

**NPWS**

**Gweedore Bay and Islands SAC**  
**(site code: 1141)**

**Conservation objectives supporting document -**  
**Marine Habitat**

**Version 1**  
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## **Introduction**

Gweedore Bay and Islands SAC is designated for the marine Annex I qualifying interest of Reefs (Figure 1).

A subtidal reef survey was undertaken in 2010 (Aquafact, 2011) and intertidal observations were made during a walkover of the site in 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 is 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 Gweedore Bay and Islands SAC, two community types are recorded in the Annex I habitat, namely Reef community complex and *Laminaria*-dominated community complex (Figure 2).

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 Gweedore Bay and Islands SAC 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 COMMUNITY COMPLEX

This community complex occurs in the intertidal throughout the site. It is recorded on exposed shores from An Chloch Ghlas in the south to Bunaninver in the north and along the sheltered upper shores of Keadew, Cruit and Annagary Strands (Figure 2). It also occurs in the shallow subtidal at the outer reaches of the Gweedore River at Bunbeg.

On exposed coasts from An Chloch Ghlas in the south to Altawinny Bay in the north the reef substrate is that of bedrock with some vertical or near vertical surfaces and large boulders. At the northern extreme of the site from Altawinny Bay to Bunaninver the substrate is that of flat bedrock on the upper shore with smaller boulders and large cobbles on the lower shore.

Where this community complex occurs in sheltered environs it is very narrow and is composed primarily of bedrock; some small boulders occur on the bedrock at Annagary Strand and northeast of Dunmore.

On exposed reefs the lichen *Lichina pygmaea*, the gastropods *Nucella lapillus*, *Littorina littorea* and *Patella vulgata*, the barnacles *Chthamalus stellatus* and *Semibalanus balanoides* and the brown algae *Fucus serratus*, *Himanthalia elongata* and *Laminaria digitata* are commonly recorded. On sheltered reefs the brown algae *Fucus vesiculosus* and *Halidrys siliquosa* and unidentified cushion sponges occur. The lichen *Verrucaria maura* and the brown alga *Pelvetia canaliculata* occur throughout this community complex (Table 1).

Species associated with the Reef community complex	
<i>Verrucaria maura</i>	<i>Lichina pygmaea</i>
<i>Pelvetia canaliculata</i>	<i>Laminaria digitata</i>
<i>Littorina littorea</i>	<i>Nucella lapillus</i>
<i>Patella vulgata</i>	<i>Himanthalia elongata</i>
<i>Chthamalus stellatus</i>	<i>Fucus vesiculosus</i>
<i>Semibalanus balanoides</i>	<i>Halidrys siliquosa</i>
<i>Fucus serratus</i>	Cushion sponges

**Table 1** Species associated with the Reef community complex.

#### **LAMINARIA-DOMINATED COMMUNITY COMPLEX**

This community complex is recorded within the site in water depths of between 0m and 17m (Figure 2). The exposure regime is that of exposed to moderately exposed reef.

The substrate ranges from cobble and boulder to bedrock to a mosaic of both. Cobbles and boulders are recorded between Gola Island and Inishsirrer and in the south of the site at Cruit Island; flat and sloping bedrock occurs at Gola Island and Inishfree Lower and from Cruit Island to the southern boundary of the site. In deeper water (>14m) the reef is a mosaic of bedrock and cobbles and boulders.

The species associated with this community are the kelp species *Laminaria hyperborea*, *L. digitata* and *Saccharina latissima*, encrusting calcareous red algae, the echinoderm *Echinus esculentus* and epiphytic bryozoans. The echinoderm *Holothuria (Panningothuria) forskali*, the sponge *Cliona* sp. are recorded from this community complex in areas where *Laminaria* spp. are sparse (Table 2).

Species associated with the <i>Laminaria</i> -dominated community complex	
<i>Laminaria hyperborea</i>	<i>Echinus esculentus</i>
<i>Laminaria digitata</i>	Epiphytic bryozoans
<i>Saccharina latissima</i>	<i>Holothuria (Panningothuria) forskali</i>
Encrusting calcareous red algae	<i>Cliona</i> sp.

**Table 2** Species associated with the *Laminaria*-dominated 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](http://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 Gweedore Bay and Islands SAC, which is defined by the following list of attributes and targets**

<b>Target 1</b>	The permanent area is stable or increasing, subject to natural processes.
	<ul style="list-style-type: none"><li>▪ 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 and to the scattered and discontinuous nature of hard substrate here.</li><li>▪ 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.</li><li>▪ Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.</li></ul>

<b>Target 2</b>	The distribution of reefs is stable or increasing, subject to natural processes.
	<ul style="list-style-type: none"><li>▪ The likely distribution of reef habitat in this SAC is indicated in figure 1.</li><li>▪ 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.</li><li>▪ Early consultation or scoping with the Department in advance of formal application is advisable for such proposals.</li></ul>

<b>Target 3</b>	Conserve the following community types in a natural condition: Reef community complex; <i>Laminaria</i> -dominated community complex
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- A semi-quantitative description of the communities has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 2a and 2b.
- 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 and also areas of scattered and discontinuous reef, the mapped community extents will be underestimated:
  - Reef community complex - 309ha
  - *Laminaria*-dominated community complex - 61ha
- 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:**

Aquafact (2011). Reef Investigations in Gweedore Bay and Islands cSAC (Site Code: IE001141). Produced by Aquafact on behalf of the Marine Institute in partnership with National Parks & Wildlife Service.

Figure 1. Extent of Reefs in Gweedore Bay and Islands SAC





Figure 2. Distribution of community types in Gweedore Bay and Islands SAC

