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Conservation Objectives Series

Donegal Bay (Murvagh) SAC 000133

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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***

000133	Donegal Bay (Murvagh) SAC
1140	Mudflats and sandflats not covered by seawater at low tide
1365	Harbour Seal *Phoca vitulina*
2130	*Fixed coastal dunes with herbaceous vegetation ('grey dunes')
2190	Humid dune slacks

Please note that this SAC overlaps with Donegal Bay SPA (004151) and is adjacent to Lough Eske and Ardnamona Wood SAC (000163). 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 (listed by date)

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

Title: Donegal Bay (Murvagh) SAC (000133). Conservation objectives supporting document - marine habitats and species [Version 1]

Year: 2011

Author: NPWS

Series: Unpublished Report to NPWS

Title: Donegal Bay (Murvagh) SAC (000133). Conservation objectives supporting document - coastal habitats [Version 1]

Year: 2011

Author: NPWS

Series: Unpublished Report to NPWS

Title: Donegal Bay Baseline Intertidal Survey Report

Year: 2011

Author: RPS

Series: Unpublished Report to NPWS & MI

Title: Subtidal Benthic Investigations in Donegal Bay SPA (Site Code:IE004151) and Donegal Bay cSAC (Site Code: IE000133) Co. Donegal

Year: 2010

Author: Aquafact

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

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Title: Harbour seal population assessment in the Republic of Ireland: August 2003

Year: 2004

Author: Cronin, M.; Duck, C.; Ó Cadhla, O.; Nairn, R.; Strong, D.; O'Keeffe, C.

Series: Irish Wildlife Manuals No. 11

Title: Summary of National Parks & Wildlife Service surveys for common (harbour) seals (*Phoca vitulina*) and grey seals (*Halichoerus grypus*), 1978 to 2003

Year: 2004

Author: Lyons, D.O.

Series: Irish Wildlife Manuals No. 13

Title: A Survey of Irish Links Golf Courses

Year: 1999

Author: Gaynor, K.; Browne, A.

Series: Unpublished Report to NPWS

Title: National Shingle Beach Survey of Ireland 1999

Year: 1999

Author: Moore, D.; Wilson, F.

Series: Unpublished Report to NPWS

Title: 1989 survey of breeding herds of common seal *Phoca vitulina* with reference to previous surveys

Year: 1990

Author: Harrington, R.

Series: Unpublished Report to Wildlife Service

Title: An assessment of the breeding populations of common seals (*Phoca vitulina vitulina* L.) in the Republic of Ireland during 1979

Year: 1983

Author: Warner, P.J

Series: Irish Naturalists' Journal 21: 24-26

Title: An assessment of the status of the common seal *Phoca vitulina vitulina* in Ireland

Year: 1980

Author: Summers, C.F.; Warner, P.J; Nairn, R.G.W.; Curry, M.G.; Flynn, J.

Series: Biological Conservation 17: 115-123

Spatial data sources

Year:	Interpolated 2011
Title:	Intertidal surveys 2009, 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 3 and 4)
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 4)
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:	2130, 2190 (map 5)
Year:	2011
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:	1365 (map 6)
Year:	2005
Title:	OSi Discovery series vector data
GIS operations:	High Water Mark (HWM) polyline feature class converted into polygon feature class; clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used for:	1365 (map 6)

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 Donegal Bay (Murvagh) 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 1069ha using OSi data. See marine suporting document for further details
Community distribution	Hectares	Conserve the following community types in a natural condition: Estuarine fine sands dominated by polychaetes and oligochaetes community complex; and Intertidal muddy sand to sand dominated by polychaetes, bivalves and crustaceans community complex. See map 4	The likely area of the sediment communities was derived from intertidal surveys undertaken in 2009 and 2010 (Aquafact, 2010; RPS, 2011)

1365 Harbour Seal *Phoca vitulina*

To maintain the favourable conservation condition of Harbour Seal in Donegal Bay (Murvagh) SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use. See map 6	See marine supporting document for further details
Breeding behaviour	Breeding sites	The breeding sites should be maintained in a natural condition. See map 6	Attribute and target based on background knowledge of Irish breeding populations, review of data summarised by Summers et al. (1980), Warner (1983), Harrington (1990), Lyons (2004) and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Moulting behaviour	Moult haul-out sites	The moult haul-out sites should be maintained in a natural condition. See map 6	Attribute and target based on background knowledge of Irish populations, review of data from Lyons (2004), Cronin et al. (2004) and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Resting behaviour	Resting haul-out sites	The resting haul-out sites should be maintained in a natural condition. See map 6	Attribute and target based on background knowledge of Irish populations, review of data from Lyons (2004) and unpublished National Parks & Wildlife Service records. See marine supporting document for further details
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the harbour seal population at the site	See marine 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 Donegal Bay (Murvagh) 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: Mullanasole - 19.19ha and Mountcharles - 7.82ha. See map 5	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Two sub-sites (Mullanasole and Mountcharles) were mapped, giving a total estimated area of 27.01ha. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 5 for known distribution	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Fixed dunes known to occur at Mullanasole and Mountcharles. See coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/ absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	A range of coastal habitats form a dynamic mosaic at this site according to Ryle et al. (2009); McCorry and Ryle (2009) and Moore and Wilson (1999). See coastal habitats supporting document for further details
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation structure: sward height	Centimeters	Maintain structural variation within sward	30-70% of sward should be maintained between 5 and 20cm. Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. 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 Donegal Bay (Murvagh) SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Vegetation composition: scrub/trees	Percentage cover	No more than 5% cover or under control	Based on data from Ryle et al. (2009). The spread of blackthorn (*Prunus spinosa*) scrub needs to be controlled at Mountcharles. See coastal habitats supporting document for further details

2190 Humid dune slacks

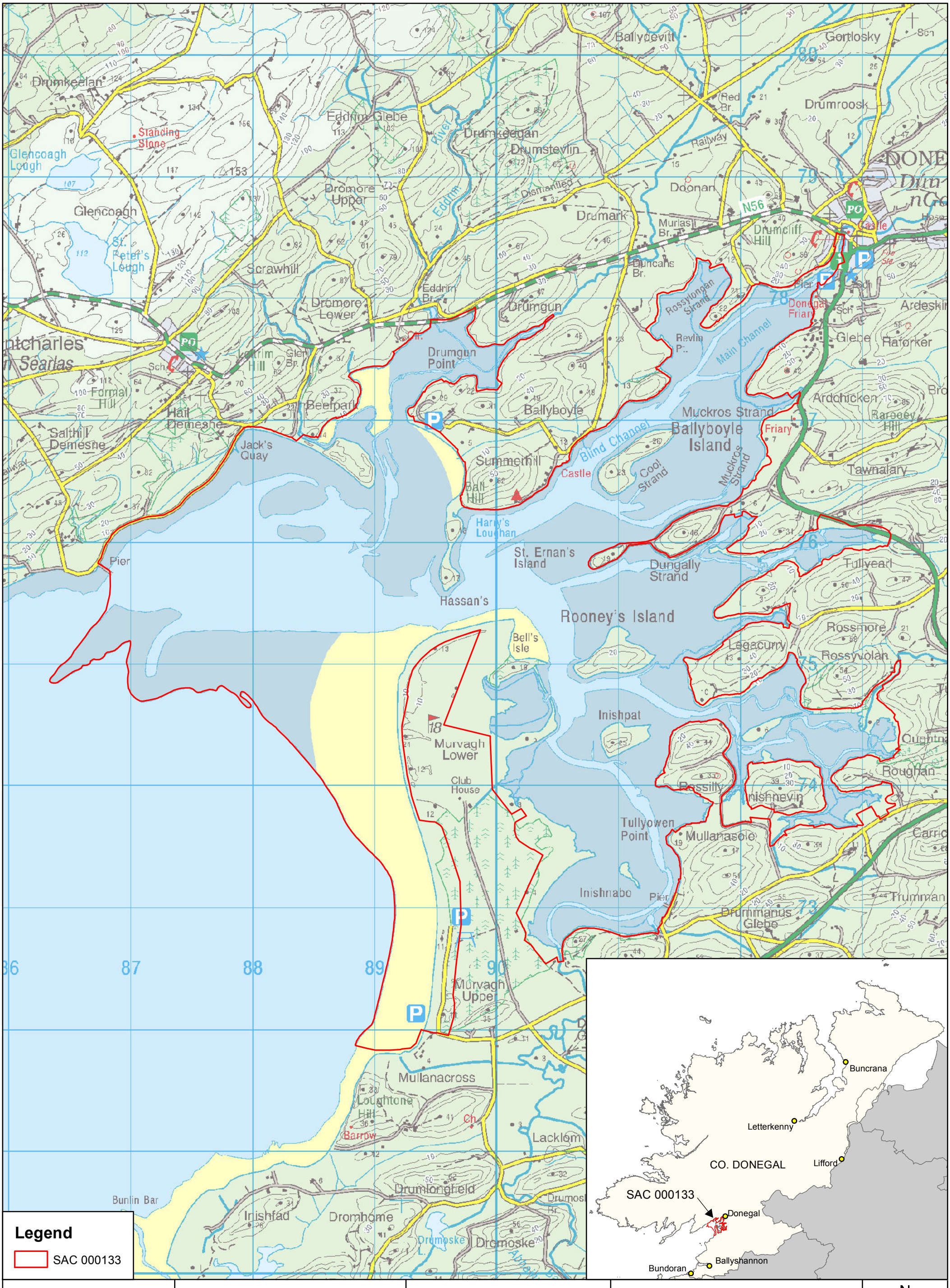
To restore the favourable conservation condition of Humid dune slacks in Donegal Bay (Murvagh) SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. For site mapped: Mullanasole - 0.12ha See map 5	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Habitat was mapped at Mullanasole, giving a total estimated area of 0.12ha. See coastal habitats supporting document for further details.
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 5 for known distribution	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Slacks known to occur at Mullanasole. They provide habitat for round-leaved wintergreen (*Pyrola rotundifolia* ssp. *maritima*). 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 Ryle et al. (2009). Some slacks at Mullanasole are believed to have dried up due to afforestation. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	A range of coastal habitats form a dynamic mosaic at this site according to Ryle et al. (2009); McCorry and Ryle (2009) and Moore and Wilson (1999). See coastal habitats supporting document for further details
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 5% of dune slack habitat, with the exception of pioneer slacks which can have up to 20% bare ground	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: cover of Salix repens	% cover; centimeters	Maintain <40% cover of creeping willow (*Salix repens*)	Cover of creeping willow (*Salix repens*) needs to be controlled (e.g. through an appropriate grazing regime) to prevent the development of a coarse, rank vegetation cover. Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details

2190 Humid dune slacks

To restore the favourable conservation condition of Humid dune slacks in Donegal Bay (Murvagh) 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. 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 000133

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MAP 1: DONEGAL BAY (MURVAGH) SAC CONSERVATION OBJECTIVES SAC DESIGNATION

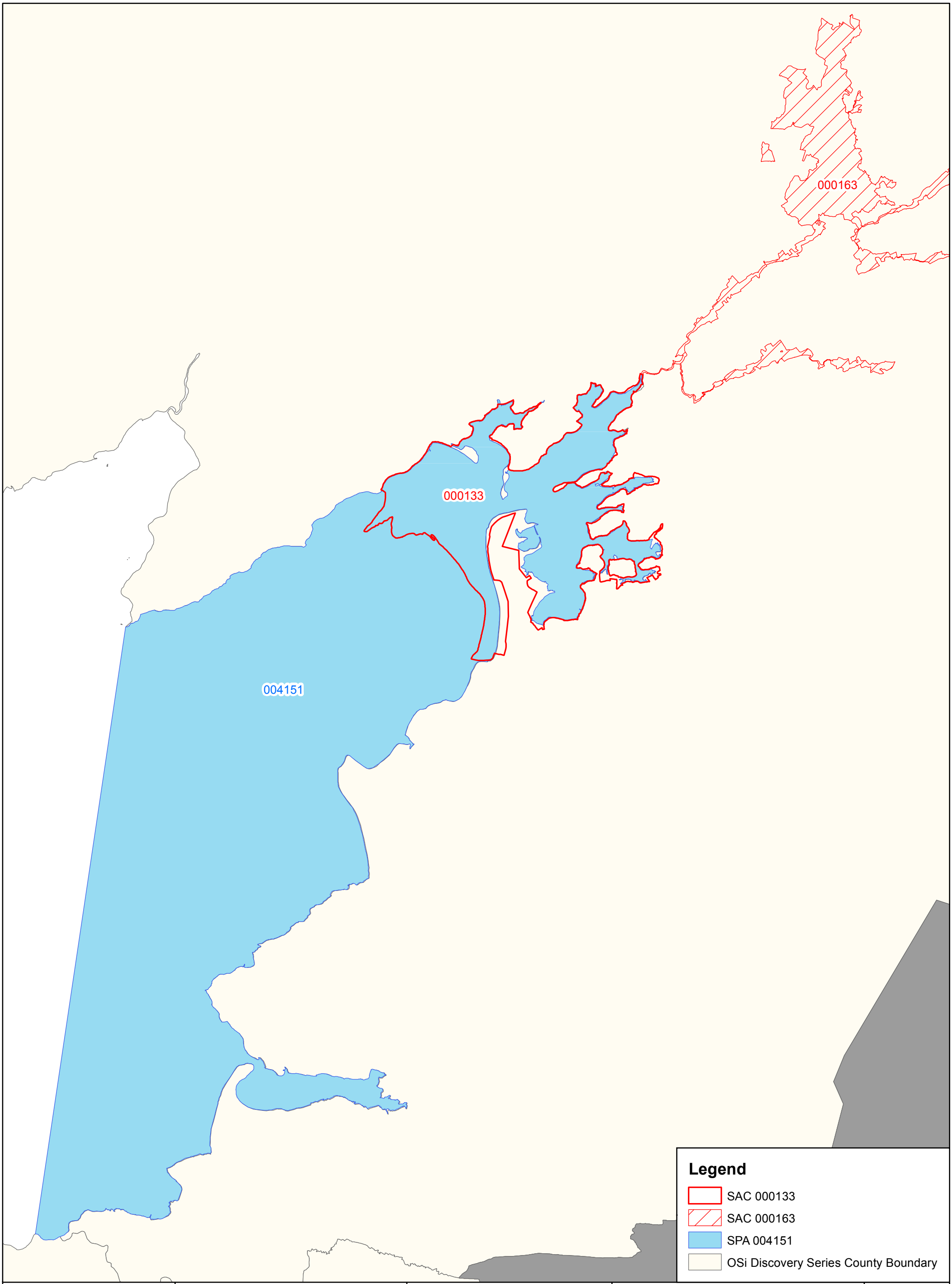
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE: SAC 000133 Version 1

0 0.5 1 km

N

Map Version 1
Date: Dec 2011



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MAP 2: DONEGAL BAY (MURVAGH) SAC CONSERVATION OBJECTIVES ADJOINING / OVERLAPPING DESIGNATIONS

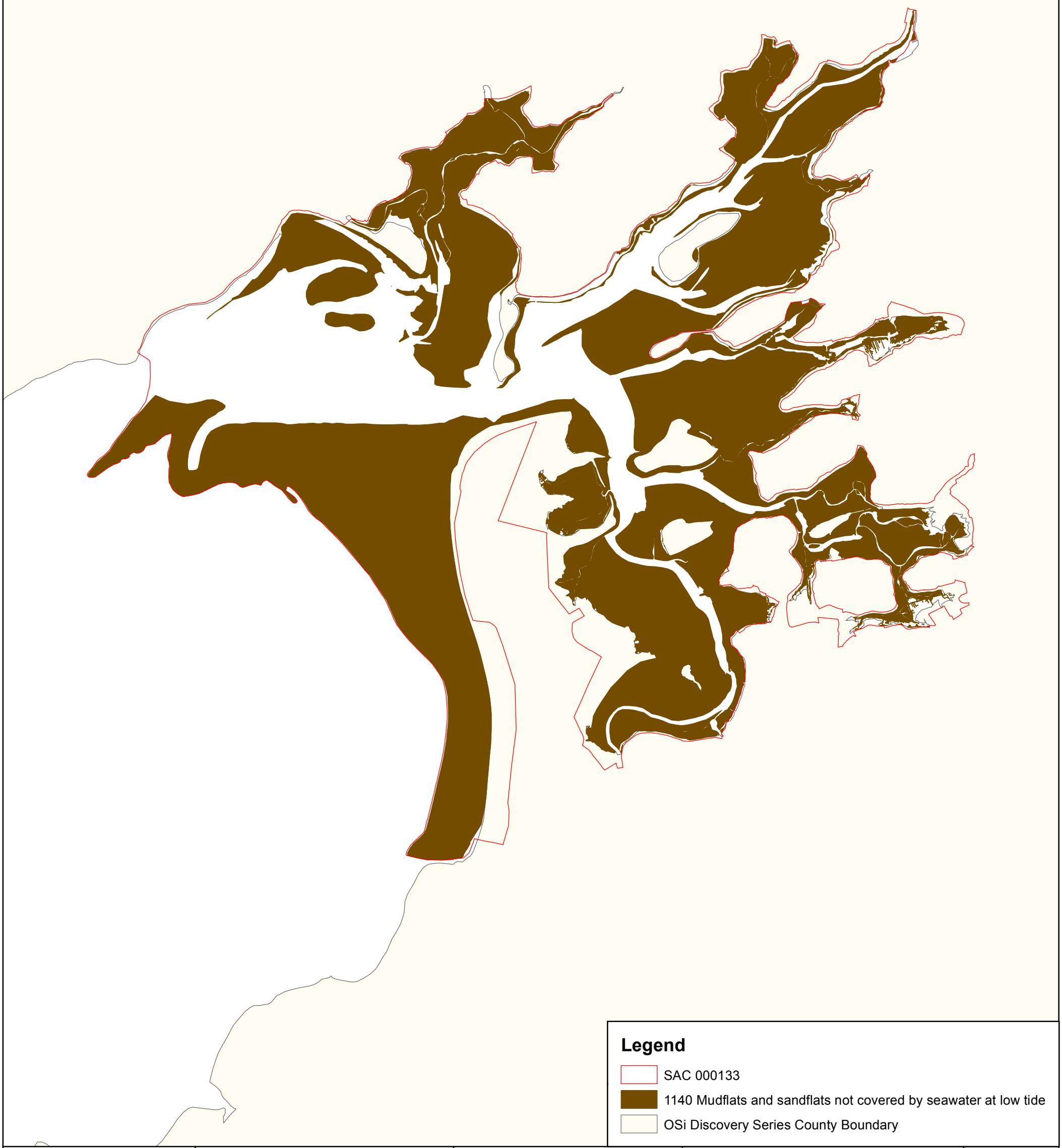
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 000133 Version 1
SAC 000163 Version 1.02
SPA 004151 Version 2.01

0 1.5 3 km

N

Map Version 1
Date: Dec 2011



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MAP 3:
DONEGAL BAY (MURVAGH) SAC
CONSERVATION OBJECTIVES
TIDAL MUDFLATS & SANDFLATS

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

COUNTY DONEGAL

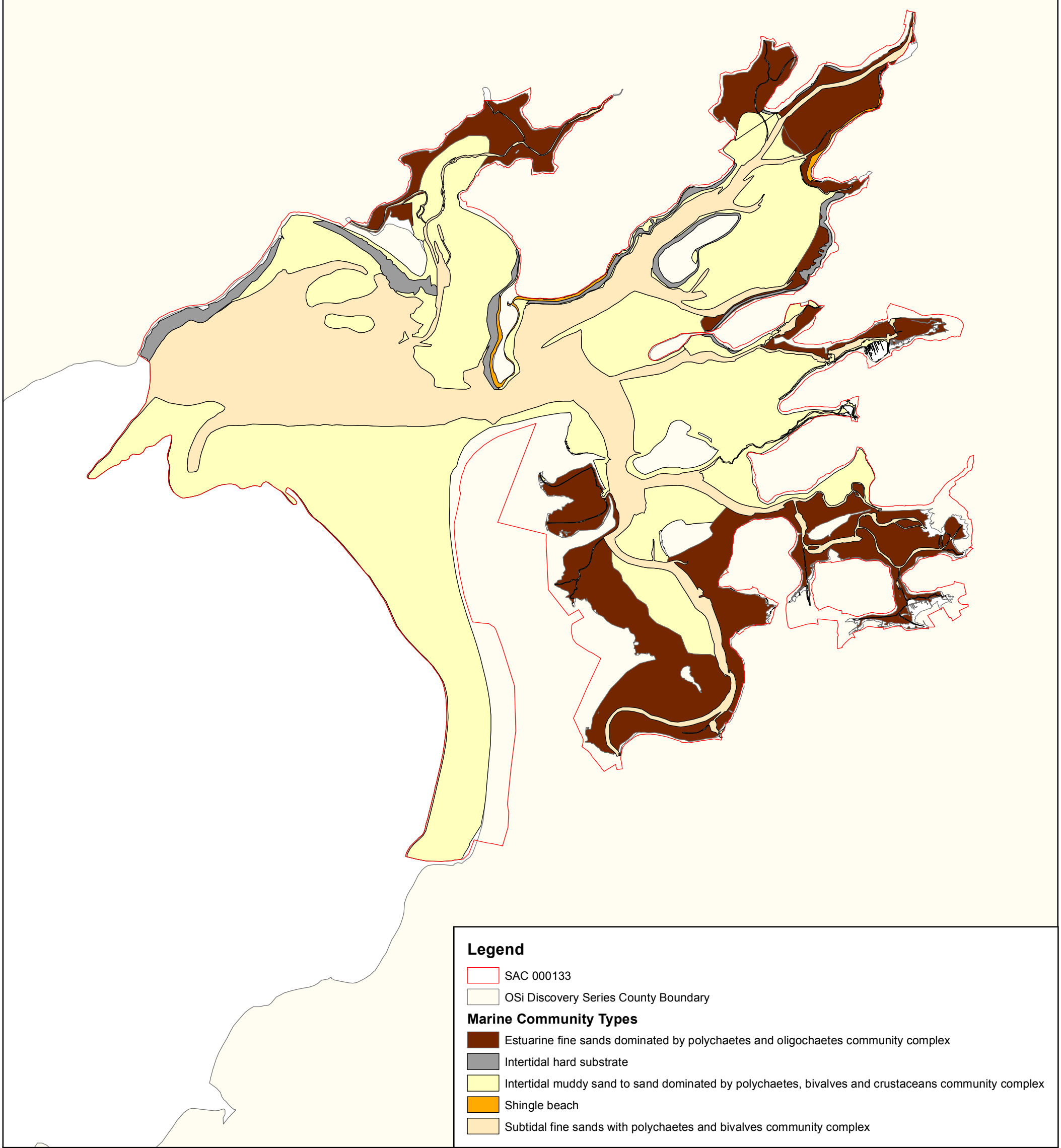
0 0.5 1 km

N

SITE CODE

SAC 000133
Version 1

Map Version 1
Date: Dec 2011



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MAP 4: DONEGAL BAY (MURVAGH) SAC CONSERVATION OBJECTIVES MARINE COMMUNITY TYPES

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

COUNTY DONEGAL

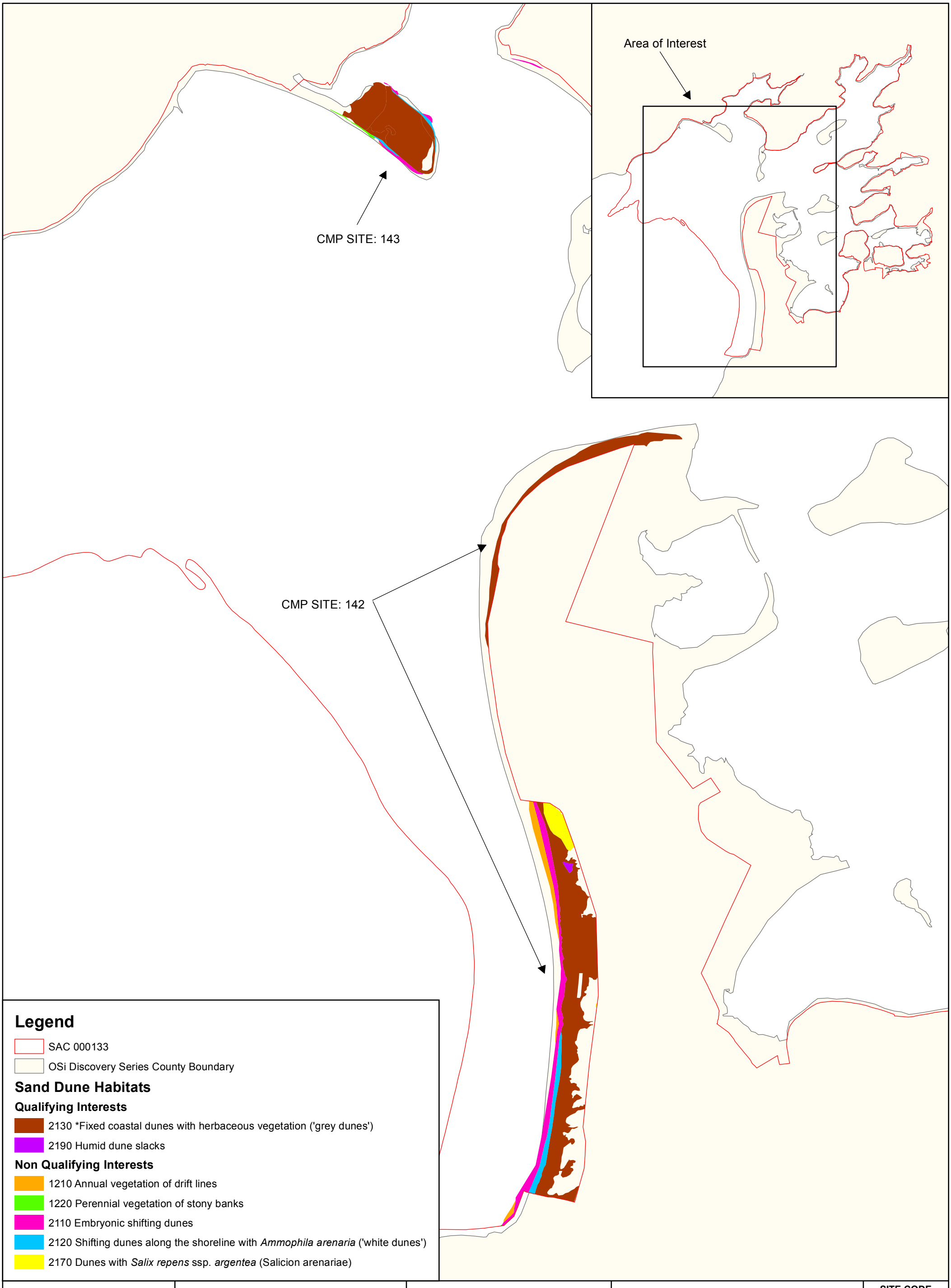
0 0.5 1 km

N

SITE CODE

SAC 000133
Version 1

Map Version 1
Date: Dec 2011



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MAP 5:
DONEGAL BAY (MURVAGH) SAC
CONSERVATION OBJECTIVES
SAND DUNE HABITATS

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

COUNTY DONEGAL

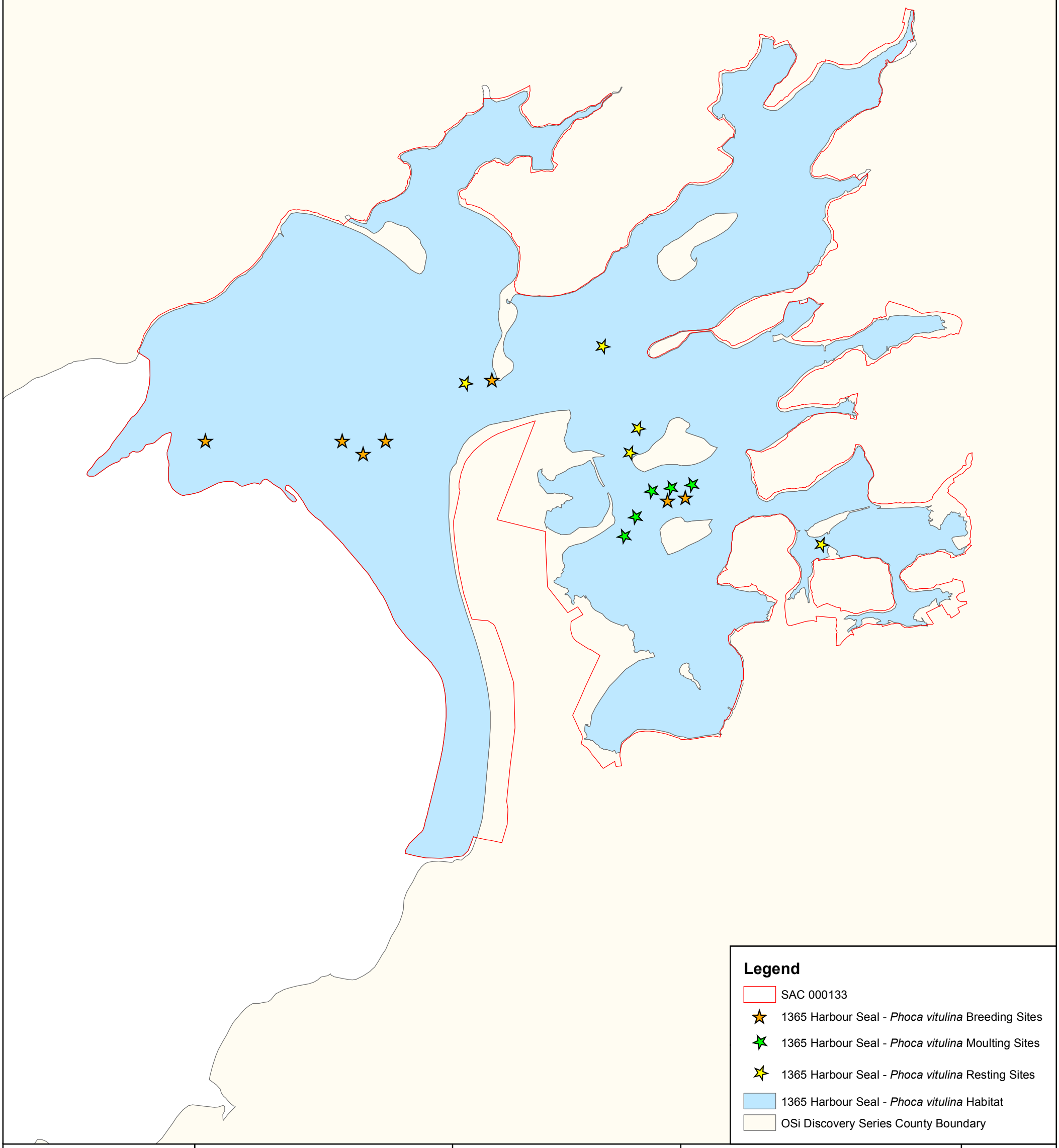
0 0.25 0.5 km

N

SITE CODE

SAC 000133
Version 1

Map Version 1
Date: Dec 2011



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MAP 6: DONEGAL BAY (MURVAGH) SAC CONSERVATION OBJECTIVES HARBOUR SEAL

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

COUNTY DONEGAL

SITE CODE

SAC 000133
Version 1

Map Version 1
Date: Dec 2011