

NPWS

**Slieve League SAC
(site code: 189)**

**Conservation objectives supporting document -
Marine Habitats**

**Version 1
July 2015**

Introduction

Slieve League SAC is designated for the marine Annex I qualifying interest of Reefs (Figure 1).

A BioMar survey of this site was carried out in 1996 (Picton and Costello, 1997) and a reef survey was undertaken in 2011 (MERC, 2012). These data were used to determine the physical and biological nature of this SAC.

Aspects of the biology and ecology of the Annex I habitat are provided in Section 1. The corresponding site-specific conservation objective 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 Slieve League SAC, two marine community types are recorded in the Annex I habitat, as presented in table 1; a description of each community type is given below.

Community Type	SAC Annex I Habitat
	Reefs (1170)
Exposed intertidal reef community	✓
Exposed subtidal community complex	✓

Table 1 The community types recorded in Slieve League SAC and their occurrence in the Annex I habitat and the adjacent SPA.

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 Slieve League 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.

EXPOSED INTERTIDAL REEF COMMUNITY

This reef community occurs extensively throughout the site from Doon Point in the north to Teelin Point in the southeast. The community occurs primarily on a substrate of vertical bedrock and cliff faces; it is also recorded from the sloping bedrock that has a fragmented distribution throughout the site, with the largest occurrence being to the northwest of Malin Beg.

The species associated with this community are the barnacle *Semibalanus balanoides*, the gastropod *Patella vulgata* and the bivalve *Mytilus edulis*.

The lichens *Verrucaria maura*, *Xanthoria parietina* and *Ramalina siliquosa* and the red alga *Porphyra umbilicalis* are recorded here while the kelps *Laminaria digitata* and *Alaria esculenta* occur in the sublittoral fringe. The anemone *Actinia equina* is recorded from this community but is rare.

Species associated with the Exposed intertidal reef community	
<i>Semibalanus balanoides</i>	<i>Mytilus edulis</i>
<i>Patella vulgata</i>	

Table 2 Species associated with the Exposed intertidal reef community.

EXPOSED SUBTIDAL REEF COMMUNITY COMPLEX

This reef community complex occurs throughout the SAC in water depths of up to 30m (Figure 2). The substrate here is largely bedrock that slopes steeply away from the cliff walls. Vertical rock walls are recorded at Carrigan Head in the south of the site. There are some small areas of cobbles and boulders, but these are generally fragmented in their distribution with the largest occurrence being off the shore at Slieve League.

The species associated with this community are the kelp species *Laminaria hyperborea*, the red algae *Delesseria sanguinea*, *Bonnemaisonia asparagoides*, *Kallymenia reniformis*, *Nitophyllum punctatum* and *Rhodymenia pseudopalmata*, the brown algae *Dictyota dichotoma* and *Dictyopteris polypodioides*, the sponges *Cliona celata* and *Leucosolenia botryoides*, the gastropod *Calliostoma zizyphinum*, the hydroids *Nemertesia ramosa*, *Schizotricha frutescens* and *Sertularella gayi*, the bryozoans *Parasmittina trispinosa*, *Alcyonidium diaphanum* and *Porella compressa* and the anthozoan *Caryophyllia (Caryophyllia) smithii* (Table 3). *D. sanguinea*, *D. dichotoma*, *D. polypodioides*, *C. celata*, *C. zizyphinum* and *C. (Caryophyllia) smithii* are recorded throughout the community. The remaining species are not uniformly distributed throughout the community.

Where vertical walls occur, the anthozoans *Corynactis viridis*, *Metridium senile* and the bryozoan *Crisia eburnea* are recorded. In the shallower parts of the complex, where *L. hyperborea* occurs, there is an understory of foliose red algae consisting of *D. sanguinea*, *B. asparagoides*, *K. reniformis*, *N. punctatum* and *R. pseudopalmata* along with *Hypoglossum hypoglossoides*, *Acrosorium uncinatum* and *Plocamium cartilagineum*. The sponge *L. botryoides* and the bryozoans *P. trispinosa*, *A. diaphanum* and *P. compressa* are also recorded here.

B. asparagoides, *K. reniformis*, *P. trispinosa*, *P. compressa*, *N. ramosa* and *S. gayi* are not restricted to the kelp dominated areas. They are also recorded from the south of the SAC; *S. frutescens*, the sponge *R. aculeata*, the red alga *Rhodophyllis* sp. and the colonial anemone *Isozoanthus sulcatus* also occur here.

In the cobble field off Slieve League, the ophiuroids *Ophiothrix fragilis*, *Ophiocolina nigra* are very abundant, while the ophiuroid *Ophiura alba* is also recorded. The hydroids *Nemertesia ramosa*, *Nemertesia antennina*, *Halecium halecinum*, *Schizotricha frutescens* and

Kirchenpaueria pinnata, the red algae *Rhodymenia pseudopalmata*, *Delesseria sanguinea*, *Radicilingua thysanorhizans* and *Dictyota dichotoma* and the polychaete *Spirorbis* sp. are also occur here.

To the south of Gloster Rock, the brown alga *Saccharina latissima* is recorded on a bed of stable cobbles in an unusual association with ephemeral red algae including *Halarachnion ligulatum*, *Acrosorium ciliolatum* and *ErythroGLOSSUM laciniatum*. The rare red alga *Schmitzia hiscockiana* is recorded here.

The sea fan *Eunicella verrucosa*, the soft corals *Alcyonium digitatum* and *A. glomeratum* and the bryozoan *Pentapora foliacea* are recorded on bedrock substrates in water depths of 17m to 26m. This is considered unusual due to the shallow depth and the occurrence of these species with a variety of red algae. The nudibranch *Tritonia nilsodhneri* is recorded in association with *E. verrucosa* the latter species is approaching its northern limit at this site.

The sponge *Axinella infundibuliformis* is recorded to the southeast of Carrigan Head.

Species associated with the Exposed subtidal community complex	
<i>Laminaria hyperborea</i>	<i>Leucosolenia botryoides</i>
<i>Delesseria sanguinea</i>	<i>Calliostoma zizyphinum</i>
<i>Bonnemaisonia asparagoides</i>	<i>Sertularella gayi</i>
<i>Kallymenia reniformis</i>	<i>Nemertesia ramosa</i>
<i>Nitophyllum punctatum</i>	<i>Schizotricha frutescens</i>
<i>Rhodymenia pseudopalmata</i>	<i>Parasmittina trispinosa</i>
<i>Dictyota dichotoma</i>	<i>Alcyonidium diaphanum</i>
<i>Dictyopteris polypodioides</i>	<i>Porella compressa</i>
<i>Cliona celata</i>	<i>Caryophyllia (Caryophyllia) smithii</i>

Table 3 Species associated with the Exposed subtidal 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 Reefs in Slieve League 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.
	<ul style="list-style-type: none">▪ 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.
	<ul style="list-style-type: none">▪ 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: Exposed intertidal reef community and Exposed subtidal 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 2.
- 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:
 - Exposed intertidal reef community -32ha
 - Exposed subtidal community complex- 584ha
- 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 (2012). Intertidal and Subtidal Reef Survey of Slieve League SAC. Carried out by MERC on behalf of the Marine Institute in partnership with National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.

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 Reefs in Slieve League SAC

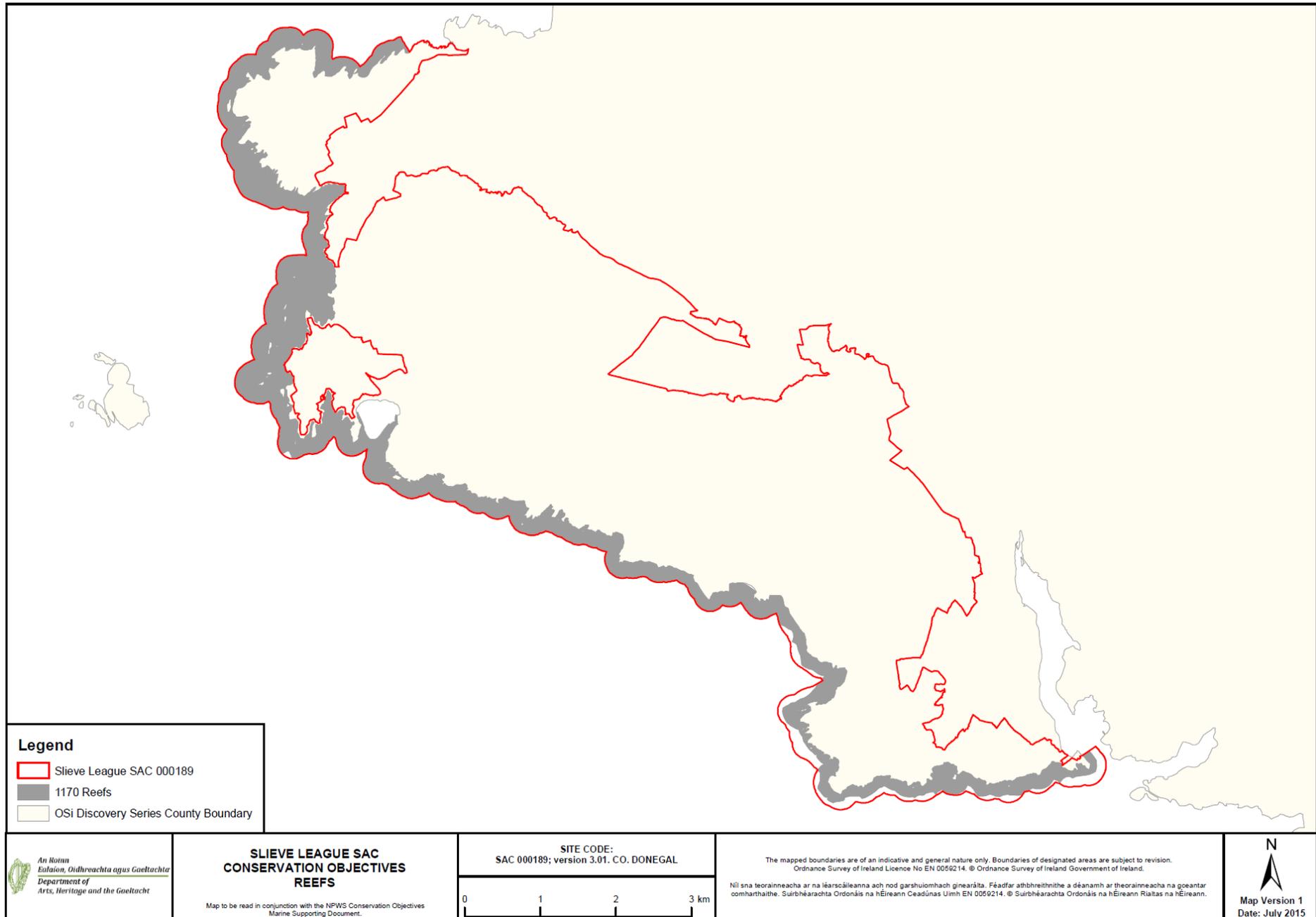


Figure 2. Distribution of community types in Slieve League SAC

