2017 Further Monitoring Report Wild Atlantic Way Monitoring A Report prepared for Fáilte Ireland

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November 2017







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Chapter 1 Introduction

The Wild Atlantic Way is located along the west coast of Ireland which contains Ireland's largest concentrations of sites that are designated for protection under the Habitats Directives.

A Strategic Environmental Assessment and an Appropriate Assessment [of effects on designated sites] pointed to the need to monitor the effects of the implementation of the Wild Atlantic Way Operational Programme – to ensure that unintended adverse effects would be identified and avoided. The monitoring also serves the purpose of establishing a baseline of existing effects – to help to identify any effects of increases or changes of effects due to the gradual establishment of the Wild Atlantic Way.

Survey work was carried out in 2016 which demonstrated that existing patterns of visitor activity generally cause very low levels of effect on the environment. However, the survey work did establish that there are some areas where impacts do occur.

This report investigates the likely causes of effects that were recorded by monitoring of visitors and ecological assessments at Discovery Points along the Wild Atlantic Way. The survey work in 2016 examined sites and their contexts – first to establish patterns of visitor activity and second to examine ecological condition/effects in areas found to have been frequented by visitors.

The report concentrates on sites where High Levels of Impact [Category 3] were recorded at least once.

This report seeks to outline further action to support sustainable tourism within the receiving environment. It is supported with ecological surveys and visitor monitoring of the sites carried out in 2016.

This report is an account of site visits to eight signature WAW sites. A brief site description is followed by an overview of the current and potential impacts at each site. Each of the sites visited was a tourism/recreation attraction prior to the development of the Wild Atlantic Way. As a result, many of the impacts identified have been developing over many years of visitor use. These impacts are from ongoing and pre-existing environmental impacts such as erosion and habitat development, impacts from agriculture and tourism/recreation impacts.

The objective of this report is to identify and report on where future management action will be needed to address existing and emerging visitor or other impacts. Further, more detailed discussion of management plans will be outlined in a subsequent report.

Note: It should be noted where recommendations are executed by the relevant authority at site level as a result of this monitoring programme that compliance with Article 6 (3) of the Habitats Directive must be adhered to.

Chapter 2 Survey Methodology

All sites were visited by the author, Dr Ken Boyle, who has experience in the assessment of visitor impact assessment on soils and vegetation. An assessment of the range of recreation impacts was made at each site. This was done by walking the site with reference to surveys undertaken on visitor behaviour at the sites and on ecological monitoring of the sites.

The objective of assessing recreation impacts is to determine what the extent of such impacts are, the likely development of such impacts over time and the vulnerability of the sites and vegetation/habitat types to particular recreation activity. Over time such data will allow any management activities to be directed effectively.

Where there is evidence of natural processes causing erosion or recreation pressures compounding damage from natural processes these are identified. As some of the sites are grazed or are access points to agricultural lands these multiple uses are noted. The purpose of this survey was to establish categories of damage, natural erosion, vegetation trampling, vegetation loss, soil erosion and identify likely drivers of this damage. Impact levels were categorised as shown in below.

Low Impact (Category 1)	No impact or a discernible impact i.e. no significant, lasting damage is identified
Medium Impact (Category 2)	A short term, reversible effect that is intermittent but will have no significant, long term impact
High/Severe Impact (Category 3)	Severe effect that has potential to have a significant, long-term, irreversible or permanent impact

The work is a scoping assessment, the results of which will facilitate more focused damage assessment and site monitoring which in turn could inform any management plans that are developed in the future.

A sketch map of the sites was used to locate general recreation activities. In addition, an assessment was made of the vulnerability of vegetation to damaging activities, fire, contamination and disturbance. Photographs were taken to illustrate particular damage and to assist in interpretation of the levels of damage to vegetation, soils and habitats at each of the sites.

Sites where High Levels of Impact [Category 3] were recorded at least once were:

- Lisfannon beach, Co Donegal
- Rossguill, Co Donegal
- Castlegregory Beach, Co Kerry
- Mt Brandon, Co Kerry
- Rossbeigh Strand, Co Kerry
- Dooneen, Co Cork
- Barley Cove, Co Cork
- Dursey Sound (formerly referred to as Garnish Point), Co Cork

Chapter 3 Survey Results 3.1 Lisfannon Beach, Co Donegal

Landscape Type: Soft shore/beach

Site Description

The site comprises a sandy beach and narrow dune system with a small freshwater wetland to the landward side and on the shores of Lough Swilly. The Blue Flag Beach is an important local recreational amenity and attracts day-trippers from Derry City.



Figure 3.1 Location, *, of Lisfannon beach, Co Donegal

The site is part of an area designated as a Natural Heritage Area (NHA) and is an important wetland area for birds. The dune system and wetlands are relatively young, mapping indicates the site evolved rapidly in the 20th century from sand flats to dunes and saltmarsh. The dunes system is still evolving and growing.

Car parking, public toilets and litter bins are provided at the site. Signage at the site includes safety notices, Blue Flag water quality data and interpretative signage outlines the geomorphology of the site, historic connections of the site to John Newton (composer of 'Amazing Grace').

The access road allows cars to park to the rear of the dune system and give visitors immediate access to the beach.

The site was visited on 31st May, 2017. The site was inspected on foot. The survey consisted of walking through the dunes, dune slack, salt marsh and wetland to the south of the site entrance, noting damage to vegetation/soils and identifying potential vulnerabilities to the vegetation and habitats. These areas are indicated in Figure 3.2 below. The field notes were supported with photography to illustrate particular states of soils, habitats and vegetation.



Figure 3.2 Map of Lisfannon beach showing 1 Car park, 2 Dune ridge, 3 Marram dunes, 4 Salt marsh and wetland, beach

Impacts identified

The site can be divided into 5 areas of recreation use and activity. See Figure 3.2

- 1 The car park, access road. Located in this area are signage, interpretative material, litter bins and toilets. The entrance from the R238 is the only access point to the site. Visitors to the site access the beach from the car park or access road. A short, (approx. 2m) wooden track guides visitors from the northern end of the car park to the beach.
- 2 A narrow dune ridge that runs north south between the access road and the beach. There are several trails through these dunes onto the beach. Vegetation along these access tracks is resistant to trampling.
- 3 The marram, fore-dunes. This line of developing dune habitat is particularly vulnerable to erosion by trampling of the vegetation and sand is exposed at intervals along this line of dunes.
- 4 Saltmarsh and freshwater wetland to the east of the access road. There is little evidence of damage to vegetation in these habitats. A track runs along the boundary between this area and the dunes to its western fringe.
- 5 The beach. Walking and swimming are the key activities here. Recreation impacts are to the dunes. Walking with dogs will cause disturbance to feeding waders in the winter months.

It should be noted that some of the erosion caused in the dunes may be the result of storm surges leading to an inundation of the dune slack area with seawater. There is evidence for this in the accumulation of dried seaweed and other debris in parts of the habitats to the rear of the dunes. In these sites fast-flowing water has cut erosion channels in the vegetation and sandy soil.

Vulnerability of habitats/vegetation

Dunes/Beach	
Damage	Trampling of vegetation, exposure of soil/sand, vulnerable to foot traffic, fore-
	dunes the most vulnerable.
	Storm surges or high tides may lead to incursion of seawater into dune slacks on
	landward side of dunes
Contamination	Very low levels of litter throughout dune systems but litter unlikely to cause
	damage to these habitats.
	Dog fouling may lead to localised nutrient enrichment as well as a hazard to users
Fire	Dune vegetation, in particular marram grass, is particularly vulnerable to fire.
	Accidental fire is a possibility. Three fire sites identified in site visit in June.
Disturbance	Walking dogs along beach may lead to disturbance of feeding waders.

Table 3.1 Vulnerability of dune/beach habitats at Lisfannon

Table 3.2 Vulnerability of saltmarsh habitat at Lisfannon

Saltmarsh		
Damage	While some tracks are evident along the margins of the saltmarsh the vegetation	
	is robust/resilient and traffic across the area is probably low.	
Contamination	Contamination Very occasional littering. Some debris carried in on high tides.	
Fire	Fire No evidence of fire and vegetation robust	
Disturbance	Disturbance Birds using the saltmarsh may be disturbed by walkers/dogs but	
	as already noted there is limited recreation activity in this habitat and evidence	
	suggest it is limited to a track on the margins of the site.	



Figure 3.3 Well demarcated track in the dune slacks at the south of the Lisfannon beach



Figure 3.4 Eroding vegetation and exposed sand in the dune slack area, Lisfannon; Some of this erosion may be caused by seawater incursions at high tides or in storm surges



Figure 3.5 Site of fires adjacent to dune vegetation, Lisfannon



Figure 3.6 Erosion of dune vegetation at access to Lisfannon beach from car park.

Key Impact Observations

From the assessment of the site the following issues are prevalent on site:

• Trampling of vegetation, localised erosion of soil, fire threats to dune vegetation, localised littering and dog fouling.

Recommended actions to address specific effects of recreation at the site are outlined in Table 3.3 below

Area	Dunes/	'Beach
Threat	Specific Effect	Action Recommended
Damage	Trampling of vegetation, exposure of	Monitoring the number and width of
	soil/sand, vulnerable to foot traffic,	tracks from the access road to the
	fore-dunes the most vulnerable.	beach would provide an indication of
	Storm surges or high tides may lead to	levels of damage to the marram dunes
	incursion of seawater into dune slacks	in particular. This data could be
	on landward side of dunes	gathered on an annual basis to
		identify trends and the threat of more
		extensive vegetation and soil loss.
Contamination	Very low levels of litter throughout	Visitor information at access points to
	dune systems but litter unlikely to cause	the site on control of dogs and threats
	damage to these habitats.	posed by dog fouling
	Dog fouling may lead to localised	
	nutrient enrichment as well as a hazard	
	to users	
Fire	Dune vegetation, in particular marram	Visitor information on threat of fire to
	grass, is particularly vulnerable to fire.	the habitats.
	Accidental fire is a possibility. Three fire	Consideration of provision of
	sites identified in site visit in June.	barbeque sites
Disturbance	Walking dogs along beach may lead to	Visitor information on threats to
	disturbance of feeding waders.	birds, this is seasonal and restricted to
		key areas on site

Table 3.3 Recommended actions to address specific effects of recreation at Lisfannon

3.2 Rossguill, Headland, Co Donegal

Landscape Type: Coastal, montane

Site description

The Discovery point is a layby on the road that can accommodate about 10 cars. It overlooks the Sheephaven and Mulroy Bays. The headland below the layby is of heather on a shallow peat soil.



Figure 3.7 Location * of Rossguill Headland, Co Donegal

To the south of the car park a hill rises steeply. This area is accessible to visitors and may be used to get better views across the headland.

The ground to the south is primarily rocky outcrop with peat and heather.

The site was visited on the 18th August 2017. The survey consisted of a walk along the road and into the habitat noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. Observations were made as field notes on the day of the site visit. See figure 3.8



Figure 3.8 Car park 1 and Area to south of car park 2 at Rossguill Headland

Impacts identified

There are no evident adverse impacts adjacent to the car park. Across the road the steeply sloping ground is a matrix of rock, exposed peaty soil and heather. While there may be some damage from visitors most damage is probably due to soil slip and natural erosion at this point. Grazing from sheep could have contributed to vegetation loss and rainfall to movement of peaty material downhill.

Key Impact Observations

The assessment of the site the following issue is prevalent on the site:

• Erosion to steeply sloping ground above and south of the car park. This erosion is likely driven by natural processes and only marginally influenced by recreation users.

Area	Steeply sloping ground above and south of the car park	
Threat	Specific Effect	Action Recommended
Damage	Erosion to steeply sloping ground above	No action required
	and south of the car park. This erosion is	
	likely driven by natural processes and	
	only marginally influenced by recreation	
	users.	

Table 3.4 Recommended actions to address specific effects of recreation at Rossguill

3.3 Castlegregory Beach, Co Kerry

Landscape Type: Soft shore/beach

Site Description:

Castlegregory beach is located on the northern side of the Dingle peninsula. Figure 3.9. The beach is about 5km in length and accessed via Castlegregory village. This access point is mid-way along the length of the beach. A narrow dune ridge lies between the beach and the hinterland which is generally grassland.



Figure 3.9 Location * of Castlegregory beach, Co Kerry

The car park is surrounded by a low wall with access to the beach on all sides. Toilets litter bins and information boards are located in or adjacent to the car park. The car park can accommodate approx. 30 cars. The site was visited on the 15th June 2017. The survey consisted of walking through the dunes to the east and west of the site entrance, noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. Figure 3.10 identifies the key areas surveyed. The field notes were supported with photography to illustrate particular states of soils, habitats and vegetation.



Figure 3.10 Castlegregory beach, habitats surveyed

The Dingle Way (long distance walking route) runs through Castlegregory on to the beach and west along the beach. The Dingle Way was established about 25 years ago and widely publicised locally and online. The Dingle Way is also identified on the OSI Discovery series 1:50,000 maps of the ingle peninsula.

Impacts identified

Access to the beach is direct from the car park. As a result, there is limited damage to dune vegetation and this is mainly in the vicinity of the car park. An area of fresh marram growth is developing on the eastern side of the car park. This regrowth may reflect the directing of visitors through the access points on the car park wall; this has the effect of directing people on to the beach without walking through dunes.

A 'road'/sandy track runs to the back of the dunes on the eastern side of the car park. This sandy track is used to access grasslands and a horse riding school to the rear of the beach. A number of access/desire lines run from this sandy road through the dunes to the beach.

To the west of the car park are the public toilets. A track crosses the dunes here to the beach and is again used by vehicles to access farmlands to the rear of the beach.

In general impacts from recreation are limited to the vicinity of the car park and may include minor erosion of dunes and littering.

Walking west along the beach there is evidence of erosion of dunes. This erosion is being driven by the sea and may reflect increasing wave and storm energy. There are some measures to stabilise dunes with fencing, bales and rocks along the beach.

Vulnerability of habitats/vegetation

Dunes / beach	
Damage	Trampling of vegetation, exposure of soil/sand, vulnerable to foot traffic,
	fore-dunes the most vulnerable.
	Storm surges or high tides may be contributing to dune erosion along some
	stretches of the beach.
Contamination	Very low levels of litter throughout dune systems but litter, while unsightly,
	is unlikely to cause damage to these habitats.
	Dog fouling may lead to localised nutrient enrichment as well as a hazard to
	users
Fire	Dune vegetation, in particular marram grass, is particularly vulnerable to fire.
	Accidental fire is a possibility.
Disturbance	Walking dogs along beach may lead to disturbance of feeding waders.

Table 3.5 Vulnerability of dunes and beach at Castlegregory



Figure 3.11 Vegetation growing on developing dunes to the east of the car park at Castlegregory beach



Figure 3.12 The sandy track to the rear of the dunes and east of the car park at Castlegregory beach



Figure 3.13 Retaining wall at car park and access track to beach on western side of the car park on Castlegregory beach. Tyre tracks are evident in the foreground. This access is to farmland along the beach.



Figure 3.14 Dune erosion on Castlegregory beach



Figure 3.15 Bales being used to manage erosion of dunes on Castlegregory beach

Key Impact Observations

From the assessment of the site the following issues are prevalent on site.:

- Desire lines through dune ridge, vegetation change in some areas around car park
- Ongoing use of the sandy road to the east of the entrance may be giving rise to a series of tracks through the dune ridge to the beach.
- Dune systems are vulnerable to wind erosion, blowouts, particularly where vegetation cover has been lost.

Area	Dunes/Beach	
Threat	Specific Effect	Action Recommended
Damage	Trampling of vegetation, exposure of soil/sand, vulnerable to foot traffic, fore- dunes the most vulnerable. Storm surges or high tides may be contributing to dune erosion along some stretches of the beach.	Monitoring the number and width of tracks from the access road to the beach would provide an indication of levels of damage to the marram dunes in particular. This data could be gathered on an annual basis to identify trends and the threat of more extensive vegetation and soil loss.
	Desire lines through dune ridge, vegetation change in some areas around car park	
	Visitor access to the site, limited by the walled in car park. Visitors are guided to the beach through the access points	No action needed
	which is effective in limiting damage to dunes at the site. Ongoing use of the sandy road to the east of the entrance may be giving rise to a series of tracks through the dune ridge to the beach.	Limiting car access to land owners only
	Dune systems are vulnerable to wind erosion, blowouts, particularly where vegetation cover has been lost.	An assessment of the network of exposed sand in dunes could facilitate or prioritise the selection of management actions. These could be as simple as signs that identify the importance of the dune habitat and its vulnerability to trampling or the identification of a number of key desire lines and development of a track network

Table 3.6 Recommended actions to address specific threats of recreation at Castlegregory beach

Contamination	Vary low lovals of littar throughout dupa	Visitor information on throats of dag
Contamination	very low levels of litter throughout dune	visitor information on threats of dog
	systems but litter unlikely to cause	fouling to habitats and health with
	damage to these habitats.	provision of bins
	Dog fouling may lead to localised	
	nutrient enrichment as well as a hazard	
	to users	
Fire	Dune vegetation, in particular marram	Visitor information on threats of fire
	grass, is particularly vulnerable to fire.	to the habitat
	Accidental fire is a possibility. Three fire	
	sites identified in site visit in June.	
Disturbance	Walking dogs along beach may lead to	Notices of seasonal threats from dogs
	disturbance of feeding waders.	

3.4 Brandon point, Co Kerry

Landscape type: Coastal, cliff, montane

Site Description:

Brandon Point is the northern point on the peninsula west of Brandon Bay. The main habitats are sea cliffs, grasslands and dry heath. The vegetation on the site is dominated by gorse (*Ulex* spp), with heather, bog cotton and a mix of grasses. Sheep are grazed on the site and the gorse has been burnt in the recent past.



Figure 3.16 Location *of Brandon Point site

A car park at the site accommodates 10/12 cars. There is some interpretative signage and a safety notice at the car park. Access to the site is from the car park, north through a gap in fencing to the cliffs and west over a style and uphill to the WWII observation tower/point that stands on the slope above the car park. The cliff walk is part of a local loop walk, Sli an tSáis (Sauce creek walking trail), that runs from Brandon Village through Brandon point and west along the headland. The route is clearly marked and identified as an easy walking route.

The site was visited on the 16th June 2017. The survey consisted of walking through the site along the cliff and uphill from the car park to the WWII lookout point and on to fence and style about 100m west of the observation point, noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. See figure 3. For location of site elements. The field notes were supported with photography to illustrate particular states of soils, habitats and vegetation.



Figure 3.17 Location of Car park 1, cliff view point 2 and alternative trail to upper part of site 3 at Brandon Point site

Impacts identified

There is marked erosion of vegetation and soils in a few places along the cliff ledges adjacent to the car park. This damage is limited in extent.

A grassy track runs uphill from the car park. In places the track narrows and at these points there is vegetation loss and exposure and erosion of underlying soils.

Approaching the observation tower the track merges with an old green road that continues uphill to a fence on the western perimeter of the site.

Gorse vegetation is prevalent throughout the site and has in the recent past been burnt. This burning may be part of the management of the site for grazing. The presence of sheep on the site may be responsible for many of the minor tracks running through the site in the gorse and heather.

During the site visit a number of chough (*Pyrrhocorax pyrrhocorax*) were observed on the cliffs and in the gorse and heather vegetation on site. Nesting sites for the chough are on cliff ledges and therefor inaccessible to visitors.

The observation tower is in poor condition; a slab of the roofing material has collapsed onto the floor of the building.

Vulnerability of habitats/vegetation

Sea Cliffs		
Damage	Trampling of vegetation, exposure of soil/sand in accessible areas/ledges	
Contamination	Litter currently absent from the site but litter unlikely to cause damage to	
	these habitats.	
Fire	Fire may be threat to heather on the cliff	
Disturbance	Limited disturbance may be experienced by birds on cliff ledges, but these	
	sites are generally inaccessible to visitors.	

Table 3.7 Vulnerability of cliff habitat at Brandon Point

Table 3.8 Vulnerability	y of grassland/dry	' heath at Brandon Po	int

Grassland/dry heath		
Damage	Trampling of vegetation, exposure of soil on sloping ground	
Contamination	Litter currently absent from the site but litter unlikely to cause damage to	
	these habitats.	
Fire	Gorse and heather are both very vulnerable to fire and management of	
	burning on the site would be important.	
Disturbance	Limited disturbance may be experienced by birds in this site	



Figure 3.18 Vegetation loss and soil erosion on cliff ledges at Brandon point, adjacent to the car park



Figure 3.19 Looking east along Green road/track running past observation point at Brandon Point



Figure 3.20 Track running uphill from car park at Brandon Point. As the track narrows soil is exposed



Figure 3.21 Observation building at Brandon point, the roof has collapsed in and the structure is in poor condition

Key Impact Observations

From the assessment of the site the following issues are prevalent on site:

- Erosion of soils and vegetation in limited places on steep track to observation tower
- Erosion of soil and vegetation at informal viewing point adjacent to car park

In the coming years ongoing assessment of the extent of this erosion should be monitored.

Area	Sea cliffs	
Threat	Specific effect	Action recommended
Damage	Trampling of vegetation, exposure of soil/sand in accessible areas/ledges	Surface could be made robust through use of gravel to create a viewing point
Contamination	Litter currently absent from the site but litter unlikely to cause damage to these habitats.	NA
Fire	Fire may be threat to heather on the cliff	Visitor information on threat to habitat
Disturbance	Limited disturbance may be experienced by birds on cliff ledges, but these sites are generally inaccessible to visitors.	NA
Grassland/dry heath		
Damage	Trampling of vegetation, exposure of soil on sloping ground	A 'green road' runs from the car park along the contour and up to the observation tower. This track is still evident and is shown on OS Discovery Map 70. Minor amendments to access from the car park could encourage visitors to use this more robust route and protect soils on the steeper slopes of the site.
Contamination	Litter currently absent from the site but litter unlikely to cause damage to these habitats.	NA
Fire	Gorse and heather are both very vulnerable to fire and management of burning on the site would be important.	Visitor information on threats
Disturbance	Limited disturbance may be experienced by birds in this site	Visitor information on threats

Table 3.9 Recommended actions to address specific recreation impacts at Brandon Point

3.5 Rossbeigh Strand, Co Kerry

Landscape type Coastal, beach, dunes

Site Description:

Rossbeigh beach is located on the 1.5km west of Glenbeigh on the Iveragh Peninsula, Co Kerry. The dune complex and beach is about 4.0 km in length and from 250 to 500m in width extending north into Dingle Bay. A sandy each with shingle runs along the western side of the site and on the eastern side a saltmarsh and mudflats run up to the edge of the dunes.



Figure 3.22 Location * of Rossbeigh site, Co Kerry

A car park, services, toilet block, showers and play facilities are located at the entrance to the beach and dunes. The car park can accommodate a large number of cars and it is possible to drive along the eastern side of the dune complex on an unsurfaced track.

An access point about 100m east of the car park entrance is used by pony trekking groups on a regular basis. This track runs along the eastern flank of the dune system, between the dunes and the saltmarsh and mudflats.

The site was visited on the 22nd June 2017. The survey consisted of walking along the beach through the dune system, saltmarsh and along mudflats noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. The field notes were supported with photography to illustrate particular states of soils, habitats and vegetation.



Figure 3.23 Location of Beach 1, dune complex 2, grasslands 3 and saltmarsh and mud flats 4 at Rossbeigh, Co Kerry

Impacts identified

There is no evidence of damage from recreation activities to the beach along the western side of Rossbeigh strand. Occasional littering on the beach is limited in extent and is clearly managed by the authorities.

The dune systems show evidence of erosion throughout. Tracks run along ridge lines of most dunes in the complex, particularly on the west overlooking the beach. Higher dunes have erosion that results from walking/climbing and play. On the west wind and wave action have breached some of the dunes and caused blowouts.

There is evidence of a large rabbit population in the dunes, droppings and burrows, and some evidence (droppings) that sheep/goats graze in the area on occasions.

Along the east of the dune complex the saltmarsh borders grassland that is accessed by visitors in cars. There is evidence that visitors use this area for picnics, bonfires and barbeques.

A clear route has been established by pony trekking activities along the east of the site over grassland and parts of the salt marsh. This track is generally on relatively robust ground. There was evidence of occasional crossing of the saltmarsh by horses/ponies but this is limited in extent.

During the site visit informal camping was observed at two locations within the dunes.

Vulnerability of habitats/vegetation

Beach	
Damage	None evident
Contamination	Litter would be the main contaminant at the beach, but this is managed
	effectively
Fire	No
Disturbance	Potential disturbance of feeding waders by dogs and walkers

Table 3.10 Vulnerability of beach at Rossbeigh

Table 3.11 Vulnerability of dune complex at Rossbeigh

Dune complex	
Damage	Erosion along many of the dune ridges due to trampling, erosion of flanks of
	larger dunes, a result of play on the dunes. Some blowouts along western side of
	dune complex bordering the beach.
Contamination	Litter is occasional in the dunes. Camping takes place on occasions and the
	campers may use the dunes to go to the toilet.
Fire	Campers may light fires that threaten the marram grass communities.
Disturbance	There is the potential for users of the dunes to disturb ground nesting birds in
	the summer months.

Table 3.12 Vulnerability of saltmarsh and mudflats at Rossbeigh

Saltmarsh and mudflats	
Damage	Limited evidence of occasional incursion by pony trekking. The site is vulnerable to this kind of traffic as the vegetation and soft sand can be easily impacted by hooves.
Contamination	Litter would be the main contaminant, but this is managed effectively
Fire	No

Table 3.13 Vulnerability of Grasslands on east of dune complex at Rossbeigh

Grasslands on east of		
dune complex		
Damage	Tracks from pony trekking but limited in extent	
Contamination	Contamination Litter, but this is managed effectively	
Fire	Evidence throughout the grasslands of bonfires and barbeque sites, these	
	do little damage to the grasses but if adjacent to dunes may cause some	
	burning of marram grasses in high summer	
Disturbance	Limited in this area. Car traffic and walkers are at a distance from the	
	saltmarsh and mudflats.	



Figure 3.24 Blowout fronting beach at Rossbeigh



Figure 3.25 Blowouts in the dune system at Rossbeigh, these could derive from eroded dune ridges



Figure 3.26 Three fire sites in the dunes



Figure 3.27 Fire in grassland within dunes



Figure 3.28 Shoe marks from pony trekking in salt marsh



Figure 3.29 Exposed sand along flank of dune ridge



Figure 3.30 Network of trails through dunes and on to beach at Rossbeigh



Figure 3.31 Details of trails through dunes at Rossbeigh, grass eroding and giving way to exposed sand particularly on sloping ground



Figure 3.32 Multiple fire sites at parking and picnic area within the dunes at Rossbeigh

Key Impact Observations

From the assessment of the site the following issues are prevalent on site:

- Erosion is extensive along dune ridges, impromptu camp fires/barbeques are potential threat to dune vegetation,
- Impacts to vegetation and soils throughout the site could be limited with actions outlined in Table 3.14

Specific area	Dunes complex		
Threat	Specific effect	Action recommended	
Damage	Erosion along many of the dune ridges due	Provision of information on	
	to trampling, erosion of flanks of larger	vulnerability of dunes to	
	dunes, a result of play on the dunes. Some	trampling, closure of trails on a	
	blowouts along western side of dune	temporary basis to allow	
	complex bordering the beach.	recovery	
Contamination	Litter is occasional in the dunes. Camping	Information on vulnerability of	
	takes place on occasions and the campers	dunes to contamination	
	may use the dunes to go to the toilet.		
Fire	Campers may light fires that threaten the	Information on vulnerability to	
	marram grass communities.	fire damage	
Disturbance	There is the potential for users of the dunes	Information to visitors on	
	to disturb ground nesting birds in the	threats to birds seasonally	
	summer months.		
Beach			
Damage	None evident	No action needed	
Contamination	Litter would be the main contaminant at the	No further action	
-	beach, but this is managed effectively		
Fire	No	No action needed	
Disturbance	Potential disturbance of feeding waders by	Information to visitors on a	
	dogs and walkers	seasonal basis	
Saltmarsh and			
mudflats			
Damage	Limited evidence of occasional incursion by	Liaison with pony trekking	
	pony trekking. The site is vulnerable to this	organisers to identify	
	kind of traffic as the vegetation and soft sand	vulnerability of the site	
Contonination	can be easily impacted by nooves.		
Contamination	Litter would be the main contaminant, but	NA	
Fire		NA	
File Grasslands on			
Grassianus on			
Damage	Tracks from pony trakking but limited in	No action needed	
Damage	extent		
Contamination	Contamination Litter but this is managed	NA	
	effectively		
Fire	Evidence throughout the grasslands of	Information to visitors on	
	bonfires and barbeque sites, these do little	threat to habitats from fire.	

Table 3.14 Recommended actions to address specific recreation impacts at Rossbeigh

	damage to the grasses but if adjacent to dunes may cause some burning of marram	consideration to the provision of barbeque sites
	grasses in high summer	
Disturbance	Limited in this area. Car traffic and walkers	NA
	are at a distance from the saltmarsh and	
	mudflats.	

3.6 Dooneen, County Cork

Landscape type Coastal, rocky shore, low cliffs

Site description

The Wild Atlantic Way point at Dooneen is at an abandoned copper mine. The site is 1.3km northwest of Allihies village in County Cork. The car park at the site can accommodate five / six cars at most and is bounded by a low stone wall. Spoil from the mine and a network of tracks throughout the site cut through the vegetation of dry heath and grasslands. The site is of limited extent, about 130m in length and 60m in depth, bordered by the R575 road.



Figure 3.33 Location * of Dooneen site

The site was visited on the 25th July 2017. The survey consisted of a walk through the headland noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. The field notes were supported with photography to illustrate particular states of soils, habitat and vegetation.



Figure 3.34 Location of Car park 1 and headland with dry heath and mine spoil 2 at Dooneen, Co Kerry

Impacts Identified

Impacts due to visitor trampling and associated erosion are difficult to disentangle from the effects of mine spoil on vegetation growth and soil development at the site. However, on a walk through the site the exposed soil is clearly vulnerable to erosion from trampling and visitor movement is clearly on some of these tracks that allow access to the coast/cliff edges. The network of tracks and exposed soil/spoil is in turn vulnerable to erosion from rainfall and water runoff on the sloping ground.

There is no evidence of grazing on the site.

Vulnerability of habitats/vegetation

Coastal heath and		
mine spoil		
Damage	The exposed soils/spoil and vegetation is vulnerable to trampling. Foot	
	traffic on the soil has created a network of tracks through the site and these	
	are further eroded by rain and water runoff.	
Contamination	N/A	
Fire	Dry heath vegetation may be vulnerable to fire but threats are not evident.	
Disturbance	N/A	

Table 3.15 Vulnerability of Coastal heath and mine spoil at Dooneen



Figure 3.35 Network of tracks, exposed spoil and vegetation at Dooneen



Figure 3.36 Deeply eroded gully at Dooneen, rain, running water and trampling

Key Impact Observations

From the assessment of the site the following issues are prevalent on site:

- Erosion due to walking and runoff from rainfall
- The site is small and dominated by the spoil of an abandoned copper mine.
- A network of tracks crosses the site from the car park/observation point to the cliff edges.
- Due to the coarse texture of the soils and spoil the material is transported by running water, (rain runoff) and tracks in places have become gullies.

Area	Coastal heath and mine spoil	
Threat	Specific effect	Action recommended
Damage	The exposed soils/spoil and	To limit erosion on the site it
	vegetation is vulnerable to	may be necessary to develop a
	trampling. Foot traffic on the	viewing platform that contains
	soil has created a network of	visitor movement.
	tracks through the site and	
	these are further eroded by rain	
	and water runoff.	
Contamination	N/A	
Fire	Dry heath vegetation may be	NA
	vulnerable to fire but threats on	
	the site are not evident.	
Disturbance	N/A	

Table 3.16 Recommended actions to address recreation impacts at Dooneen

3.7 Barley Cove, Co Cork

Landscape type Coastal, Beach, sand dunes

Site description

Barley Cove is on the Mizen Peninsula about 5km southwest of Goleen, County Cork. It comprises an exposed southwest facing sandy beach and associated dune system.



Figure 3.37 Location * of Barley Cove, Co Cork

A car park accommodates over 20 cars and this is the primary access point to the beach. Access to the beach is via a wooden walkway across grassy dune slacks. A floating pontoon/ bridge allows access to the beach at the rear of the dune system. Walkers then cross the dunes via a series of tracks to the southwest facing beach.

The site was visited on the 15th August, 2017. The survey consisted of a walk through the dune slack adjacent to the car park to the beach on and off walkways and through the dune system noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. The field notes were supported with photography to illustrate particular states of soils, habitats and vegetation.



Figure 3.38 Location of Car park 1, access path and grasslands 2, pontoon access 3, dunes 4 and beach 5 at Barley Cove, Co Cork

Impacts identified

From the car park to the pontoon visitors are guided via a wooden walkway. This limits damage to the grasslands to the edges of the walkway which are occasionally eroded. Some or all of this erosion may predate the installation of the walkway.

The grasslands are grazed by rabbits, no evidence of sheep grazing though at the time of site inspection though this may occur at other times of the year.

Away from the walkway erosion of the grasslands has resulted in exposure of sand and a patchwork of erosion throughout the area.

The floating pontoon brings visitors to the rear of the dunes on the sandy spit/beach. Visitors then walk from the walkway over the dunes and on to the beach. A network of tracks permeates the dunes and lead to the beach. Erosion along the tracks has to vegetation loss and the exposure of unconsolidated sand. In the dune slacks there is a mosaic of exposed sand and vegetation, marram grass and flowering plants that may be the result of overgrazing. It is not clear that recreation use has led to the loss of vegetation in these places.

On the beach the dunes/dune vegetation is eroding in places as a result of wave action. Play on the faces of dunes may be facilitating erosion of sand, see photo.

Access to the beach from the northern end of the beach is from private chalets and traffic levels are not as high as from the car park.

Vulnerability of habitats/vegetation

Dunes / beach				
Damage	Trampling of vegetation, exposure of soil/sand, vulnerable to			
	foot traffic, fore-dunes the most vulnerable			
	Storm surges or high tides may lead to erosion of fore-dunes			
Contamination	Very low levels of litter throughout dune systems but litter			
	unlikely to cause damage to these habitats.			
	Dog fouling may lead to localised nutrient enrichment as well			
	as a hazard to users			
Fire	Dune vegetation, in particular marram grass, is particularly			
	vulnerable to fire. Accidental fire is a possibility. No evidence of			
	fire damage on the site inspection.			
Disturbance	Walking dogs along beach may lead to disturbance of feeding			
	waders.			

Table 3.17 Vulnerability of dune and beach at Barley Cove



Figure 3.39 Wooden walkway accessing beach from car park at Barley Cove



Figure 3.40 Erosion at edges of walkway, may have been happening prior to installation of walkway at Barley Cove



Figure 3.41 Walkway and pontoon at Barley Cove



Figure 3.42 Pontoon, at low tide, accessing Barley Cove beach



Figure 3.43 'Play' on the face of a dune, erosion from tidal action and play may be causing vegetation loss



Figure 3.44 On access to the beach at Barley Cove walking through marram, to the right new growth of marram can be seen



Figure 3.45 The beach at Barley Cove with evidence of vegetation loss on faces of fore dunes.

Key Impact Observations

From the assessment of the site the following issues are prevalent on site:

- Minor erosion to sand and vegetation along portions of the wooden walkway
- Tracks/desire lines through marram dunes leading to exposure of sand in places
- Vegetation loss in the dune slack areas about 100m from car park, this may be the result of overgrazing in the past

Area	Dunes/beach						
Threat	Specific effects	Actions recommended					
Damage	Trampling of vegetation, exposure of	The monitoring of visitor movement					
	soil/sand, vulnerable to foot traffic,	on the site could facilitate the control					
	fore-dunes the most vulnerable	of damage associated with the					
	Storm surges or high tides may lead to	developing network of trails on the					
	erosion of fore-dunes	beach in the long term the presence					
		of the pontoon may concentrate					
		visitor movement to a single track.					
Contamination	Very low levels of litter throughout	No further action needed					
	dune systems but litter unlikely to						
	cause damage to these habitats.						
	Dog fouling may lead to localised	Visitor information on vulnerability					
	nutrient enrichment as well as a	of habitat to nutrient enrichment					
	hazard to users						
Fire	Dune vegetation, in particular	Visitor information on vulnerability					
	marram grass, is particularly	of habitats to fire					
	vulnerable to fire. Accidental fire is a						
	possibility. No evidence of fire						
	damage on the site inspection.						
Disturbance	Walking dogs along beach may lead to	Visitor information					
	disturbance of feeding waders.						

Table 3.18 Recommended actions to address recreation impacts at Barley Cove

3.8 Dursey Sound, Co Cork

Landscape type: Rocky shore, grasslands on shallow peat soils

Site Description:

Dursey Sound is located on the south-western tip of the Beara Peninsula in Co. Cork, and is the departure point for the cable car to Dursey Island. The car park is bounded by grasslands on shallow peat soils. These grasslands are grazed by sheep.



Figure 3.46 Location * of Dursey Sound, Co Cork

The site was visited on the 25th July 2017. The survey consisted of a walk through the headlands adjacent to the car park noting damage to vegetation and identifying potential vulnerabilities to the vegetation and habitats. The field notes were supported with photography to illustrate particular states of soils, habitats and vegetation.



Figure 3.47 Location of Car park1 and grassland, heath vegetation 2 at Dursey Sound, Co Cork

Impacts identified

The grasslands are on shallow peat soils. The grasses are generally resilient and there is limited evidence of damage from trampling. At one point adjacent to the car park walkers have eroded vegetation and underlying peat and soil have been exposed. The grasses on the site are the result of grazing pressure from sheep.

Vulnerability of habitats/vegetation

Table 3.19 Vulnerability of Dry Humid Acid Grassland at Dursey Sound

Dry Humid Acid Grassland	The grasslands are generally robust but where foot traffic is great loss
	of vegetation is evident.
	In the immediate vicinity of the car park there are mud patches caused
	by visitor movements and extensive trampling. Currently there are
	planks of wood laid through the trample patch to facilitate visitor
	movements. This pathway could be improved to ensure the safety of
	visitors and improve the resilience of the dry humid acid grassland
	being impacted.



Figure 3.48 Erosion of grass cover and exposure of underlying soil at Garnish



Figure 3.49 Resilient grassland at Garnish, grass cover on a dry soil can accommodate a moderate level of trampling

Key Impact Observations

From the assessment of the site the following issues exist on site:

- Limited vegetation and soil erosion due to trampling in the vicinity of the car park.
- Management of the immediate vicinity of the car park to ensure site maintenance and the alleviation on pressures through actions such as viewing platforms.

Chapter 4 Key Impacts

The key impacts observed in the survey of the ten sites visited can be classified into

- Development of track and trails on vulnerable soils and in vulnerable vegetation. Examples of this type of damage are found in dune systems where the sandy and poorly developed soil and marram grasses are easily damaged.
- Erosion occurs on more robust soils where visitor activities are concentrated at viewing points such as coastal cliffs or on trails to viewing points within sites
- Impromptu use of fire is a potential threat to a number of coastal sites, particularly dune systems and there is evidence of fires being lit at several of the sites visited
- Disturbance to birds from dog walking and visitor access is likely in a number of sites
- Contamination through dog fouling is a potential risk in dune and dune grassland habitats

Recreation users, site visitors can be educated on the nature of these threats. The high nature value of the sites is a special feature of these sites and raising the awareness of site users to these values would encourage responsible behaviour.

The future quality of the Wild Atlantic Way can be protected¹ through educating and encouraging land owners and site managers to engage in ongoing programme of soil, vegetation and visitor monitoring that provides data to relevant authorities.

Three Examples

Three examples (Table 4.1, below) illustrate the types of vegetation and soil impact occurring at sites surveyed are shown below. The impacts identified are ongoing and have evolved in years prior to the establishment of the Wild Atlantic Way.

Table 4.2 summarises the likely causes of the impacts at the Wild Atlantic Way Discovery Points surveyed.

¹ Note; Fáilte Ireland do not own or otherwise control any sites along the Wild Atlantic Way. The overwhelming majority of routes and stops are parts of long-established touring routes and destinations.

Example 1 Lisfannon beach, Co Donegal								
Survey Photo	Site	Impact	Comment					
	Lisfannon beach, Co Donegal	Vegetation loss at access point to the beach Impact is caused by long established patterns of visitor activity. No other cause was evident	Use of wooden tracks at such access points would help guide visitors avoid development of secondary access tracks					
	Lisfannon beach, Co Donegal	Vegetation loss in area behind dunes at Lisfannon. Impact is caused by long established patterns of visitor activity. No other cause was evident	The track is limited in extent. In time such desire lines could become the site of walkways					
	Lisfannon beach, Co Donegal	Fire damage adjacent to dunes	Fire is primarily a threat in prolonged dry conditions. Information on threat of fire could be provided. In some areas barbeques could be provided.					

Table 4.1 Examples of damage to sites on the Wild Atlantic Way

Rossbeigh, Co Kerry	Soil erosion, natural slippage/movement of soil and erosion of vegetation and soil on track. Impact is caused by long established patterns of visitor activity. No other cause was evident.	This site is part of a secondary Zone and is not at the location of the signage.
Rossbeigh, Co Kerry	Exposed sand and trails through dunes at Roissbeigh, Co Kerry. Fire sites in the grassy area between dunes	Visitor information could warn users of threats to vegetation from fires
Rossbeigh, Co Kerry	Blowouts in dune complex.	These blowouts could have developed from tracks along dune ridges that exposed sand to wind action

Dooneen, Co Cork	Tracks through vegetation at Dooneen expose underlying spoil. The vegetation is growing on a poorly developed soil and mine spoil and so vulnerable to trampling from visitors accessing	The tracks are relatively robust. Runoff following rain may be deepening some tracks.
Dooneen, Co Cork	Path evolution, vegetation change, loss, exposure of underlying soil, widening of track. Impact is mainly caused by visitor activity to a plant community on a poorly develop soil	Visitors could be guided through this site with one key track to a viewing platform at the cliff.

Table 4.2 Summary of Sites visited, general condition of site and proposed measures.

	Conditi	on		
Site	Poor	Fair	Good	Likely Causes of Observed Effects
Lisfannon Beach				Visitor movement from car park beach through dune ridge and minor track development along saltmarsh. Sea incursion in places in dune slacks
Rossguill				No evident impact from visitor use, erosion to the south of car park due to natural processes
Castlegregory				Local landowners accessing farmland adjacent to beach, some movement of visitors through dunes
Mt Brandon				Visitors on cliff ledge viewing point and on track to observation tower
Rossbeigh				Beach area in good condition but dunes ridges throughout the site eroded by foot traffic. Fire pits at picnic sites are a possible threat to vegetation.
Dooneen				Trampling, rain and water runoff
Barley cove				Foot traffic through dunes

Chapter 5 Preliminary Conclusions

Table 5.1 summarises the condition and likely causes of the observed effects at each site. It also summarises measures which could help address these issues.

Broadly the impacts to vegetation and soils are limited in extent at all sites. The impacts identified in site visits fall into a broad category of informal trail development that results from trampling of vegetation and, over time, exposure and erosion of exposed soils. These impacts have generally evolved over a number of years. Dune vegetation in areas of high recreation value are most susceptible to erosion damage. Fire may be a threat in some locations where informal barbeques are used by visitors.

Monitoring and further assessment of the current state of track/trail development and in particular the condition of dunes and track development in dune systems at Lisfannon beach, Castlegregory, Barley Cove and Rossbeigh could provide more detailed information the general trend in damage at these sites. This could also inform on how impacts to habitats and soils could be addressed. In the future on site monitoring could be facilitated through community participation to compliment expert monitoring of the sites; this would promote the community engagement element of the Wild Atlantic Way Operational Program to facilitate sustainable tourism.

	Conditio	Likely Causes of Observed				Potential					
		Effects				solutions					
Site	Poor	Fair	Good	isitors	irazing	latural Erosion	oor Management	oor Design	Aanagement Plan	edesign	Aonitoring
Lisfannon					0	2		<u> </u>	~	Ľ.	
Rossguill											
Castlegregory											
Mt Brandon,											
Rossbeigh Strand											
Dooneen											
Barley Cove											
Garnish Point											

Table 5.1 Condition and likely causes of effects at surveyed sites on Wild Atlantic Way