

NPWS

Kerry Head Shoal SAC
(site code: 2263)

Conservation objectives supporting document -
Marine Habitat

Version 1
September 2013

Introduction

Kerry Head Shoal SAC is designated for the marine Annex I qualifying interest of Reefs (Figure 1).

In addition to the BioMar survey that was undertaken in 1995 (Picton & Costello, 1997) a reef survey was undertaken 2010 (Aquafact, 2010). 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 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 Kerry Head Shoal SAC, a single community type, Exposed subtidal reef community complex, is recorded; a description of this community type is given below.

Estimated area of this community type within the Annex I 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 Kerry Head Shoal 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.

EXPOSED SUBTIDAL REEF COMMUNITY COMPLEX

This community complex occurs throughout the site in depths of between 20m to 52m; the shoal itself runs in a northwest direction across the centre of the site. In the north and west of the site the substrate is that of flat or sloping limestone bedrock; gullies, fissures and sumps present in this bedrock contain small amounts of sand. Sand is also recorded as a thin layer over bedrock elsewhere. Vertical rock walls are present in the southeast of the site, while in the south and east and around the shoal the predominant substrate is a mosaic of bedrock, cobble and boulders.

The species associated with this community complex are the encrusting sponges *Pachymatisma johnstonia* and *Axinella dissimilis*, the echinoderm *Holothuria (Panningothuria) forskali*, the cup coral *Caryophyllia (Caryophyllia) smithii* and foliose algae. These species are not uniformly distributed throughout the community.

Foliose algae are recorded at depths of between 20m and 26m around the shoal at the centre of the site. Where the kelp *Laminaria hyperborea* occurs it is sparse and the understory beneath it includes red algae such as *Callophyllis laciniata*, *Kallymenia reniformis*, *Acrosorium ciliolatum*, *Cryptopleura ramosa*, *Delesseria sanguinea* and *Drachiella spectabilis* and the brown alga *Carpomitra costata*. A rich and diverse fauna including the sponges *Cliona celata* and *Polymastia boletiformis*, the hydroids *Aglaophenia pluma*, *Nemertesia antennina*, the bryozoans *Membranipora membranacea* and *Electra pilosa* and the gastropod *Aplysia punctata* are also recorded here.

The echinoderms *Echinus esculentus*, *Antedon bifida*, *Aslia lefevrii*, *Luidia ciliaris*, *Marthasterias glacialis*, *Stichastrella rosea* and *Henricia oculata*, the sponges *Suberites carnosus*, *Thymosia guernei*, *Dysidea fragilis*, *Haliclona (Rhizoniera) viscosa*, *Haliclona (Haliclona) urceolus*, *Iophon nigricans*, *Spongionella pulchella*, *Spongosorites* sp., *Tethya aurantium* and *Stelligera stuposa*, the cnidarians *Alcyonium digitatum*, *Corynactis viridis* and *Sertularella gayi* and the gastropod *Calliostoma zizyphinum* are recorded within this complex.

Three species which are more typical of deeper water are recorded within this complex; these are the sea fan *Eunicella verrucosa*, the hydroid *Gymnangium montagui* and the ascidian *Diazona violacea*.

The site hosts the best known example of the axinellid sponge community in Ireland. In addition to *Axinella dissimilis* several other species of erect and encrusting sponges are recorded here including *Axinella damicornis*, *Axinella infundibuliformis*, *Phakellia ventilabrum*, *Bubaris vermiculata* and the rare species *Axinella flustra* and *Hexadella racovitzai*. *A. infundibuliformis*, *A. flustra*, *P. ventilabrum*, *B. vermiculata* and *H. racovitzai* occur at depths of between 33m and 40m. A number of rare species including the bryozoan *Pentapora fascialis*, the ascidian *Diazona violacea* and the soft coral *Alcyonium glomeratum* occur on bedrock from this depth range. In the deepest areas of the site the rare sponges *Craniella cranium*, *Craniella zetlandica* and *Quasillina brevis* and the rare gastropod *Aldisa zetlandica* are recorded.

Axinella flustra and *Hexadella racovitzai*, *Craniella cranium*, *Craniella zetlandica* and *Quasillina brevis* are only known from only one or two other locations in Ireland.

Species
Encrusting sponges
<i>Holothuria (Panningothuria) forskali</i>
<i>Pachymatisma johnstonia</i>
<i>Caryophyllia (Caryophyllia) smithii</i>
<i>Axinella dissimilis</i>
Foliose algae

Table 1: Species associated with Exposed subtidal reef 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 the Annex I habitat to facilitate the appropriate assessment process:

Objective **To maintain the favourable conservation condition of Reefs in Kerry Head Shoal 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.
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- 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.
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- 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 type in a natural condition: Exposed subtidal reef community complex.

- A semi-quantitative description of the community has been provided in Section 1.
- An interpolation of its likely distribution is provided in figure 2.
- The estimated area of the community 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:
 - Exposed subtidal reef community complex - 5797ha
- 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 the community should not exceed an approximate area of 15% of the interpolated area of the 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 the community but may not necessarily represent a continuous or ongoing source of disturbance over time and space may be assessed in a context-specific manner giving due consideration to the proposed nature and scale of activities during the reporting cycle and the particular resilience of the receiving habitat in combination with other activities within the designated site.

Bibliography:

Aquafact (2011). Reef Investigations in Kerry Head Shoal cSAC (cSAC Site Code: IE002263).

Produced by Aquafact on behalf of the Marine Institute in partnership with National Parks & Wildlife Service Aquafact

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 Kerry Head Shoal SAC

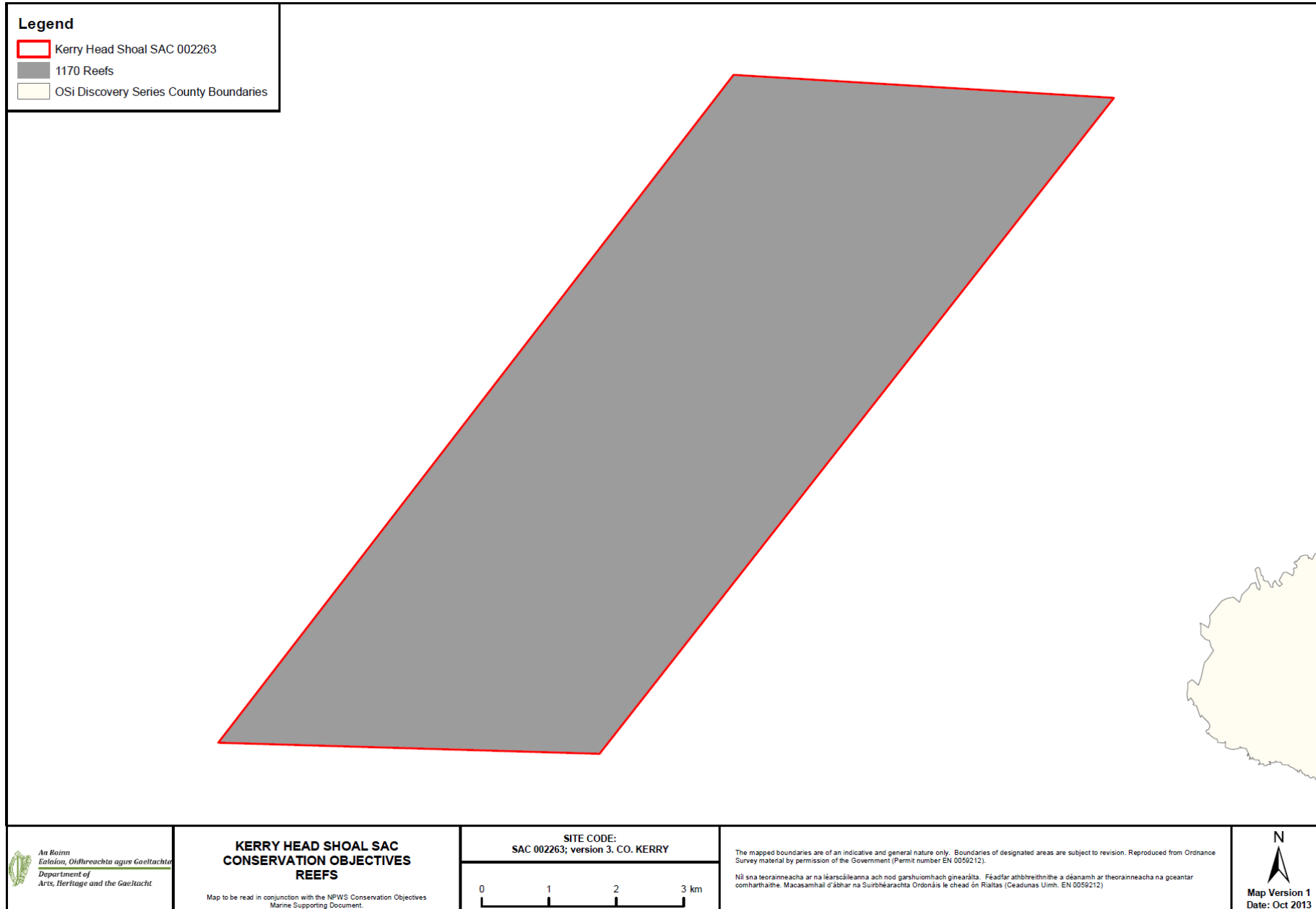


Figure 2. Distribution of the community type in Kerry Head Shoal SAC

