NPWS

Lady's Island Lake SAC

(site code: 000704)

Conservation objectives supporting document -

Marine Habitats

Version 1

April 2019

Contents

Please note that this document should be read in conjunction with the following report: NPWS (2019) Conservation Objectives: Lady's Island Lake SAC 000704. Version 1.0. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

Introduction

Lady's Island Lake SAC is designated for the marine Annex I Qualifying Interest habitat Reefs (see Figure 1).

A BioMar survey was carried out in this area in 1994 (Picton and Costello, 1997) and intertidal and subtidal surveys were undertaken in 2012 (MERC, 2013); these data were used to determine the physical and biological nature of the habitat in the 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/EEC).

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 conservation objective and targets in the completion of such assessments is provided in Section 2.

Section 1

Principal Benthic Communities

Within Lady's Island Lake SAC, a single community type was recorded in the Annex I habitat Reefs and a description of this is given below.

The estimated area of the 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 Lady's Island Lake 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.

Intertidal reef community complex

This community complex occurs to the south and west of Carnsore Point (Figure 2). The substrate is that of gently sloping bedrock with boulders and cobbles. The reef may have a transitory veneer of sediment and patches of sand may accumulate between reef outcrops. Although this intertidal reef is subject to strong wave action and tidal currents, the shallow sloping intertidal and infralittoral morphology dissipates much of the energy leading to a shore classification of moderately exposed reef. Rock pools are frequent within the complex.

The species associated with this complex include the gastropod *Patella vulgata*, the green alga *Ulva intestinalis,* the red algae *Corallina officinalis, Osmundea pinnatifida, Mastocarpus stellatus* and Corallinaceae, the brown algae *Fucus serratus* and *Himanthalia elongata,* the anthozoan *Actinia equina* and the sponge *Halichondria (Halichondria) panicea*.

Other species recorded within the complex include the brown algae *Laminaria digitata* and *Fucus vesiculosus,* the red algae *Palmaria palmata*, *Plumaria plumosa* and *Chondrus crispus*, the hydrozoan *Dynamena pumila*, the barnacle *Semibalanus balanoides*, the gastropods *Melarhaphe neritoides* and *Nucella lapillus*. The lichens *Ramalina siliquosa, Verrucaria maura* and *Xanthoria parietina* also occur within the complex.

Table 1 Species associated with the Intertidal reef community complex.

Species associated with the Intertidal reef community complex	
Fucus serratus	*Plumaria plumosa*
Fucus vesiculosus	*Actinia equina*
Himanthalia elongata	*Semibalanus balanoides*
Laminaria digitata	*Melarhaphe neritoides*
Cladophora rupestris	*Nucella lapillus*
Ulva intestinalis	*Patella vulgata*
Chondrus crispus	*Dynamena pumila*
Corallina officinalis	*Halichondria (Halichondria) panicea*
Corallinaceae	*Ramalina siliquosa*
Mastocarpus stellatus	*Verrucaria maura*
Osmundea pinnatifida	*Xanthoria parietina*
Palmaria palmata	

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A small area of subtidal reef occurs within this site to the south of Carnsore Point, just below the low water mark. Here, the kelp species *Laminaria hyperborea* dominates.

Intertidal sediment community

This sediment community, which is not part of the Annex I Reefs habitat, occurs from the western extreme of the SAC to the intertidal reef at Carnsore Point. The substrate ranges from sand to mixed sediment. The fauna is dominated by the polychaetes *Eteone longa*, *Capitella* spp., *Malacoceros fuliginosus* and *Arenicola marina* and, in coarser sediments, the crustaceans *Eurydice pulchra* and *Pontocrates* sp.

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 functions, 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 functions 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 functions (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 EU Habitats 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 the site-specific conservation objective and targets for the Annex I habitat to facilitate the appropriate assessment process:

Objective **To maintain the favourable conservation condition of Reefs in Lady's Island Lake 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

- The area of this habitat represents the minimum estimated area of reef in the SAC and underestimates the actual area due to the sloping rock within the reef habitat.
- This target refers to activities or operations that propose to permanently remove habitat from the SAC, thereby reducing the permanent amount of habitat area. It does not refer to long or short term disturbance of the biology of the 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 the 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 SAC. 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: Intertidal reef 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 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:

  - Intertidal reef community complex - 1ha

- This target relates to the structure and functions 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 (2013) Intertidal and Subtidal Reef Survey of Lady's Island Lake 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 Reefs in Lady's Island Lake SAC

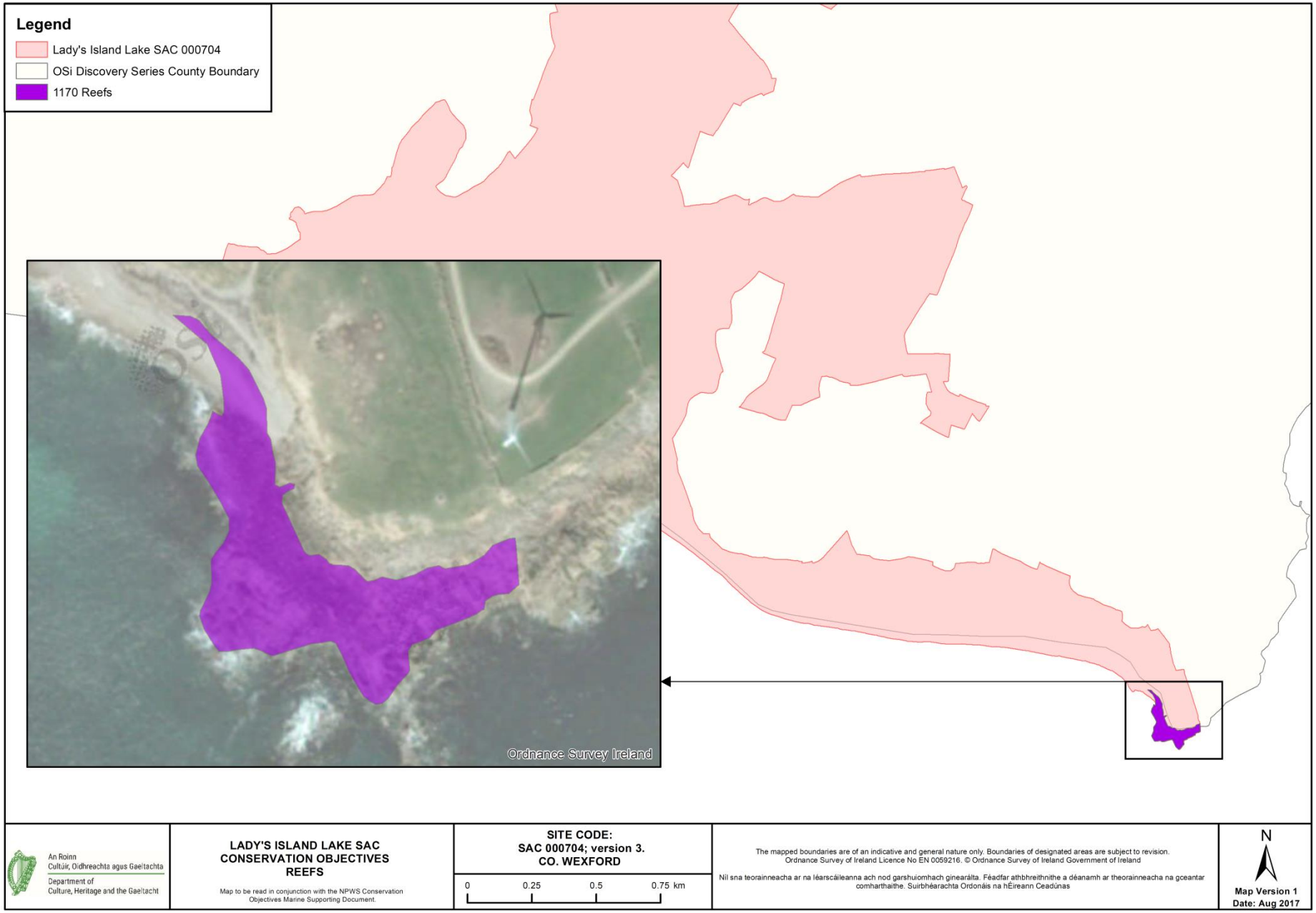

Figure 2. Distribution of marine community types in Lady's Island Lake SAC