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Conservation Objectives Series

Barley Cove to Ballyrisode Point SAC 001040

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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***

001040	Barley Cove to Ballyrisode Point SAC
1140	Mudflats and sandflats not covered by seawater at low tide
1220	Perennial vegetation of stony banks
1310	*Salicornia* and other annuals colonising mud and sand
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
1395	Petalwort *Petalophyllum ralfsii*
1410	Mediterranean salt meadows (Juncetalia maritimi)
2120	Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)*
4030	European dry heaths

Please note that this SAC overlaps with Sheep's Head to Toe Head SPA (004156). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate. IMPORTANT: This 'Version 2' document includes 1 additional QI (1395). The conservation objectives for pre-existing QIs have not been updated.

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	1999
Title :	National Shingle Beach Survey of Ireland 1999
Author :	Moore, D.; Wilson, F.
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 :	2009
Title :	Saltmarsh monitoring project 2007-2008
Author :	McCorry, M.; Ryle, T.
Series :	Unpublished report to NPWS
Year :	2013
Title :	*Petalophyllum ralfsii* (Wils.) Nees & Gottsche (Petalwort) in the Republic of Ireland. Article 17 report backing document
Author :	Campbell, C; Hodgetts, N; Lockhart, N.
Series :	Unpublished report to NPWS
Year :	2013
Title :	Monitoring survey of Annex I sand dune habitats in Ireland
Author :	Delaney, A.; Devaney, F.M.; Martin, J.M.; Barron, S.J.
Series :	Irish Wildlife Manuals, No. 75
Year :	2013
Title :	The status of EU protected habitats and species in Ireland. Volume 3. Species assessments
Author :	NPWS
Series :	Conservation assessments
Year :	2014
Title :	Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland, Version 2.0
Author :	Perrin, P.M.; Barron, S.J.; Roche, J.R.; O'Hanrahan, B.
Series :	Irish Wildlife Manuals, No. 79
Year :	2014
Title :	Barley Cove to Ballyrisode Point SAC (site code: 1040) Conservation objectives supporting document- coastal habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document
Year :	2014
Title :	Barley Cove to Ballyrisode Point SAC (site code; 1040) Conservation objectives supporting document- marine habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document
Year :	2015
Title :	Monitoring methods for *Petalophyllum ralfsii* (Wils.) Nees & Gottsche (Petalwort) in the Republic of Ireland
Author :	Campbell, C.; Hodgetts, N.; Lockhart, N.
Series :	Irish Wildlife Manual No. 90

Year :	2019
Title :	The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments
Author :	NPWS
Series :	Conservation assessments
Year :	2019
Title :	The monitoring and assessment of *Petalophyllum ralfsii* (Petalwort) in the Republic of Ireland 2016–2018
Author :	Campbell, C.; Hodd, R.; O'Neill, F.
Series :	Irish Wildlife Manuals, No. 109

Other References

Year :	1988
Title :	The Irish red data book 1. Vascular plants
Author :	Curtis, T.G.F.; McGough, H.N.
Series :	Wildlife Service, Dublin
Year :	2008
Title :	The phytosociology and conservation value of Irish sand dunes
Author :	Gaynor, K.
Series :	Unpublished Ph.D. Thesis, National University of Ireland, Dublin
Year :	2012
Title :	Intertidal benthic surveys of Barley Cove to Ballyrisode Point SAC
Author :	MERC
Series :	Unpublished report to the Marine Institute and NPWS
Year :	2013
Title :	Conservation of selected legally protected and Red Listed bryophytes in Ireland
Author :	Campbell, C.
Series :	Unpublished Ph.D. Thesis, Trinity College Dublin

Spatial data sources

Year :	Interpolated 2014
Title :	Intertidal 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 :	1140, marine community types (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 :	2008
Title :	OSi 1:5000 IG 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 :	Revision 2010
Title :	Saltmarsh Monitoring Project 2007-2008. Version 1
GIS Operations :	QIs selected; clipped to SAC boundary; overlapping regions with Coastal CO data investigated and resolved with expert opinion used
Used For :	1310, 1330, 1410 (map 5)
Year :	Revision 2012
Title :	National Shingle Beach Survey
GIS Operations :	Clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	1220 (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 :	1220, 2120, 2130 (map 6)

Conservation Objectives for : Barley Cove to Ballyrisode Point SAC [001040]

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 Barley Cove to Ballyrisode Point 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 66ha using a combination of OSi Discovery series and 1:5000 data
Community distribution	Hectares	Conserve the following community types in a natural condition: Sand with *Eurydice pulchra* community complex; Coarse sediment with *Tubificoides benedii* community. See map 4	Based on intertidal surveys undertaken in 2011 (MERC, 2012). See marine supporting document for further details

1220 Perennial vegetation of stony banks

To maintain the favourable conservation condition of Perennial vegetation of stony banks in Barley Cove to Ballyrisode Point 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	Current area unknown. One area of vegetated shingle (0.12ha) was recorded at Barley Cove during the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). 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 recorded locations	Based on data from Moore and Wilson (1999). Shingle in County Cork is typically found as small deposits. Full distribution currently unknown. Shingle known to occur at two sub-sites: Barley Cove and South of Spanish Point, Crookhaven. 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 Moore and Wilson (1999). Shingle features are relatively stable in the long term. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Moore and Wilson (1999). At Barley Cove, associated habitats include sand dunes. At South of Spanish Point, Crookhaven, the shingle transitions to intertidal shingle, rocky shore and cliff. 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 typical vegetated shingle flora including the range of sub-communities within the different zones	Moore and Wilson (1999) report that at Barley Cove, the population of sea kale (*Crambe maritima*) dominates the vegetation and probably represents the finest sea kale site in the county. 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	Negative indicators include non-native species indicative of changes in nutrient status and species not considered characteristic of the habitat. No negative species were recorded by Moore and Wilson (1999) or Delaney et al. (2013) for this habitat in the SAC. See coastal habitats supporting document for further details

1310 *Salicornia* and other annuals colonising mud and sand

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Barley Cove to Ballyrisode Point 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: Dough - 0.48ha. See map 5	Based on data from Saltmarsh Monitoring Project (SMP) (McCorry and Ryle, 2009). Habitat recorded and mapped at one sub-site, giving a total estimated area of 0.48ha. At the Barley Cove sub-site, this habitat was recorded in several salt pans within the ASM. 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 5 for known distribution	Based on data from McCorry and Ryle (2009). *Salicornia* is an annual species, so its distribution can vary significantly from year to year. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain, or where necessary restore, natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). Sediment supply is particularly important for this pioneer saltmarsh community, as the distribution of this habitat depends on accretion rates. At Barley Cove there are no significant loss of habitat due to land-use changes or erosion. At Dough there has been an increase in extent of saltmarsh habitat owing to colonisation of recently accreted sand within the inlet. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain/restore 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 Barley Cove the main saltmarsh has a variable topography that displays typical saltmarsh zonation. Patches of *Salicornia* flats were recorded within several of the salt pans within the ASM. 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 Barley Cove there is a transition to fixed dune grassland along the upper saltmarsh boundary, there are also several sandy mounds within the saltmarsh area that support fixed dune grassland vegetation. At Dough, the saltmarsh is part of a large sand dune system of notable conservation interest. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Barley Cove, the grazing intensity is low. At Dough there is heavy grazing pressure from cattle as well as rabbits (*Oryctolagus cuniculus*). See coastal habitats supporting document for details
Vegetation structure: vegetation cover	Percentage cover at a representative number 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 details
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities listed in SMP (McCorry and Ryle, 2009)	Based on data from McCorry and Ryle (2009). At the Dough sub-site there is a rare *Salicornia* flat habitat characterised by ephemeral saltmarsh vegetation with sea pearlwort (*Sagina maritima*) in the transition zone between the saltmarsh and the sand dunes. See coastal habitats supporting document for further details

Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No common cordgrass (*Spartina anglica*) has been recorded at this site it and should be prevented from establishing	Based on data from McCorry and Ryle (2009). See coastal habitats supporting document for further details

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

To restore the favourable conservation condition of Atlantic salt meadows (Glauco-Puccinellietalia maritimae) in Barley Cove to Ballyrisode Point 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: Barley Cove - 0.72ha; Dough - 5.15ha. See map 5	Based on data from Saltmarsh monitoring Project (SMP) (McCorry and Ryle, 2009). Two sub-sites that supported Atlantic salt meadow (ASM) were mapped giving a total estimated area of 5.87ha. NB further unsurveyed areas maybe present within the SAC. 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 McCorry and Ryle (2009). ASM is the dominant saltmarsh habitat at Barley Cove while there are more or less equal amounts of ASM and MSM at the Dough sub-site. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). At Barley Cove there has been some infilling around the saltmarsh which has affected a small area of saltmarsh. At Dough, there has been an increase in extent of the saltmarsh due to a colonisation of recently accreted sand within the tidal inlet. There has also been some loss of saltmarsh due to erosion by the tidal river but this has been offset by the greater rate of accretion. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	At Barley Cove, the saltmarsh topography within the ASM is well developed and there are salt pans and creeks present. At Dough, the saltmarsh is poorly developed within the ASM and there are few areas with typical mid marsh salt pans and creeks. 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 range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). At Barley Cove there is a transition to fixed dune type grassland along the upper saltmarsh boundary. There are also several mounds within the saltmarsh area that support fixed dune grassland vegetation. At Dough the saltmarsh is well developed and is part of a larger coastal system including a large sand dune system of notable conservation interest. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Barley Cove the grazing intensity is low. At Dough there is heavy grazing pressure from cattle and rabbits (*Oryctolagus cuniculus*). See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% area outside creeks vegetated	Based on data from McCorry and Ryle (2009). At Barley Cove there are some signs of minor poaching by cattle. At Dough there is heavy poaching damage of the saltmarsh. 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 SMP (McCorry and Ryle, 2009)	See coastal habitats supporting document for further details

Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No common cordgrass (*Spartina anglica*) has been recorded at this site it and should be prevented from establishing	Based on data from McCorry and Ryle (2009). See coastal habitats supporting document for further details

1410 Mediterranean salt meadows (Juncetalia maritimi)

To restore the favourable conservation condition of Mediterranean salt meadows (Juncetalia maritimi) in Barley Cove to Ballyrisode Point 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: Barley Cove - 0.10ha; Dough - 5.51ha. See map 5	Based on data from the Saltmarsh Monitoring Project (SMP) (McCorry and Ryle, 2009). Two sub-sites that support Mediterranean Salt Meadow (MSM) were mapped giving a total estimated area of 5.61ha. NB further unsurveyed areas maybe present within the SAC. 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 McCorry and Ryle (2009). ASM is the dominant saltmarsh habitat at Barley Cove while there are more or less equal amounts of ASM and MSM at Dough sub-site. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). At Barley Cove there has been some infilling around the saltmarsh which has affected a small area of saltmarsh. At Dough, there has been an increase in extent of the saltmarsh due to a colonistion of recently accreted sand within the tidal inlet. There has also been some loss of saltmarsh due to erosion by the tidal river but this has been offset by the greater rate of accretion. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Based on data from McCorry and Ryle (2009). See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Mediterranean salt meadows is found high up in the saltmarsh but requires occasional tidal inundation. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of saltmarsh habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). At Barley Cove there is a transition to fixed dune type grassland along the upper saltmarsh boundary. There are also several mounds within the saltmarsh area that support fixed dune grassland vegetation. At Dough the saltmarsh is well developed and is part of a larger coastal system including a large sand dune system of notable conservation interest. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation in the sward	Based on data from McCorry and Ryle (2009). At Barley Cove the grazing intensity is low. At Dough there is heavy grazing pressure from cattle and rabbits (*Oryctolagus cuniculus*). See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated	Based on data from McCorry and Ryle (2009). At Barley Cove there are some signs of minor poaching by cattle. At Dough there is heavy poaching damage of the saltmarsh. 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 characteristic species listed in SMP (McCorry and Ryle, 2009)	See coastal habitats supporting document for further details

Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No common cordgrass (*Spartina anglica*) has been recorded at this site it and should be prevented from establishing	Based on data from McCorry and Ryle (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 Barley Cove to Ballyrisode Point 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. Barley Cove - 0.54ha. See map 6	Habitat was mapped during the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). Habitat mapped at one sub-site to give a total estimated area of 0.54ha. 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 Delaney et al. (2013). The mobile dunes are limited in length and are not well represented in Barley Cove. 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 (*Ammophila arenaria*) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. 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). A range of coastal habitats occurs at Barley Cove including saltmarsh and shingle. See coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage cover	95% of marram grass (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from 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 (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*)	Based on data from Delaney et al. (2013). The Barley Cove site supports a characteristic dune flora. 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 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 (*Hippophae rhamnoides*) should remain absent. 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 Barley Cove to Ballyrisode Point 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: Barley Cove - 18.31ha. See map 6	Based on data from the Sand Dunes Monitoring Project (SDM) (Delaney et al., 2013). One sub-site was mapped, giving a total estimated area of 18.31ha. 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 Delaney et al. (2013). The fixed dunes are relatively extensive at Barley Cove, particularly on the eastern half of the site. Historically sand was extracted from the site in the 1950s and 1960s. 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	Based on data from Gaynor (2008), Ryle et al. (2009) and Delaney et al. (2013). A range of coastal habitats occurs at Barley Cove including saltmarsh and shingle. 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). Access paths and tracks are a feature around the main beach at Barley Cove. 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). Rabbits (*Oryctolagus cuniculus*) and some cattle and horses graze the fixed dune habitat extensively causing damage in some areas. 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 Delaney et al. (2013). The Barley Cove site supports a characteristic dune flora. See coastal habitats supporting document for further details.
Vegetation composition: negative indicator species (including *Hippophae rhamnoides*)	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from 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 (*Hippophae rhamnoides*) should remain absent. The negative indicator species common ragwort (*Senecio jacobaea*) and creeping thistle (*Cirsium arvense*) are common throughout the fixed dunes at Barley Cove. 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 Delaney et al. (2013). See coastal habitats supporting document for further details

4030 European dry heaths

To maintain the favourable conservation condition of European dry heaths in Barley Cove to Ballyrisode Point 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	Total area of this habitat has not been calculated, but estimated to cover at least 50% of the SAC. It occurs in mosaic with other habitats such as wet heath/blanket bog (NPWS internal files)
Habitat distribution	Occurrence	No decline from current habitat distribution, subject to natural processes	The heath in this SAC is widely distributed and is a good example of the maritime variant in the western part of its Irish and European range (NPWS internal files)
Ecosystem function: soil nutrient status	Soil pH and nutrient levels at a representative number of monitoring stops	Maintain soil nutrient status within natural range	Changes to soil nutrient status can occur from application of manure or fertiliser, high stock densities or supplementary feeding above appropriate levels
Vegetation composition: positive indicator species	Number and pecentage cover at a representative number of monitoring stops	At least two positive indicator species, as listed in Perrin et al. (2014), with combined cover of at least 50%	Attribute and target based on Perrin et al. (2014). Bell heather (*Erica cinerea*), western gorse (*Ulex gallii*) and ling (*Calluna vulgaris*) are listed for the heath in this SAC (NPWS internal files)
Vegetation composition: bryophyte and non-crustose lichen species	Number at a representative number of monitoring stops	At least three bryophyte or non-crustose lichen species present, excluding *Campylopus* and *Polytrichum* moss species	Attribute and target based on Perrin et al. (2014)
Vegetation composition: rare/scarce species	Occurrence and population size	No decline in distribution or population sizes of rare, threatened or scarce species associated with the habitat	The heath in this SAC is notable for the concentration of rare/scarce species it supports (NPWS internal files). These include species listed in the red data book (Curtis and McGough, 1988): green-winged orchid (*Orchis morio*), bird's-foot (*Ornithopus perpusillus*), spotted rock-rose (*Tuberaria guttata*), hairy bird's-foot-trefoil (*Lotus subbiflorus*) and pale dog-violet (*Viola lactea*); the last two species are protected under the Flora (Protection) Order 1999
Vegetation structure: dwarf shrub species	Pecentage cover at a representative number of monitoring stops	Cover of bog myrtle (*Myrica gale*), creeping willow (*Salix repens*) and Western gorse (*Ulex gallii*) collectively less than 50%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: negative indicator weed species	Pecentage cover at a representative number of monitoring stops	Cover of negative indicator weedy species collectively less than 1%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: non-native species	Pecentage cover at a representative number of monitoring stops	Cover of non-native species less than 1%.	Attribute and target based on Perrin et al. (2014)
Vegetation composition: native trees and shrubs	Pecentage cover in local vicinity	Cover of scattered native trees and shrubs less than 20%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: bracken	Pecentage cover in local vicinity	Cover of bracken (*Pteridium aquilinum*) less than 10%	Attribute and target based on Perrin et al. (2014)
Vegetation composition: soft rush	Percentage cover in local vicinity	Cover of soft rush (*Juncus effusus*) less than 10%	Attribute and target based on Perrin et al. (2014). Dense areas of soft rush can indicate disturbance
Vegetation structure: senescent ling	Pecentage cover at a representative number of monitoring stops	Senescent proportion of ling (*Calluna vulgaris*) less than 50% cover	Attribute and target based on Perrin et al. (2014)

Vegetation structure: growth phases of ling	Percentage cover in local vicinity	Outside boundaries of sensitive areas, all growth phases of ling (*Calluna vulgaris*) should occur throughout, with at least 10% of cover in mature phase	Attribute and target based on Perrin et al. (2014), where sensitive areas and growth phases are defined
Vegetation structure: signs of browsing	Pecentage cover at a representative number of monitoring stops	Last complete growing season's shoots of ericoids showing signs of browsing collectively less than 33%	Attribute and target based on Perrin et al. (2014)
Vegetation structure: burning	Occurrence in local vicinity	No signs of burning inside sensitive areas	Attribute and target based on Perrin et al. (2014), where sensitive areas are defined
Vegetation structure: disturbed bare ground	Pecentage cover at a representative number of monitoring stops and in local vicinity	Cover of disturbed bare ground less than 10%	Attribute and target based on Perrin et al. (2014)

1395 Petalwort *Petalophyllum ralfsii*

To maintain the Favourable conservation condition of Petalwort *Petalophyllum ralfsii* at Barley Cove to Ballyrisode Point SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Distribution of populations	Number and geographical spread of populations	No decline, subject to natural processes. See map 7 for recorded locations	Petalwort *Petalophyllum ralfsii* occurs at Barley Cove to Ballyrisode Point SAC in two main extent of occurrence polygons, see map 7. The first extent occurs along a trackway, c.1–3m wide, through the back of fixed dune habitat. The second extent occurs in a dune slack to the south of the trackway (Campbell et al., 2019)
Extent of area occupied by habitat	Hectares	No decline, subject to natural processes. Area of suitable habitat is estimated to be c.0.0436ha	The area of occupancy of *Petalophyllum ralfsii* at Barley Cove to Ballyrisode Point SAC, estimated from polygons drawn around GPS co-ordinates taken from NPWS surveys and Campbell et al. (2019), is c.0.19ha. However, only c.23% of this area is suitable for *P. ralfsii*, i.e. c.0.0436ha. See Campbell et al. (2019) for further details
Population size	Number of individuals	Maintain the size and extent of the population at the site	The population at Barley Cove to Ballyrisode Point SAC is estimated at c.24,416 thalli, from estimates made during the survey of three monitoring stops (Campbell et al., 2019)
Hydrological conditions: soil moisture	Occurrence of damp soil conditions	Maintain hydrological conditions so that substrate is kept moist and damp throughout the year, but not subject to prolonged inundation by flooding in winter	*Petalophyllum ralfsii* grows in damp sand. The substrate at Barley Cove is shallow humic sandy soil, 1.5-3cm deep, overlying pure sand (Campbell et al., 2019)
Vegetation: open structure	Height and percentage cover of vegetation	Maintain open, low vegetation, with a high percentage cover of bryophytes (small acrocarps and liverwort turf) and bare ground	*Petalophyllum ralfsii* grows in compacted, sandy ground. The habitat is kept open by trampling, rabbit grazing and inundation. No livestock grazing occurs at this site. Some quad-bike scrambling was noted in the slack which was cutting up the surface. This activity was in a very small area of the slack and the impact of off-road driving is deemed to be neutral overall, as the trackway is maintained by vehicle use, as well as by walkers (Campbell et al., 2019). Barley Cove to Ballyrisode Point SAC had Favourable Conservation Status in the most recent Article 17 reporting period (NPWS, 2019) based on the following vegetation-related attributes: shrub cover (≤25%); grass cover (≤60%); cover of bare ground (≥5%); mean vegetation height (<9cm). See Campbell et al. (2019) for further details on vegetation composition requirements and methodologies

Legend

Barley Cove to Ballyrisode Point SAC 001040

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MAP 1:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

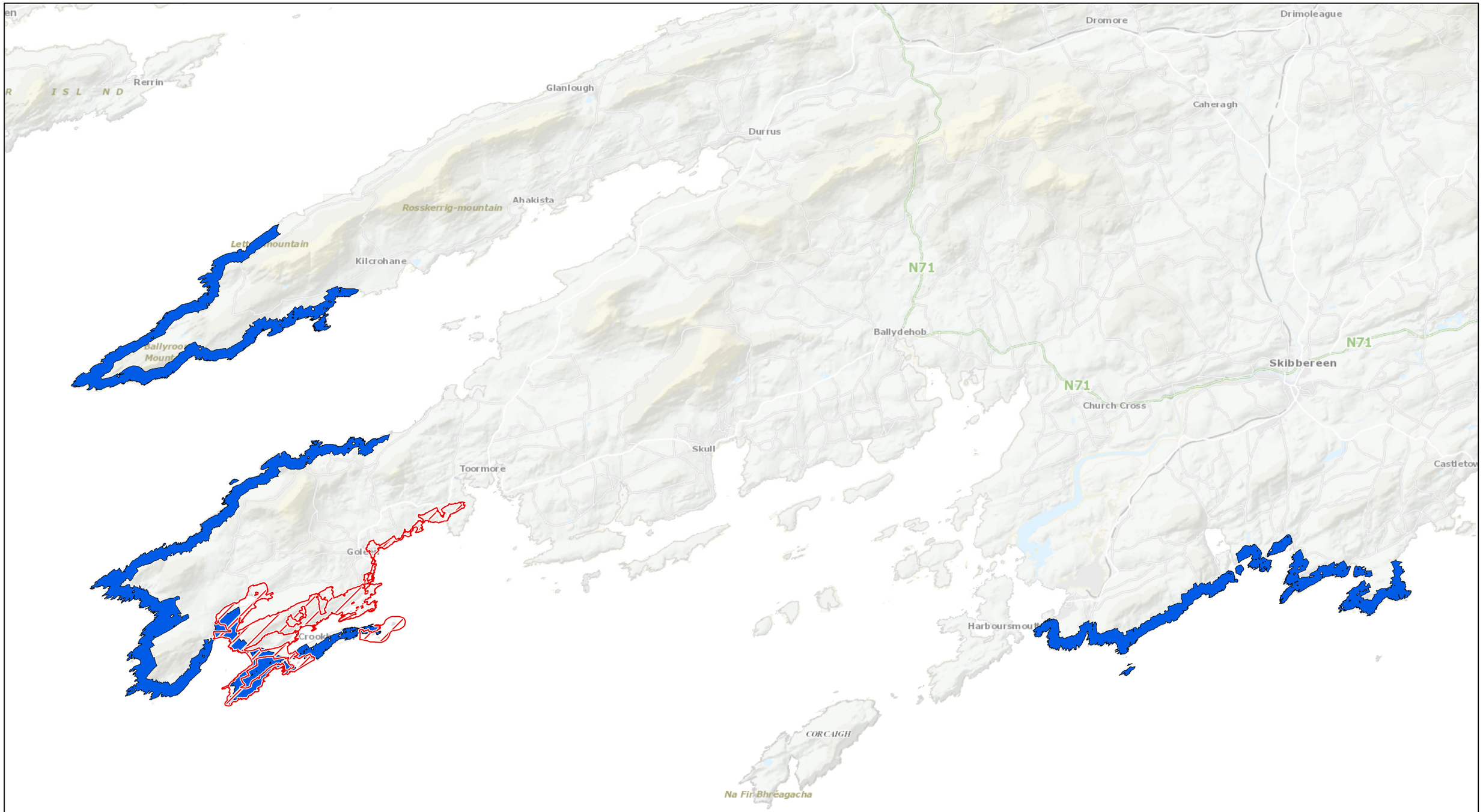
Map to be read in conjunction with the NPWS Conservation Objectives Document

SITE CODE:
SAC 001040; version 3.02
CO. CORK

0 0.5 1 2 Km

N

Map Version 2
Date: February 2024



Legend

- Barley Cove to Ballyrisode Point SAC 001040
- Sheep's Head to Toe Head SPA 004156

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MAP 2:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
OVERLAPPING SITE

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

SITE CODE:
SAC 001040; version 3.02
CO. CORK

0 1.25 2.5 5 Km

N

Map Version 2
Date: February 2024

Legend

- Barley Cove to Ballyrisode Point SAC 001040
- 1140 Mudflats and sandflats not covered by sea water at low tide
- OSi Discovery Series County Boundary

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MAP 3:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
TIDAL MUDFLATS AND SANDFLATS

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

SITE CODE:
SAC 001040; version 3. CO. CORK.

0 0.5 1 1.5 2 km

N

Map Version 1
Date: Aug 2014

Legend

- Barley Cove to Ballyrisode Point SAC 001040
- OSi Discovery Series County Boundary

Marine Community Types

- Coarse sediment with *Tubificoides benedii* community
- Reef
- Sand with *Eurydice pulchra* community complex
- Subtidal sediment

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MAP 4:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
MARINE COMMUNITY TYPES

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

SITE CODE:
SAC 001040; version 3. CO. CORK.

0 0.5 1 1.5 2 km

N

Map Version 1
Date: Aug 2014

SMP: 0067

SMP: 0066

Legend

Barley Cove to Ballyrisode Point SAC 001040

OSi Discovery Series County Boundary

SMP: 0066 Saltmarsh Monitoring Project Site Codes

Saltmarsh Habitats

1310 *Salicornia* and other annuals colonising mud and sand

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

1330 / 1410 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) / Mediterranean salt meadows (Juncetalia maritimi)

1410 Mediterranean salt meadows (Juncetalia maritimi)

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MAP 5:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
SALTMARSH HABITATS

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

SITE CODE:
SAC 001040; version 3. CO. CORK.

0 0.5 1 1.5 2 km

N

Map Version 1
Date: Aug 2014

South of Spanish Point
Crookhaven

SDM: 064

Barley Cove

Legend

Barley Cove to Ballyrisode Point SAC 001040

OSi Discovery Series County Boundary

National Shingle Beach Survey sub-sites

1220 Perennial vegetation of stony banks

Sand Dune Habitats

Qualifying Interests

1220 Perennial vegetation of stony banks

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

2130 *Fixed coastal dunes with herbaceous vegetation ('grey dunes')

Non Qualifying Interests

1210 Annual vegetation of drift lines

2110 Embryonic shifting dunes

2190 Humid dune slacks

SDM: 064 Sand Dunes Monitoring Project Site Codes

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MAP 6:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
SAND DUNE HABITATS &
PERENNIAL VEGETATION OF STONY BANKS

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

SITE CODE:
SAC 001040; version 3. CO. CORK.

0 0.5 1 1.5 2 km

N

Map Version 1
Date: Aug 2014

Legend

- 1395 Petalwort - *Petalophyllum ralfsii*
- Barley Cove to Ballyrisode Point SAC 001040
- OSI Discovery Series County Boundaries

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National Parks and Wildlife Service

MAP 7:
BARLEY COVE TO BALLYRISODE POINT SAC
CONSERVATION OBJECTIVES
PETALWORT

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

SITE CODE:
SAC 001040; version 3.02
CO. CORK

0 0.5 1 2 Km

N

Map Version 1
Date: February 2024