National Tourism and Environmental Monitoring Programme

Tramore 2024

Fáilte Ireland
Turasóireacht Náisúnta
An tÚdarás Eorbartha
National Tourism
Development Authority

National Tourism and Environmental Monitoring Programme

Annual Report for Tramore 2024

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TRAMORE – INTERESTING FINDS

Interesting Finds

Adult and pupal bloody-nosed beetles (*Timarcha tenebricosa*) were highly active in the dunes during the survey. This species is found exclusively in southern counties with its population centred around Waterford (When threatened, this species produces a bright red substance from its mouth which resembles blood.

Habitats

The following habitats were recorded on site:

- Earth banks (BL2)
- Buildings and artificial surfaces (BL3)
- Sea walls, piers and jetties (CC1)
- Embryonic dunes (CD1)
- Marram dunes (CD2)
- Fixed dunes (CD3)
- Lower salt marsh (CM1)
- Exposed sand, gravel or till (ED1)
- Recolonising bare ground (ED3)
- Wet grassland (GS4)
- Sand shores (LS2)
- Mud shores (LS4)
- Scrub (WS1)

Features of the Site

- There is a large car park present between the site and Tramore.
- Toilet facilities are present at the car park.
- Ruins related to motor racing, which date from the early 1900's, are present in the mud shores in Tramore strand.
- Tramore Nature Park, known locally as Lark Park, is directly north of the site.
- Tramore Burrow is a spit containing dunes, salt marsh and Tramore Strand that is a popular area for walking.

Key Recommendations

- Construction of a formal path should be considered between the car park and the beach. This should be accompanied by fencing surrounding the dunes, and signage to instruct visitors to stay on the path. The existing damaged fencing should be removed and replaced, and the old boardwalk should be repaired or replaced.
- A formal path with signage and way markers should be constructed to direct visitors to Tramore Nature Park from the car park, along with informative signage regarding the racecourse ruins.
- Signage indicating that dogs should remain on a lead should be provided to protected wetland and water birds in the salt marsh and ground nesting birds in the dunes.

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, Irelands 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), these 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 the site in Tramore, Co. Waterford.

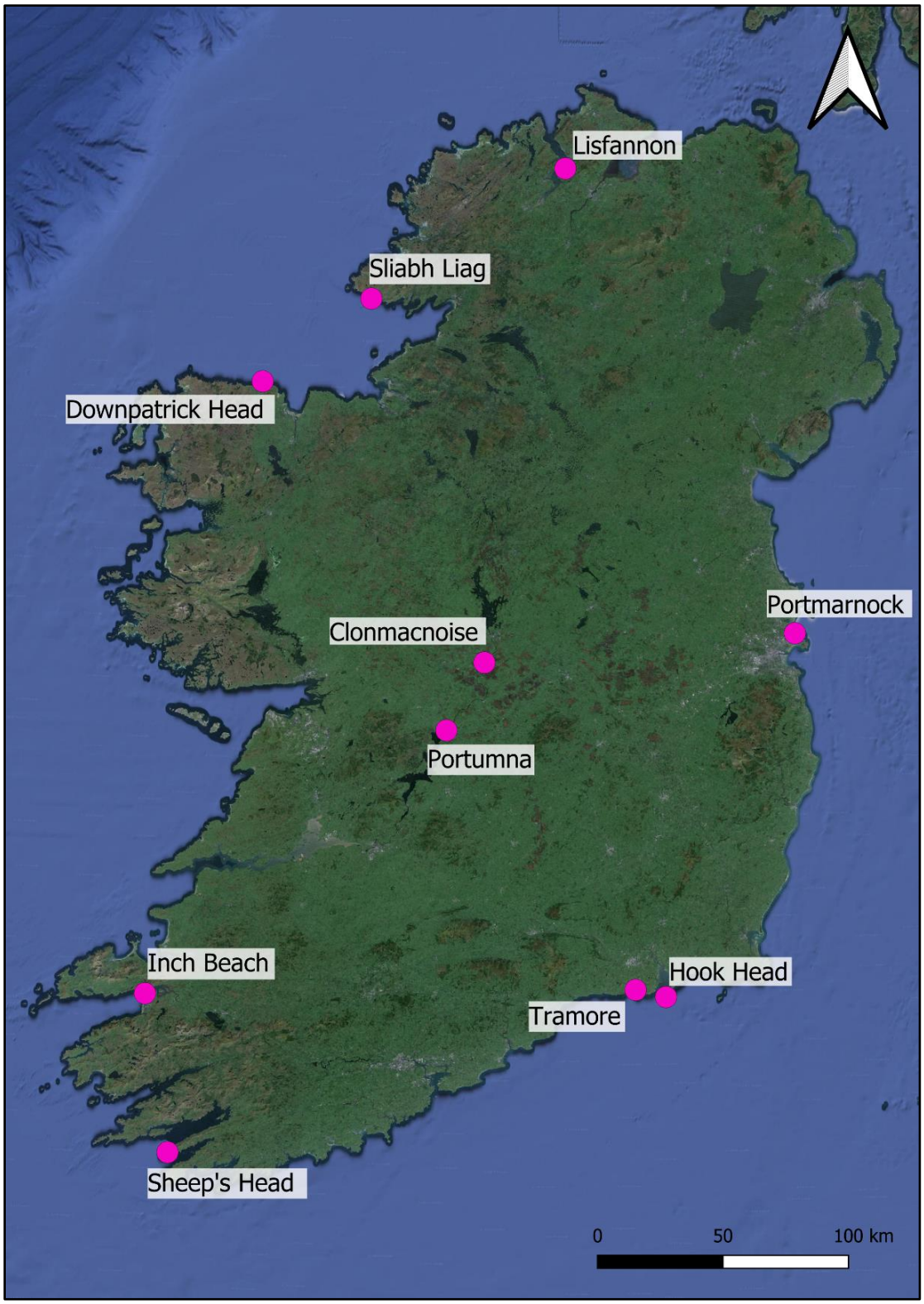

Figure 1.1 **Environmental Monitoring Programme 2024 locations. Basemap provided by Google.**

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 Tramore

Tramore is a coastal town located in Co. Waterford. The area being surveyed for this report ("the site") is located east of Tramore town. The western extent of the site is comprised of the beach car park and overflow car park. Leading east from the car park, the path leads to Tramore Burrow, which is a spit made up of salt marsh, dunes and Tramore Strand, which shelters a shallow intertidal areas known as the Backstrand. The site is also surrounding by Tramore beach to the south and east. The site boundary is displayed in Figure 1.2 below. The site is accessible via Promenade Road. The site is served by the Bus Éireann 360 route from Waterford City. Given that the site is directly east of Tramore town, it is also easily accessible on foot and by bicycle. The car park has approximately 200 car spaces, and there are additional parking areas along the promenade to the west of the site. Toilet facilities and other amenities such as restaurants and shops are located immediately west of the site. Tramore Amusement and Leisure Park is located west of the site.

Tramore is listed as a coastal destination in the Waterford City and County Development Plan (CCDP) 2022-2028. The Waterford CCDP list the development of world class water sports activity facilities in Tramore in association with Fáilte Ireland as a tourism policy objective. There is also an objective to develop a greenway from Waterford city to Tramore. Tramore beach has lost its Blue Flag award, with the water quality being demoted from 'excellent' to 'good' based on the analysis of results of in-season water samples taken between 2020 and 2023.

The Tramore site is within the Tramore Dunes and Backstrand SAC and pNHA, and the Tramore Back Strand SPA. The Mid-Waterford Coast SPA and the Ballyvoyle Head to Tramore pNHA are approximately 2.8km southwest of the site.

Figure 1.2 Tramore site boundary outlined in red. Basemap provided by Google.

1.4 Critical Infrastructure

Table 1.1 to Table 1.3 below provide information on the infrastructure at Tramore. Uisce Éireann's website was used to access information on the Water Supply and Wastewater Treatment Capacity Registers for County Waterford (Uisce Éireann 2024a, b).

Table 1.1 Tramore Wastewater Infrastructure

Wastewater Treatment Plant (WWTP)	Uisce Éireann Indication of Capacity
• Toilet facilities are available directly adjacent to the site. • Wastewater treatment is provided by Tramore WWTP.	• Spare capacity available.

Table 1.2 Summary of Drinking Water infrastructure at Tramore

Drinking Water	Water Resource Name (WRZ)	Uisce Éireann Indication of Capacity
The site is within the settlement of Tramore.	East Waterford Water Supply Scheme	Spare capacity available.

Table 1.3 Summary of Transport infrastructure at Tramore

Nearest Settlement	Current Transport Infrastructure	Comment
The site is within the settlement of Tramore.	Tramore is accessed by the Promenade Road. There are numerous car parks on and in the vicinity of the site.	The site is served by the 360 bus from Waterford city.

2.0 METHODOLOGY

The following surveys were undertaken:

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

The site survey in Tramore was undertaken on the 15th of May 2024. The weather conditions were clear during the survey, with some wind. The sub-sections below present the methodology used at each site.

2.1 Habitat Condition Assessment Methodology

The habitats within the site were classified and mapped (**Figure 1.1**) 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 were noted, including any damage and the likely cause of the damage. The areas along the paths are described in 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 Failte 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 Car Park	An area used for parking, wider than the road, that is paved, usually with tarmacadam.
Gravel Car Park	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 includes built heritage, sculptures as well as toilets and bins. Hazards including unstable walls, broken fences or unprotected cliff tops.

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 in Tramore along with their corresponding Annex I habitats. A habitat map in presented in Figure 3.2. It should be noted that having a corresponding Annex I habitat does not mean the Annex I habitat is automatically present.

Table 3.1 Fossitt (2000) habitats in Tramore and this corresponding Annex I habitats.

Fossitt 2000 Habitat	Annex I habitats (Natura 2000 code)[1]
Fixed dunes (CD3)	Fixed coastal dunes with herbaceous vegetation ("grey dunes") (2130)* Decalcified fixed dunes with *Empetrum nigrum* (2140)* Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) (2150)* Dunes with *Salix repens ssp. argentea* (*Salicion arenariae*) (2170)
Lower salt marsh (CM1)	*Salicornia* and other annuals colonising mud and sand (1310) *Spartina* swards (*Spartinion maritimae*) (1320) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) (1330) Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) (1420)
Embryonic dunes (CD1)	Embryonic shifting dunes (2110)
Marram dunes (CD2)	Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") (2120)
Sand shores (LS2)	Mudflats and sandflats not covered by sea water at low tide (1140) Annual vegetation of drift lines (1210)
Mud shores (LS4)	Mudflats and sandflats not covered by sea water at low tide (1140)
Wet grassland (GS4)	*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (6410)
Recolonising bare ground (ED3)	None
Earth banks (BL2)	None
Buildings and artificial surfaces (BL3)	None
Exposed sand, gravel or till (ED1)	None
Shingle and gravel shores (LS1)	Annual vegetation of drift lines Littoral gravels and sands (1210)
Scrub (WS1)	*Juniperus communis* formations on heaths or calcareous grasslands (5130)

[1] * Indicates priority habitat

Fossitt 2000 Habitat	Annex I habitats (Natura 2000 code)[1]
Sea walls, piers and jetties (CC1)	None

Dune Habitats (CD1, CD2, CD3)

Fixed dunes (CD3) is the dominant dune habitat type on the site. Fixed dunes cover most of Tramore Burrow, and extend west towards the car park. Marram dunes (CD2) are present along the southern (seaward) side of Tramore Burrow, with Embryonic shifting dunes forming the interface between the Marram dunes and the beach.

Given that visitor impacts were consistent throughout the different dune habitats, they are discussed collectively here. The western stretch of the dunes is severely impacted by recreation and amenity users, with clear signs of trampling and multiple informal paths being utilised. In Tramore Burrow, visitor movements through the dunes have resulted in trampling and braiding to such an extent that it visible from satellite imagery, as well as on the Strava heatmaps. This has resulted in the collapse of some areas and dune and the loss of vegetation. Chestnut pale fencing, rope boundaries and signage are present within the dunes to prevent recreation and amenity users from entering, however much of this has fallen and has visibly been trampled, and informal paths continue throughout the dunes. Areas of deterioration and collapse of the dunes were noted as a result of recreation and amenity users accessing them from the beach. This decreased with distance from the promenade and was less prominent on the easternmost side of the burrow, where the dunes are steeper.

Marram grass (Ammophila arenaria), daisy (*Bellis perennis*), and kidney vetch (*Anthyllis vulneraria*) were the dominant species recorded in the dunes. Other species present include dandelion (*Taraxacum vulgaria*), common stork's-bill (*Erodium cicutarium*), sand pansy (*Viola tricolor ssp. curtisii*), buck's-horn plantain (*Plantago coronopus*), common sorrel (*Rumex acetosa*), ribwort plantain (*Plantago lanceolata*), wild radish (*Raphanus raphanistrum ssp. raphanistrum*), swiss chard (*Beta vulgaris*), wild carrot (*Daucus carota*), common milkwort (*Polygala vulgaris*), common bird's-foot-trefoil (*Lotus corniculatus*), wild pansy (*Viola tricolor ssp. tricolor*), sea-holly (*Eryngium maritimum*), burnet rose (*Rosa spinosissima*), sedges (*Carex sp.*), hawthorn (*Crataegus monogyna*), germander speedwell (*Veronica chamaedrys*), bramble (*Rubus fructicosus*), bush vetch (*Vicia sepium*), eyebright (*Euphrasia officinalis*), bluebell (*Hyacinthoides non-scripta*), meadow buttercup (*Ranunculus acris*), and some ferns. This habitat is displayed in **Figure 3.1**.

Figure 3.1 Fixed dune (CD3) habitat in Tramore Burrow.

Lower salt marsh (CM1)

Lower salt marsh is present between the car park and Tramore Burrow. There is also a small pocket of this habitat (approximately .5 hectares) in the northeastern part of the burrow. There are small drainage channels leading to the mud shores and mudflats north of the site within the saltmarsh. Given the difficulty of the terrain and the large number of channels present, the exact locations if these channels are not mapped. To the south of this habitat, it slowly transitioned to recolonizing bare ground. It is possible that this habitat has slowly regressed over time as a result of the impacts from visitor movements between Tramore Burrow and the car park. Small amounts of litter in the marsh noted in the salt marsh. Unleashed dogs were also noted entering this habitat. No other impacts from recreation and amenity users were observed within the marsh, likely due to it being difficult to traverse. Thrift (*Armeria maritima*), Sea Purslane (*Atriplex portulacoides*), and English Scurvygrass (*Cochlearia anglica)* are the dominant species. Grasses are present to the south of this habitat where it transitions to recolonising bare ground, but do not dominate. Dead crabs were noted throughout the marsh in large numbers, which were likely deposited during high tide. Oysterctachers and other wetland birds were observed foraging north of this habitat in Tramore Strand. This habitat is displayed in **Figure 3.2**.

Figure 3.2 Lower salt marsh (CM1) habitat in Tramore Burrow.

Sand shores (LS2)

A sandy beach surrounds the eastern side of Tramore Burrow and extends west along to the promenade. Areas of deterioration and collapse of the dunes were noted as a result of recreation and amenity users accessing them from the beach. This decreased with distance from the promenade and was less prominent on the easternmost side of the burrow, where the dunes are steeper.

Mud shores (LS4)

Mud shores are present to the northeast of the overflow car park, and extend north of the salt marsh habitat, overlapping with it in the form of drainage channels. There are old ruins present within this habitat of a racecourse from the 1900's. No recreation and amenity related impacts were recorded in this habitat. Mixed sediments along with thrift and sea purslane were present at the terrestrial borders of this habitat. In drainage channels in the salt marsh, evidence of marine worm species was recorded.

Wet grassland (GS4)

This habitat is present in the overflow carpark, which is north of the main car park on site, and borders Tramore Nature Park and the mud shore habitat. Visitors use this habitat to access Tramore Nature Park, which has resulted in various informal paths through it. This is discussed further in Section 3.2. Herbaceous species present include red clover (*Trifolium pratense*), white clover (*Trifolium repens*), bird's-foot trefoil, ribwort plantain, curled dock (*Rumex crispus ssp. crispus*), silverweed (*Potentilla anserina*), gorse, meadow buttercup, creeping buttercup (*Ranunculus repens*), red fescue (*Festuca rubra),* nettle (*Urtica dioica*), thrift, daisy, dandelion, cuckoo flower (*Cardamine pratensis*), common vetch (*Vicia sativa ssp. segetalis*), ragged robin (*Silene flos-cuculi*), English scurvygrass, cocksfoot (*Dactylis glomerata*),

Swiss chard, bird's foot trefoil, tree mallow (*Malva arborea*), marestails, bramble and some areas of rush.

Recolonising bare ground (ED3)

This habitat was present in the overflow carpark, and transitions into wet grassland to the northeast. It also extends east towards the dunes. Areas in the overflow carpark not yet colonised by vegetation comprised of gravel and bare ground. This area was not accessible to vehicles from the car park at the time of the survey and is likely made available to recreation and amenity users for parking during busier times of the year. Infromal paths from the wet grassland extended into this habitat, but given that some areas are bare, paths were difficult to identify. Where this habitat extended east towards Tramore Burrow, visitor movements from the car park have resulted in multiple informal pathways and pathway braiding, which may be the cause of vegetation being unable to fully colonise this area. Species recorded in the overflow carpark park were daisy, dandelion, Water mint (*Mentha aquatica*), hawthorn, kidney vetch, cocksfoot, smooth meadow-grass (*Poa pratensis sens lat*.), bitter-vetch (*Lathyrus linifolius*), chamomile (*Chamaemelum nobile*), ribwort plantain, grasses, thistle, red fescue, and yellow flag iris (*Iris pseudacorus*). East of the car park, and south of the salt marsh, areas not colonized by vegetation comprised of sand and bare ground. Areas colonised by vegetation were species-poor, with daisies, dandelions, grasses, thrift, Swiss chard, and meadow buttercup present.

Earth banks (BL2)

Earth banks present between the car park and the beach, extending east towards Tramore Burrow, between the wet recolonising bare ground/mud shore habitat and the marsh habitat, and between the marsh habitat and the mudflats to the northeast, beyond the study area. Signs of trampling from recreation and amenity users and erosion were evident on all of the banks, including some evidence of equestrian activities. The trampling damage to the bank habitats on either side of the marsh was particularly severe, resulting in braiding, and as such vegetation loss. Species found on the earth bank north of beach included hogweed (*Heracleum sp.*), cow parsley (*Anthriscus sylvestris*), common ramping fumitory (*Fumaria muralis*), creeping butter cup, curled doc, and chamomile. Species were similar between the area of wet grassland/recolonising bare ground and the earth bank adjacent to it, with swiss chard dominating, and kidney vetch, smooth meadow-grass, cocksfoot, daisy, dandelion, bird's-foot trefoil, yellow flag iris, ivy, and bitter-vetch also present. The species composition was similar on the bank to the west of the salt marsh, with sedges and marram being more prominent here.

Buildings and artificial surfaces (BL3)

This habitat is found at the car park leading from the Promenade Road. This habitat is not of biodiversity value. A wood and wire fence to the north and an earth bank to the south of the carpark create a well-defined boundary. As such, impacts to habitats here are minimal.

Exposed sand, gravel or till (ED1)

This habitat is found at the eastern extent of the car park leading towards Tramore Burrow. This habitat is not of biodiversity value.

Shingle and gravel shores (LS1)

Small pockets of this habitat type are present within the sandy shore at the northeastern corner of Tramore Burrow. These have likely formed as a result of tidal

deposits of sediment. These pockets of habitat typically did not exceed 100m in length at the time of the field survey.

Scrub (WS1)

A small area of Gorse (*Ulex europaeus*) and bramble scrub is present where the study area borders Tramore Nature Park. Rushes were present among the gorse. There were some informal paths through the scrub, but it was unclear if these were made my visitors alone, or if wildlife was also a contributor.

Sea walls, piers and jetties (CC1)

An area of rock armour is present on the sandy beach, south of Tramore Burrow. This area is very small, measuring less than 80m in length.

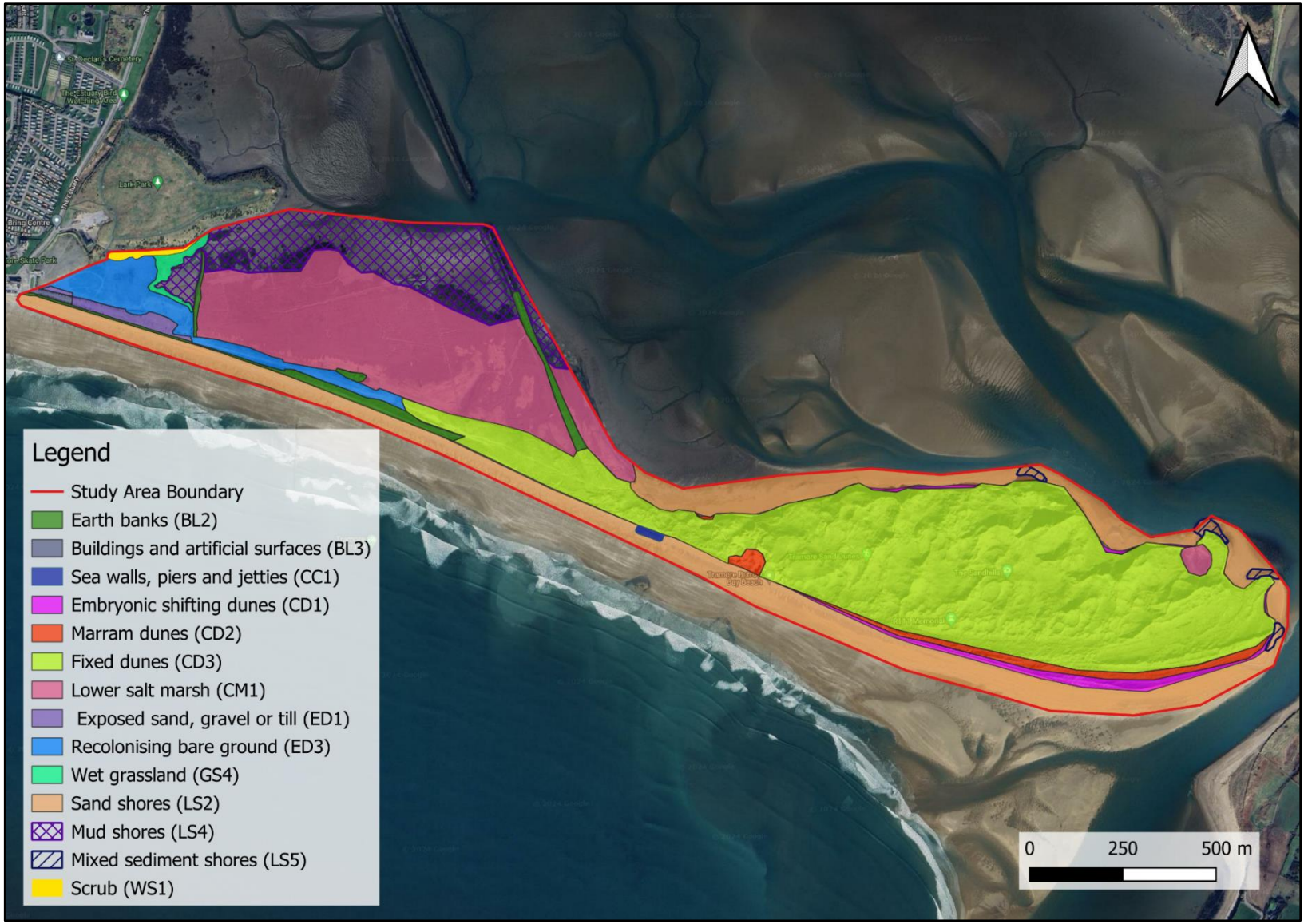

Figure 3.3 Habitat map of Tramore. Basemap provided by Google.

3.2 Pathway Condition Assessment

The car park is the entry point for the site. Both the paved and gravel areas in the car park are in a satisfactory condition. They are spacious and have clear boundaries separating them from the surrounding habitats, with a stockproof fencing to the northern boundary and an earth bank to the southern boundary.

North of the main carpark, there is an overflow carpark. There are a number of informal paths linking the car parks north to Tramore Nature Park. The main path has been mapped; however, it should be noted that there are numerous informal paths that were not easily defined. The condition of this path and the paths in the general area is unsatisfactory. The paths between the car parks and Tramore Nature Park traverses through an area of wet grassland, which has resulted in some trampling in this area. Continued use of this informal route will likely result in further damage to the wet grassland, and potentially to the mud shore habitat adjacent to it. An example of this is displayed in the top left corner of Plate 3.1.

The earth bank which appears to have been used to reclaim an area of the sea for the former racecourse is heavily trampled and exhibited braiding. There was also evidence of horse riding in this area which has contributed to the damage to the path.

From the carpark, visitors are directed towards Tramore Burrow on a bare track running parallel to the beach. This is displayed in the top right corner of Plate 3.1. There are a number of informal trails running through this area and into the dunes to the east, resulting in the regression and deterioration of the surrounding habitat. An example of this is displayed in the bottom right corner of Plate 3.1. The informal paths do not traverse into the salt marsh habitat, though given the extent of path braiding, erosion may have led to the regression of the salt marsh habitat over time, which has resulted in recolonising bare ground.

Given the extent of the paths present in Tramore Burrow, the path which appeared to be most dominant during the survey was assessed and mapped below. As discussed in Section 3.1 above, visitor movements through the dunes have resulted in informal paths and braiding in this habitat which has resulted in the collapse of some areas and dune and the regression of vegetation. An instance of dune collapse as a result of visitor movements is displayed in the bottom left corner of Plate 3.1. Efforts to prevent this such a fencing and signage have had limited success, and much of the fencing is now broken. A boardwalk is present to the west of Tramore Burrow, but it is overgrown and uneven, and does not lead very far.

Figure 3.4 presents a heat map of visitor movements at the site, provided by Strava. Strava aggregates data from users on its app who opt-in to share their activities and locations. The pathway condition assessment map is provided in Figure 3.5. Plate 3.1 displays some of the pathways encountered in Tramore.

Overview

Much of the paths on this site are unsatisfactory. The most concerning damage is present in the dune habitat within and leading to Tramore Burrow. In the narrow stretch of fixed dunes leading to Tramore Burrow, trampling and braiding has caused the deterioration of the habitat in this area. In Tramore Burrow, much of the fencing in the dune habitat has fallen, and numerous paths have led to erosion and habitat loss.

Figure 3.4 Heat map of visitor movements in Tramore (Strava, 2024).

Figure 3.5 **Path types and conditions present on the site. Basemap provided by Google. Given the number of paths in Tramore Burrow, they are not mapped above.**

Grassy path leading from Tramore Nature Park

Bare ground path leading from Tramore Burrow to the car park

Bare path resulting in dune erosion

Bare path leading from Tramore Burrow to the Car Park

Plate 3.1 Some unsatisfactory paths recorded in on site.

3.3 Features, Signage and Hazards

3.3.1 Features and Signage

There are some bins in the car park, including dog waste bag dispensers and bins with signage. There are also two bins located on the path to Tramore Burrow. A lifebuoy is present in the car park. There is a sign in the car park with information on the wetlands and waterbirds found in the area. As discussed in Section 3.1, ruins of a 20th century racecourse are present in the mud shore habitat. There is no informative signage pertaining to these ruins. There is little to no directional signage on the site, and as such it is unclear where visitors should walk, and where should be avoided. Images of the signage and features on the site are shown in **Plate 3.2** below.

Informative signage on wetlands and waterbirds in Tramore.

Old ruins in the mud shore habitat.

Directional signage in the car park.

A lifebuoy at the car park.

Plate 3.2 Features and signage on the site.

3.3.2 Hazards

Hazards were recorded in Tramore Burrow. The broken fencing (**Plate 3.3**) and old boardwalk (**Plate 3.4**) are trip hazards, particularly given that some of the broken fencing has fallen and is difficult to see. Furthermore, as various informal paths have formed in the dunes, many of them are steep and suddenly drop steeply. This also creates a hazard for people walking. Hazards are displayed in **Plate 3.3** and **Plate 3.4** below.. As uneven pathways were found throughout Tramore Burrow, they are not mapped. It should also be noted that given the nature of the dunes and that some of the fencing was trampled and difficult to find, there may be additional locations of damaged fencing in Tramore Burrow. Mapping of notable features and hazards recorded on the site are displayed below in Figure 3.6.

Plate 3.3 Fallen stock proof fencing (top) and old wooden fencing (bottom).

Plate 3.4 **The boardwalk (L) and uneven footing within the dunes (R).**

Figure 3.6 **The location of the old boardwalk and damaged fencing at Tramore. Basemap provided by Google.**

3.4 Ecological Constraints

3.4.1 Protected Sites

A desktop study was undertaken to identify designated sites and rare and protected species in the vicinity of the site. There two European (SACs and SPAs) and one nationally designated site (NHAs and pNHAs) within or adjacent to Tramore. Information on these sites was obtained from the NPWS website and the sites respective Natura 2000 Standard Data Forms. These sites are described in Table 3.2 below.

Table 3.2 Designated sites within 2km of the Tramore site

Site Name [Site Code]	Qualifying Interests[2]	Distance (km) from Site	Pressures and Threats (those related to recreation and amenity are in bold)
European Designated Sites			
Tramore Dunes and Backstrand SAC [000671]	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210 Perennial vegetation of stony banks [1220] *Salicornia* and other annuals colonising mud and sand [1310]	Within site boundary	• Discharges • Grazing • Hunting • Urbanised areas, human habitation
	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]*		• **Removal of beach materials** • **Camping and caravans** • Invasive non-native species • **Leisure fishing** • **Bait digging/collection** • **Walking, horseriding and non-motorised vehicles**
Tramore Backstrand SPA [004027]	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Lapwing (*Vanellus vanellus*) [A142]	Within site boundary	• Urbanised areas, human habitation • Pollution • Invasive non-native species • Discharges

[2] * Indicates priority habitat

Site Name [Site Code]	Qualifying Interests[2]	Distance (km) from Site	Pressures and Threats (those related to recreation and amenity are in bold)
	Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Wetland and Waterbirds [A999]		• **Walking, horseriding and non-motorised vehicles** • Grazing • Fertilisation
National Designated Sites			
Tramore Dunes And Backstrand pNHA [000671]	No site description available. Refer to Tramore Dunes and Backstrand SAC above.	Within site boundary	No site description available.

3.4.2 Incidental Species Recorded

Tramore supports a range of habitats and species. Invertebrate activity was high in the dunes in Tramore Burrow during the survey, with bumble bees (*Bombus* spp.), wolf spiders (*Lycosidae*), and various species of moths and flies among the invertebrate species recorded. Adult and pupal Bloody-nosed Beetles (*Timarcha tenebricosa*) were also observed in large numbers in these dunes. This species has a limited range in Ireland and is found exclusively in southern counties such as Waterford (Brock, 2021).

Table 3.3 below presents the bird species recorded during the ecological surveys at Tramore, along with their Birds of Conservation Concern (BoCCI) status (2020–2026).

Table 3.3 Incidental Species Records

Scientific Name	Common Name
Red Status	
Larus argentatus	Herring Gull
Anthus pratensis	Meadow Pipit
Amber Status	
Phalacrocorax carbo	Cormorant
Larus marinus	Great Black-Backed Gull
Delichon urbicum	House Martin
Passer domesticus	House Sparrow
Linaria cannabina	Linnet
Haematopus ostralegus	Osytercatcher
Charadrius hiaticula	Ringed Plover
Alauda arvensis	Skylark
Sturnus vulgaris	Starling
Hirundo rustica	Swallow
Green Status	
Egretta garzetta	Little Egret
Corvus cornix	Hooded Crow
Coloeus monedula	Jackdaw
Corvus frugilegus	Rook
Turdus philomelos	Song Thrush

3.4.3 Records of Rare, Protected and Invasive Species

Records of rare, protected, and invasive species from the past ten years from a polygon of the site boundary were obtained the National Biodiversity Data Centre (NBDC) online database. These records are presented in Table 3.4 below.

Table 3.4 Rare, protected, and invasive species recorded in the past decade in the site polygon from NBDC database

Scientific name	Common Name	Date of last record	Status
Terrestrial Mammals			
Hedgehog	*Erinaceus europaeus*	27/06/2021	Wildlife Acts
Marine Mammals			
Common Dolphin	*Delphinus delphis*	20/02/2024	EU Habitats Directive: Annex IV || Wildlife Acts
Common Porpoise	*Phocoena phocoena*	02/02/2014	EU Habitats Directive: Annex II; Annex IV || Wildlife Acts || OSPAR Convention
Common Seal	*Phoca vitulina*	21/12/2018	EU Habitats Directive: Annex II; Annex V || Wildlife Acts
Risso's Dolphin	*Grampus griseus*	04/10/2019	EU Habitats Directive: Annex IV || Wildlife Acts
Striped Dolphin	*Stenella coeruleoalba*	01/02/2017	EU Habitats Directive: Annex IV || Wildlife Acts
Birds			
Swallow	*Hirundo rustica*	19/06/2016	Wildlife Acts || Birds of Conservation Concern - Amber List
Bar-tailed Godwit	*Limosa lapponica*	18/02/2023	Wildlife Acts || EU Birds Directive >> Annex I || Birds of Conservation Concern - Amber List
Blackbird	*Turdus merula*	23/02/2019	Wildlife Acts || EU Birds Directive
Black-headed Gull	*Larus ridibundus*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Red List
Black-tailed Godwit	*Limosa limosa*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Brent Goose	*Branta bernicla*	26/03/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Cormorant	*Phalacrocorax carbo*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Curlew	*Numenius arquata*	19/02/2023	Wildlife Acts || EU Birds Directive >> Annex II, Section II || Birds of Conservation Concern - Red List
Dunlin	*Calidris alpina*	19/03/2023	Wildlife Acts || EU Birds Directive >> Annex I || Birds of Conservation Concern - Amber List
Egret	*Egretta garzetta*	19/02/2023	Wildlife Acts || EU Birds Directive >> Annex I Bird Species
Golden Plover	*Pluvialis apricaria*	19/02/2023	Wildlife Acts || EU Birds Directive >> Annex I; Annex II, Section II; Annex III, Section III || Birds of Conservation Concern - Red List

Scientific name	Common Name	Date of last record	Status
Grey Heron	*Ardea cinerea*	06/03/2022	Wildlife Acts || EU Birds Directive
Grey Plover	*Pluvialis squatarola*	18/02/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Herring Gull	*Larus argentatus*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Red List
Hooded Crow	*Corvus cornix*	20/06/2020	Wildlife Acts || EU Birds Directive
House Martin	*Delichon urbicum*	19/06/2016	Wildlife Acts || Birds of Conservation Concern - Amber List
Kestrel	*Falco tinnunculus*	26/06/2022	Wildlife Acts || Birds of Conservation Concern - Amber List
Linnet	*Carduelis cannabina*	15/05/2022	Wildlife Acts || Birds of Conservation Concern - Amber List
Meadow Pipit	*Anthus pratensis*	15/05/2022	Wildlife Acts || EU Birds Directive
Northern Wheatear	*Oenanthe oenanthe*	19/03/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Red Knot	*Calidris canutus*	18/02/2023	Wildlife Acts || Birds of Conservation Concern - Red List
Ringed Plover	*Charadrius hiaticula*	19/03/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Rock Pipit	*Anthus petrosus*	05/05/2023	Wildlife Acts || EU Birds Directive
Rook	*Corvus frugilegus*	19/06/2016	Wildlife Acts || EU Birds Directive
Turnstone	*Arenaria interpres*	12/12/2017	Wildlife Acts || EU Birds Directive
Oystercatcher	*Haematopus ostralegus*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Redshank	*Tringa totanus*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Red List
Shelduck	*Tadorna tadorna*	19/02/2023	Wildlife Acts || Birds of Conservation Concern - Amber List
Snipe	*Gallinago gallinago*	19/02/2023	Wildlife Acts || EU Birds Directive >> Annex II, Section I; Annex III, Section III || Birds of Conservation Concern - Amber List
Starling	*Sturnus vulgaris*	26/08/2019	Wildlife Acts || Birds of Conservation Concern - Amber List
Swift	*Apus apus*	19/06/2016	Wildlife Acts || Birds of Conservation Concern - Amber List
Sand Martin	*Riparia riparia*	09/11/2022	Wildlife Acts || Birds of Conservation Concern - Amber List
Sandwich Tern	*Sterna sandvicensis*	24/07/2019	Wildlife Acts || EU Birds Directive >> Annex I || Birds of Conservation Concern - Amber List

Scientific name	Common Name	Date of last record	Status
Sky Lark	*Alauda arvensis*	15/05/2022	Wildlife Acts || Birds of Conservation Concern - Amber List
Stonechat	*Saxicola torquata*	19/02/2023	Wildlife Acts || EU Birds Directive
Teal	*Anas crecca*	18/02/2023	Wildlife Acts || EU Birds Directive >> Annex II, Section I; Annex III, Section II || Birds of Conservation Concern - Amber List
Whimbrel	*Numenius phaeopus*	30/04/2020	Wildlife Acts || EU Birds Directive
Wigeon	*Anas penelope*	18/02/2023	Wildlife Acts || EU Birds Directive >> Annex II, Section I; Annex III, Section II || Birds of Conservation Concern - Amber List
Terrestrial Invertebrates			
Marsh Fritillary[3]	*Euphydryas aurinia*	04/06/2017	EU Habitats Directive: Annex II || Threatened Species: Vulnerable
Invasive Species			
Common Cordgrass	*Spartina anglica*	16/09/2023	High Impact Invasive Species || Regulation S.I. 477 (Ireland)
Common Broomrape	*Orobanche minor*	15/06/2022	Medium Impact Invasive Species
European Rabbit	*Oryctolagus cuniculus*	31/03/2015	Medium Impact Invasive Species

[3] Devil's-bit scabious (*Succisa pratensis*) was recorded within the NBDC polygon for the site and is the host plant of Marsh Fritillary.

4.0 RECOMMENDATIONS

Based on the information collected during the field survey and desk study, the following recommendations are made:

- Fáilte Ireland should support initiatives that aim to enhance dune conservation efforts and engage with local authorities (Waterford Co. Co.), local conservation groups (e.g. Tramore Eco Group) and EPA research projects in advocating for policies that protect and preserve sand dunes.
- The construction of a formal path from car park to lead visitors along already established walking route would help reduce habitat degradation adjacent to the path. The replacement and extension of the old boardwalk (displayed in Plate 3.4) should be considered, as this would create a path with a clear boundary between it and the surrounding habitats. This would allow for the restoration of the surrounding dune habitat. Visitors should be directed along designated paths and discouraged from venturing into the dunes using both signage and fencing. The existing damaged fencing should be removed.
- There is limited signage at the site and the signage that is present is generally instructional, without providing reasons and justification. Where instructional signage is being implemented, teleological signage (signage with instruction and justification for the instruction) should be used.
- A formal path with signage and way markers should be constructed to direct visitors to Tramore Nature Park from the car park. Some informative signage relating to the ruins should also be considered.
- Tramore is a popular location for dog walking – this is detailed further Appendix A. Signage indicating that dogs should remain on a lead should be provided by the salt marsh, given that this area is of value to wetland and waterbirds for feeding, and in the dunes, as this habitat supports ground-nesting birds.

5.0 REFERENCES

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APPENDIX A
Fáilte Ireland Visitor Characterisation Surveys

Tramore Beach & Dunes – Visitor Monitoring Assessment

August 2024

Contents

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).

Visitor Characterisation Survey Methodology:

In line with the methodology used in 2021 and 2022, the following visitor characterisation surveys were undertaken to supplement the monitoring undertaken by ROD at the Tramore Beach and Dune site:

• Visitor Characterisation Surveys

The visitor characterisation surveys were undertaken at Tramore Beach and Dunes on the 5th of June (Wednesday) 2024 and 16th August (Friday) 2024. The surveys were undertaken using one surveyor to gauge typical visitor usage and behaviours over the survey periods. The surveys were undertaken towards the eastern edge of Tramore beach at the narrow point 'the neck' of the dunes system adjacent to the rock armour giving a good vantage point of observing activities along beach, access to the rear of the Burrows and activity within the dune system itself (See Plate 1 below).

Plate 1: Visitor Monitoring Survey undertaken from point as indicated below:

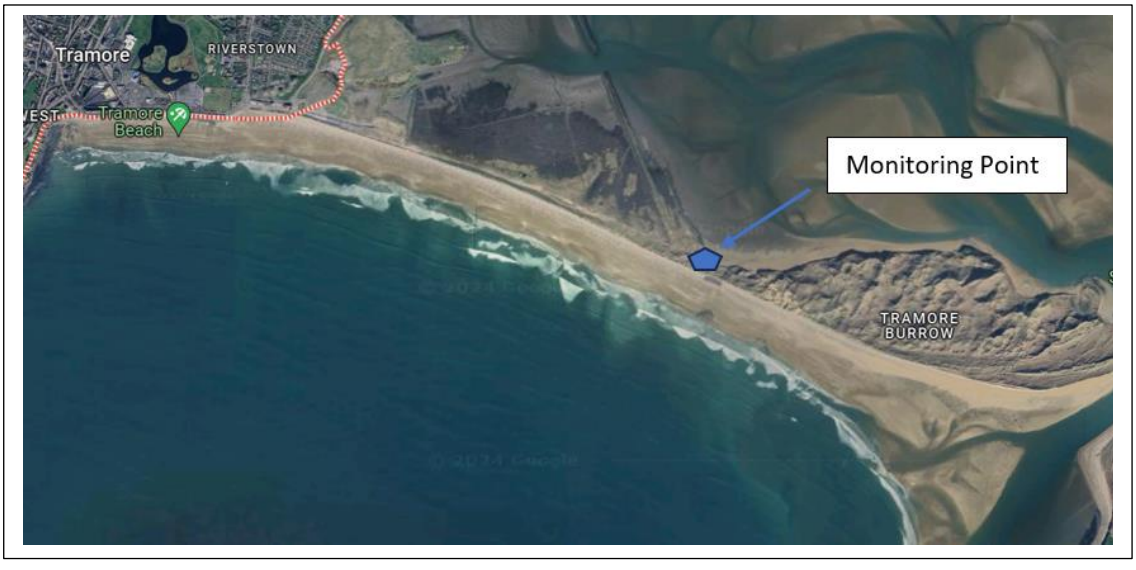

Plate 2 below indicates the 3 main movement areas within the beach system observed on site:

- A – Walking running along the established track to the rear of the beach;
- B – Walking running along the heavily braided tracks within the dune system; and
- C – Walking, running, swimming etc.. along the beach

Plate 2: Main visitor movements direction of movement (A, B and C)

Plate 3: Main visitor movements direction of movement (A, B and C) [Image looking westwards towards Tramore]

The weather during site survey 5th of June 2024 comprised a dry, bright and blustery day. Similarly, the survey undertaken on the 16th of August was dry and bright becoming windy and colder towards the end of the survey. 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

• Use of Available Interpretive Signage

Results:

Visitor Characterization Survey:

The visitor monitoring survey on the 5th of June 2024 from 13.30 to 15.30 recorded a total of 57 No. visitor groups comprising 88 No. Individuals. This site during the survey period was most popular amongst the 'individual adult' group closely followed by the 'couple' group. The following activities undertaken during the survey (listed in order of occurrence rate):

- Walking, running or cycling on paths, marked trails or hard surfaces;
- Walking, running or cycling in mown grass, managed grassland or level sand;
- Any Movement leaving an existing trail or marked path;
- Sitting on benches, walls, mown grass, sand;
- Swimming, sailing, surfing, kayaking in wate; and
- Disturbance of Wildlife;

The visitor monitoring survey on the 16th of August 2024 from 12.30 to 14.30 recorded a total of 44 No. visitor groups comprising 83 No. Individuals. This site during the survey period was most popular amongst the 'individual adult' group followed by the 'elderly couple', 'family' 'mixed small group' and 'couple' groups. The following activities undertaken during the survey (listed in order of occurrence rate):

- Walking, running or cycling on paths, marked trails or hard surfaces;
- Walking, running or cycling in mown grass, managed grassland or level sand;
- Any Movement leaving an existing trail or marked path; and
- Disturbance of Wildlife;

Prevalence of Group Type

Figure 1 presents the prevalence of group types observed visiting the site, either without a dog or with a dog during the survey period on the 5th of June 2024. 'Individual Adult' made up the largest proportion of group type with 32% of visitor groups observed. The second largest group type was 'couple' with 35%. The third largest was the 'individual elderly' group type with 15%. The remaining group types observed in order of prevalence were 'small adult group', 'elderly couple', 'mixed small group' and 'Under 18'. All group types to varying degrees included a dog. The 'individual adult' and 'small adult' group types were most popular with for dogs with 5 and 3 groups respectively including dogs. All Seven groups, when observed, included several dogs that were off the lead with the 'Individual Adult' highest with four groups observed with dogs off lead.

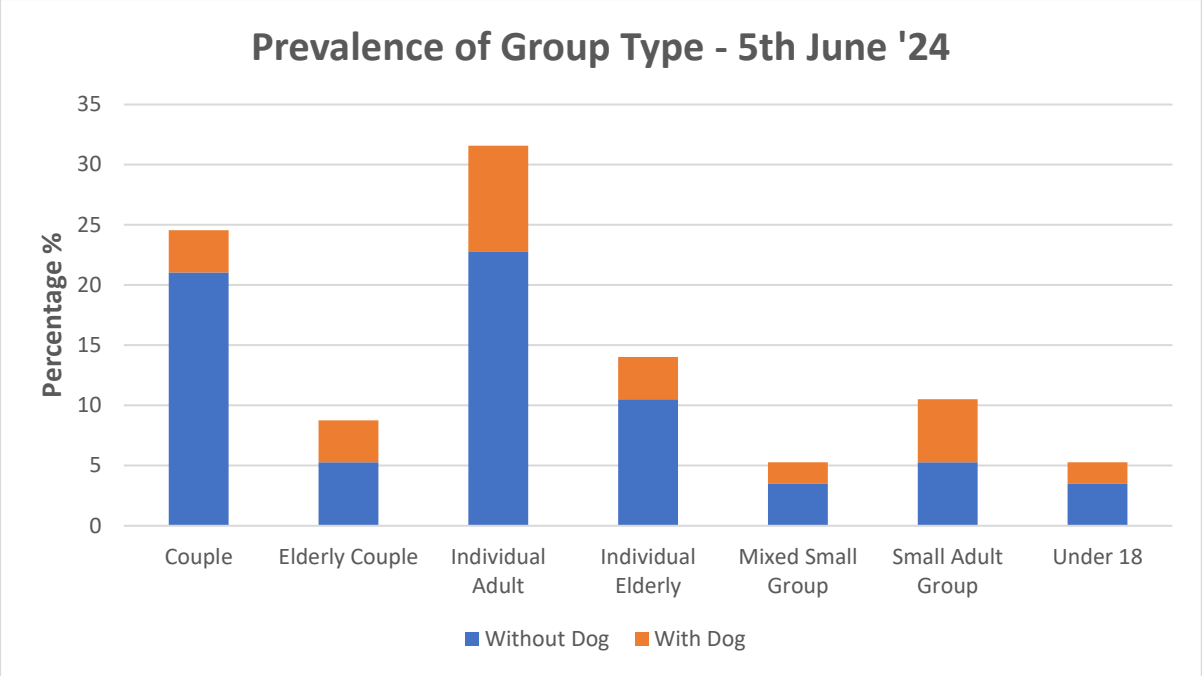

Figure 1: Prevalence of Group Type – 5th June 2024

Figure 2 below presents the prevalence of group types observed visiting the site, either without a dog or with a dog during the survey period on the 16th of August 2024. 'Individual Adult' made up the largest proportion of group type with 41% of visitor groups observed. The following 4 groups were all similarly sized with the second largest group type 'elderly couple' comprising 14% closely followed by the 'couple' and 'mixed small group' both recorded at 12%. The entire 'elderly couple group' were observed to be accompanied by dogs, with dogs being also very popular with the 'Individual Adult' group. All Seven groups, when observed, included several dogs that were off the lead with 79% of all dogs recorded as off their leads.

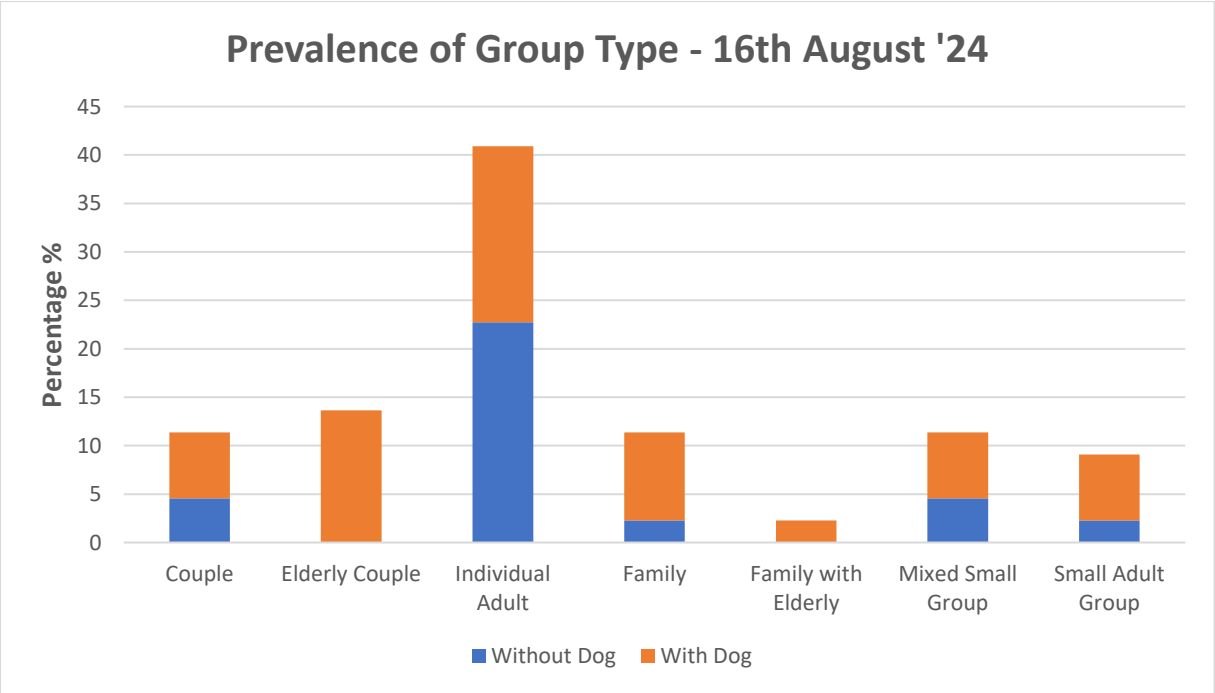

Figure 2: Prevalence of Group Type – 16th August 2024

Prevalence of Transport Type

Walking was the only mode of transport observed. For these visitor groups that arrived on foot, it should be considered that the surveyors were observing from the beach & dunes and that a large number of visitors were likely to have arrived by car and continued their journey on foot from the carpark. The closest carpark is approximately 1.25km to the west of the survey site.

Activity Levels

Figure 3 presents the activity levels at Tramore Beach during the 5th of June survey. A sample of 57 visitor groups' activities were observed. The results from this are shown below in Figure 2. Activity categories are detailed in Appendix I. Activities such as Walking, running or playing on level sands is a low-level activity, whereas disturbing wildlife and picking herbaceous vegetation are considered high level activities. 81% of the activities observed at Tramore Beach were considered low level activities. The medium level activities comprised 18% and related to 'Any Movement leaving an existing trail or marked path' which related to generally walking in the dune system outside of established tracks. The high-level activities observed included Disturbance of birds observed being chased by dogs off leads

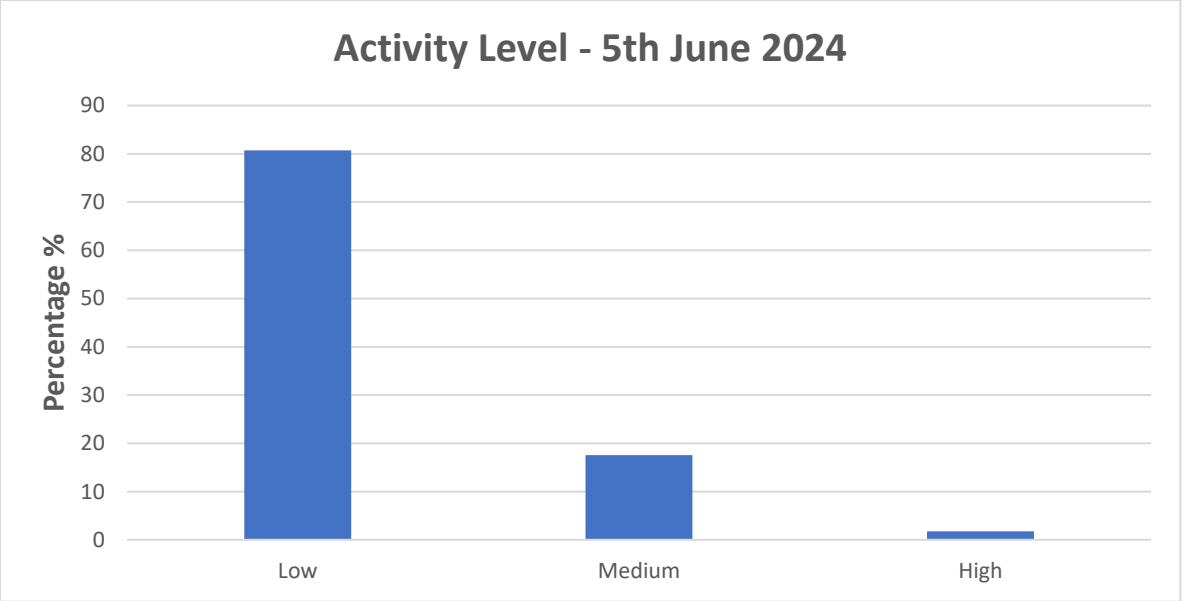

Figure 3: Activity Level – 5th June 2024

Figure 4 presents the activity levels at Tramore Beach during the 16th of August survey. A sample of 44 visitor groups' activities were observed. The results from this are shown below in Figure 4. Activity categories are detailed in Appendix I. Activities such as Walking, running or playing on level sands is a low-level activity, whereas disturbing wildlife and picking herbaceous vegetation are considered high level activities.

77% of the activities observed at Tramore Beach were considered low level activities. The medium level activities comprised 20% and related to 'Any Movement leaving an existing trail or marked path' which related to generally walking in the dune system outside of established tracks. Again, the high-level activities observed included disturbance of birds observed being chased by dogs off leads (1 No. recorded).

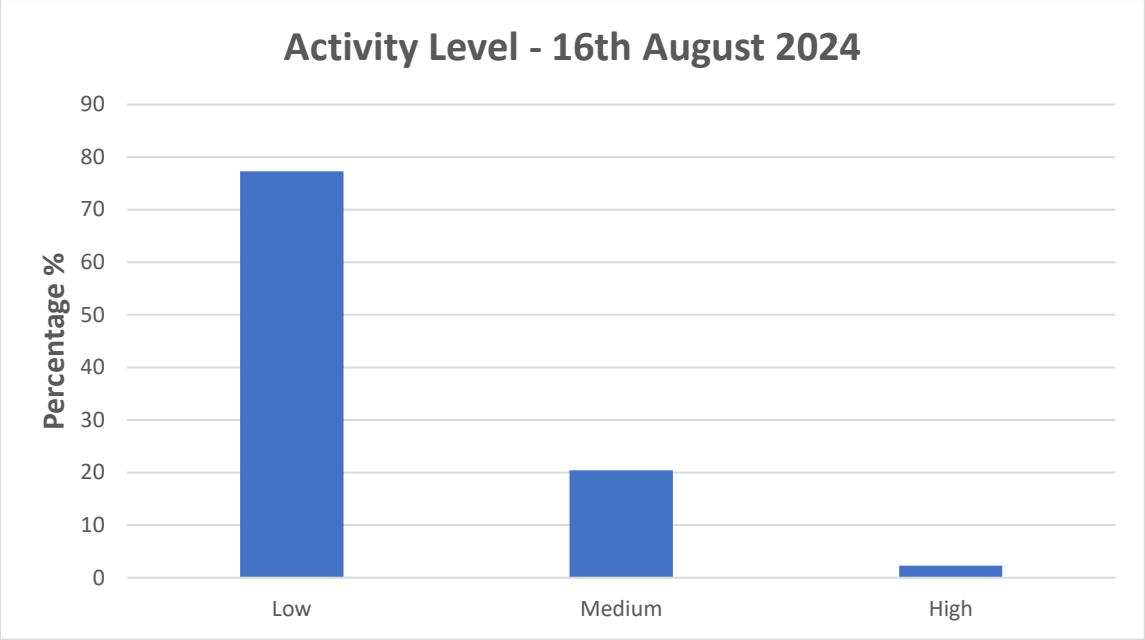

Figure 4: Activity Level – 16th August 2024

Impact Severity Levels

Figure 5 presents the impact severity level observed at the site during the 5th of June survey. A sample of 57 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. The survey found that 81% of the activities observed had low level impact severity on the site. Low level includes no effects, desire lines on grassy and leafy vegetation and temporary disturbance of wildlife. 19% had a medium level of impact severity, medium level includes disturbance of wildlife and desire lines or tracks visible outside of existing trail or marked path.

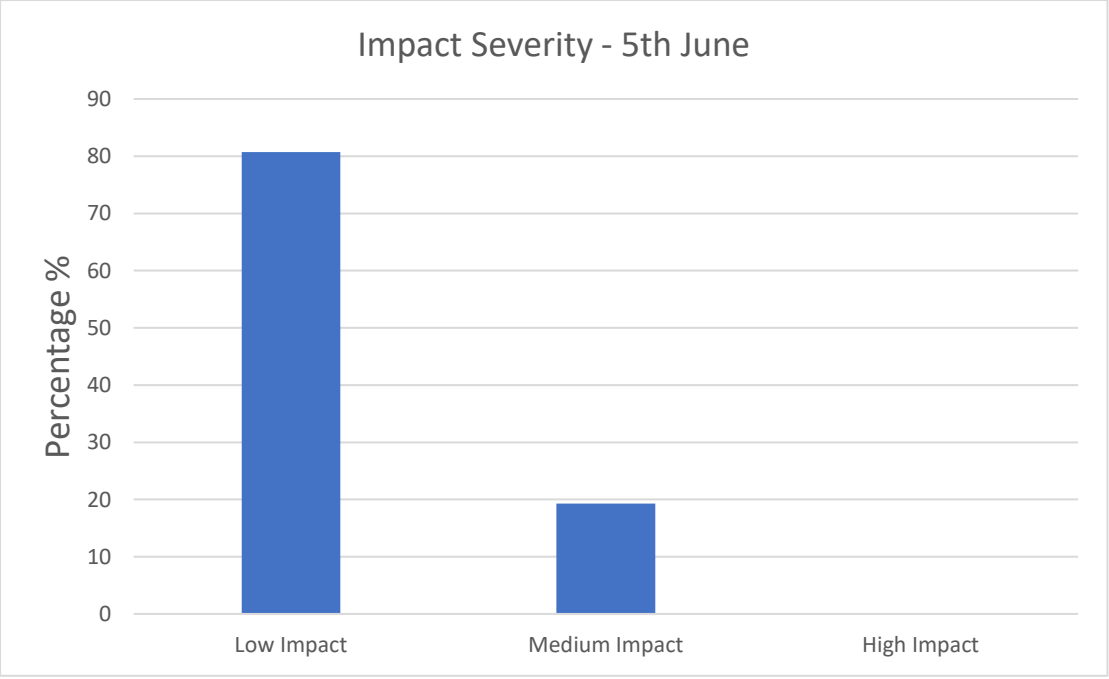

Figure 5: Impact Severity Levels – 5th June '24

Figure 6 presents the impact severity level observed at the site during the 16th of August survey. A sample of 44 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. The survey found that 77% of the activities observed had low level impact severity on the site. Low level includes no effects, desire lines on grassy and leafy vegetation and temporary disturbance of wildlife. 23% had a medium level of impact severity, medium level includes disturbance of wildlife and desire lines or tracks visible outside of existing trail or marked path.

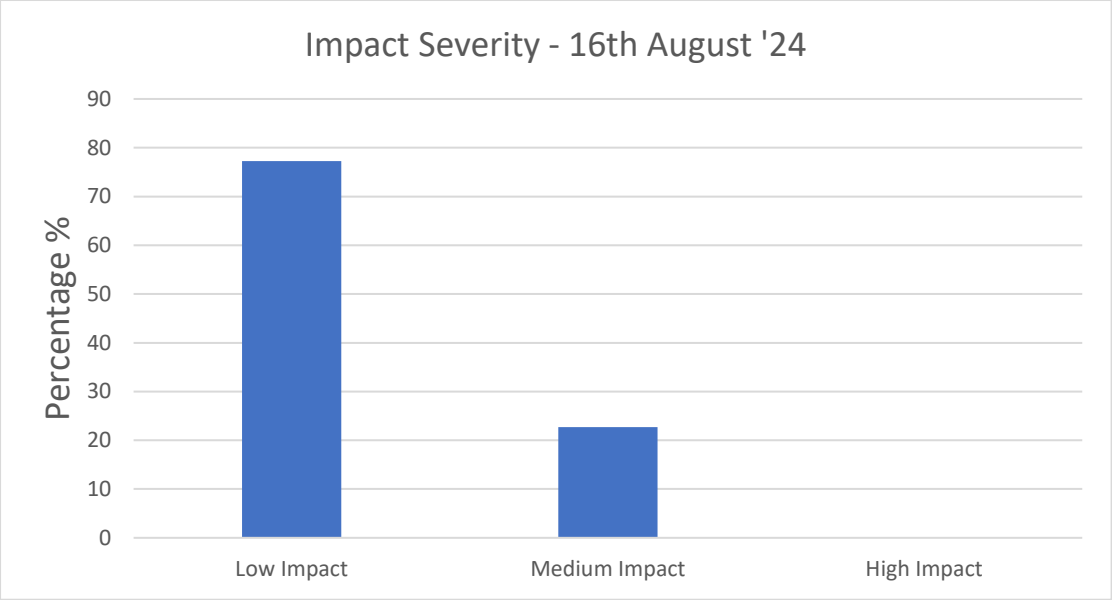

Figure 6: Impact Severity Levels – 16th August '24

Observations:

From observation of users, it is clear that Tramore Beach and the 'loop walk' extending around the back of the dunes to the "Back Strand" is a very popular amenity to both residents and holiday makers alike. As detailed above, the route is also very popular with dog walkers and disturbance to bird species was observed by dogs off their lead during both survey periods.

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

Fáilte Ireland
Turasóireacht Náisúnta
An tÚdara Eorbartha
National Tourism
Development Authority