

**NPWS**

**Tranarossan and Melmore Lough SAC  
(site code: 194)**

**Conservation objectives supporting document -  
Marine Habitats**

**Version 1  
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## **Introduction**

Tranarossan and Melmore Lough SAC is designated for the marine Annex I qualifying interest of Mudflats and sandflats not covered by seawater at low tide (Figure 1).

An intertidal survey was undertaken in 2011 (MERC, 2012) and an intertidal walkover in 2013 (Patterson and Kennedy, 2013) 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 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 Tranarossan and Melmore Lough SAC, a single community type is recorded in the Annex I habitat Mudflats and sandflats not covered by seawater at low tide. A description of this community type is given below.

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 Tranarossan and Melmore Lough 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 SAND COMMUNITY COMPLEX

This community occurs throughout the site at Doagh, Trá na Rossan, Boyeeghter Strand, Tranafaighaboy, Gortnalughoge Bay and Invermore Bay (Figure 2). It occurs from the intertidal into the shallow subtidal.

The sediment of the complex is that of medium to fine sand, with medium sand ranging from 4.2% to 61.1% and fine sand from 9.5% to 94.3%. Coarse sand is generally <6%; however at Doagh it comprises 59.28% of the sediment fractions. The proportions of the remaining fractions within the complex are negligible.

The fauna of this community is typical of mobile intertidal sands with generally low species abundances and diversity. The distinguishing species are oligochaetes of the family Enchytraeidae, the crustaceans *Eurydice pulchra* and *Talitrus saltator* and the polychaete *Scolelepis (Scolelepis) squamata* (Table 1). These species are not uniformly distributed within the community and their abundances are generally low. Enchytraeidae are recorded from Doagh, at Gortnalughoge Bay and at Tranafaighaboy, *E. pulchra* is recorded Gortnalughoge Bay. *T. saltator* occurs at Doagh and Boyeeghter Strand and *S. (Scolelepis) squamata* is recorded at Gortnalughoge Bay and at Trá na Rossan.

The polychaete *Pygospio elegans*, the bivalve *Lasaea adansonii*, the gastropod *Peringia ulvae* and the amphipods *Pontocrates arenarius*, *Bathyporeia pilosa* and *Haustorius arenarius* are also recorded within this community; they occur in low abundances. *P. elegans*, *B. pilosa* and

*H.arenarius* are recorded at Invermore Bay. *P. arenarius* and *P. ulvae* are recorded at Trá na Rossan and *L. adansonii* occurs at Doagh.

The amphipod *Bathyporeia pelagica* and the polychaetes *Nephtys cirrosa* and *Scoelepis* (*Scoelepis*) *foliosa* are recorded at Trá na Rossan.

Distinguishing species Intertidal sand community complex	
Enchytraeidae indet.	<i>Scoelepis</i> ( <i>Scoelepis</i> ) <i>squamata</i>
<i>Eurydice pulchra</i>	<i>Talitrus saltator</i>

**Table 1** Distinguishing species of Intertidal sand 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 Mudflats and sandflats not covered by seawater at low tide in Tranarossan and Melmore Lough 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 2**        Conserve the following community type in a natural condition: Intertidal sand community complex.

- A semi-quantitative description of this community type has been provided in Section 1.
- An interpolation of its likely distribution is provided in figure 2.
- The estimated area of this community type 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:
  - Intertidal sand community complex - 28ha
- 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:**

MERC (2012). Intertidal benthic survey of Tranarossan and Melmore Lough 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.

Paterson, A. and B. Kennedy (2013). Tranarossan & Melmore Lough SAC (000194), Sheephaven Bay SAC (001190) and Ballyness Bay SAC (001090) Field Report. Carried out on behalf of the National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Figure 1. Extent of Mudflats and sandflats not covered by seawater at low tide in Tranarossan and Melmore Lough SAC

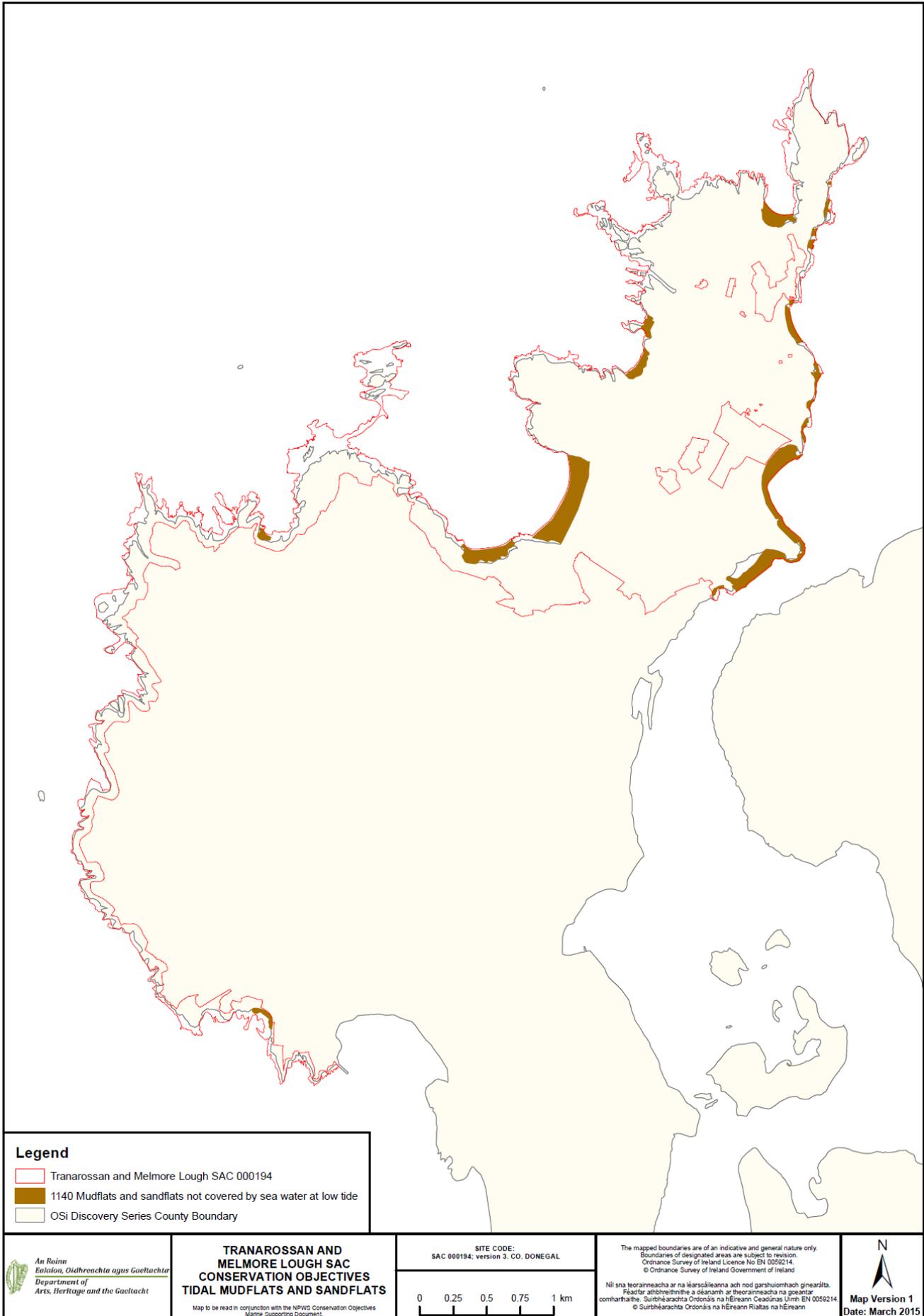


Figure 2 Distribution of community types in Tranarossan and Melmore Lough SAC

