

National Parks and Wildlife Service

Conservation Objectives Series

Rogerstown Estuary SAC 000208



*An Roinn
Ealaíon, Oidhreachta agus Gaeltachta*

*Department of
Arts, Heritage and the Gaeltacht*



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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.

Qualifying Interests

* indicates a priority habitat under the Habitats Directive

000208	Rogerstown Estuary SAC
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1130	Estuaries
1140	Mudflats and sandflats not covered by seawater at low tide
1310	<i>Salicornia</i> and other annuals colonising mud and sand
1330	Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)
1410	Mediterranean salt meadows (<i>Juncetalia maritimi</i>)
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)*

Please note that this SAC overlaps with Rogerstown Estuary SPA (004015). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping SPA as appropriate.

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	2007
Title :	Saltmarsh Monitoring Project 2006
Author :	McCorry, M.
Series :	Unpublished report to NPWS
<hr/>	
Year :	2009
Title :	Coastal Monitoring Project 2004-2006
Author :	Ryle, T.; Murray, A.; Connolly, C.; Swann, M.
Series :	Unpublished report to NPWS
<hr/>	
Year :	2009
Title :	Saltmarsh monitoring project 2007-2008
Author :	McCorry, M; Ryle, T.
Series :	Unpublished report to NPWS
<hr/>	
Year :	2013
Title :	Rogerstown Estuary SAC (208) Conservation objectives supporting document- coastal habitats V1
Author :	NPWS
Series :	Conservation Objectives supporting document
<hr/>	
Year :	2013
Title :	Rogerstown Estuary SAC (208) Conservation objectives supporting document- marine 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 PhD thesis, National University of Ireland, Dublin
<hr/>	
Year :	2012
Title :	Intertidal benthic survey of Rogerstown Estuary SAC and Rogerstown Estuary SPA
Author :	MERC
Series :	Unpublished report to the Marine Institute and NPWS
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Year :	2012
Title :	Subtidal benthic survey of Rogerstown Estuary SAC and Rogerstown Estuary SPA
Author :	MERC
Series :	Unpublished report to the Marine Institute and NPWS

Spatial data sources

Year :	2010
Title :	EPA WFD transitional waterbody data
GIS Operations :	Clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	1130 (map 3)
<hr/>	
Year :	Interpolated 2013
Title :	Intertidal and subtidal surveys 2011
GIS Operations :	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
Used For :	Marine community types, 1140 (maps 4 and 5)
<hr/>	
Year :	2005
Title :	OSi Discovery series vector data
GIS Operations :	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
Used For :	Marine community types base data (map 5)
<hr/>	
Year :	Revision 2010
Title :	Saltmarsh Monitoring Project 2007-2008. Version 1
GIS Operations :	QIs selected; clipped to SAC boundary; overlapping regions with Coastal CO data investigated and resolved with expert opinion used
Used For :	1310, 1330, 1410 (map 6)
<hr/>	
Year :	2009
Title :	Coastal Monitoring Project 2004-2006. Version 1
GIS Operations :	QIs selected; clipped to SAC boundary; overlapping regions with Saltmarsh CO data investigated and resolved with expert opinion used
Used For :	2120, 2130 (map 7)

1130 Estuaries

To maintain the favourable conservation condition of Estuaries in Rogerstown Estuary 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 as 268ha using OSi data and the defined Transitional Water Body area under the Water Framework Directive
Community extent	Hectares	Maintain the extent of the <i>Zostera</i> -dominated community and the <i>Mytilus edulis</i> -dominated community, subject to natural processes. See map 5	Based on intertidal and subtidal surveys undertaken in 2011 (MERC, 2012a,b) and EPA surveys. See marine supporting document for further details
Community structure: <i>Zostera</i> density	Shoots/m ²	Conserve the high quality of the <i>Zostera</i> -dominated community, subject to natural processes	Estimated during 2011 EPA survey. See marine supporting document for further details
Community structure: <i>Mytilus edulis</i> density	Individuals/m ²	Conserve the high quality of the <i>Mytilus edulis</i> -dominated community, subject to natural processes	Estimated during an intertidal survey in 2011 (MERC, 2012). See marine supporting document for further details
Community distribution	Hectares	Conserve the following community types in a natural condition: Sand to coarse sediment with <i>Nephtys cirrosa</i> and <i>Scolecopsis squamata</i> community complex; Estuarine sandy mud to mixed sediment with <i>Tubificoides benedii</i> , <i>Hediste diversicolor</i> and <i>Peringia ulvae</i> community complex. See map 5	Based on intertidal and subtidal surveys undertaken in 2011 (MERC, 2012). See marine habitats supporting document for further details

Conservation Objectives for : Rogerstown Estuary SAC [000208]

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 Rogerstown Estuary 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 4	Habitat area was estimated using OSi data as 370ha
Community extent	Hectares	Maintain the extent of the <i>Zostera</i> -dominated community and the <i>Mytilus edulis</i> -dominated community, subject to natural processes. See map 5	Based on intertidal and subtidal surveys undertaken in 2011 (MERC, 2012) and EPA surveys. See marine supporting document for further details
Community structure: <i>Zostera</i> density	Shoots/m ²	Conserve the high quality of the <i>Zostera</i> -dominated community, subject to natural processes	Estimated during 2011 EPA survey. See marine supporting document for further details
Community structure: <i>Mytilus edulis</i> density	Individuals/m ²	Conserve the high quality of the <i>Mytilus edulis</i> -dominated community, subject to natural processes	Estimated during an intertidal survey in 2011 (MERC, 2012). See marine supporting document for further details
Community distribution	Hectares	Conserve the following community types in a natural condition: Sand to coarse sediment with <i>Nephtys cirrosa</i> and <i>Scolelepis squamata</i> community complex; Estuarine sandy mud to mixed sediment with <i>Tubificoides benedii</i> , <i>Hediste diversicolor</i> and <i>Peringia ulvae</i> community complex. See map 5	Based on intertidal and subtidal surveys undertaken in 2011 (MERC, 2012). See marine habitats supporting document for further details

Conservation Objectives for : Rogerstown Estuary SAC [000208]

1310 *Salicornia* and other annuals colonising mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Rogerstown Estuary 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 sub-site mapped: Rogerstown Estuary 0.90ha. See map 6	Based on data from Saltmarsh Monitoring Project (SMP) (McCorry, 2007). Habitat surveyed and mapped at a single sub-site, giving a total estimated area of 0.90ha. N.B. Further unsurveyed areas may be present within this site. 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	Based on data from SMP (McCorry, 2007). <i>Salicornia</i> is an annual species, so its distribution can vary significantly from year to year. This habitat occurs at several locations within the inner and outer estuary, See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain, or where necessary restore, natural circulation of sediments and organic matter, without any physical obstructions	Based on data from SMP (McCorry, 2007). Sediment supply is particularly important for this pioneer saltmarsh community, as the distribution of this habitat depends on accretion rates. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Based on data from SMP (McCorry, 2007). Creeks deliver sediment throughout saltmarsh system. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from SMP (McCorry, 2007). This pioneer saltmarsh community requires regular tidal inundation. 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 SMP (McCorry, 2007). A range of saltmarsh habitats occurs at this site including mosaics. In the outer estuary at Portrane Burrow, there are zonations between saltmarsh and sand dune habitats. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from SMP (McCorry, 2007). See coastal habitats supporting document for details
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated	Based on data from SMP (McCorry, 2007). See coastal habitats supporting document for details
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)	Based on data from SMP (McCorry, 2007). 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>). No new sites for this species and an annual spread of less than 1% where it is already known to occur	Based on data from SMP (McCorry, 2007). <i>Spartina</i> has formed swards on both the intertidal mudflats and also forms mosaics with established saltmarsh. See coastal habitats supporting document for further details

Conservation Objectives for : Rogerstown Estuary SAC [000208]

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

To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Rogerstown Estuary 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 sub-site mapped: Rogerstown Estuary-37.2ha. See map 6	Based on data from Saltmarsh Monitoring Project (SMP) (McCorry, 2007). Habitat surveyed and mapped at a single sub-site, giving a total estimated area of 37.2ha. N.B. Further unsurveyed areas may be present within the site. 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	Based on data from SMP (McCorry, 2007). ASM is the most common saltmarsh habitat at this site. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Based on data from SMP (McCorry, 2007). 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	Based on data from SMP (McCorry, 2007). The saltmarsh topography is well developed in most of the larger sections of ASM. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from SMP (McCorry, 2007). See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from SMP (McCorry, 2007). A range of saltmarsh habitats occurs at this site including mosaics. In the outer estuary at Portrane Burrow, there are zonation between saltmarsh and sand dune habitats. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from SMP (McCorry, 2007). Much of the saltmarsh is not grazed by livestock and has a relatively high sward height. Hares and wildfowl graze on the saltmarsh and the mid-marsh zone has a typical natural low sward height. See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% area outside creeks vegetated	Based on data from SMP (McCorry, 2007). 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 SMP (McCorry and 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% where it is known to occur	Based on data from SMP (McCorry, 2007). <i>Spartina</i> has formed swards on both the intertidal mudflats and also forms mosaics with established saltmarsh. See coastal habitats supporting document for further details

Conservation Objectives for : Rogerstown Estuary SAC [000208]

1410 Mediterranean salt meadows (*Juncetalia maritimi*)

To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Rogerstown Estuary 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 sub-site mapped: Rogerstown Estuary- 2.18ha. See map 6	Based on data from the Saltmarsh Monitoring Project (SMP) (McCorry, 2007). Habitat surveyed and mapped at a single sub-site giving a total estimated area of 2.18ha. N.B. Further unsurveyed areas may be present within the site. 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 SMP (McCorry, 2007). There are small areas of MSM in this site. 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	Based on data from SMP (McCorry, 2007). See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Based on data from the SMP (McCorry, 2007). Within the MSM there are occasional salt pans present. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from SMP (McCorry, 2007). MSM is found high up in the saltmarsh but requires occasional tidal inundation. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of saltmarsh habitats including transitional zones, subject to natural processes including erosion and succession.	Based on data from SMP (McCorry, 2007). A range of saltmarsh habitats occur at this site including mosaics. In the outer estuary at Portrane Burrow, there are zonation between saltmarsh and sand dune habitats. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation in the sward	Based on data from SMP (McCorry, 2007). Much of the saltmarsh is not grazed by livestock and has a relatively high sward height. Hares and wildfowl graze on the saltmarsh and the mid-marsh zone has a typical natural low sward height. See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated	Based on data from SMP (McCorry, 2007). 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 characteristic species listed in SMP (McCorry and Ryle, 2009)	Based on data from SMP (McCorry, 2007). Species of local distinctiveness include meadow barley (<i>Hordeum secalinum</i>), and rock sea lavender (<i>Limonium binervosum</i>). 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% where it is already known to occur	Based on data from SMP (McCorry, 2007). <i>Spartina</i> has formed swards on both the intertidal mudflats and also forms mosaics with established saltmarsh. See coastal habitats supporting document for further details

Conservation Objectives for : Rogerstown Estuary SAC [000208]

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 Rogerstown Estuary SAC, which is defined by the following list of attributes and targets:

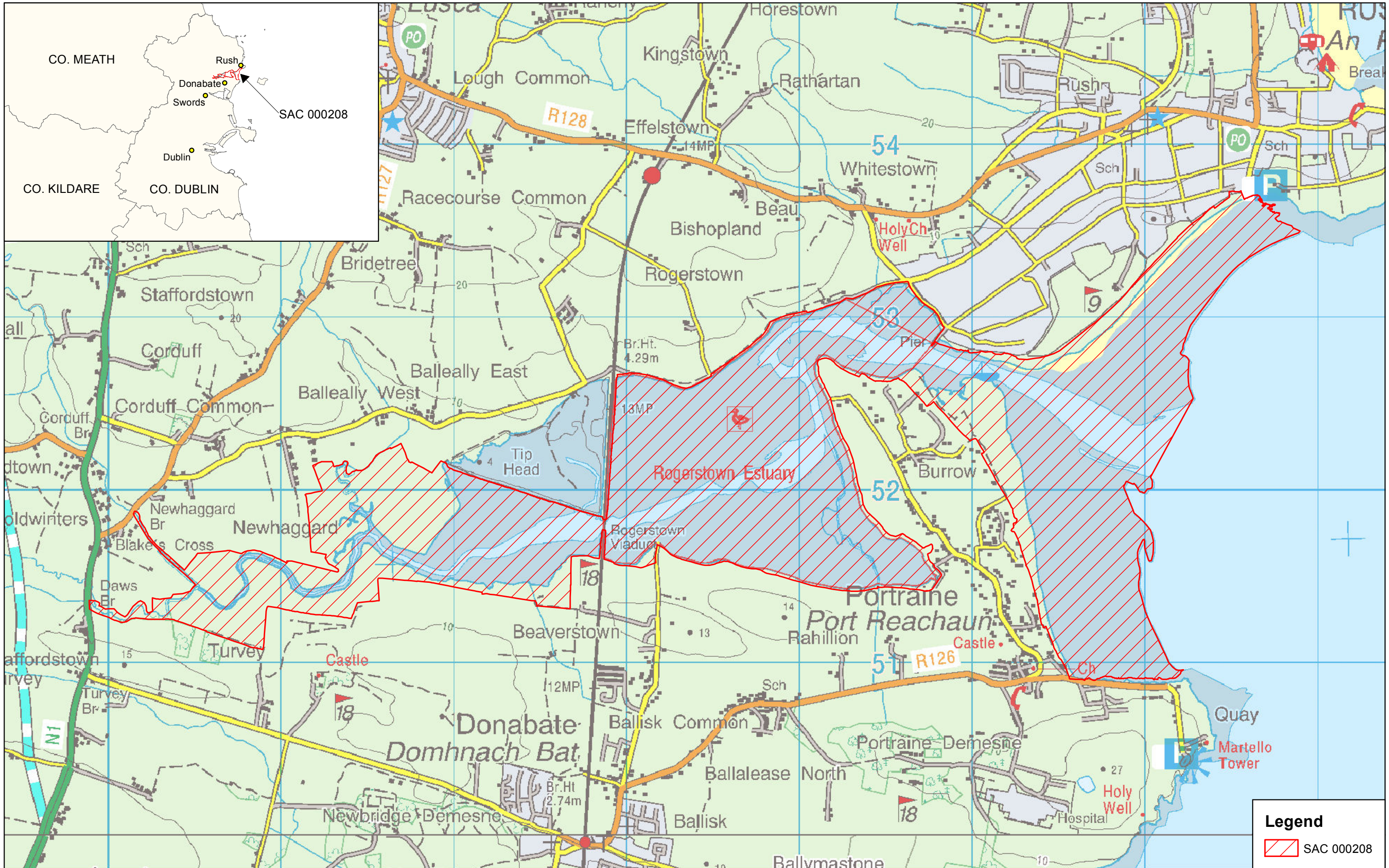
Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Rush - 1.25ha, Portrane - 1.31ha. See map 7	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009). Two sub-sites were surveyed and mapped, giving an estimated area of 2.56ha. 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, or change in habitat distribution, subject to natural processes. See map 7 for known distribution	Based on data from CMP (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	Based on data from CMP (Ryle et al., 2009). 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. At Rush sandhills, a sea wall has been built at Rush Sailing Club and is likely to be impacting on sediment dynamics at this sub-site. 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). At both sub-sites there are transitions between sand dune habitats. At Portrane there are also transitions to saltmarsh habitats. 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 CMP (Ryle et al., 2009). At Portrane there is a high cover of unhealthy specimens of marram grass <i>Ammophila arenaria</i> . 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 CMP (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 CMP (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

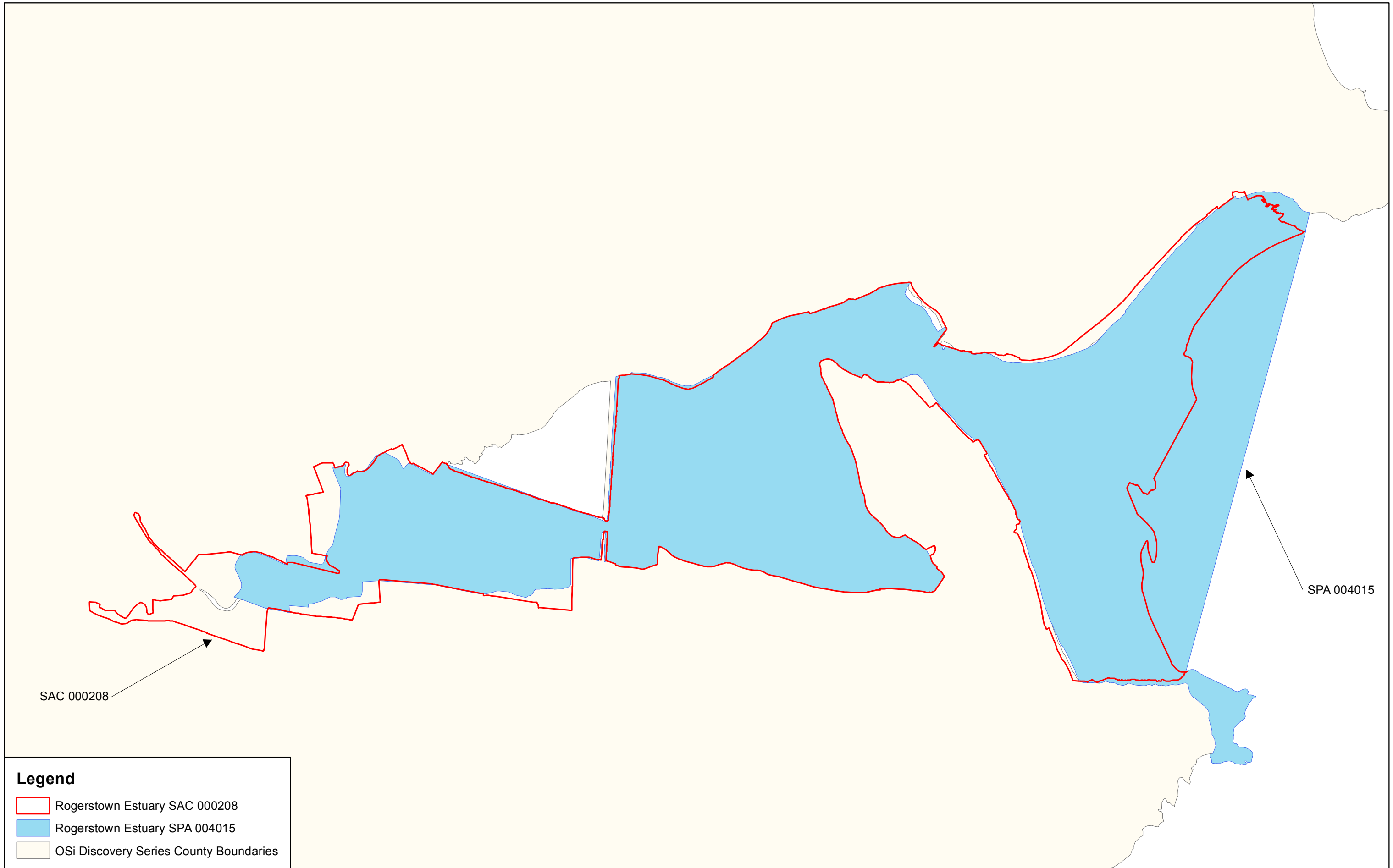
Conservation Objectives for : Rogerstown Estuary SAC [000208]

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 Rogerstown Estuary SAC, which is defined by the following list of attributes and targets:

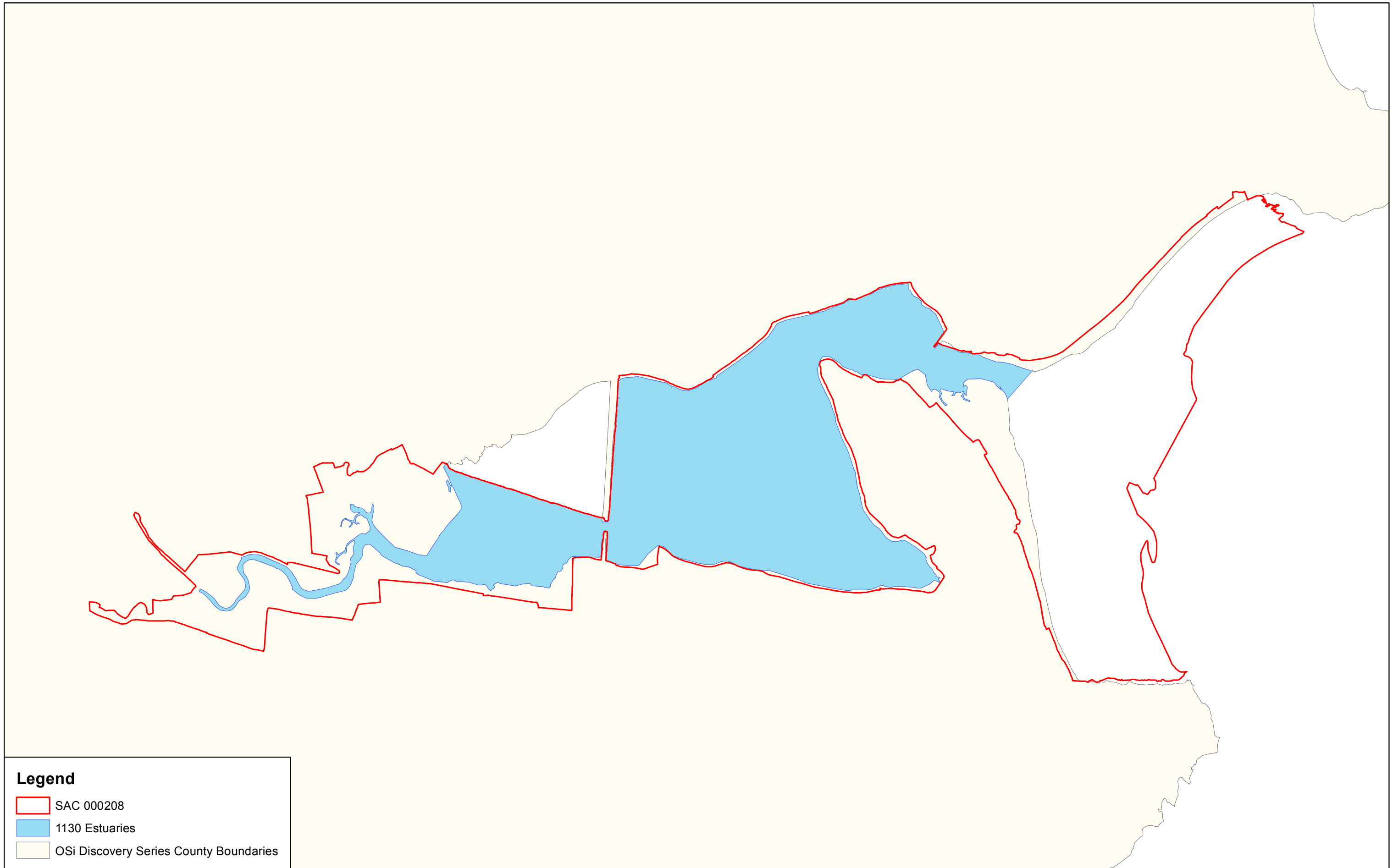
Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Rush - 3.24ha; Portrane - 5.13ha. See map 7	Based on data from Coastal Monitoring Project (CMP) (Ryle et al., 2009). Two sub-sites surveyed and mapped, giving an estimated area of 8.37ha. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, or change in habitat distribution, subject to natural processes. See map 7 for known distribution	Based on data from CMP (Ryle et al., 2009). Fixed dune habitat is the most abundant sand dune habitat within the SAC. 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	Based on data from CMP (Ryle et al., 2009). Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. At Rush sandhills, a sea wall has been built at Rush Sailing Club and is likely to impact on sediment dynamics. 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 CMP (Ryle et al., 2009). At both sub-sites there are transitions between sand dune habitats. At Portrane there are also transitions to saltmarsh habitats. 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). High recreational pressure on both sub-sites has resulted in the creation of numerous tracks. See coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from Gaynor (2008) and CMP (Ryle et al., 2009). Grazing by livestock is absent from the sub-sites. At Rush Sandhills, there are some small patches of rabbit-grazed short turf. 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 CMP (Ryle et al., 2009). The presence of the Red Data Book species green-winged orchid (<i>Orchis morio</i>) and hairy violet (<i>Viola hirta</i>) in fixed dunes are an indicator of local distinctiveness. See coastal habitats supporting document for further details.
Vegetation composition: negative indicator species (including <i>Hippophae rhamnoides</i>)	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from CMP (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 CMP (Ryle et al., 2009). See coastal habitats supporting document for further details





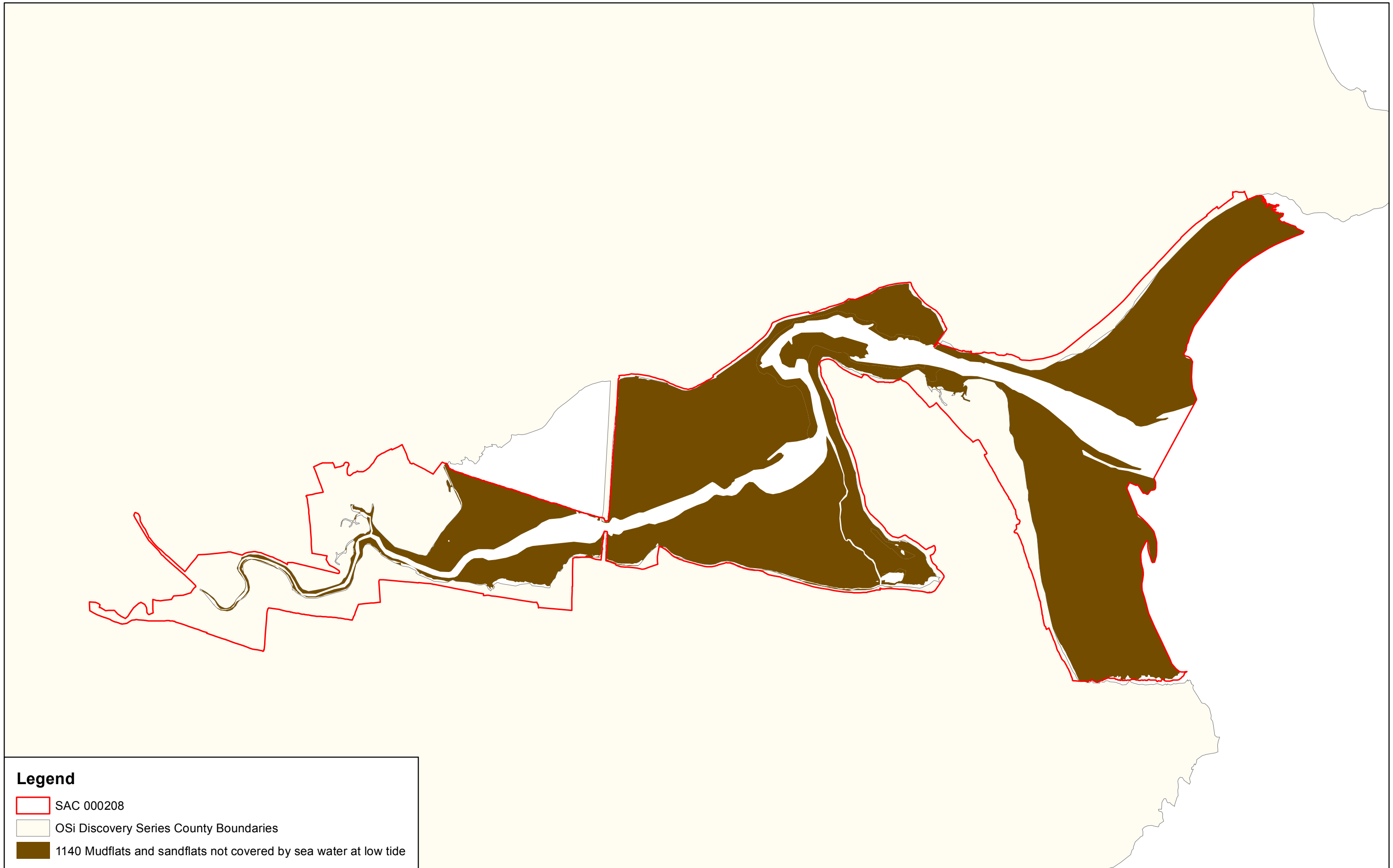
Legend

- Rogerstown Estuary SAC 000208
- Rogerstown Estuary SPA 004015
- OSi Discovery Series County Boundaries



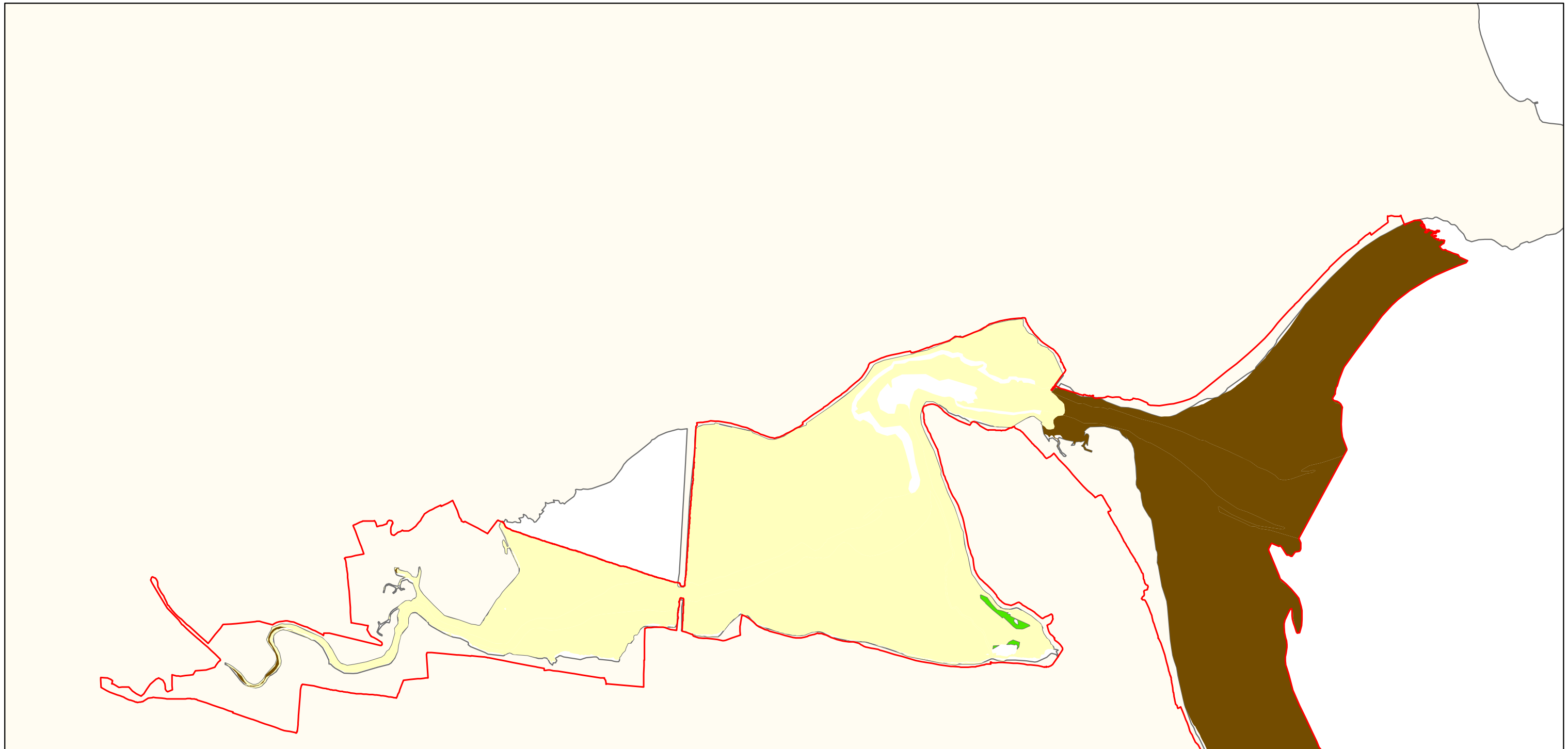
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- SAC 000208
- 1130 Estuaries
- OSi Discovery Series County Boundaries



Legend

- SAC 000208
- OSi Discovery Series County Boundaries
- 1140 Mudflats and sandflats not covered by sea water at low tide

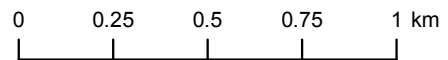


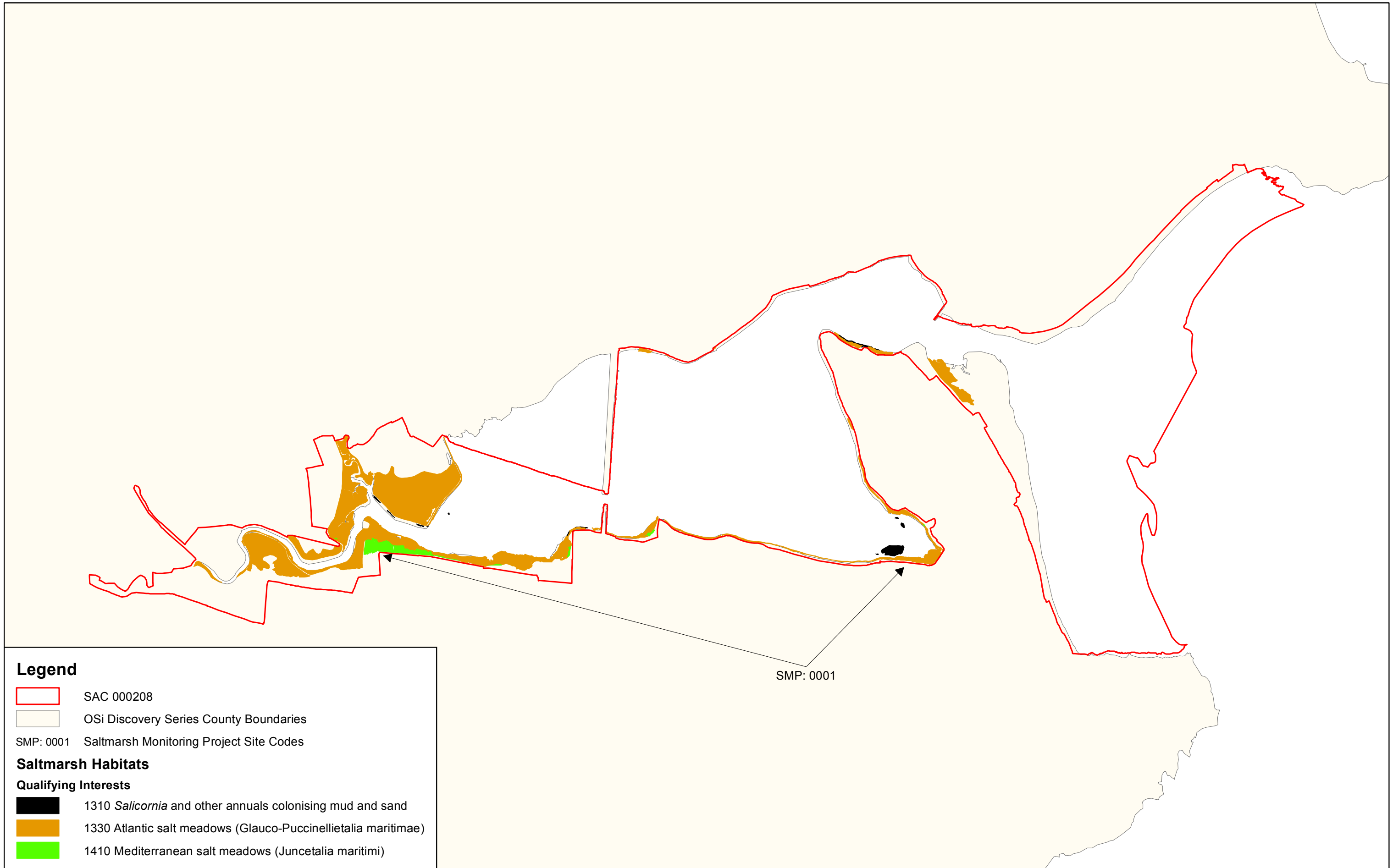
Legend

- SAC 000208
- OSi Discovery Series County Boundaries

Marine Community Types

- Estuarine sandy mud to mixed sediment with *Tubificoides benedii*, *Hediste diversicolor* and *Peringia ulvae* community complex
- Mytilus edulis*-dominated community complex
- Sand to coarse sediment with *Nephtys cirrosa* and *Scolelepis squamata* community complex
- Zostera*-dominated community





Legend

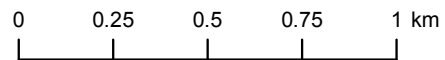
- SAC 000208
- OSi Discovery Series County Boundaries
- SMP: 0001 Saltmarsh Monitoring Project Site Codes

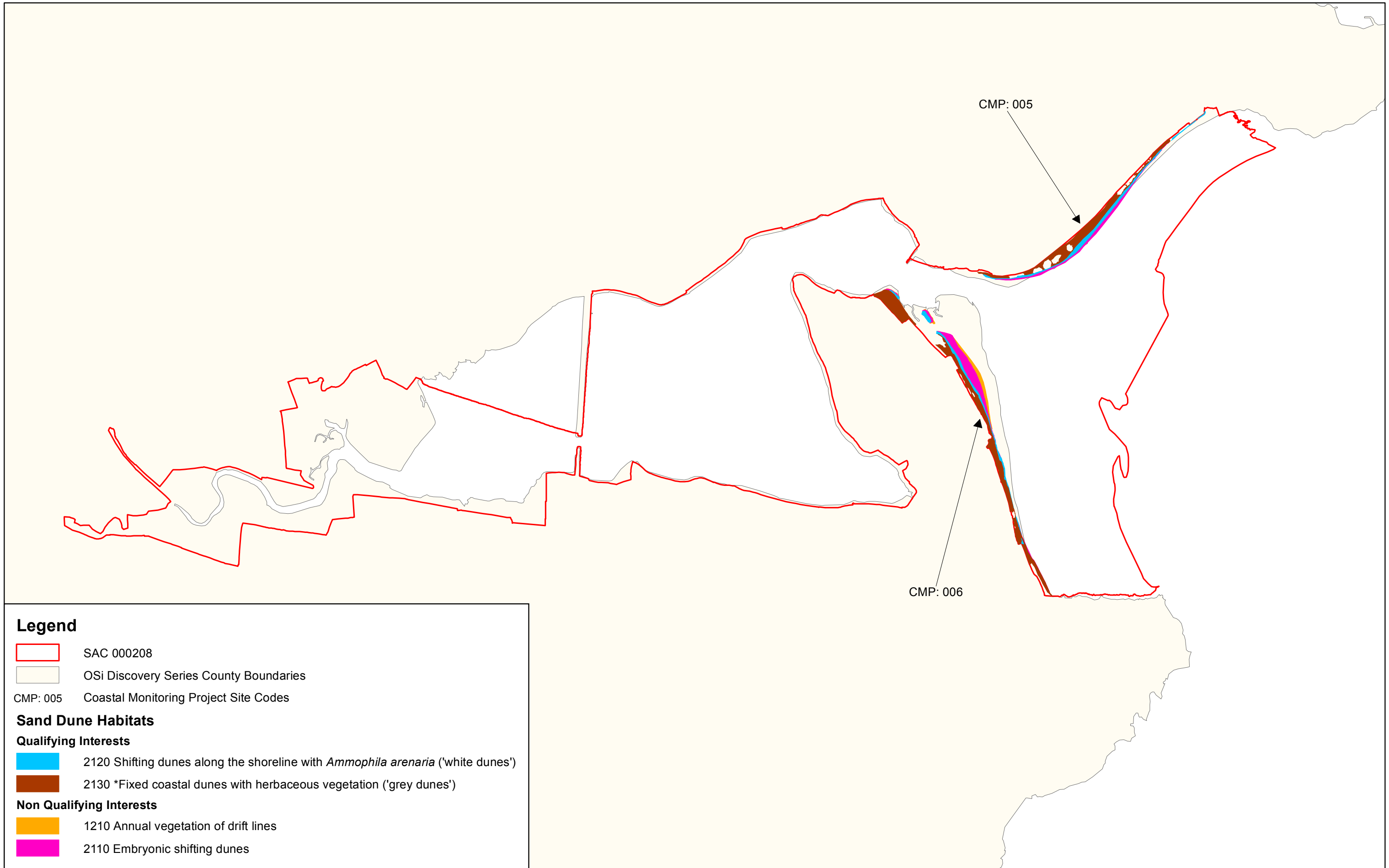
Saltmarsh Habitats

Qualifying Interests

- 1310 *Salicornia* and other annuals colonising mud and sand
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- 1410 Mediterranean salt meadows (*Juncetalia maritimi*)

SMP: 0001





Legend

- SAC 000208
- OSi Discovery Series County Boundaries
- CMP: 005 Coastal Monitoring Project Site Codes

Sand Dune Habitats

Qualifying Interests

- 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')
- 2130 *Fixed coastal dunes with herbaceous vegetation ('grey dunes')

Non Qualifying Interests

- 1210 Annual vegetation of drift lines
- 2110 Embryonic shifting dunes

