

National Parks and Wildlife Service

Conservation Objectives Series

Dog's Bay SAC 001257



An Roinn Ealaíon, Oidhreachta,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta

Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs



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The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year :	1998
Title :	Biomar survey of Irish machair sites 1996
Author :	Crawford, I.; Bleasdale, A.; Conaghan, J.
Series :	Irish Wildlife Manual No. 3
Year :	2009
Title :	Coastal Monitoring Project 2004-2006
Author :	Ryle, T.; Murray, A.; Connolly, K.; Swann, M.
Series :	Unpublished report to NPWS
Year :	2012
Title :	Ireland Red List No. 8: Bryophytes
Author :	Lockhart, N.; Hodgetts, N.; Holyoak, D.
Series :	Ireland Red List series, NPWS
Year :	2013
Title :	Monitoring survey of Annex I sand dune habitats in Ireland
Author :	Delaney, A.; Devaney, F.M.; Martin, J.M.; Barron, S.J.
Series :	Irish Wildlife Manual No. 75
Year :	2013
Title :	The status of EU protected habitats and species in Ireland. Volume 2. Habitats assessments
Author :	NPWS
Series :	Conservation assessments
Year :	2014
Title :	Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland, Version 2.0
Author :	Perrin, P.M.; Barron, S.J.; Roche, J.R.; O'Hanrahan, B.
Series :	Irish Wildlife Manual No. 79
Year :	2016
Title :	Ireland Red List No. 10: Vascular Plants
Author :	Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
Series :	Ireland Red Lists series, NPWS
Year :	2017
Title :	Dog's Bay SAC (site code: 1257) Conservation objectives supporting document- coastal habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	2008
Title :	The phytosociology and conservation value of Irish sand dunes
Author :	Gaynor, K.
Series :	Unpublished Ph.D. Thesis, National University of Ireland, Dublin

Spatial data sources

Year : 2013

Title : Sand Dune Monitoring Project 2011. Version 1

GIS Operations : QIs selected; clipped to SAC boundary. Expert opinion used to resolve any issues arising

Used For : 1210, 2110, 2120, 2130 (map 2)

1210 Annual vegetation of drift lines

To restore the favourable conservation condition of Annual vegetation of drift lines in Dog's Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For the sub-site mapped: Dog's Bay - 0.22ha. See map 2	Based on data from the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Annual vegetation of drift lines was mapped at the sub-site Dog's Bay (SDM site ID: 097) to give a total estimated area of 0.22ha within Dog's Bay SAC. The habitat is very difficult to measure in view of its dynamic nature which means that it can appear and disappear within a site from year to year. See the Dog's Bay SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 2 for known distribution	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Annual vegetation of drift lines was recorded on Dog's Bay beach but is better developed on the Gorteen side of the tombolo where it stretches the length of the beach. See the coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Accumulation of organic matter in tidal litter is essential for trapping sand and initiating dune formation. See the coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Delaney et al. (2013). There are transitional communities between a range of sand dune habitats in the SAC as well as annual drift line vegetation associated with the embryonic dunes. See the coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities with typical species: sea rocket (<i>Cakile maritima</i>), sea sandwort (<i>Honkenya peploides</i>), prickly saltwort (<i>Salsola kali</i>) and orache (<i>Atriplex</i> spp.)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). In Dog's Bay SAC, typical strandline species include sea rocket (<i>Cakile maritima</i>), sea mayweed (<i>Tripleurospermum maritimum</i>), frosted orache (<i>Atriplex laciniata</i>), sea sandwort (<i>Honkenya peploides</i>), spear-leaved orache (<i>Atriplex prostrata</i>), saltwort (<i>Salsola kali</i>) and sand couch (<i>Elytrigia juncea</i>). See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-native species) to represent less than 5% cover	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. See the coastal habitats supporting document for further details

Conservation Objectives for : Dog's Bay SAC [001257]

2110 Embryonic shifting dunes

To maintain the favourable conservation condition of Embryonic shifting dunes in Dog's Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For the sub-site mapped: Dog's Bay - 0.18ha. See map 2	Based on data from the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Embryonic shifting dunes was mapped at the sub-site Dog's Bay (SDM site ID: 097) to give a total estimated area of 0.18ha within Dog's Bay SAC. The habitat is very difficult to measure in view of its dynamic nature. See the Dog's Bay SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 2 for known distribution	Based on data from Delaney et al. (2013). There are two short, narrow bands of embryonic shifting dunes at Dog's Bay. One strip is present on the beach that faces south-west, while the other one is on an isolated patch of dune vegetation beside Gorteen Bay. See the coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. See the coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Annual drift line vegetation is associated with the embryonic dunes. The shifting dunes form a narrow band before grading into embryonic dunes to the front. See the coastal habitats supporting document for further details
Vegetation composition: plant health of foredune grasses	Percentage cover	More than 95% of sand couch grass (<i>Elytrigia juncea</i>) and/or lyme-grass (<i>Leymus arenarius</i>) should be healthy (i.e. green plant parts above ground and flowering heads present)	The Coastal Monitoring Project (CMP) (Ryle et al., 2009) indicated that there is healthy growth of sand couch (<i>Elytrigia juncea</i>) within the embryonic dune habitat. See the coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities with typical species: sand couch grass (<i>Elytrigia juncea</i>) and/or lyme-grass (<i>Leymus arenarius</i>)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). The vegetation of embryonic dunes at Dog's Bay SAC is typically species-poor with prickly saltwort (<i>Salsola kali</i>), frosted orache (<i>Atriplex laciniata</i>), sea sandwort (<i>Honkenya peploides</i>) sea mayweed (<i>Matricaria maritima</i>) and sand couch (<i>Elytrigia juncea</i>). Marram grass (<i>Ammophila arenaria</i>), biting stonecrop (<i>Sedum acre</i>), common bird's-foot trefoil (<i>Lotus corniculatus</i>), smooth meadow-grass (<i>Poa pratensis</i>) and sand sedge (<i>Carex arenaria</i>) are also present. See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-native species) to represent less than 5% cover	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. See the coastal habitats supporting document for further details

2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)

To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) in Dog's Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For the sub-site mapped: Dog's Bay - 0.36ha. See map 2	Based on data from the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Shifting dunes along the shoreline with <i>Ammophila arenaria</i> was mapped at the sub-site Dog's Bay (SDM site ID: 097) to give a total estimated area of 0.36ha within Dog's Bay SAC. The habitat is very difficult to measure in view of its dynamic nature. See the Dog's Bay SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 2 for known distribution	Based on data from Delaney et al. (2013). A strip of marram dunes occurs along the front of the system at Dog's Bay. See the coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Marram grass (<i>Ammophila arenaria</i>) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. Rock gabions are an obstacle to the further extension of the habitat in the SAC (Delaney et al., 2013). See the coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Ryle et al. (2009) and Delaney et al. (2013). At Dog's Bay SAC, the shifting dunes form a narrow band before grading into embryonic dunes to the front. See the coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage cover	More than 95% of marram grass (<i>Ammophila arenaria</i>) and/or lyme-grass (<i>Leymus arenarius</i>) should be healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). See the coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities dominated by marram grass (<i>Ammophila arenaria</i>) and/or lyme-grass (<i>Leymus arenarius</i>)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). In the mobile dunes in the SAC, common species include sand couch (<i>Elytrigia juncea</i>), marram grass (<i>Ammophila arenaria</i>), sea holly (<i>Eryngium maritimum</i>), red fescue (<i>Festuca rubra</i>), sea mayweed (<i>Tripleurospermum maritimum</i>), sea radish (<i>Raphanus raphanistrum</i> subsp. <i>maritimus</i>), biting stonecrop (<i>Sedum acre</i>), common bird's-foot trefoil (<i>Lotus corniculatus</i>) and sand sedge (<i>Carex arenaria</i>). See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-native species) to represent less than 5% cover	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. The negative indicator species common ragwort (<i>Senecio jacobaea</i>) appears in the mobile dune habitat. The mobile sand dunes above the gabions are very steep, and a small stand of common nettle (<i>Urtica dioica</i>) has become established just behind the gabions. See the coastal habitats supporting document for further details

Conservation Objectives for : Dog's Bay SAC [001257]

2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)

To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes)* in Dog's Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For the sub-site mapped: Dog's Bay - 44.76ha. See map 2	Based on data from the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Fixed dunes with herbaceous vegetation (grey dunes) was mapped at the sub-site Dog's Bay (SDM site ID: 097) to give a total estimated area of 44.76ha within Dog's Bay SAC. See the Dog's Bay SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 2 for known distribution	Based on data from Ryle et al. (2009) and Delaney et al. (2013). The fixed dune is a relatively large area extending southwards to a granite outcrop, with a beach (Tra Gárbh) to the south. See the coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Delaney et al. (2013). Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. See the coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Ryle et al. (2009) and Delaney et al. (2013). An interesting transition from fixed dune to dry heath is present in the SAC. See the coastal habitats supporting document for further details
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). The fixed dunes (grey dunes) at Dog's Bay were very damaged by over-exploitation in the past, leading to extensive areas of bare sand and blowouts. Remedial works were undertaken to stabilise the sand using soft engineering techniques and a maximum stocking density was imposed. See the coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). See the coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain range of sub-communities with typical species listed in Delaney et al. (2013)	The typical plant species present in the species-rich fixed dunes in the SAC include red fescue (<i>Festuca rubra</i>), common bird's-foot trefoil (<i>Lotus corniculatus</i>), eyebright (<i>Euphrasia officinalis</i> agg.), selfheal (<i>Prunella vulgaris</i>), wild thyme (<i>Thymus polytrichus</i>), cat's-ear (<i>Hypochaeris radicata</i>), ribwort plantain (<i>Plantago lanceolata</i>), sand sedge (<i>Carex arenaria</i>), glaucous sedge (<i>C. flacca</i>), yellow-rattle (<i>Rhinanthus minor</i>), white clover (<i>Trifolium repens</i>), mouse-ear hawkweed (<i>Pilosella officinarum</i>), lady's bedstraw (<i>Galium verum</i>), field wood-rush (<i>Luzula campestris</i>), common mouse-ear (<i>Cerastium fontanum</i>), fairy flax (<i>Linum catharticum</i>), common centaury (<i>Centaureum erythraea</i>), harebell (<i>Campanula rotundifolia</i>) and biting stonecrop (<i>Sedum acre</i>). See the coastal habitats supporting document for further details

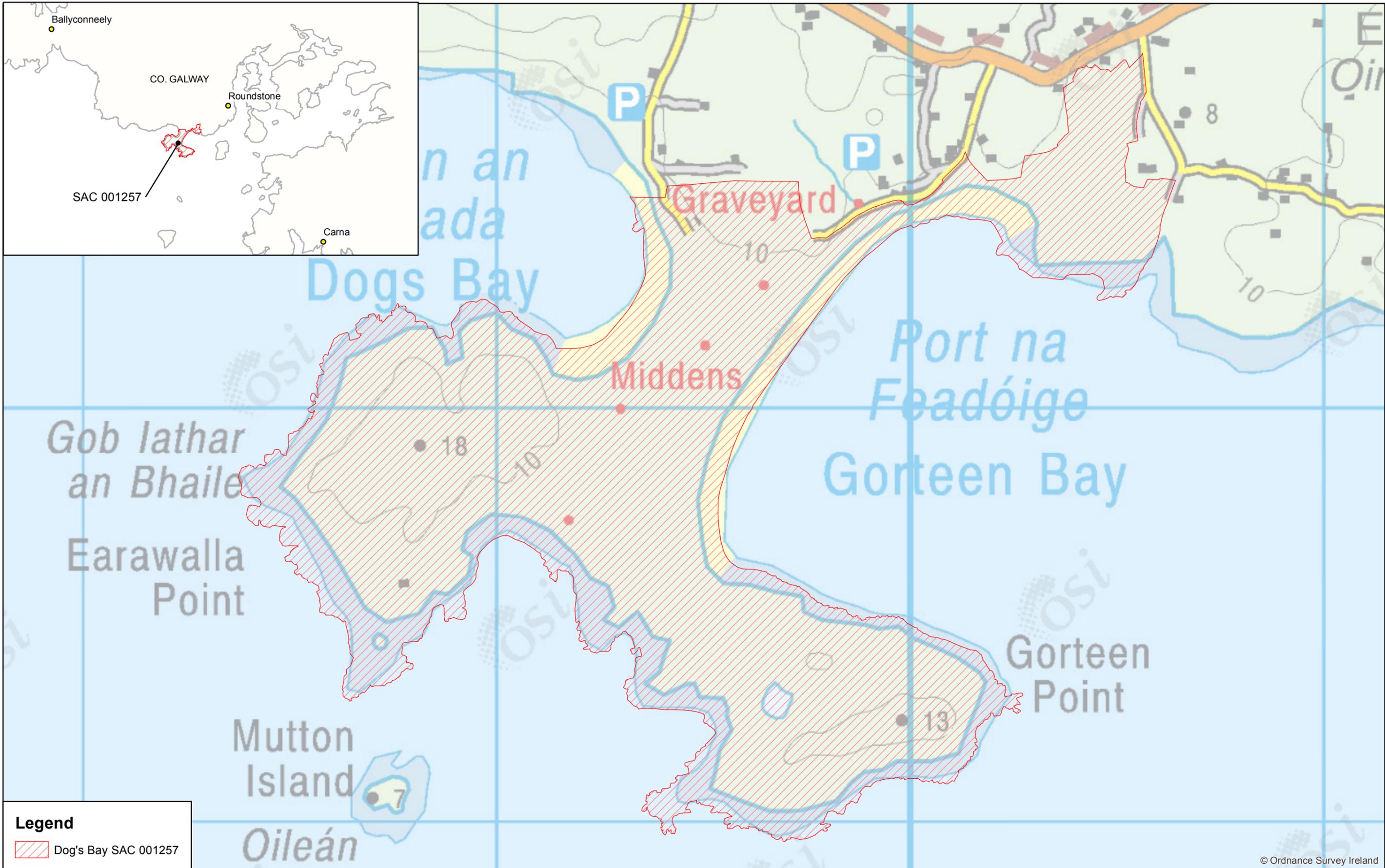
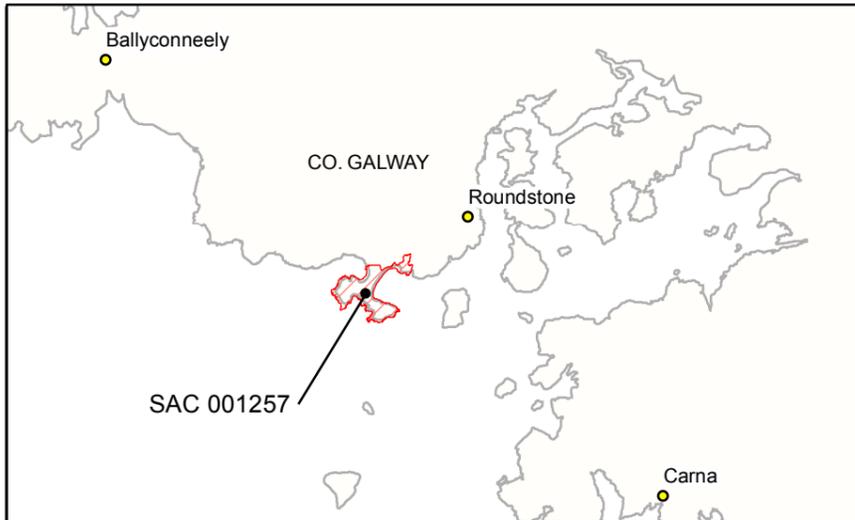
Vegetation composition: negative indicator species (including <i>Hippophae rhamnoides</i>)	Percentage cover	Negative indicator species (including non-native species) to represent less than 5% cover	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. The negative indicator common ragwort (<i>Senecio jacobaea</i>) is found throughout the fixed dune habitat and is quite common in patches. See the coastal habitats supporting document for further details
Vegetation composition: scrub/trees	Percentage cover	No more than 5% cover or under control	Based on data from Ryle et al. (2009) and Delaney et al. (2013). See the coastal habitats supporting document for further details

4030 European dry heaths

To maintain the favourable conservation condition of European dry heaths in Dog's Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes	European dry heaths has not been mapped in detail for Dog's Bay SAC and thus the total area of the qualifying habitat is unknown. Dry heath occurs on the rocky granite headland in the south-west of the SAC on low rocky knolls and forms mosaics with lichen-covered rock outcrops, dune grassland and flush (Crawford et al., 1998; NPWS internal files)
Habitat distribution	Occurrence	No decline, subject to natural processes	See note on area above
Ecosystem function: soil nutrients	Soil pH and appropriate nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	Relevant nutrients and their natural ranges are yet to be defined. However, nitrogen deposition is noted as being relevant to this habitat (NPWS, 2013)
Community diversity	Abundance of variety of vegetation communities	Maintain variety of vegetation communities, subject to natural processes	The diversity of dry heath communities within this SAC is unknown. Information on vegetation communities associated with this habitat is presented in Perrin et al. (2014)
Vegetation composition: lichens and bryophytes	Number of species at a representative number of 2m x 2m monitoring stops	Number of bryophyte or non-crustose lichen species present at each monitoring stop is at least three, excluding <i>Campylopus</i> and <i>Polytrichum</i> mosses	Attribute and target based on Perrin et al. (2014). Dry heath is not necessarily rich in lichen and bryophyte species, but a minimum amount should still be present
Vegetation composition: number of positive indicator species	Number of species at a representative number of 2m x 2m monitoring stops	Number of positive indicator species present at each monitoring stop is at least two	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat, which is composed of dwarf shrubs, is also presented. Western gorse (<i>Ulex gallii</i>), bell heather (<i>Erica cinerea</i>) and ling (<i>Calluna vulgaris</i>) are listed as present in the dry heath in this SAC (Crawford et al., 1998; NPWS internal files)
Vegetation composition: cover of positive indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Cover of positive indicator species at least 50% for siliceous dry heath and 50-75% for calcareous dry heath	Attribute and target based on Perrin et al. (2014), where the list of positive indicator species for this habitat, which is composed of dwarf shrubs, is also presented
Vegetation composition: dwarf shrub composition	Percentage cover at a representative number of 2m x 2m monitoring stops	Proportion of dwarf shrub cover composed collectively of bog-myrtle (<i>Myrica gale</i>), creeping willow (<i>Salix repens</i>) and western gorse (<i>Ulex gallii</i>) is less than 50%	Attribute and target based on Perrin et al. (2014). Bog-myrtle is indicative of flushed conditions and is more characteristic of wet heaths and blanket bogs. Creeping willow is more characteristic of dune heaths. Western gorse is a component of dry heath, but high proportions of it may indicate a history of undesirable levels of grazing
Vegetation composition: negative indicator species	Percentage cover at a representative number of 2m x 2m monitoring stops	Total cover of negative indicator species less than 1%	Attribute and target based on Perrin et al. (2014), where the list of negative indicator species for this habitat is also presented
Vegetation composition: non-native species	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of non-native species less than 1%	Attribute and target based on Perrin et al. (2014). Non-native species can be invasive and have deleterious effects on native vegetation. A low target is set as non-native species can spread rapidly and are most easily dealt with when still at lower abundances
Vegetation composition: native trees and shrubs	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of scattered native trees and shrubs less than 20%	Attribute and target based on Perrin et al. (2014). High cover of native trees and shrubs would indicate that the habitat may be succeeding towards scrub or woodland due to lack of grazing
Vegetation composition: bracken	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of bracken (<i>Pteridium aquilinum</i>) less than 10%	Attribute and target based on Perrin et al. (2014). High cover of bracken would indicate that the habitat may be succeeding towards a dense bracken community

Vegetation composition: soft rush	Percentage cover in local vicinity of a representative number of monitoring stops	Cover of soft rush (<i>Juncus effusus</i>) less than 10%	Attribute and target based on Perrin et al. (2014). High cover of soft rush would suggest undesirable hydrological conditions. Note however, that poor flushes dominated by soft rush can naturally occur in mosaic with this habitat. Discrete areas of this separate habitat should not be considered here
Vegetation structure: senescent ling	Percentage cover at a representative number of 2m x 2m monitoring stops	Senescent proportion of ling (<i>Calluna vulgaris</i>) cover less than 50%	Attribute and target based on Perrin et al. (2014). Senescence is part of the natural cycle of ling, but a dominance of ling in the senescent phase would indicate a lack of management (appropriate grazing or burning) to promote ling regeneration
Vegetation structure: signs of browsing	Percentage of shoots browsed at a representative number of 2m x 2m monitoring stops	Less than 33% collectively of the last complete growing season's shoots of ericoids showing signs of browsing	Attribute and target based on Perrin et al. (2014)
Vegetation structure: burning	Occurrence in local vicinity of a representative number of monitoring stops	No signs of burning in sensitive areas	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas is also presented. Fires can be part of the natural cycle of dry heath and may also be used as a valuable management tool to promote a diversity of growth phases in ling (<i>Calluna vulgaris</i>). However, currently most hill fires in Ireland are intentionally started to encourage grass growth for livestock. Fires which are too intense, too frequent, too extensive or which occur in sensitive areas are damaging to the habitat
Vegetation structure: growth phases of ling	Percentage cover in local vicinity of a representative number of monitoring stops	Outside sensitive areas, all growth phases of ling (<i>Calluna vulgaris</i>) should occur throughout, with at least 10% of cover in the mature phase	Attribute and target based on Perrin et al. (2014), where the list of sensitive areas is also presented. The growth phases of ling are pioneer (<10cm high), building (10-30cm high) and mature (<30cm high). As burning is undesirable in sensitive areas, it is not reasonable to require the stated diversity of growth phases within these areas
Physical structure: disturbed bare ground	Percentage cover at, and in local vicinity of, a representative number of 2m x 2m monitoring stops	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014). Disturbance can include hoof marks, wallows, human foot prints and vehicle and machinery tracks. Excessive disturbance can result in loss of characteristic species and presage erosion for heaths and peatlands
Indicators of local distinctiveness	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	This includes species listed in the Flora (Protection) Order, 2015 and/or the red data lists (Lockhart et al., 2012; Wyse Jackson et al., 2016)



Legend
 Dog's Bay SAC 001257

An Poinn Ealaíon, Oidhreacht, Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
 Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

**MAP 1:
 DOG'S BAY SAC
 CONSERVATION OBJECTIVES
 SAC DESIGNATION**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:
 SAC 001257; version 3.02. CO. GALWAY**

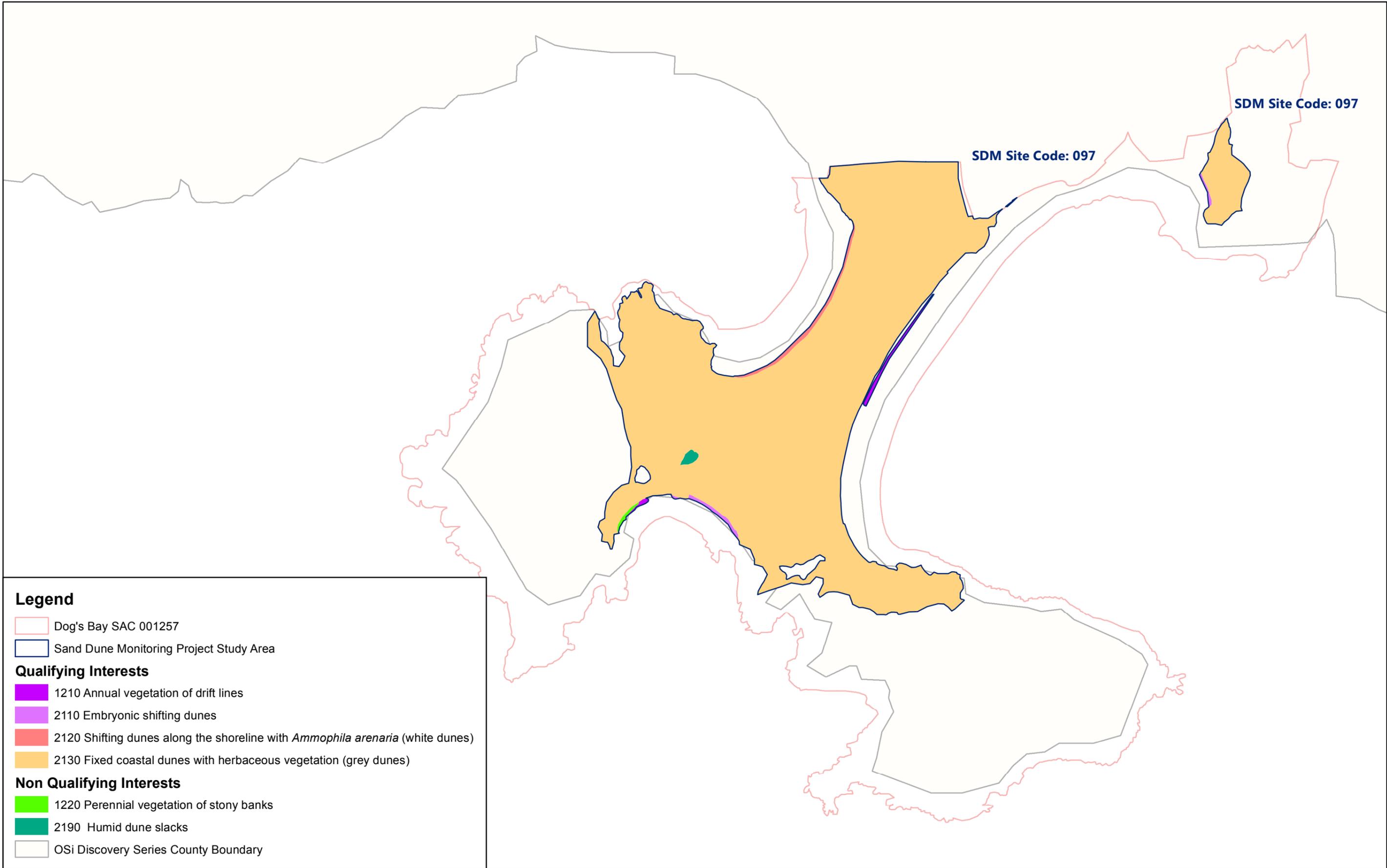
0 0.1 0.2 0.3 0.4 km

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.
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**Map Version 1
 Date: Nov 2016**



Legend

- Dog's Bay SAC 001257
- Sand Dune Monitoring Project Study Area
- Qualifying Interests**
- 1210 Annual vegetation of drift lines
- 2110 Embryonic shifting dunes
- 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
- 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)
- Non Qualifying Interests**
- 1220 Perennial vegetation of stony banks
- 2190 Humid dune slacks
- OSi Discovery Series County Boundary