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Conservation Objectives Series

Tacumshin Lake SAC 000709

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Oidhreachta agus Gaeltachta
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Heritage and the Gaeltacht

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Introduction

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

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

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

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

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

Notes/Guidelines:

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

Qualifying Interests

**** indicates a priority habitat under the Habitats Directive***

000709	Tacumshin Lake SAC
1150	Coastal lagoons*
1210	Annual vegetation of drift lines
1220	Perennial vegetation of stony banks
2110	Embryonic shifting dunes
2120	Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)

Please note that this SAC overlaps with Tacumshin Lake SPA (004092) and is adjacent to Lady's Island Lake SAC (000704), Saltee Islands SAC (000707) and Carnsore Point SAC (002269). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping and adjacent sites as appropriate.

Supporting documents, relevant reports & publications

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

NPWS Documents

Year :	2007
Title :	Inventory of Irish coastal lagoons (version 2)
Author :	Oliver, G.
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 :	2016
Title :	Ireland Red List No. 10: Vascular Plants
Author :	Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M.
Series :	Ireland Red Lists series, NPWS
Year :	2017
Title :	Survey and assessment of vegetated shingle and associated habitats at 30 coastal sites in Ireland
Author :	Martin, J.R.; Daly, O.H.; Devaney F.M.
Series :	Irish Wildlife Manual No. 98
Year :	2018
Title :	Tacumshin Lake SAC (site code: 709) Conservation objectives supporting document- coastal habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document
Year :	2018
Title :	Tacumshin Lake SAC (site code: 709) Conservation objectives supporting document- coastal lagoons V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	2013
Title :	Monitoring and assessment of Irish lagoons for the purposes of the EU Water Framework Directive, 2009-2011. Parts 1 and 2
Author :	Roden, C.M.; Oliver, G.A.
Series :	Unpublished report to the Environmental Protection Agency

Spatial data sources

Year :	Revision 2011
Title :	Inventory of Irish Coastal Lagoons. Version 3
GIS Operations :	Clipped to SAC boundary
Used For :	1150 (map 3)
Year :	2017
Title :	Vegetated Shingle Monitoring Project
GIS Operations :	QIs selected; clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising
Used For :	1210, 1220, 2110, 2120 (map 4)

1150 Coastal lagoons

To restore the favourable conservation condition of Coastal lagoons* in Tacumshin Lake SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable, subject to slight natural variation. Favourable reference area: 380.7ha. See map 3	Area calculated from spatial data derived from Oliver (2007) for Tacumshin Lake (site code IL007). See the Tacumshin Lake SAC conservation objectives supporting document for coastal lagoons for further details
Habitat distribution	Occurrence	No decline, subject to natural processes. See map 3 for mapped lagoon	Site Tacumshin Lake (site code IL007) in Oliver (2007). See the lagoons supporting document for further details
Salinity regime	Practical salinity units (psu)	Annual median salinity and temporal variation within natural range	Tacumshin Lake is recorded as an oligohaline lagoon. See the lagoons supporting document for further details
Hydrological regime	Metres	Annual water level fluctuations and minima within natural ranges	The maximum depth of Tacumshin Lake is recorded as less than 2m. See the lagoons supporting document for further details
Barrier: connectivity between lagoon and sea	Permeability	Appropriate hydrological connections between lagoons and sea, including where necessary, appropriate management	Tacumshin Lake is described as a natural sedimentary lagoon. See the lagoons supporting document and the site-specific conservation objectives for habitats 1220, 2110 and 2120 in this volume for further details
Water quality: Chlorophyll *a*	µg/L	Annual median chlorophyll *a* within natural ranges and less than 5µg/L	Target based on Roden and Oliver (2013). See the lagoons supporting document for further details
Water quality: Molybdate Reactive Phosphorus (MRP)	mg/L	Annual median MRP within natural ranges and less than 0.1mg/L	Target based on Roden and Oliver (2013). See the lagoons supporting document for further details
Water quality: Dissolved Inorganic Nitrogen (DIN)	mg/L	Annual median DIN within natural ranges and less than 0.15mg/L	Target based on Roden and Oliver (2013). See the lagoons supporting document for further details
Depth of macrophyte colonisation	Metres	Macrophyte colonisation to maximum depth of lagoon	Where the lagoon is less than 2m deep, it is expected that macrophyte colonisation would extend to the full depth. See the lagoons supporting document for further details
Typical plant species	Number and m^2	Maintain number and extent of listed lagoonal specialists, subject to natural variation	Species listed in Oliver (2007). See the lagoons supporting document for further details
Typical animal species	Number	Maintain listed lagoonal specialists, subject to natural variation	Species listed in Oliver (2007). See the lagoons supporting document for further details
Negative indicator species	Number and percentage cover	Negative indicator species absent or under control	Low salinity, shallow water and elevated nutrient levels increase the threat of accelerated encroachment by reedbeds. See the lagoons supporting document for further details

1210 Annual vegetation of drift lines

To maintain the favourable conservation condition of Annual vegetation of drift lines in Tacumshin Lake 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	Based on data from the Vegetated Shingle Monitoring Project (VSM) (Martin et al., 2017). Annual vegetation of drift lines was not recorded at the sub-site Tacumshin (VSM site code 023) during the VSM and thus the total area of the qualifying habitat within Tacumshin Lake SAC is unknown. The habitat is very difficult to measure in view of its dynamic nature which means that it can appear and disappear within a site from year to year. See the Tacumshin Lake SAC conservation objectives supporting document for coastal habitats for further details
Habitat distribution	Occurrence	No decline, subject to natural processes	The full distribution of the habitat in the SAC is currently unknown. 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	Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Accumulation of organic matter in tidal litter is essential for trapping sand and initiating dune formation. Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation, resulting in increased rates of erosion. 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	See the coastal habitats supporting document for further details
Vegetation composition: communities and typical species	Occurrence	Maintain the presence of species-poor communities with typical species: sea rocket (*Cakile maritima*), sea sandwort (*Honckenya peploides*), prickly saltwort (*Salsola kali*) and oraches (*Atriplex* spp.)	See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage	Negative indicator species cover in any individual monitoring stop should not be more than 25%; no negative indicator species should be present in more than 60% of monitoring stops; cover of negative indicator species across the whole site should not be more than 5%	Negative indicators include species indicative of changes in nutrient status and species not considered characteristic of the habitat. See the coastal habitats supporting document for further details
Vegetation composition: non-native species	Percentage	Non-native species should not be present in more than 20% of monitoring stops	See the coastal habitats supporting document for further details

1220 Perennial vegetation of stony banks

To restore the favourable conservation condition of Perennial vegetation of stony banks in Tacumshin Lake 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: Tacumshin - 3.92ha. See map 4	Based on data from the Vegetated Shingle Monitoring Project (VSM) (Martin et al., 2017). Perennial vegetation of stony banks was surveyed and mapped in the sub-site Tacumshin (VSM site code 023) to give a total estimated area of 3.92ha. See the Tacumshin Lake 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, including erosion and succession. See map 4 for recorded distribution	Based on data from Martin et al. (2017). The habitat is located on the southern edge of Tacumshin Lake, on the landward side of the dune system. See the coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/absence of physical barriers	Maintain, or where necessary restore, the natural circulation of sediment and organic matter, without any physical obstructions	Works around the sluice within the Tacumshin sub-site were recorded as having a negative impact on the vegetated shingle habitat (Martin et al., 2017). See the coastal habitats supporting document for further details
Physical structure: disturbance	Percentage	No more than 20% of the habitat affected by disturbance	Based on data from Martin et al. (2017). Disturbance can include damage from heavy trampling, vehicle damage and removal of substrate. 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 Martin et al. (2017). Habitats associated with the vegetated shingle in Tacumshin Lake SAC include sand dune and saltmarsh habitats and a lagoon. See the coastal habitats supporting document for further details
Vegetation composition: communities and typical species	Occurrence	Maintain the typical species within the range of vegetated shingle communities	Based on data from Martin et al. (2017) where information on the vegetated shingle communities and associated typical species lists are presented. See the coastal habitats supporting document for the list of typical species recorded during the VSM in the pioneer community of the habitat in the Tacumshin sub-site. The Critically Endangered (Wyse Jackson et al., 2016) and Flora (Protection) Order, 2015 listed species cottonweed (*Achillea maritima*) was previously recorded within the habitat (Ryle et al., 2009), but not during the VSM
Vegetation composition: negative indicator species	Percentage	Negative indicator species cover in any individual monitoring stop should not be more than 25%; no negative indicator species should be present in more than 60% of monitoring stops	Based on data from Martin et al. (2017) where the list of negative indicator species for the habitat is also presented. Negative indicators include species indicative of changes in nutrient status and species not considered characteristic of the habitat. See the coastal habitats supporting document for further details
Vegetation composition: non-native species	Percentage	Non-native species cover in any individual monitoring stop should not be more than 1%; non-native species should not be present in more than 20% of monitoring stops; cover of non-native species across the whole site should not be more than 1%	Based on data from Martin et al. (2017). The non-native invasive species Japanese rose (*Rosa rugosa*) was recorded within the Tacumshin sub-site during the VSM, but with less than 1% coverage. See the coastal habitats supporting document for further details

2110 Embryonic shifting dunes

To maintain the favourable conservation condition of Embryonic shifting dunes in Tacumshin Lake 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: Tacumshin - 0.73ha. See map 4	Based on data from the Vegetated Shingle Monitoring Project (VSM) (Martin et al., 2017). Embryonic shifting dunes habitat was surveyed and mapped at the sub-site Tacumshin (VSM site code 023) to give a total estimated area of 0.73ha within Tacumshin Lake SAC. The habitat is very difficult to measure in view of its dynamic nature. See the Tacumshin Lake 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 recorded distribution	Based on data from Martin et al. (2017). The habitat is located in four distinct areas at the front of the dune system in the SAC, with the longest stretch of habitat approximately 600m in length. 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	Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Physical barriers can lead to fossilisation or over-stabilisation of dunes, as well as beach starvation resulting in increased rates of erosion. 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 Martin et al. (2017). See the coastal habitats supporting document for further details
Vegetation composition: plant health of foredune grasses	Percentage	More than 40% of monitoring stops should contain sand couch grass *(Elytrigia juncea*) and/or lyme grass (*Leymus arenarius*) that is healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Martin et al. (2017). See the coastal habitats supporting document for further details
Vegetation composition: typical species and communities	Occurrence	Maintain the presence of species-poor communities with typical species: sand couch grass (*Elytrigia juncea*) and/or lyme grass (*Leymus arenarius*)	Based on data from Martin et al. (2017). See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage	Negative indicator species cover in any individual monitoring stop should not be more than 25%; no negative indicator species should be present in more than 60% of monitoring stops; cover of negative indicator species across the whole site should not be more than 5%	Based on data from Martin et al. (2017). Negative indicators include species indicative of changes in nutrient status and species not considered characteristic of the habitat. See the coastal habitats supporting document for further details
Vegetation composition: non-native species	Percentage	Non-native species should not be present in more than 20% of monitoring stops	Based on data from Martin et al. (2017). See the coastal habitats supporting document for further details

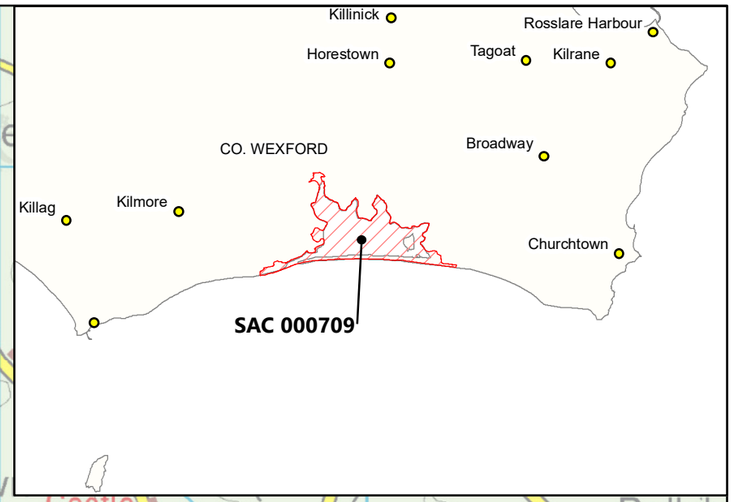
2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes)

To maintain the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) in Tacumshin Lake 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: Tacumshin - 13.23ha. See map 4	Based on data from the Vegetated Shingle Monitoring Project (VSM) (Martin et al., 2017). Shifting dunes along the shoreline with *Ammophila arenaria* was surveyed and mapped at the sub-site Tacumshin (VSM site code 023) to give a total estimated area of 13.23ha within Tacumshin Lake SAC. The habitat is very difficult to measure in view of its dynamic nature. See the Tacumshin Lake 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 recorded distribution	Based on data from Martin et al. (2017). Mobile dunes stretch almost the entire length of the SAC. 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	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 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 Martin et al. (2017). See the coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage	More than 40% of monitoring stops should contain sand couch grass (*Elytrigia juncea*) and/or lyme grass (*Leymus arenarius*) that is healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Martin et al. (2017). See the coastal habitats supporting document for further details
Vegetation composition: communities and typical species	Occurrence	Maintain the presence of species-poor communities dominated by marram grass (*Ammophila arenaria*) and/or lyme grass (*Leymus arenarius*)	Based on data from Martin et al. (2017). See the coastal habitats supporting document for further details
Vegetation composition: negative indicator species	Percentage	Negative indicator species cover in any individual monitoring stop should not be more than 25%; no negative indicator species should be present in more than 60% of monitoring stops; cover of negative indicator species across the whole site should not be more than 5%	Based on data from Martin et al. (2017). Negative indicators include species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (*Hippophae rhamnoides*) should be absent or effectively controlled. The negative indicator species false oat-grass (*Arrhenatherum elatius*), creeping thistle (*Cirsium arvense*), spear thistle (*C. vulgare*) and common ragwort (*Senecio jacobaea*) were recorded within three monitoring stops in the habitat in the Tacumshin sub-site during the VSM, but at a cover of less than 1%. See the coastal habitats supporting document for further details
Vegetation composition: non-native species	Percentage	Non-native species should not be present in more than 20% of monitoring stops	Based on data from Martin et al. (2017). Japanese rose (*Rosa rugosa*) was recorded by the VSM in the habitat in the Tacumshin sub-site. See the coastal habitats supporting document for further details

Legend

Tacumshin Lake SAC 000709



Church
Grange Cross Rds.
Linziestown
Paradise
Lingstown Upper
Holy Wells
Castle
Grange
Holy Well
Ballyboy
Grayrobin
Walshestown
Lingstown Lower
Cross Scales
Sigginstown
Castle
07
Ballyh
Rathnedan
Ch
Castle
Churchtown
Tacumshin
Wexford Cycle Hub
Genstown
Mountpill
Tacumshin Lake
Tilladavin
Siggilstown Isd
06
Ballymurry
Hilltov
Ballagh
Grogan
Grogan Burrow
05

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MAP 1:
TACUMSHIN LAKE SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

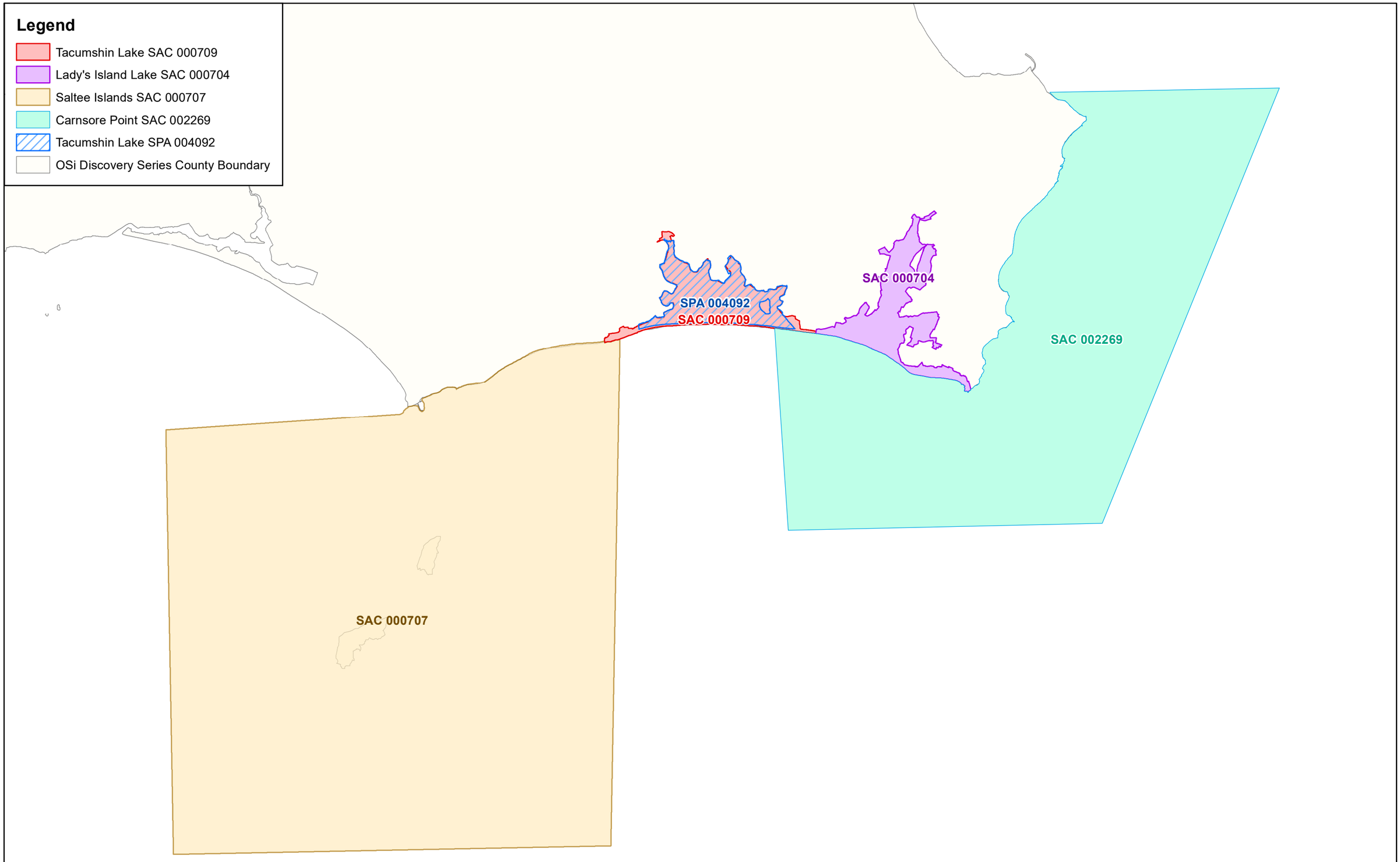
Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE: SAC 000709; version 3.01
CO. WEXFORD

0 0.2 0.4 0.6 0.8 1 km

N

Map Version 1
Date: Aug 2017



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MAP 2:
TACUMSHIN LAKE SAC
CONSERVATION OBJECTIVES
OVERLAPPING AND ADJACENT DESIGNATIONS

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

SITE CODE: SAC 000709; version 3.01
SAC 000704; version 3, SAC 00707; version 3.01
SAC 002269; version 3.01, SPA 004092; version 3
CO. WEXFORD

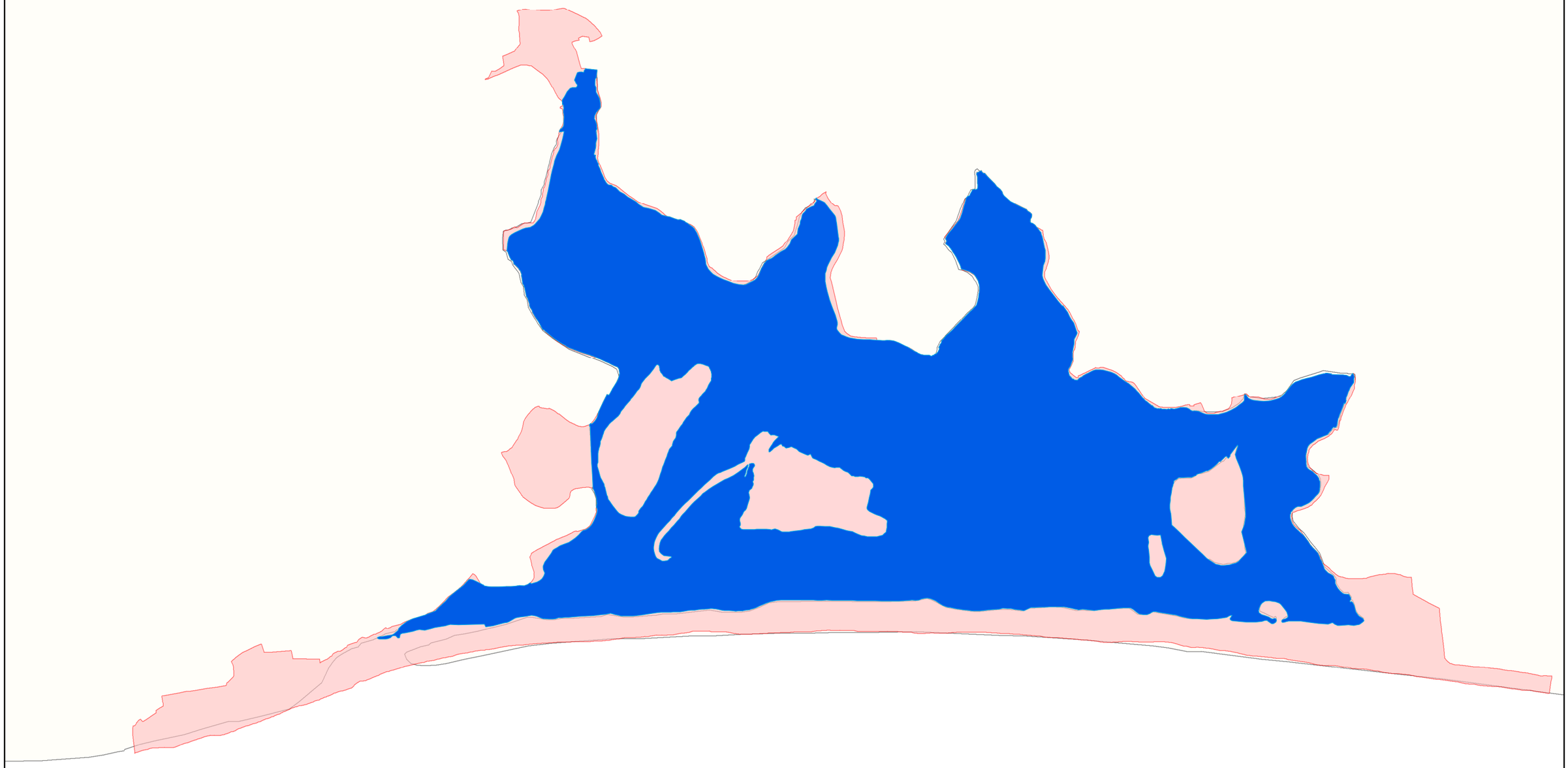
0 1 2 3 4 5 km

N

Map Version 1
Date: Aug 2017

Legend

- 1150 Coastal lagoons
- Tacumshin Lake SAC 000709
- OSi Discovery Series County Boundary



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MAP 3:
TACUMSHIN LAKE SAC
CONSERVATION OBJECTIVES
COASTAL LAGOONS

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

SITE CODE:
SAC 000709; version 3.01
CO. WEXFORD

0 0.2 0.4 0.6 0.8 1 km

N

Map Version 1
Date: Aug 2017

Legend

- Tacumshin Lake SAC 000709
- OSi Discovery Series County Boundary

Annex I Qualifying Interest

- 1220 Perennial vegetation of stony banks
- 2110 Embryonic shifting dunes
- 2120 Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)

Annex I Non-qualifying Interest

- 2130* Fixed dunes with herbaceous vegetation (grey dunes)

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MAP 4:
TACUMSHIN LAKE SAC
CONSERVATION OBJECTIVES
COASTAL HABITATS

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

SITE CODE:
SAC 000709; version 3.01
CO. WEXFORD

0 0.2 0.4 0.6 0.8 1 km

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Map Version 1
Date: Aug 2017