



National Tourism and Environmental Monitoring Programme Inch Beach 2024



**Fáilte
Ireland**

Turasóireacht Náisiúnta
An tÚdara Eorbartha
National Tourism
Development Authority

National Tourism and Environmental Monitoring Programme

Report for Inch Beach 2024

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INCH BEACH – INTERESTING FINDS

Interesting Finds

Natterjack Toad (*Epidalea calamita*) is the only native toad species in Ireland. Their range is limited to Co. Kerry and the Raven in Co. Wexford. In July 2024, 500 natterjack toadlets were released into the dunes at Inch beach as part of a volunteer breeding programme in conjunction with the National Parks and Wildlife Service (NPWS) (RTÉ, 2024).



Features of the Site

- Inch Beach is a Blue Flag Beach and is within the Kerry Seas National Park (Páirc Náisiúnta na Mara, Ciarraí).
- Inch Beach has a small carpark and informational signage including the signature Wild Atlantic Way Discovery Point for the site.
- A café-restaurant is located beside the beach, providing picnic tables for café patrons with a view to the beach.
- Various surf schools are available on the beach.

Habitats

Selected habitats recorded on site:

- Fixed dunes (CD3)
- Muddy sand shores (LS3)
- Lower salt marsh (CM1)
- Sand shores (LS2)
- Dune slacks (CD5)
- Marram dunes (CD2)
- Embryonic dunes (CD1)
- Estuaries (MW4)
- Wet grassland (GS4)
- Exposed rocky shores (LR1)

Key Recommendations

- Dune protection measures should be considered at Inch Beach to prevent further damage to this habitat as a result of visitors.
- A review of the parking arrangements at Inch Beach should be undertaken and should consider the current practice of unrestricted and open parking (and driving) on the beach.
- The damaged boardwalk should be removed and replaced with a low-maintenance solution to segregate visitors and moving vehicular traffic between the carpark and the beach.
- Any access or tourism related initiatives should complement the conservation measures currently being undertaken for Natterjack Toad.
- Considering recent conservation initiatives for Natterjack Toad, restrictions on off-lead dogs should be implemented, accompanied by teleological signage (signage with instruction and justification for the instruction).

1.0 INTRODUCTION

1.1 Background

Roughan & O'Donovan (ROD) was appointed by Fáilte Ireland to conduct Visitor and Environmental Surveys as part of the National Environmental Surveying & Monitoring Programme. Fáilte Ireland regularly engages with environmental research that is used to make informed management decisions and produce robust guidelines to facilitate the protection of the environment. From its inception in 2014, the Wild Atlantic Way (WAW) Operational Monitoring Programme has been conducting research into the impacts of recreation on the receiving environment.

Building on the success of the WAW environmental monitoring programme which ran from 2015-2019, Fáilte Ireland expanded the programme to a national level. From 2021 to 2022 the programme monitored 19 individual sites located in all of Fáilte Ireland's regional areas: The Wild Atlantic Way, Ireland's Hidden Heartlands, Ireland's Ancient East, and Dublin. This 2024 National Monitoring report builds on environmental surveying and monitoring undertaken on behalf of Fáilte Ireland as far back as 2015. To date (excluding 2024 data), the surveys have monitored a total of 57 sites and recorded the activities and effects of over 30,000 visitors at a range of popular sites including inland, urban, coastal and WAW discovery points.

The environmental surveys and monitoring in 2023 followed the methodologies used in previous years. Following the completion of the 2023 surveys, a review of the methodology was undertaken. In developing the 2024 survey methodology, ROD considered the methodology for gathering the data, the presentation of the data, and the usefulness of the data gathered. The review also considered the time required to gather the data.

Ten sites were surveyed in 2024. Figure 1.1 below shows the locations of these sites. This report is for Inch Beach, Co. Kerry.



Figure 1.1 Environmental Monitoring Programme 2024 locations. Basemap provided by Google.

1.2 Aim of the Report

The purpose of the monitoring programme is as follows:

- To gain insight from an environmental perspective at amenity and recreation sites across Ireland;
- To obtain data on path and trail conditions etc. for each site;
- To obtain data relating to habitats, flora, and fauna for each site;
- To identify observable trends or variations among the sites;
- To make recommendations where appropriate for site management for the benefit of the site, the visitor, and the natural environment.

1.3 Site Description of Inch Beach

Inch Beach is located in Co. Kerry, approximately 1.2km southwest of Inch village, a linear village along the R561. It is accessible via the R561. The area being surveyed for this report ("the site") consists of Inch Beach and the lands to the east. The site boundary is presented in Figure 1.2 below. Parking, public toilets, informative signage, a café and bins are available on site. Inch Beach is a Blue Flag Beach, and lies within the Kerry Seas National Park (Páirc Náisiúnta na Mara, Ciarraí), Ireland's first marine National Park. The Kerry County Development Plan (CDP) notes that the sand dune habitats found in Inch among the most extensive in the southwest of Ireland, some of which are Annex I habitat. They also support a range of species including rare plants and many of special conservation interest. (KCC, 2022). Inch is also among the coastlines in Kerry most at risk of coastal erosion (KCC, 2022).

The site overlaps with Castlemaine Harbour SAC (Special Area of Conservation) and SPA (Special Protection Area) and Castlemaine Harbour pNHA (proposed Nationally Designated Site). Slieve Mish Mountains SAC is 1km northeast of the site.



Figure 1.2 Site boundary outlined in red. Basemap provided by ESRI.

1.4 Critical Infrastructure

Tables 1.1 to 1.3 below provide information on the infrastructure at Inch Beach. Uisce Éireann's website was used to access information on the Water Supply and Wastewater Treatment Capacity Registers for County Kerry (Uisce Éireann 2023a, b).

Table 1.1 Inch Beach Wastewater Infrastructure

Wastewater Treatment Plant (WWTP)	Uisce Éireann Indication of Capacity
<ul style="list-style-type: none"> Toilet facilities are available on this site in a shipping container located at the beach car park. The nearest wastewater treatment plant is Annascaul WWTP. 	<ul style="list-style-type: none"> There is currently no spare capacity available at Annascaul WWTP.

Table 1.2 Summary of Drinking Water Infrastructure at Inch Beach

Drinking Water	Water Resource Name (WRZ)	Uisce Éireann Indication of Capacity
The nearest serviced settlement to Inch Beach is Annascaul.	Annascaul/ Ballintermon	Potential capacity available (Level of service improvement required).

Table 1.3 Summary of Transport Infrastructure at Inch Beach

Nearest Settlement	Current Transport Infrastructure	Comment
Inch Beach	Inch Beach is accessed by the R561. There is a small carpark on the site, and visitors are permitted to park on the beach.	The site is served by the 276, R13 and R16 local link buses.

2.0 METHODOLOGY

The following surveys were undertaken:

- Habitat Surveys
- Pathway Condition Survey
- Survey of the features, signage and hazards

The survey at Inch Beach was undertaken on the 21st of May 2024. The weather conditions were clear and dry. The sub-sections below present the methodology used.

2.1 Habitat Condition Assessment Methodology

The habitats within the site were classified and mapped in accordance with *A Guide to Habitats in Ireland* (Fossitt, 2000) and *Best Practice Guidance for Habitat Surveying and Mapping* (Smith et al. 2011). Notes were taken on species composition and habitat condition. Fossitt habitats corresponding to Annex I habitats were noted using the *Interpretation Manual of European Union Habitats* (EC, 2013). A desktop study was also undertaken to identify designated sites and rare and protected species in the vicinity of each site. Incidental sightings of birds, mammals, reptiles, etc. were also recorded during the site surveys.

The condition of the habitat in each polygon or line will be noted, including any damage and the likely cause of the damage. The areas along pathways are outlined by the pathway condition assessment in Section 2.2 below. The following criteria were used to assess habitat condition:

- Extent of habitat degradation;
- Impact of habitat degradation (localised or widespread);
- Potential for the habitat to recover; and
- Whether or not intervention is required.

2.2 Pathway Condition Assessment Methodology

The main paths were defined during the site visit and a desk study which included a review of the Strava heat maps (www.strava.com/heatmap), and a review of the previous site monitoring reports, if available. Typically, the main paths are formalised waymarked trails or heavily trafficked paths that are not formalised. These paths usually link the site entry points and car parks to a destination or feature of interest. The paths were categorised into sections by type and composition. The different types of path are described in Table 2.1 below. Visitor Characterisation Surveys were undertaken by Fáilte Ireland and are presented in Appendix A. Each path section is described as 'satisfactory' or 'unsatisfactory' based on the condition of the path and whether or not it could accommodate the current levels of use. Indicators that a path was not suitable for the current levels of use included the presence of wet areas, erosion, trip hazards, damaged pavement, braiding, path widening and habitat loss along the path. Paths that generally facilitated unobstructed movement between locations were deemed as 'satisfactory'.



Table 2.1 Pathway Types

Pathway Type	Description
Paved Carpark	An area used for parking, wider than the road, that is paved, usually with tarmacadam.
Gravel Carpark	An area used for parking, wider than the road, that is gravel or crushed stone.
Paved Road	A road that is paved with tarmacadam or similar hard material.
Gravel Road	A road consisting of gravel or crushed stone, with no grass in the middle.
Gravel Track	A single vehicle pathway used by small numbers of vehicles. Tracks are normally paved with gravel and can have grass in the middle
Grassy Track	A single vehicle pathway used by small numbers of vehicles. These tracks are not paved and are used primarily by tractors, quads or small numbers of private vehicles.
Paved Path	A path is primarily for foot traffic. Paved paths are found in more developed areas, to cater for higher levels of traffic.
Gravel Path	A path is primarily for foot traffic and can be a single track or a track wide enough for several people to walk abreast. Gravel paths are found in more developed areas, to cater for higher levels of traffic.
Grassy Path	A path is primarily for foot traffic and can be a single track or a track wide enough for several people to walk abreast. Grassy paths are found in less developed areas, often beyond feature of interest, and are used less frequently.
Bare Ground Path	These paths occur where the vegetation had been eroded by foot traffic and is bare ground, or damages vegetation. These paths are often widespread on sites where formal waymarked trails are not provided.

2.3 Features, Signage and Hazards

Signage, features of interest, and hazards were recorded, photographed and mapped. Features include built heritage, sculptures as well as toilets and bins. Examples of hazards include unstable walls or broken fences.

3.0 RESULTS

3.1 Habitat Condition Assessment

Habitats were surveyed during the optimum habitat survey season i.e., April to September (Smith et al., 2011). Habitats were classified according to *A Guide to Habitats in Ireland* (Fossitt, 2000). Table 3.1 lists the habitats identified at Inch Beach along with their corresponding Annex I habitats. A habitat map is presented in Figure 3.1. It should be noted that having a corresponding Annex I habitat does not indicate the Annex I habitat is automatically present. Some areas in the study area are private land and residential dwellings and have been mapped accordingly.

Table 3.1 Fossitt (2000) habitats and links to Annex I habitats.

Fossitt 2000 Habitat	Corresponding Annex I habitats (Natura 2000 code) ¹
Buildings and artificial surfaces (BL3)	None
Embryonic dunes (CD1)	Embryonic shifting dunes (2110)
Marram dunes (CD2)	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") (2120)
Fixed dunes (CD3)	Fixed coastal dunes with herbaceous vegetation ("grey dunes") (2130)* Decalcified fixed dunes with <i>Empetrum nigrum</i> (2140)* Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) (2150)* Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>) (2170)
Dune slacks (CD5)	Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>) (2170) Humid dune slacks (2190)
Lower salt marsh (CM1)	Salicornia and other annuals colonising mud and sand (1310) Spartina swards (<i>Spartinion maritimae</i>) (1320) Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) (1330) Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocometea fruticosi</i>) (1420)
Improved agricultural grassland (GA1)	None
Amenity grassland (improved) (GA2)	None
Wet grassland (GS4)	<i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (6410)
Exposed rocky shores (LR1)	Reefs (1170)
Sand shores (LS2)	Mudflats and sandflats not covered by sea water at low tide (1140) Annual vegetation of drift lines (1210)
Muddy sand shores (LS3)	Mudflats and sandflats not covered by sea water at low tide (1140)
Estuaries (MW4)	Estuaries (1130)

¹ * Indicates priority habitat

Scrub (WS1)	<i>Juniperus communis</i> formations on heaths or calcareous grasslands (5130)
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Dune Habitats (CD1, CD2, CD3)

Fixed dunes (CD3) are the dominant habitat type at Inch Beach. This habitat is separated from the main beach by narrow stretches of Marram dunes (CD2) and Embryonic dunes (CD1). Visitor pressure has contributed to habitat deterioration. This is discussed further in Section 3.2 below. There are several areas where erosion has led to large areas of bare sand with no vegetation cover. Litter was also recorded in these areas. There was evidence of grazing by rabbits which exacerbated the issue of erosion on the site.



Plate 3.1 Dune habitats at Inch Beach.

Grasses such as Bents (*Agrostis* spp.) and Marram (*Ammophila arenaria*) were recorded across much of the dunes, with Sand Pansies (*Viola tricolor* ssp. *curtisii*), Speedwells (*Veronica* sp.) Ragwort (*Jacobaea vulgaris*), Yarrow (*Achillea millefolium*), Sea Spurge (*Euphorbia paralias*), Cat's-ear (*Hypochaeris radicata*), Scarlet Pimpernel (*Anagallis arvensis*), Rosebay Willowherb (*Chamaenerion angustifolium*), Common Milkwort (*Polygala vulgaris*), Cut-leaved Crane's-bill (*Geranium dissectum*), Common Bird's-foot Trefoil (*Lotus corniculatus*), Marsh Orchid (*Dactylorhiza Kerryensis*), New Zealand Flax (*Phormium* sp.), Polypody (*Polypodium* sp.), Sand Sedge (*Carex arenaria*), Alder (*Alnus glutinosa*), and mosses also present. White Clover (*Trifolium repens*), Ribwort Plantain (*Plantago lanceolata*), Daisy (*Bellis perennis*), Common Vetch (*Vicia sativa*), Broad-leaved Everlasting-lasting Pea (*Lathyrus latifolius*), and Portland Spurge (*Euphorbia portlandica*) are also present in the northern section of the dunes. This habitat is presented in Plate 3.1 above.

Muddy sand and sand shores (LS2 & LS3)

The beach on the site is comprised of sand shores, which transitions to muddy sand shores with distance from the land. Litter was noted in these habitats. Multiple cars were noted parking on the beach – this is visible from aerial mapping and photography.

Lower salt marsh (CM1)

Lower salt marsh is present in the northeast of the site, and in two small pockets in the southeast of the site. Sea Arrowgrass (*Triglochin maritima*) was the dominant species in this habitat, with Sea Plantain (*Plantago maritima*), Sea Milkwort (*Lysimachia maritima*), and Thrift (*Armeria maritima*) also present.

Dune slacks (CD5)

Dune slacks is present southwest of the large area of salt marsh at the site, and two small pockets of dune slacks are present in the southeast of the site. Creeping Willow (*Salix repens*) and mosses dominated this habitat. Ragwort, Sand Pansy, Cut-leaved Crane's-bill, Birds-foot Trefoil, Silverweed (*Argentina anserina*), Germander Speedwell (*Veronica chamaedrys*), Daisy, Lesser Spearwort (*Ranunculus flammula*), Common Dog Violet (*Viola riviniana*), Lady's Bedstraw (*Galium verum*), Field Wood-rush (*Luzula campestris*), Soft Rush (*Juncus effusus*), Willows (*Salix* spp.), and Sedges were also found in this habitat. This habitat is displayed in Plate 3.2 below.



Plate 3.2 Dune Slacks (CD5) habitat at Inch Beach.

Estuaries (MW4)

The Castlemaine Harbour estuary is located east of Inch Beach.

Wet Grassland (GS4)

This habitat is present in the north of the study area, south of the R561. It is comprised of private agricultural fields which extend beyond the study area.

Exposed rocky shores (LR1)

A narrow area of this habitat is located at the northern extent of the beach.

Scrub (WS1)

This habitat is found at the northernmost point of the site, north of the beach. It is also present in a small pocket north of Inch campsite and extends among some residential dwellings.

Improved agricultural and amenity grasslands (GA1 & GA2)

These habitats are present in several small pockets among the residential dwellings in the north of the site.

Buildings and artificial surfaces (BL3)

The artificial surfaces on the site comprise of the parking area in the north of the site, as well as roadway and buildings.

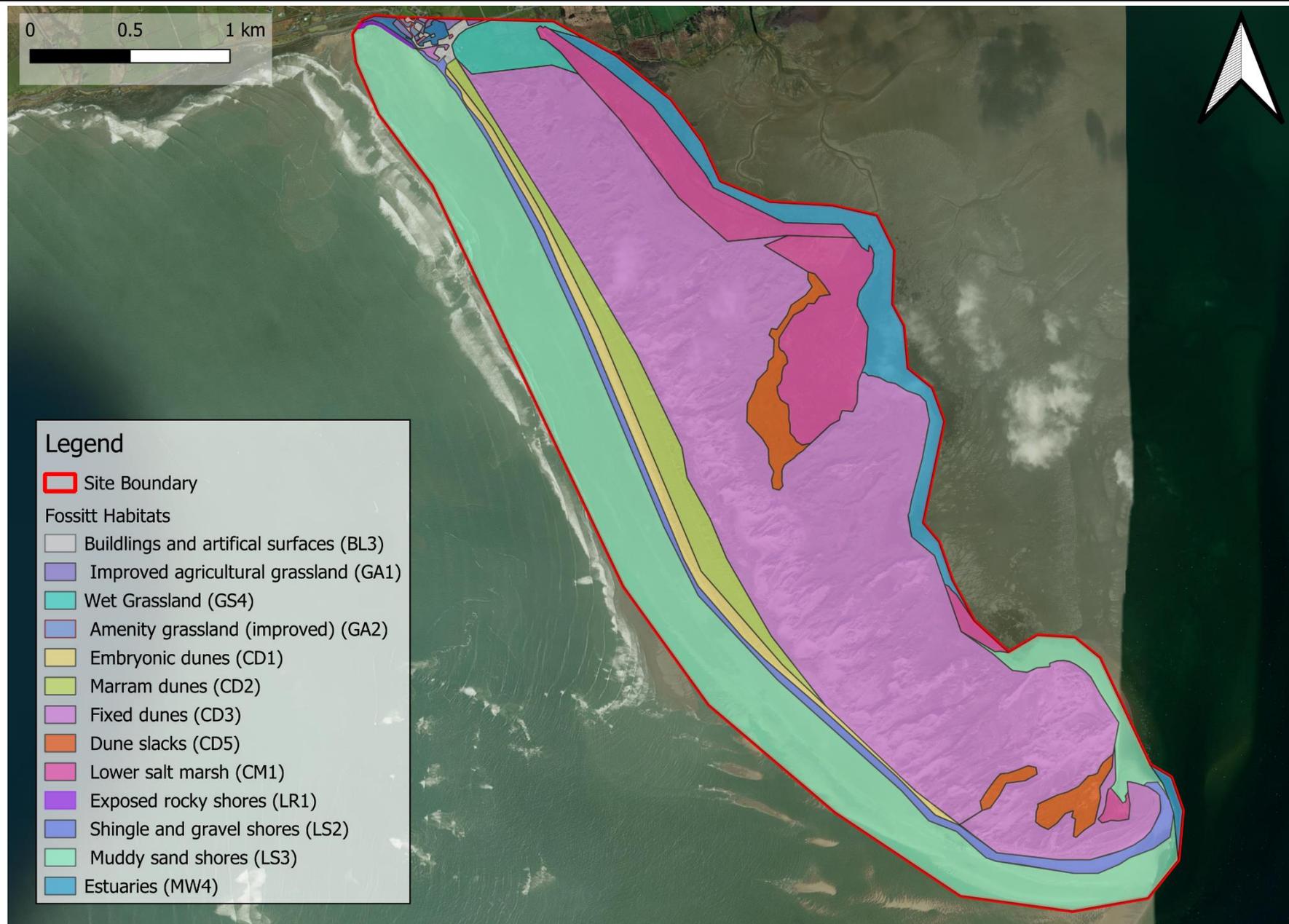


Figure 3.1 Habitat map of Inch Beach. Basemap provided by ESRI.

3.2 Pathway Condition Assessment

The paved carpark in the north of the site is small and in an unsatisfactory condition. Sand has blown into the carpark. This has resulted in inefficient parking, resulting in fewer space available for parking. This is displayed in the top left corner of Plate 3.4 below. Leading southeast from the carpark, a bare path runs through the dunes, parallel to the beach (See Figure 3.2). Numerous small paths have been created between the beach and the main path running parallel to the beach through the dunes. Due to how widespread nature of the paths, they have not been mapped.

The entirety of this main path is in an unsatisfactory condition. Erosion, widening and braiding occurs along its entire length. This is displayed in the top right corner of Plate 3.4 below, and an example of severe pathway braiding is displayed in the bottom left corner of Plate 3.4. The pathway is approximately 3.9 km in length, after which it gently rejoins the beach at the south end of the site. The only satisfactory pathway recorded on Inch Beach was a small bare pathway approximately 1.5 km south of the carpark. This satisfactory bare path ran perpendicular to the main bare path, between the main beach and the dunes to the east. This path was approximately 1.2 m wide and is considered satisfactory due to its uniformity, and a lack of evidence of the pathway encroaching on the surrounding habitat. This pathway is displayed in the bottom right corner of Plate 3.4 below. The pathway condition assessment map is provided in Figure 3.3.

Figure 3.2 presents a Strava heat map for the site. Strava aggregates data from users on its app who opt-in to share their activities and locations.



Figure 3.2 Heat map of visitor movements at Inch Beach (Strava, 2024).



Figure 3.3 Pathway types and conditions present on the site. Basemap provided by Google.



Plate 3.4 **Examples of the pathways recorded at Inch Beach.**

3.3 Features, Signage and Hazards

3.3.1 Features and Signage

The carpark has limited spaces available, which are difficult to see due to the amount of sand. This is discussed further in Section 3.3.2 below. Due to the limited carparking availability at the beach, visitors are permitted to park on the beach. Rubbish bins are available in the carpark and along the beach access road beside the café. No designated dog waste bins were recorded on the site. Toilet facilities in a shipping container were recorded in the beach carpark at the time of the survey. The café is located on the southside of the beach access road to the carpark. There are a number of picnic benches for café patrons separated from the beach by large rocks. Signage (Plate 3.5, 3.6) relating to beach safety, parking, history and local heritage, geology, biodiversity, and the beach is at the beach carpark and the café patio. Some signs have deteriorated and are difficult to read. Signage has been erected along the chestnut fencing in the carpark, indicating that dune restoration works were being undertaken. Some of these signs have fallen or become covered over by marram grass, rendering some of the signs illegible. Deteriorated and fallen signage is presented below in Plate 3.6 below.



Plate 3.5 Signage regarding littering (left) and history and local heritage (right).



Plate 3.6 Deteriorated signage on biodiversity (top left) and geology (top right). Fallen dune restoration signage (bottom).

3.3.2 Hazards

Sand has been blown onto a significant area of the carpark at Inch Beach covering the road markings. The sand is not deep enough to affect accessibility and the result is limited to cars parking further apart than they would if the spaces were marked. This will in turn lead to more pressure for parking outside the car park. Additionally, the steps to the café from the beach access road across from the carpark are also covered in sand, creating a potential risk for visitors to slip or fall. An incomplete or temporary boardwalk² was installed between the carpark and the beach, presumably for safer pedestrian access to the beach. However, this boardwalk is in poor condition and was closed-off to the public at the time of the survey. As a result, the area for safe pedestrian passage to the beach is reduced, causing visitors to have to walk closer to traffic. Barriers around the boardwalk are blocking access to information signage. Exposed cables connected to a utilities box close to the carpark was recorded. This is likely to service commercial activities on the beach and to allow them to operate without the need for generators. site. The exposed cables are a trip hazard, and their presence might also lead to vandalism and a risk of electrocution. The potential hazards are presented in Plate 3.7 below. The locations of each hazard are presented below in Figure 3.4.

² Since the site visit was undertaken for Inch Beach, Fáilte Ireland visitor monitoring was undertaken and identifies some of these hazards as being resolved, including the removal and replacement of the boardwalk (See Appendix 1).



Figure 3.4 Hazards encountered at Inch Beach (all located near the car park). Basemap provided by Google.

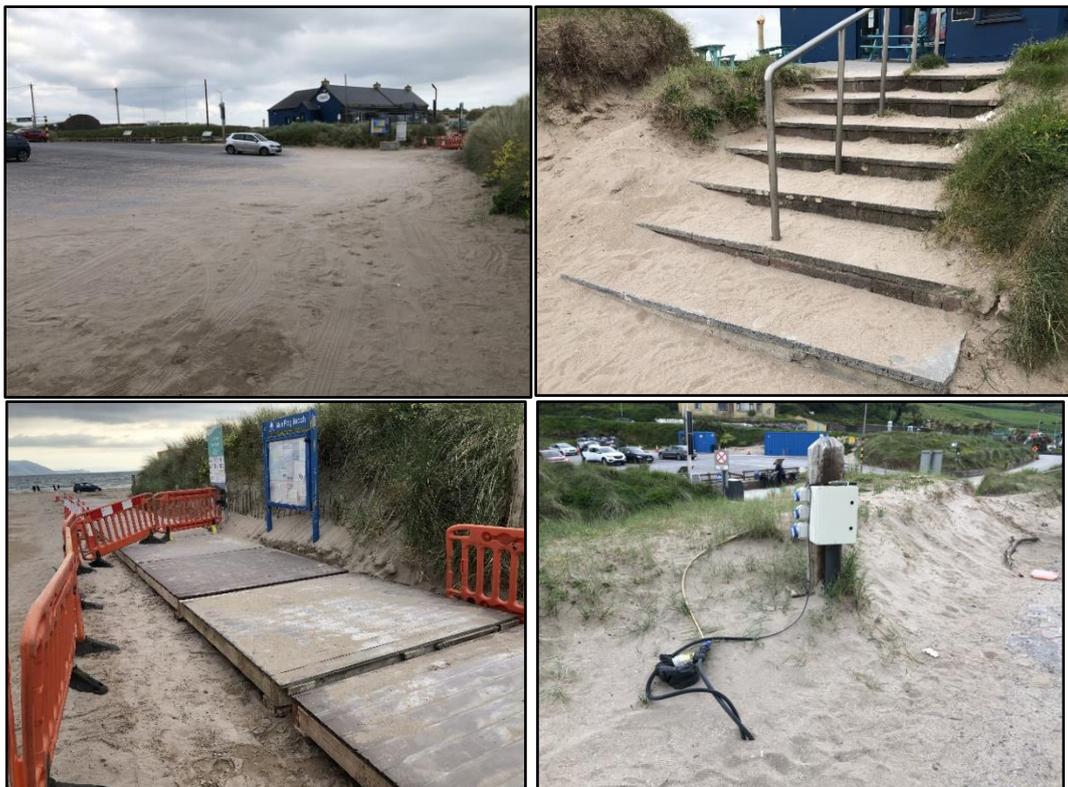


Plate 3.7 Sand-covered carpark (top left) and steps (top right). Broken boardwalk (bottom left) and exposed cables (bottom right).

3.4 Ecological Constraints

3.4.1 Protected Sites

As discussed in Section 2.1, a desk study was undertaken to identify designated sites and rare and protected species in the vicinity of the site. There are three European (SACs and SPAs) and one nationally designated sites (NHAs and pNHAs) within or adjacent to Inch Beach. Information on these sites was obtained from the NPWS website and their respective Natura 2000 Standard Data Forms. These sites are described in Table 3.2 below.

Table 3.2 Designated sites within 2 km of the Inch Beach site.

Site Name [Site Code]	Qualifying Interests	Distance (km) from Site	Pressures and Threats (those related to recreation are in bold)
European Sites			
Castlemaine Harbour SPA [004029]	<ul style="list-style-type: none"> • Red-throated Diver (<i>Gavia stellata</i>) [A001] • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] • Wigeon (<i>Anas penelope</i>) [A050] • Mallard (<i>Anas platyrhynchos</i>) [A053] • Pintail (<i>Anas acuta</i>) [A054] • Scaup (<i>Aythya marila</i>) [A062] • Common Scoter (<i>Melanitta nigra</i>) [A065] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] • Ringed Plover (<i>Charadrius hiaticula</i>) [A137] • Sanderling (<i>Calidris alba</i>) [A144] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Redshank (<i>Tringa totanus</i>) [A162] • Greenshank (<i>Tringa nebularia</i>) [A164] • Turnstone (<i>Arenaria interpres</i>) [A169] 	Within the site	<ul style="list-style-type: none"> • Marine and freshwater aquaculture • Invasive non-native species • Outdoor sports and leisure activities, recreational activities • Continuous urbanisation • Dispersed habitation • Fertilisation

	<ul style="list-style-type: none"> • Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346] • Wetland and Waterbirds [A999] 		
Castlemaine Harbour SAC [000343]	<ul style="list-style-type: none"> • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • 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] • Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2170] • Humid dune slacks [2190] • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Salmo salar</i> (Salmon) [1106] • <i>Lutra lutra</i> (Otter) [1355] • <i>Petalophyllum ralfsii</i> (Petalwort) [1395] 	Within site boundary.	<ul style="list-style-type: none"> • Dispersed habitation • Grazing • Leisure fishing • Marine and Freshwater Aquaculture • Walking, horseriding and non-motorised vehicles • Infilling of ditches, dykes, ponds, pools, marshes or pits • Removal of beach materials • Invasive non-native species • Camping and caravans

<p>Slieve Mish Mountains SAC [002185]</p>	<ul style="list-style-type: none"> Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Blanket bogs (* if active bog) [7130] Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] <i>Trichomanes speciosum</i> (Killarney Fern) [1421] 	<p>1 km northeast of site</p>	<ul style="list-style-type: none"> Fertilisation Restructuring agricultural land holding Grazing Dispersed habitation Peat extraction Sand and gravel quarries Military manoeuvres Fire and fire suppression
Nationally Designated Sites			
<p>Castlemaine Harbour pNHA [000343]</p>	<p>No site description. Refer to Castlemaine Harbour SAC and SPA.</p>	<p>Within the site boundary</p>	<p>No site description</p>

3.4.2 Incidental Species Recorded

Inch Beach supports a range of habitats and species. Table 3.3 below presents the bird species recorded during the ecological surveys at Inch Beach, along with their Birds of Conservation Concern (BoCC) status (2020–2026).

Table 3.3 Incidental Species Records

Scientific Name	Common Name
Red Status	
<i>Larus argentatus</i>	Herring Gull
<i>Anthus pratensis</i>	Meadow Pipit
Amber Status	
<i>Larus fuscus</i>	Lesser Black-backed Gull
<i>Alauda arvensis</i>	Skylark
<i>Lymnocyptes minimus</i>	Snipe
<i>Saxicola torquatus</i>	Stonechat
<i>Hirundo rustica</i>	Swallow
Green Status	
<i>Turdus merula</i>	Blackbird
<i>Corvus corone</i>	Hooded Crow

<i>Corvus monedula</i>	Jackdaw
<i>Motacilla alba yarrelli</i>	Pied Wagtail
<i>Emberiza schoeniclus</i>	Reed Bunting
<i>Charadrius hiaticula</i>	Ringed Plover
<i>Corvus frugilegus</i>	Rook
<i>Columba palumbus</i>	Woodpigeon

3.4.3 Records of Rare, Protected and Invasive Species

Records of rare, protected, and invasive species from the past ten years from Hectads V69P, V69N, V69T, V69U and Q60K were obtained the National Biodiversity Data Centre (NBDC) online database. These records are presented in Table 3.3 below.

Table 3.3 Rare, protected, and invasive species recorded in the past decade from Hectads V69P, V69N, V69T, V69U and Q60K from NBDC database.

Scientific name	Common Name	Date of last record	Status*
Marine Mammals			
<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin	02/04/2008	EU Habitats Directive: Annex IV; Wildlife Acts
<i>Tursiops truncatus</i>	Bottle-nosed Dolphin	08/10/2016	EU Habitats Directive: Annex II; Wildlife Acts
<i>Delphinus delphis</i>	Common Dolphin	23/01/2019	EU Habitats Directive: Annex IV; Wildlife Acts
<i>Phocoena phocoena</i>	Common Porpoise	23/01/2019	EU Habitats Directive: Annex II; Wildlife Acts
<i>Globicephala melas</i>	Long-finned Pilot Whale	22/07/2017	EU Habitats Directive: Annex IV; Wildlife Acts
<i>Stenella coeruleoalba</i>	Striped Dolphin	02/08/2010	EU Habitats Directive: Annex IV; Wildlife Acts
<i>Lagenorhynchus albirostris</i>	White-beaked Dolphin	06/02/2004	EU Habitats Directive: Annex IV; Wildlife Acts
Birds			
<i>Limosa lapponica</i>	Bar-tailed Godwit	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Larus ridibundus</i>	Black-headed Gull	22/01/2017	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Rissa tridactyla</i>	Black-legged Kittiwake	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Branta bernicla</i>	Brent Goose	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Phalacrocorax carbo</i>	Cormorant	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Numenius arquata</i>	Curlew	04/09/2016	EU Birds Directive: Annex II; Wildlife Acts; Birds of Conservation Concern: Red List
<i>Calidris alpina</i>	Dunlin	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Anas strepera</i>	Gadwall	31/12/2011	EU Birds Directive: Annex II; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Morus bassanus</i>	Gannet	24/01/2016	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Larus marinus</i>	Great Black-backed Gull	24/09/2016	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Podiceps cristatus</i>	Great Crested Grebe	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Gavia immer</i>	Great Northern Diver	31/12/2011	Annex I; Wildlife Acts
<i>Tringa nebularia</i>	Greenshank	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Pluvialis squatarola</i>	Grey Plover	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Uria aalge</i>	Guillemot	24/09/2016	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Circus cyaneus</i>	Hen Harrier	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List

<i>Larus argentatus</i>	Herring Gull	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Red List
<i>Passer domesticus</i>	House Sparrow	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Falco tinnunculus</i>	Kestrel	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Larus fuscus</i>	Lesser Black-backed Gull	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Carduelis cannabina</i>	Linnet	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Egretta garzetta</i>	Little Egret	08/10/2016	EU Birds Directive: Annex I; Wildlife Acts
<i>Clangula hyemalis</i>	Long-tailed Duck	31/12/2011	EU Birds Directive: Annex II; Wildlife Acts
<i>Anas platyrhynchos</i>	Mallard	22/05/2023	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Puffinus puffinus</i>	Manx Shearwater	24/09/2016	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Falco columbarius</i>	Merlin	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Larus canus</i>	Mew Gull	01/09/2017	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Cygnus olor</i>	Mute Swan	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Vanellus vanellus</i>	Lapwing	31/12/2011	EU Birds Directive: Annex II; Wildlife Acts; Birds of Conservation Concern: Red List
<i>Anas acuta</i>	Pintail	31/12/2011	EU Birds Directive: Annex II, Annex III; Wildlife Acts; Birds of Conservation Concern: Red List
<i>Anas clypeata</i>	Shoveler	31/12/2011	EU Birds Directive: Annex II, Annex III; Wildlife Acts; Birds of Conservation Concern: Red List
<i>Oenanthe oenanthe</i>	Wheatear	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Haematopus ostralegus</i>	Oystercatcher	23/09/2018	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Falco peregrinus</i>	Peregrine Falcon	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts
<i>Alca torda</i>	Razorbill	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Calidris canutus</i>	Red Knot	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Red List
<i>Tringa totanus</i>	Redshank	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Red List
<i>Pyrhocorax pyrrhocorax</i>	Red-billed Chough	20/03/2020	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Mergus serrator</i>	Red-breasted Merganser	06/05/2011	EU Birds Directive: Annex II; Wildlife Acts
<i>Gavia stellata</i>	Red-throated Diver	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Charadrius hiaticula</i>	Ringed Plover	05/05/2018	Wildlife Acts; Birds of Conservation Concern: Amber List

<i>Columba livia</i>	Rock Pigeon	31/12/2011	EU Birds Directive: Annex II; Wildlife Acts
<i>Melanitta nigra</i>	Scoter	31/12/2011	EU Birds Directive: Annex II, Annex III; Wildlife Acts; Birds of Conservation Concern: Red List
<i>Phalacrocorax aristotelis</i>	Shag	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Tadorna tadorna</i>	Shelduck	14/05/2020	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Alauda arvensis</i>	Sky Lark	25/04/2023	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Gallinago gallinago</i>	Snipe	25/04/2023	EU Birds Directive: Annex II, III; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Sturnus vulgaris</i>	Starling	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Hirundo rustica</i>	Swallow	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Anas crecca</i>	Teal	31/12/2011	EU Birds Directive: Annex II, Annex III, Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Rallus aquaticus</i>	Water Rail	31/12/2011	Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Cygnus cygnus</i>	Whooper Swan	31/12/2011	EU Birds Directive: Annex I; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Anas penelope</i>	Wigeon	31/12/2011	EU Birds Directive: Annex II, Annex III; Wildlife Acts; Birds of Conservation Concern: Amber List
<i>Columba palumbus</i>	Wood Pigeon	31/12/2011	EU Birds Directive: Annex II, Annex III; Wildlife Acts
Reptiles & Amphibians			
<i>Rana temporaria</i>	Common Frog	03/05/2018	EU Habitats Directive: Annex V; Wildlife Acts
<i>Epidalea calamita</i>	Natterjack Toad	12/04/2022	EU Habitats Directive: Annex IV; Wildlife Acts
<i>Lissotriton vulgaris</i>	Smooth Newt	08/07/2020	Wildlife Acts
<i>Caretta caretta</i>	Loggerhead Turtle	04/03/2008	EU Habitats Directive: Annex II; Wildlife Acts
Cartilaginous Fish			
<i>Raja montagui</i>	Spotted Ray	14/05/20215	OSPAR Convention
<i>Raja clavata</i>	Thornback Ray	14/05/20215	OSPAR Convention
Terrestrial Mammals			
<i>Myotis daubentonii</i>	Daubenton's Bat	15/09/2008	EU Habitats Directive: Annex IV; Wildlife Acts
<i>Lutra lutra</i>	Otter	05/05/2005	EU Habitats Directive: Annex II, IV; Wildlife Acts

<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	15/09/2008	EU Habitats Directive: Annex IV; Wildlife Acts
Invasive Species			
<i>Oryctolagus cuniculus</i>	Rabbit	25/04/2023	Medium Impact Invasive Species
<i>Potamopyrgus antipodarum</i>	Jenkins' Spire Snail	08/08/2016	Medium Impact Invasive Species

4.0 RECOMMENDATIONS

Based on the information presented in the preceding sections, the following recommendations are made:

- Inch Beach has a formal car park and some other areas where small numbers of vehicles can park. During busy periods, the beach is used as an overflow car park. Both from a safety and environmental point of view, the practice of using the beach as an open and unrestricted car park should be reviewed. The provision of additional parking is in line with the Kerry County Development Plan Objective 11-58: “Provide carparking and regularise beach related commercial facilities in the Sand Dune area/coastal areas of the Maharees, Inch, Banna and other coastal locations so as to protect the overall integrity of the sand dunes.” (KCC, 2022). Dune protection measures should be considered as part of a coordinated assessment in any infrastructure development plans at inch beach.
- Dune protection measures should be considered at Inch Beach in consultation with the NPWS regarding any conservation works proposed associated with the Kerry Seas National Park (Páirc Náisiúnta na Mara, Ciarraí) – Ireland's first Marine National Park. Chestnut-pale or similar fencing should be considered along the dunes to prevent people from walking through them, which has led to erosion and habitat loss. On similar sites in Ireland, chestnut pale fencing has been used to protect and restore dunes.
- The boardwalk³ which was cordoned off at the time of the survey. The boardwalk should be repaired or replaced with a low maintenance and safe solution to segregate pedestrians from vehicles and to allow visitor access to the informational signage.
- Erosion of the dune habitat is exacerbated by overgrazing by rabbits. Any dune protection measures should consider the localised exclusion of rabbits, as well as people, using fencing, to allow damaged habitat to recover.
- Kerry County Council should consider providing segregated waste bins and dog waste bins on site.
- The repair or replacement of the existing damaged signage should be considered. Where signage is being implemented, teleological signage (signage with instruction and justification for the instruction) should be used.
- Any access or tourism related initiatives should complement the conservation measures currently being undertaken for Natterjack Toad and should be considered in consultation with the NPWS regarding any conservation works proposed associated with the Kerry Seas National Park.
- Where instructional signage is being implemented, teleological signage (signage with instruction and justification for the instruction) should be used.



³ Since the site visit was undertaken for Inch Beach, Fáilte Ireland visitor monitoring was undertaken and identifies some of these hazards as being resolved, including the removal and replacement of the boardwalk (See Appendix 1).

5.0 REFERENCES

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Appendix A

Fáilte Ireland Visitor Characterisation Surveys



Inch Beach – Visitor Monitoring Assessment

August 2024

Contents

- **1.0 Introduction:**
- **2.0 Visitor Characterisation Survey Methodology:**
- **3.0 Results:**
 - **Prevalence of Group Type**
 - **Prevalence of Transport Type**
 - **Activity Levels**
- **4.0 Observations**

Appendix 1 – Activity & Impact Codes

1.0 Introduction:

Background

Fáilte Ireland regularly engages with environmental research that is used to make informed management decisions and produce robust guidelines to facilitate the protection of the environment. From its inception in 2014, the Wild Atlantic Way (WAW) Operational Monitoring Programme has been conducting research into the impacts of tourism on the receiving environment. These surveys have been monitoring 57 sites and recorded the activities and effects of over 26,000 visitors to WAW discovery points.

Building on the success of the WAW environmental monitoring programme which ran from 2015-2019, Fáilte Ireland expanded the programme to a national level. From 2021 to 2022 the programme monitored 19 individual sites located in all of Fáilte Ireland's regional areas: The Wild Atlantic Way, Irelands Hidden Heartlands, Ireland's Ancient East, and Dublin. The environmental monitoring builds on environmental surveying and monitoring undertaken on behalf of Fáilte Ireland as far back as 2015, and to date (excluding the 2024 data), the surveys have monitored a total of 66 sites and recorded the activities and effects of over 30,000 visitors at a range of tourism sites (including inland, urban, coastal and WAW discovery points).

2.0 Visitor Characterisation Survey Methodology:

- Visitor Characterisation Surveys

The visitor characterisation survey was undertaken by the Fáilte Ireland Planning and Environmental team at Inch Beach to supplement and be appended to the National Environmental Monitoring Programme 2024 Report undertaken by Roughan O'Donovan Consulting Engineers. The survey was undertaken on the 15th of August 2024 from 14.30-16.30 on a sunny and breezy Thursday afternoon. The survey was undertaken at various locations from the carpark along Inch beach.

For the purposes of this assessment a 'visitor' refers to an individual, couple or group who arrive together. The following variables were recorded for each visitor:

- Activity Type
- Group Type
- Transport Type
- Activity Levels; and
- Impact Severity Levels.

3.0 Results:

3.1 Visitor Characterization Survey:

The visitor monitoring survey undertaken on the 15th of August 2024 from 14.30-16.30 on a sunny and breezy Thursday afternoon. A total of 78 No. visitor groups comprising 287 No. Individuals were recorded. This site during the survey period was most popular amongst the 'Families' group followed by the 'Individual adult' and 'Couple' groups. The following activities undertaken by groups during the survey are listed in order of occurrence rate below:

- Walking, running, cycling or playing on level sand

- Sitting on sand
- Swimming, sailing, surfing in water
- Resting, reading, looking, picnicking, sightseeing, painting, photographing
- Any movement leaving an existing trail or marked path / Climbing on walls, loose stones, sand, soil etc..

3.2 Prevalence of Group Type

Figure 1 presents the prevalence of group types observed visiting the site, either without a dog or with a dog. 'Family' made up the largest proportion of group type with 48% of visitor groups observed. The second largest group type was 'Individual Adult' with 19%. The third largest was the 'couple' group type with 13%. The remaining group types observed in order of prevalence were 'elderly couple', 'Under 18' and 'Mixed Large Group' and 'Large Adult Group'. The only group types observed with dogs were the 'Couple' and 'Family' groups with only 3% and 1% respectively observed with dogs. All were observed off leads.

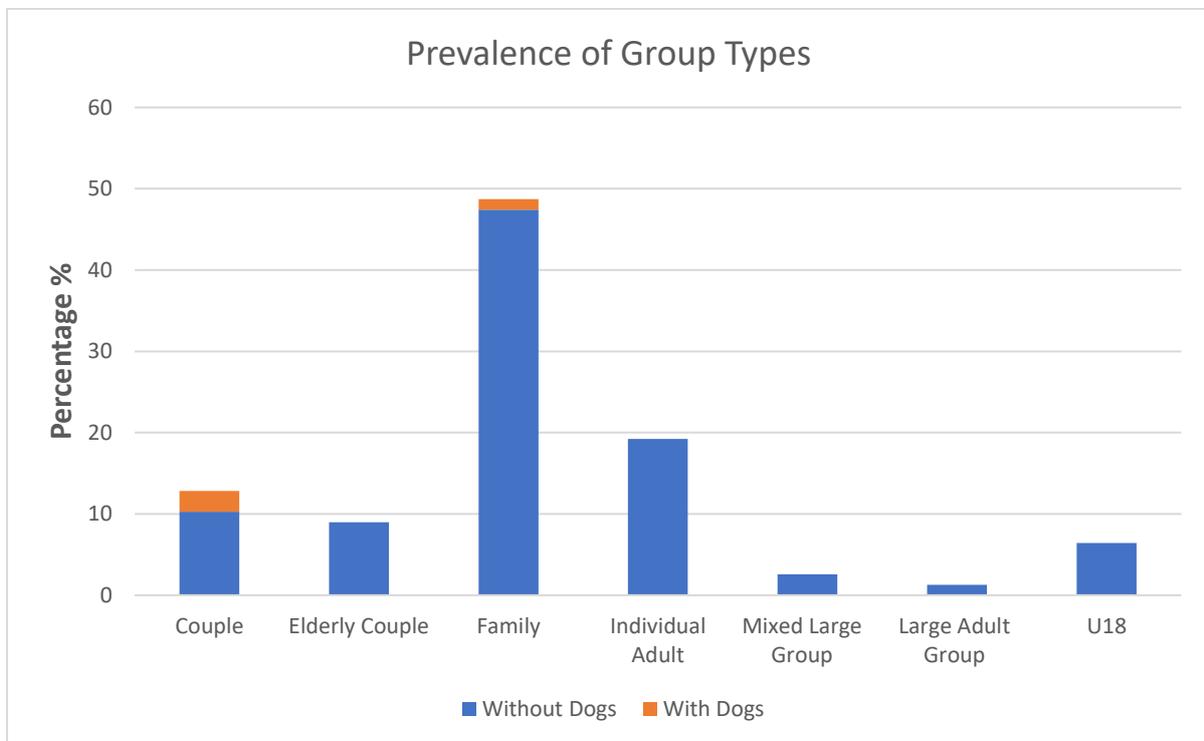


Figure 1: Prevalence of Group Type

3.3 Prevalence of Transport Type

The main mode of transport observed for groups arriving to Inch beach was by 'car' accounting for 73% of visitor groups observed visiting the site. This included both groups observed walking from the designated carpark and those who were observed to park on the beach. 22% of groups were observed arriving via campervan again comprising using both the designated carpark and parking on the beach.

The remaining 6% of visitor groups arrived by 'bike' (3%) and by 'bus/coach' (3%). It should be noted that the 'bus/coach' groups comprised approximately 20% of the overall visitor numbers observed.

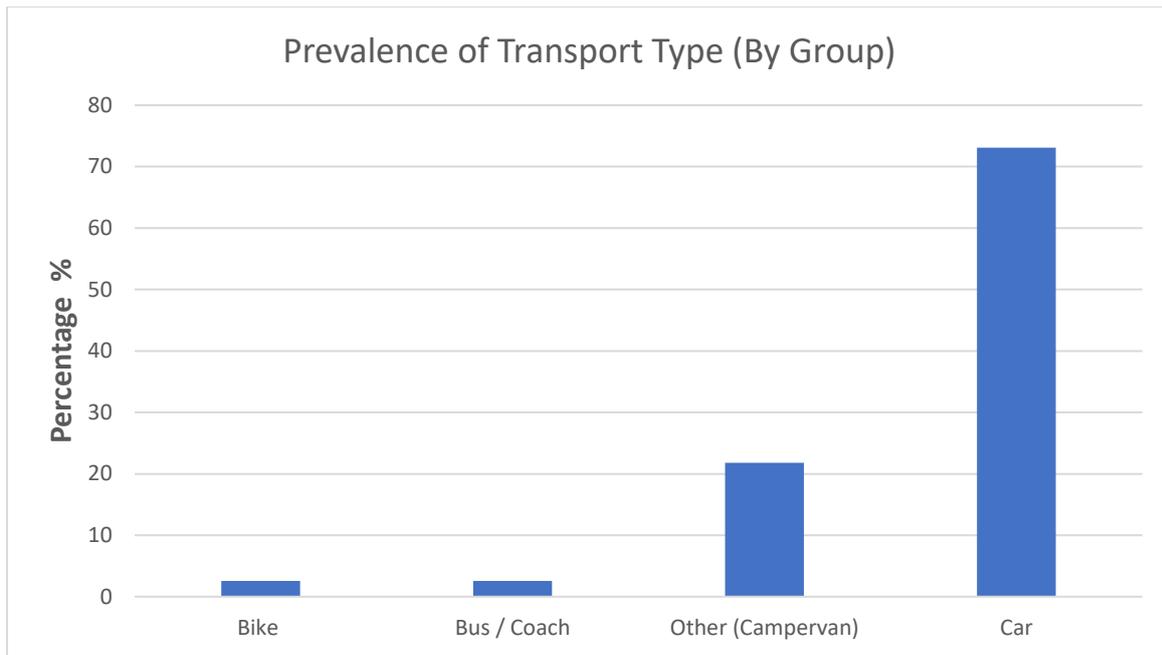


Figure 2: Prevalence of Transport Type (By Group)

3.4 Activity Levels

Figure 3 below presents the activity levels at Inch Beach. A sample of 78 visitor groups' activities were observed. The results from this are shown below in Figure 3. Activity categories are detailed in Appendix I. Activities such as Swimming, surfing, walking, running or playing on level sands is considered a low-level activity, whereas any movement leaving an existing trail or marked path is considered a medium level activity. 95% of the activities observed at Inch were considered low level activities. The remaining 5% of medium level activity generally comprised groups walking through sand dunes leaving existing trails or marked paths.

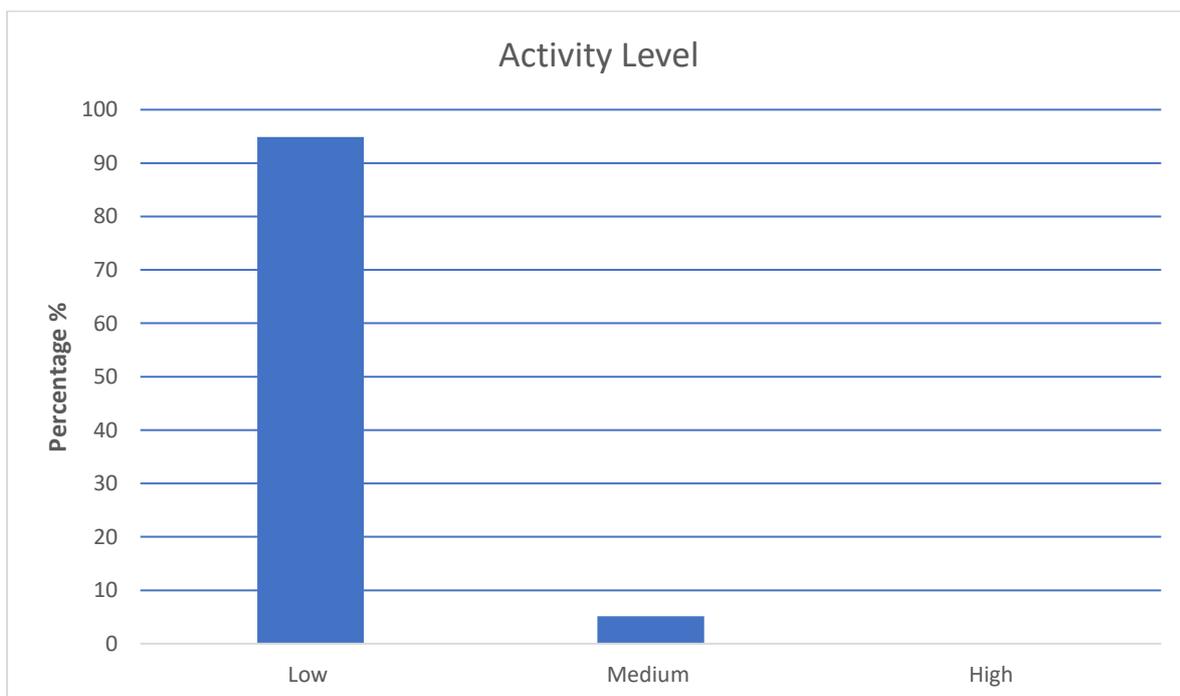


Figure 3: Activity Level

3.5 Impact Severity Levels

Figure 4 presents the impact severity level observed at the site. A sample of 78 visitor groups' activities were observed. Impact severity level relates to the damage of an activity on the site. The levels of impact severity are detailed in Appendix I. Similar to the impact type above, the survey found that 95% of the activities observed had low level impact severity on the site. Medium level severity levels includes no effects, desire lines or tracks visible outside of marked paths or existing trails and comprised 5% of activities observed.

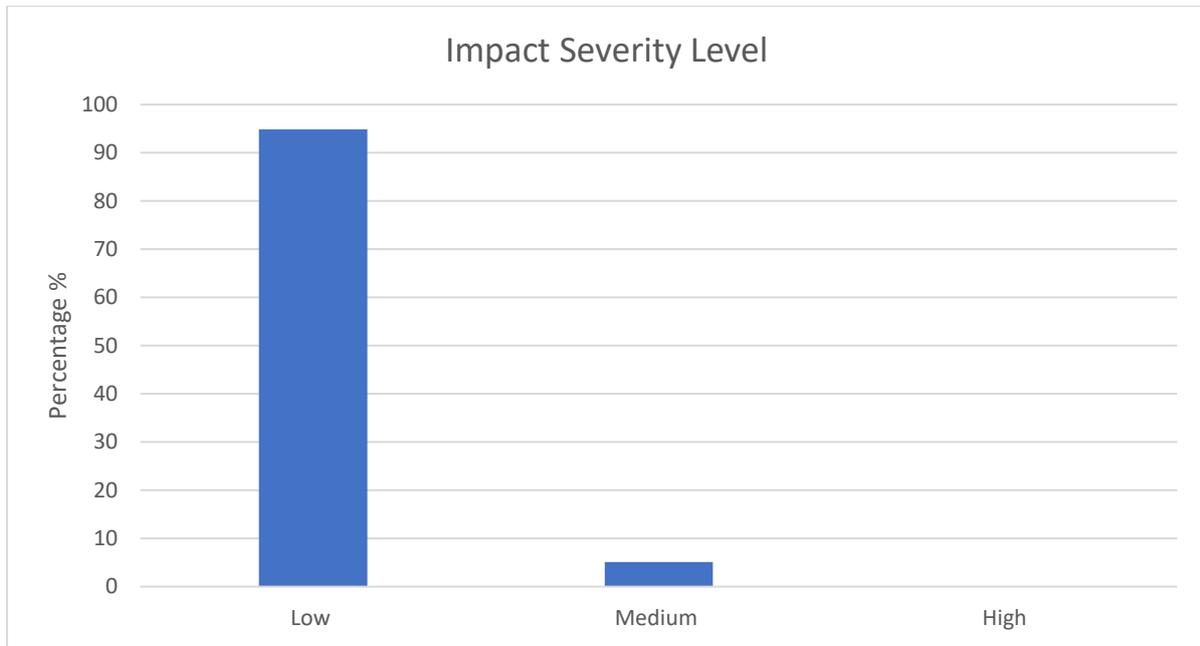


Figure 4: Impact Severity Levels

3.6 Activity Types

Figure 5 presents the Activity Types observed at the site. The survey found that 47% of the activities observed comprised a mix walking, running, cycling or playing in level sand with 18% undertaking swimming, sailing, surfing in water.

26% comprised sitting on sand with the remaining 4% comprising resting, reading, looking, picnicking, sightseeing, painting, photographing. The remaining 5% (4 visitor groups) were observed walking through dune systems outside of marked paths or existing trails.

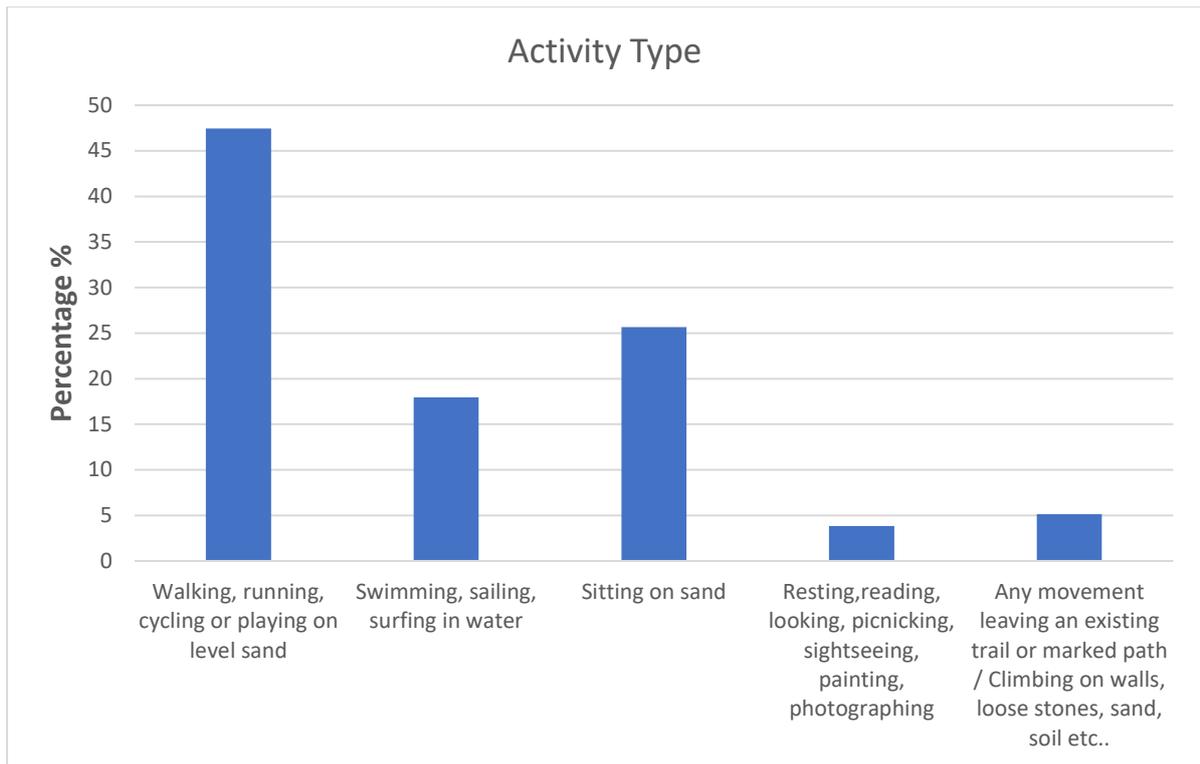
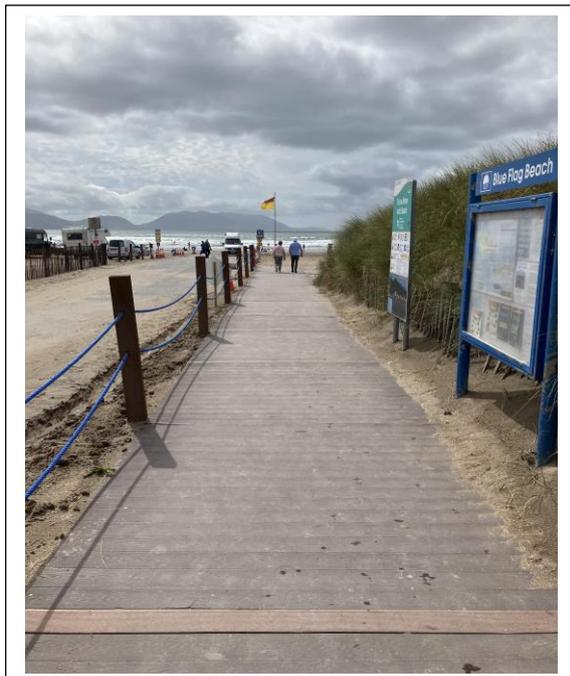


Figure 5: Activity Types

4.0 Observations

The site survey was commenced approximately 1 hour after high tide with VMS signage advising motorists to leave adequate time to remove cars from the beach if required.

One operative from Kerry County Council was on site for the duration of the survey monitoring the carpark, picking up litter and sweeping sand off what appears to be a recently constructed boardwalk to the beach.



Appendix 1 – Activity & Impact Codes

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

Impacts		
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

