NPWS

Barley Cove to Ballyrisode Point SAC
(site code: 1040)

Conservation objectives supporting document -
Marine Habitats

Version 1

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Introduction

Barley Cove to Ballyrisode Point SAC is designated for the marine Annex I qualifying interest of Mudflats and sandflats not covered by seawater at low tide (Figure 1).

Intertidal survey was undertaken in 2011 (MERC, 2012) and 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 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 Barley Cove to Ballyrisode Point SAC, two community types are recorded within the Annex I habitat. A description of each community type is given below.

Community Type	Annex I Habitat
	Mudflats and sandflats not covered by seawater at low tide (1140)
Sand with *Eurydice pulchra* community complex	✓
Coarse sediment with *Tubificoides benedii* community	✓

Table 1 The community types recorded in Barley Cove to Ballyrisode Point SAC.

Estimated areas of each community type within the Annex I habitat, based on interpolation, and 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 Barley Cove to Ballyrisode Point 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.

SAND WITH *EURYDICE PULCHRA* COMMUNITY COMPLEX

This community complex is recorded in the intertidal and the shallow subtidal at Barley Cove, in Galley Cove and in Crook Haven at White Strand (Figure 2).

The substrate here is largely that of medium sand (ranging from 20.1% to 78%); however at Cannawee, in Barley Cove, the sediment is more mixed with coarse sand ranging from 19.9% to 45.6% and fine sand from 18.6% to 71.6%.

The distinguishing species are the crustaceans *Eurydice pulchra* and *Pontocrates arenarius* and the polychaete *Scolelepis* (*Scolelepis*) *squamata*. These species are not uniformly distributed throughout the community. *E. pulchra* is recorded in moderate to low abundances in Barley Cove and at White Strand. *S.* (*Scolelepis*) *squamata* occurs in low abundances and

P. arenarius is recorded in moderate to low abundances in Barley Cove. *S.* (*Scolelepis*) *squamata* also occurs at White Strand (Table 2).

The crustaceans *Bathyporeia pelagica* and *Cumopsis fagei* and the oligochaete *Tubificoides benedii* occur in low abundances in Barley Cove. The bivalves *Cerastoderma edule*, *Mya arenaria* and *Angulus tenuis* and the polychaete *Lanice conchilega* are recorded on White Strand and at Galley Cove. The bivalves *Chamelea gallina*, *Solen marginatus* and *Ensis magnus* also occur at Galley Cove.

The polychaete *Caulleriella alata* is locally abundant at White Strand; other species which occur here include the polychaetes *Scoloplos* (*Scoloplos*) *armiger*, *Mediomastus fragilis*, *Pygospio elegans* and *Nephtys hombergii* and the amphipod *Gammarus chevreuxi* which occur in low abundances. These species are not recorded elsewhere within the complex. This increase in diversity may be due to increase algal cover on the south of the beach.

Distinguishing species of Sand with *Eurydice pulchra* community complex	
Eurydice pulchra	*Pontocrates arenarius*
Scolelepis (*Scolelepis*) *squamata*	

Table 2 Distinguishing species of the Sand with *Eurydice pulchra* community complex.

A variant of this community complex occurs intertidally at White Strand and Galley Cove. It is distinguished by the polychaetes *Arenicola marina* and *Microphthalmus* sp. which are recorded in low abundances here. The polychaetes *Malacoceros fuliginosus* and *Capitella* sp. are recorded in high abundances in Galley Cove. In the northwest of White Strand adjacent to a drainage channel the gastropod *Peringia ulvae* is recorded in high abundances while the oligochaete *Tubificoides benedii* occurs in moderate abundances.

COARSE SEDIMENT WITH *TUBIFICOIDES BENEDII* COMMUNITY

This community occurs in the northeast of Crook Haven at Rock Island (Figure 2).

The substrate is that of coarse to mixed sediments, with gravel ranging from 44.5% to 61.1%, very coarse sand from 13.6% to 14.4% and coarse sand from 9.4% to 14.8%; the proportion of fine material within the complex is low (fine sand ranging from 4.4% to 6.9%, very fine sand <2% and silt-clay from 3.3% to 5.8%).

The distinguishing species of this community are the oligochaetes *Tubificoides benedii* and *Heterochaeta costata*, the polychaete *Malacoceros fuliginosus* and unidentified nemerteans. *T. benedii* is recorded in very high abundances while *H. costata* is recorded in high to moderate

abundances within the community. *M. fuliginosus* occurs in moderate to low abundances while unidentified nemerteans occur in low abundances.

The polychaete *Capitella* sp., the gastropod *Peringia ulvae*, unidentified nematodes, amphipods of the family Gammaridae and oligochaetes of the family Enchytraeidae occur in low abundances throughout the community. The bivalve *Cerastoderma edule* occurs in low abundances on the upper shore at Rock Island.

Distinguishing species of Coarse sediment with *Tubificoides benedii* community	
Tubificoides benedii	*Malacoceros fuliginosus*
Heterochaeta costata	Nemertea indet.

Table 2 Distinguishing species of the Coarse sediment with *Tubificoides benedii* community.

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 Mudflats and sandflats not covered by seawater at low tide in Barley Cove to Ballyrisode 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 target refers to activities or operations that propose to permanently remove habitat from a 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 5	Conserve the following community types in a natural condition: Sand with *Eurydice pulchra* community complex and Coarse sediment with *Tubificoides benedii* community.

- A semi-quantitative description of these community types has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 2.
- The estimated areas of these community types within the Mudflats and sandflats not covered by seawater at low tide habitat given below is based on spatial interpolation and therefore should be considered indicative:
    - Sand with *Eurydice pulchra* community complex – 6ha
    - Coarse sediment with *Tubificoides benedii* community – 66ha

- 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 Benthic Surveys of Barley Cove to Ballyrisode Point SAC. Produced by MERC on behalf of the Marine Institute in partnership with National Parks & Wildlife Service.

Figure 1. Extent of Mudflats and sandflats not covered by seawater at low tide in Barley Cove to Ballyrisode Point SAC

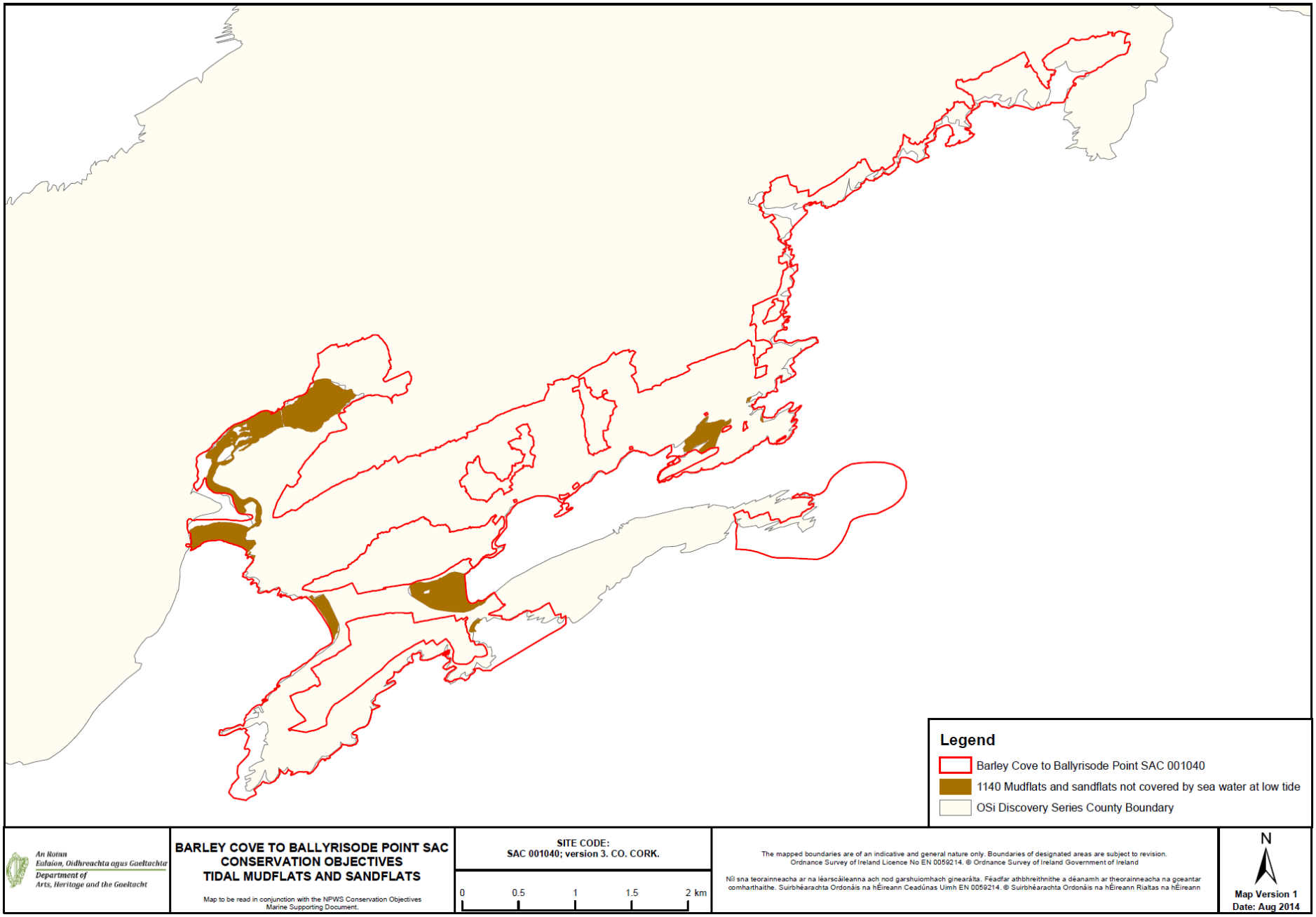

Figure 2. Distribution of community types in Barley Cove to Ballyrisode Point SAC