

National Parks and Wildlife Service

Conservation Objectives Series

Ballyness Bay SAC 001090



*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

001090	Ballyness Bay SAC
1013	Snail <i>Vertigo geyeri</i>
1130	Estuaries
1140	Mudflats and sandflats not covered by seawater at low tide
2110	Embryonic shifting dunes
2120	Shifting dunes along the shoreline with <i>Calluna vulgaris</i> (white dunes)
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)
2190	Humid dune slacks

Please note that this SAC overlaps with Falcarragh to Meenlaragh SPA (004149) and adjoins Horn Head and Rinclevan SAC (000147). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping and adjacent sites 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 :	2006
Title :	A survey of intertidal mudflats and sandflats in Ireland
Author :	Aquafact
Series :	Unpublished report to NPWS
Year :	2009
Title :	Coastal Monitoring Project 2004-2006
Author :	Ryle, T.; Murray, A.; Connolly, K.; Swann, M.
Series :	Unpublished report to NPWS
Year :	2011
Title :	Monitoring and condition assessment of populations of <i>Vertigo geyeri</i> , <i>Vertigo angustior</i> and <i>Vertigo moulinsiana</i> in Ireland
Author :	Moorkens, E.A.; Killeen, I.J.
Series :	Irish Wildlife Manual No. 55
Year :	2013
Title :	Monitoring survey of Annex I sand dune habitats in Ireland
Author :	Delaney, A.; Devaney, F.M.; Martin, J.R.; Barron, S.J.
Series :	Irish Wildlife Manual No. 75
Year :	2014
Title :	Ballyness Bay SAC (site code: 1090) Conservation objectives supporting document- coastal habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document
Year :	2014
Title :	Ballyness Bay SAC (site code: 1090) Conservation objectives supporting document- marine habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	2012
Title :	Intertidal benthic survey of Ballyness Bay SAC
Author :	MERC
Series :	Unpublished report to the Marine Institute and NPWS
Year :	2012
Title :	Subtidal benthic survey of Ballyness Bay SAC
Author :	MERC
Series :	Unpublished report to the Marine Institute and NPWS

Spatial data sources

Year :	Interpolated 2014
Title :	Intertidal surveys 2006, 2011; subtidal survey 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 :	1130, 1140, marine community types (maps 3, 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 :	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, 2190 (map 6)
Year :	2013
Title :	Sand Dune Monitoring Project 2011. 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, 2190 (map 6)
Year :	2014
Title :	NPWS rare and threatened species database
GIS Operations :	Dataset created from spatial references in database records. Expert opinion used as necessary to resolve any issues arising
Used For :	1013 (map 6)

Conservation Objectives for : Ballyness Bay SAC [001090]

1130 Estuaries

To maintain the favourable conservation condition of Estuaries in Ballyness Bay 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 15ha by mapping extent using OSi data and expert judgement
Community distribution	Hectares	Conserve the following community types in a natural condition: Coarse sediment to sandy mud with oligochaetes and polychaetes community complex; Mobile sand community complex. See map 5	Based on intertidal surveys undertaken in 2006 (Aquafact, 2006) and 2011 MERC (2012) and a subtidal survey undertaken in 2011 (MERC, 2012). See marine habitats supporting document for further information

Conservation Objectives for : Ballyness Bay SAC [001090]

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 Ballyness Bay 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 as 690ha using OSi data
Community distribution	Hectares	Conserve the following community types in a natural condition: Coarse sediment to sandy mud with oligochaetes and polychaetes community complex; Mobile sand community complex. See map 5	Based on intertidal surveys undertaken in 2006 (Aquafact, 2006) and 2011 MERC (2012). See marine habitats supporting document for further information

Conservation Objectives for : Ballyness Bay SAC [001090]

2110 Embryonic shifting dunes

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

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. Dooley - 4.81ha, Ballyness - 2.26ha. See map 6	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009) and Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Habitat is very difficult to measure in view of its dynamic nature. It was recorded at two sub-sites, giving a total estimated area of 7.07ha. Accretion was noted from the western end of Ballyness. Embryo dune habitat is restricted to the northern tip of the spit at Dooley. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change, subject to natural processes. See map 6 for known distribution	Based on data from Ryle et al. (2009) and Delaney et al. (2013). 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. Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. At Dooley, the extension of the pier and carpark through reclamation from the sea is likely to modify sea currents and appears to be impacting on western side of spit where the dune face is steep (Ryle et al. 2009). 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), Ryle et al. (2009) and Delaney et al. (2013). At Dooley and Ballyness there are transitions from sand dunes to saltmarsh habitats. See coastal habitats supporting document for further details
Vegetation composition: plant health of foredune grasses	Percentage cover	More than 95% of sand couch grass (<i>Elytrigia juncea</i>) and/or lyme grass (<i>Leymus arenarius</i>) should be healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). 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: sand couch grass (<i>Elytrigia juncea</i>) and/or lyme grass (<i>Leymus arenarius</i>)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-native species) to represent less than 5% cover	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea-buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. See coastal habitats supporting document for further details

Conservation Objectives for : Ballyness Bay SAC [001090]

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

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

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Dooley-8.98ha; Ballyness - 14.15ha. See map 6	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009) and Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Habitat was mapped at two sub-sites to give a total estimated area of 23.13ha. 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 6 for known distribution	Based on data from Ryle et al. (2009) and Delaney et al. (2013). 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 encouraging further accretion. At Dooley, the extension of the pier and carpark through reclamation from the sea is likely to modify sea currents and appears to be impacting on western side of spit where the dune face is steep (Ryle et al. 2009). 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), Ryle et al. (2009) and Delaney et al. (2013). At Dooley and Ballyness there are transitions from sand dunes to saltmarsh habitats. See coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage cover	More than 95% of marram grass (<i>Ammophila arenaria</i>) and/or lyme-grass (<i>Leymus arenarius</i>) should be healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities dominated by marram grass (<i>Ammophila arenaria</i>) and/or lyme-grass (<i>Leymus arenarius</i>)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). 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) and Delaney et al. (2013). Negative indicators include non-native species; species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea-buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. See coastal habitats supporting document for further details

Conservation Objectives for : Ballyness Bay SAC [001090]

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 Ballyness Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Dooley - 97.04ha; Ballyness - 90.95ha. See map 6	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009) and Sand Dunes Monitoring Project (SMP) (Delaney et al., 2013). Habitat mapped at two sub-sites to give a total estimated area of 187.99ha. 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 Ryle et al. (2009) and Delaney et al. (2013). Fixed dune habitat is extensive at both Dooley and Ballyness. 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) and Delaney et al. (2013). Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. At Dooley, the extension of the pier and carpark through reclamation from the sea is likely to modify sea currents and appears to be impacting on western side of spit where the dune face is steep (Ryle et al. 2009). 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) and Delaney et al. (2013). At Dooley and Ballyness there are transitions from sand dunes 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) Ryle et al. (2009) and Delaney et al. (2013). See coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). At Ballyness, the high fixed dunes on the seaward side are fenced to exclude grazers resulting in rank vegetation; elsewhere, fixed dune habitat is grazed by cattle, sheep and rabbits. The majority of the Dooley site is rank and undergrazed. 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 range of sub-communities with typical species listed in Delaney et al. (2013)	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). 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) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea-buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. See coastal habitats supporting document for further details
Vegetation composition: scrub/trees	Percentage cover	No more than 5% cover or under control	Based on data from Ryle et al. (2009) and Delaney et al. (2013). See coastal habitats supporting document for further details

Conservation Objectives for : Ballyness Bay SAC [001090]

2190 Humid dune slacks

To maintain the favourable conservation condition of Humid dune slacks in Ballyness Bay SAC, which is defined by the following list of attributes and targets:

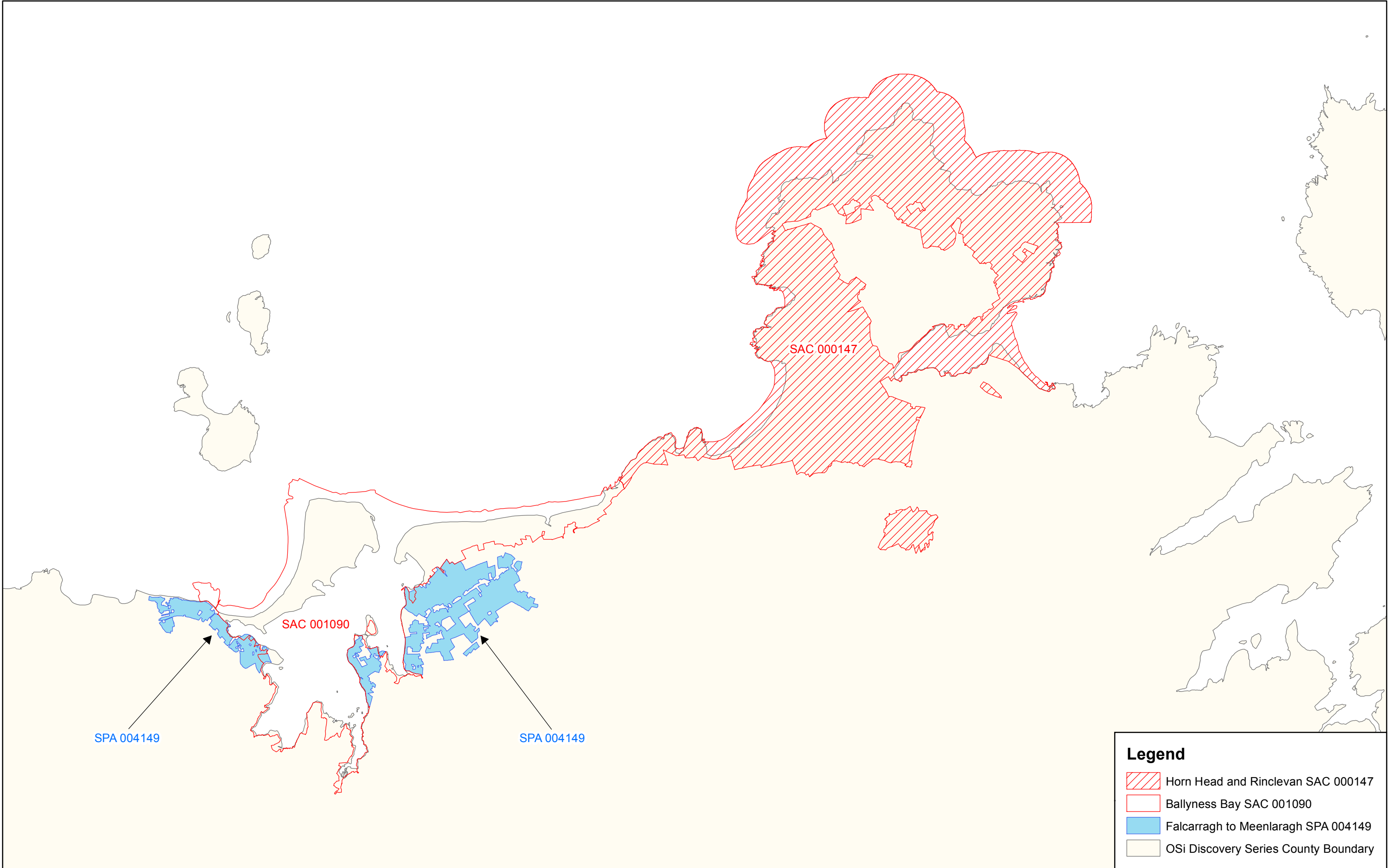
Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For sub-site mapped: Ballyness - 13.87ha. See map 6	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009) and Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Habitat was mapped at one sub-site, giving a total estimated area of 13.87ha. 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) and Delaney et al. (2013). Dune slacks were only recorded at Ballyness. 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), Ryle et al. (2009) and Delaney et al. (2013). 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) and Delaney et al. (2013). At Ballyness, there are transitions from sand dunes into saltmarsh habitats. 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), Ryle et al. (2009) and Delaney et al. (2013). At Ballyness, the dune slacks are grazed by cattle, sheep and rabbits, though no damage was noted to the habitat. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from Ryle et al. (2009) and Delaney et al. (2013). 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 Delaney et al. (2013)	Based on data from from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). See coastal habitats supporting document for further details
Vegetation composition: cover of <i>Salix repens</i>	Percentage cover	Maintain less than 40% cover of creeping willow (<i>Salix repens</i>)	Based on data from Ryle et al. (2009) and Delaney et al. (2013). Cover of creeping willow (<i>Salix repens</i>) needs to be maintained through an appropriate grazing regime, which prevents the development of a coarse, rank vegetation cover. At Ballyness, the slack supports <i>Salix repens</i> throughout, but it is not dominant. 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) and Delaney et al. (2013). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea-buckthorn (<i>Hippophae rhamnoides</i>) should be absent or effectively controlled. See coastal habitats supporting document for further details
Vegetation composition: scrub/trees	Percentage cover	No more than 5% cover or under control	Based on data from Ryle et al. (2009) and Delaney et al. (2013). See coastal habitats supporting document for further details

Conservation Objectives for : Ballyness Bay SAC [001090]

1013 ; Ynffg K \cf Snail *Vertigo geyeri*

To maintain the favourable conservation condition of Geyer's Whorl Snail in Ballyness Bay SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Distribution: occupied sites	Number	No decline. There is one known site for this species in this SAC within the 1km square B9233. See map 6	From Moorkens and Killeen (2011) (site code VgCAM10)
Presence on transect	Occurrence	Adult or sub-adult snails are present in at least two of the four samples taken from optimal or sub-optimal habitat on the transect	Transect established as part of condition assessment monitoring at this site (Moorkens and Killeen, 2011). See habitat extent target below for definition of optimal and sub-optimal habitat
Abundance on transect	Number per sample	At least two samples on the transect should have more than 20 individuals	From Moorkens and Killeen (2011)
Transect habitat quality	Metres	17m of habitat along the first 45m of the transect is classed as optimal and at least 34m is classed as optimal or sub-optimal habitat	From Moorkens and Killeen (2011). See habitat extent target below for definition of optimal and sub-optimal habitat
Transect optimal wetness	Metres	Soils, at time of sampling, are saturated (optimal wetness) for at least 24m of the first 45m of the transect	From Moorkens and Killeen (2011)
Habitat extent	Hectares	0.4-0.5ha of the site optimal and sub-optimal habitat mosaic. Optimal habitat is defined as flushed fen grassland with sward lawns 10-30cm tall, containing species such as yellow sedge (<i>Carex viridula</i>), marsh horsetail (<i>Equisetum palustre</i>), jointed rush (<i>Juncus articulatus</i>), bogbean (<i>Menyanthes trifoliata</i>) and the mosses <i>Drepanocladus revolvens</i> and <i>Campylium stellatum</i> . During sampling the water table should be between 0 and 5cm of the soil surface, but not above ground level. Sub-optimal grassland is defined as having same vegetation composition as optimal habitat but including meadowsweet (<i>Filipendula ulmaria</i>) and water horsetail (<i>Equisetum fluvatile</i>), and either vegetation height is less than 5cm or greater than 30cm; or the water table is below 5cm or ground is flooded at the time of sampling	From Moorkens and Killeen (2011)



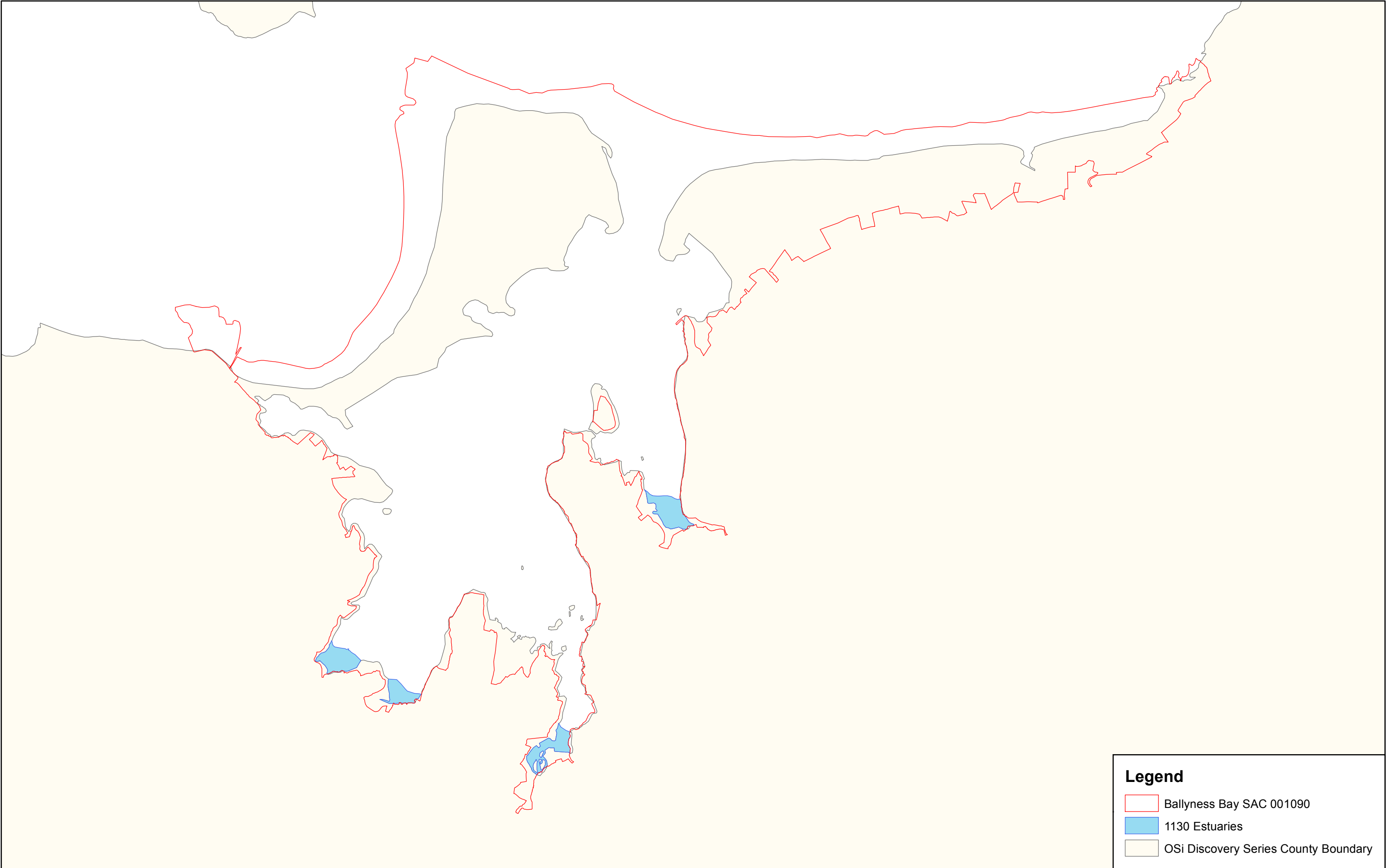
Legend

Horn Head and Rinclevan SAC 000147

Ballyness Bay SAC 001090

Falcarragh to Meenlaragh SPA 004149

OSi Discovery Series County Boundary

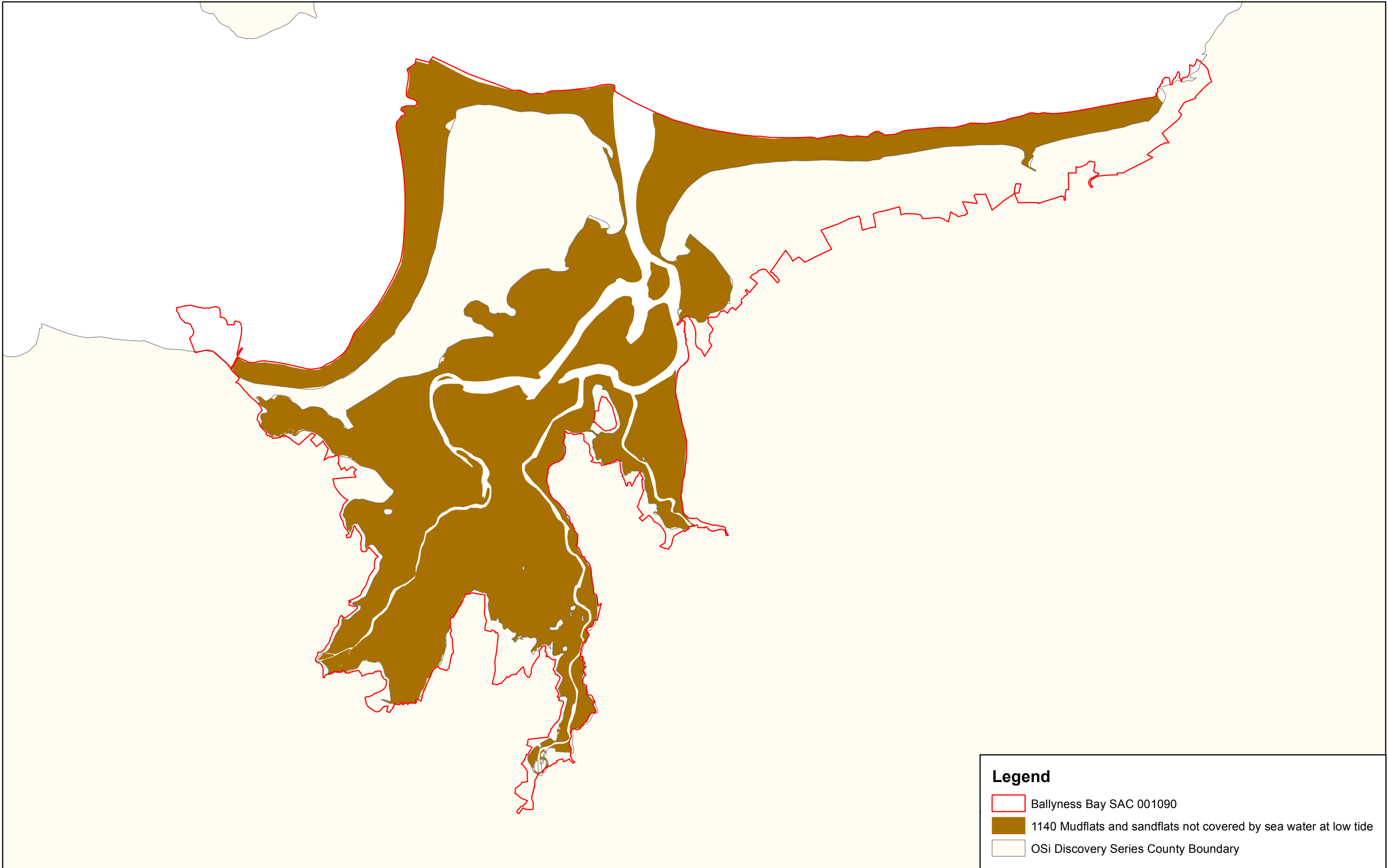


Legend




Ballyness Bay SAC 001090

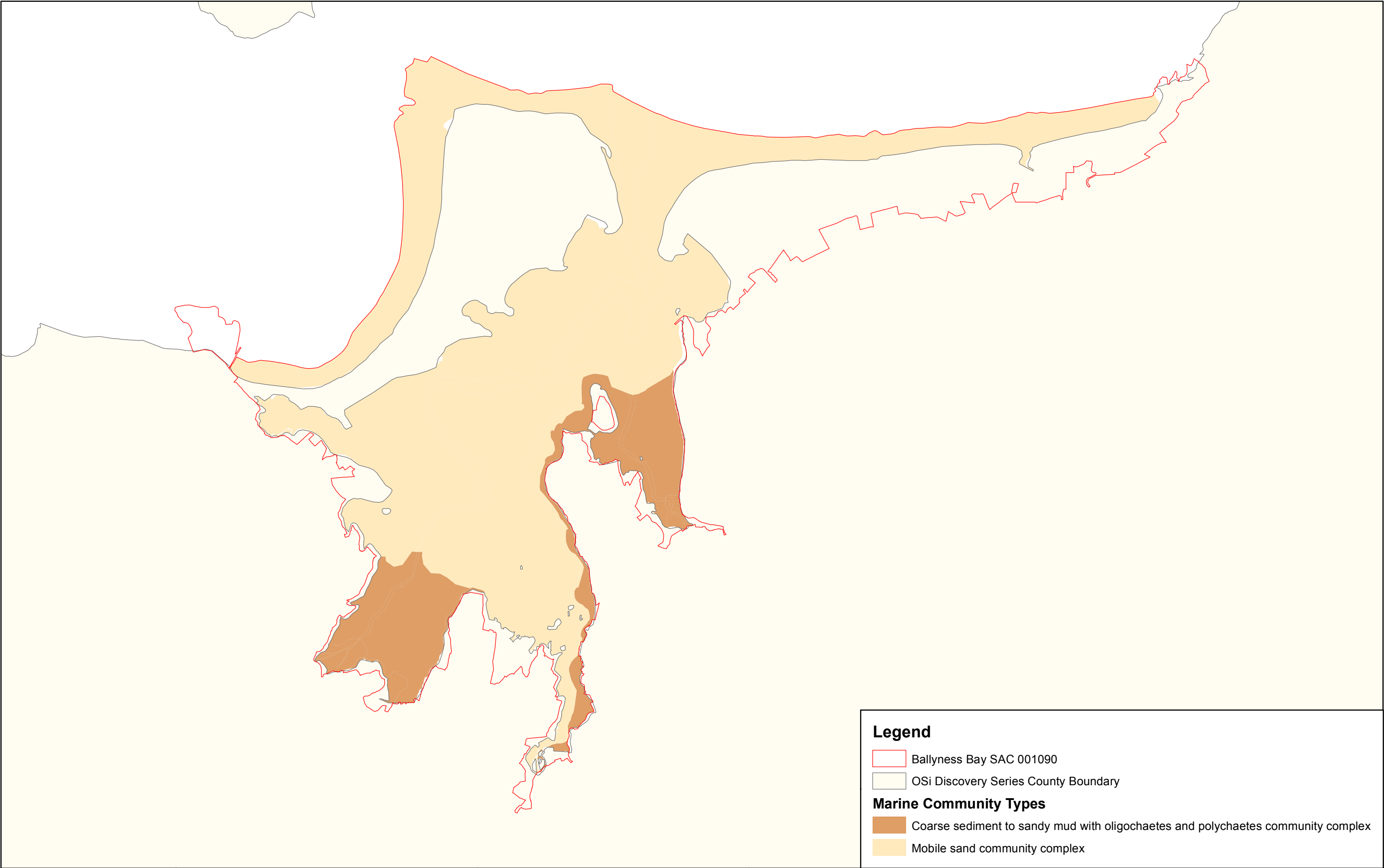
1130 Estuaries

OSi Discovery Series County Boundary



Legend

-  Ballyness Bay SAC 001090
-  1140 Mudflats and sandflats not covered by sea water at low tide
-  OSi Discovery Series County Boundary



Legend

- Ballyness Bay SAC 001090
- OSi Discovery Series County Boundary
- Marine Community Types**
- Coarse sediment to sandy mud with oligochaetes and polychaetes community complex
- Mobile sand community complex

