NPWS (2011)

Saltee Islands SAC (site code: 0707)

Conservation objectives supporting document-
marine habitats and species

Version 1

July 2011

Introduction

Saltee Islands SAC is designated for, *inter alia*, the Annex I qualifying interests of Large shallow inlets and bays (figure 1), Mudflats and sandflats not covered by seawater at low tide (figure 2), Reefs (figure 3) and Submerged or partly submerged sea caves (figure 4) and the Annex II species *Halichoerus grypus* (grey seal).

Intertidal and subtidal habitat surveys of Saltee Islands SAC were undertaken in 2010 to investigate the physical and biological structure of this site. Following research at the site between 1995 and 1999, a comprehensive survey of the grey seal breeding population was carried out in 2005 and a follow-up moult season survey conducted in 2007 in order to investigate pup production, habitat use and population composition within the site. Aspects of the biology and ecology of Annex I habitats and Annex II species are provided in Section 1. The corresponding site-specific conservation objectives will facilitate Ireland delivering on its surveillance and reporting obligations under the EU Habitats Directive (92/43/EC).

Ireland also has an obligation to ensure that consent decisions concerning operations/activities planned for Natura 2000 sites are informed by an appropriate assessment where the likelihood of such operations or activities having a significant effect on the site cannot be excluded. Further ancillary information concerning the practical application of the site-specific objectives and targets in the completion of such assessments is provided in Section 2.

Section 1

ANNEX I HABITATS

LARGE SHALLOW INLETS AND BAYS

The Saltee Islands and Forlorn Point forms the semi enclosed eastern boundary of Ballyteigue Bay (figure 1). This large, open, south-westerly facing bay is bounded to the west by the Hook Head Peninsula and is exposed to prevailing winds and swells from the south-west and moderate to locally strong tidal streams.

This Annex I habitat of Large shallow inlets and bays partly encompasses communities of the Annex I habitats of Reefs and Submerged or partly submerged sea caves; these will be dealt with separately. An additional benthic community: Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community was recorded within the Annex I habitat of Large shallow inlet and bay at this site (figure 5).

Within the SAC but outside this Annex I habitat, the subtidal sediment substrate is mixed; it occurs in depths greater than 30m and is dominated by epibenthic crustaceans.

Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community

This community occurs on the north-east portion of the site in depths of between approximately 8m and 30m (figure 5).

The substrate here is that of coarse material with gravel and cobbles and the fauna reflects this, being typical of coarse sediments in general.

The most numerically abundant species is the serpulid polychaetes *Pomatoceros* spp. and the long clawed porcelain crab *Pisidia longicornis* (table 1). Other notable taxa present are barnacles (including *Balanus* sp.), the ophiuroid *Ophiothrix fragilis* and the polychaetes *Pholoe baltica* and *Harmothoe* sp.

Distinguishing species of the Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community	
Pomatoceros triqueter	*Liljeborgia pallida*
Pomatoceros sp.	*Harmothoe* sp.
Pisidia longicornis	*Sphaerosyllis taylori*
Ophiothrix fragilis	Aoridae
Pholoe baltica (sensu Petersen)	*Amblyosyllis formosa*
Nemertea	Pectinidae
Eusyllis assimilis	

Table 1. Distinguishing species of the Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community.

MUDFLATS AND SANDFLATS NOT COVERED BY SEAWATER AT LOW TIDE.

This Annex I habitat occurs intertidally between the Mean Low Water Mark (MLWM) and the Mean High Water Mark (HMWM), with the lower shore extent being defined by the Ordnance Survey Mean Low Water boundary. At this site intertidal sediments occurs from Kilmore Quay to Ringbaun on the northern margin of the SAC; it is also recorded on the Little Saltee Island as a thin band above the intertidal reef. Within this SAC this habitat is represented by a single community complex.

The development of a community complex target arises when an area possesses similar abiotic features but records a number of biological communities that are not regarded as being sufficiently stable and/or distinct temporally or spatially to become the focus of conservation efforts. In this case, examination of the available data from Saltee Islands identified a number of biological communities whose species composition overlapped significantly. Such biological communities are grouped together into what experts consider are sufficiently stable units (i.e. a complex) for conservation targets.

Intertidal sand to muddy sand dominated by polychaetes community complex

This community complex occurs intertidally from Kilmore Quay to Ringabaun and on the Little Saltee Island above the intertidal reef (figure 5).

The sediment varies from sand (coarse sand ranges from 0.13 to 40.5%, medium sand from 0.28 to 61.3% and fine sand from 0.87 to 37.9%) to muddy sand (very fine sand ranges from 0.3 to 56.1% and silt-clay from 1.1 to 61.7%). Mixed sediment (gravel ranges from 15.6 to 34.2%) is associated with the mid to upper shore on the beach from Kilmore Quay to Ringabaun.

The fauna is dominated by the polychaetes *Eteone longa*, *Capitella* spp., *Malacoceros fuliginosus* and *Arenicola marina* (table 2) on the mid to lower shore, in coarser sediments the crustaceans *Eurydice pulchra* and *Pontocrates* sp. are more prominent. Oligochaetes predominate on the mid to upper shore.

Distinguishing species of the Intertidal sand to muddy sand dominated by polychaetes community complex	
Eteone longa	*Malacoceros fuliginosus*
Capitella sp. agg.	*Arenicola marina*
Eurydice pulchra	*Pontocrates* sp.
Oligochaetes	

Table 2: Distinguishing species of the Intertidal sand to muddy sand dominated by polychaetes community complex.

REEFS

Within this SAC reef is widespread through the site. Intertidally, it is recorded from the pier at Kilmore Quay to St. Patrick's Bridge and on some shores of the Saltee Islands. Subtidally, the reef occurs as a broad north-east/south-west band traversing the site (figure 5).

The intertidal reef consists of boulders and sloping bedrock and is classified as exposed to moderately exposed around the islands and as sheltered on the mainland around Kilmore Quay. The subtidal reef substrate ranges from rugged bedrock with steep sided gullies to large boulders mixed with sand or cobbles and pebbles; its exposure regime is classified as exposed.

Ecologically, the reef in Saltee Islands SAC can be classified into three main groups, Intertidal reef community complex, Subtidal reef dominated by echinoderms and sponges community complex and *Laminaria* dominated community (figure 5).These community types are described below.

Intertidal reef community complex

This community complex occurs on all intertidal reefs within the site; its exposure regime ranges from exposed, moderately exposed to sheltered (figure 5). Lichens dominate the top of the shore, while fucoids, wracks, gastropods and barnacles are prevalent further down the shore (table 3). The algae *Ulva* spp., *Cladophora rupestris* and *Ceramium* sp. and the barnacle *Balanus balanus* are more common on the sheltered reef while the fucoid *Fucus serratus,* the gastropods *Littorina obtusata* and *Patella depressa,* the barnacle *Chthamalus montagui* and the anemone *Actinia equina* are associated with the more exposed areas at this site. Other fauna recorded include the algae *Lithothamnion* sp., *Mastocarpus stellatus* and the serpulid polychaete *Pomatoceros* sp.

Species associated with the Intertidal reef community complex	
Fucus vesiculosis	*Fucus spiralis*
Fucus serratus	*Ascophyllum nodosum*
Porphyra purpurea	*Porphyra umbilicalis*
Patella vulgata	*Patella depressa*
Palmaria palmata	*Verrucaria maura*
Chthamalus montagui	*Balanus balanus*
Nucella lapillus	*Actinia equina*
Littorina littorea	*Littorina obtusata*
Gibbula umbilicalis	

Table 3. Species associated with Intertidal reef community complex.

Subtidal reef dominated by echinoderms and sponges community complex

This reef community complex is recorded throughout the site between depths of 15m and 40m (figure 5). The substrate is that of bedrock with steep sided gullies to large boulders mixed with sand or cobbles and pebbles. The exposure regime of this community is recorded as exposed.

This community complex is dominated by the echinoderms *Echinus* sp. and *Asterias* sp. and the sponges *Alcyonium* sp., *Cliona* sp. and encrusting sponges (table 4). At the shallow depths above 20m a variety of algae species, including encrusting calcareous red algae, also occur.

Species associated with Subtidal reef dominated by echinoderms and sponges community complex	
Echinus sp.	*Cliona* sp.
Alcyonium sp.	*Labrus* sp.
Encrusting sponges	Red algae
Asterias sp.	

Table 4. Species associated with subtidal reef dominated by echinoderms and sponges community complex.

Other species present include the anemones *Actinothoe* sp., *Sagartia* sp., *Urticina* sp., bryozoans including *Flustra* sp., the crustaceans *Cancer pagurus*, *Palinurus* sp. and *Necora puber*, the echinoderms *Henricia* sp., *Luidia* sp., *Marthasterias glacialis*, *Ophiocomina nigra*, *Ophiothrix* sp. and *Stichastrella* sp., hydroids including *Nemertesia* sp., the sponges *Myxilla* sp., *Pachymastia* sp., *Polymastia* sp., *Pentapora* sp., *Suberites* sp. and *Tethya* sp., the bivalve *Mytilus* sp. and the *polychaete Pomatoceros* sp. Several species of fish were also recorded on the reef, namely the goby *Gobiusculus* sp., the cod species *Gadus morhua* and *Trisopterus luscus*, and the dogfish *Scyliorhinus* sp.

Laminaria dominated community

Assemblages of *Laminaria* are recognised as being among the most ecologically dynamic and biologically diverse of habitats on the planet. Kelp species are the most common prominent constituents of the temperate lower intertidal and subtidal rocky shore. They are considered to be an important genus with a diverse community of fauna and other algae associated with them.

In Saltee Islands SAC, the *Laminaria* dominated community occurs on bedrock in exposed conditions between the low water mark and 20 meters depth (figure 5).

The species associated with this community are listed in table 5. Two species of *Laminaria, L. digitata* and *L. hyperborea* predominate, a third kelp species *Saccharina latissima* has also been recorded here. Several other algae species are found on this reef including *Fucus serratus*, *Saccorhiza polyschides*, *Halidrys siliquosa*, *Polysiphonia* sp., *Ahnfeltia* sp., *Chorda filum*, *Membranoptera* sp., *Delesseria* sp., *Desmarestia* sp., *Palmaria palmata*, *Gelidium* sp., *Dilsea carnosa*, *Dictyota dichotoma*, *Alaria* sp., and encrusting calcareous red algae.

The fauna recorded from this community include the sponges, *Halichondria* sp., *Alcyonium* sp., *Cliona* sp. and encrusting sponges, the anemone *Actinothoe sphyrodeta*, hydroids including *Obelia* sp., bryozoans including *Membranipora* sp., *Pomatoceros* sp. and spirorbid polychaetes, barnacles, the crabs *Carcinus maenas* and *Cancer pagurus*, and the gastropod *Calliostoma zizyphinum*. Fish species recorded include the wrasse *Labrus* sp. and the dogfish *Scyliorhinus* sp.

Species associated with the *Laminaria* dominated community	
Laminaria digitata	*Desmarestia* sp.
Foliose red algae	*Pomatoceros* sp.
Laminaria hyperborea	Spirorbids
Saccharina latissima	*Obelia* sp.
Hydroids	Bryozoans
Encrusting sponges	*Dilsea carnosa*
Membranipora sp.	*Saccorhiza polyschides*

Table 5. Species associated with the *Laminaria* dominated community.

SUBMERGED OR PARTLY SUBMERGED SEA CAVES

The distribution and ecology of intertidal or subtidal sea caves has not been the subject of scientific investigation in Ireland and the extent of very few individual caves have been mapped in detail. The Department of Communications, Marine and Natural Resources previously commissioned a coastal oblique aerial survey for the purpose of coastal protection. Analysis of this imagery has yielded some information concerning the location of partly submerged sea caves in Saltee Islands SAC, which appear to be limited to the Great Saltee Island (figure 4). There is no additional information available concerning the likely distribution of permanently submerged sea caves in the site at present. Whilst surveys undertaken in the UK indicate the structure and function of sea caves are largely influenced by hydrodynamic forces and water quality, no such information is yet available for Ireland.

ANNEX II SPECIES

HALICHOERUS GRYPUS (GREY SEAL)

This marine mammal species occurs in estuarine, coastal and offshore waters but also utilises a range of intertidal and terrestrial habitats for important life history functions such as breeding, moulting, resting and social activity. Its aquatic range for foraging and inter-site movement extends predominantly into continental shelf and slope waters. Grey seal occupies both aquatic and terrestrial habitats in Saltee Islands SAC, including intertidal shorelines that become exposed during the tidal cycle and outlying rocky skerries when these are not inundated by wave action. It is present at the site throughout the year during all aspects of its annual life cycle which includes breeding (Aug-Dec approx.), moulting (Dec-April approx.) and non-breeding foraging and resting phases. In acknowledging the limited understanding of aquatic habitat use by the species within the site, it should be noted that all suitable aquatic habitat is considered relevant to the species' range and ecological requirements at the site and is therefore of potential use by grey seals.

Grey seals are vulnerable to disturbance during periods when time is spent ashore by individuals or groups of animals. This occurs immediately prior to and during the annual breeding season, which takes place predominantly during the months of August-December. Pups are born on land, usually on remote beaches and uninhabited islands or in sheltered caves. While there may be outliers in any year, specific established

sites are used annually for breeding-associated behaviour by adult females, adult males, newborn pups and weaned pups. Such habitats are critical to the maintenance of the species within any site since pups are nursed there for a period of several weeks by the mother prior to weaning and abandonment. During this period, adult females also mate with adult males at or adjacent to breeding sites. In addition to delivering information on breeding dynamics, pup production (i.e. the number of pups born each year) can be measured or estimated in order to deliver an assessment of population size. However the relationship between pup production and total population size is not well known. An estimated 163 pups were born in Saltee Islands SAC in 2005. The corresponding minimum population estimate for the site numbered 571-734 grey seals of all ages. Known and suitable habitats for the species in Saltee Islands SAC during the breeding season are indicated in figure 6. Current breeding sites in Saltee Islands SAC are broadly as follows: Great Saltee Island and Little Saltee Island.

Grey seal also occurs at the site during the annual moult (i.e. hair shedding and replacement), a protracted period during which individual animals spend significant periods of days or weeks on the shore. Moulting is considered an intensive, energetically-demanding process that all seals must undergo, incurring further vulnerability for individuals during this period. Terrestrial or intertidal sites where seals can be found ashore are known as haul-out sites. Moult locations may be preferentially selected by the species. Those currently described in Ireland are remote from human habitation and interference, being on uninhabited islands or remote beaches, with specific established sites used annually by moulting adult females, adult males and juveniles. In Ireland the moulting phase in the annual life cycle occurs predominantly during the months of December to April. A minimum estimate of 246 grey seals was recorded at the site during the moult season in 2007. Known moult haul-out locations at the site are indicated in figure 7, broadly consisting of Great Saltee Island and the Coningmore Rocks.

Grey seal is a successful aquatic predator that feeds on a wide variety of fish and cephalopod species. For individual grey seals of all ages, intervals between foraging trips in coastal or offshore waters are spent resting ashore at terrestrial or intertidal haul-out sites, or in the water. Resting locations selected by grey seals may be more variable and dispersed than those used during the breeding or moulting seasons. While outliers may occur for very small numbers of animals, there is nevertheless a tendency for recurrent selection by grey seal of particular habitats and sites for terrestrial/intertidal resting behaviour (e.g., low-lying rocks and skerries). Known and suitable habitats for resting by the species are indicated in figure 8. Current sites described in Saltee Islands SAC are broadly as follows: Great Saltee Island, Little Saltee Island, the Coningmore Rocks and The Brandies.

Section 2: Appropriate Assessment Notes

Many operations/activities of a particular nature and/or size require the preparation of an environmental impact statement of the likely effects of their planned development. While smaller operations/activities (i.e., sub threshold developments) are not required to prepare such statements, an appropriate assessment and Natura Impact Statement is required to inform the decision-making process in or adjacent to Natura 2000 sites. The purpose of such an assessment is to record in a transparent and reasoned manner the likely effects on a Natura 2000 site of a proposed development. The Department of the Environment, Heritage and Local Government has prepared general guidance on the completion of such assessments (www.npws.ie).

Annex I Habitats

It is worth considering at the outset that in relation to Annex I habitat structure and function, the extent and quality of all habitats varies considerably in space and time and marine habitats are particularly prone to such variation. Habitats which are varying naturally, i.e., biotic and/or abiotic variables are changing within an envelope of natural variation, must be considered to have favourable conservation condition. Anthropogenic disturbance may be considered significant when it causes a change in biotic and/or abiotic variables in excess of what could reasonably be envisaged under natural processes. The capacity of the habitat to recover from this change is obviously an important consideration (i.e., habitat resilience) thereafter.

This Department has adopted a prioritized approach to conservation of structure and function in marine Annex I habitats.

1. Those communities that are key contributors to overall biodiversity at a site by virtue of their structure and/or function (keystone communities) should be afforded the highest degree of protection and any significant anthropogenic disturbance should be avoided.
2. In relation to the remaining constituent communities that are structurally important (e.g., broad sedimentary communities) within an Annex I marine habitat, there are two considerations.
    2.1. Significant anthropogenic disturbance may occur with such intensity and/or frequency as to effectively represent a continuous or ongoing source of disturbance over time and space (e.g., effluent discharge within a given area). Drawing from the principle outlined in the European Commission's Article 17 reporting framework that disturbance of greater than 25% of the area of an Annex I habitat represents unfavourable conservation status, this Department takes the view that licensing of activities likely to cause continuous disturbance of each community type should not exceed an approximate area of 15%. Thereafter, an increasingly cautious approach is advocated. Prior to any further licensing of this category of activities, an inter-Departmental management review (considering *inter alia* robustness of available scientific knowledge, future site requirements, etc) of the site is recommended.
    2.2. Some activities may cause significant disturbance but may not necessarily represent a continuous or ongoing source of disturbance over time and space. This may arise for intermittent or episodic activities for which the receiving environment would have some resilience and may be expected to recover within a reasonable timeframe relative to the six-year reporting cycle (as required under Article 17 of the Directive). This Department is satisfied that such activities could be assessed in a context-specific manner giving due consideration to the proposed nature and scale of activities

during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site.

The following technical clarification is provided in relation to specific conservation objectives and targets for Annex I habitats to facilitate the appropriate assessment process:

Objective **To maintain the favourable conservation condition of Large shallow inlets and bays in the Saltee Islands SAC, which is defined by the following list of attributes and targets**

Target 1	The permanent habitat area is stable or increasing, subject to natural processes.

- This habitat also partly encompasses the Annex I habitats of Reefs, Submerged or partly submerged sea caves and vegetated sea cliffs; however targets for these habitats should be addressed in their own right.
- This target refers to activities or operations that propose to permanently remove habitat from the site, thereby reducing the permanent amount of habitat area. It does not refer to long or short term disturbance of the biology of a site.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 2	The following community should be maintained in a natural condition: Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community

- A semi-quantitative description of this community has been provided in Section 1.
- An interpolation of its likely distribution is provided in figure 5.
- The estimated areas of this community (within the Annex 1 habitat of Large shallow inlet and bay) given below are based on spatial interpolation and therefore should be considered indicative:

  Coarse sediment with *Pomatoceros* spp. and *Pisidia longicornis* community 2,712ha.
- Significant continuous or ongoing disturbance of community should not exceed an approximate area of 15% of the interpolated area of the community, at which point an inter-Departmental management review is recommended prior to further licensing of such activities.
- Proposed activities or operations that cause significant disturbance to the community but may not necessarily represent a continuous or ongoing source of disturbance over time and space may be assessed in a context-specific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site.

Objective **To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in the Saltee Islands SAC, which is defined by the following list of attributes and targets**

Target 1	The permanent habitat area is stable or increasing, subject to natural processes

- This target refers to activities or operations that propose to permanently remove habitat from the site, thereby reducing the permanent amount of habitat area. It does not refer to long or short term disturbance of the biology of a site.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 2	The following community should be maintained in a natural condition: Intertidal sand to muddy sandy dominated by polychaetes community complex.

- A semi-quantitative description of this community has been provided in Section 1.
- An interpolation of its likely distribution is provided in figure 5.
- The estimated areas of the community given below are based on spatial interpolation and therefore should be regarded as indicative:

  Intertidal sand to muddy sand dominated polychaetes community 20 ha
- Significant continuous or ongoing disturbance of the community should not exceed an approximate area of 15% of the interpolated area of the community, at which point an inter-Departmental management review is recommended prior to further licensing of such activities.
- Proposed activities or operations that cause significant disturbance to the community but may not necessarily represent a continuous or ongoing source of disturbance over time and space may be assessed in a context-specific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site.

Objective **To maintain the favourable conservation condition of Reefs in the Saltee Islands SAC, which is defined by the following list of attributes and targets**

Target 1	The distribution of reefs should remain stable, subject to natural processes

- The likely distribution of reef habitat in this SAC is indicated (figure 3).
- This target refers to activities or operations that propose to permanently remove reef habitat, thus reducing the range over which this habitat occurs within the site. It does not refer to long or short term disturbance of the biology of reef habitats.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 2	The permanent area is stable, subject to natural processes

- This target refers to activities or operations that propose to permanently remove habitat from the site, thereby reducing the permanent amount of habitat area. It does not refer to long or short term disturbance of the biology of a site.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 3	The following reef community complexes should be maintained in a natural condition: Intertidal reef community complex; and Subtidal reef dominated by echinoderms and sponges community complex

- A semi-quantitative description of the communities has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 5.
- The estimated areas of the communities within the Reefs habitat given below are based on spatial interpolation and therefore should be regarded as indicative:

  Intertidal reef community complex 43 ha

  Subtidal reef dominated by echinoderms and sponges community complex 4,296ha
- This target relates to the structure and function of the reef and therefore it is of relevance to those activities that may cause disturbance to the ecology of the habitat.
- Significant continuous or ongoing disturbance of communities should not exceed an approximate area of 15% of the interpolated area of each community type, at which point an inter-Departmental management review is recommended prior to further licensing of such activities.
- Proposed activities or operations that cause significant disturbance to communities but may not necessarily represent a continuous or ongoing source of disturbance over time and space may be assessed in a context-specific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site.

Target 4	The extent of *Laminaria* dominated community should be conserved, subject to natural processes.

- *Laminaria* dominated communities are considered to be keystone communities that are of considerable importance to the overall ecology and biodiversity of a habitat by virtue of their physical complexity.
- Any significant anthropogenic disturbance to the extent of the *Laminaria* dominated community should be avoided.
- An interpolation of the likely distribution of the *Laminaria* dominated community is provided in figure 5 and should be regarded as indicative. Based on this interpolation the estimated area is 256 ha

Target 5	The biology of the *Laminaria* dominated community should be conserved, subject to natural processes.

- It is important to ensure the quality as well as the extent of the *Laminaria* dominated community is protected.
- Any significant anthropogenic disturbance to the flora and fauna associated with the *Laminaria* dominated community complex should be avoided.

Objective **To maintain the favourable conservation condition of submerged or partly submerged sea caves in the Saltee Islands SAC, which is defined by the following list of attributes and targets**

Target 1	The distribution of sea caves occurring should remain stable, subject to natural processes

- The distribution of all sea caves in this SAC has not yet been fully evaluated.
- This target refers to activities or operations that propose to permanently remove sea cave habitat thus reducing the range over which this habitat occurs within the site. It does not refer to long or short term disturbance of the biology of sea cave habitats.
- Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.

Target 2	Human activities should occur at levels that do not adversely affect the ecology of sea caves.

- This target relates to proposed activities or operations that may result in the deterioration of key resources (e.g., water quality) that are likely to drive or influence community structure of sea caves in the site. In the absence of complete knowledge on these elements in this site, such considerations should be assessed where appropriate on a case-by-case basis.

The following technical clarification is provided in relation to specific conservation objectives and targets for Annex II species to facilitate the appropriate assessment process:

Objective **To maintain the favourable conservation condition of grey seal in the Saltee Islands SAC, which is defined by the following list of attributes and targets**

Target 1	Species range within the site should not be restricted by artificial barriers to site use.

- This target may be considered relevant to proposed activities or operations that will result in the permanent exclusion of grey seal from part of its range within the site, or will permanently prevent access for the species to suitable habitat therein.
- It does not refer to short-term or temporary restriction of access or range.
- Early consultation or scoping with the Department in advance of formal application is advisable for proposals that are likely to result in permanent exclusion.

Target 2	The breeding sites should be maintained in a natural condition.

- Target 2 is relevant to proposed activities or operations that will result in significant interference with or disturbance of (a) breeding behaviour by grey seal within the site and/or (b) aquatic/terrestrial/intertidal habitat used during the annual breeding season.
- Operations or activities that cause displacement of individuals from a breeding site or alteration of natural breeding behaviour, and that may result in higher mortality or reduced reproductive success, would be regarded as significant and should therefore be avoided.

Target 3	The moult haul-out sites should be maintained in a natural condition.

- Target 3 is relevant to proposed activities or operations that will result in significant interference with or disturbance of (a) moulting behaviour by grey seal within the site and/or (b) aquatic/terrestrial/intertidal habitat used during the annual moult.
- Operations or activities that cause displacement of individuals from a moult haul-out site or alteration of natural moulting behaviour to an extent that may ultimately interfere with key ecological functions would be regarded as significant and should therefore be avoided.

Target 4	The resting haul-out sites should be maintained in a natural condition.

- Target 4 is relevant to proposed activities or operations that will result in significant interference with or disturbance of (a) resting behaviour by grey seal within the site and/or (b) aquatic/terrestrial/intertidal habitat used for resting.
- Operations or activities that cause displacement of individuals from a resting haul-out site to an extent that may ultimately interfere with key ecological functions would be regarded as significant and should therefore be avoided.

Target 5	The grey seal population occurring within the site should contain adult, juvenile and pup cohorts annually.

- Resting haul-out sites and the composition of haul-out groups may be different to those normally observed during breeding or moulting. There is some evidence of cohort-linked preferential selection by grey seals of terrestrial/intertidal sites elsewhere in Ireland.
- Whilst information is limited in Saltee Islands SAC at this time, disturbance at a specific location may have the effect of causing cohort-specific disturbance within the population. Population composition, whether in aquatic or terrestrial/intertidal habitats within the entire site or at individual locations, is likely to vary naturally within and between years.
- For the effective maintenance of the population, the above cohorts should be represented in the population occurring naturally within the site each year and any disturbance likely to cause such a cohort-specific effect should be carefully considered.

Target 6	Human activities should occur at levels that do not adversely affect the grey seal population.

- Proposed activities or operations should not introduce man-made energy (e.g., aerial or underwater noise, light or thermal energy) at levels that could result in a significant negative impact on individuals and/or the population of grey seal within the site. This refers to both the aquatic and terrestrial/intertidal habitats used by the species in addition to important natural behaviours during the species' annual cycle.
- Target 6 also relates to proposed activities or operations that may result in the deterioration of key resources (e.g., water quality, feeding, etc) upon which grey seals depend. In the absence of complete knowledge on the species' ecological requirements in this site, such considerations should be assessed where appropriate on a case-by-case basis.

Figure 1. Extent of Shallow inlets and bays in Saltee Islands SAC

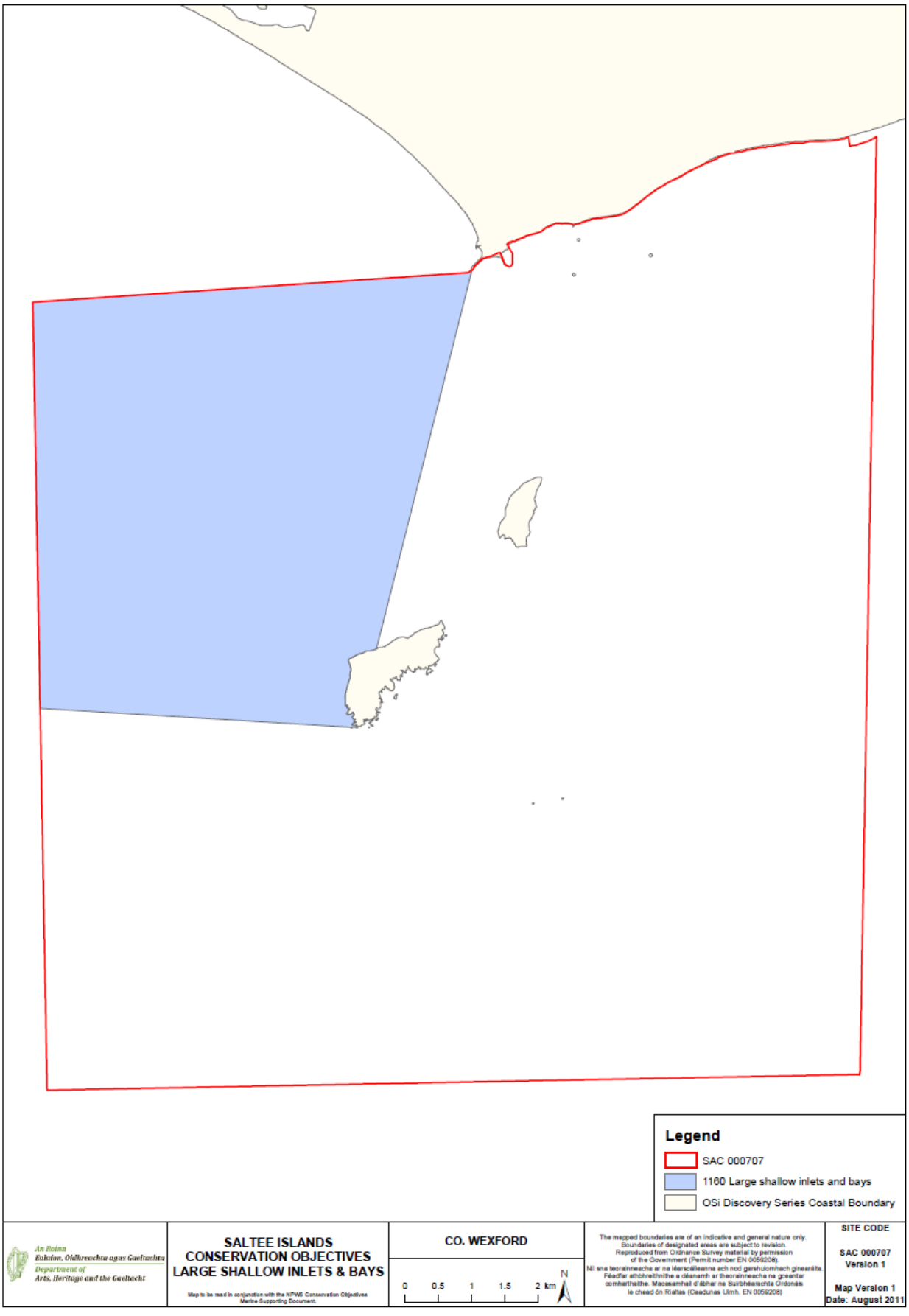

Figure 2. Extent of Mudflats and sandflats not covered by seawater at low tide in Saltee Islands SAC

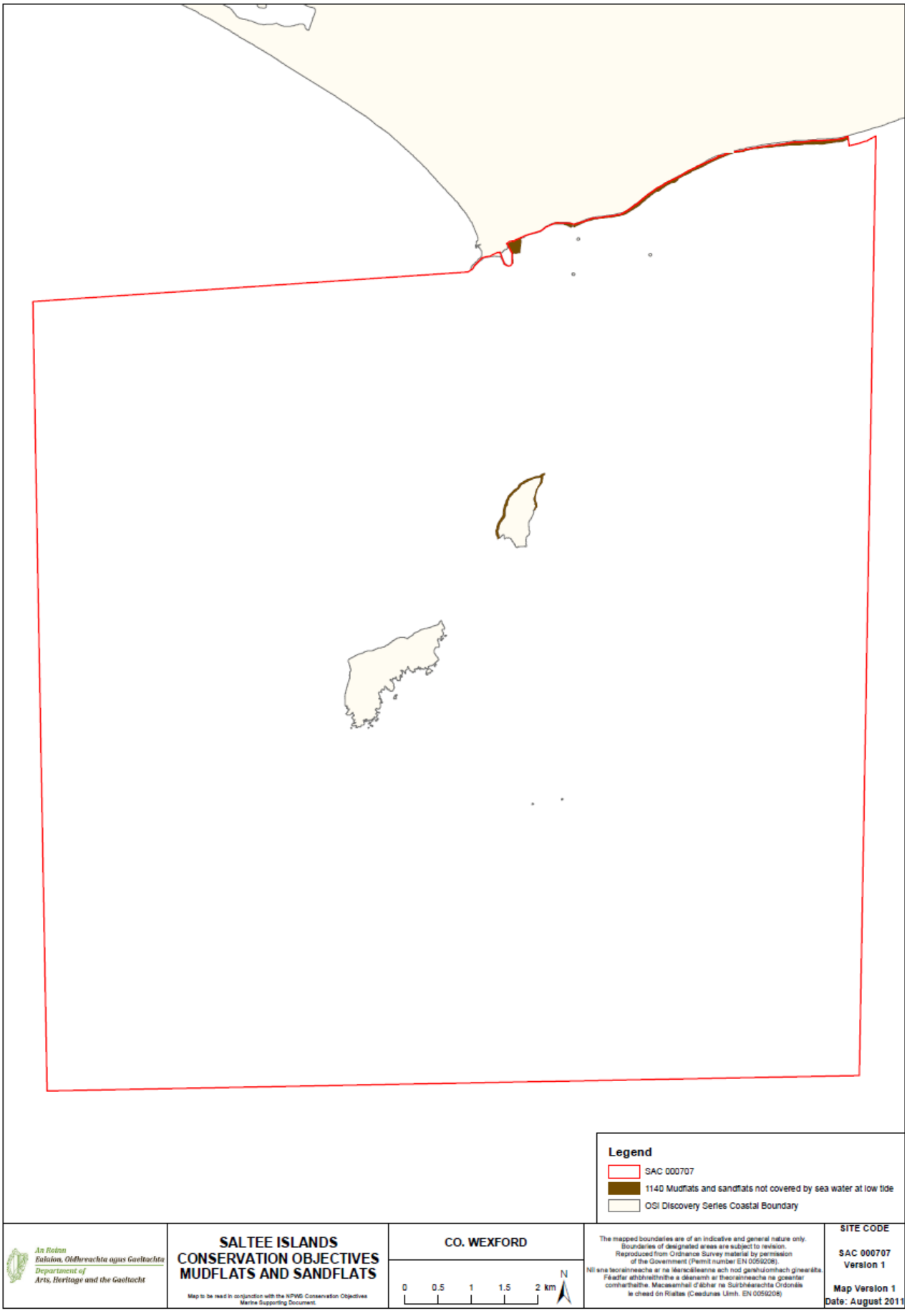

Figure 3. Extent of Reefs in Saltee Islands SAC

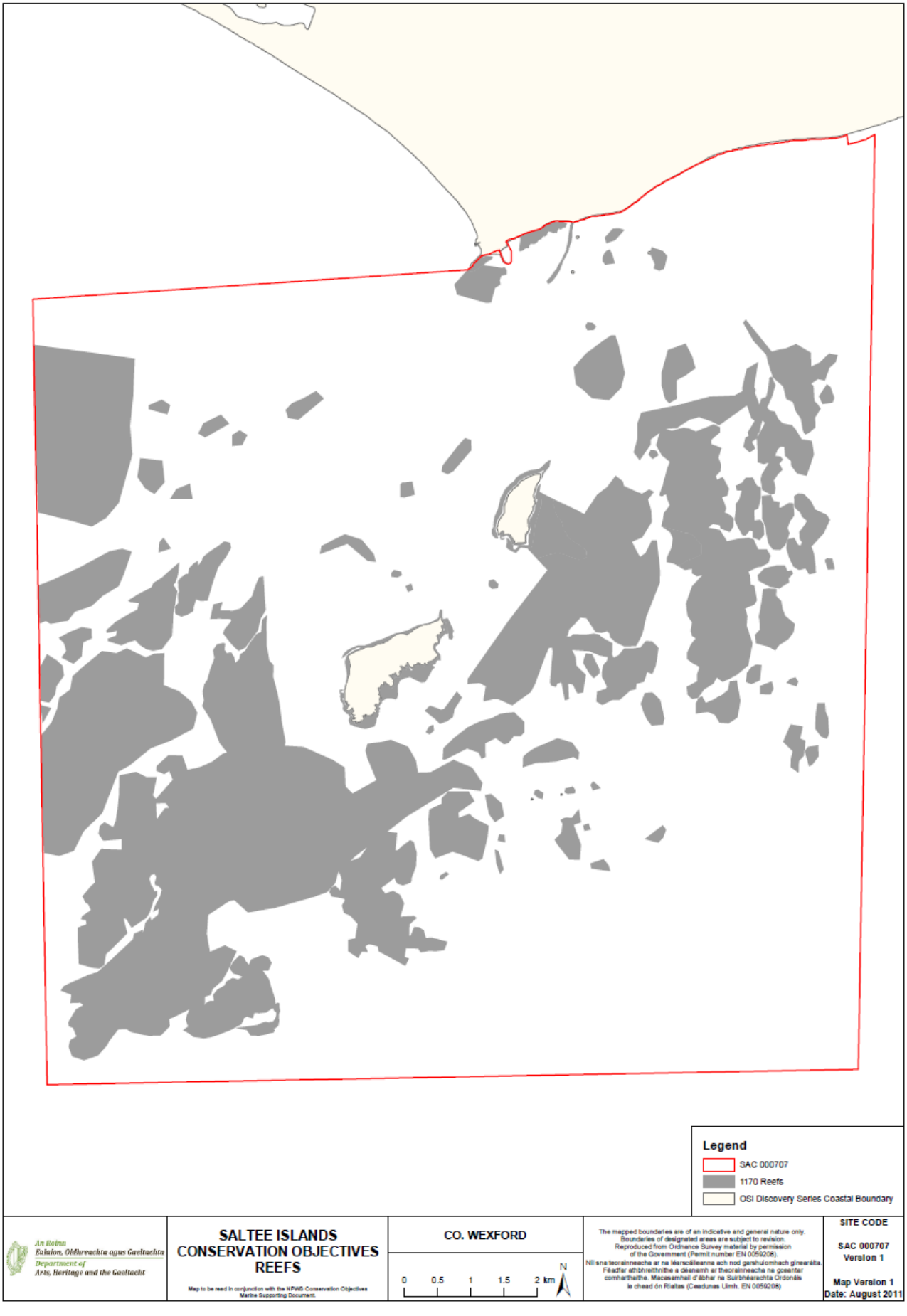

Figure 4. Distribution of Submerged or partly submerged sea caves in Saltee Islands SAC

Figure 5. Distribution of marine communities in Saltee Islands SAC

Figure 6. *Halichoerus grypus* - Known breeding sites

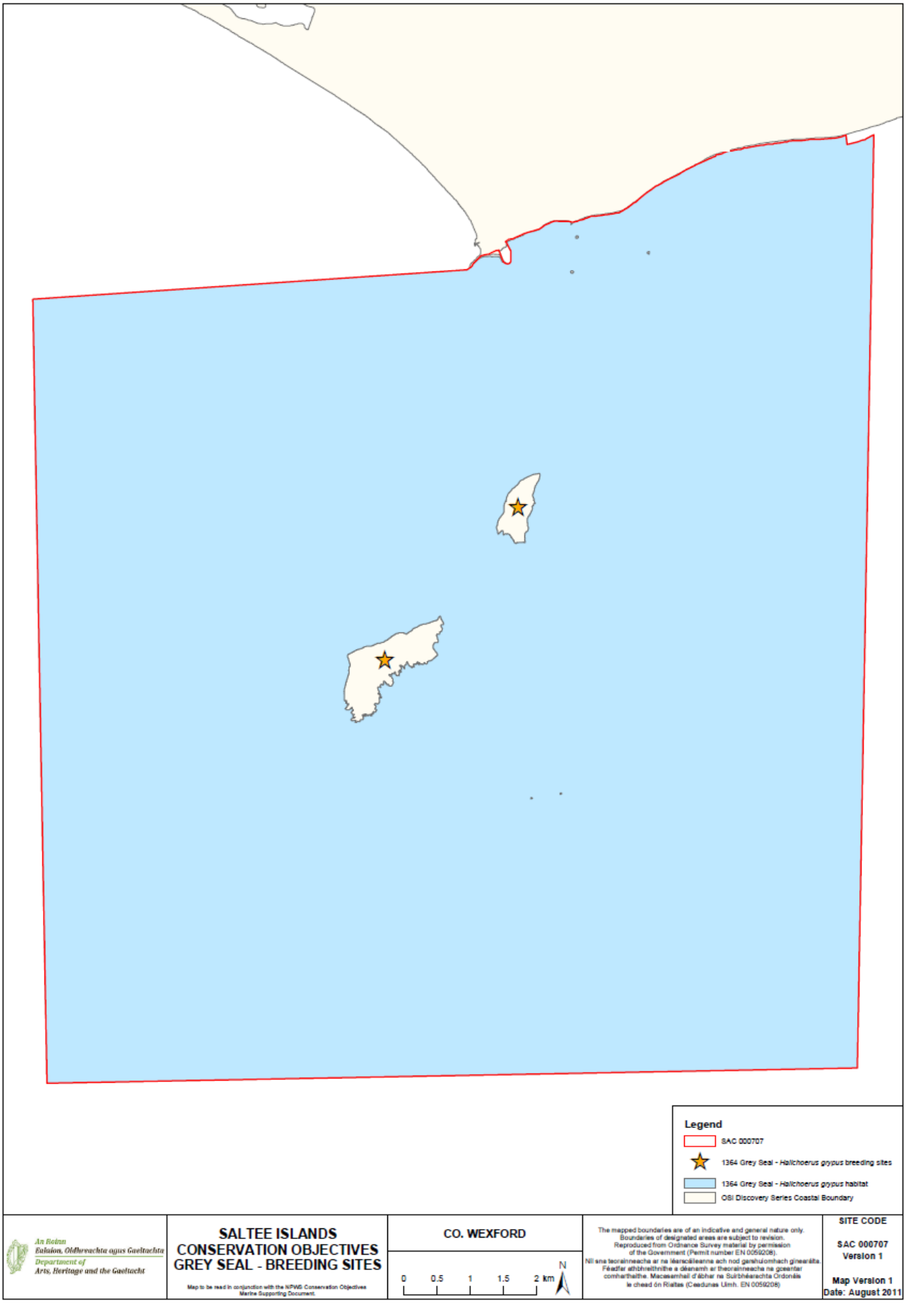

Figure 7. *Halichoerus grypus* - Known moult haul out sites

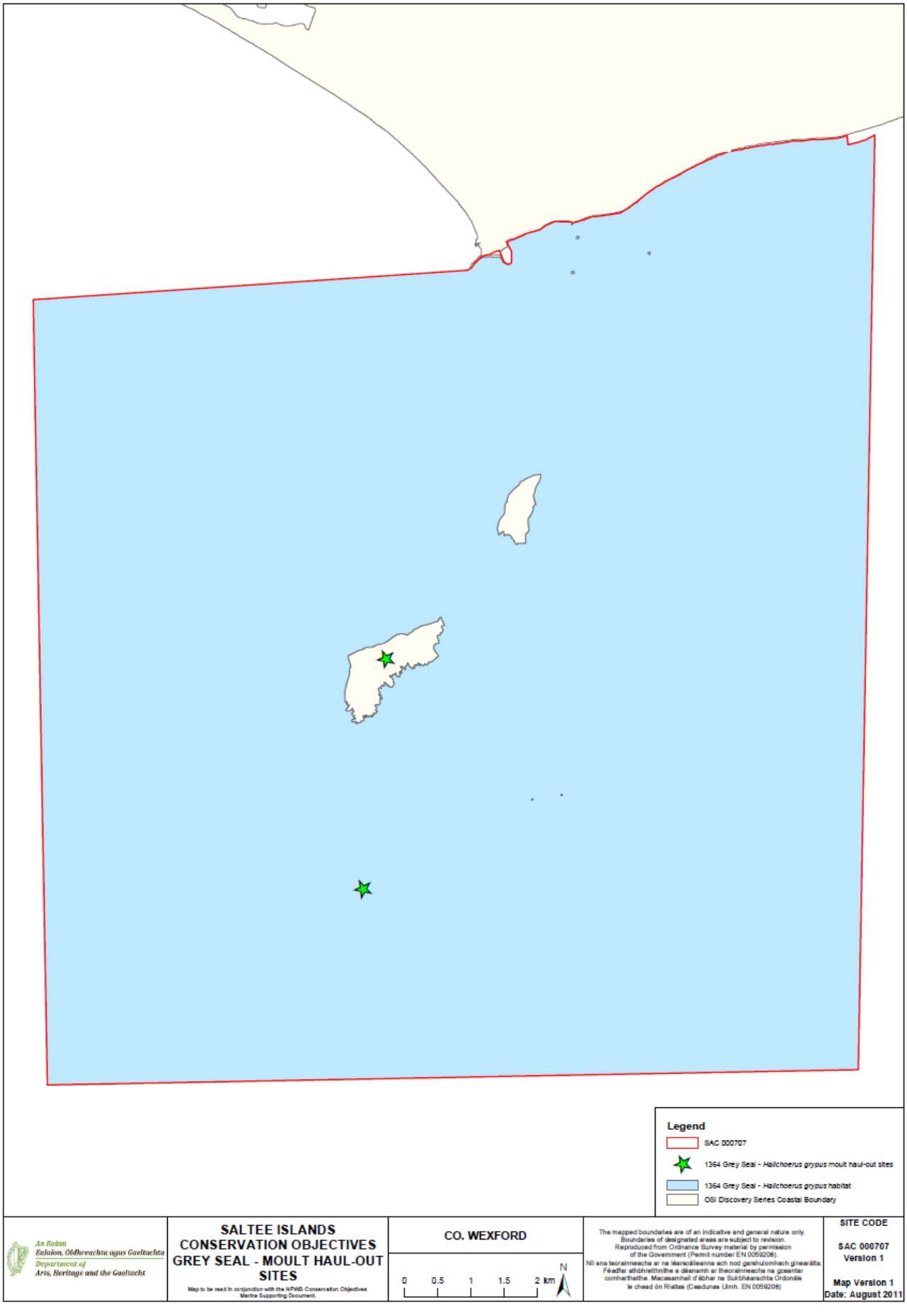

Figure 8. *Halichoerus grypus* - Known resting haul-out sites (non-breeding)