.

At these sites, a higher proportion of more significant visitor impacts, *i.e.* medium and high level, were noted at the sensitive features of the SPAs and SACs. These were as a result of visitors using fragile areas, such as sand dunes, machair, orchid-rich grasslands and saltmarshes for walking, dog-walking and/or off-road vehicular access, or as a result of activities likely to cause disturbance to wildlife such as off-leash dog-walking, drone use and powered-paragliding. In addition, negative impacts on habitats were also noted during the ecological surveys such as the existence of well-worn desire-lines, tyre-tracks through protected habitats, severe erosion and inappropriate waste-disposal. Recommendations have been made to prevent further damage to and/or facilitate recovery of the protected habitats, species and ecological processes at these sites. Further monitoring will facilitate an assessment of long-term pressures from annual visitor numbers to ensure they will not present future problems for these sites.

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, particularly in relation to sensitive habitat features and flora;
- Review of existing management facilities and access routes at certain sites. Consideration should be given to controlling visitor movements. This could be achieved with the use of temporary moving trails, permanent marked trails, or the exclusion of whole areas of sensitive, protected habitat. This would facilitate the dispersal of impacts and facilitate the recovery of impacted areas.
- Restrict access where harm to the environment is unavoidable, this is particularly important for vehicle access in relation to some sites e.g. Lacken Strand saltmarsh;
- Explore the potential for a part-time warden at peak times at busy sites to manage human conflicts with the receiving environment of Discovery Points;
- Review or improve interpretive facilities informing visitors of the sensitivity of sensitive areas and appropriate behaviour/activities;
- A requirement to keep dogs on a leash during periods when birds are ground-nesting and/or over-wintering;
- The provision of dog-waste bags at all sites;
- The provision of (portable) toilet facilities at all sites;
- Drone usage at the sites should be restricted or managed appropriately;
- Powered paragliding at sites should be restricted or managed appropriately; and
- An overall assessment of the site management practices is required to assess the steps and measures needed to reduce the harmful activities which currently are evident at sites.

All works must comply with the WAW Site Maintenance Guidelines. Similarly, all works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. 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. These recommendations take account of habitat features as well as flora and bird species and their sensitivities.

Table 4.1 Summary results of ecological monitoring at WAW signature Discovery Points undertaken in 2019

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
|------------------|---|---|--|--|
| Sheep's Head | Sheep's Head SAC Sheep's Head to Toe Head SPA Sheep's Head pNHA | Dry heath, Wet heath, Kerry slug (<i>Geomalacus maculosus</i>), Peregrine falcon (<i>Falco peregrinus</i>), Chough (<i>Pyrrhocorax pyrrhocorax</i>), Fulmar (<i>Fulmarus glacialis</i>). | Localised trampling and erosion of heath vegetation and clifftop vegetation. | Visitor movements are concentrated along the main walking trail. However, they also occur at key vantage points off the main trail resulting in the removal of vegetation, soil compaction and exposure. Further damage should be avoided by controlling/ managing visitor access to the damaged areas. Provisions to minimise impacts from trampling should be explored such as: <ul style="list-style-type: none"> • The erection of information signage about the site's ecology and its sensitivity at the entrances to the walking trail. • The erection of additional signage at the entrances to the walking trail area could provide guidance to visitors walking the trails to stick to the route provided and avoid unnecessary trampling of wet and dry heath. • Erection of temporary moving trails to disperse trampling at vantage points sequentially or fixed marking of walkways (in addition to existing way-markers) to ensure a unified area is sacrificed to preserve all surrounding habitat. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). Additionally, all works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |
| Seefin Viewpoint | Sheep's Head SAC Sheep's Head pNHA | Dry heath, Wet heath, Kerry slug (<i>Geomalacus maculosus</i>). | Localised trampling of heath vegetation, littering, urination. | Because the site is very wet, visitor movements have high potential to have a negative impact if not managed appropriately. The site is currently not well managed and there is evidence of visitor movements having localised adverse impacts on vegetation and contributing to erosion of the peat substrate within both the core and secondary movement areas. Provisions to minimise impacts from trampling should be explored such as: <ul style="list-style-type: none"> • The erection of additional signage at the visitor parking area could provide guidance to visitors walking the trails behind the carparks to stick to the route provided and avoid unnecessary trampling of wet heath. • Erection of temporary moving trails to disperse trampling across the site sequentially or fixed marking of walkways (in addition to existing way-markers) to ensure a unified area is sacrificed to preserve all surrounding habitat. • Installation of portable toilet facilities at the site. <p>Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.</p> |

⁴⁸ Key ecological impacts identified within this report in relation to habitat features, condition and flora species as well as impacts identified to bird species further detailed in Appendix II of this report.

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
|-----------------|--|--|---|--|
| | | | | <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |
| Durseley Sound | Kenmare River SAC Beara Peninsula SPA Garnish Point pNHA | Dry heaths, Sea cliffs, Chough (<i>Pyrrhocorax pyrrhocorax</i>) Fulmar (<i>Fulmaris gacialis</i>) | Localised trampling of heath vegetation. | <p>Visitors, including construction workers, continue to have minor localised adverse impact at this site which relate to vegetation compaction, with trampling being present at key pinch and vantage point locations.</p> <p>As with previous year, provisions to minimise impacts from trampling should be explored such as:</p> <ul style="list-style-type: none"> • The erection of additional signage at the visitor parking area could provide guidance to visitors walking the trails behind the cable car station to stick to the paths provided and avoid unnecessary disturbance and/or trampling of dry heath and/or ground-nesting birds. • Erection of temporary moving trails to disperse trampling across the site sequentially or fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat. <p>A planning application has been lodged with An Bord Pleanála for the replacement of the existing cableway system, which is approaching the end of its operational life, with a modern cableway system including a cable car station, small sheltered waiting area and welfare facilities on the Island and a cable car station, visitor centre, shop, cafe and welfare facilities on the mainland together with improved car parking facilities. A decision is due on the application in Spring of 2020.</p> <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.</p> <p>These recommendations are in line with those identified as part of the monitoring program from all previous years 2015 – 2018</p> |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
|-----------------|---|--|---|---|
| Inch Strand | Castlemaine Harbour SAC Castlemaine Harbour SPA Castlemaine Harbour pNHA | Tidal mudflats and Sand shores, Embryonic shifting dunes, Marram dunes, Fixed dunes, Dunes with Creeping Willow, Humid dune slacks, Red-throated Diver (<i>Gavia stellata</i>) Great Nornern Diver (<i>Gavia immer</i>) Golden Plover (<i>Pluvialis apricaria</i>) Bar-tailed Godwit (<i>Limosa lapponica</i>) | Localised trampling of dune vegetation, Off-road vehicular movement, Disturbance of wildlife. | The Discovery Point is relatively well managed and well maintained. The assessment focused on the receiving environment of the Discovery Point which showed visitors had little adverse effects on the ecological features in its immediate area. Visitors do have minor localised adverse impact on the sand dune system which relate primarily to trampling, vegetation compaction and erosion. Provisions to minimise impacts from within the sand dune system and on the beach should be explored such as: <ul style="list-style-type: none"> • The erection of additional signage at the visitor parking area could provide guidance to visitors walking the trails behind the beach to stick to existing and marked trails provided and avoid unnecessary disturbance and/or trampling of sand dunes and birds. • Erection of temporary moving trails to disperse trampling across the sand dunes sequentially, or fixed marking of walkways, to ensure a unified area is sacrificed to preserve all surrounding habitat. • A requirement to keep dogs on-lead within the sand dunes and also on the beach during winter when waders are foraging along the shoreline. • Enforcement of the ban on driving and parking on the beach beyond the 1km point. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |
| Banna Strand | Akeragh, Banna and Barrow Harbour SAC Tralee Bay Complex SPA Akeragh, Banna and Barrow Harbour pNHA | Embryonic shifting dunes, Marram dunes, Fixed dunes, Humid dune slacks, Atlantic Salt Meadows, Mediterranean Salt Meadows, Golden Plover (<i>Pluvialis apricaria</i>) Bar-tailed Godwit (<i>Limosa lapponica</i>) Whooper Swan (<i>Cygnus cygnus</i>) | Trampling of dune vegetation, Erosion of dunes. | The Discovery Point is relatively well managed and well maintained. The assessment focused on the receiving environment of the Discovery Point which showed visitors had little adverse effects on the ecological features in its immediate area. Visitors do have a localised adverse impact on the sand dune system adjacent to the Discovery Point which relate primarily to trampling, vegetation compaction and erosion. Provisions to minimise impacts within the sand dune system and on the beach should be explored such as: <ul style="list-style-type: none"> • The erection of additional signage at the visitor parking area could provide guidance to visitors walking in the dunes behind the beach to stick to existing and marked trails provided and to avoid unnecessary disturbance and/or trampling of sand dunes and birds. • Erection of temporary moving trails to disperse trampling across the site sequentially or fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat. |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
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| | | | | <ul style="list-style-type: none"> Potentially restricting access as well as providing dune restoration and enforcement works at areas that are particularly sensitive or have existing damaged. A requirement to keep dogs on-lead within the sand dunes and also on the beach during winter when waders are foraging along the shoreline. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |
| Spanish Point | <p>Carrowmore to Spanish Point and Islands SAC</p> <p>Mid-Clare Coast SPA</p> <p>Carrowmore to Spanish Point and Islands pNHA</p> | <p>Reefs, Petrifying springs with tufa formation,</p> <p>Wetlands and waterbirds,</p> <p>Cormorant (<i>Phalacrocorax carbo</i>), Barnacle Goose (<i>Branta leucopsis</i>), Ringed Plover (<i>Charadrius hiaticula</i>), Sanderling (<i>Calidris alba</i>) Purple Sandpiper (<i>Calidris maritima</i>) Dunlin (<i>Calidris alpina</i>) Turnstone (<i>Arenaria interpres</i>).</p> | <p>Trampling of dune vegetation, Erosion of dunes, Interference with site material.</p> | <p>The overall habitat condition is good, with the exception of the sand dunes between beach and the road. This site is very busy, although visitor numbers were low during our survey because it was outside of school holidays and the weather was poor. Nonetheless, the effect of visitor movements was clearly evident in the sand dunes, the majority of which were not fenced off, and therefore subject to trampling, compaction and erosion.</p> <p>It is recommended that these areas are fenced off to allow for recovery of the fixed and marram dune habitats. Additionally, dune restoration works such as dune enforcement is recommended at this site. Some of the more regularly used and substantial desire-lines through these habitats could be marked to ensure a unified area is sacrificed to restore the surrounding habitat. Where this system is already in place, between the carpark and the beach, management appears to be working well.</p> <p>Accordingly, provisions to minimise further impact and to restore sand dune habitats should be implemented such as:</p> <ul style="list-style-type: none"> The erection of additional signage at the visitor parking area regarding the sensitivity of the sand dune habitats. The erection of additional signage at the top and bottom of dunes to provide guidance to visitors to stick to marked trails and to avoid unnecessary trampling of sand dunes. Further fencing off of dunes and fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
|------------------|---|--|--|--|
| Flaggy Shore | Galway Bay Complex SAC Inner Galway Bay SPA Galway Bay Complex pNHA | Mudflats and sandflats, Large shallow inlets and bays, reefs, Perennial vegetation of stony banks, Limestone pavement, Otter (<i>Lutra lutra</i>) Harbour seal (<i>Phoca vitulina</i>) Black-throated Diver (<i>Gavia arctica</i>), Great Northern Diver (<i>Gavia immer</i>), Sandwich Tern (<i>Sterna sandvicensis</i>), Common Tern (<i>Sterna hirundo</i>), | Localised trampling of vegetation, Off-road vehicular movement, Disturbance of wildlife. | The Flaggy Shore Discovery Point is a very quiet site, receiving a relatively low number of visitors. The areas which are subject to visitor movements have low species diversity and are of relatively low ecological value. No rare or protected species or habitats were recorded on site. Visitor movements are causing some trampling of vegetation between the road and shoreline. However, there are no ecological features of significance which are being impacted by visitor movements. Consideration could be given to control/manage visitor movements to reduce trampling at observation points, <i>e.g.</i> by providing fixed "photo opportunity" platforms. The signage regarding the looped walk should be repaired and cleaned. There is also an opportunity to erect informational signage regarding the geology of the local area and to direct visitors to the excellent example of fossiliferous limestone biokarst that occurs c. 1 km west of the Discovery Point. Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. |
| Traught Beach | Galway Bay Complex SAC Inner Galway Bay SPA Galway Bay Complex pNHA | Mudflats and sandflats, Large shallow inlets and bays, Reefs, Perennial vegetation of stony banks, Otter (<i>Lutra lutra</i>) Harbour seal (<i>Phoca vitulina</i>) Black-throated Diver (<i>Gavia arctica</i>), Great Northern Diver (<i>Gavia immer</i>), Golden Plover (<i>Pluvialis apricaria</i>), | Trampling of vegetation, Drone operation. | The areas within the Traught Beach Discovery Point site which are subject to visitor movements have low species diversity and are of relatively low ecological value. No rare or protected species or habitats were recorded on site. Visitor movements are causing some trampling of vegetation along the stony bank high along the shoreline. However, there are no ecological features of significance which are being impacted by visitor movements. Consideration could be given to control/manage visitor movements to reduce trampling at these points, <i>e.g.</i> by providing fixed signage regarding trampling of vegetation, lighting of fires. Consideration should be given to regulating the use of drones in the area, particularly when at times when overwintering birds are likely to be present. Designated fire pit or BBQ areas could be installed to control any potential risk of fire damage moving forward. Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. |
| Derrigimlagh Bog | Connemara Bog Complex SAC, SPA and pNHA | Blanket bog, Northern Atlantic wet heath, European dry heath, Natural dystrophic lakes. | Localised trampling of herbaceous vegetation, Transient disturbance, | The receiving area of the Signature Discovery Point is extremely well managed. None of the effects observed are thought to have any long-lasting effect. The site has a relatively high density of visitors, and there is some evidence of minor elements of erosion or compaction where visitors trample areas just adjacent to the trail and in the vicinity of some of the visitor information stations. Although the areas effected by grazing and peat extraction do not fall within the |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
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| | Slyne Head Peninsula SAC and pNHA | | Grazing. | <p>boundaries of the designated sites, they could be better managed by land-users to prevent further degradation of the bog/heath habitats.</p> <p>It is also recommended that portable toilet facilities be included at the site.</p> <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> |
| Blacksod Harbour | <p>Mullet/Blacksod Bay Complex SAC</p> <p>Blacksod Bay/Broadhaven SPA</p> | <p>Mudflats and sandflats, Large shallow inlets and bays, Reefs,</p> <p>Otter (<i>Lutra lutra</i>)</p> <p>Great Northern Diver (<i>Gavia immer</i>), Ringed Plover (<i>Charadrius hiaticula</i>), Common Tern (<i>Sterna hirundo</i>),</p> | Localised trampling of vegetation, Littering, Climbing on monuments. | <p>Blacksod Harbour Discovery Point is an extremely quiet site, as evidenced by the encroachment of recolonising vegetation in the carpark and memorial garden. Further, the Discovery Point itself is not a very well located or obvious, as the majority of visitors drove to, parked and walked on the pier, 100m beyond the Discovery Point. Most visitors read the signage that related to the lighthouse and Inishkea Islands rather than the signage at the Discovery Point and in the memorial garden. A concrete wall separates the memorial garden and Discovery Point from the road, and perhaps this makes it less obvious to visitors as a destination compared to the Lighthouse and pier. The lighthouse keeper, Vincent Sweeney, mentioned that plans were being discussed about starting visitor/public tours of Blacksod Lighthouse. The site would appear to have a lot of capacity to absorb visitor numbers with little impact to the qualifying interests and sensitive receptors of the designated sites.</p> <p>Consideration could be given to improving the visibility of the Discovery Point as a point of interest for visitors through the erection of road signage on approach to the site. A café and toilet facilities would also be welcome at this site, given its distance from Belmullet's restaurants, cafés and other facilities.</p> <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> |
| Lacken Strand | <p>Lacken Saltmarsh and Kilcummin Head SAC</p> <p>Killala Bay/Moy Estuary SPA.</p> <p>Lacken Saltmarsh and Kilcummin Head pNHA</p> | <p>Atlantic salt meadows, Mediterranean salt meadows,</p> <p>Wetland and Waterbirds,</p> <p>Ringed Plover (<i>Charadrius hiaticula</i>), Golden Plover (<i>Pluvialis apricaria</i>), Grey Plover (<i>Pluvialis squatarola</i>), Sanderling (<i>Calidris alba</i>), Dunlin (<i>Calidris alpina</i>),</p> | Trampling of saltmarsh vegetation, Transient disturbance, Disturbance of wildlife, Off-road vehicular driving, Powered paragliding. | <p>Although visitor numbers were the lowest recorded during the 2019 survey season (83 people), the types of activities observed at the site have great potential for habitat degradation and disturbance of species. Areas of trampling, compaction and erosion were evident in the salt marsh. While the sandy shore habitat is more resilient to the mechanical effects of motorised vehicles, the potential for pollution to due oil or fuel spillages exists.</p> <p>It is recommended that the salt marsh is fenced off to protect the upper and lower salt marsh habitats and allow for regeneration of damaged areas. This can be achieved using well placed large rocks, or other non-intrusive methods.</p> <p>If necessary, some of the desire-lines regularly used by walkers through the salt marsh could be marked to ensure a unified area is sacrificed to restore the surrounding habitat, or a boardwalk constructed. Visitors preferentially parked on the access road, saltmarsh and beach rather than</p> |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
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| | | Bar-tailed Godwit (<i>Limosa lapponica</i>) Curlew (<i>Numenius arquata</i>), Redshank (<i>Tringa totanus</i>). | | <p>using the carpark across the road at the trail head. Vehicular access to the saltmarsh should be completely prevented, while on the beach it should be limited. Activities like off-lead dog walking and powered paragliding have great potential to cause disturbance to roosting and foraging birds.</p> <p>Accordingly, provisions to minimise further impact and to restore salt marsh habitats should be implemented such as:</p> <ul style="list-style-type: none"> • A prohibition of vehicular access (cars, vans, quadbikes, scramblers, powered-paragliders <i>etc.</i>) to the salt marsh. • Restriction of vehicular access to the strand. • The erection of signage asking visitors to park at the trailhead carpark. • The erection of signage regarding the ecology and sensitivity of the salt marsh habitats and of overwintering bird species. • Fencing off of the salt marsh, and if necessary fixed marking of walkways through the salt marsh along existing desire lines to ensure a unified area is sacrificed to preserve all surrounding habitat. • A requirement to keep dogs on leads when birds are over-wintering at the site. • A prohibition of powered paragliding when birds are over-wintering at the site. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. Where possible, spoil heaps and construction vehicles should be stored on hard surfaced areas to avoid impacts to the surrounding vegetation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |
| Inishcrone Pier | Killala Bay/Moy Estuary SPA Killala Bay/Moy Estuary SAC | Mudflats and sandflats, Embryonic shifting dunes, Marram dunes, Fixed dunes, Wetlands and waterbirds, Red-throated Diver (<i>Gavia stellata</i>), Golden Plover (<i>Pluvialis apricaria</i>), Bar-tailed Godwit (<i>Limosa lapponica</i>) | Disturbance of wildlife. | <p>Overall the site management is robust and the habitat condition is favourable. Therefore, there are no recommendations.</p> <p>It is important to note that monitoring was undertaken at the Discovery Point itself and did not take place around the beach and sand dune habitats which are located at least 600m from the Discovery Point. This area receives a lot of visitors that engage in walking, dog-walking, running, surfing, body-boarding and SUPing. Horse-riding was observed along the beach. Although this area is not within the immediate receiving area of the Discovery Point, given the good condition of the sand dune system in the area, as identified by the NPWS, it is recommended that surveying is carried out in these habitats, as it is this amenity that is the primary attraction for visitors to Enniscrone.</p> |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
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| Rosses Point | Cummeen Strand/Drumcliff Bay SAC Cummeen Strand SPA Cummeen Strand/Drumcliff Bay pNHA | Mudflats and sandflats, Embryonic dunes, Marram dunes, Fixed dunes, <i>Juniperus communis</i> formations on calcareous grasslands, Semi-natural dry grasslands (* important orchid sites), Petrifying springs with tufa formation (<i>Cratoneurion</i>), Harbour Seal (<i>Phoca vitulina</i>) Wetland and Waterbirds, Light-bellied Brent Goose (<i>Branta bernicla hrota</i>), Oystercatcher (<i>Haematopus ostralegus</i>), Redshank (<i>Tringa totanus</i>). | Trampling of grassland and dune vegetation, littering. | <p>The overall habitat condition is good, with the exception of the calcareous grasslands on the headland between the beaches (around QRPAG7) and a small area above the purpose-built swimming pier (at QRPAG4). This is a busy site and although visitor movements were largely limited to existing paths and managed trails, there was a significant amount of movement away from these areas. This was also evidenced by visible desire lines through both calcareous grasslands and sand dunes. The vegetation in these areas were subject to trampling, compaction and erosion. It is recommended that these areas are managed to allow for recovery of the habitats. Where management is already in place, e.g. adjacent to the Discovery Point, it appears to be working quite well.</p> <p>Accordingly, provisions to minimise further impact and to restore habitats are recommended; such as:</p> <ul style="list-style-type: none"> • Extension of current grassland management, through mowing, to the headland area between the beaches. Consideration should be given to the use of fixed pathways or moving pathways demarcated by an ankle high rope border. This would facilitate the dispersal of impacts and facilitate the recovery of impacted areas. • The erection of additional signage at the Discovery Point and visitor parking area regarding the ecology and sensitivity of the orchid-rich grassland habitat, and the sand dune system. • The erection of additional signage to provide guidance to visitors to stick to marked trails and to avoid unnecessary trampling of grassland and sand dune vegetation. • Fencing off of the marram and fixed dunes between existing, well-worn desire lines to ensure a unified area is sacrificed to preserve all surrounding habitat. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |
| Mountcharles Pier | Donegal Bay (Murvagh) SAC Donegal Bay SPA Donegal Bay (Murvagh) pNHA | Mudflats and sandflats, Fixed dunes, Dunes with <i>Salix repens</i> spp. <i>argentea</i> , Humid dune slacks, Harbour seal (<i>Phoca vitulina</i>), Wetland and Waterbirds, | No discernible effects. | <p>As none of the habitats specified in the conservation objectives outlined for the SAC/SPA occur in proximity to the Discovery Point, visitor movements at Mountcharles Pier do not have a negative impact on these. However, there is clear evidence of damage occurring to the area of recolonising bare ground adjacent to the Discovery Point as a direct result of visitor movements. This is because the existing car parking facilities are not fit for purpose. While this is an area of relatively low ecological value, consideration should be given to providing surfaced parking facilities at the Discovery Point to prevent further damage.</p> <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site</p> |

| Discovery Point | Designated sites | Sensitive features with potential to be affected by visitors | Ecological impacts identified ⁴⁸ | Recommendation(s) |
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| | | Great Northern Diver (<i>Gavia immer</i>), Light-bellied Brent Goose (<i>Branta bernicla hrota</i>), Common Scoter (<i>Melanitta nigra</i>), Sanderling (<i>Calidris alba</i>). | | Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation. |
| Carrickfinn Beach | Gweedore Bay and Islands SAC West Donegal Coast SPA Gweedore Bay and Islands pNHA | Reefs, Embryonic dunes, Marram dunes, Fixed dunes, Machairs, Marsh Fritillary (<i>Euphydryas aurinia</i>), Otter (<i>Lutra lutra</i>) Fulmar (<i>Fulmarus glacialis</i>), Peregrine (<i>Falco peregrinus</i>), Chough (<i>Pyrrhocorax pyrrhocorax</i>). | Trampling of dune and machair vegetation, Creation of desire lines, Noise pollution. | Visitor movements are concentrated along the beach. However, they also occur along desire lines and driving tracks throughout the wider sand dune and machair habitats, resulting in the removal of vegetation, substrate compaction and erosion. Further damage should be avoided by better controlling/managing visitor access to the damaged areas. Provisions to minimise impacts from visitor movements should be explored such as: <ul style="list-style-type: none"> • The erection of information signage about sand dune and machair ecology and sensitivity. • Erection of temporary moving trails to disperse trampling sequentially across dunes and machair, or fixed marking of walkways to ensure a unified area is sacrificed to preserve all surrounding habitat. • The creation of a designated way-marked nature-trail along existing desire lines, with the inclusion of ecological information at key points along the trail. • The erection of additional signage at the key entrances to the sand dunes/machair to provide guidance to visitors to stick to routes provided, thus avoiding destruction of vegetation. • Fencing-off of the sand dune and machair areas at key points to prevent vehicular access, as the current signs are being ignored. • Provision of beach-cleaning equipment (pickers, rubbish bags, dog-fouling bags) at the carpark that are available 24/7, rather than during very limited life-guarding hours. <p>Any site maintenance works or improvements to facilitate the recovery of the vegetation should be carried out in compliance with Appendix V of the WAW Operational Programme (Site Maintenance Guidelines). All works must be undertaken in compliance with the EU Habitats Directive (Council Directive 92/43/EEC) and all other relevant environmental legislation.</p> <p>Further monitoring is recommended at this site to assess the site condition over time; with specific reference to any management interventions introduced on site.</p> |

Section 5 References

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