

# National Parks and Wildlife Service

---

## *Conservation Objectives Series*

---

### Lackan Saltmarsh and Kilcummin Head SAC 000516



An Roinn Ealaíon, Oidhreachta,  
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta

---

Department of Arts, Heritage,  
Regional, Rural and Gaeltacht Affairs



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

**Citation:**

**NPWS (2016) Conservation Objectives: Lackan Saltmarsh and Kilcummin Head  
SAC 000516. Version 1. National Parks and Wildlife Service, Department of Arts,  
Heritage, Regional, Rural and Gaeltacht Affairs.**

**Series Editor: Rebecca Jeffrey  
ISSN 2009-4086**

## Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

### **Notes/Guidelines:**

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

## Qualifying Interests

\* indicates a priority habitat under the Habitats Directive

---

000516	Lackan Saltmarsh and Kilcummin Head SAC
1310	<del>Ulex</del> 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 <del>Cladonia</del> (white dunes)
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)E

**Please note that this SAC overlaps with Killala Bay/Moy Estuary SPA (004036). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.**

## Supporting documents, relevant reports & publications

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

### NPWS Documents

<b>Year :</b>	2007
<b>Title :</b>	Saltmarsh Monitoring Project 2006
<b>Author :</b>	McCorry, M.
<b>Series :</b>	Unpublished report to NPWS
<hr/>	
<b>Year :</b>	2009
<b>Title :</b>	Coastal Monitoring Project 2004-2006
<b>Author :</b>	Ryle, T.; Murray, A.; Connolly, K.; Swann, M.
<b>Series :</b>	Unpublished report to NPWS
<hr/>	
<b>Year :</b>	2009
<b>Title :</b>	Saltmarsh monitoring project 2007-2008
<b>Author :</b>	McCorry, M.; Ryle, T.
<b>Series :</b>	Unpublished report to NPWS
<hr/>	
<b>Year :</b>	2013
<b>Title :</b>	Monitoring survey of Annex I sand dune habitats in Ireland
<b>Author :</b>	Delaney, A.; Devaney, F.M.; Martin, J.M.; Barron, S.J.
<b>Series :</b>	Irish Wildlife Manual No. 75
<hr/>	
<b>Year :</b>	2016
<b>Title :</b>	Lacken Saltmarsh and Kilcummin Head SAC (site code: 516) Conservation objectives supporting document- coastal habitats V1
<b>Author :</b>	NPWS
<b>Series :</b>	Conservation objectives supporting document

### Other References

<b>Year :</b>	2008
<b>Title :</b>	The phytosociology and conservation value of Irish sand dunes
<b>Author :</b>	Gaynor, K.
<b>Series :</b>	Unpublished PhD thesis, National University of Ireland, Dublin

## Spatial data sources

<b>Year :</b>	Revision 2010
<b>Title :</b>	Saltmarsh Monitoring Project 2007-2008. Version 1
<b>GIS Operations :</b>	QIs selected; clipped to SAC boundary; overlapping regions with Coastal CO data investigated and resolved with expert opinion used
<b>Used For :</b>	1310, 1330, 1410 (map 3)
<hr/>	
<b>Year :</b>	2009
<b>Title :</b>	Coastal Monitoring Project 2004-2006. Version 1
<b>GIS Operations :</b>	QIs selected; clipped to SAC boundary; overlapping regions with Saltmarsh CO data investigated and resolved with expert opinion used
<b>Used For :</b>	2120, 2130 (map 4)
<hr/>	

**1310 Salicornia and other annuals colonising mud and sand**

**To restore the favourable conservation condition of *Salicornia* and other annuals colonising mud and sand in Lackan Saltmarsh and Kilcummin Head 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 the sub-site mapped: Lackan - 0.001ha	Based on data from the Saltmarsh Monitoring Project (SMP) (McCorry, 2007; McCorry and Ryle, 2009). <i>Salicornia</i> and other annuals colonising mud and sand was surveyed at the sub-site Lackan (site ID: SMP0022) to give a total estimated area of 0.001ha in Lackan Saltmarsh and Kilcummin Head SAC. This extent is too small to be mapped. NB further unsurveyed areas may be present within the SAC. See the Lackan Saltmarsh and Kilcummin Head SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes	Based on data from McCorry (2007) and McCorry and Ryle (2009). <i>Salicornia</i> is an annual species, so its distribution can vary significantly from year to year. See the 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 McCorry (2007) and McCorry and Ryle (2009). Sediment supply is particularly important for this pioneer saltmarsh community, as its distribution depends on accretion rates. Within the estuary and along the margins of the Cloonalaghan River, sediments originating from the river have built up to form an extensive saltmarsh (Ryle et al., 2009). See the 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 (2007) and McCorry and Ryle (2009). Creeks deliver sediment throughout the saltmarsh system. At Lackan, the creek network is well-developed and many of the creeks contain very soft mud and are unusually deep. See the coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from McCorry (2007) and McCorry and Ryle (2009). This pioneer saltmarsh community requires regular tidal inundation. See the 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 (2007) and McCorry and Ryle (2009). See the coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from McCorry (2007) and McCorry and Ryle (2009). See the coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% of the area outside of creeks vegetated	Based on data from McCorry (2007) and McCorry and Ryle (2009). See the 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 McCorry and Ryle (2009)	Based on data from McCorry (2007) and McCorry and Ryle (2009). There is frequent glasswort ( <i>Salicornia</i> sp.) and occasional annual sea-blite ( <i>Suaeda maritima</i> ) associated with some areas. See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species - <i>Spartina anglica</i>	Hectares	There is no record of common cordgrass ( <i>Spartina anglica</i> ) in the SAC and its establishment should be prevented	Based on data from McCorry (2007) and McCorry and Ryle (2009). No common cordgrass ( <i>Spartina anglica</i> ) was recorded in this habitat in the SAC. See the coastal habitats supporting document for further details

## Conservation Objectives for : Lackan Saltmarsh and Kilcummin Head SAC [000516]

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

**To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Lackan Saltmarsh and Kilcummin Head 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 the sub-site (Lackan) and potential areas mapped: 32.70ha. See map 3	Based on data from the Saltmarsh Monitoring Project (SMP) (McCorry, 2007; McCorry and Ryle, 2009). The sub-site Lackan (site ID: SMP0022) that supports Atlantic Salt Meadows (ASM) was mapped (32.43ha) and additional areas of potential ASM habitat (0.27ha) were identified from an examination of aerial photographs, giving a total estimated area of 32.70ha within Lackan Saltmarsh and Kilcummin Head SAC. NB further unsurveyed areas may be present within the SAC. See the Lackan Saltmarsh and Kilcummin Head SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 3 for known distribution	Based on data from McCorry (2007) and McCorry and Ryle (2009). The saltmarsh is mostly contained in one large main unit. A band of saltmarsh extends along the north-western and north-eastern shorelines of Lackan Bay, which eventually narrows out and transitions to sand dune and sandy beach habitats. NB further unsurveyed areas may be present within the SAC. See the 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 (2007) and McCorry and Ryle (2009). Erosion and accretion mainly affects the ASM at this SAC. See the 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 (2007) and McCorry and Ryle (2009). The original creek network has been affected by drainage and some of the channels in the mid-eastern part of the saltmarsh have been artificially deepened and straightened in the past. See the coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from McCorry (2007) and McCorry and Ryle (2009). There have been drainage and land reclamation works in the past with regularly-spaced drains across the north-western section of the saltmarsh linking with drains from adjacent wet grassland on slopes to the Cloonalaghan River. See the 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 (2007) and McCorry and Ryle (2009). Natural transitions occur between saltmarsh types as well as to other coastal habitats such as sand dunes. See the coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from McCorry (2007) and McCorry and Ryle (2009). Sheep grazing has created a typical low sward (1-2cm high). See the coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% of the area outside of creeks vegetated	Based on data from McCorry (2007) and McCorry and Ryle (2009). There are vehicle tracks and wheel ruts on the ASM at the north-western and north-eastern corners of the saltmarsh where minor roads allow access to the sandflats and Lackan Bay. See the 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 McCorry and Ryle (2009)	Based on data from McCorry (2007) and McCorry and Ryle (2009). ASM vegetation is dominated by a thrift ( <i>Armeria maritima</i> ) and sea plantain ( <i>Plantago maritima</i> ) sward. See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species - <i>Spartina anglica</i>	Hectares	There is no record of common cordgrass ( <i>Spartina anglica</i> ) in the SAC and its establishment should be prevented	Based on data from McCorry (2007) and McCorry and Ryle (2009). No common cordgrass ( <i>Spartina anglica</i> ) was recorded in this habitat in the SAC. See the coastal habitats supporting document for further details

## Conservation Objectives for : Lackan Saltmarsh and Kilcummin Head SAC [000516]

### 1410 Mediterranean salt meadows (*Juncetalia maritimi*)

**To restore the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Lackan Saltmarsh and Kilcummin Head 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 the sub-site (Lackan): 65.03ha. See map 3	Based on data from the Saltmarsh Monitoring Project (SMP) (McCorry, 2007; McCorry and Ryle, 2009). The sub-site Lackan (site ID: SMP0022) that supports Mediterranean Salt Meadows (MSM) was mapped to give a total estimated area of 65.03ha within Lackan Saltmarsh and Kilcummin Head SAC. NB further unsurveyed areas may be present within the SAC. See the Lackan Saltmarsh and Kilcummin Head SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 3 for known distribution	Based on data from McCorry (2007) and McCorry and Ryle (2009). MSM habitat dominates the western side of Cloonalaghan River and the southern part of the saltmarsh. NB further unsurveyed areas may be present within the SAC. See the 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 (2007) and McCorry and Ryle (2009). Some minor erosion and accretion occurs within the MSM further up the Cloonalaghan River channel from the ASM habitat. See the 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 (2007) and McCorry and Ryle (2009). The creek and pan topography in the MSM is very well-developed with frequent pans and a dense network of creeks. See the coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from McCorry (2007) and McCorry and Ryle (2009). Mediterranean salt meadow is found high up in the saltmarsh but requires occasional tidal inundation. See the 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 (2007) and McCorry and Ryle (2009). Natural transitions occur between saltmarsh types as well as to other coastal habitats such as sand dunes. See the coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation in the sward	Based on data from McCorry (2007) and McCorry and Ryle (2009). The grazing level is low in the MSM as the dense patches of sea rush ( <i>Juncus maritimus</i> ) present protect the other vegetation. See the coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% of the area outside of creeks vegetated	Based on data from McCorry (2007) and McCorry and Ryle (2009). The MSM habitat has suffered some damage due to heavy cattle poaching. See the 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 McCorry and Ryle (2009)	Based on data from McCorry (2007) and McCorry and Ryle (2009). Sea rush ( <i>Juncus maritimus</i> ) occurs on slightly elevated sites and its sharp stems protect succulent plants such as common scurvygrass ( <i>Cochlearia officinalis</i> ) and sea aster ( <i>Aster tripolium</i> ) from grazing. Sea club-rush ( <i>Bolboschoenus maritimus</i> ) and common reed ( <i>Phragmites australis</i> ) are present in the ditches. This limited species diversity is typical of MSM habitat. See the coastal habitats supporting document for further details

Vegetation composition: negative indicator species - <i>Spartina anglica</i>	Hectares	There is no record of common cordgrass ( <i>Spartina anglica</i> ) in the SAC and its establishment should be prevented	Based on data from McCorry (2007) and McCorry and Ryle (2009). No common cordgrass ( <i>Spartina anglica</i> ) was recorded in this habitat in the SAC. See the coastal habitats supporting document for further details
--	----------	---	--

---

## Conservation Objectives for : Lackan Saltmarsh and Kilcummin Head SAC [000516]

### 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 Lackan Saltmarsh and Kilcummin Head 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 the sub-site mapped: Lackan (including Rathlackan) - 2.82ha. See map 4	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009). Shifting dunes along the shoreline with <i>Ammophila arenaria</i> was mapped at the sub-site Lackan (including Rathlackan; CMP site ID: 129) to give a total estimated area of 2.82ha within Lackan Saltmarsh and Kilcummin Head SAC. This habitat is very difficult to measure in view of its dynamic nature. See the Lackan Saltmarsh and Kilcummin Head SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 4 for known distribution	Based on data from Ryle et al. (2009). See the 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. Marram grass ( <i>Ammophila arenaria</i> ) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. The sandhills at the Rathlackan sub-site, on the north-west side of Lackan Saltmarsh and Kilcummin Head SAC, are badly eroded, which has resulted in the availability of sediment that may be re-worked to form temporary foredune habitat. There appears to have been some attempts at dune protection through the planting of marram grass and lyme-grass ( <i>Leymus arenarius</i> ) on heaped banks of sand and cobbles. See the 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). Mobile dunes at Rathlackan extend around the seaward edge of the spit. Behind the dunes, there are sheltered intertidal sandflats which in turn are backed by extensive saltmarsh. See the 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). Although mobile dunes occur along the full northern edge of the spit in the SAC, the characteristic vegetation of marram ( <i>Ammophila arenaria</i> ) is frequently quite sparse and/or has an unhealthy appearance, reflecting the general lack of sediment mobility along the seaward edge of the dunes. Only at the western tip of the spit, where accreting or locally recycled sediment accumulates, is there a substantial band of healthy marram. See the 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). The mobile dune habitat at Rathlackan is characterised by the presence of marram grass ( <i>Ammophila arenaria</i> ). Lyme-grass ( <i>Leymus arenarius</i> ) is also present in places. See the 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). 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 the coastal habitats supporting document for further details

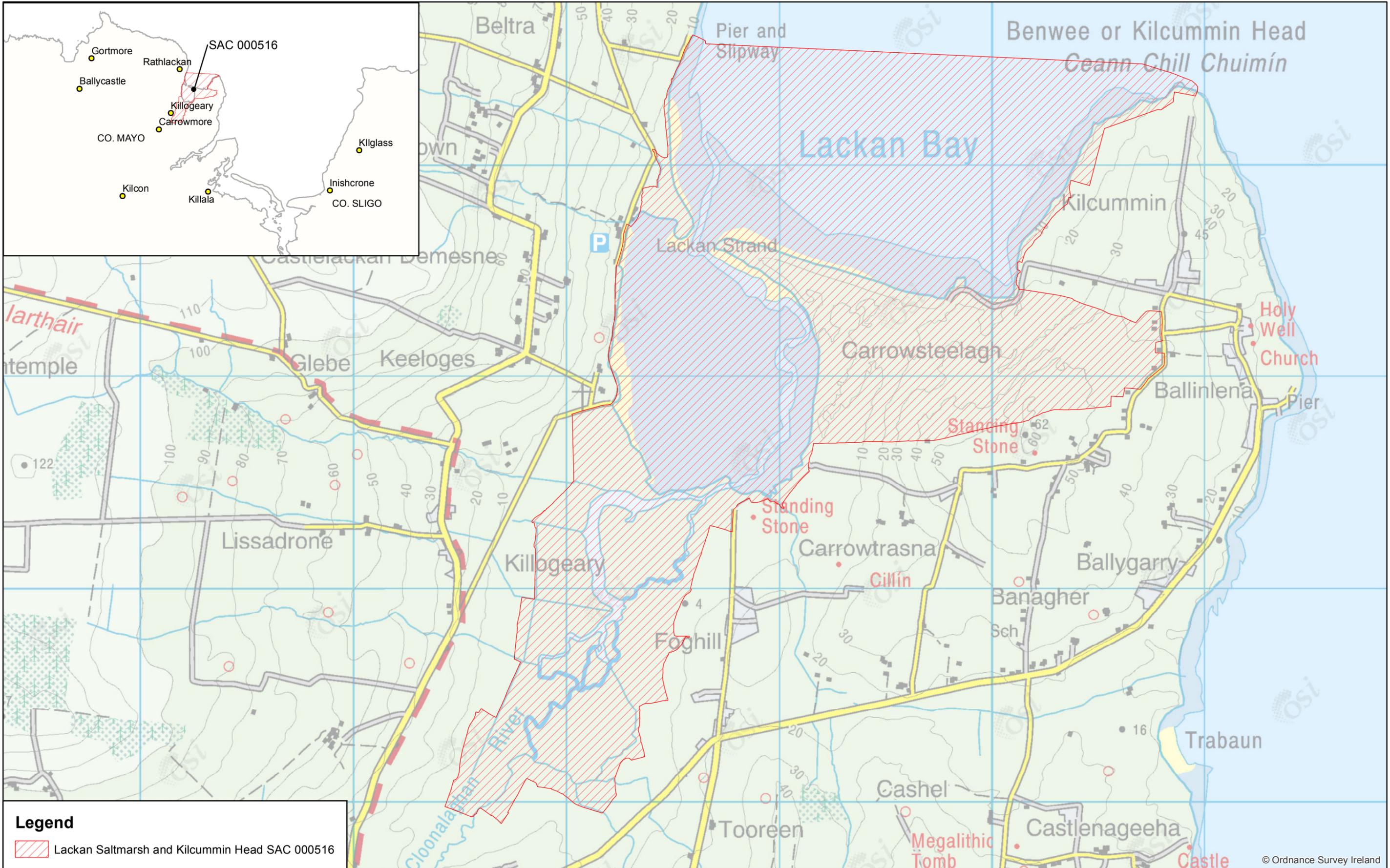
## Conservation Objectives for : Lackan Saltmarsh and Kilcummin Head SAC [000516]

### 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 Lackan Saltmarsh and Kilcummin Head 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: Lackan (including Rathlackan) - 95.18ha. See map 4	Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009). Fixed coastal dunes with herbaceous vegetation was mapped at the sub-site Lackan (including Rathlackan; CMP site ID: 129) to give a total estimated area of 95.18ha within Lackan Saltmarsh and Kilcummin Head SAC. See the Lackan Saltmarsh and Kilcummin Head SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 4 for known distribution	Based on data from Ryle et al. (2009). See the 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). Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. The north-facing (seaward) side of the Lackan dunes has a highly eroded dune face which, coupled with the lack of any substantially accreting habitat and no significant foredune development, suggests the system is being depleted of sediment. See the 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). The outer zone of Lackan Saltmarsh and Kilcummin Head SAC is dominated by a sand dune system and a sandy beach. The sand dunes are dominated by fixed dunes. Behind the dunes, there are sheltered intertidal sandflats which in turn are backed by extensive saltmarsh. See the 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 the coastal habitats supporting document for further details
Vegetation structure: sward height	Centimetres	Maintain structural variation within sward	Based on data from Gaynor (2008) and Ryle et al. (2009). Different levels of grazing have resulted in varying sward heights in the fixed dune habitat at this SAC. See the 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 range of sub-communities with typical species listed in Delaney et al. (2013)	Based on data from Gaynor (2008) and Ryle et al. (2009). The more commonly noted species in the fixed dunes included sand sedge ( <i>Carex arenaria</i> ), glaucous sedge ( <i>C. flacca</i> ), red fescue ( <i>Festuca rubra</i> ), lady's bedstraw ( <i>Galium verum</i> ), cat's ear ( <i>Hypochaeris radicata</i> ), common bird's-foot trefoil ( <i>Lotus corniculatus</i> ), field wood-rush ( <i>Luzula campestris</i> ), mouse-ear-hawkweed ( <i>Pilosella officinarum</i> ), ribwort plantain ( <i>Plantago lanceolata</i> ), yellow-rattle ( <i>Rhinanthus minor</i> ), wild thyme ( <i>Thymus polytrichus</i> ) and Germander speedwell ( <i>Veronica chamaedrys</i> ). See the 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 Gay nor (2008) and 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 Lackan Saltmarsh and Kilcummin Head SAC, the localised proliferation of species such as creeping thistle ( <i>Cirsium arvense</i> ), spear thistle ( <i>C. vulgare</i> ) and common ragwort ( <i>Senecio jacobaea</i> ) in the fixed dunes may be indicative of recent overgrazing and intensive management. See the 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). At Lackan Saltmarsh and Kilcummin Head SAC, there were occasional stunted hawthorn ( <i>Crataegus monogyna</i> ) shrubs in the fixed dune grassland, although the total shrub and tree cover was insignificant. See the coastal habitats supporting document for further details



**Legend**

 Lackan Saltmarsh and Kilcummin Head SAC 000516



An Foinn Ealaíon, Oidhreacht, Gnóthaí Réigiúnacha, Tuairne agus Gaeltachta  
 Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

**MAP 1:  
 LACKAN SALTMARSH AND KILCUMMIN HEAD SAC  
 CONSERVATION OBJECTIVES  
 SAC DESIGNATION**

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

**SITE CODE:  
 SAC 000516; version 3.  
 CO. MAYO**

0 0.25 0.5 0.75 1 km

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.  
 Ordnance Survey of Ireland Licence No EN 0059216. © Ordnance Survey of Ireland Government of Ireland.

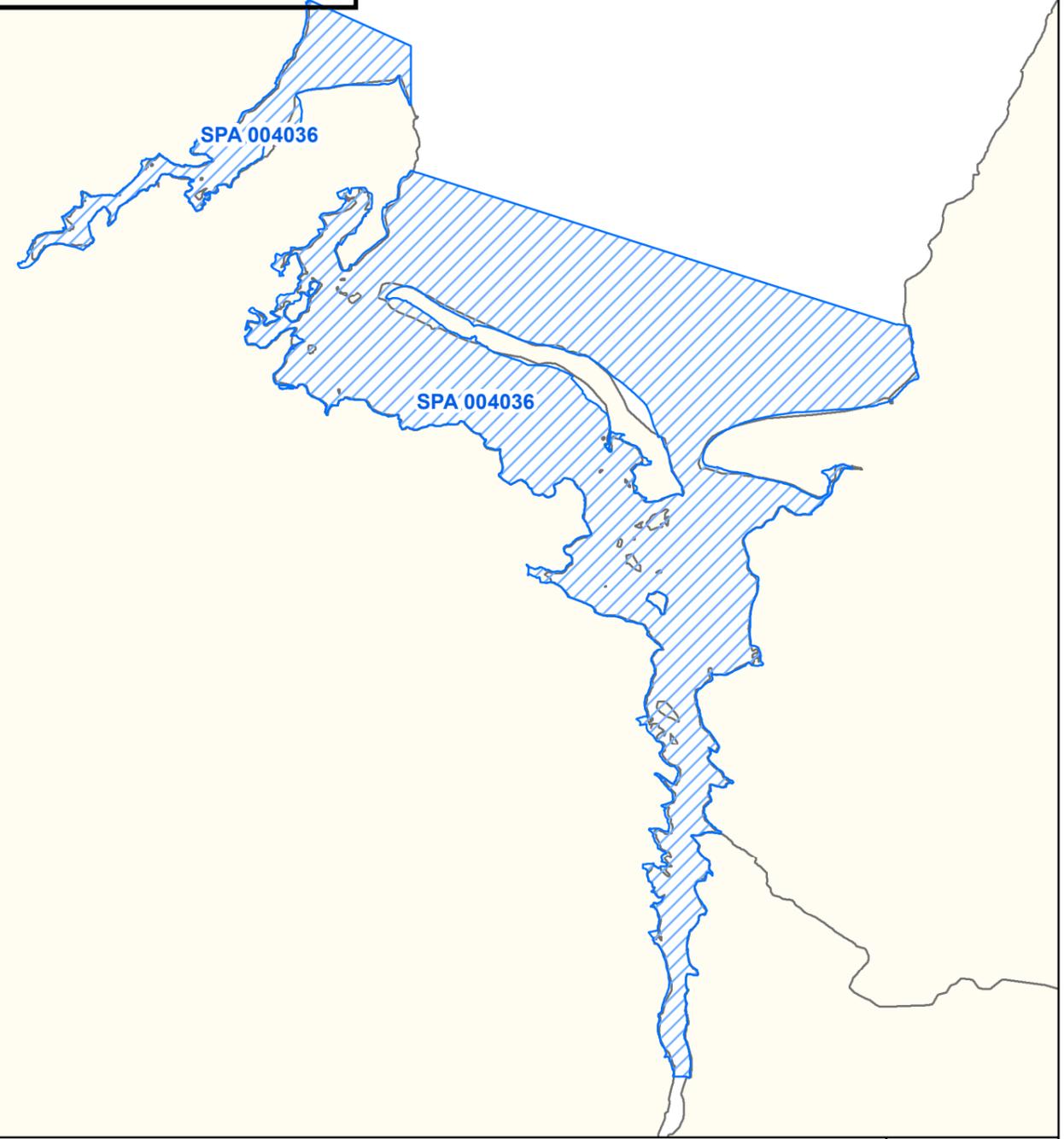
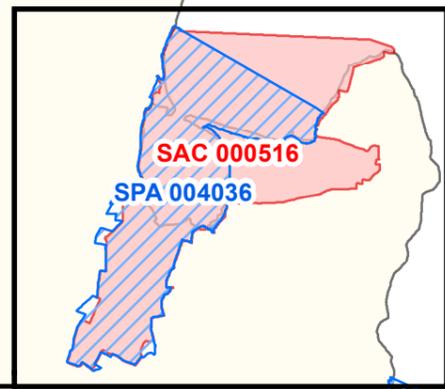
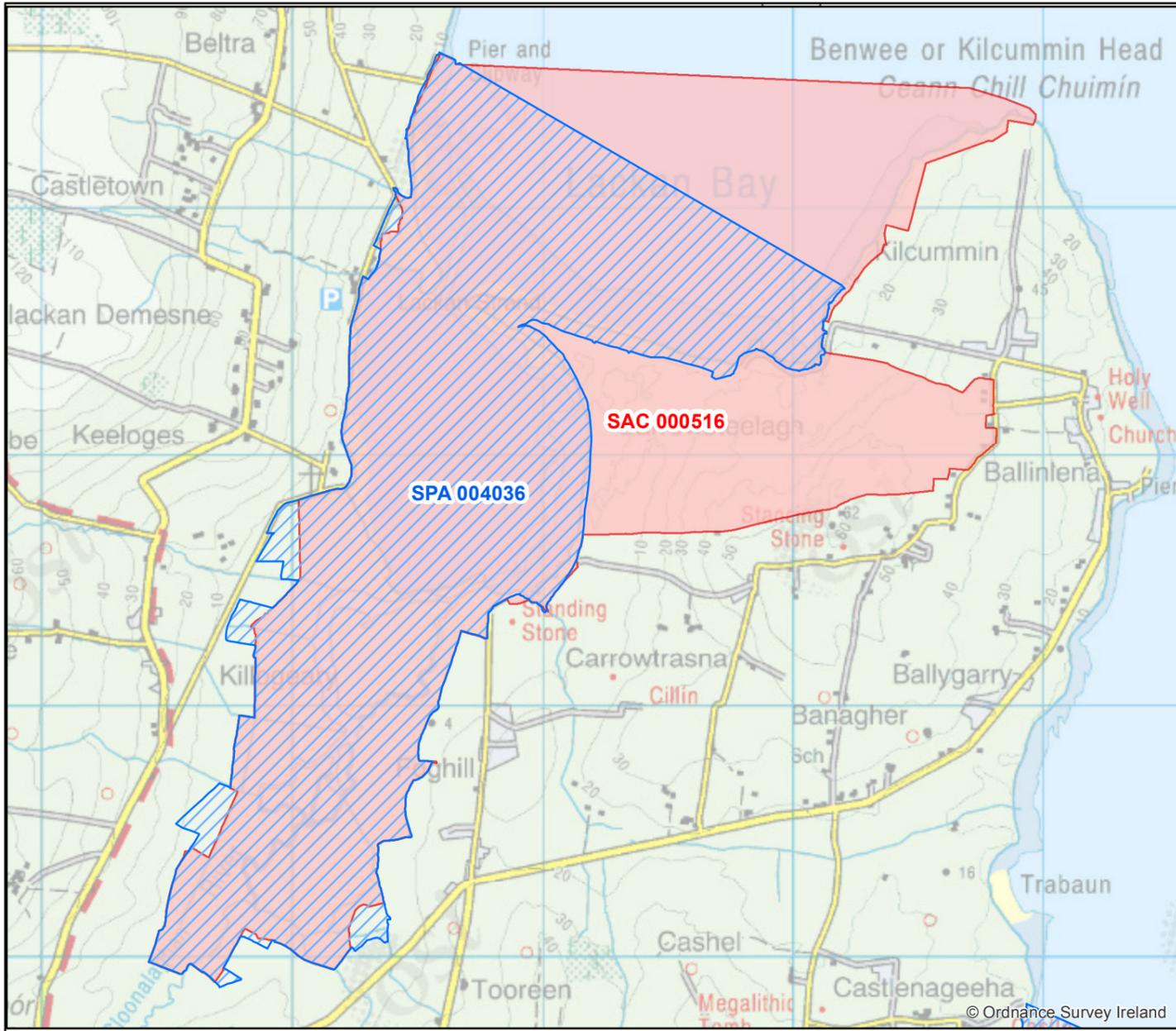
Níl sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbhreithniú a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann.

**N**



**Map Version 1  
 Date: Oct 2016**

© Ordnance Survey Ireland



**Legend**

- Lackan Saltmarsh and Kilcummin Head SAC 000516
- Killala Bay/Moy Estuary SPA 004036
- OSi Discovery Series County Boundary

An Roinn Ealaíon, Oidhreacht, Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta  
 Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs

**MAP 2:  
 LACKAN SALTMARSH AND KILCUMMIN HEAD SAC  
 CONSERVATION OBJECTIVES  
 OVERLAPPING DESIGNATIONS**

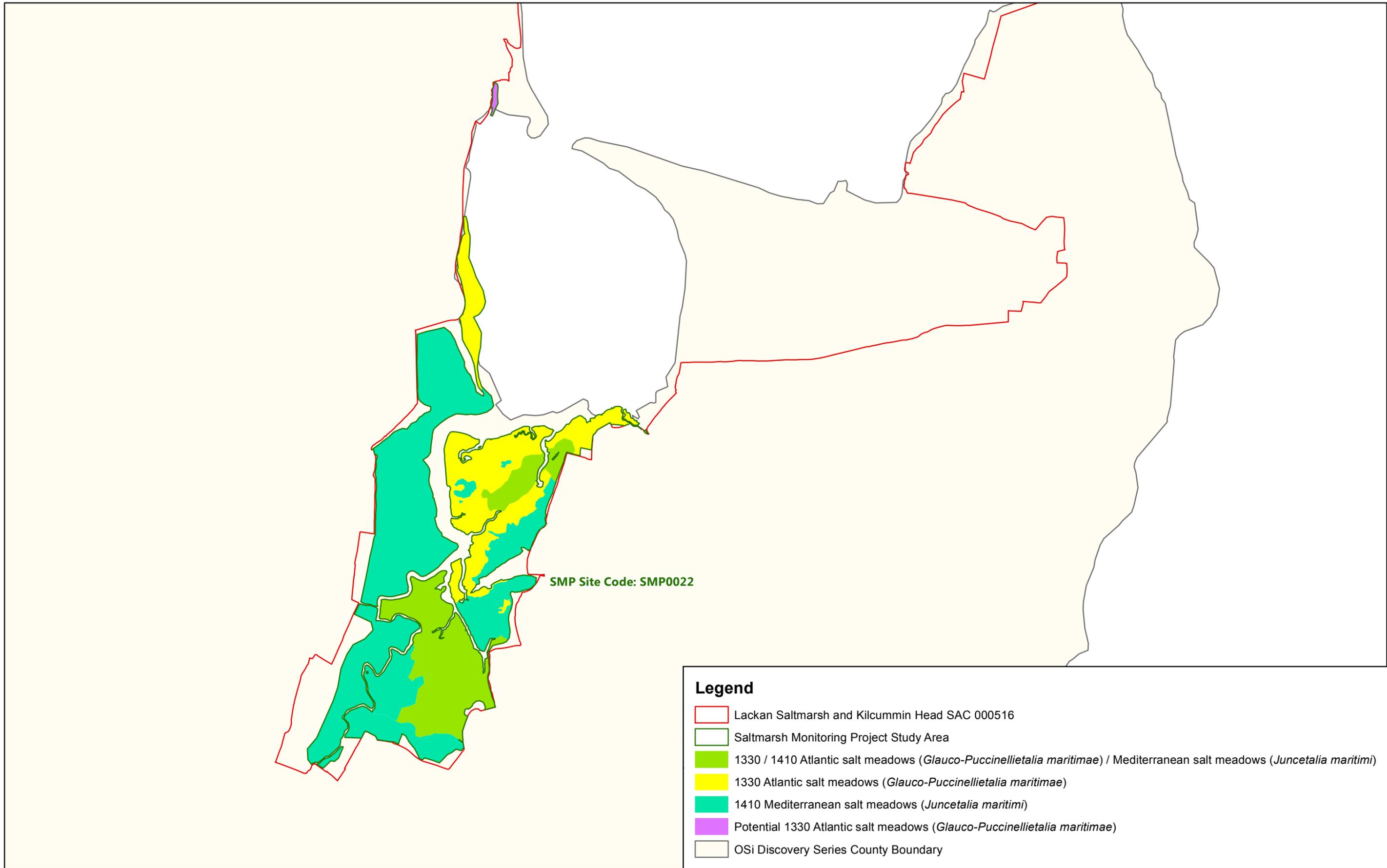
Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:  
 SAC 000516; version 3. SPA 004036; version 3.  
 CO. MAYO**

The mapped boundaries are of an indicative and general nature only. Boundaries of designated areas are subject to revision.  
 Ordnance Survey of Ireland Licence No EN 0059216. © Ordnance Survey of Ireland Government of Ireland.

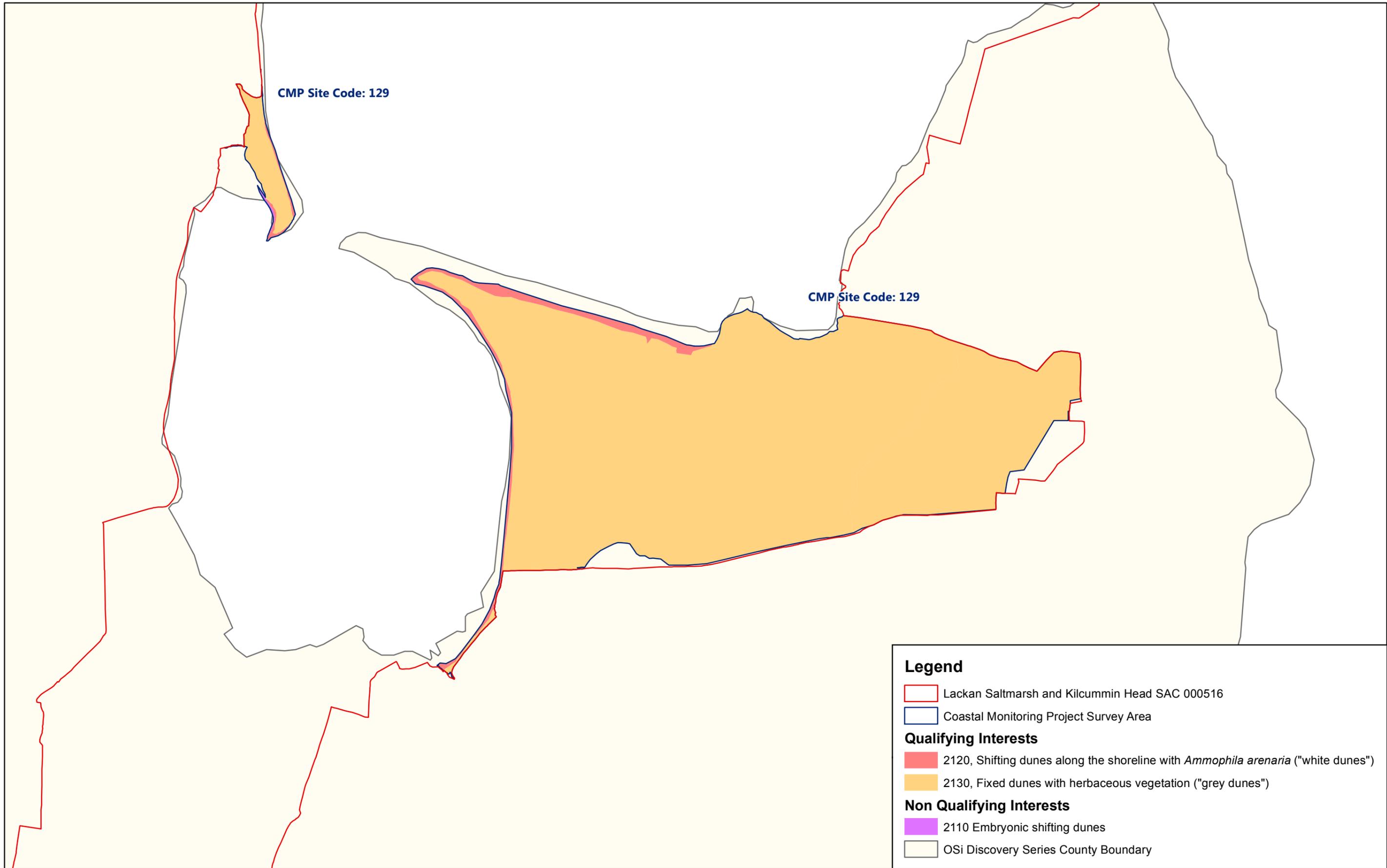
Nil sna teorainneacha ar na léarscáileanna ach nod garshuíomhach ginearálta. Féadfar athbheithnihe a déanamh ar theorainneacha na gceantar comharthaithe. Suirbhéarachta Ordonáis na hÉireann Ceadúnas Uimh EN 0059216. © Suirbhéarachta Ordonáis na hÉireann Rialtas na hÉireann.

**Map Version 1  
 Date: Oct 2016**



**Legend**

- Lackan Saltmarsh and Kilcummin Head SAC 000516
- Saltmarsh Monitoring Project Study Area
- 1330 / 1410 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) / Mediterranean salt meadows (*Juncetalia maritimi*)
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- 1410 Mediterranean salt meadows (*Juncetalia maritimi*)
- Potential 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- OSi Discovery Series County Boundary



**Legend**

- Lackan Saltmarsh and Kilcummin Head SAC 000516
- Coastal Monitoring Project Survey Area

**Qualifying Interests**

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

**Non Qualifying Interests**

- 2110 Embryonic shifting dunes
- OSi Discovery Series County Boundary