NPWS

Blasket Islands SAC (site code: 2172)

Conservation objectives supporting document - Marine Habitats and Species

Version 1

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Introduction

Blasket Islands SAC is designated for the marine Annex I qualifying interest of Reefs and Submerged or partially submerged sea caves (Figure 1 and 2) and the Annex II species *Phoca vitulina* (harbour porpoise) and *Halichoerus grypus* (grey seal).

A BioMar survey of this site was carried out in 1996 (Picton and Costello, 1997) and a subtidal reef survey was undertaken in 2010 (Aquafact, 2010); InfoMar (Ireland's national marine mapping programme) data from the site was also reviewed. These data were used to determine the physical and biological nature of the Annex I reef habitat.

The distribution and ecology of intertidal or subtidal seacaves has not previously been the subject of scientific investigation in Ireland and the extents of very few individual caves have been mapped in detail. Analysis of the imagery from the Department of Communications, Marine and Natural Resources coastal oblique aerial survey yielded some information concerning the expected location of partly submerged seacaves in Blasket Islands SAC (Figure 2). There is no additional information available concerning the likely distribution of permanently submerged seacaves in the site at present. Whilst surveys undertaken in the UK indicate the structure and functions of seacaves are largely influenced by hydrodynamic forces and water quality, no such information is yet available for Ireland.

A considerable number of records of harbour porpoise have been gathered within this site and adjacent waters off the south-west coast of Ireland, particularly over the last two decades (e.g. Leopold *et al.*, 1992; Pollock *et al.*, 1997; Hammond *et al.*, 2002; Reid *et al.*, 2003; Ó Cadhla *et al.*, 2004; SCANS-II, 2008; Berrow *et al.*, 2010; Ryan *et al.*, 2010; Wall *et al.*, 2013). In addition, targeted surveys of the harbour porpoise community occurring within the site were conducted in 2007 (Berrow *et al.*, 2007; Berrow *et al.*, 2009), 2008 (Berrow *et al.*, 2008), 2009 and 2010 (O'Brien *et al.*, 2012). This work sought to investigate species occurrence, distribution, abundance, habitat use and community composition within the site. The efforts in 2007 and 2008 were successful in estimating for the first time the density and abundance of the species within the site during the summer months.

In addition to records compiled from historical Wildlife Service site visits (Summers, 1983; MacMahon, 1989; Lyons, 2004) more detailed investigations of grey seal population status, distribution and seasonal habitat use within the site were conducted between 1995 and 2003 (Kiely, 1998; Kiely & Myers, 1998; Cronin *et al.*, 2004; Cronin & Ó Cadhla, 2004; Cronin *et al.*, 2007). A comprehensive nationwide survey of Ireland's grey seal breeding population was subsequently carried out in 2005 (Ó Cadhla *et al.,* 2008) and a follow-up moult season survey was conducted in 2007 (Ó Cadhla & Strong, 2007). These facilitated the further investigation of seasonal population composition within the site, annual pup production and habitat use, information which has been augmented by targeted research at the Blasket Islands (e.g. Cronin *et al.*, 2013; Jessopp *et al.*, 2013). National Parks & Wildlife Service surveillance of

the grey seal population within the site has continued on a regular basis through the annual efforts of regional staff, a regional monitoring programme for the species (Ó Cadhla *et al.*, 2013) and ancillary data collected during summer population surveys for harbour seal (*Phoca vitulina* ; Duck *et al.*, 2013).

Aspects of the biology and ecology of the Annex I habitats and the 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

Principal Benthic Communities

Within Blasket Islands SAC, two community types are recorded. Their occurrence within the Annex I habitats are presented in table 1 and a description of each of them is given below.

Community Type	SAC Annex I Habitats	
	Reefs (1170)	Submerged or partially submerged sea caves (8330)
Reef with faunal turf and echinoderms community complex	✓	✓
Laminaria-dominated community	✓	

Table 1 The community types recorded in Blasket Islands SAC and their occurrence in the Annex I habitats.

Estimated area of these community types within Annex I reef habitat, based on interpolation, is given in the objective targets in Section 2.

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 Blasket 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.

REEF WITH FAUNAL TURF AND ECHINODERMS COMMUNITY COMPLEX

This community complex is recorded extensively at the southern and western margins of the site; it is also occurs at the northern boundary of the site due north-east of Inishtooskert and off the coast of the mainland between Clogher Head and Dunquin. Small patches of this reef community are recorded around the islands, and between the islands and the mainland (Figure 2). It ranges in depth from approximately 15m to 102m.

The substrate within the complex consists of flat or sloping bedrock, cobble and boulder fields, or a mosaic of these. Vertical rock walls also occur within the complex east off Inishnabro and off the south east and south west of Inishtooskert. The exposure regime is that of exposed reef.

A wide variety of species are associated with this complex due to the diversity of substrates and broad depth range in which it occurs. The species include the anthozoans *Alcyonium digitatum, Corynactis viridis* and *Cliona celata* and the hydrozoans *Nemertesia antennina*, *N. ramosa* and *Pentapora foliacea.* The more conspicuous fauna recorded here consist of the echinoderms *Echinus esculentus*, *Holothuria (Panningothuria) forskalii*, *Marthasterias glacialis, Henricia oculata* and *Luidia ciliaris* (Table 2).

The cobbles support well-developed clumps of the hydrozoan *Sertularia argentea* and many sponges of the genus *Polymastia*; the polychaete *Spirobranchus* sp. is also abundant here. Vertical cliff faces host the anemones *Corynactis viridis* and *Sagartia elegans*; the former occurs in abundance whilst the latter is recorded here occasionally. The sponges *Pachymatisma johnstonia, Esperiopsis fucorum* and *Microciona spinarcus* are also recorded in these areas along with the hydrozoan *Tubularia indivisa*. The bedrock is often heavily colonised by hydroids including *Halecium halecinum, H. beanii, Nemertesia antennina* and *N. ramosa* and erect bryozoans including *Pentapora foliacea, Cellaria fistulosa*, *C. sinuosa* and *Bicellariella ciliata*. Algae are sparse on the vertical walls but colonise flatter areas.

A variant of this community type occurs where reef extends into the intertidal, where barnacle species dominate. While no survey was undertaken of the sea caves at this site it is likely that the community within them would reflect the fauna of the surrounding reef community.

Species associated with the Reef with faunal turf and echinoderms community complex	
Echinus esculentus	*Marthasterias glacialis*
Alcyonium sp.	*Luidia ciliaris*
Cliona celata	Encrusting red calcareous algae
Spirobranchus sp.	*Pentapora foliacea*
Encrusting sponges	

Table 2 Species associated with the Reef with faunal turf and echinoderms community complex.

LAMINARIA-DOMINATED COMMUNITY

This community occurs most extensively within this site on the northwest of Great Blasket Island; elsewhere it occurs as small patches to the northwest of Beginish Island and off the mainland between Clogher Head and Dunmore Head (Figure 3).

This community is recorded from depths of between 8m and 18 m on both flat and sloping bedrock and a mosaic of this and cobble/boulder fields.

Laminaria hyperborea is the most widespread of the kelp species associated with this community but *Saccharina latissima* and *Saccorhiza polyschides* also occur. Diverse foliose red algae including *Delesseria sanguinea*, *Dictyota dichotoma, Hypoglossum hypoglossoides, Plocamium cartilagineum*, *Phycodrys rubens* and *Callophyllis laciniata* are frequently recorded in the understorey (Table 3). The anthozoans *Corynactis viridis* and *Alcyonium digitatum*, the sponges *Scypha ciliata* and *Cliona celata*, the hydroids *Abietinaria abietina* and *Sertularia argentea,* the gastropod *Calliostoma zizyphinum* and the echinoderms *Marthasterias glacialis*, *Echinus esculentus, Luidia ciliaris* and *Holothuria (Panningothuria) forskalii* are recorded among the kelp, as is the ballan wrasse *Labrus bergylta*.

The rare red alga *Schizymenia dubyi* is recorded south west of Sound Rock.

Species associated with the *Laminaria*-dominated community	
Laminaria hyperborea	Encrusting red calcareous algae
Echinus esculentus	Encrusting sponges
Foliose red algae	*Saccharina latissima*
Cliona celata	*Luidia ciliaris*
Bryozoa indet.	

Table 3 Species associated with the *Laminaria*-dominated community.

Annex II Marine mammals

PHOCOENA PHOCOENA (HARBOUR PORPOISE)

This small toothed cetacean species (from the mammal Order Cetacea - whales, dolphins and porpoises) occurs in estuarine, coastal and offshore waters in which it carries out breeding, foraging, resting, social activity and other life history functions. Its distribution extends predominantly throughout continental shelf waters and the species may range over many hundreds or thousands of kilometres. As air-breathing mammals, harbour porpoises must return to the water surface to breathe but they are otherwise wholly aquatic. Individual porpoises of all ages use sound as their primary sensory tool in order to navigate, communicate, avoid predators, or locate and facilitate the capture of prey under water, for example. Group sizes tend to be small (i.e. in single figures, more commonly 2-3 individuals) although larger aggregations may occasionally be recorded, particularly in the summer months.

Harbour porpoise breeds annually in Ireland, predominantly during the months of May to September. The principal calving period in Irish waters is thought to occur in the months of May and June, although it may extend throughout the summer months and early autumn. Newborn calves are weaned before they are one year old. Mating commonly occurs several weeks after the calving season.

The occurrence of harbour porpoises within a prescribed marine area can be estimated using visual observation and passive acoustic methods in order to deliver an assessment of community or population size (i.e. relative abundance or absolute abundance), density and distribution. The size, community structure and distribution or habitat use of harbour porpoise inhabiting Blasket Islands SAC are not fully understood. In acknowledging limitations in the understanding of aquatic habitat use by the species within the site, it should be noted that all suitable aquatic habitat (Figure 4) is considered relevant to the species range and ecological requirements at the site and is therefore of potential use by harbour porpoises.

Boat-based sampling effort for harbour porpoises within the site, which targeted the 2007 and 2008 summer-autumn seasons, delivered survey-based density estimates ranging from 0.38-3.38 animals per km^2. Overall pooled estimates across five surveys in July to September 2007 were: 1.33 individuals per km^2, N=303±107 individuals, 95% Confidence Intervals: 133-691, Coefficient of Variation=0.35. Overall pooled estimates across three further surveys in July to September 2008 were: 1.65 individuals per km^2, N=372±105 individuals, 95% Confidence Intervals: 216-647, Coefficient of Variation=0.28. Thus the 2008 surveys provided higher and slightly more accurate figures overall. While the numbers of harbour porpoise encountered during any survey within the site are variable, additional acoustic data plus casual and effort-related sighting rates from coastal observation stations are significant for the Atlantic coast of Ireland and comparatively high group sizes (>5 individuals) have been

recorded from surveys on land and at sea. The species is present at the site in all seasons, while important cohorts within the harbour porpoise community such as adults, juveniles and newborn calves have been recorded within the site, including during the calving/breeding season.

Harbour porpoise is a successful aquatic predator that feeds on a wide variety of fish, cephalopod and crustacean species occurring in the water column or close to the seabed. Dive depths in excess of 200m have been recorded for the species. Foraging areas for harbour porpoise are often associated with areas of strong tidal current and associated eddies; therefore the occurrence of porpoises close to shore or adjacent to islands and prominent headlands is commonly reported. However gaps remain in the knowledge of the species foraging ecology within Blasket Islands SAC and the data available may be biased toward particular locations due to the nature of survey effort and opportunistic reports from a range of sources. There is currently no detailed information available on individual or group movements by harbour porpoise within or into/out of the site, nor is it known whether individuals/groups of the species demonstrate any faithfulness to the site (i.e. site fidelity or residency). Nevertheless, the consistent annual and seasonal occurrence of the species at the site, its occurrence during the calving/breeding period and density/population estimates available to date all indicate the importance of this coastal site for the 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 Blasket Islands SAC, including intertidal shorelines and skerries that become exposed during the tidal cycle. It is present at the site throughout the year during all aspects of its annual life cycle which includes breeding (August to December approximately), moulting (December to April approximately) 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 in which 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 to 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 314 pups were born in Blasket Islands SAC in 2011. The corresponding minimum population estimate for the site numbered 1,099-1,413 grey seals of all ages. Known and suitable habitats for the species in Blasket Islands SAC during the breeding season are indicated in figure 5. Current breeding sites in Blasket Islands SAC are principally distributed among the following islands: Beginish (Beiginis), Great Blasket Island (An Blascaod Mór), Illaunbwee (Oileán Buí), Inishvickillane (Inis Mhic Aoibhleáin) and Young's Island (Oileán na nÓg) with some additional and possibly less frequent breeding activity at Carrigadda (An Charraig Fhada) and Inishnabro (Inis na Bró). Breeding takes place among the numerous beaches, rock ledges, coves, gullies and a few caves situated on these islands, where access for seals to intertidal shorelines and the area above high water mark is possible.

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 989 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 6, broadly consisting of Beginish (Beiginis), Carrigadda (An Charraig Fhada), Great Blasket Island (An Blascaod Mór), Illaunbwee (Oileán Buí), Inishvickillane (Inis Mhic Aoibhleáin) and Young's Island (Oileán na nÓg) where selected rock ledges, beaches, coves and caves provide access for seals to intertidal shorelines and the area above high water mark.

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 within the site are indicated in figure 7, broadly consisting of Beginish (Beiginis), Carrigadda (An Charraig Fhada) and nearby skerries including the Edge Rocks (Na Faoibhir), Great Blasket Island (An Blascaod Mór), Illaunbwee (Oileán Buí), Inishnabro (Inis na Bró), Inishtooskert (Inis Tuaisceart), Inishvickillane (Inis Mhic Aoibhleáin), Tearaght Island (An Tiaracht) and Young's Island (Oileán na nÓg) where selected rock ledges, beaches, coves and caves provide access for seals to intertidal shorelines and the area above high water mark.

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. General guidance on the completion of such assessments has been prepared and is available at 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) and their low resilience 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 and Annex II species to facilitate the appropriate assessment process:

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

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

- The area of this habitat represents the minimum estimated area of reef at this site and underestimates the actual area due to the many areas of sheer and steeply sloping rock within the reef habitat.
- 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 distribution of reefs is stable or increasing, subject to natural processes.

- The likely distribution of reef habitat in this SAC is indicated in figure 1.
- 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 3	Conserve the following community types in a natural condition: Reef with faunal turf and echinoderms community complex and *Laminaria*-dominated community.

- A semi-quantitative description of the communities has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 3.
- The estimated area of the communities within the Reefs habitat given below is based on spatial interpolation and therefore should be considered indicative. In addition, as this habitat contains significant areas of sheer and steeply sloping rock, the mapped community extent will be underestimated:
    - Reef with faunal turf and echinoderms community complex - 4817ha
    - *Laminaria*-dominated community - 43ha
- 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.

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

Target 1	The distribution of sea caves occurring in the site is stable, subject to natural processes.

- The distribution of all sea caves in this SAC has not yet been fully evaluated (Figure 2).
- 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 at the site.

- 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.

Objective **To maintain the favourable conservation condition of harbour porpoise in Blasket 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 harbour porpoise 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	Human activities should occur at levels that do not adversely affect the harbour porpoise community at the site.

- 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 community of harbour porpoise within the site. This refers to the aquatic habitats used by the species in addition to important natural behaviours during the species annual cycle.
- This target also relates to proposed activities or operations that may result in the deterioration of key resources (e.g. water quality, feeding, etc) upon which harbour porpoises 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.
- Proposed activities or operations should not cause death or injury to individuals to an extent that may ultimately affect the harbour porpoise community at the site.

Objective **To maintain the favourable conservation condition of grey seal in Blasket 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	Conserve the breeding sites in a natural condition.

- This target 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	Conserve the moult haul-out sites in a natural condition.

- This target 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	Conserve the resting haul-out sites in a natural condition.

- This target 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	Human activities should occur at levels that do not adversely affect the grey seal population at the site.

- 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.
- This target 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.
- Proposed activities or operations should not cause death or injury to individuals to an extent that may ultimately affect the grey seal population at the site.

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Figure 1. Extent of Reefs in Blasket Islands SAC

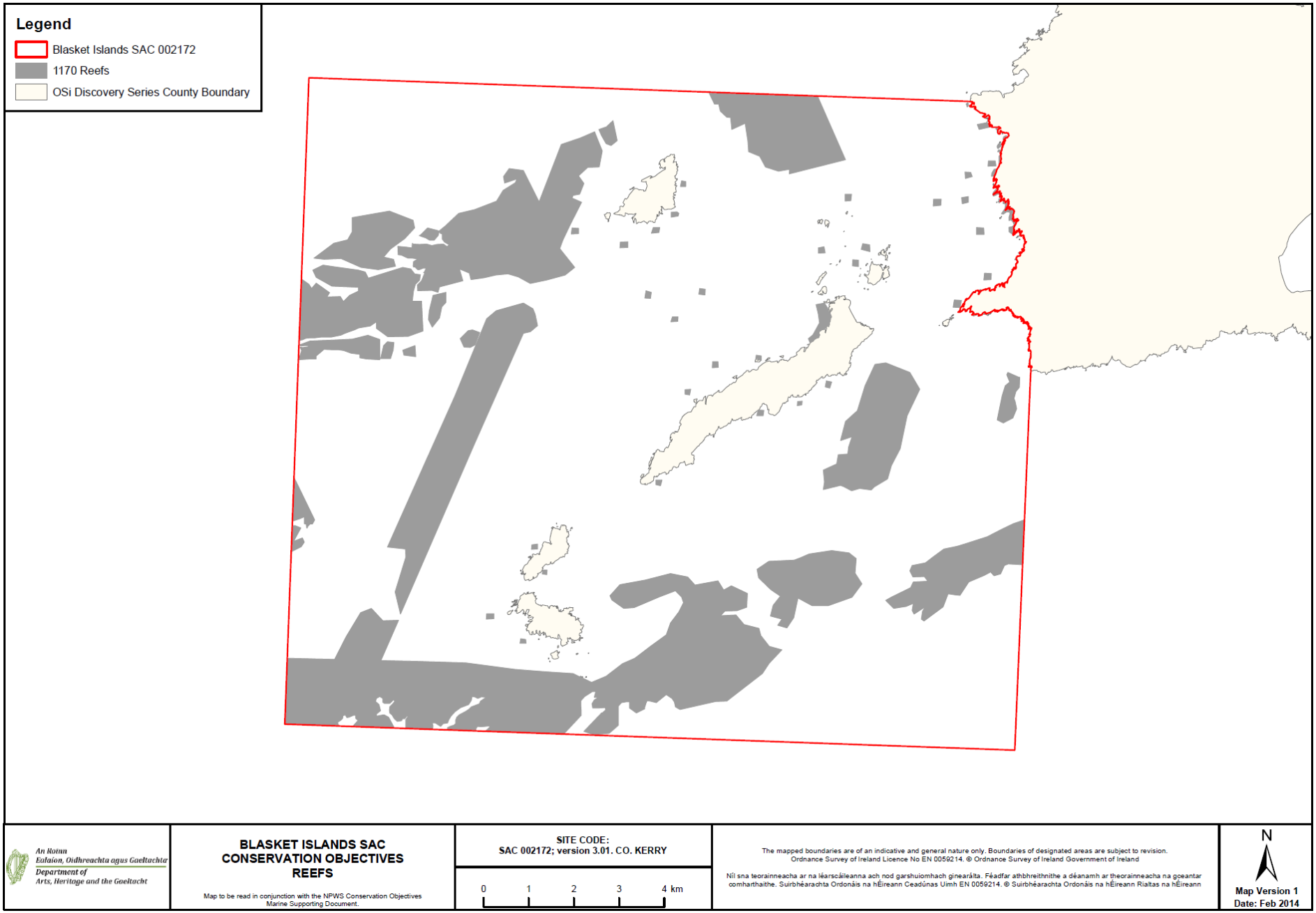

Figure 2. The expected distribution of seacaves in Blasket Islands SAC

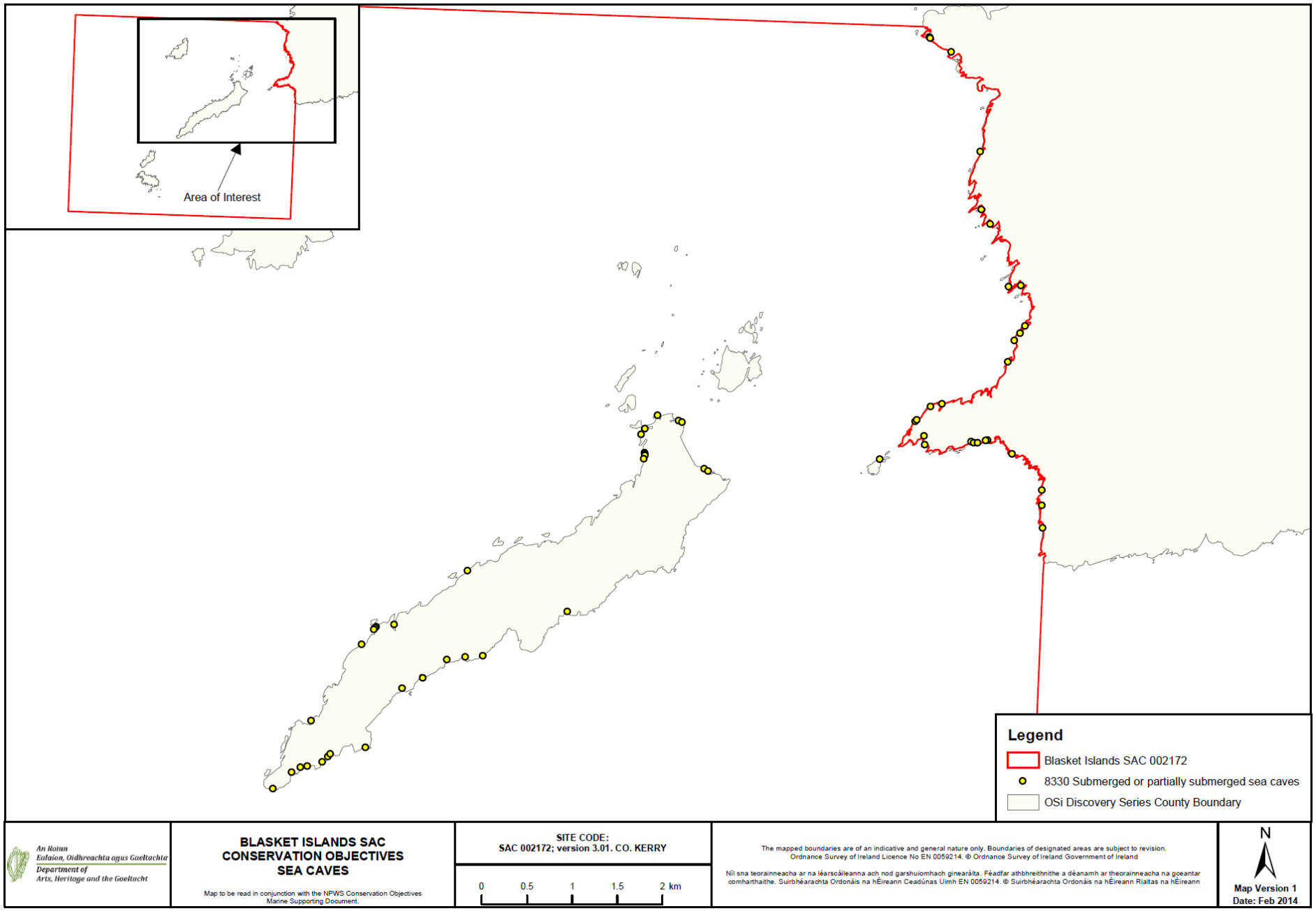

Figure 3. Distribution of community types in Blasket Islands SAC

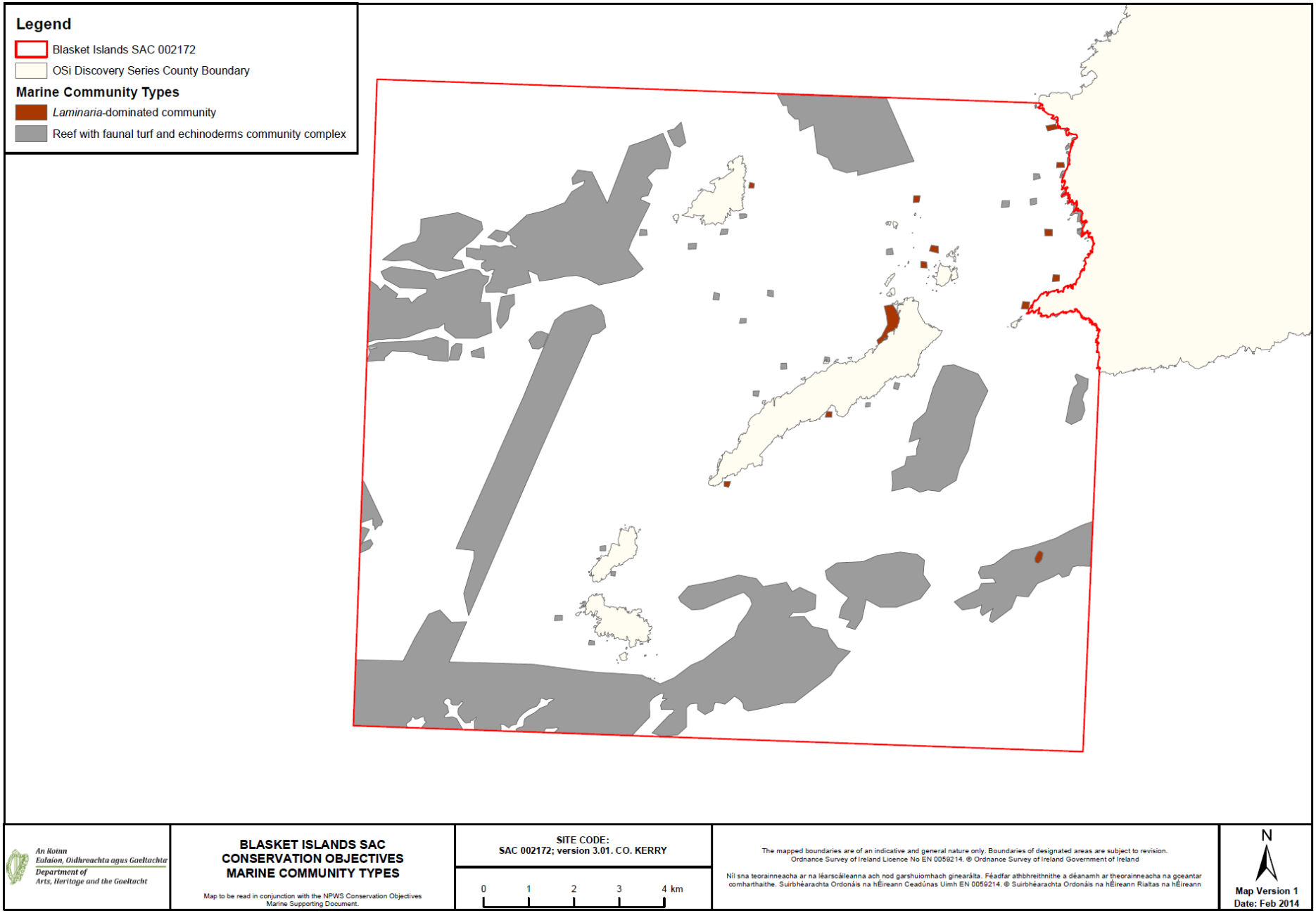

Figure 4. Suitable habitat of *Phocoena phocoena* within Blasket Islands SAC

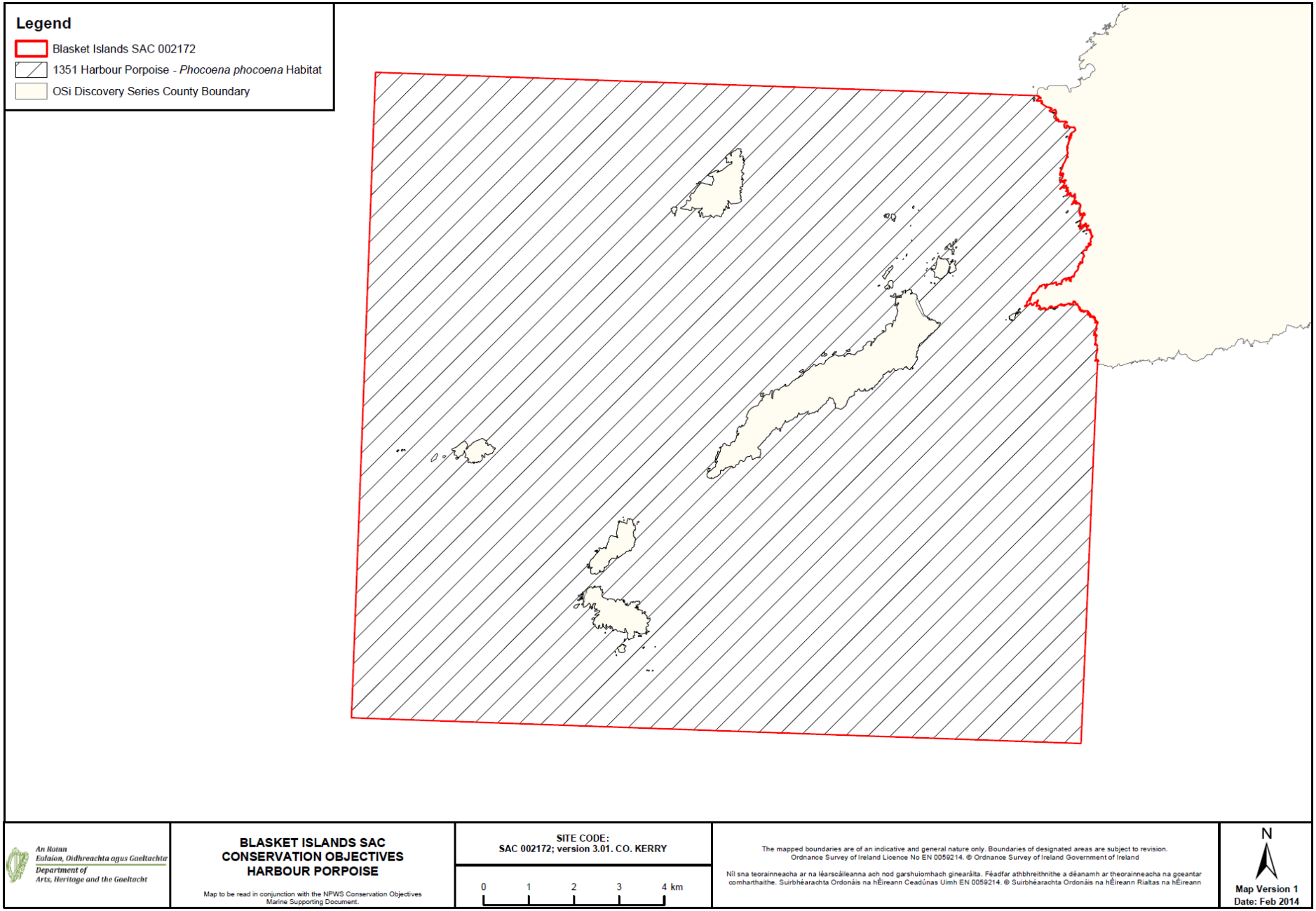

Figure 5. *Halichoerus grypus* - Known breeding sites in Blasket Islands SAC

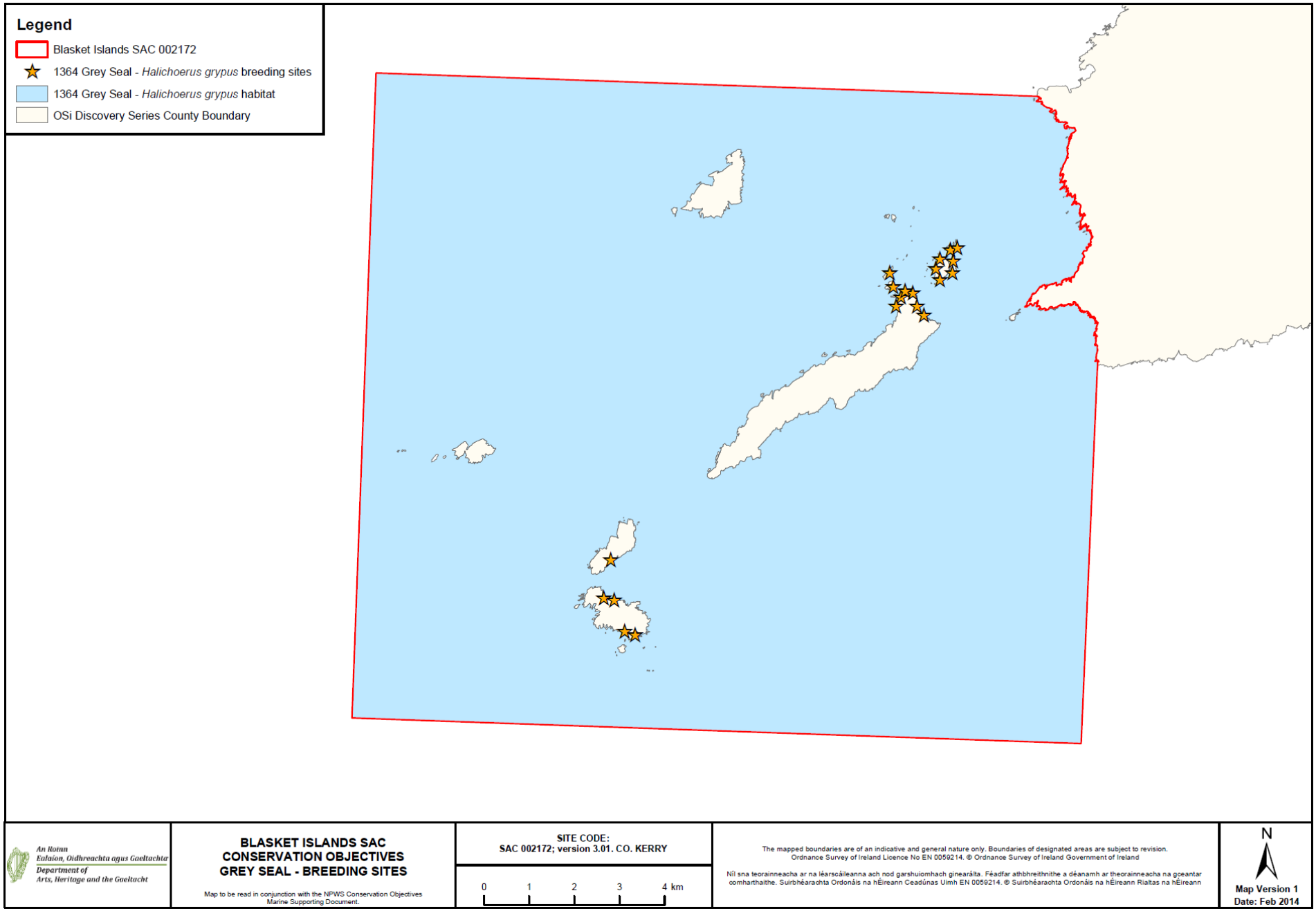

Figure 6. *Halichoerus grypus* - Known moult haul out sites in Blasket Islands SAC

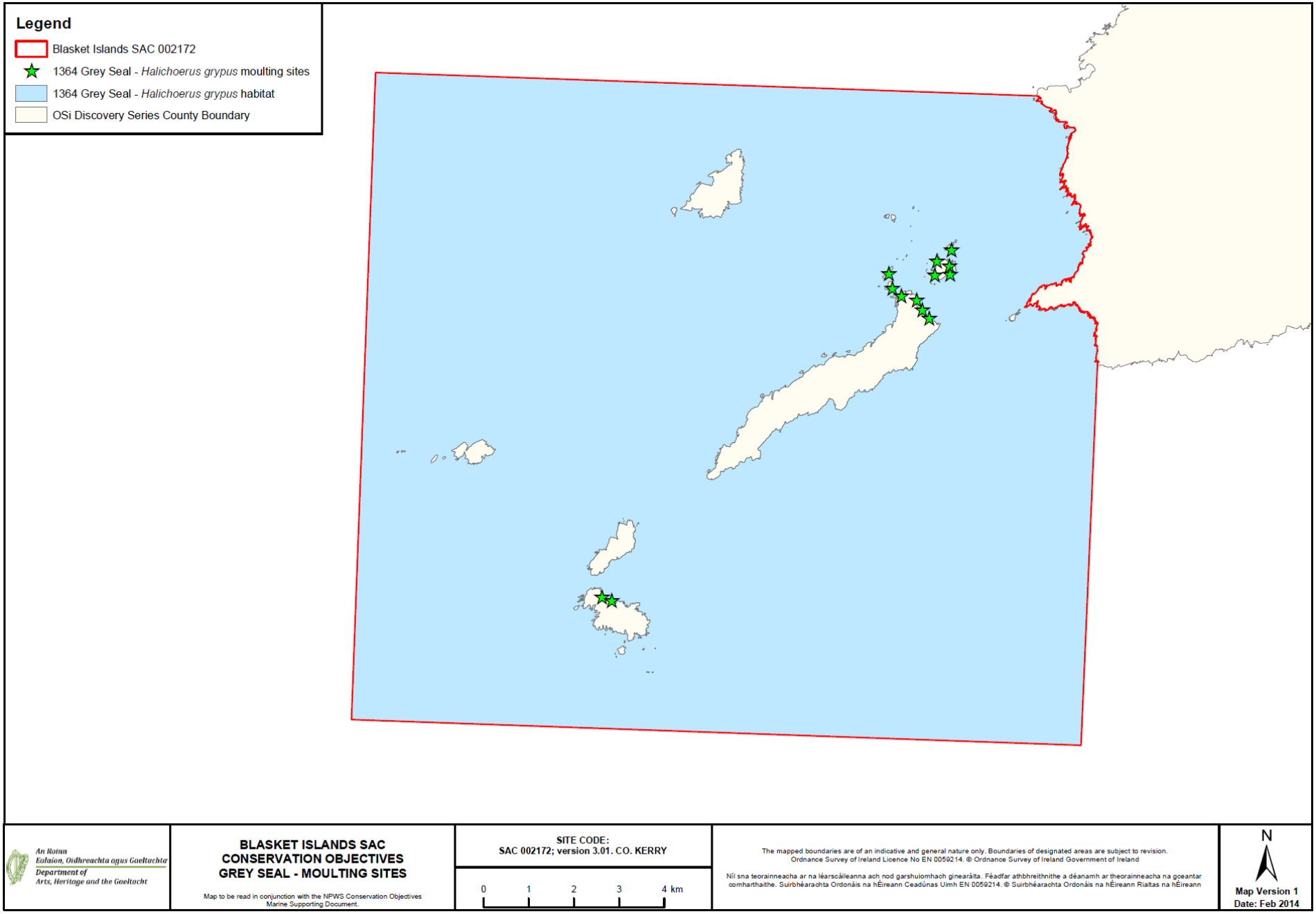

Figure 7. *Halichoerus grypus* - Known resting haul-out sites (non-breeding) in Blasket Islands SAC