NATIONAL TOURISM MONITORING PROGRAMME 2021-2025

ANNUAL RESULTS FOR 2021

MALIN HEAD

for: **Fáilte Ireland**

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Malin Head – Interesting Finds

ECOLOGICAL HIGHLIGHTS

Ireland's most northely point is an important observation site for wildlife – including migrating birds, basking sharks and whales. The site also has important historic features.

There is a breeding population of corncrakes to the north east of the site that is currently being monitored by the NPWS.

VISITOR INTERACTION & MANAGEMENT

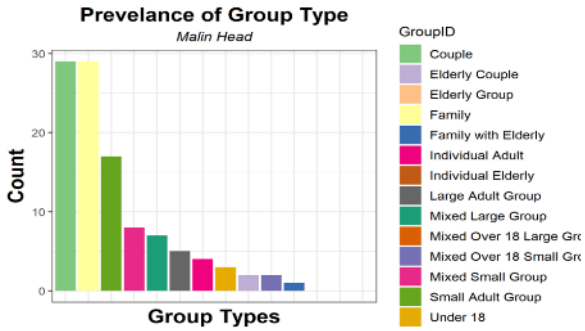
- Visitor interactions on site well controlled with strong management practices in place.
- Over 80% of all activities undertaken were considered to be low level activities such picnicking and exploring off trail.
- The majority of impacts observed on site were deemed to be low level impacts, with 50% of impacts consisting of light desire lines.
- Most of the visitors to the site stayed for at least 27 minutes –given the nature of the site itself.
- Majority of visitors read signage that was available on site.

KEY RECOMMENDATIONS

- A visitor management plan is needed to control visitor movement damage at the site.
- A Traffic and parking strategy needs to be devised to address and prevent incursions onto protected habitats.
- Habitat restoration and long-term habitat management should be explored to support the enhancement of biodiversity.
- Community engagement and environmental awareness protocols should be explored for the site to support positive environmental behaviours on site.

VISITOR NUMBERS AND DWELL TIME

- 390 people visited the site over 8 hours
- Average dwell time of 27 minutes



Highlights:

- Path management system is needed
- Carparking control measures are needed.
- Site dwell time of at least 27 minutes.
- Site signage is limited – missed opportunity for wildlife and habitats.





1 Malin Head

1.1 Purpose & Outputs of the Programme

Building on the success of the Wild Atlantic Way (WAW) environmental monitoring programme which ran from 2015-2019 – Fáilte Ireland has decided to expand the programme to a national level. The programme will monitor 19 individual sites located in all of Fáilte Irelands regional areas; The Wild Atlantic Way, Irelands Hidden Heartlands, Irelands Ancient East and Dublin. The programme will run for 5 years from 2021-2025.

The sites that are included in the programme vary in type from inland forest parks, to coastal sites, to privately owned attractions and diverse urban locations - can be seen below.

The purpose of the programme is as follows:

- To gain more insight from an environmental perspective as to what is happening at a variety of sites where we encourage visitors to frequent,
- To gather information (visitor behaviour, movement, path and trail conditions, surveys for birds, flora etc) for each site over the course of 5 years,
- To understand if there are observable trends and/or observable variations amongst site types over a 5-year period,
- To note good & bad practice at sites in order to;
- Make recommendations where appropriate for site management which is intended will have

sustainable benefits for the site, the visitor and the natural environment.

The Wild Atlantic Way Environmental Monitoring Programme allowed us to monitor the behaviour & movement of over 26,000 visitors, identify where there were stresses on the environment or potential future risks as well as good and bad practice.

This culminated in our ability to make useful recommendations to site owners and managers and ultimately to development a practical set of Guidelines for Visitor management (from Planning thorough to Site Operation).

It is hoped that we can build on the learnings of this previous programme and by engaging with site managers, to knowledge share, can enhance the information that we gather for each site chosen nationally for this new programme.

The key areas of focus within the data being gathered is to answer the following questions:

- How do the learning outcomes from the WAW monitoring compare when using repeat measures at fixed locations over a long period? Hence, what are the predictors of impact occurrence and severity?
- Following on from the WAW monitoring data – with the refined methods we aim to understand what activities cause which impact; and what are the factors which influence these activity choices in visitors?
- Understanding visitor movement patterns with respect to ranging behaviours – i.e., is there a distance threshold where impacts are less severe or negligible?
- Undertake pathway condition assessments to understand the relative sensitivities or tolerances of path types to visitor movements – taking note of habitat type and visitor numbers/load capacity.

These questions will be answered upon completion of the full suite of surveys and data collected annually over the course of the monitoring programme. However, each year will have annual interim reports to enable emerging findings and management recommendation to be identified and shared with the relevant stakeholders to support progressive management practices.

1.2 Methods & Surveys

The following surveys were undertaken at Malin Head:

1.2.1 Visitor Characterisation Survey

Visitor characterisation surveys were undertaken at each of the monitoring sites during the weekend period between June-August. The survey at Malin Head was undertaken on the 27th of June 2021, with max temperatures reaching approximately 14.4° C, no rainfall and low levels of wind on the day[1]. These surveys followed an 8-hour time period recording samples of visitor behaviour of an many visitors on site as possible. Visitor movement patterns, demographic data and activities undertaken were recorded for all sampled visitors. Where activities had associated impacts, these were also recorded and the relevant severity was recorded using the same coding system as with the WAW monitoring (see Appendix I for details). It is important to note that the visitor characterisation surveys are indiscriminate between visitors and local amenity use.

1.2.2 Ecological & Path Assessments

In addition to the visitor movement and behavioural records an ecological assessment and path network assessment was undertaken at each site. This consisted of mapping all tracks and trails – with records of hazards, notable damage etc. In addition to this, all habitats were mapped according to the Fossitt Habitat coding system while information on bird populations was gathered from National Biodiversity Centre Data.

[1] Weather data gathered from: https://www.met.ie/climate/available-data/historical-data

1.2.3 Other Surveys

Additional sample surveys were undertaken at Malin Head to identify the species presence of mammals. This information can inform potential management actions related to amenity services such as lighting which could conflict with sensitive species on site.

1.3 Site Description of Malin Head

Malin Head itself is used for various forms of recreation such beach walks and fishing. Along with being encompassed by the North Inishowen Coast SAC, it holds habitats such as stretches of montane heath and rare flowers due to the landscape of the area.

Figure 1.1 Malin Head

North Inishowen Coast SAC

Figure 1.2 Study Area within North Inishowen Coast SAC

1.4 Pathways and Features Condition Results

1.4.1 Pathway Condition

The pathways at Malin Head are mainly made up of managed pathways of even width with a small section of hard infrastructure pathways. These managed pathways all show heavy signs of compaction with some signs of erosion due to walkers. There are also multiple desire lines and eroded pathways at Malin Head which all show signs of heavy compaction and erosion due to various levels of walking.

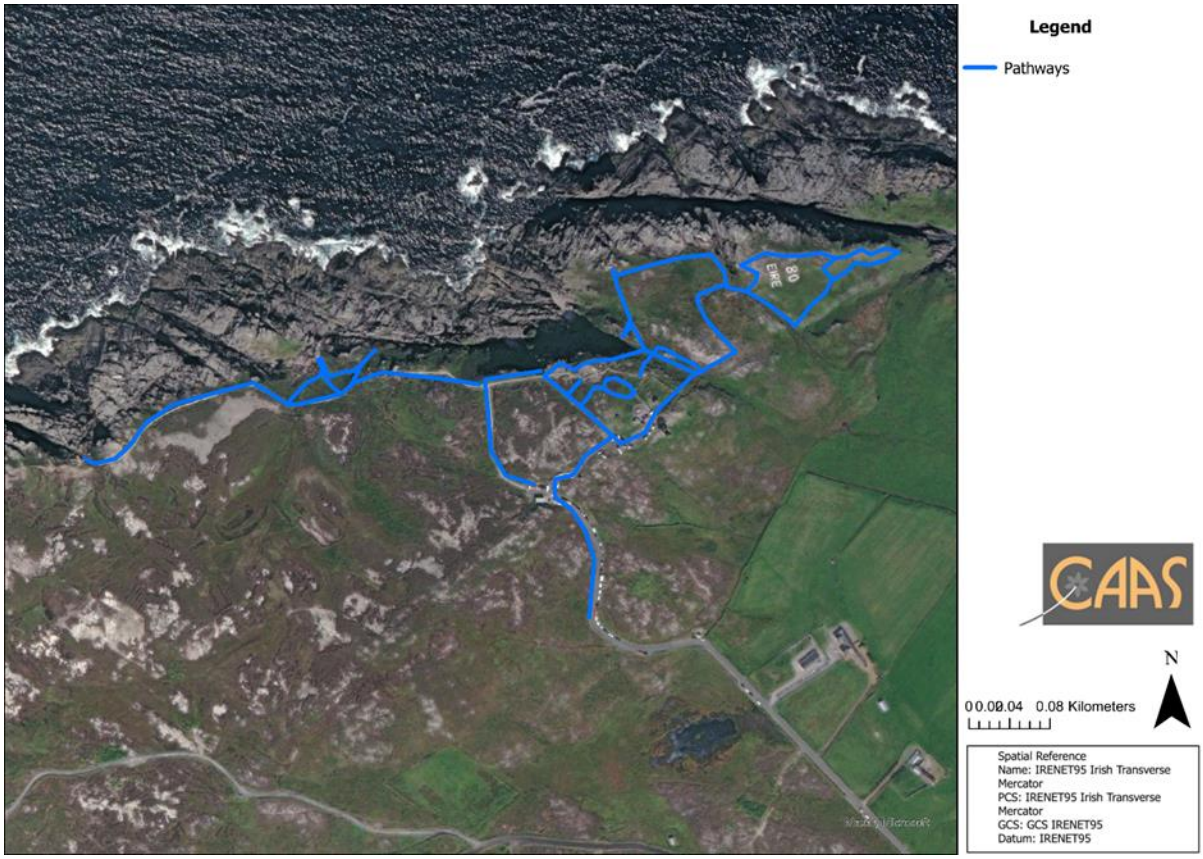


Figure 1.3 Pathways identified at Malin Head

Figure 1.4 Pathways at Malin Head

1.4.2 Features Condition

Malin Head contains multiple signs which relate to the important ecological features of the surrounding area, especially signs which include information about important bird species which can be seen in the area (Figure 1.6). The site also contains amenities for visitors such a car park, toilets and also benches which are dotted along the designated pathways.

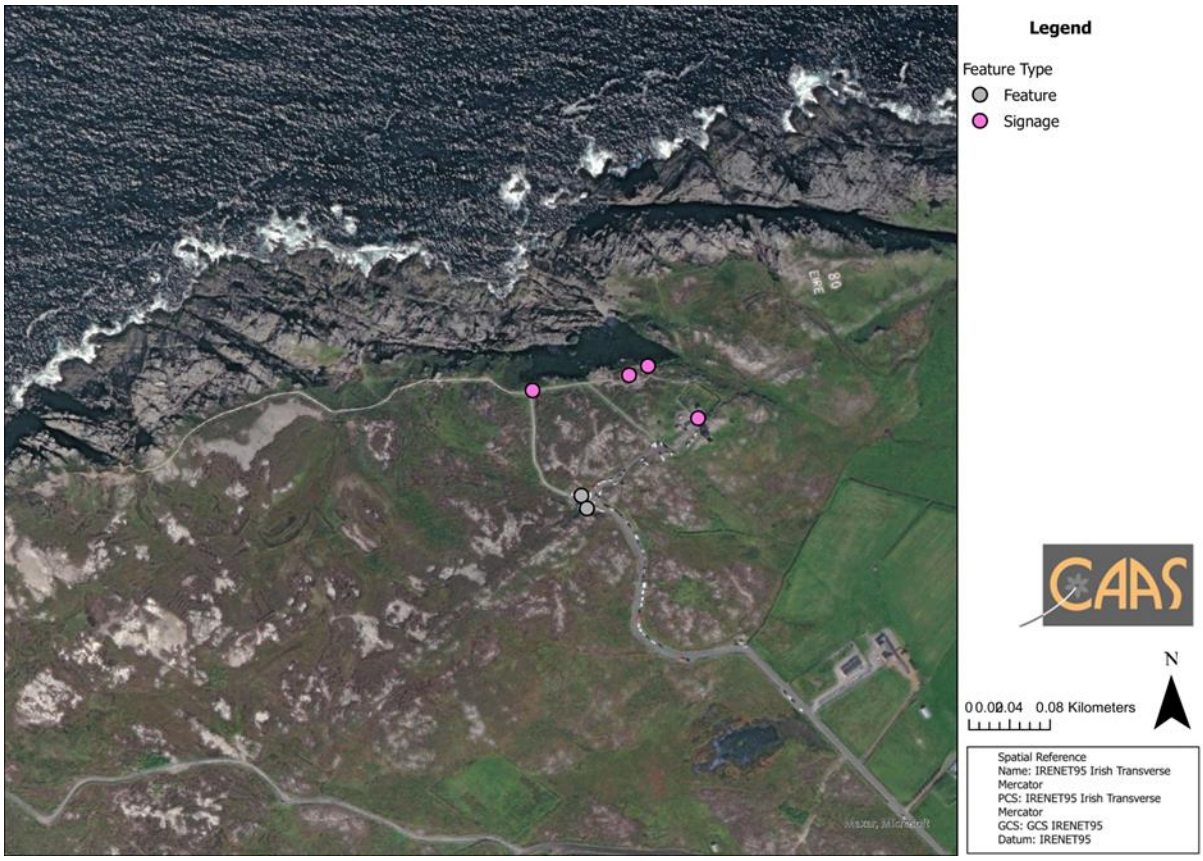


Figure 1.5 Features recorded at Malin Head

Figure 1.6 Features at Malin Head

1.4.3 Hazards

The hazard mapping at Malin Head identified few hazards, one of which, a broken fence which leads to an unsafe area (Figure 1.8).

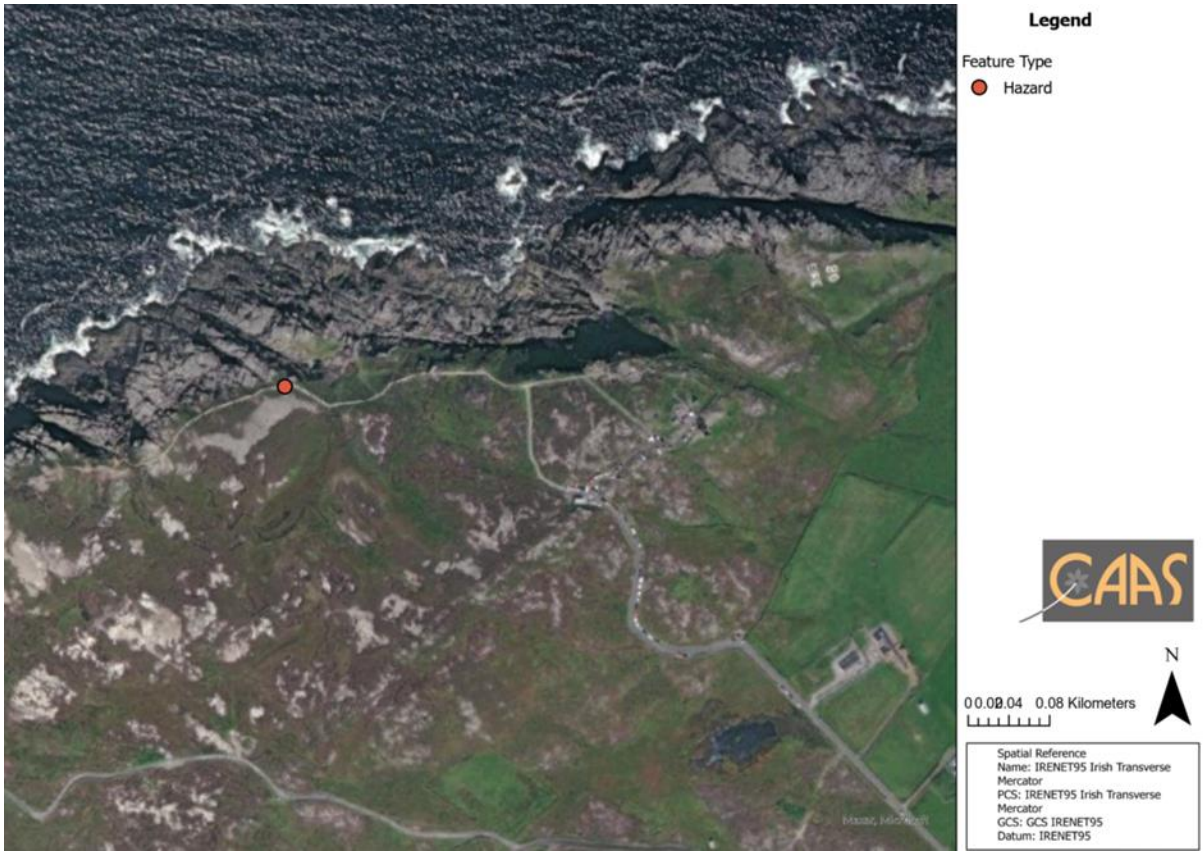


Figure 1.7 Hazards recorded at Malin Head

Figure 1.8 Hazard at Malin Head

1.5 Visitor Characterisation Survey

The visitor monitoring surveys resulted in a total of 390 visitors (which represent 107 group observations). The site is most popular amongst the Couple Family group with the dominant mode of transport being car. The average dwell time for the site was 27 minutes; with the following activities undertaken during the survey (listed in order of occurrence rate):

Activity Type
Exploring off trail
Photographing
Picnicking
Sitting
Climbing
Cycling
Dog walking (on lead)
Quadbiking/ Scrambling
Flying drone
Public urination

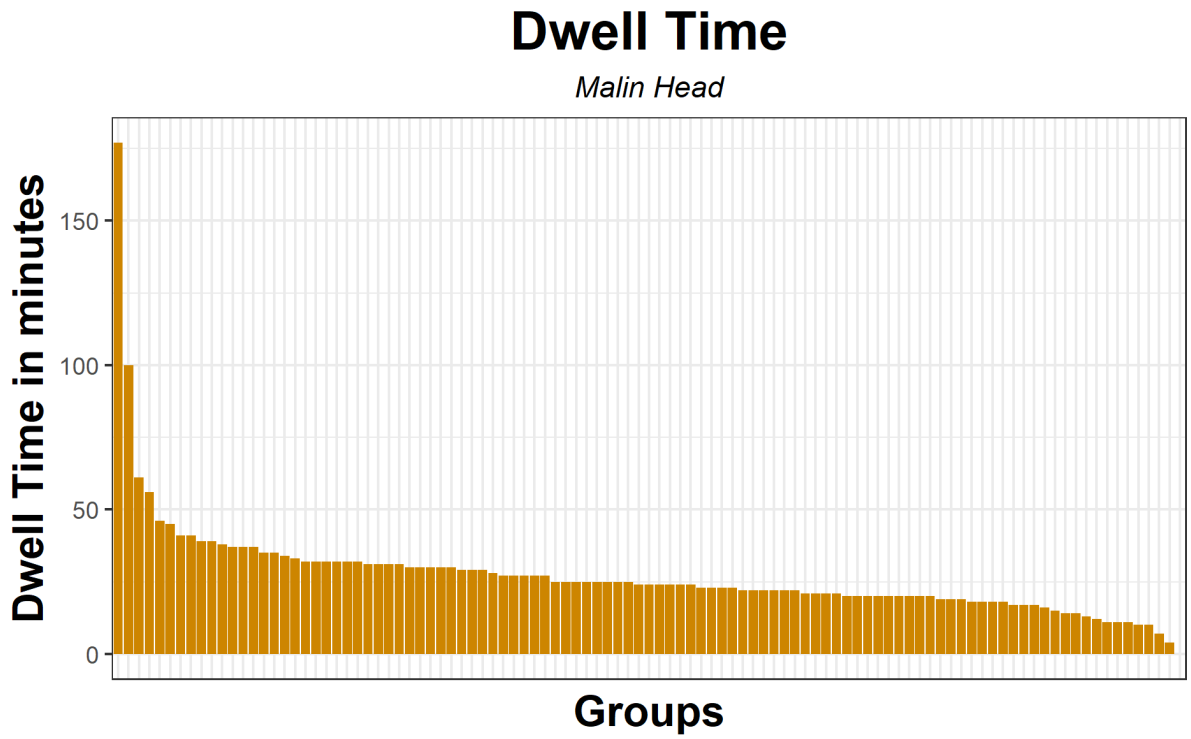


Figure 1.9 Duration of Time Spent at Malin Head

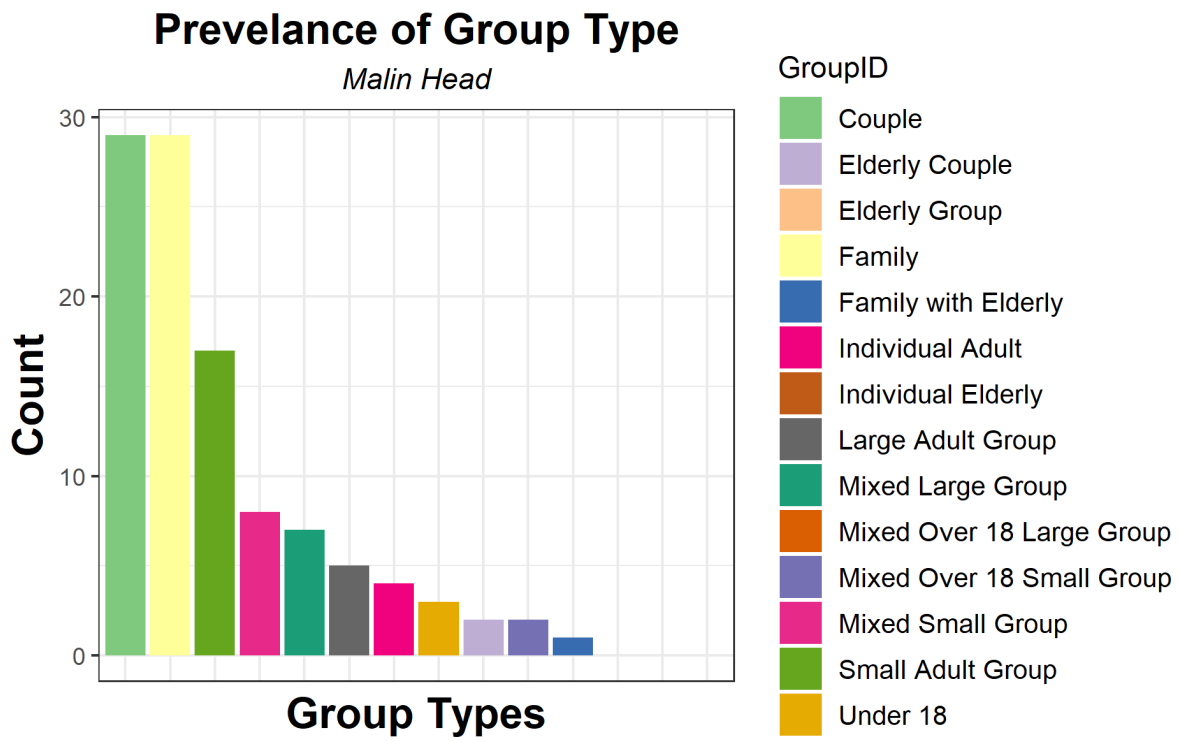


Figure 1.10 Groups of visitors that visited Malin Head

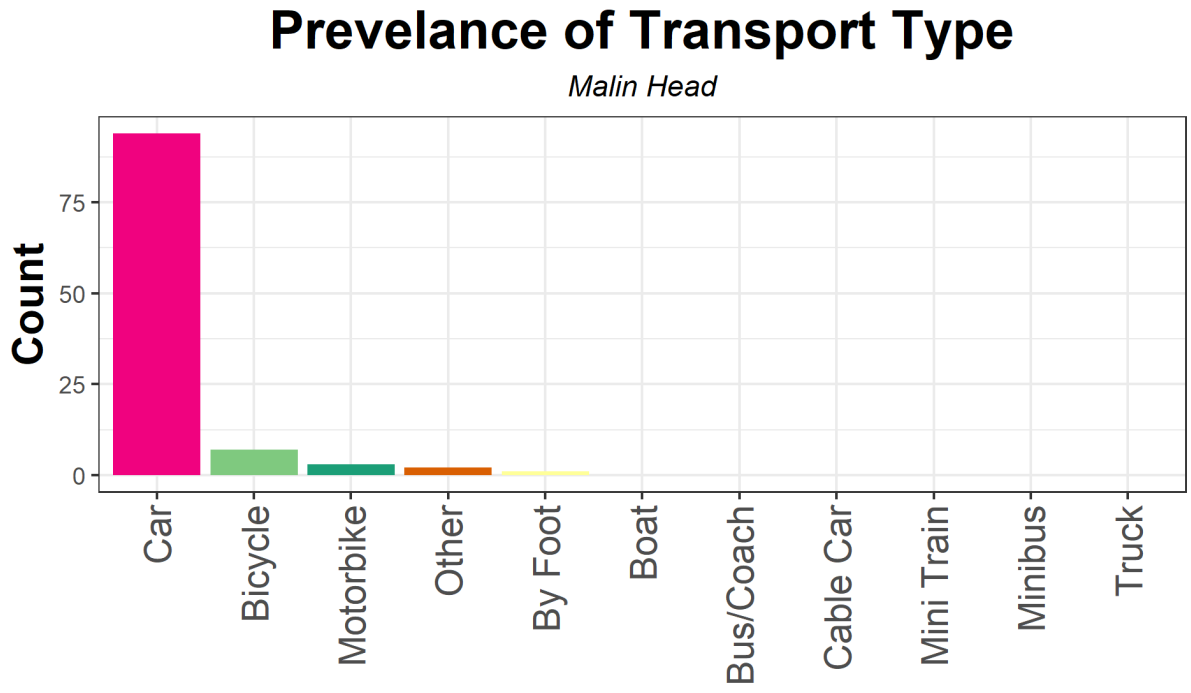


Figure 1.11 Mode of transport used to visit Malin Head

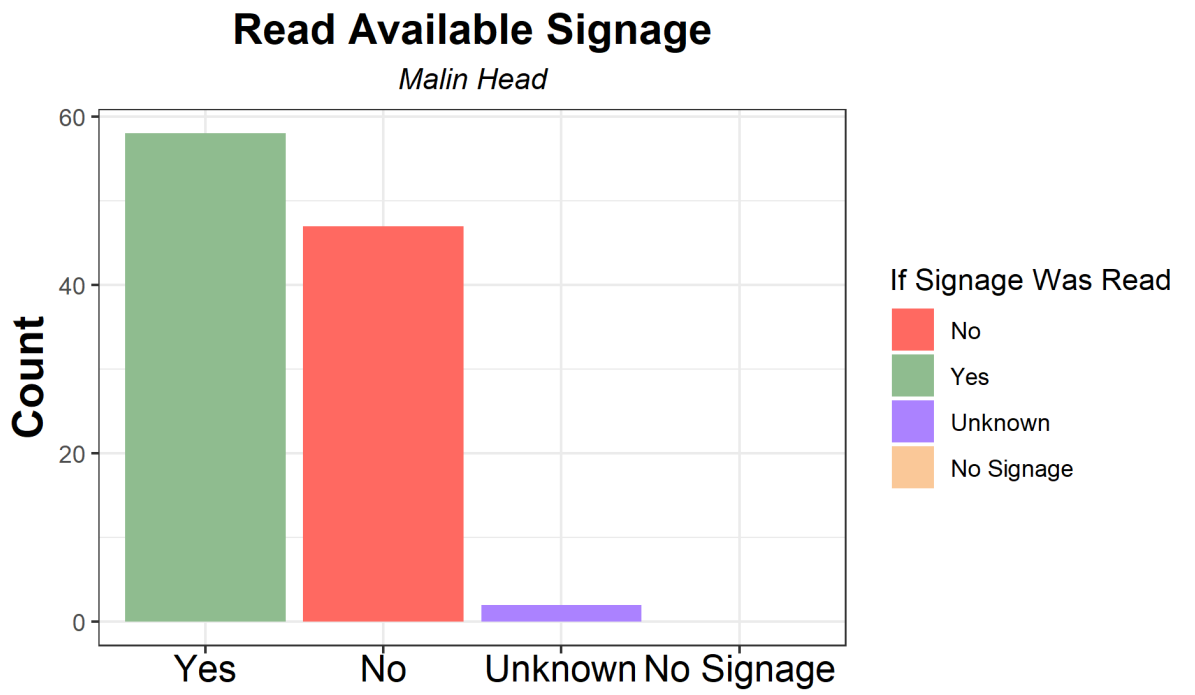


Figure 1.12 Use of Interpretive Material at Malin Head

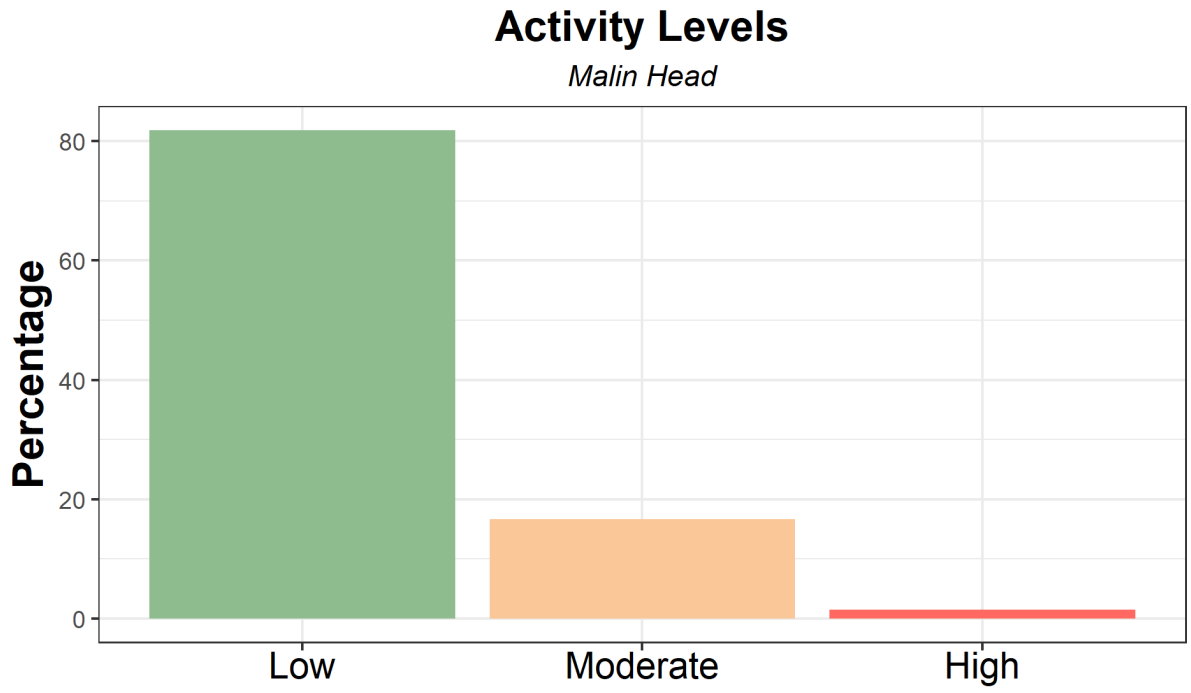


Figure 1.13 Categories of Activity Levels Observed at Malin Head

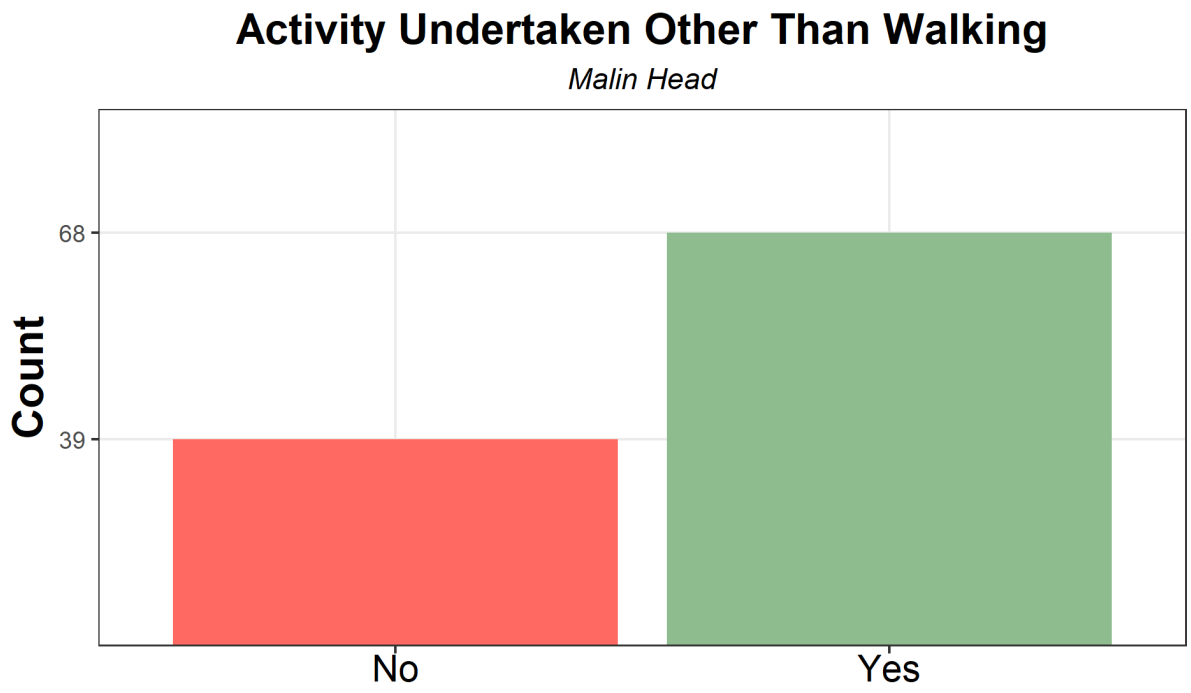


Figure 1.14 Activities undertaken other than walking

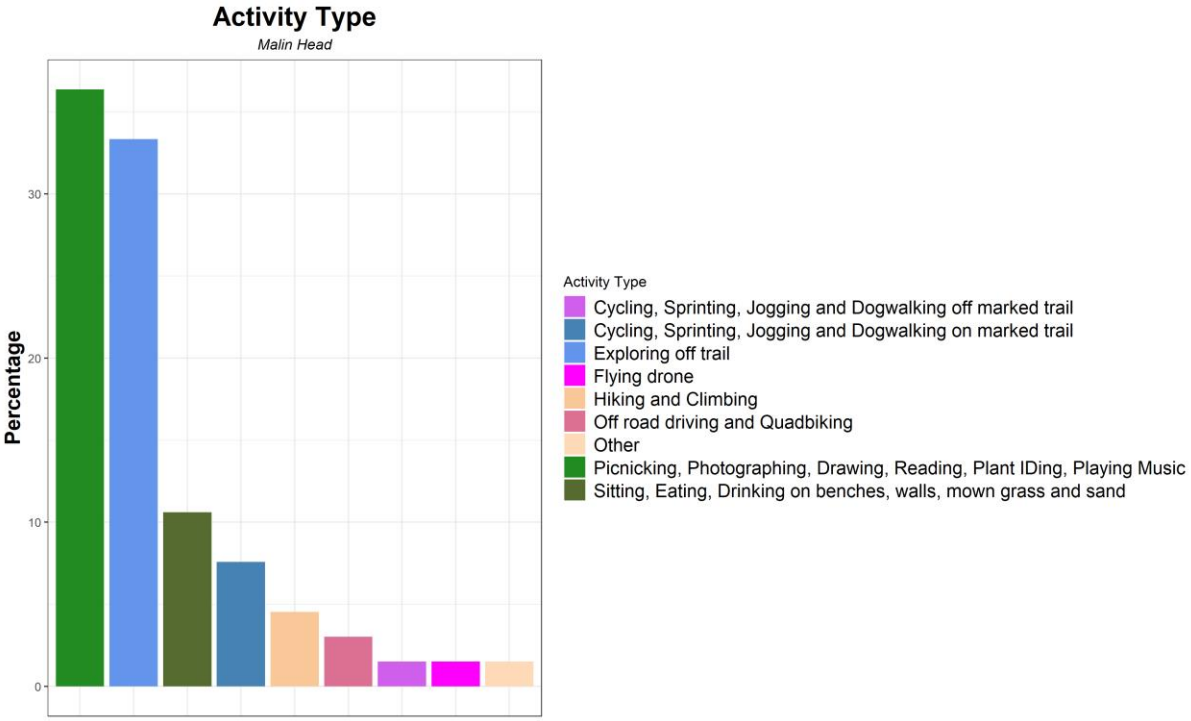


Figure 1.15 Range of Visitor Activities Observed at Malin Head

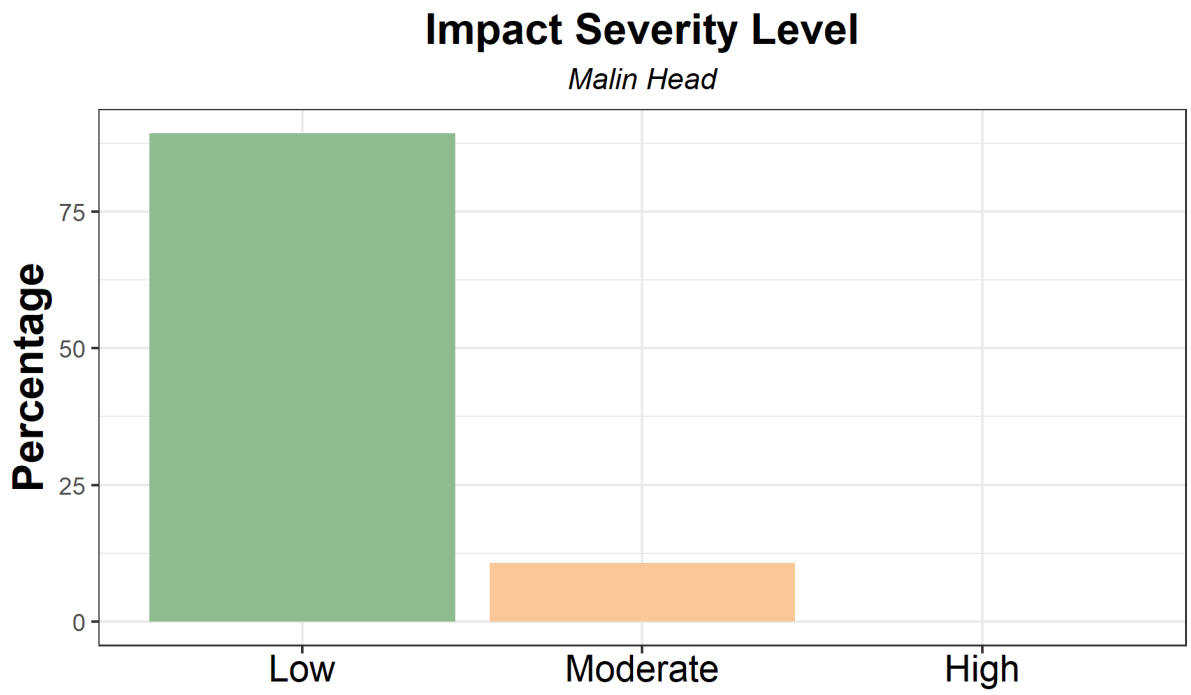


Figure 1.16 Categories of Environmental Impact Levels Observed at Malin Head as a result of Visitor Activities

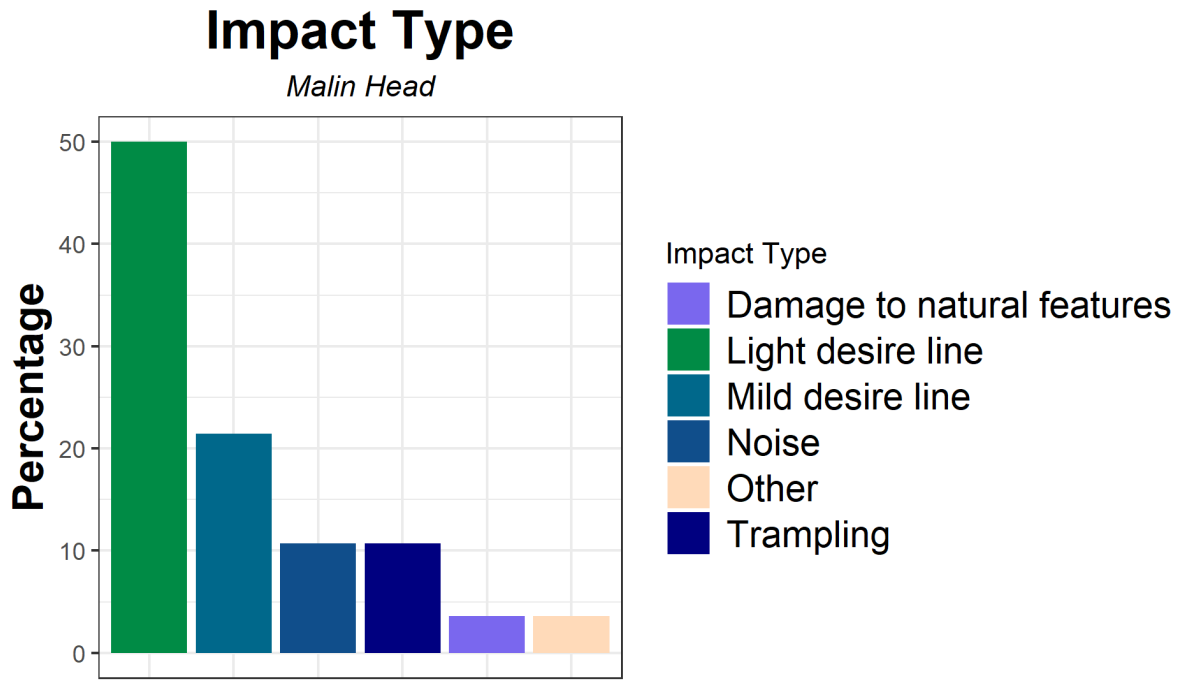


Figure 1.17 Range of Environmental Impacts Observed at Malin Head

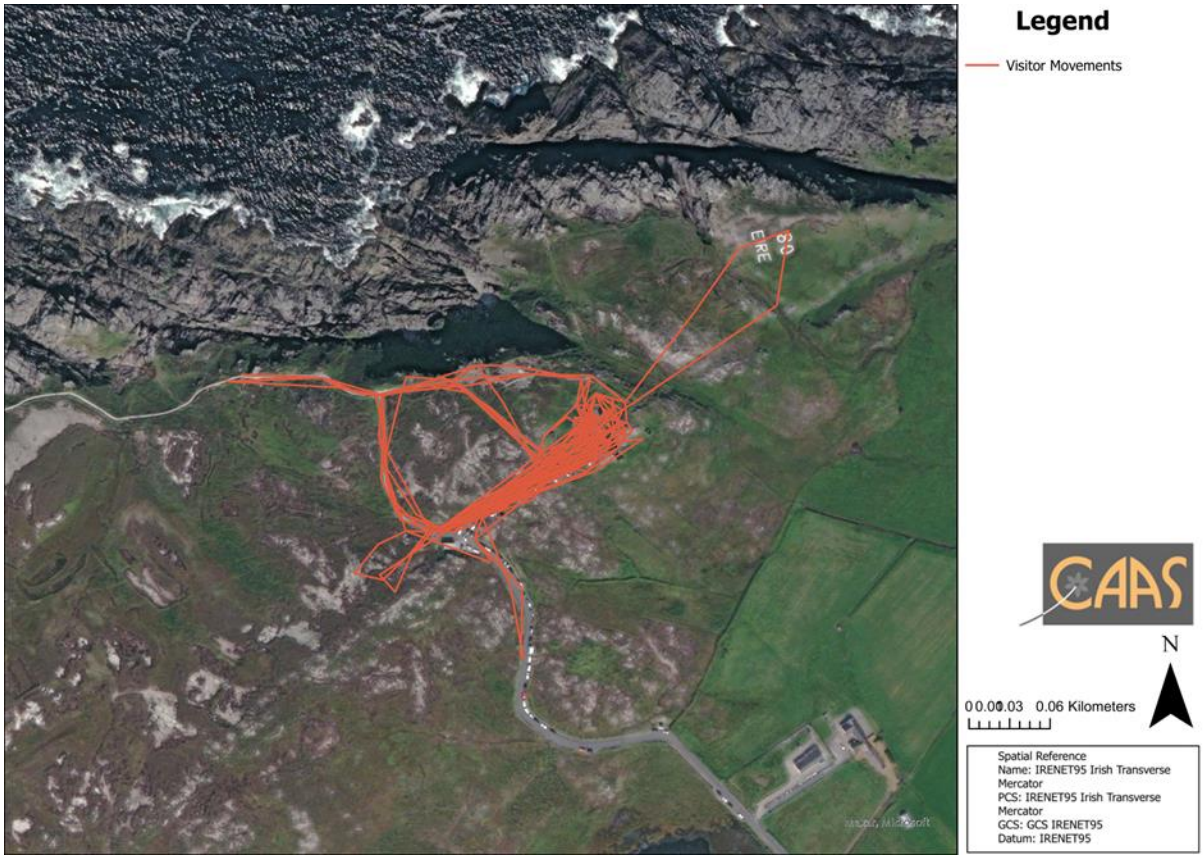


Figure 1.18 Visitor movement patterns at Malin Head

Of the 107 groups recorded on site 64% of them undertook activities other than walking. These activities (identified above) resulted in 28 impacts being observed on site during the survey. Thus, 42% of activities on site resulted in impacts on the environment. The impact severity levels varied with 89% of the impacts being low, 11% of impacts being moderate, and 0% of impacts being high severity. The impacts identified for the site were:

Impact Type	Count
Damage to natural features	1
Light desire line	14
Mild desire line	6
Noise	3
Other	1
Trampling	3

1.6 Ecological Monitoring Results

1.6.1 Ecological Constraints

The species and habitats within 2km of Malin Head are known to be sensitive to pollution, hydrological changes, overgrazing and land use management.

Table 1.1 Designated sites within 2km of Malin Head and relevant ecological receptors

Site Code	Site Name	Distance (km)	Site Type	Qualifying Feature
[002012]	North Inishowen Coast pNHA	0.00	pNHA	

Site Code	Site Name	Distance (km)	Site Type	Qualifying Feature
[002012]	North Inishowen Coast SAC	0.00	SAC	Machairs * in Ireland [21A0], Otter (*Lutra lutra*) [1355], European dry heaths [4030], Narrow-mouthed whorl snail (*Vertigo angustior*) [1014], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Mudflats and sandflats not covered by seawater at low tide [1140], Perennial vegetation of stony banks [1220], Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
[004146]	Malin Head SPA	1.97	SPA	Corncrake (*Crex crex*) [A122]

1.6.2 Habitat Descriptions

Malin Head is mainly made up of one habitat, dry siliceous heath (Fossitt Code HH1). This habitat provides amble foraging area for special conservation interests for which the SPA, Malin Head, is designated (Corncrake (*Crex crex*)) and is typical of an elevated coastal area.

There is widespread damage to the protected habitat as a direct result of tourism through trampling, staying off the designated tracks and overflow parking on the protected habitat (particularly along the roadside edge were cars pull 2 wheels onto the heathland to ensure they are out of the way of other cars).

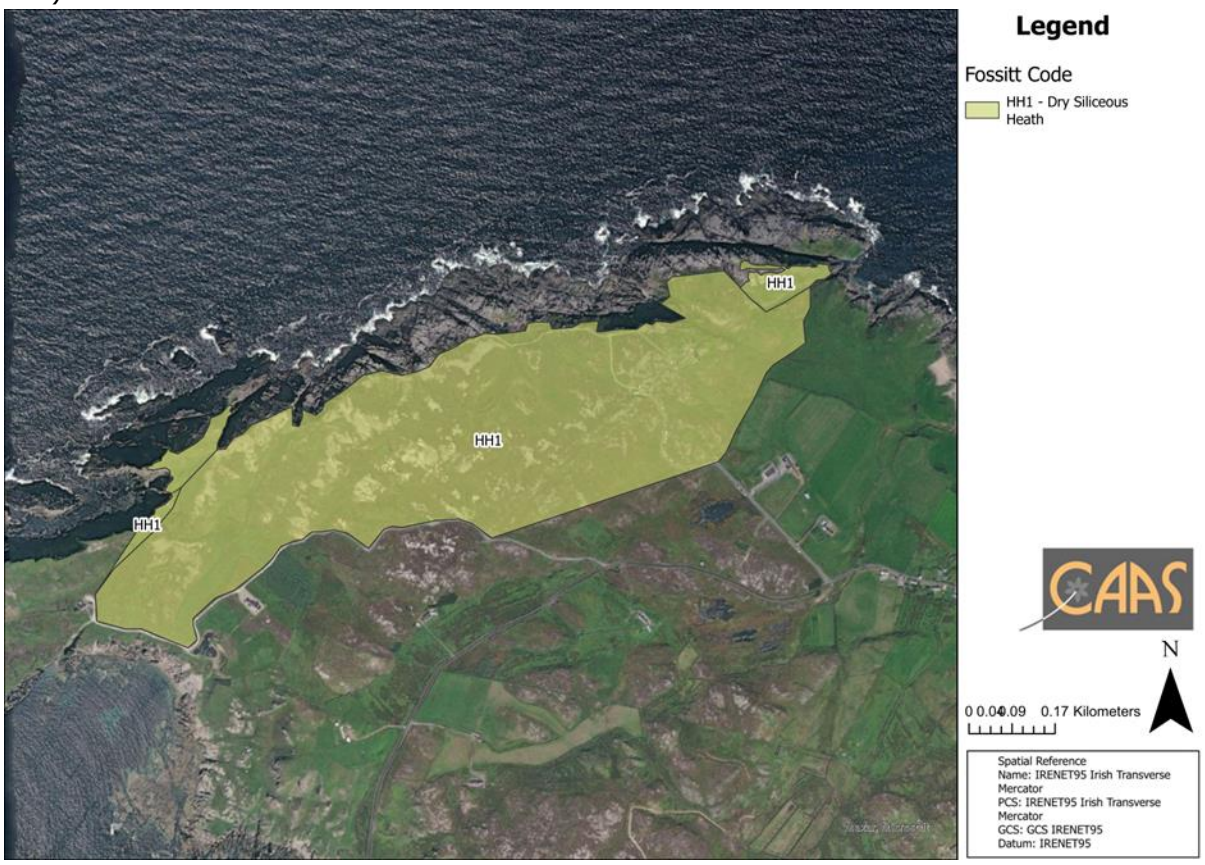


Figure 1.19 Habitats present at Malin Head

1.6.3 Condition Assessment

There are a range of habitats present on site, the assessment of habitat condition identified that the overall habitat quality[2] following the assessment scale was "3" which means the majority of the habitats have a widespread degree of negative impact, but slight and capable of rapid recovery. There were 17 recorded incidents of damage to habitats occurring off the marked paths on site. The causes of the damage were identified to be vehicles, camping and walking by visitors.

[2] This value was calculated using the methods set out in Appendix II

1.6.4 Mammals on Site

No mammals were recorded on site at Malin Head. As the NBDC data shows, the majority of mammal species in the area are marine mammals due to Malin Head's location on the north coast of Ireland, with the most common species observed in the area being bottle-nosed dolphins. However, a variety of terrestrial mammals have been observed in the area, albeit in small numbers with species such as otter and hare being recorded.

Table 1.2 List of mammals that have been recorded at NBDC Hectads C35 & C45

Taxonomic group	Common name	Scientific name	Record count
Marine mammal	Bottle-nosed Dolphin	*Tursiops truncatus*	50
Marine mammal	Common Dolphin	*Delphinus delphis*	3
Marine mammal	Common Porpoise	*Phocoena phocoena*	3
Marine mammal	Common Seal	*Phoca vitulina*	2
Marine mammal	Cuvier's Beaked Whale	*Ziphius cavirostris*	2
Marine mammal	Grey Seal	*Halichoerus grypus*	5
Marine mammal	Long-finned Pilot Whale	*Globicephala melas*	2
Marine mammal	Minke Whale	*Balaenoptera acutorostrata*	3
Marine mammal	Risso's Dolphin	*Grampus griseus*	2
Marine mammal	Sperm Whale	*Physeter macrocephalus*	2
Marine mammal	Striped Dolphin	*Stenella coeruleoalba*	2
Marine mammal	True's Beaked Whale	*Mesoplodon mirus*	1
Marine mammal	White-beaked Dolphin	*Lagenorhynchus albirostris*	1
Terrestrial mammal	American Mink	*Mustela vison*	1
Terrestrial mammal	Eurasian Badger	*Meles meles*	1
Terrestrial mammal	Eurasian Red Squirrel	*Sciurus vulgaris*	1
Terrestrial mammal	European Otter	*Lutra lutra*	6
Terrestrial mammal	European Rabbit	*Oryctolagus cuniculus*	1
Terrestrial mammal	Feral Goat	*Capra hircus*	2
Terrestrial mammal	Irish Hare	*Lepus timidus subsp. hibernicus*	3
Terrestrial mammal	Pipistrelle	*Pipistrellus pipistrellus*	2
Terrestrial mammal	Red Deer	*Cervus elaphus*	1
Terrestrial mammal	Red Fox	*Vulpes vulpes*	2
Terrestrial mammal	Soprano Pipistrelle	*Pipistrellus pygmaeus*	1

1.7 Recommendations

- A visitor management plan is needed to control visitor movement damage at the site.
- A Traffic and parking strategy needs to be devised to address and prevent incursions onto protected habitats.
- Habitat restoration and long-term habitat management should be explored to support the enhancement of biodiversity.
- Community engagement and environmental awareness protocols should be explored for the site to support positive environmental behaviours on site.

Appendix I

Activities		
Category 1 Low Level		
Walking, running or cycling on paths, marked trails or hard surfaces		LA 1
Walking, running, cycling or playing in mown grass, managed grassland or level sand		LA 2
Sitting on benches, walls, mown grass, sand		LA 3
Swimming, sailing, surfing, kayaking in water		LA 4
Resting, reading, looking, picnicking, sightseeing, painting, photographing		LA 5
Vehicular movement on roads and parking areas		LA 6
Watching nature in hedges, woods, streams, pools and intertidal areas		LA 7
Category 2 Medium Level		
Powered movement through water		MA 1
Any movement leaving an existing trail or marked path		MA 2
Any movement leaving a trail through leafy vegetation		MA 3
Any movement leaving a trail through woody vegetation		MA 4
Climbing on walls, loose stones, sand, soil etc.		MA 5
Fishing		MA 6
Category 3 High Level		
Walking through wet/muddy soil		HA 1
Scrambling on steep or loose slopes		HA 2
Off road vehicular movement		HA 3
Disturbance of wildlife		HA 4
Deliberate building or moving or knocking site materials - parts of monuments, walls, stones, sand etc.		HA 5
Picking herbaceous vegetation		HA 6

Appendix I Activity and impact code index used for recording visitor behaviours on site

Category 1 Low Impact		
No identifiable effect		LIE 1
Desire lines or trails visible on grass and leafy vegetation		LIE 2
Temporary disturbance (including chasing and feeding) of insects, fish, amphibian, reptiles, insects, birds and mammals		LIE 3
Temporary change of character - due to the appearance or nature of activities (noise, crowds, etc.)		LIE 4
General/light littering		LIE 5
Category 2 Medium Impact		
Desire lines or tracks visible outside of existing trail or marked path		MIE 1
Trampling of herbaceous vegetation		MIE 2
Damage to woody vegetation		MIE 3
Incidentally moving or knocking site materials - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.		MIE 4
Addition/alteration of site features, transient emissions, noise		MIE 5
Transient disturbance, emissions, noise		MIE 6
Disturbance of wildlife		MIE 7
Category 3 Severe Impact		
Direct interference with site material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.		SIE 1
Removal of material - parts of monuments, walls, stones, sand, rooted vegetation, flora, fauna etc.		SIE 2
Vandalism or graffiti		SIE 3
Destruction of structures, vegetation or fauna		SIE 4
Heavy littering or dumping quantities of waste		SIE 5
Burning materials or lighting a fire		SIE 6
Injuring, killing or taking wildlife		SIE 7

Appendix II

Habitat Condition Assessment Methodology

A rating scale has been designed for this monitoring programme as a standardised, repeatable measurement for assessing habitat condition across all sites[3]. For the purposes of this monitoring programme, habitat condition is assessed at every site by the surveyor examining four core criteria:

1. The extent to which habitat degradation (due to human activity), if any, is observed;
2. If habitat degradation is observed, the degree to which the impact is localised or widespread;
3. The potential ability for the habitat to recover (related to scale of degradation); and,
4. The requirement for intervention (related to the degree of the previous 3 elements).

For these assessments the term 'degradation' is taken to mean any change that reduces the long-term viability habitats and its qualifying interests [flora and fauna]. Degradation can include readily visible evidence of factors such as surface erosion or compaction, vegetation loss, crowd disturbance [noise], disturbance by pets, littering, burning or pollution.

Based on these four criteria, each site is walked along transects established by the principal pathways that are used for visitor access and movement through each site. At 100 metres intervals along the selected pathways, an assessment of habitat condition is made, using an established rating scale of 1 to 5; 1 being no impact and 5 being high impact. Each rating is then translated into a condition assessment, as displayed in Table II - 1 below.

These ratings are gathered for each site, and are then grouped; from which the mode is taken (i.e., the rating that occurs most frequently. This then recorded and reported as the resultant overall rating of the assessed habitat condition assessment for each site.

Table II-1 Habitat rating scale and condition assessment

Scale	Condition
1	No evidence of any habitat degradation observed.
2	Localised habitat degradation, but slight and capable of rapid recovery.
3	Widespread habitat degradation, but slight and capable of rapid recovery.
4	Localised habitat degradation, requiring intervention to allow full recovery.
5	Widespread habitat degradation, requiring intervention to allow full recovery.

[3] Note: Where possible, the same surveyor is used across multiple sites – but in some instances, different surveyors survey different sites. This can lead to a human variation in the assigning of the rating scale for impact. However, there will be sufficient repetition of the data through the several years of the monitoring programme to account for any variations in human interpretation on this scale.