

# National Parks and Wildlife Service

## Conservation Objectives Series

### Raven Point Nature Reserve SAC 000710



***An Roinn  
Ealaíon, Oidhreachta agus Gaeltachta***  
***Department of  
Arts, Heritage and the Gaeltacht***



**National Parks and Wildlife Service,  
Department of Arts, Heritage and the Gaeltacht,  
7 Ely Place, Dublin 2, Ireland.  
Web: [www.npws.ie](http://www.npws.ie)  
E-mail: [nature.conservation@ahg.gov.ie](mailto:nature.conservation@ahg.gov.ie)**

**Citation:**

NPWS (2011) Conservation Objectives: Raven Point Nature Reserve SAC 000710. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

**Series Editors: Rebecca Jeffrey & Naomi Kingston  
ISSN 2009-4086**

## Introduction

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.

## Qualifying Interests

*\* indicates a priority habitat under the Habitats Directive*

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000710	Raven Point Nature Reserve SAC
1140	Mudflats and sandflats not covered by seawater at low tide
1210	Annual vegetation of drift lines
1330	Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )
2110	Embryonic shifting dunes
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')
2130	*Fixed coastal dunes with herbaceous vegetation ('grey dunes')
2170	Dunes with <i>Salix repens</i> ssp. <i>argentea</i> ( <i>Salicion arenariae</i> )
2190	Humid dune slacks

**Please note that this SAC is adjacent to/overlaps with Slaney River Valley SAC 000781; The Raven SPA 004019; and Wexford Harbour and Slobs SPA 004076. See map 2.**

## Supporting documents, relevant reports & publications (listed by date)

Supporting documents, NPWS reports and publications are available for download from: [www.npws.ie/Publications](http://www.npws.ie/Publications)

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**Title:** Raven Point Nature Reserve SAC (000710): Conservation objectives supporting document - coastal habitats. [Version 1]

**Year:** 2011

**Author:** NPWS

**Series:** Unpublished Report to NPWS

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**Title:** Raven Point Nature Reserve SAC (000710): Conservation objectives supporting document - marine habitats. [Version 1]

**Year:** 2011

**Author:** NPWS

**Series:** Unpublished Report to NPWS

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**Title:** A survey of mudflats and sandflats in Ireland. An intertidal soft sediment survey of Wexford Harbour

**Year:** 2009

**Author:** ASU

**Series:** Unpublished Report to NPWS

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**Title:** Coastal Monitoring Project 2004-2006

**Year:** 2009

**Author:** Ryle, T.; Murray, A.; Connolly, C.; Swann, M.

**Series:** Unpublished Report to NPWS

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**Title:** The phytosociology and conservation value of Irish sand dunes

**Year:** 2008

**Author:** Gaynor, K.

**Series:** Unpublished PhD thesis, National University of Ireland, Dublin

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**Title:** A Study of The Raven, Co. Wexford

**Year:** 1980

**Author:** Anon.

**Series:** Joint report prepared by An Foras Forbartha and Forest and Wildlife Service, Department of Fisheries and Forestry

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## Spatial data sources

<b>Year:</b>	Interpolated 2011
<b>Title:</b>	Intertidal soft sediment survey, 2008
<b>GIS operations:</b>	Polygon feature classes from marine community types base data sub-divided based on interpolation of marine survey data. Expert opinion used as necessary to resolve any issues arising
<b>Used for:</b>	Marine community types, 1140 (maps 3 & 4)
<b>Year:</b>	2005
<b>Title:</b>	OSi Discovery series vector data
<b>GIS operations:</b>	High water mark (HWM) and low water mark (LWM) polyline feature classes converted into polygon feature classes and combined; EU Annex I Saltmarsh and Coastal data erased out if present
<b>Used for:</b>	Marine community types base data (map 4)
<b>Year:</b>	Revision 2010
<b>Title:</b>	Saltmarsh Monitoring Project 2007-2008. Version 1
<b>GIS operations:</b>	QIs selected; clipped to SAC boundary; overlapping regions with Coastal CO data investigated and resolved with expert opinion used
<b>Used for:</b>	1330 (map 5)
<b>Year:</b>	2009
<b>Title:</b>	Coastal Monitoring Project 2004-2006. Version 1
<b>GIS operations:</b>	QIs selected; clipped to SAC boundary; overlapping regions with Saltmarsh CO data investigated and resolved with expert opinion used
<b>Used for:</b>	1210, 2110, 2120, 2130, 2170, 2190 (map 6)

**Conservation objectives for: Raven Point Nature Reserve SAC [000710]**

**1140 Mudflats and sandflats not covered by seawater at low tide**

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 3	Habitat area was estimated using OSi data as 73ha
Community distribution	Hectares	The following community types should be maintained in a natural condition: Sand dominated by polychaetes community complex; Estuarine muds dominated by polychaetes and crustaceans community complex. See map 4	The likely area of sediment communities was derived from an intertidal survey undertaken in 2008 (ASU, 2009). See marine supporting document for further details

**1210 Annual vegetation of drift lines**

**To maintain the favourable conservation condition of Annual vegetation of driftlines in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:**

<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. Total area mapped: 0.37ha. See map 6	Based on data from the Coastal Monitoring Project (Ryle et al. 2009). 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 and, at the time of survey in 2004, was absent from the entire east coast stretch from Raven Point to Curraclloe, where erosion has taken place in recent times. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6	Based on data from Ryle et al. (2009). Majority of habitat found at southern tip of site, although there may be additional patches distributed throughout the site. See 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. Accumulation of organic matter in tidal litter is essential for trapping sand and initiating dune formation. Harbour construction works at Wexford and Rosslare have interrupted the natural flow of sediment along the coast. This has led to beach starvation and increased rates of erosion along the eastern side of the Raven. See 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). See 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>Honckenya peploides</i> ), prickly saltwort ( <i>Salsola kali</i> ) and Orache ( <i>Atriplex</i> spp.)	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details



1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

To maintain the favourable conservation condition of Atlantic salt meadows in Raven Point Nature Reserve 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. Total area mapped: 0.22ha. See map 5	The site was not surveyed by the Saltmarsh Monitoring Project (McCorry and Ryle 2009). Assessment is based on data from the Coastal Monitoring Project (Ryle et al. 2009) who mapped a small area of saltmarsh (1.52ha), of which 0.22ha was Atlantic salt meadow. The saltmarsh at the Raven is of recent origin and is naturally very dynamic. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 5 for known distribution	Based on data from Anon (1980) and Ryle et al. (2009). Saltmarsh is restricted to the southern end of the Raven. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Allow creek and pan structure to develop, subject to natural processes, including erosion and succession	As the saltmarsh at Raven Point is of recent origin it has yet to develop a creek and pan network. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	See 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	Atlantic salt meadow is found at the southern tip of Raven Point in close association with a range of sand dune habitats. Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain >90% of the saltmarsh area vegetated	See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Saltmarsh Monitoring Project (McCorry & Ryle, 2009)	See coastal habitats supporting document for further details
Vegetation structure: negative indicator species - <i>Spartina anglica</i>	Hectares	No significant expansion of common cordgrass ( <i>Spartina anglica</i> ), with an annual spread of less than 1%	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details

**2110 Embryonic shifting dunes**

**To restore the favourable conservation condition of Embryonic shifting dunes in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:**

<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Habitat area	Hectares	Area increasing, subject to natural processes, including erosion and succession. Total area mapped: 1.13ha. See map 6	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Habitat is very difficult to measure in view of its dynamic nature. A large actively accreting area near Raven Point, at the southern tip of the site, accounted for much of the total embryonic dune area. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6 for known distribution	Based on data from Ryle et al. (2009). Distribution concentrated at the southern end, with patchy distribution along the eastern edge. See 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. Harbour construction works at Wexford and Rosslare have interrupted the natural flow of sediment along the coast. This has led to beach starvation and increased rates of erosion along the eastern side of the Raven. See 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). See coastal habitats supporting document for further details
Vegetation composition: plant health of foredune grasses	Percentage cover	>95% of sand couch ( <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)	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species: sand couch ( <i>Elytrigia juncea</i> ) and/or lyme-grass ( <i>Leymus arenarius</i> )	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). 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 coastal habitats supporting document for further details

## Conservation objectives for: Raven Point Nature Reserve SAC [000710]

### 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* in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. Total area mapped: 9.38ha. See map 6	Habitat was mapped during the Coastal Monitoring Project (Ryle et al. 2009). Habitat is very difficult to measure in view of its dynamic nature. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6 for known distribution	Significant building of mobile dunes including a number of substantial ridges has occurred at the Raven in recent years (Ryle et al. 2009). See 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, thus encouraging further accretion. Harbour construction works at Wexford and Rosslare have interrupted the natural flow of sediment along the coast. This has led to beach starvation and increased rates of erosion along the eastern side of the Raven. See 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 Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage cover	>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). See 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 Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). 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 coastal habitats supporting document for further details

**Conservation objectives for: Raven Point Nature Reserve SAC [000710]**

**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 Raven Point Nature Reserve 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. Total area mapped: 22.65ha. See map 6	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). NB further unsurveyed areas maybe present in the site, particularly in the wooded area. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6 for known distribution	See 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	Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. See 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). See 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) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	30-70% of sward should be maintained between 2 and 20cms. Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). 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 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). See coastal habitats supporting document for further details

**Conservation objectives for: Raven Point Nature Reserve SAC [000710]**

**2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)**

To maintain the favourable conservation condition of Dunes with *Salix repens* ssp. *argentea* (*Salix arenariae*) in Raven Point Nature Reserve 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. Total area mapped: 0.14ha. See map 6	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). NB further unsurveyed areas maybe present in the site, particularly in the wooded area. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 6 for known distribution	See 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	Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. See 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). See coastal habitats supporting document for further details
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 10% cover, subject to natural processes	Based on data from Ryle et al. (2009). NB further unsurveyed areas maybe present in the site, particularly in the wooded area. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	See coastal habitats supporting document for further details
Vegetation composition: cover and height of <i>S. repens</i>	% cover; centimeters	Maintain >10% cover of creeping willow ( <i>Salix repens</i> ); vegetation height should be in the average range of 5-20cm	Cover of creeping willow ( <i>Salix repens</i> ) should be maintained (e.g. through an appropriate grazing regime) to prevent the development of a coarse, rank vegetation cover. Based on data from Ryle et al. (2009)
Vegetation composition: negative indicator species	Percentage cover at a representative sample of monitoring stops	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). 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 coastal habitats supporting document for further details

**Conservation objectives for: Raven Point Nature Reserve SAC [000710]**

**2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)**

To maintain the favourable conservation condition of Dunes with *Salix repens* ssp. *argentea* (*Salix arenariae*) in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Vegetation composition: scrub/trees	Percentage cover	For trees and scrub other than creeping willow ( <i>Salix repens</i> ), there should be no more than 5% cover or their presence should be under control	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details

**2190 Humid dune slacks**

**To restore the favourable conservation condition of Humid dune slacks in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:**

<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. Total area mapped: 0.75ha See map 6	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). The site was mapped, giving a total estimated area of 0.75ha. NB further unsurveyed areas maybe present in the site, particularly in the wooded area. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 6 for known distribution	Slacks occur throughout The Raven site including within the afforested areas. They provide habitat for round-leaved wintergreen ( <i>Pyrola rotundifolia</i> ssp. <i>maritima</i> ) and natterjack toad ( <i>Bufo calamita</i> ). See 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	Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. See coastal habitats supporting document for further details
Physical structure: hydrological and flooding regime	Water table levels; groundwater fluctuations (metres)	Maintain natural hydrological regime	Based on data from Gaynor (2008) and Ryle et al. (2009). Some slacks at the site are believed to have dried up due to afforestation. See 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	See coastal habitats supporting document for further details
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 5% of dune slack habitat, with the exception of pioneer slacks, which can have up to 20% bare ground	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Vegetation height will vary considerably depending on the age and wetness of the slack. Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details

**2190 Humid dune slacks**

To restore the favourable conservation condition of Humid dune slacks in Raven Point Nature Reserve SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Vegetation composition: cover of <i>Salix repens</i>	% cover; centimeters	Maintain <40% cover of creeping willow ( <i>Salix repens</i> )	Cover of creeping willow ( <i>Salix repens</i> ) needs to be controlled (e.g. through an appropriate grazing regime) to prevent the development of a coarse, rank vegetation cover. Based on data from Ryle et al. (2009).
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). 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 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). See coastal habitats supporting document for further details