

National Parks and Wildlife Service

Conservation Objectives Series

Boyne Coast and Estuary SAC 001957



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



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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*

001957 Boyne Coast and Estuary SAC

- | | |
|------|---|
| 1130 | Estuaries |
| 1140 | Mudflats and sandflats not covered by seawater at low tide |
| 1310 | Salicornia and other annuals colonizing mud and sand |
| 1330 | Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) |
| 1410 | Mediterranean salt meadows (<i>Juncetalia maritimi</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') |

Please note that this SAC overlaps with Boyne Estuary SPA (004080) and is adjacent to the River Boyne and River Blackwater SAC (002299). See map 2. The conservation objectives for this site should be used in conjunction with those for overlapping and adjacent sites as appropriate.

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

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

Title: Boyne Coast and Estuary SAC (001957). Conservation objectives supporting document - marine habitats. [Version 1]

Year: 2012

Author: NPWS

Series: Unpublished Report to NPWS

Title: Boyne Coast and Estuary SAC (001957). Conservation objectives supporting document - coastal habitats. [Version 1]

Year: 2012

Author: NPWS

Series: Unpublished Report to NPWS

Title: An intertidal soft sediment survey of the Boyne Coast and Estuary

Year: 2011

Author: ASU

Series: Unpublished Report to NPWS & MI

Title: Benthic Survey of the Boyne Coast and Estuary Special Area of Conservation and Boyne Estuary Special Protection Area

Year: 2011

Author: EcoServe

Series: Unpublished Report to NPWS & MI

Title: Saltmarsh Monitoring Report 2007-2008

Year: 2009

Author: McCorry, M.; Ryle, T.

Series: Unpublished Report to NPWS

Title: Coastal Monitoring Project 2004-2006

Year: 2009

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

Series: Unpublished Report to NPWS

Title: The phytosociology and conservation value of Irish sand dunes

Year: 2008

Author: Gaynor, K.

Series: Unpublished PhD thesis, National University of Ireland, Dublin

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)
Year:	Interpolated 2012
Title:	Intertidal and subtidal surveys, 2010
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)
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)
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 (map 6)
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:	2110, 2120, 2130 (map 7)

1130 Estuaries

To maintain the favourable conservation condition of Estuaries in Boyne Coast and 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 403ha using OSi data and the defined Transitional Water Body area under the Water Framework Directive
Community distribution	Hectares	Conserve the following community types in a natural condition: Intertidal estuarine mud and fine sand with <i>Hediste diversicolor</i> and <i>Corophium volutator</i> community; and Subtidal fine sand dominated by polychaetes community. See map 5	Habitat structure was elucidated from intertidal and subtidal surveys undertaken in 2010 (ASU, 2011; EcoServe, 2011)

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 Boyne Coast and 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 403ha
Community distribution	Hectares	Conserve the following community types in a natural condition: Intertidal estuarine mud and fine sand with <i>Hediste diversicolor</i> and <i>Corophium volutator</i> community; and Fine sand dominated by bivalves community complex. See map 5	Habitat structure was elucidated from an intertidal survey undertaken in 2010 (ASU, 2011). See marine supporting document for further details

1310 Salicornia and other annuals colonizing mud and sand

To restore the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Boyne Coast and 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-sites mapped: Baltray- 2.91ha, Mornington- 1.14ha. See map 6	Based on data from Saltmarsh Monitoring Project (McCorry and Ryle, 2009). Habitat mapped at two sub-sites surveyed, giving a total estimated area of 4.05ha. NB further unsurveyed areas maybe 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 McCorry and Ryle (2009). <i>Salicornia</i> is an annual species, so its distribution can vary significantly from year to year. At Baltray, saltmarsh is expanding in infilled intertidal zone. Large area of Mornington saltmarsh was reclaimed in the past. 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 McCorry and Ryle (2009). Sediment supply is particularly important for this pioneer saltmarsh community, as the distribution of this habitat depends on accretion rates. Sediment supply to saltmarshes at Baltray and Mornington is likely to be affected by the construction of navigation walls and dredging of the main channel. 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 McCorry and Ryle (2009). Creeks deliver sediment throughout saltmarsh system. At Baltray and Mornington the structure is modified by drainage channels. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	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 McCorry and Ryle (2009). At Baltray and Mornington there are zonations within the saltmarsh habitats as well as transitions to adjacent sand dune systems. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Baltray and Mornington grazing is absent and sward height is variable. See coastal habitats supporting document for further details

1310 Salicornia and other annuals colonizing mud and sand

To restore the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
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 McCorry and Ryle (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 listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)	Based on data from 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 McCorry & Ryle (2009). <i>Spartina</i> is well established at this site. Swards of <i>Spartina</i> are widespread at Baltray and there has been significant expansion of <i>Spartina</i> at Mornington since 2000. 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 (*Glauco-Puccinellietalia*) in Boyne Coast and 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-sites mapped: Baltray- 17.67ha, Mornington- 8.76ha. See map 6	Based on data from the Saltmarsh Monitoring Project (McCorry and Ryle, 2009). Habitat mapped at two sub-sites surveyed, giving a total estimated area of 26.43ha. NB further unsurveyed areas maybe 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 McCorry and Ryle (2009). At Baltray there has been some extensive recent development of ASM. At Mornington the saltmarsh may have been more extensive in the past. 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 McCorry and Ryle (2009). At Baltray and Mornington saltmarsh development likely to be affected by the construction of navigation walls in the past and dredging of the main channel. 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 McCorry and Ryle (2009). Creek and pan structures are well-developed in some parts of Baltray and Mornington but modified in other areas by drainage channels. 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	Based on data from McCorry and Ryle (2009). At Baltray and Mornington there are zonations within the saltmarsh habitats as well as transitions to adjacent sand dune systems. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). The saltmarshes at Baltray and Mornington are ungrazed by livestock and the sward height is quite variable. 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	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 (*Glauco-Puccinellietalia*) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
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 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%	Based on data from McCorry and Ryle (2009). <i>Spartina</i> is well established at this site. Swards of <i>Spartina</i> are widespread at Baltray and there has been significant expansion of <i>Spartina</i> at Mornington since 2000. See coastal habitats supporting document for further details

Conservation objectives for: Boyne Coast and Estuary SAC [001957]

1410 Mediterranean salt meadows (*Juncetalia maritimi*)

The status of Mediterranean salt meadows (*Juncetalia maritimi*) as a qualifying Annex I habitat for Boyne Coast and Estuary SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this habitat.

Attribute	Measure	Target	Notes

2110 Embryonic shifting dunes

To restore the favourable conservation condition of Embryonic shifting dunes in Boyne Coast and 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-sites mapped: Baltray- 2.52ha, Mornington- 0.67ha. See map 7	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Habitat is very difficult to measure in view of its dynamic nature and was recorded at both sub-sites, giving a total estimated area of 3.18ha. 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 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 Ryle et al. (2009). Dunes are naturally dynamic systems that require continuous supply and circulation of sand. The training wall at the mouth of the Boyne Estuary has led to an accumulation of sand at Mornington and enhanced the development of dunes at the northern section. The dunes are accreting at the southern end of Baltray, with wide areas of embryonic dune and strandine fronting mobile and fixed dunes. 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). Both sand dune systems at Baltray and Mornington occur adjacent to extensive estuarine saltmarshes. See coastal habitats supporting document for further details
Vegetation composition: plant health of foredune grasses	Percentage cover	More than 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

2110 Embryonic shifting dunes

To restore the favourable conservation condition of Embryonic shifting dunes in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
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

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 Boyne Coast and 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-sites mapped: Baltray- 2.97ha, Mornington- 1.99ha. See map 7	Habitat was mapped during the Coastal Monitoring Project (Ryle et al. 2009). Habitat was recorded at both sub-sites, giving a total estimated area of 4.97ha. 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 Ryle et al. (2009). Shifting dunes were recorded at both Baltray and Mornington sub-sites. 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 (<i>Ammophila arenaria</i>) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. The training wall at the mouth of the Boyne Estuary has led to an accumulation of sand at Mornington and enhanced the development of dunes at the northern section. The dunes are accreting at the southern end of Baltray, with wide areas of embryonic dune and strandine fronting mobile and fixed dunes. 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). Both sand dune systems at Baltray and Mornington occur adjacent to extensive estuarine saltmarshes. See coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage cover	More than 95% of marram (<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 (<i>Ammophila arenaria</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

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

Attribute	Measure	Target	Notes
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. Ragwort (<i>Senecio jacobaea</i>) was recorded from Mobile dunes at both Baltray and Mornington. See coastal habitats supporting document for further details

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

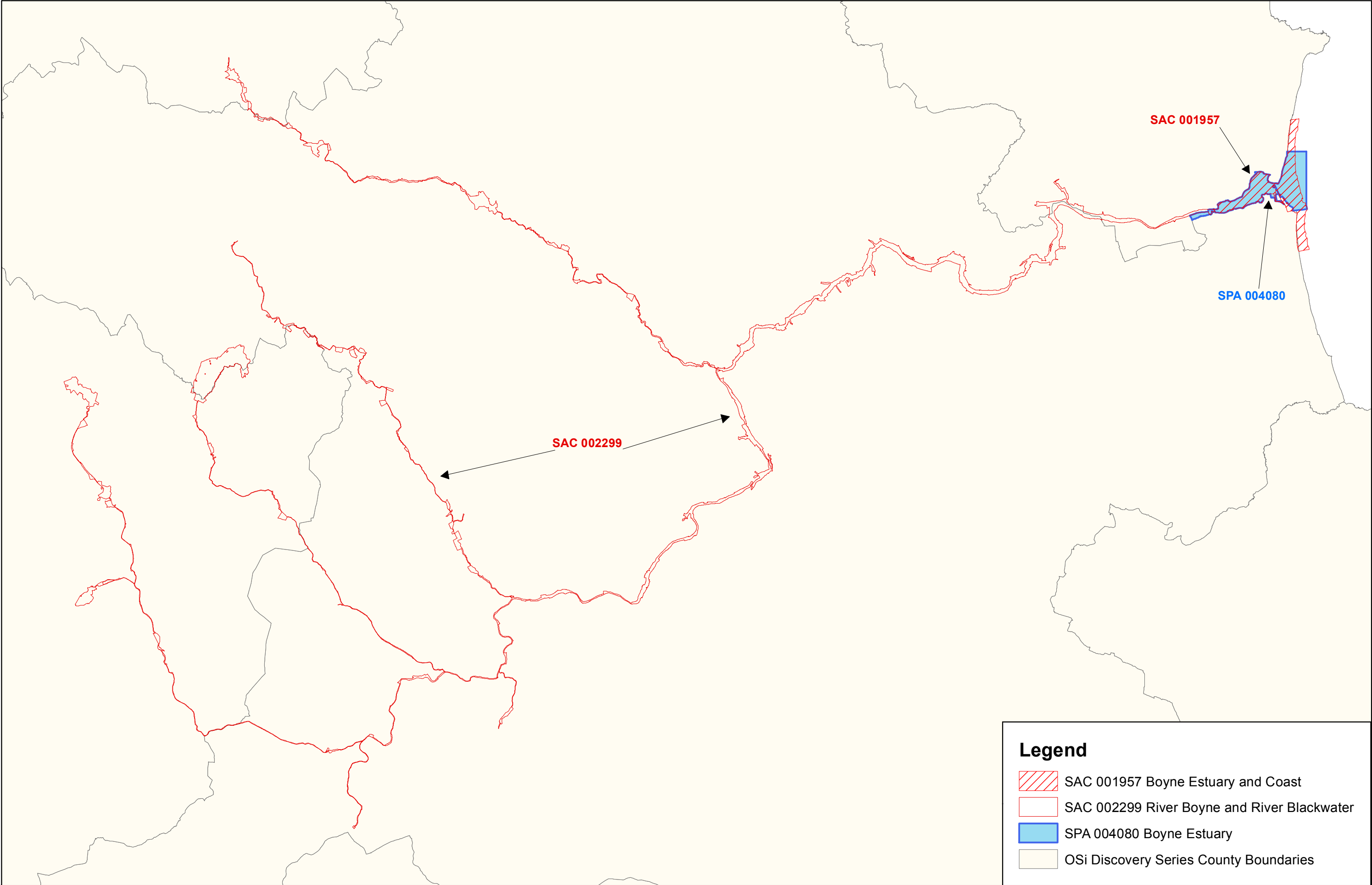
Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Baltray-26.41ha; Mornington-20.46ha. See map 7	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Habitat was recorded at both sub-sites, giving a total estimated area of 46.87ha. 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 the Coastal Monitoring Project (Ryle et al., 2009). Fixed dunes recorded at both Baltray and Mornington. 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 the Coastal Monitoring Project (Ryle et al., 2009). The training wall at the mouth of the Boyne Estuary has led to an accumulation of sand at Mornington and enhanced the development of dunes at the northern section. The dunes are accreting at the southern end of Baltray, with wide areas of embryonic dune and strandine fronting mobile and fixed dunes. 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). Both sand dune systems at Baltray and Mornington occur adjacent to extensive estuarine saltmarshes. 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). The estimated area of bare sand at Mornington currently accounts for greater than 10% of the fixed dune habitat. See coastal habitats supporting document for further details
Vegetation composition: sward 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)	Based on data from Gaynor (2008) and Ryle et al. (2009). The locally rare species viper's bugloss (<i>Echium vulgare</i>) was recorded in the fixed dunes at Baltray. Mornington is the most northerly known site in Ireland for wild clary (<i>Salvia verbenaca</i>). See coastal habitats supporting document for further details

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

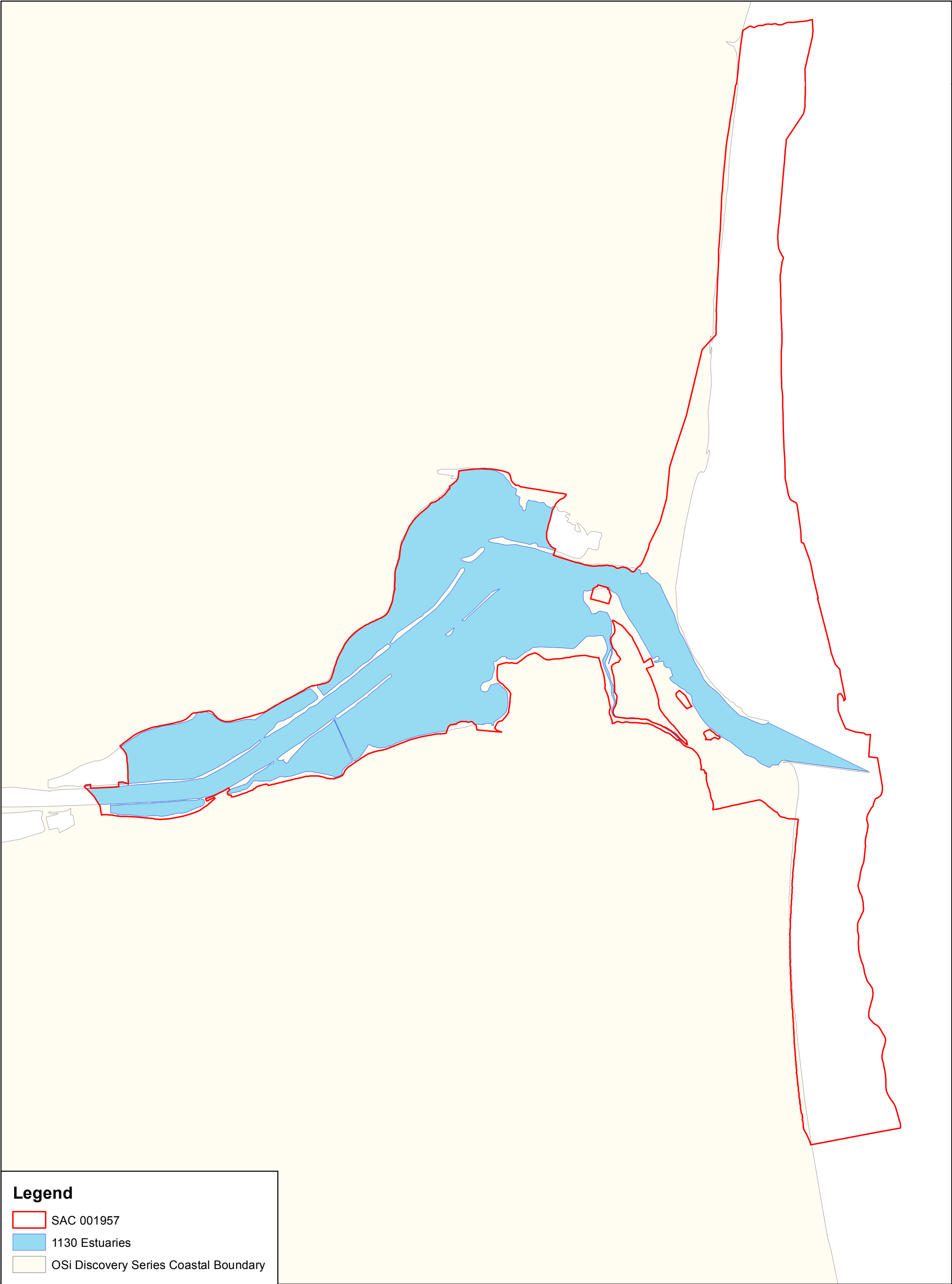
Attribute	Measure	Target	Notes
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. At both Baltray and Mornington, creeping thistle (<i>Cirsium arvense</i>), ragwort (<i>Senecio jacobaea</i>) and common nettle (<i>Urtica dioica</i>) were recorded in fixed dunes. 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





Legend

-  SAC 001957 Boyne Estuary and Coast
-  SAC 002299 River Boyne and River Blackwater
-  SPA 004080 Boyne Estuary
-  OSi Discovery Series County Boundaries






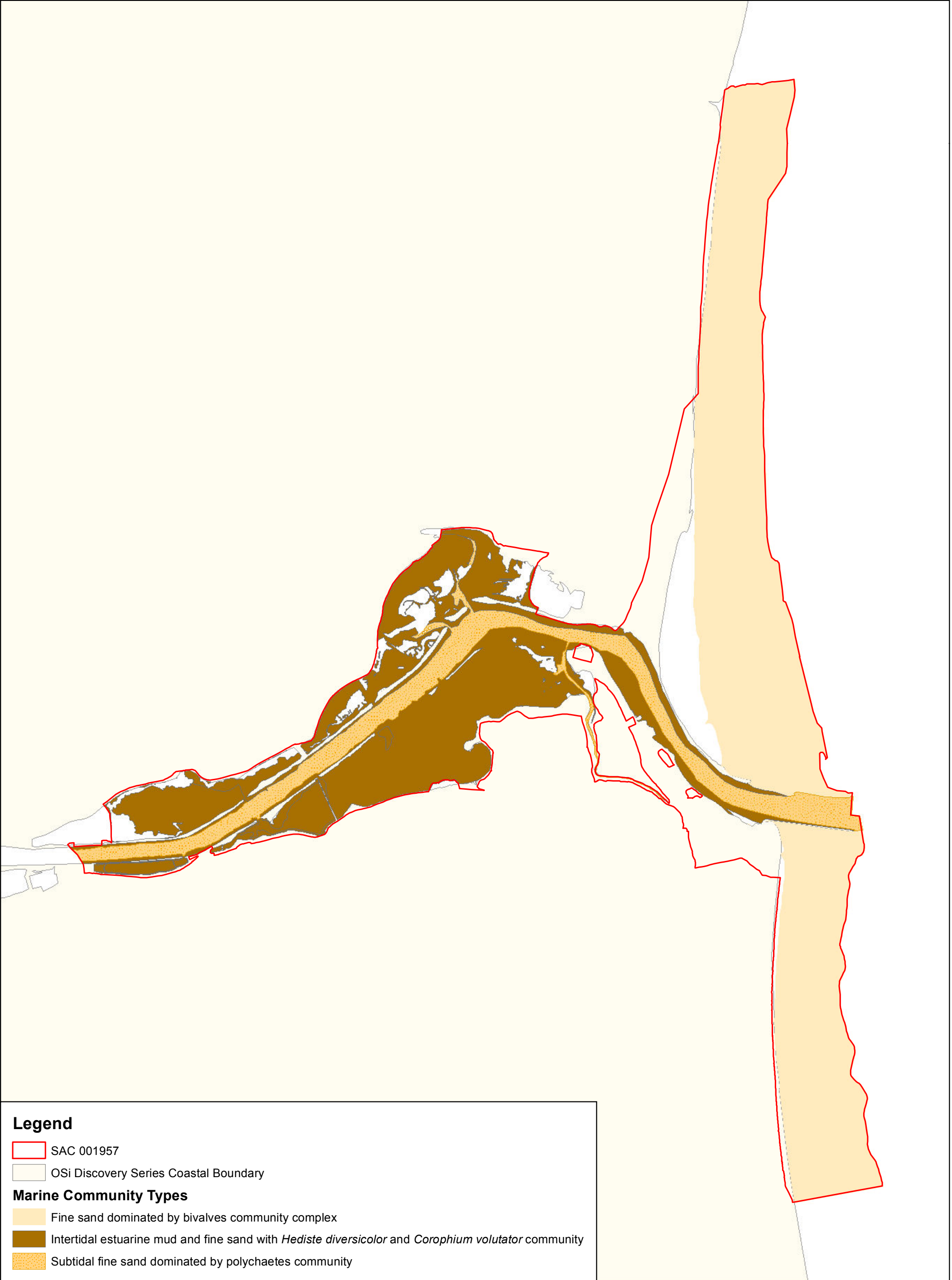
Legend

- SAC 001957
- 1130 Estuaries
- OSi Discovery Series Coastal Boundary



Legend

-  SAC 001957
-  1140 Mudflats and sandflats not covered by seawater at low tide
-  OSi Discovery Series Coastal Boundary

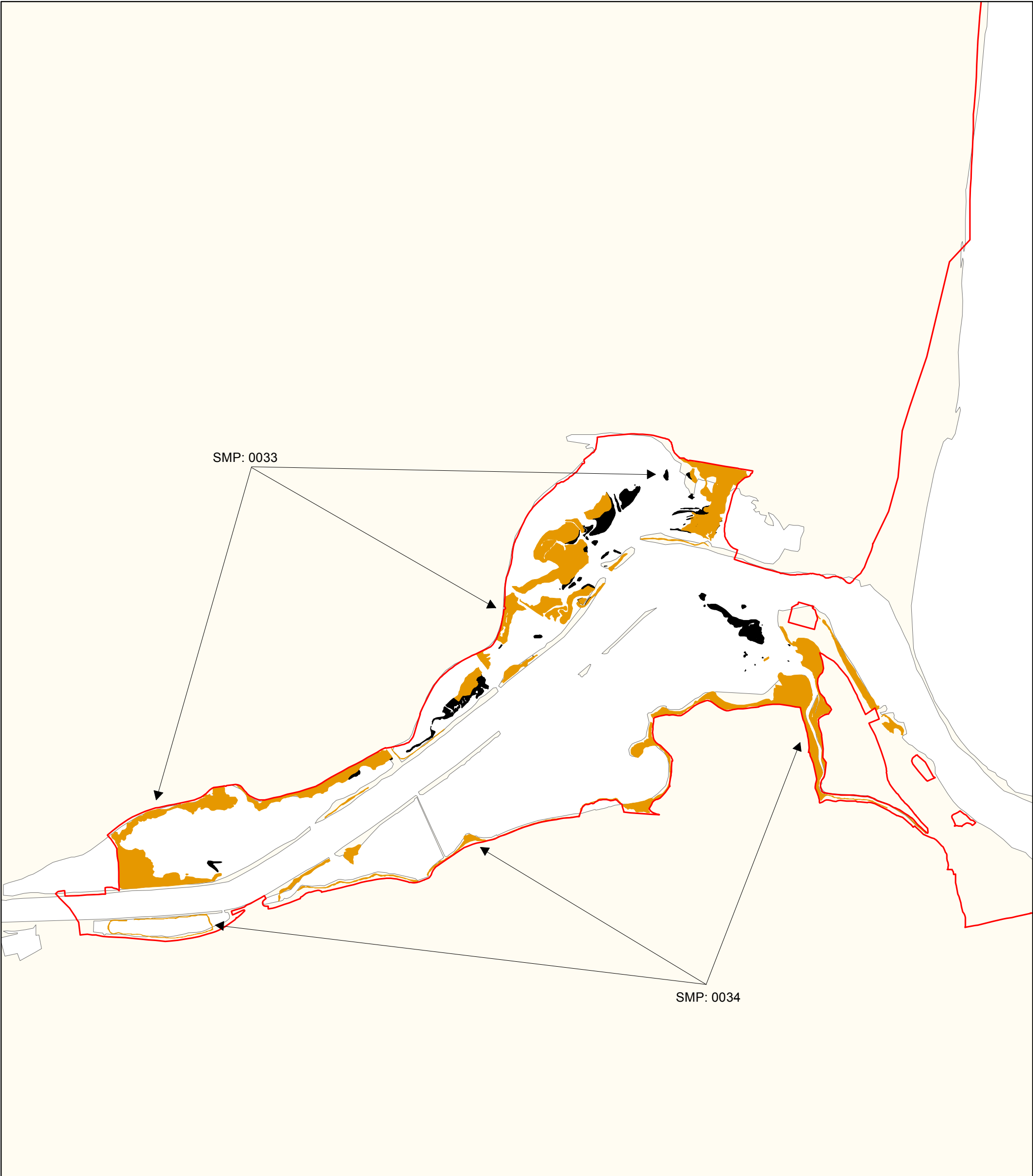


Legend

- SAC 001957
- OSi Discovery Series Coastal Boundary

Marine Community Types

- Fine sand dominated by bivalves community complex
- Intertidal estuarine mud and fine sand with *Hediste diversicolor* and *Corophium volutator* community
- Subtidal fine sand dominated by polychaetes community



Legend

- SAC 001957
- OSi Discovery Series Coastal Boundary
- SMP: 0033 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*)

