NATIONAL TOURISM MONITORING PROGRAMME 2021-2025

ANNUAL RESULTS FOR 2021

DERRYNANE BEACH

for: **Fáilte Ireland**

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Contents

Derrynane Beach – Interesting Finds

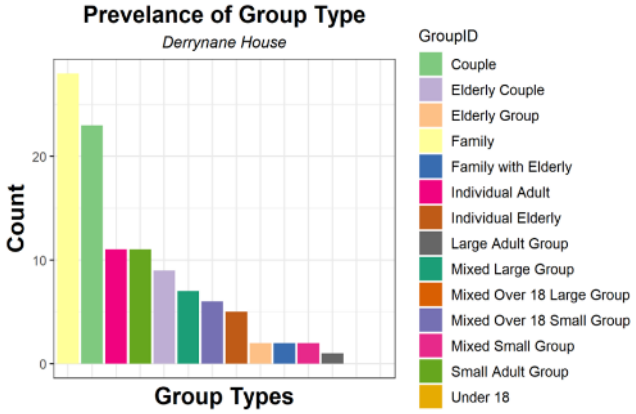
HIGHLIGHTS

The site contains the ancestral home of Daniel O'Connell as well as a National Historic Park. Derrynane hosts to a wide range of mammals including badgers and Irish stoat. The surrounding area is also known to play host to natterjack toads, which are the rarest amphibian in Ireland and protected under the Habitats Directive.

Derrynane has a complex range of habitats from near ancient woodland and ornamental gardens, to freshwater and saltwater marshes, to diverse coastal grassland systems.

VISITOR NUMBERS AND DWELL TIME

- 325 people visited the site over 8 hours
- Average dwell time of 40 minutes



KEY RECOMMENDATIONS

- Measures are needed to control the rabbit population which is causing dune destabilisation.
- A dynamic trail management system could be explored to help protect the leading edge of the dune from erosion.
- Dogs swimming in the natterjack toad pools was recorded as an issue for the site. Designated areas for dogs off the lead could help to control the impact while avoiding community conflict.

VISITOR INTERACTION & MANAGEMENT

- Visitor interactions on site well controlled with strong management practices in place.
- Vast majority of visitors only undertook walking on site, with only low impacts observed.
- Most common impact observed on site was trampling of vegetation.
- The OPW have strong habitat management processes and engage in an evidence-based management strategy.
- Most of the visitors to the site stayed for at least 40 minutes – given the nature of the site
- Majority of visitors to the site did not read signage that was available.

Highlights:

- Natterjack toad spawning area
- Lesser horseshoe bat roost
- Machaire habitat
- Long site dwell time of at least 40 minutes.
- Extremely well managed site

1 Derrynane Beach

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 Derrynane Beach:

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 Derrynane Beach was undertaken on the 19th of June 2021, with max temperatures reaching 22.5° 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 Derrynane Beach to identify the species presence of breeding birds, wintering birds and 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 Derrynane Beach

Derrynane House was the ancestral home of one of the most historic figures in Irish history, Daniel O'Connell, located on the Iveragh peninsula, which contains the Ring of Kerry - a noted scenic route as well as the Iveragh Peninsula SAC. The beach is the centre of a stretch of coastline covering about 5km that contains a National Historic Park, a number of popular sandy beaches as well as visitor accommodation and facilities. Derrynane Beach, although a short trail, contains areas like marram dunes, machairs, a broadleaved forest and tall herb swamps.

Figure 1.1 Derrynane Beach

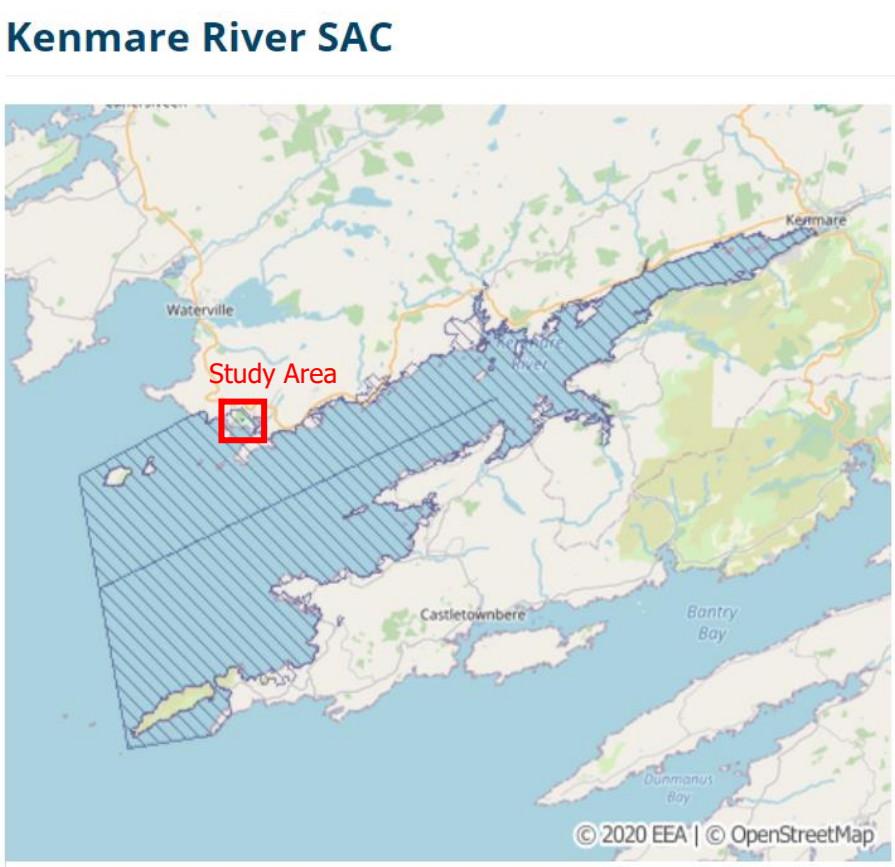


Figure 1.2 Study Area within Kenmare River SAC

1.4 Pathways and Features Condition Results

1.4.1 Pathway Condition

The path are a mixture of hard infrastructure and soft infrastructure trails – as well as managed walkways and desire lines. The paths are all relatively consistent in width for each individual trail. Throughout the woodland and around the house the trail is hard/soft surfaced. Within the dune systems along the high traffic areas there are buried membranes to prevent substrate compaction. All paths are in high condition – but there are signs of trampling which are seen to be from horse riding. Along the inner bay edge (west of the site) there is signs of trampling and erosion from visitor movements along the ridge where the high density of movements is causing dune destabilisation.

Figure 1.3 Pathways identified at Derrynane Beach

1.4.2 Features Condition

The site contains not only Derrynane Beach itself, but there are also numerous signs which relate to the history, heritage, ecology and wildlife of the area. Derrynane Beach also contains trail maps which show the designated trails throughout the area.

Figure 1.4 Features recorded at Derrynane Beach

Figure 1.5 Features at Derrynane Beach

1.4.3 Hazards

No hazards of significance were recorded on site.

1.5 Visitor Characterisation Survey

The visitor monitoring surveys resulted in a total of 325 visitors (which represent 107 group observations). The site is most popular amongst the Family group with the dominant mode of transport being car. The average dwell time for the site was 40 minutes; with the following activities undertaken during the survey (listed in order of occurrence rate):

Activity Type
Cycling
Exploring off trail
Horse-riding
Dog walking (on lead)
Hurling
Surfing
Swimming

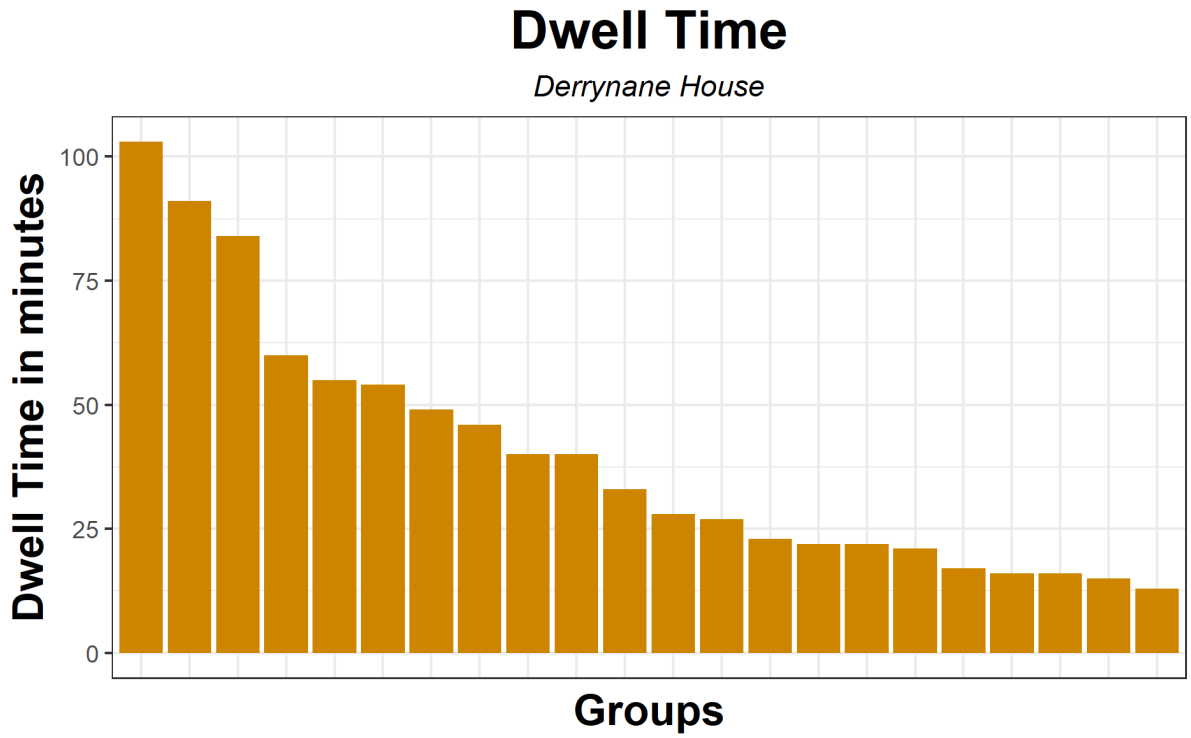


Figure 1.6 Duration of Time Spent at Derrynane Beach

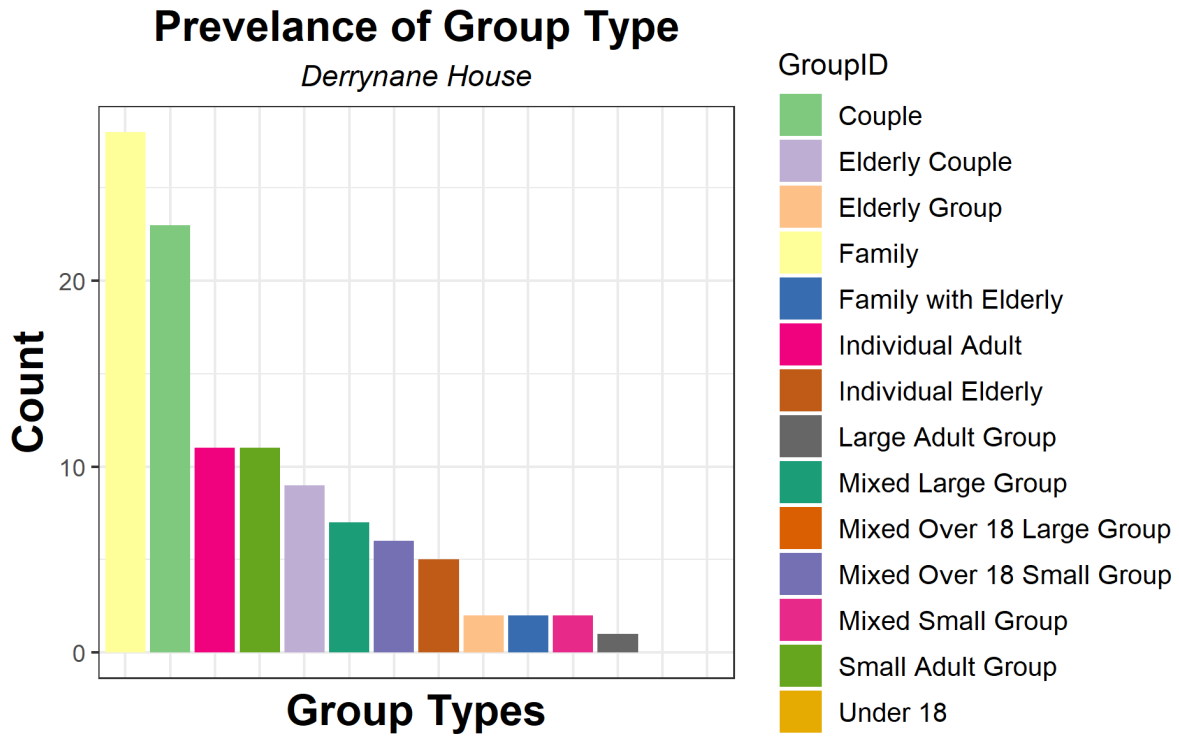


Figure 1.7 Groups of visitors that visited Derrynane Beach

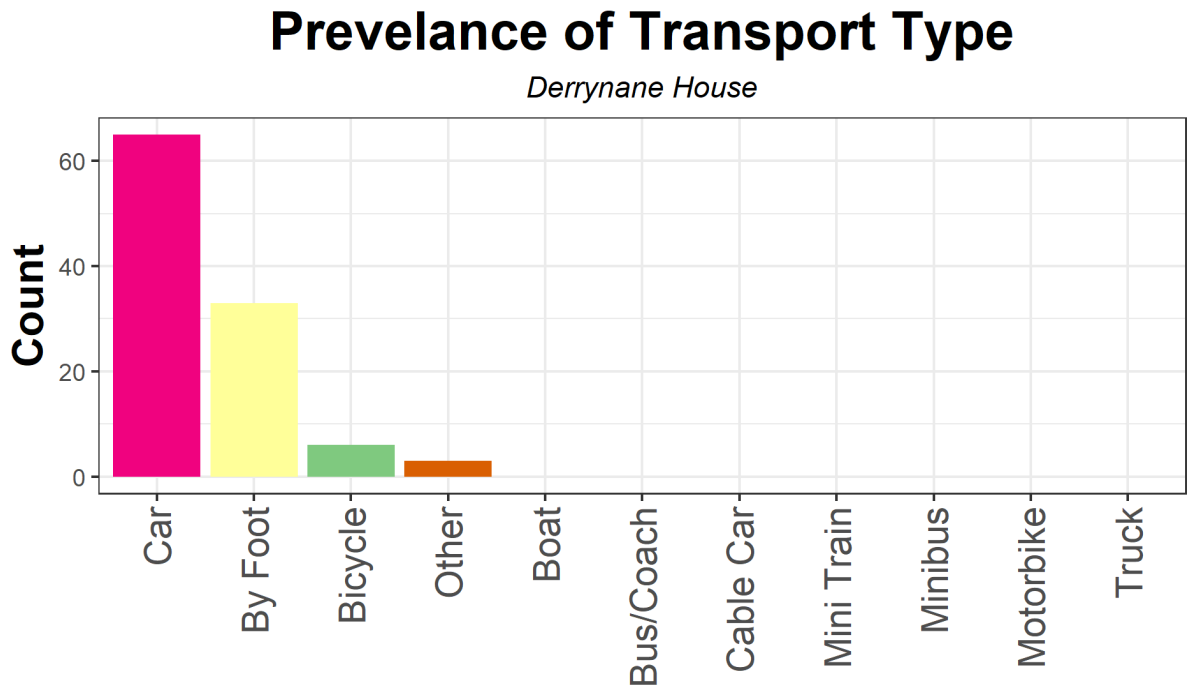


Figure 1.8 Mode of transport used to visit Derrynane Beach

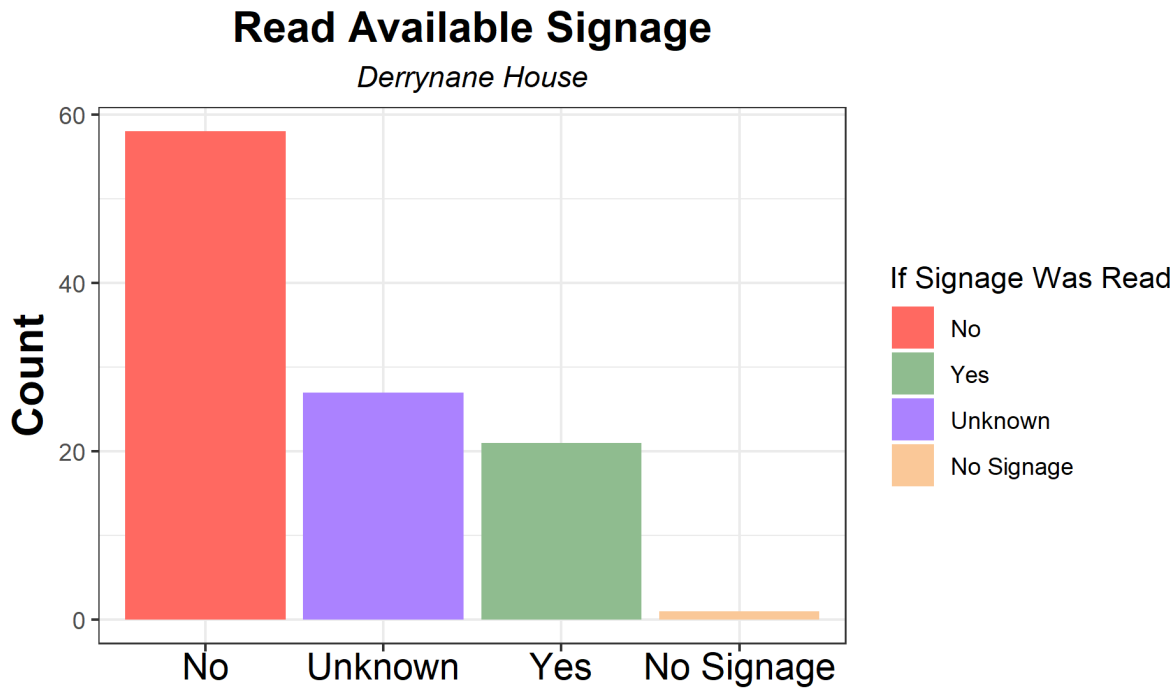


Figure 1.9 Use of Interpretive Material at Derrynane Beach

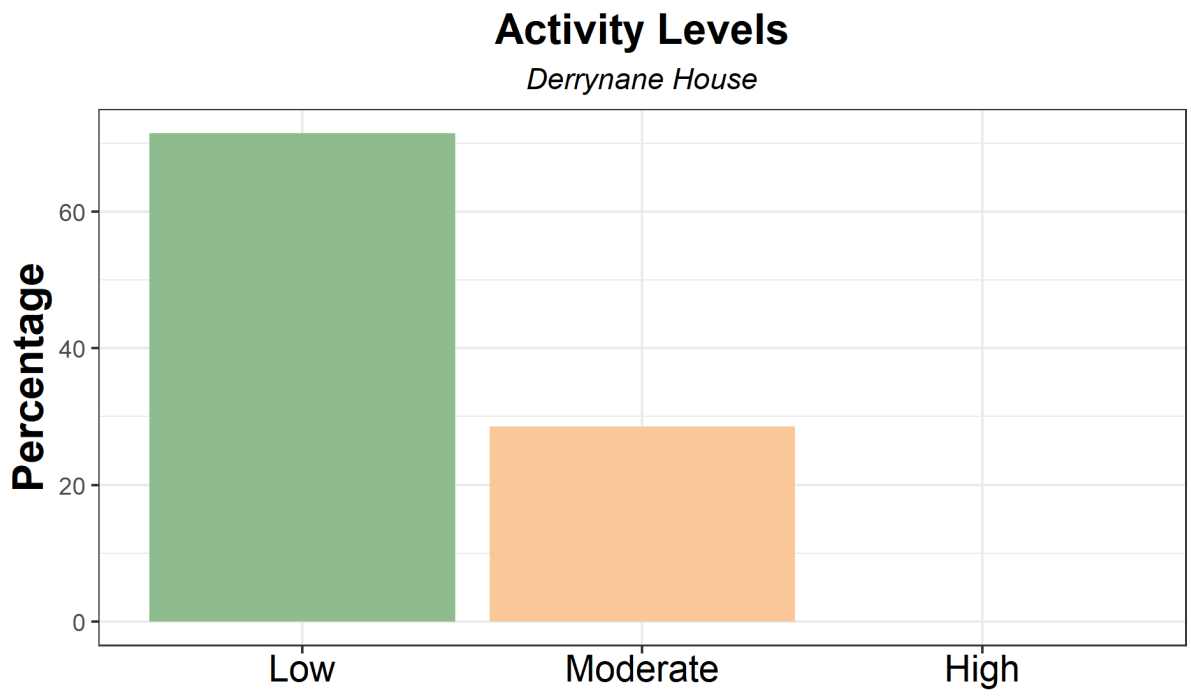


Figure 1.10 Categories of Activity Levels Observed at Derrynane Beach

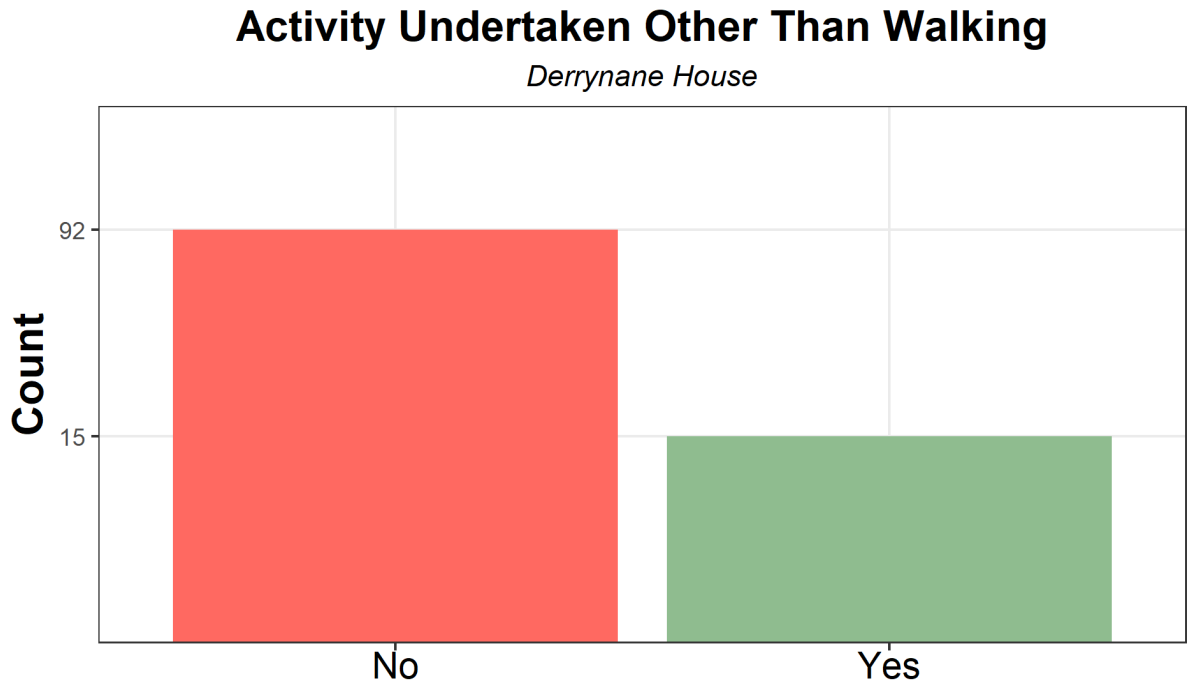


Figure 1.11 Activities undertaken other than walking

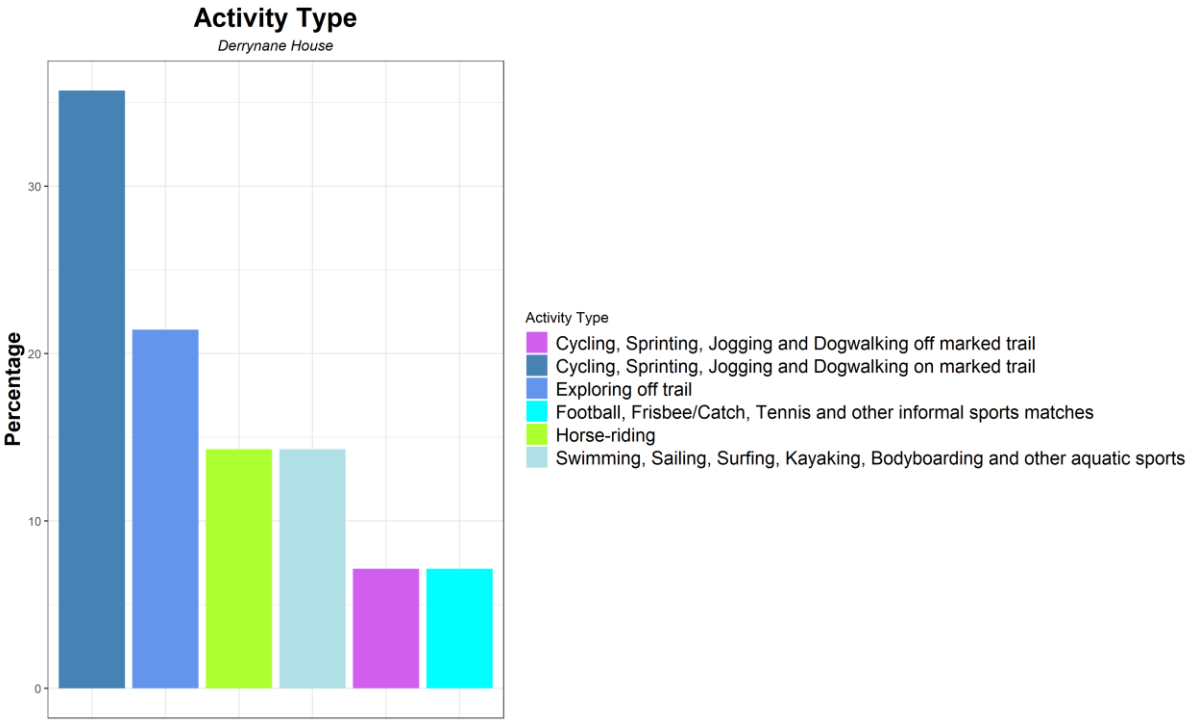


Figure 1.12 Range of Visitor Activities Observed at Derrynane Beach

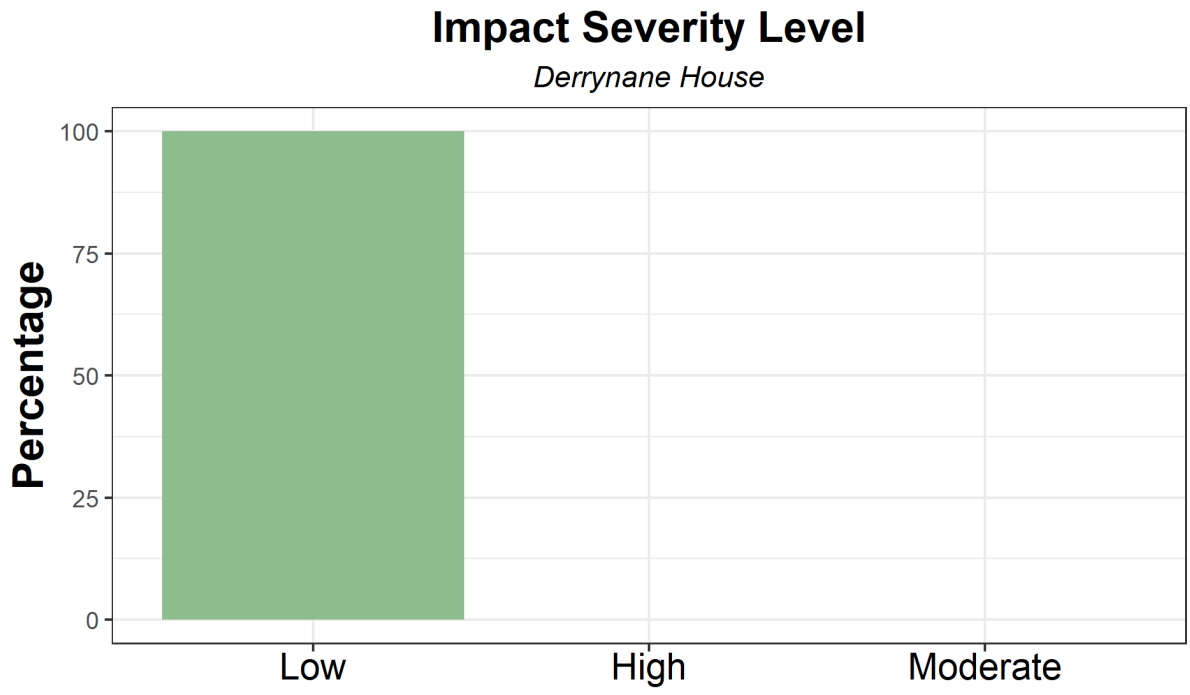


Figure 1.13 Categories of Environmental Impact Levels Observed at Derrynane Beach as a result of Visitor Activities

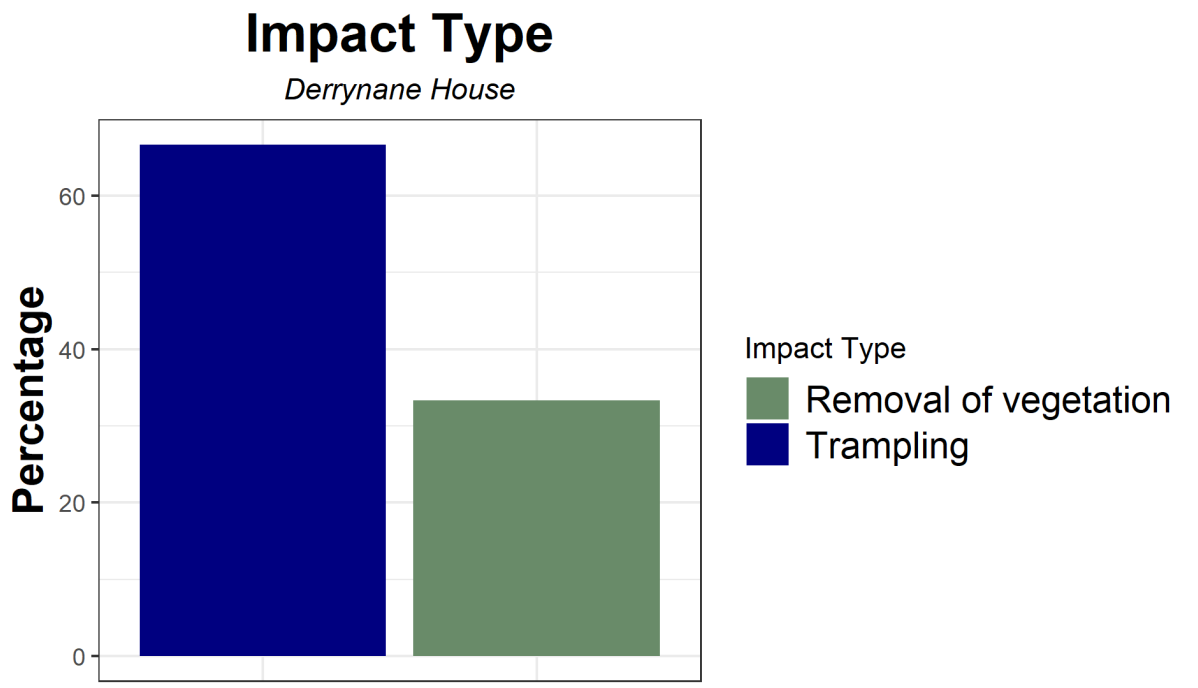


Figure 1.14 Range of Environmental Impacts Observed at Derrynane Beach

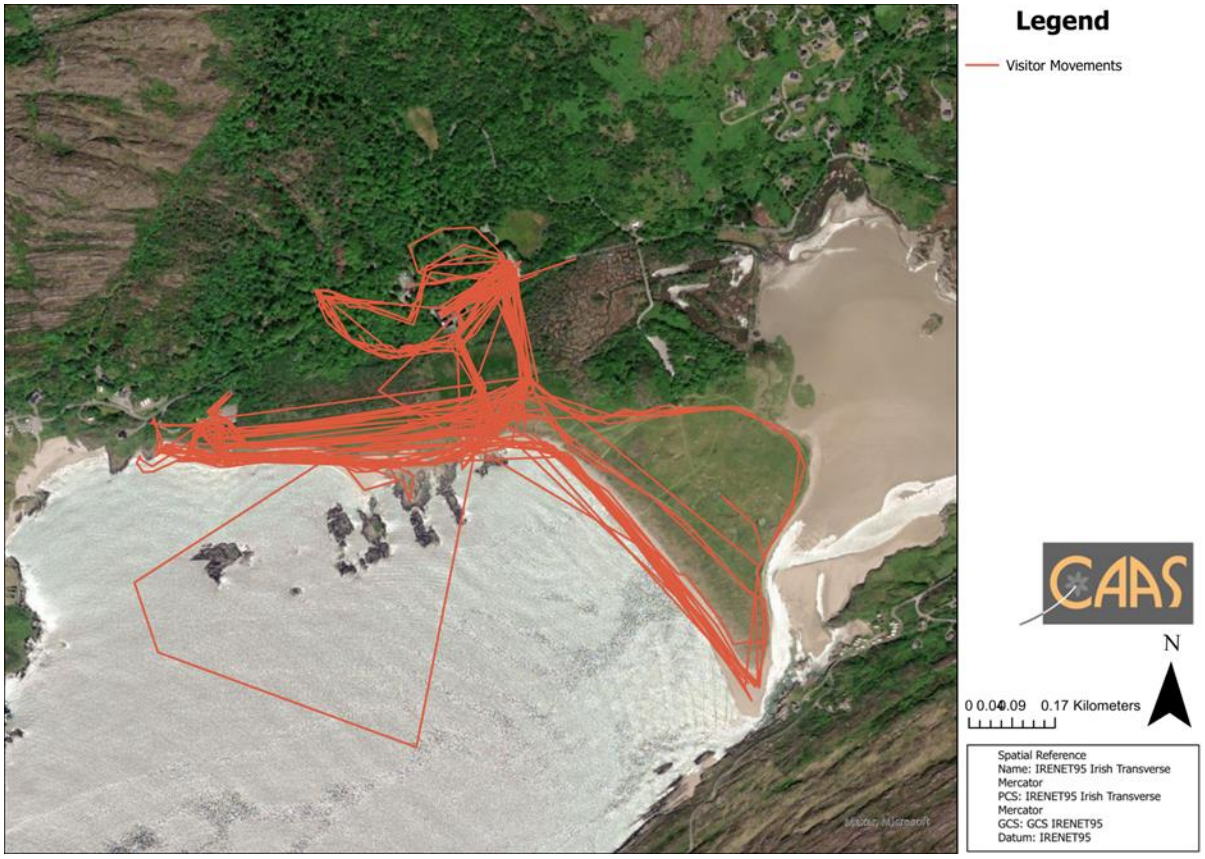


Figure 1.15 Visitor movement patterns at Derrynane Beach

Of the 107 groups recorded on site 14% of them undertook activities other than walking. These activities (identified above) resulted in 3 impacts being observed on site during the survey. Thus, 21% of activities on site resulted in impacts on the environment. The impact severity levels varied with 100% of the impacts being low, 0% of impacts being moderate, and 0% of impacts being high severity. The impacts identified for the site were:

Impact Type	Count
Removal of vegetation	1
Trampling	2

1.6 Ecological Monitoring Results

1.6.1 Ecological Constraints

Species within Derrynane are sensitive to pollution, disturbance effects, invasive species and habitat availability and the habitats are sensitive to hydrological changes, pollution, land use management changes and drainage.

Table 1.1 Designated sites within 2km of Derrynane Beach and relevant ecological receptors

Site Code	Site Name	Distance (km)	Site Type	Qualifying Feature
[001346]	Darrynane Bay Islands And Marsh, Lamb's Head pNHA	0.00	pNHA	
[004154]	Iveragh Peninsula SPA	0.11	SPA	Kittiwake *(Rissa tridactyla)* [A188], Peregrine falcon *(Falco peregrinus)* [A103], Guillemot *(Uria aalge)* [A199], Chough *(Pyrrhocorax pyrrhocorax)* [A346], Fulmar *(Fulmarus glacialis)* [A009]
[000365]	Killarney National Park, Macgillycuddy's Reeks And Caragh River Catchment pNHA	0.91	pNHA	
[000365]	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC	0.91	SAC	Alpine and Boreal heaths [4060], Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410], Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0], Otter *(Lutra lutra)* [1355], Northern Atlantic wet heaths with Erica tetralix [4010], Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260], Calaminarian grasslands of the Violetalia calaminariae [6130], Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or Isoeto-Nanojuncetea [3130], Oligotrophic waters containing very few minerals of sandy plains *(Littorelletalia uniflorae)* [3110], European dry heaths [4030], Taxus baccata woods of the British Isles [91J0], River lamprey *(Lampetra fluviatilis)* [1099], Kerry Slug *(Geomalacus maculosus)* [1024], Lesser horseshoe bat *(Rhinolophus hipposideros)* [1303], Marsh Fritillary *(Euphydryas aurinia)* [1065], Atlantic salmon *(Salmo salar)* [1106], Slender naiad *(Najas flexilis)* [1833], Brook Lamprey *(Lampetra planeri)* [1096], Sea Lamprey *(Petromyzon marinus)* [1095], Freshwater Pearl Mussel *(Margaritifera margaritifera)* [1029], Slender Naiad *(Najas flexilis)* [1833], Killarney Shad *(Alosa fallax killarnensis)* [5046], Killarney fern *(Trichomanes speciosum)* [1421], Alluvial forests with Alnus glutinosa and Fraxinus excelsior *(Alno-Padion, Alnion incanae, Salicion albae)* [91E0], Depressions on peat substrates of the Rhynchosporion [7150], Blanket bogs * if active bog [7130], *Juniperus communis* formations on heaths or calcareous grasslands [5130]

1.6.2 Habitat Descriptions

Derrynane Beach has a complex of habitats ranging from ornamental gardens and mixed broadleaved woodlands to complex dune systems including machaire habitats and fixed dunes. The machaire is particularly diverse with an average species richness of 16 species per square meter. There are ponds on site which host natterjack toads as well as freshwater marsh habitats. To the west of the site there are also Atlantic salt meadow and mud flat habitats.

The movement patterns of visitors are well managed for the most part. However, along the western edge of the site there are signs of trampling causing dune destabilisation and erosion along the ridge.

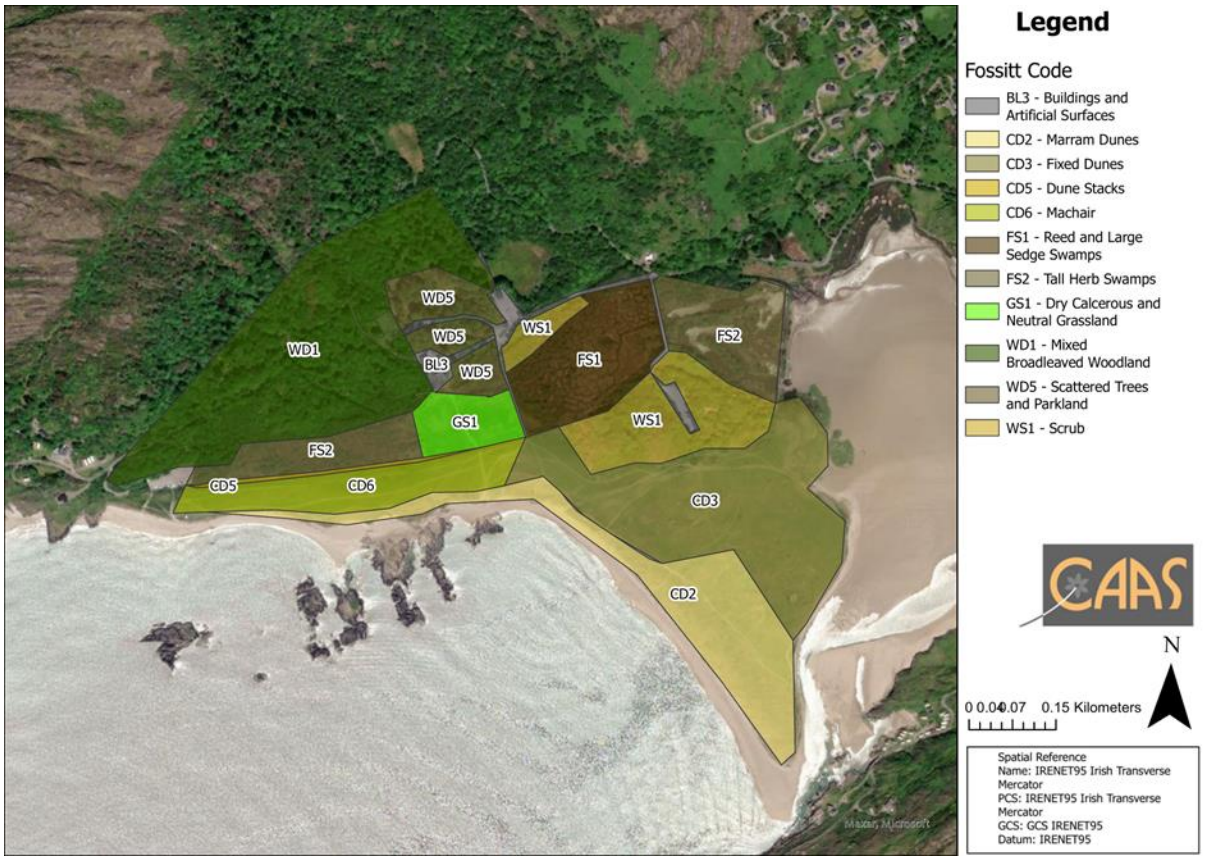


Figure 1.16 Habitats present at Derrynane Beach

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 "1" which means the majority of the habitats have no evidence of any negative impact on the habitats or other ecological features. There were 14 recorded incidents of damage to habitats occurring off the marked paths on site. The causes of the damage were identified to be rabbit overpopulation causing dune destabilisation and local outdoor fitness classes.

1.6.4 Breeding Bird Survey

The birds recorded at Derrynane Beach encompass a good mix between waders and passerines due to both its coastal and woodland habitats. The most common bird recorded was the shag, with also a number of birds such as wrens, hooded crows and meadow pipits being recorded. A relatively large number of choughs were also recorded.

Table 1.2 Results of the breeding bird survey conducted at Derrynane Beach

Common Name	Scientific Name	List Status	Seen	Heard	Both	Number Recorded
Arctic Tern	*Sterna paradisaea*	Amber		heard		2
Blackcap	*Sylvia atricapilla*	Green		heard		4

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

Common Name	Scientific Name	List Status	Seen	Heard	Both	Number Recorded
Black Guillemot	*Cepphus grylle*	Amber		heard		3
Black-headed Gull	*Larus ridibundus*	Amber		heard		3
Blue Tit	*Cyanistes caeruleus*	Green		heard		1
Bullfinch	*Pyrrhula pyrrhula*	Green		heard		1
Chaffinch	*Fringilla coelebs*	Green	seen			4
Chiffchaff	*Phylloscopus collybita*	Green		heard		1
Chough	*Pyrrhocorax pyrrhocorax*	Amber		heard		8
Common Gull	*Larus canus*	Amber		heard		5
Cormorant	*Phalacrocorax carbo*	Amber		heard		2
Goldcrest	*Regulus regulus*	Amber		heard		1
Great Black-backed Gull	*Larus marinus*	Green		heard		2
Grey Heron	*Ardea cinerea*	Green		heard		2
Herring Gull	*Larus argentatus*	Amber		heard		4
Hooded Crow	*Corvus cornix*	Green		heard		13
Lesser Black-backed Gull	*Larus fuscus*	Amber		heard		1
Linnet	*Linaria cannabina*	Amber		heard		1
Mallard	*Anas platyrhynchos*	Amber		heard		1
Meadow Pipit	*Anthus pratensis*	Red		heard		10
Mistle Thrush	*Turdus viscivorus*	Green		heard		2
Oystercatcher	*Haematopus ostralegus*	Red		heard		2
Robin	*Erithacus rubecula*	Green		heard		1
Sand Martin	*Riparia riparia*	Amber		heard		10
Sandwich Tern	*Thalasseus sandvicensis*	Amber		heard		3
Sedge Warbler	*Acrocephalus schoenobaenus*	Green		heard		1
Shag	*Phalacrocorax aristotelis*	Amber		heard		21
Skylark	*Alauda arvensis*	Amber		heard		4
Song Thrush	*Turdus philomelos*	Green		heard		1
Stonechat	*Saxicola torquatus*	Green		heard		1
Wheatear	*Oenanthe oenanthe*	Amber		heard		1
Willow Warbler	*Phyllocopus trochilus*	Amber		heard		1
Woodpigeon	*Columba palumbus*	Green		heard		4
Wren	*Troglodytes troglodytes*	Green		heard		6

1.6.5 Mammals on Site

Mammals recorded on site included Irish stoat, wood mouse, hedgehog and bank vole. Bank vole is an invasive species. There is an extensive and problematic population of rabbits present on site causing dune destabilizing. Otter signs were recorded but none were seen. Derrynane Beach, however the NBDC data shows a mixture of both marine and terrestrial mammals due to its location on the coast. Seals and dolphins were the most common marine mammals spotted while badgers, otters, rabbits, hares and hedgehogs were found to be abundant in the NBDC data.

Table 1.3 List of mammals recorded at Derrynane Beach

Common name	Scientific name
European Otter	*Lutra lutra*
European Rabbit	*Oryctolagus cuniculus*
Bank Vole	*Myodes glareolus*
Irish Stoat	*Mustela erminea subsp. hibernica*
West European Hedgehog	*Erinaceus europaeus*
Wood Mouse	*Apodemus sylvaticus*

Table 1.4 List of mammals that have been recorded at NBDC Hectads V55 & V56

Taxonomic group	Common name	Scientific name	Record count
Marine mammal	Atlantic White-sided Dolphin	*Lagenorhynchus acutus*	1

Taxonomic group	Common name	Scientific name	Record count
Marine mammal	Bottle-nosed Dolphin	*Tursiops truncatus*	4
Marine mammal	Common Dolphin	*Delphinus delphis*	19
Marine mammal	Common Porpoise	*Phocoena phocoena*	11
Marine mammal	Common Seal	*Phoca vitulina*	23
Marine mammal	Fin Whale	*Balaenoptera physalus*	1
Marine mammal	Grey Seal	*Halichoerus grypus*	3
Marine mammal	Humpback Whale	*Megaptera novaeangliae*	1
Marine mammal	Long-finned Pilot Whale	*Globicephala melas*	2
Marine mammal	Minke Whale	*Balaenoptera acutorostrata*	6
Marine mammal	Phocidae	*Phocidae*	2
Marine mammal	Pinnipedia	*Pinnipedia*	1
Marine mammal	Risso's Dolphin	*Grampus griseus*	1
Marine mammal	Sei Whale	*Balaenoptera borealis*	1
Marine mammal	Striped Dolphin	*Stenella coeruleoalba*	2
Terrestrial mammal	Brown Long-eared Bat	*Plecotus auritus*	1
Terrestrial mammal	Brown Rat	*Rattus norvegicus*	5
Terrestrial mammal	Eurasian Badger	*Meles meles*	47
Terrestrial mammal	Eurasian Pygmy Shrew	*Sorex minutus*	5
Terrestrial mammal	European Otter	*Lutra lutra*	13
Terrestrial mammal	European Rabbit	*Oryctolagus cuniculus*	21
Terrestrial mammal	Feral Goat	*Capra hircus*	1
Terrestrial mammal	Irish Hare	*Lepus timidus subsp. hibernicus*	67
Terrestrial mammal	Irish Stoat	*Mustela erminea subsp. hibernica*	4
Terrestrial mammal	Lesser Horseshoe Bat	*Rhinolophus hipposideros*	4
Terrestrial mammal	Lesser Noctule	*Nyctalus leisleri*	1
Terrestrial mammal	Natterer's Bat	*Myotis nattereri*	2
Terrestrial mammal	Pine Marten	*Martes martes*	4
terrestrial mammal	Pipistrelle	*Pipistrellus pipistrellus*	2
Terrestrial mammal	Red Deer	*Cervus elaphus*	3
Terrestrial mammal	Red Fox	*Vulpes vulpes*	5
Terrestrial mammal	Sika Deer	*Cervus nippon*	5
Terrestrial mammal	Soprano Pipistrelle	*Pipistrellus pygmaeus*	2
Terrestrial mammal	West European Hedgehog	*Erinaceus europaeus*	24
Terrestrial mammal	Wood Mouse	*Apodemus sylvaticus*	2

1.6.6 Wintering Bird Survey

Species observations on site in winter included Great Northern Diver, Common Teal, Common Sandpiper and Eurasian Curlew. The mudflats to the west of the site were identified to be a site of high importance for winter waders for foraging.

Table 1.5 Results of the wintering bird survey conducted at Derrynane Beach

Common name	Scientific name	Record count
Great Northern Diver	*Gavia immer*	1
Common Teal	*Anas crecca*	5
Common Sandpiper	*Actitis hypoleucos*	9
Eurasian Curlew	*Numenius arquata*	7

Table 1.6 List of wintering birds that have been recorded at NBDC Hectads V55 & V56

Taxonomic group	Common name	Scientific name	Record count
Bird	Alcidae	*Alcidae*	1
Bird	Arctic Tern	*Sterna paradisaea*	5
Bird	Bar-tailed Godwit	*Limosa lapponica*	2
Bird	Black-crowned Night Heron	*Nycticorax nycticorax*	1
Bird	Black-headed Gull	*Larus ridibundus*	18
Bird	Black-legged Kittiwake	*Rissa tridactyla*	5
Bird	Black-tailed Godwit	*Limosa limosa*	1

Taxonomic group	Common name	Scientific name	Record count
Bird	Black Guillemot	*Cepphus grylle*	10
Bird	Bonaparte's Gull	*Larus philadelphia*	2
Bird	Cattle Egret	*Bubulcus ibis*	4
Bird	Common Coot	*Fulica atra*	4
Bird	Common Crane	*Grus grus*	1
Bird	Common Cuckoo	*Cuculus canorus*	17
Bird	Common Greenshank	*Tringa nebularia*	6
Bird	Common Guillemot	*Uria aalge*	22
Bird	Common Kingfisher	*Alcedo atthis*	7
Bird	Common Moorhen	*Gallinula chloropus*	5
Bird	Common Pochard	*Aythya ferina*	3
Bird	Common Redshank	*Tringa totanus*	9
Bird	Common Sandpiper	*Actitis hypoleucos*	4
Bird	Common Scoter	*Melanitta nigra*	2
Bird	Common Shelduck	*Tadorna tadorna*	1
Bird	Common Snipe	*Gallinago gallinago*	16
Bird	Common Tern	*Sterna hirundo*	5
Bird	Dunlin	*Calidris alpina*	3
Bird	Eurasian Curlew	*Numenius arquata*	35
Bird	Eurasian Oystercatcher	*Haematopus ostralegus*	22
Bird	Eurasian Spoonbill	*Platalea leucorodia*	1
Bird	Eurasian Teal	*Anas crecca*	1
Bird	Eurasian Wigeon	*Anas penelope*	7
Bird	Eurasian Woodcock	*Scolopax rusticola*	9
Bird	European Shag	*Phalacrocorax aristotelis*	17
Bird	Gadwall	*Anas strepera*	1
Bird	Great Bittern	*Botaurus stellaris*	2
Bird	Great Black-backed Gull	*Larus marinus*	21
Bird	Great Cormorant	*Phalacrocorax carbo*	21
Bird	Great Crested Grebe	*Podiceps cristatus*	1
Bird	Great Northern Diver	*Gavia immer*	14
Bird	Greater White-fronted Goose	*Anser albifrons*	1
Bird	Green Sandpiper	*Tringa ochropus*	1
Bird	Grey Heron	*Ardea cinerea*	32
Bird	Grey Plover	*Pluvialis squatarola*	1
Bird	Greylag Goose	*Anser anser*	1
Bird	Herring Gull	*Larus argentatus*	26
Bird	Kumlien's Iceland Gull	*Larus glaucoides subsp. kumlieni*	1
Bird	Lesser Black-backed Gull	*Larus fuscus*	15
Bird	Little Egret	*Egretta garzetta*	9
Bird	Little Grebe	*Tachybaptus ruficollis*	5
Bird	Mallard	*Anas platyrhynchos*	25
Bird	Manx Shearwater	*Puffinus puffinus*	12
Bird	Mew Gull	*Larus canus*	16
Bird	Mute Swan	*Cygnus olor*	11
Bird	Northern Fulmar	*Fulmarus glacialis*	3
Bird	Northern Gannet	*Morus bassanus*	29
Bird	Northern Lapwing	*Vanellus vanellus*	6
Bird	Purple Sandpiper	*Calidris maritima*	1
Bird	Razorbill	*Alca torda*	5
Bird	Red-breasted Merganser	*Mergus serrator*	9
Bird	Red-throated Diver	*Gavia stellata*	5
Bird	Red Knot	*Calidris canutus*	1
Bird	Ringed Plover	*Charadrius hiaticula*	11
Bird	Ruddy Turnstone	*Arenaria interpres*	5
Bird	Sand Martin	*Riparia riparia*	6
Bird	Sanderling	*Calidris alba*	3
Bird	Sandwich Tern	*Sterna sandvicensis*	1

Taxonomic group	Common name	Scientific name	Record count
Bird	Squacco Heron	*Ardeola ralloides*	1
Bird	Surf Scoter	*Melanitta perspicillata*	15
Bird	Tufted Duck	*Aythya fuligula*	1
Bird	Water Rail	*Rallus aquaticus*	5
Bird	Whimbrel	*Numenius phaeopus*	2
Bird	White-throated Dipper	*Cinclus cinclus*	5
Bird	Whooper Swan	*Cygnus cygnus*	2

1.7 Recommendations

The site is well managed with strong management practices focusing specifically on biodiversity. The site has engaging nature signage and regularly hosts community events which focus on nature exploration and education.

- Measures are needed to control the rabbit population which is causing dune destabilisation.
- A dynamic trail management system could be explored to help protect the leading edge of the dune from erosion.
- Dogs swimming in the natterjack toad pools was recorded as an issue for the site. Designated areas for dogs off the lead could help to control the impact while avoiding community conflict.

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.