

**Black Head-Poulsallagh Complex SAC
(site code 20)
Conservation objectives supporting document
-coastal habitats**

NPWS

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Please note that the opinions expressed in the site reports from the Sand Dunes Monitoring Project (SDM) are those of the authors and do not necessarily reflect the opinion or policy of NPWS.

Please note that this document should be read in conjunction with the following report: NPWS (2014). Conservation Objectives: Black Head-Poulsallagh Complex SAC 000020. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

1 Introduction

Achieving Favourable Conservation Status (FCS) is the overall objective to be reached for all Annex I habitat types and Annex II species of European Community interest listed in the Habitats Directive 92/43/EEC (Commission of the European Communities, 2007). It is defined in positive terms, such that a habitat type or species must be prospering and have good prospects of continuing to do so.

The Black Head-Poulsallagh Complex encompasses a complete range of rocky Burren habitats from coastal, glacially planed limestone pavements to high level heaths. The Caher River, the only river found in the high Burren, and Fanore Dunes, one of the best dune systems in Clare are included in the site. The shoreline of this site has the best examples in Ireland of an important biogeographical variation of intertidal reefs extremely exposed to wave action, and these shores have been described as some of the most interesting open coast shores of both Britain and Ireland. The shores are gently sloping, stepped limestone pavements over most of the site but at Black Head the shore is narrow and very steeply stepped.

Fanore dunes consist of both mobile and stabilised areas. A small population of the rare liverwort, *Petalophyllum ralfsii* occurs within a damp, grassy area of the dunes.

A superb and extensive example of a highly exposed vegetated shingle bank occurs at Poulsallagh, with substrate ranging from large limestone boulders to pebbles. The population of sea samphire (*Crithmum maritimum*) is considered the best in the region. Lichen cover at this site is particularly well developed (Moore & Wilson, 1999).

Black Head-Poulsallagh Complex SAC (site code: 20) is designated for a range of habitats including reefs, sea caves, vegetated shingle, heaths, lowland hay meadows, orchid-rich grassland and limestone pavement. Although the fixed dunes at Fanore are not included as a qualifying interest, they do support a population of petalwort (*Petalophyllum ralfsii*), which is a qualifying interest. There is only one coastal habitat included in the list of qualifying interests for the site:

- Perennial vegetation of stony banks (1220)

This backing document sets out the conservation objectives for the Perennial vegetation of stony banks (or vegetated shingle) in Black Head-Poulsallagh Complex SAC, which is defined by a list of parameters, attributes and targets. The main parameters are (a) Range (b) Area and (c) Structure and Functions, the last of which is broken down into a number of attributes, including physical structure, vegetation structure and vegetation composition.

The targets set for the **vegetated shingle** are based in part on the findings of the National Shingle Beach Survey (NSBS), which was carried out in 1999 on behalf of the National Parks and Wildlife Service (NPWS) (Moore & Wilson, 1999).

The NSBS visited the following two sub-sites within Black Head-Poulsallagh Complex SAC:

1. Poulmagrahaun
2. Poulsallagh

An area of 0.22ha of vegetated shingle was also recorded at the Fanore sub-site by the Sand Dunes Monitoring Project (SDM) (Delaney *et al.*, 2013). The distribution of known shingle sites in Black Head-Poulsallagh Complex SAC is presented in Appendix I.

During the NSBS, profiles and transects were recorded from each shingle beach and each site was assigned a crude High/Medium/Low interest ranking. A 'high interest' ranking denotes a site that is of high conservation value. The site may be of interest botanically or geomorphologically. A 'medium interest' ranking implies the site may be extensive but not of particular interest either botanically or geomorphologically. A 'low interest' ranking is reserved for small sites, highly damaged sites or sites that are of a very common classification. The vegetated shingle at Poulsallagh was rated of high interest during the NSBS, owing to the presence of the best rock samphire (*Crithmum maritimum*) population in the region, while the Poulmagrahaun sub-site was rated of 'low interest' (Moore & Wilson, 1999).

The habitat was not mapped at any of the sub-sites, but the vegetation was recorded, as were the human impacts and alterations at the site, which are useful tools for assessing the Structure and Functions of the habitat.

Poulmagrahaun consists of a large deposit of limestone boulders on limestone pavement.

Poulsallagh is a massive deposit of worked and unworked limestone ranging from boulders 3m long to small angular pebbles 1cm wide.

Fanore is a large dune system that has developed over a shingle beach.

2 Conservation Objectives

A conservation objective aims to define the favourable conservation condition of a habitat or species at a particular site. Implementation of the objective will help to ensure that the habitat or species achieves favourable conservation status at a national level.

3 Perennial vegetation of stony banks

Perennial vegetation of stony banks is vegetation that is found at or above the mean high water spring tide mark on shingle beaches (i.e., beaches composed of cobbles and pebbles). It is dominated by perennial species (i.e. plants that continue to grow from year to year). The first species to colonise are annuals or short-lived perennials that are tolerant of periodic displacement or overtopping by high tides and storms. Level, or gently-sloping, high-level mobile beaches, with limited human disturbance, supports the best examples of this vegetation. More permanent ridges are formed by storm waves. Several of these storm beaches may be piled against each other to form extensive structures.

3.1 Overall Objective

The overall objective for 'perennial vegetation of stony banks' in Black Head – Poulsallagh Complex SAC is to 'maintain the favourable conservation condition'. This objective is based on an assessment of the recorded condition of the habitat under a range of attributes and targets. The assessment is divided into three main headings (a) Range, (b) Area and (c) Structure and Functions.

3.2 Area

3.2.1 Habitat extent

Habitat extent is a basic attribute to be assessed when determining the condition of a particular habitat. The target for favourable condition is '*no decrease in extent from the established baseline*'. Bearing in mind that coastal systems are naturally dynamic and subject to change even within a season, this target is assessed subject to natural processes, including erosion and succession.

The exact current extent of this habitat in Black Head – Poulsallagh Complex SAC is unknown. The National Shingle Beach Survey (Moore & Wilson, 1999) did not map the extent of the shingle at Poulmagrahaun and Poulsallagh. A total area of 0.22ha of vegetated shingle was also recorded and mapped at Fanore by Delaney *et al.* (2013).

The target is that the area should be stable or increasing, subject to natural processes, including erosion and succession.

3.3 Range

3.3.1 Habitat distribution

The known distribution of vegetated shingle is presented in Appendix I. The habitat has been recorded from Poulmagrahaun, Poulsallagh and Fanore, but its distribution is likely to be more widespread.

The target is that there should be no decline, or change in the distribution of this habitat, unless it is the result of natural processes, including erosion and succession.

3.4 Structure and Functions

A fundamental aim of shingle conservation is to facilitate natural mobility. Shingle beaches are naturally dynamic systems, making them of geomorphological interest as well as ecological interest. They are constantly changing and shingle features are rarely stable in the long term.

3.4.1 Functionality and sediment supply

The health and on-going development of this habitat relies on a continuing supply of shingle sediment. This may occur sporadically as a response to storm events rather than continuously. Interference with the natural coastal processes, through offshore extraction or coastal defence structures in particular, can interrupt the supply of sediment and lead to beach starvation.

The target is to maintain and restore where possible the natural circulation of sediment and organic matter, without any physical obstructions.

3.4.2 Vegetation structure: zonation

Ecological variation in this habitat type depends on stability; the amount of fine material accumulating between the pebbles; climatic conditions; width of the foreshore and past management of the site. The ridges and lows also influence the vegetation patterns, resulting in characteristic zonations of vegetated and bare shingle. In the frontal less stable areas of shingle, the vegetation tends to be dominated by annuals and short-lived salt-tolerant perennials. Where the shingle is more stable the vegetation becomes more perennial in nature and may include grassland, heathland and scrub, depending on the exact nature of the site. The presence of lichens indicates long term stability of the shingle structure.

At both Poulmagrahaun and Poulisallagh, associated habitats include lowland karst and inter tidal shingle (Moore & Wilson, 1999). Poulmagrahaun shingle is backed by eroding *Festuca rubra*-dominated pasture (Moore & Wilson 1999). Poulisallagh shingle is backed by grazed pasture with outcrops of limestone pavement on either side of the bay (Moore & Wilson, 1999).

At Fanore, a range of coastal habitats occur alongside the vegetated shingle, including annual strandline, embryo dunes, mobile dunes and fixed dunes (Delaney *et al.*, 2013).

The target is to maintain the range of coastal habitats, including transitional zones, subject to natural processes including erosion and succession.

3.4.3 Vegetation composition: typical species & sub-communities

The degree of exposure, as well as the coarseness and stability of the substrate determines species diversity. The shingle habitat in Black Head - Poulisallagh Complex SAC is known to support a typical flora for this habitat type.

Sea thrift (*Armeria maritima*) and scurvy grass (*Cochlearia officinalis*) were recorded at Poulmagrahaun by the NSBS (Moore & Wilson, 1999). The more species-rich shingle at Poulisallagh supports sea thrift (*Armeria maritima*), scurvy grass (*Cochlearia officinalis*), rock samphire (*Crithmum maritimum*), bird's-foot-trefoil (*Lotus corniculatus*) and buck's horn plantain (*Plantago coronopus*) (Moore & Wilson, 1999). Lichens were also present. The NSBS considered the rock samphire (*Crithmum maritimum*) population to be the best in the region.

The SDM recorded this habitat at Fanore, where it supports typical species such as sea thrift (*Armeria maritima*), sea beet (*Beta vulgaris ssp. maritima*), rock samphire (*Crithmum maritimum*), sea-holly (*Eryngium maritimum*), sea sandwort (*Honckenya peploides*), sea plantain (*Plantago maritima*) and sea mayweed (*Tripleurospermum maritimum*) (Delaney *et al.*, 2013).

The target for this attribute is to ensure that the typical flora of vegetated shingle is maintained, as are the range of sub-communities within the different zones.

3.4.4 Vegetation composition: negative indicator species

Where the shingle becomes more stabilised negative indicator species can become an issue. Negative indicator species can include non-native species (e.g. *Centranthus ruber*, *Lupinus arboreus*); species indicative of changes in nutrient status (e.g. *Urtica dioica*) and species not considered to be typical of the habitat (e.g. *Pteridium aquilinum*).

No negative species were recorded by the NSBS or the SDM at any of the known sub-sites within this SAC (Moore & Wilson, 1999; Delaney *et al.*, 2013).

The target for this attribute is that negative indicator species (including non-native species) should make up less than 5% of the vegetation cover.

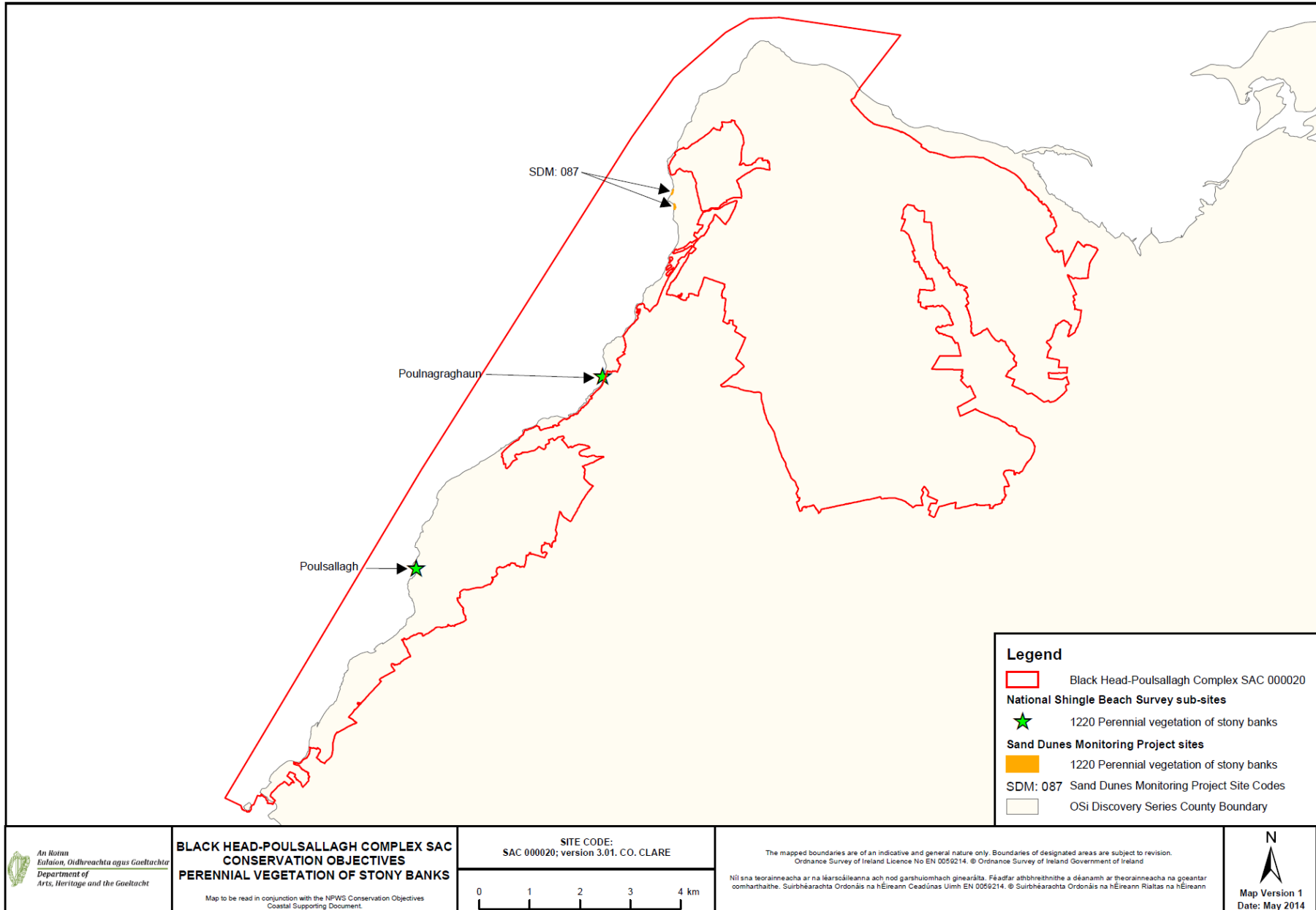
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Appendix I: Distribution map of known shingle sites within Black Head- Poulsallagh Complex SAC



Appendix II – Site report and habitat maps from the Sand Dunes Monitoring Project (Delaney *et al.*, 2013)

SITE 087 FANORE

The following individual site report should be read in conjunction with the main report (Delaney *et al.*, 2013). Please note that CMP refers to the Coastal Monitoring Project (Ryle *et al.*, 2009) and SDM refers to the Sand Dunes Monitoring Project (Delaney *et al.*, 2013). Unless otherwise stated, the baseline maps refer to the habitat maps produced during the CMP. These baseline maps were revised, to account for discrepancies in the original survey, before comparisons were made with the habitat maps produced during the SDM (see section 2.3 in SDM main report). These revised maps are referred to as the revised baseline maps in the following text.

1 SITE DESCRIPTION

Fanore is a medium-sized site located approximately 9 km north-west of Ballyvaghan and 3 km south of Black Head, Co. Clare. It is situated within the Burren region of Clare, on its north-west coast. It forms part of the Black Head-Poulsallagh Complex SAC (SAC 000020). Five Annex I sand dune habitats (* indicates a priority habitat) were recorded here during the CMP: **1210 Annual vegetation of drift lines**, **1220 Perennial vegetation of stony banks**, **2110 Embryonic shifting dunes**, **2120 Marram dunes (white dunes)** and ***2130 Fixed dunes (grey dunes)** (Ryle *et al.*, 2009). **8240 Limestone pavements** occur in association with the sand dune habitats at Fanore. Much of the site is found overlying limestone pavement, and in places, the limestone pavement is at the surface. Glacial erratics can also be found scattered throughout the dunes (Ryle *et al.*, 2009).

The rare Annex II bryophyte *Petalophyllum ralfsii* (Petalwort) was previously recorded at Fanore (NPWS, 1997), but was not found during the CMP or the SDM. Choughs were noted during the SDM however. The dunes at Fanore are primarily used for amenity, with a large caravan park and associated access roads located within the dunes themselves.

A conservation programme implemented by the Local Authority on the southern part of the site has been ongoing since prior to the CMP. The conservation programme is targeted at reducing the damage to the dunes caused by beach users (Burren Connect, 2013).

2 CONSERVATION ASSESSMENTS

2.1 Overview

Fanore was surveyed on the 16th of September 2011. Of the five Annex I sand dune habitats recorded on the site during the baseline survey, four were recorded in 2011. The habitats found at Fanore in 2011 and the results of the conservation assessments are presented in Table 1. **1220 Perennial vegetation of stony banks**, **2110 Embryonic shifting dunes** and **2120 Marram dunes (white dunes)** were assessed as Favourable and the ***2130 Fixed dunes (grey dunes)** habitat was

assessed as Unfavourable-Inadequate. **1210 Annual vegetation of drift lines**, which was recorded during the CMP, was no longer present in 2011.

Table 1. Conservation assessment results for all Annex I dune habitats surveyed at Fanore, Co. Clare

Habitat	Area	Structure & Functions	Future Prospects	Overall result
1220 Perennial vegetation of stony banks	Favourable (stable)	Favourable (stable)	Favourable (stable)	Favourable (stable)
2110 Embryonic shifting dunes	Favourable (stable)	Favourable (stable)	Favourable (stable)	Favourable (stable)
2120 Marram dunes (white dunes)	Favourable (stable)	Favourable (improving)	Favourable (stable)	Favourable (improving)
*2130 Fixed dunes (grey dunes)	Unfavourable-Inadequate (deteriorating)	Unfavourable -Inadequate (stable)	Unfavourable -Inadequate (stable)	Unfavourable-Inadequate (deteriorating)

2.1.1 Area

The areas of Annex I sand dune habitats at Fanore are presented in Table 2. There were small revisions to two of the Annex I habitats recorded during the CMP. **1220 Perennial vegetation of stony banks** had been mapped on exposed limestone pavement during the baseline survey, but this was not considered to conform to the Annex I habitat in 2011. The boundary of ***2130 Fixed dunes (grey dunes)** was moved to coincide better with a field boundary. **1210 Annual vegetation of drift lines** was no longer present in 2011. There has been a small increase in the area of sand dune habitats present at Fanore, and this is due to accretion.

Table 2. Areas of Annex I dune habitats originally mapped at Fanore during the baseline survey (Coastal Monitoring Project), the revised baseline areas and areas mapped during the Sand Dune Monitoring Project in 2011.

Habitat	Baseline survey (ha)	Revised baseline (ha)	Sand Dunes Monitoring Project (ha)
1210 Annual vegetation of drift lines	0.02	0.02	0.00
1220 Perennial vegetation of stony banks	0.66	0.09	0.22
2110 Embryonic shifting dunes	0.28	0.28	0.12
2120 Marram dunes (white dunes)	0.38	0.38	0.43
*2130 Fixed dunes (grey dunes)	61.87	61.04	61.56
Total	63.21	61.81	62.33

2.1.2 Structure and Functions

Structure and Functions were assessed for four habitats at Fanore. Table 3 shows the results of the Structure and Functions assessment. All criteria passed for **1220 Perennial vegetation of stony banks**, **2110 Embryonic shifting dunes** and **2120 Marram dunes (white dunes)**, and one criterion failed for ***2130 Fixed dunes (grey dunes)**. ***2130 Fixed dunes (grey dunes)** were therefore assessed as Unfavourable-Inadequate.

Table 3. Annex I sand dune habitats at Fanore for which Structure and Functions were assessed, with the number of monitoring stops, assessment criteria and the number of criteria that failed.

Habitat	No. monitoring stops	Total no. assessment criteria	No. failed criteria
1220 Perennial vegetation of stony banks	2	6	0
2110 Embryonic shifting dunes	2	7	0
2120 Marram dunes (white dunes)	2	7	0
*2130 Fixed dunes (grey dunes)	12	11	1

2.1.3 Future Prospects

Impacts and activities recorded at Fanore are presented in Table 4. Impact codes are assigned according to Ssymanck (2010). **1220 Perennial vegetation of stony banks** had no impacts, while the only impact recorded for either **2110 Embryonic shifting dunes** and **2120 Marram dunes (white dunes)** was the neutral impact of walking. ***2130 Fixed dunes (grey dunes)** had twelve impacts, with nine having a negative effect. Of these, undergrazing, off-road driving, trampling and paths and tracks were the most significant. Walking was also recorded within this habitat as a neutral impact.

Table 4. Impacts recorded in Annex I sand dune habitats at Fanore in 2011. Source refers to whether the impact being scored originates inside or outside the Annex I habitat being assessed.

Habitat code	Impact code	Impact description	Intensity	Effect	Percent of habitat	Source
1220	X	No impacts	-	-	100	-
2110	G01.02	Walking	Low	Neutral	50	Inside
2120	G01.02	Walking	Low	Neutral	50	Inside
*2130	A04.03	Undergrazing	Medium	Negative	30	Inside
*2130	C01	Limestone pavement removal	Low	Negative	1	Outside
*2130	D01.01	Paths, Tracks	High	Negative	5	Inside
*2130	D01.02	Roads	High	Neutral	1	Inside
*2130	G01.02	Walking	Medium	Neutral	70	Inside
*2130	G01.03.02	Off-road driving	Medium	Negative	25	Inside
*2130	G02.08	Caravans	High	Negative	5	Inside
*2130	G05	Campfires	High	Negative	1	Inside
*2130	G05.01	Trampling	High	Negative	10	Inside
*2130	G05.09	Fencing	Medium	Positive	1	Inside
*2130	H05.01	Rubbish	Medium	Negative	1	Inside
*2130	I02	Problem natives - Bracken	Medium	Neutral	1	Inside

2.2 Annex I habitat assessments

The conservation status of the Annex I habitats at Fanore is discussed below. The present conservation status in 2011 is compared with the baseline status and if a habitat is not in Favourable status, the main reasons for the Unfavourable assessment are given. Areas recorded in 2011 are compared with the revised baseline areas. It should be borne in mind that natural processes such as erosion, deposition and succession are primary drivers of change on coastal habitats.

2.2.1 1210 Annual vegetation of drift lines

This habitat was not recorded during the SDM, but there was no indication that the loss was due to anthropogenic activity. The location where it had been present during the baseline survey was occupied by *2130 Fixed dunes (grey dunes) in 2011.

2.2.2 1220 Perennial vegetation of stony banks

Shingle has been deposited on the exposed limestone pavement at Fanore. The area mapped as **1220 Perennial vegetation of stony banks** was restricted to vegetated parts of the shingle, and did not include vegetation associated with the limestone pavement or unvegetated shingle.

Area

The area of **1220 Perennial vegetation of stony banks** had increased from 0.09 ha during the CMP to 0.22 ha during the SDM. During the CMP, Area was assessed as Favourable. Area was assessed as Favourable (stable) during the SDM.

Structure and Functions

All of the criteria passed in the Structure and Functions assessment. During the CMP, Structure and Functions were assessed as Favourable. Structure and Functions were assessed as Favourable (stable) during the SDM.

Future Prospects

No impacts were recorded in this habitat during the SDM or the CMP. Future Prospects were assessed as Favourable during the CMP. During the SDM, Future Prospects were assessed as Favourable (stable).

Conservation assessment

All of the parameters were assessed as Favourable for this habitat during both the CMP and the SDM. The conservation status of **1220 Perennial vegetation of stony banks** was assessed as Favourable (stable) during the SDM.

2.2.3 2110 Embryonic shifting dunes

There is no large source of sand near Fanore for dune building, and **2110 Embryonic shifting dunes** are found as small, fragmented patches at the site.

Area

The area of **2110 Embryonic shifting dunes** decreased from 0.28 ha during the CMP to 0.12 ha during the SDM. There is no indication that this change is due to anthropogenic factors. Area was assessed as Unfavourable-Bad during the CMP because of the limited extent of the habitat at Fanore. Under the current methodology, the limited area of the habitat is not considered to merit an Unfavourable assessment as the extent is constrained by natural factors and not by human activities. During the SDM, Area was assessed as Favourable (stable).

Structure and Functions

All of the criteria passed in the Structure and Functions assessment. Structure and Functions were assessed as Favourable during the baseline survey, although no monitoring stops were carried out. Structure and Functions were assessed as Favourable (stable) during the SDM.

Future Prospects

The only impact recorded from this habitat in 2011 was walking, and it had a neutral effect. During the CMP, Future Prospects were assessed as Unfavourable-Bad due to the unavailability of sediment for dune building. The quantity of sediment available in the system is considered to be a natural effect of the location of this system on a rocky coast, and is not due to human activity. Under the methodology used during the SDM, the parameter would have passed the assessment. Future Prospects were assessed as Favourable (stable) during the SDM.

Conservation assessment

All three of the parameters were assessed as Favourable during the SDM. Although two of the parameters were assessed as Unfavourable-Bad during the CMP, the reasons cited were not considered to represent an anthropogenic threat according to the SDM methodology and therefore the initial assessments were revised. The conservation status of **2110 Embryonic shifting dunes** was assessed as Favourable (stable) during the SDM.

2.2.4 2120 Marram dunes (white dunes)

Two narrow bands of **2120 Marram dunes (white dunes)** are found at Fanore, and they are located close to where the Murroogh River emerges on the shore.

Area

There has been a slight increase in the area of **2120 Marram dunes (white dunes)** since the baseline survey from 0.38 ha to 0.43 ha, but they are still very limited in extent. During the baseline survey, Area was assessed as Unfavourable-Bad because of the limited extent of the habitat at Fanore. Under the current methodology, the limited area of the habitat is not considered to merit an Unfavourable assessment as the extent is constrained by natural factors and not by human activities. Area was assessed as Favourable (stable) during the SDM.

Structure and Functions

Only two monitoring stops were carried out because of the limited extent of **2120 Marram dunes (white dunes)** at Fanore. All of the criteria passed the Structure and Functions assessment. During the CMP, Structure and Functions were assessed as Unfavourable-Bad because of the poor health of the *Ammophila arenaria*. Structure and Functions were assessed as Favourable (improving) during the SDM.

Future Prospects

Only one impact, walking, was recorded at Fanore during the SDM. The Future Prospects were assessed as Unfavourable-Bad during the CMP because of the limited sediment supply. Under the current methodology this is not considered to be a negative impact because it is a natural effect of the

location of this system on a rocky coast. Future Prospects were assessed as Favourable (stable) during the SDM.

Conservation assessment

All of the parameters were assessed as Favourable during the SDM. During the CMP, all three of the parameters were assessed as Unfavourable-Bad. The baseline assessments of Area and Future Prospects were revised in line with the current methodology, and these are considered to have been in Favourable condition during the baseline survey. The Structure and Functions were assessed as Unfavourable-Bad because of the poor condition of the vegetation, and the baseline assessment was not altered for this parameter. The conservation status of **2120 Marram dunes (white dunes)** was assessed as Favourable (improving) during the SDM.

2.2.5 *2130 Fixed dunes (grey dunes)

The caravan park found in the middle of the ***2130 Fixed dunes (grey dunes)** habitat has been present since prior to designation, and has been incorporated into the SAC. Limestone pavement is found frequently throughout this habitat at Fanore.

Area

The area of ***2130 Fixed dunes (grey dunes)** has increased from 61.04 ha during the CMP to 61.56 ha during the SDM due to succession from **2120 Marram dunes (white dunes)**. The footprint of the caravans was not mapped as part of the CMP, but the caravans that were present during the CMP can be seen on aerial photographs dating to 2005. In addition to the caravans present in 2006, examination of digital imagery (Google Earth, 2013) indicates that several new caravans have been placed in the habitat, and these occupy an area of approximately 150 m² which was formerly ***2130 Fixed dunes (grey dunes)**. Each of the new structures is individually below the minimum mapping area. During the CMP, area was assessed as Favourable. Area was assessed as Unfavourable-Inadequate (deteriorating) during the SDM as there was a loss of less than 1% of the habitat per year since the CMP.

Structure and Functions

The criterion assessing damage due to disturbance failed in the Structure and Functions assessment. Damage was recorded from half of the monitoring stops. Further damage was noticed within the dunes where the ***2130 Fixed dunes (grey dunes)** habitat was affected by the removal of limestone in an area of limestone pavement within the sand dunes. During the CMP, Structure and Functions were assessed as Unfavourable-Inadequate because of the spread of *Pteridium aquilinum* and excessively tall sward height. Structure and Functions were assessed as Unfavourable-Inadequate (stable) during the SDM.

Future Prospects

During the SDM, paths and tracks, off road driving, trampling, caravans, campfires and rubbish were recorded as negative impacts associated with the caravan park. Only the foot print of the new caravans was included as a direct effect on the caravan park. Undergrazing and removal of limestone pavement were also recorded as negative impacts. Although the reason for limestone pavement removal was not immediately obvious, it may have been associated with the activities of

the caravan park, particularly in light of the recent pitching of new caravans. Further development is considered to be a threat to the habitat. Fencing has a positive effect by restricting access to sensitive parts of the sand dunes. Future Prospects were assessed as Unfavourable-Inadequate during the CMP because of the effects of stock feeding, problematic native species, the caravan park and erosion along tracks. Other negative impacts recorded for the habitat included removal of sand or gravel and disposal of household waste, both of which were of limited extent. The continuation of the current management will prevent the habitat from attaining positive status in the foreseeable future. Future Prospects were assessed as Unfavourable-Inadequate (stable) during the SDM.

Conservation assessment

All of the parameters were assessed as Unfavourable-Inadequate during the SDM. The Area assessment has deteriorated from Favourable since the baseline survey, but the other two parameters have remained stable. The conservation status of ***2130 Fixed dunes (grey dunes)** was assessed as Unfavourable-Inadequate (deteriorating) during the SDM.

3 DISCUSSION

3.1 Fanore dune protection works

The need to restore parts of the sand dune habitat at Fanore was accepted prior to 2005, and protection works had started before the site was surveyed during the CMP. These works have continued in the interim, with the relocation of parking spaces, upgrading of access to the beach and fencing off of degraded sections of the dunes (Burren Connect, 2013). These works appear to have reduced the degree of damage in the southern part of the site.

3.2 Caravan park

This site is unusual in that a large caravan park is present within the dunes but the access roads and caravans were not mapped out of the habitat during the CMP. This means that aerial photographs must be used to determine whether the caravans are expanding into the dune system. Any extension of the caravan site into previously undeveloped dunes is considered to be a loss of area. There are signs that new caravans have been established since the CMP and that further areas are being prepared for development, and this represents a threat to the site.

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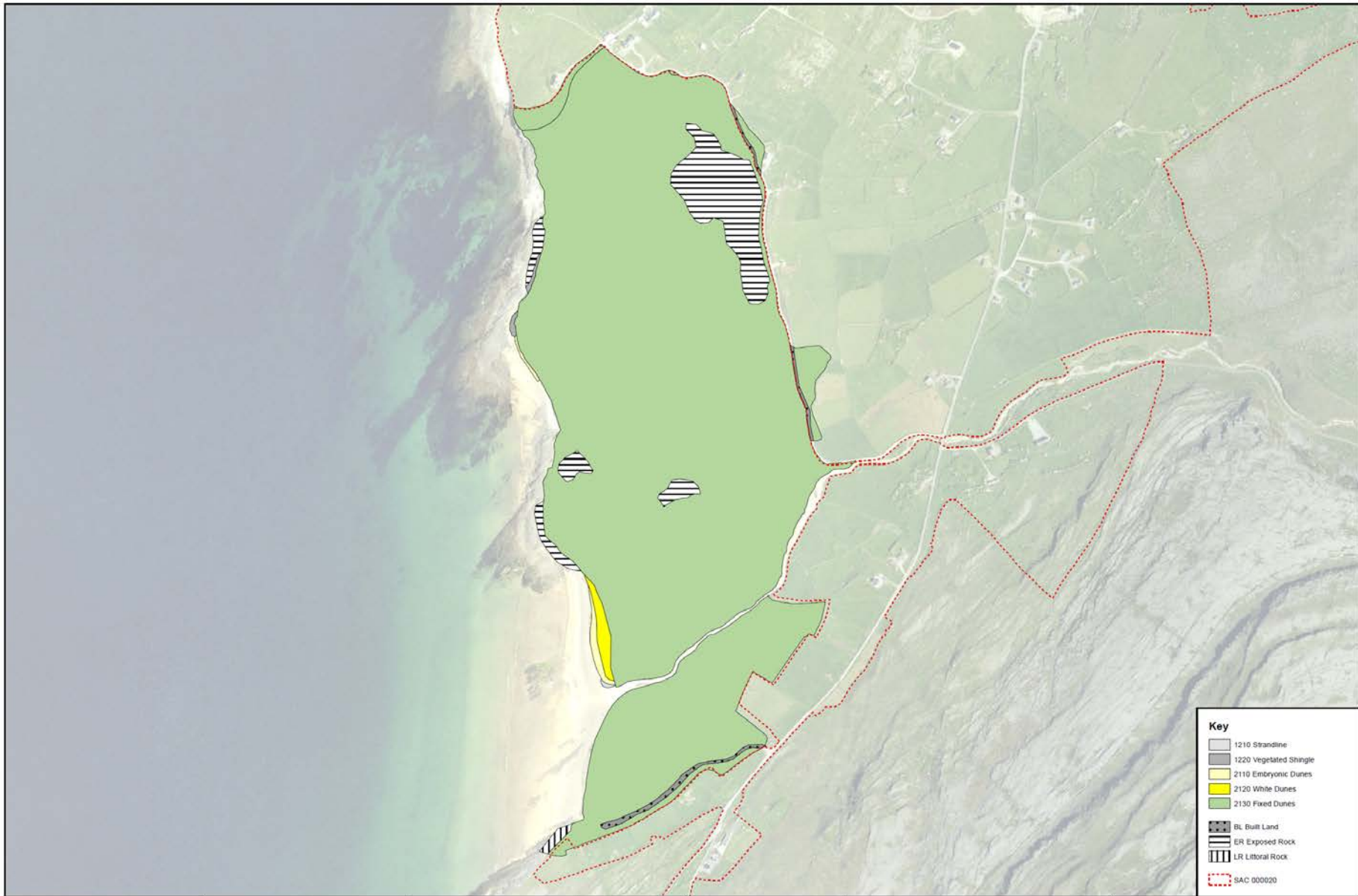
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Key

- 1210 Strandline
- 1220 Vegetated Shingle
- 2110 Embryonic Dunes
- 2120 White Dunes
- 2130 Fixed Dunes
- BL Built Land
- ER Exposed Rock
- LR Littoral Rock
- SAC 000020

An Boinn
Ealaíon, Oidhreacht agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

Monitoring survey of Annex I
sand dune habitats in Ireland
2011-2012

Fanore,
Co. Clare
- Revised Baseline Habitat Map -

SDM code: 087
Date of
map production: 11-04-2014

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