NPWS

St John's Point SAC
(Site code: 191)

Conservation objectives supporting document -
Marine Habitats

Version 1

March 2015

Introduction

St John's Point SAC is designated for the marine Annex I qualifying interests of Large shallow inlets and bays, Reefs and Submerged or partially submerged sea caves (Figures 1, 2 and 3). The Annex I habitat Large shallow inlets and bays is a large physiographic feature that may wholly or partly incorporate other Annex I habitats including reefs and sea caves within its area.

A BioMar survey of this site was carried out in 1994 (Picton and Costello, 1997) and intertidal and subtidal surveys were undertaken in 2012 (MERC, 2012a and b); these data were used to determine the physical and biological nature of this SAC.

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 St John's Point SAC (Figure 3). 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.

Aspects of the biology and ecology of the Annex I habitat 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 objective and targets in the completion of such assessments is provided in Section 2.

Section 1

Principal Benthic Communities

Within St John's Point SAC six community types are recorded. The Annex I habitats in which they are recorded is presented in table 1, a description of each community type is given below.

	Habitats		
	Large shallow inlets and bays (1160)	Reefs (1170)	Submerged or partly submerged seacaves (8330)
Intertidal coarse sediment with enchytraeid oligochaetes and *Scolelepis squamata* community complex	✓		
Maërl-dominated community	✓		
Sand to mixed sediment with polychaetes and *Edwardsia* spp. community complex	✓		
Intertidal reef community complex	✓	✓	
Laminaria-dominated community complex	✓	✓	✓
Subtidal reef with echinoderms and sponges community complex	✓	✓	

Table 1 The community types recorded in St John's Point SAC and their occurrence the Annex I habitats for which the site is designated.

Estimated areas of each community type within the Annex I habitat, based on interpolation, are 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 St John's Point 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 COARSE SEDIMENT WITH ENCHYTRAEID OLIGOCHAETES AND *SCOLELEPIS SQUAMATA* COMMUNITY COMPLEX

This community complex is recorded on the beach to the south of Rabley Hill and at Cassan Sound (Figure 4).

The substrate is that of mobile gravelly sand with gravel constituting >15% of the sediment, very coarse sand being >23% and coarse sand being >18%. Silt-clay is negligible >0.1%.

The faunal abundances in this community are low with the distinguishing species being the oligochaetes of the family Enchytraeidae, the polychaete *Scolelepis squamata* and unidentified nematodes (Table 2).

Distinguishing species Intertidal coarse sediment with enchytraeid oligochaetes and *Scolelepis squamata* community complex	
Enchytraeidae spp.	Nematoda
Scolelepis squamata	

Table 2 Distinguishing species of Intertidal coarse sediment with enchytraeid oligochaetes and *Scolelepis squamata* community complex.

MAËRL-DOMINATED COMMUNITY

This community occurs to the east of the site in the vicinity of Black Rock (Figure 4). The community is recorded from the lower intertidal to water depths of up to 23m.

The substrate is 80% to 90% living maërl with 100% ground cover throughout the majority of the bed; the maërl also forms dunes in some areas of the community.

A single maërl species *Lithothamnion corallioides* is recorded here; other species associated with this community include the polychaetes *Glycera lapidum*, *Lanice conchilega*, *Polygordius* sp., *Sphaerosyllis bulbosa* and *Syllis* sp, the amphipods *Animoceradocus semiserratus* and *Urothoe marina*, the decapods *Galathea intermedia*, *Pagurus bernhardus* and *Pisidia longicornis*, the lesser sand eel *Ammodytes tobianus*, the anthozoans *Adamsia palliata* and *Cerianthus lloydii*, the hydroid *Corymorpha nutans*, the echinoderms *Marthasterias glacialis* and *Echinocyamus pusillus*, the bivalves *Clausinella fasciata* and *Gouldia minima* and nematodes (Table 3).

Species associated with the Maërl-dominated community	
Lithothamnion corallioides	*Pisidia longicornis*
Glycera lapidum	*Ammodytes tobianus*
Lanice conchilega	*Adamsia palliata*
Polygordius sp.	*Cerianthus lloydii*
Sphaerosyllis bulbosa	*Corymorpha nutans*
Syllis sp.	*Marthasterias glacialis*
Animoceradocus semiserratus	*Echinocyamus pusillus*
Urothoe marina	*Clausinella fasciata*
Galathea intermedia	*Gouldia minima*
Pagurus bernhardus	Nematoda spp.

Table 3 Species associated with the Maërl-dominated community.

SAND TO MIXED SEDIMENT WITH POLYCHAETES AND *EDWARDSIA* SPP. COMMUNITY COMPLEX

This subtidal community complex occurs where sediment accumulates between subtidal reef outcrops. It is recorded in the east of the site in water depths of 10 to 25m and in the western extremes of the site in water depths of between 28m and 42m (Figure 4).

In the western part of the site, the sediment is that of fine to medium sand (ranging from 2.6% to 70.7% and 10.4% to 49.1%, respectively) with negligible amounts of silt-clay (>4.2%). To the east, the sediment is mixed (with gravel ranging from 13.6% to 34.6%, very coarse sand from 16.7% to 16.4%, fine sand 6.4% to 81.2% and silt-clay from 9.1% to 23.2%); it is composed of mineral particles, broken shell and maërl sand or gravel.

The fauna of this community is distinguished by the polychaetes *Nephtys* spp., *Hilbigneris gracilis* and *Owenia fusiformis*, the anthozoan *Edwardsia* spp., the phoronid *Phoronis* sp., the bivalve *Dosinia lupinus* and the echinoderm *Echinocyamus pusillus* (Table 4). To the east of the site, the polychaete *Glycera alba,* the sipunculan *Aspidosiphon (Aspidosiphon) muelleri* and the amphipod *Ampelisca diadema* are locally dominant. Overall faunal abundances are low in this area.

Distinguishing species Sand to mixed sediment with polychaetes and *Edwardsia* spp. community complex	
Nephtys spp.	*Phoronis* sp.
Edwardsia spp.	*Dosinia lupinus*
Hilbigneris gracilis	*Echinocyamus pusillus*
Owenia fusiformis	

Table 4 Distinguishing species of Sand to mixed sediment with polychaetes and *Edwardsia* spp. community complex.

INTERTIDAL REEF COMMUNITY COMPLEX

This community complex occurs extensively within the site from Portned to west of Pound Point in the north and from St John's Point to Ackle Back in the south; it includes offshore areas at Connellagh and Lackboy Island (Figure 4).

It is recorded primarily on a substrate of sloping bedrock that often occurs under cliff faces. The community composition varies locally with exposure, aspect and topography. In general, the shore is more exposed from Portned to St. John's Point to the west and is moderately exposed from the beach at Rabley Hill beach to Ackle Back to the east.

The species associated with this community are the lichen *Verrucaria maura*, the barnacle *Semibalanus balanoides*, the gastropod *Patella vulgata*, the anemone *Actinia equina*, the green alga *Ulva intestinalis*, and the brown algae *Fucus serratus*, *Fucus vesiculosus* and *Laminaria digitata* (Table 5).

On exposed shores the red alga *Porphyra umbilicalis* is frequent, while a variety of *F. vesiculosus* adapted to high wave action (*Fucus vesiculosus linearis*) is occasional. On moderately exposed mid shores, the gastropod *Nucella lapillus* is recorded as frequent. The brown seaweed *Himanthalia elongata*, the red algae Corallinaceae spp., the lichen *Xanthoria parietina* and the flowering plant Sea Thrift (*Armeria maritima*) are also recorded within this community complex.

Species associated with the Intertidal reef community complex	
Semibalanus balanoides	*Fucus serratus*
Verrucaria maura	*Fucus vesiculosus*
Patella vulgata	*Actinia equina*
Ulva intestinalis	*Laminaria digitata*

Table 5 Species associated with the Intertidal reef community complex.

LAMINARIA-DOMINATED COMMUNITY COMPLEX

This community complex occurs extensively throughout the site. It is also recorded offshore at Bullockmore to the west of St. John's Point, where a large reef rises to within 2m of the water surface (Figure 4). It is occurs in depths of between 0m to 20m; the exposure regime is that of exposure reef.

The substrate is heterogeneous, leading to a spatial mosaic of community types within the complex. The most common substrate is terraced flat or sloping limestone bedrock that may be fissured or fractured. The depth may change rapidly at terrace edges. The bedrock may be pitted or overlain with a veneer of sediment. Vertical rock faces and sea caves occur within this community.

The biota is dominated by the brown alga *Laminaria hyperborea*. The associated flora includes the brown alga *Saccharina latissima*, coralline red algae including *Lithothamnion corallioides* and Corallinaceae spp., and the foliose red algae species *Dilsea carnosa*, *Delessaria sanguinea* and *Hypoglossum hypoglossoides*. Fauna associated with the kelp understorey include the bryozoan *Membranipora membranacea*, the sea cucumber *Holothuria (Panningothuria) forskali*, the sea urchin *Echinus esculentus*, the anthozoan *Alcyonium digitatum* and sponges of the family Axinellidae (Table 6). Where the reef is covered with a veneer of sand or maërl sand, the faunal community is similar to that of the adjacent reef, but faunal coverage is reduced.

Species associated with the *Laminaria*-dominated community complex	
Laminaria hyperborea	*Saccharina latissima*
Corallinaceae spp.	*Hypoglossum hypoglossoides*
Delessaria sanguinea	*Holothuria (Panningothuria) forskali*
Dilsea carnosa	*Echinus esculentus*
Membranipora membranacea	*Alcyonium digitatum*
Axinellidae spp.	*Alcyonium glomeratum*
Eunicella verrucosa	

Table 6 Species associated with the *Laminaria*-dominated community complex.

A variant of this community is recorded from small sea caves (1m to 3m in length) which were investigated during the BioMar survey. The water depth within the larger seacaves does not exceed 3m. The pink sea fan *Eunicella verrucosa* are commonly recorded at the bottom of the caves with *Alcyonium glomeratum* occurring on the overhanging surfaces.

SUBTIDAL REEF WITH ECHINODERMS AND SPONGES COMMUNITY COMPLEX

This community complex occurs extensively throughout the site in depths ranging from 20m to 62m (Figure 4). The substrate is the same as that described for the *Laminaria*-dominated reef. However, areas of cobble, or a mosaic of cobble and gravel, occur within the complex but predominantly in the southwest of the site.

Species associated with this reef community complex include the sea cucumber *Holothuria (Panningothuria) forskali*, sponges of the family Axinellidae, coralline red algae and the anthozoans *Caryophyllia (Caryophyllia) smithii* and *Alcyonium* spp. (Table 7).

In the shallower reefs (<30m), the community is dominated by the hydroid *Nemertesia antennina* and the anthozoan *C. (Caryophyllia) smithii,* the echinoderms *Echinus esculentus, Stichastrella rosea, Asterias rubens* and *H. (Panningothuria) forskali*, the sponge *Cliona celata* and coralline red algae. In the deeper water (>30m), sponges including *Hymedesmia (Hymedesmia) paupertas, Pachymatisma johnstonia*, *Phakellia ventilabrum* and *Axinella infundibuliformis* are frequently to commonly recorded. The bryozoan *Reteporella beaniana,* the hydroid *Sertularella gayi*, the anthozoans *Alcyonium glomeratum* and *Parazoanthus anguicomus,* and the echinoderms *Luidia ciliaris and Antedon bifida* are also recorded here.

Species associated with Subtidal reef with echinoderms and sponges community complex	
Corallinaceae spp.	*Antedon bifida*
Hymedesmia (Hymedesmia) paupertas	*Luidia ciliaris*
Pachymatisma johnstonia	*Asterias rubens*
Cliona celata	*Reteporella beaniana*
Axinella infundibuliformis	*Stichastrella rosea*
Phakellia ventilabrum	*Parazoanthus anguicomus*
Holothuria (Panningothuria) forskali	*Sertularella gayi*
Alcyonium spp.	*Nemertesia antennina*
Echinus esculentus	*Caryophyllia (Caryophyllia) smithii*

Table 6 Species associated with the Subtidal reef with echinoderms and sponges community complex.

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 to facilitate the appropriate assessment process:

Objective **To maintain the favourable conservation condition of Large shallow inlets and bays in St John's Point 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 encompasses the Annex I habitat Reefs. Targets for this habitat should be addressed in its 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	Maintain the extent of the maërl-dominated community complex, subject to natural processes.

- The maërl-dominated community complex is considered to be keystone community that is of considerable importance to the overall ecology and biodiversity of a habitat by virtue its of their physical complexity, e.g. it serves as important nursery grounds for commercial and non-commercial species.
- Any significant anthropogenic disturbance to the extent of this community complex should be avoided.

- An interpolation of the likely distribution of this community complex is provided in figure 4. The area given below is based on spatial interpolation and therefore should be considered indicative:
    - Maërl-dominated community complex - 23ha

Target 3	Conserve the high quality of the maërl-dominated community complex, subject to natural processes.

- Every effort should be made to avoid any death to living maërl.
- Any significant anthropogenic disturbance to the quality of the maërl-dominated community (i.e. volume of live maërl, thallus structure) should be avoided.

Target 5	Conserve the following community types in a natural condition: Intertidal coarse sediment with enchytraeid oligochaetes and *Scolelepis squamata* community complex; Sand to mixed sediment with polychaetes and *Edwardsia* spp. community complex; Intertidal reef community complex; *Laminaria*-dominated community complex: Subtidal reef with 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 3.
- The estimated areas of these communities given below are based on spatial interpolation and therefore should be considered indicative:
    - Intertidal coarse sediment with enchytraeid oligochaetes and *Scolelepis squamata* community complex - 2ha
    - Sand to mixed sediment with polychaetes and *Edwardsia* spp. community complex - 3ha
    - Intertidal reef community complex – 25ha
    - *Laminaria*-dominated community complex – 37ha
    - Subtidal reef with echinoderms and sponges community complex – 138ha
- 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 Reefs in St John's Point 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 2.
- 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: Intertidal reef community complex; *Laminaria*-dominated community complex; Subtidal reef with 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 4.
- The estimated areas of the communities within the Reefs habitat given below are 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 extents will be underestimated:
  - Intertidal reef community complex – 65ha
  - *Laminaria*-dominated community complex –209ha
  - Subtidal reef with echinoderms and sponges community complex –595ha

- 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 partially submerged sea caves in St John's Point 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 3).
- 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.

Target 3	Conserve the following community type in a natural condition: *Laminaria*-dominated community complex.

- A semi-quantitative description of this community complex has been provided in Section 1.
- The estimated area of this community complex within the Submerged or partially submerged sea caves habitat is unknown but is likely to cover any available hard substrate.
- 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.

Bibliography:

MERC (2012a). Intertidal Benthic Survey and Intertidal Reef Survey of St John's Point SAC. Carried out by MERC on behalf of the Marine Institute in partnership with National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

MERC (2012b). Subtidal Sediment, Maerl and Subtidal Reef Survey of St John's Point SAC. Carried out by MERC on behalf of the Marine Institute in partnership with National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Picton, B.E. and Costello M. J. 1997. The BioMar biotope viewer: a guide to marine habitats, fauna and flora in Britain and Ireland, Environmental Sciences Unit, Trinity College, Dublin.

Figure 1. Extent of Large shallow inlets and bays in St John's Point SAC

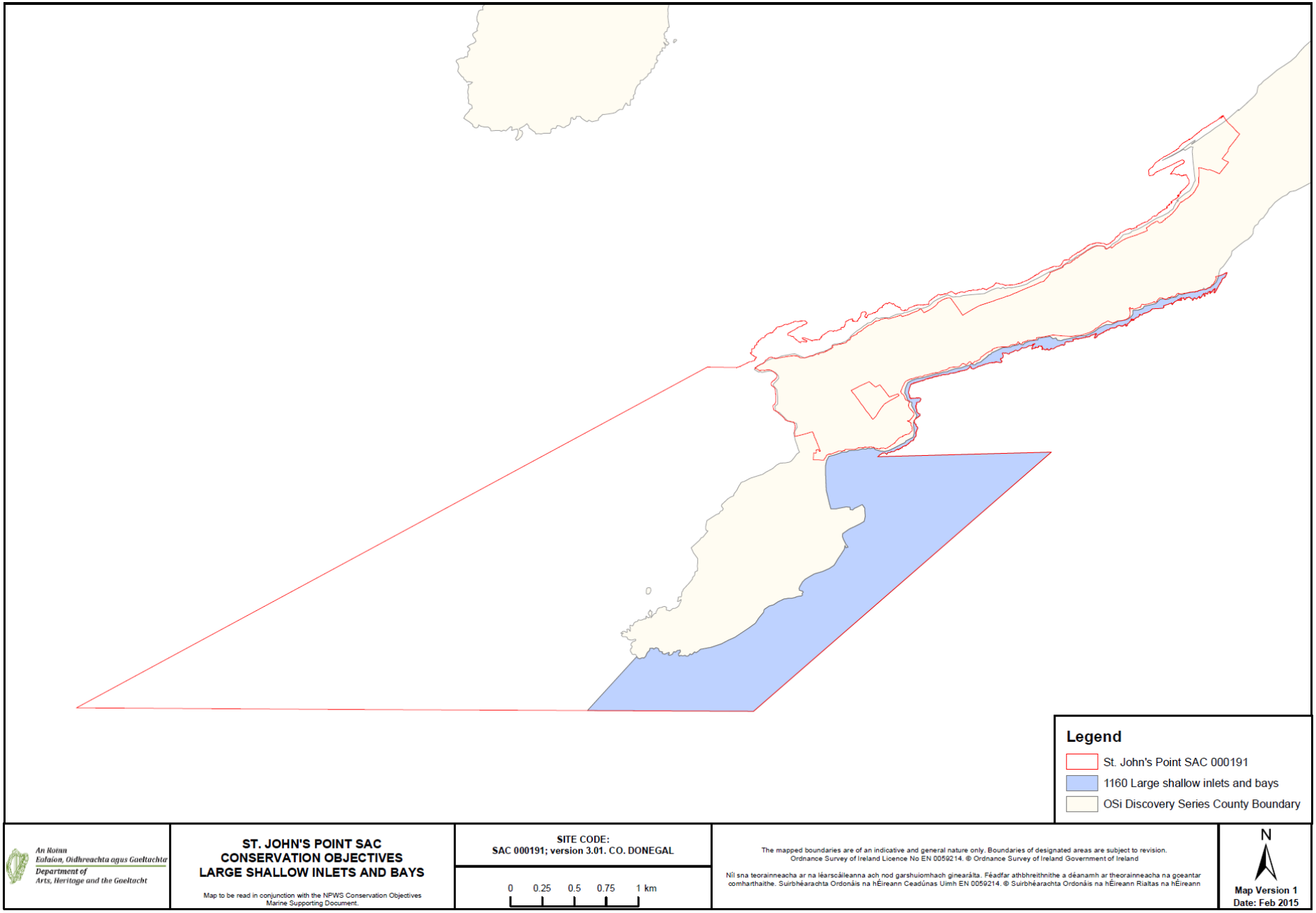

Figure 2. Extent of Reefs in St John's Point SAC

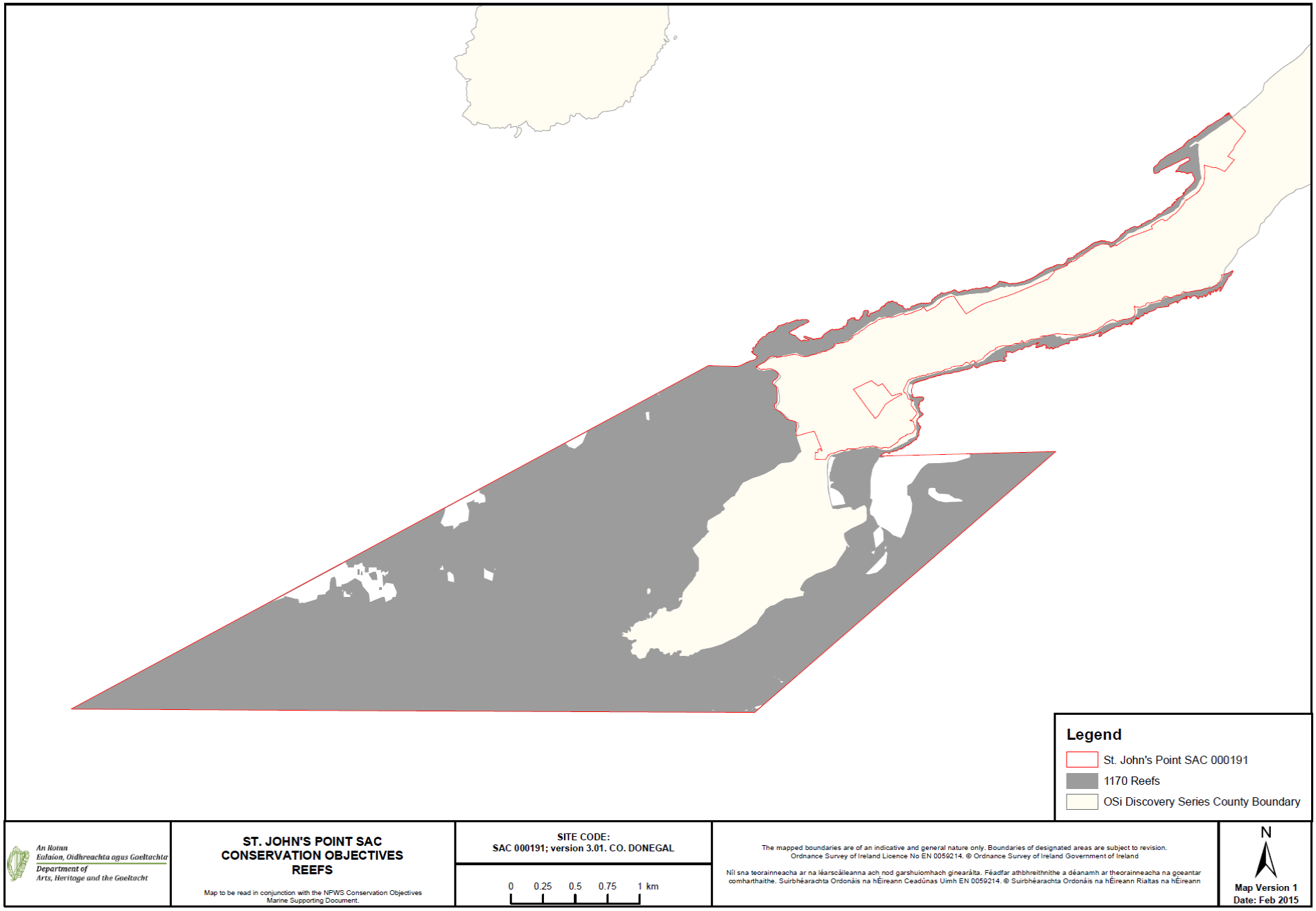

Figure 3. The expected distribution of seacaves in St John's Point SAC

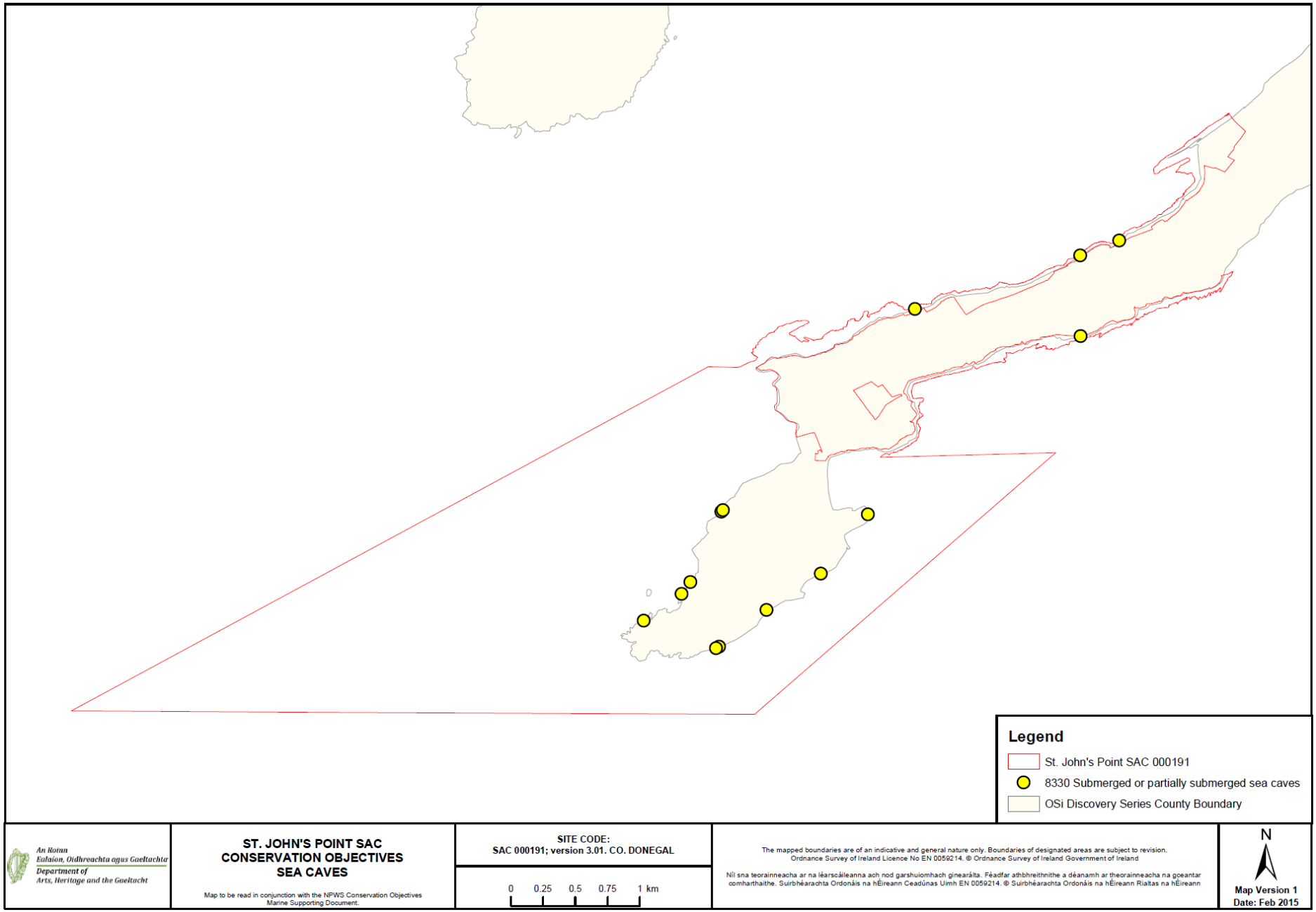

Figure 4. Distribution of community types in St John's Point SAC