

NPWS

Tramore Dunes and Backstrand SAC (site code: 0671)

**Conservation objectives supporting document
- marine habitats**

Version 1

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Introduction

Tramore Dunes and Backstrand SAC is designated for the marine Annex I qualifying interest Mudflats and sandflats not covered by sea water at low tide (Figure 1).

An intertidal survey was undertaken in 2008 (ASU, 2008) and these data were used to determine the physical and biological nature of this SAC and overlapping Special Protection Area (SPA) Tramore Back Strand SPA (site code 4027).

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 below.

Section 1: Principal Benthic Communities

Within Tramore Dunes and Backstrand SAC four community types are recorded. The Annex I habitat in which they are recorded and their occurrence in the overlapping SPA is presented in table 1; a description of each community type is given below.

Community Type	Mudflats and sandflats not covered by seawater at low tide (1140)	SPA
Intertidal fine sand with <i>Bathyporeia pilosa</i> and <i>Nephtys cirrosa</i> community	✓	✓
Intertidal muddy sand with <i>Pygospio elegans</i> and <i>Tubificoides benedii</i> community complex	✓	✓
<i>Zostera</i> -dominated community	✓	✓
<i>Mytilus edulis</i> -dominated community		✓

Table 1 The community types recorded in Tramore Dunes and Backstrand SAC and their occurrence in the Annex I habitat and the adjacent SPA.

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 Tramore Dunes and Backstrand SAC identified a series 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 FINE SAND WITH *BATHYPOREIA PILOSA* AND *NEPHTYS CIRROSA* COMMUNITY

This community is recorded in the southern margins of the backstrand around the main channel, on Tramore Strand and on the eastern shore of Rinnashark Harbour (Figure 2).

The sediment is largely that of fine sand (ranging from 45.7% to 95.0%) with variable amounts of medium sand (ranging from 1.0% to 56.7%). The proportions of the remaining sediment fractions are low (coarse material <7%, fine material <4%).

The fauna is dominated by the amphipod *Bathyporeia pilosa*, with the polychaete *Nephtys cirrosa* commonly occurring here (Table 2). The polychaete *Scolelepis mesnili* is recorded in the more exposed areas of the site at Tramore Strand and the intertidal area of Rinnashark

Harbour; here it occurs in moderate abundances. The bivalve *Tellina tenuis* is recorded in moderate abundances in the sheltered areas of the backstrand.

Distinguishing species of the Intertidal fine sand with <i>Bathyporeia pilosa</i> and <i>Nephtys cirrosa</i> community	
<i>Bathyporeia pilosa</i>	<i>Nephtys cirrosa</i>
<i>Scolelepis mesnili</i>	<i>Tellina tenuis</i>

Table 2 Distinguishing species of the Intertidal fine sand with *Bathyporeia pilosa* and *Nephtys cirrosa* community.

INTERTIDAL MUDDY SAND WITH *Pygospio elegans* AND *Tubificoides benedii* COMMUNITY COMPLEX

This community complex occurs extensively within the Tramore Backstrand (Figure 2).

The sediment is that of muddy sand with fine sand ranging from 94.1% to 25.3%, medium sand from 21.4% to 0.4%, very fine sand from 23.6% to 1.3%, silt-clay from 26.4% to 1.6% and coarse sand from 8.5% to 0%. The amounts of very coarse material is low (<6%) here.

The fauna is dominated by the polychaete *Pygospio elegans* and the oligochaete *Tubificoides benedii* (Table 3). The latter is not uniformly distributed within the complex, its highest abundances recorded on the eastern and southern shore of the backstrand; *P. elegans* occurs in moderate abundances within this group. A number of species, including the polychaetes *Hediste diversicolor* and *Scoloplos armiger*, the bivalve *Cerastoderma edule* and the gastropod *Peringia ulvae*, are not uniformly distributed within the complex; where they do occur their abundances range from high to moderate. The polychaete *Arenicola marina* was observed towards the western end of the backstrand; here it occurs in densities of between 4m⁻² and 19m⁻².

Intertidal muddy sand with <i>Pygospio elegans</i> and <i>Tubificoides benedii</i> community complex	
<i>Pygospio elegans</i>	<i>Tubificoides benedii</i>
<i>Crangon crangon</i>	<i>Hediste diversicolor</i>
<i>Scoloplos armiger</i>	<i>Cerastoderma edule</i>
<i>Peringia ulvae</i>	<i>Arenicola marina</i>

Table 3 Distinguishing species of the Intertidal muddy sand with *Pygospio elegans* and *Tubificoides benedii* community complex.

ZOSTERA-DOMINATED COMMUNITY

The intertidal seagrass *Zostera noltii* is recorded at two locations within the site. The largest occurs along the north shore of the backstrand while the second bed is due west of the Ballinattin Causeway (Figure 2).

The sediment is that of sand to muddy sand (fine sand ranges from 88.0% to 48.2%, very fine sand from 20.5% to 1.7% and silt-clay from 25.2% to 4.0%) with some coarse material (5%) in the smaller of the two beds.

This community occurs within the Intertidal muddy sand with *Pygospio elegans* and *Tubificoides benedii* community complex and the fauna reflects that presented in table 3.

The following community is present is due west of the Ballinattin Causeway. It is not present in the SAC but lies within the boundary of the SPA.

MYTILUS EDULIS-DOMINATED COMMUNITY

A bed of the bivalve *Mytilus edulis* is located due west of the Ballinattin Causeway in proximity to the *Zostera noltii* bed. The underlying sediment is that of muddy sand.

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. The Department of the Environment, Heritage and Local Government has prepared general guidance on the completion of such assessments (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) 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 Mudflats and sandflats not covered by seawater at low tide in Tramore Dunes and Backstrand 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
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- 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	Maintain the extent of the <i>Zostera</i> -dominated community, subject to natural processes.
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- A *Zostera*-dominated community is considered to be a keystone community that is of considerable importance to the overall ecology and biodiversity of a habitat by virtue of its physical complexity, e.g. it serves as important nursery grounds for commercial and non-commercial species.
- Any significant anthropogenic disturbance to the extent of this community should be avoided.
- An interpolation of the likely distribution of this community is provided in figure 2. The area given below is based on spatial interpolation and therefore should be considered indicative:

- *Zostera*-dominated community complex- 13ha.

Target 3 Conserve the high quality of the *Zostera*-dominated community, subject to natural processes.

- It is important to ensure the quality as well as the extent of the *Zostera*-dominated community is conserved; for example shoot density can provide an indication of the habitat quality as well as giving information on the habitat complexity and refuge capability; all are important components in maintaining the structural and functional integrity of the habitat.
- Whilst no site-specific data has been collected to date, any significant anthropogenic disturbance to the quality of this community should be avoided.

Target 4 Conserve the following community types in a natural condition: Intertidal fine sand with *Bathyporeia pilosa* and *Nephtys cirrosa* community and Intertidal muddy sand with *Pygospio elegans* and *Tubificoides benedii* community complex.

- A semi-quantitative description of these communities has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 2.
- The estimated areas of the communities within the Mudflats and sandflats not covered by seawater at low tide habitat given below are based on spatial interpolation and therefore should be considered indicative:
 - Intertidal fine sand with *Bathyporeia pilosa* and *Nephtys cirrosa* community - 222ha.
 - Intertidal muddy sand with *Pygospio elegans* and *Tubificoides benedii* community complex - 313ha.
- 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:

ASU (2008). A survey of mudflats and sandflats in Ireland. An intertidal soft sediment survey of Tramore Beach and Back Strand. Carried out by ASU on behalf of National Parks & Wildlife Service.

Figure 1 Extent of Annex I habitat Mudflats and sandflats not covered by seawater at low tide in Tramore Dunes and Backstrand SAC.

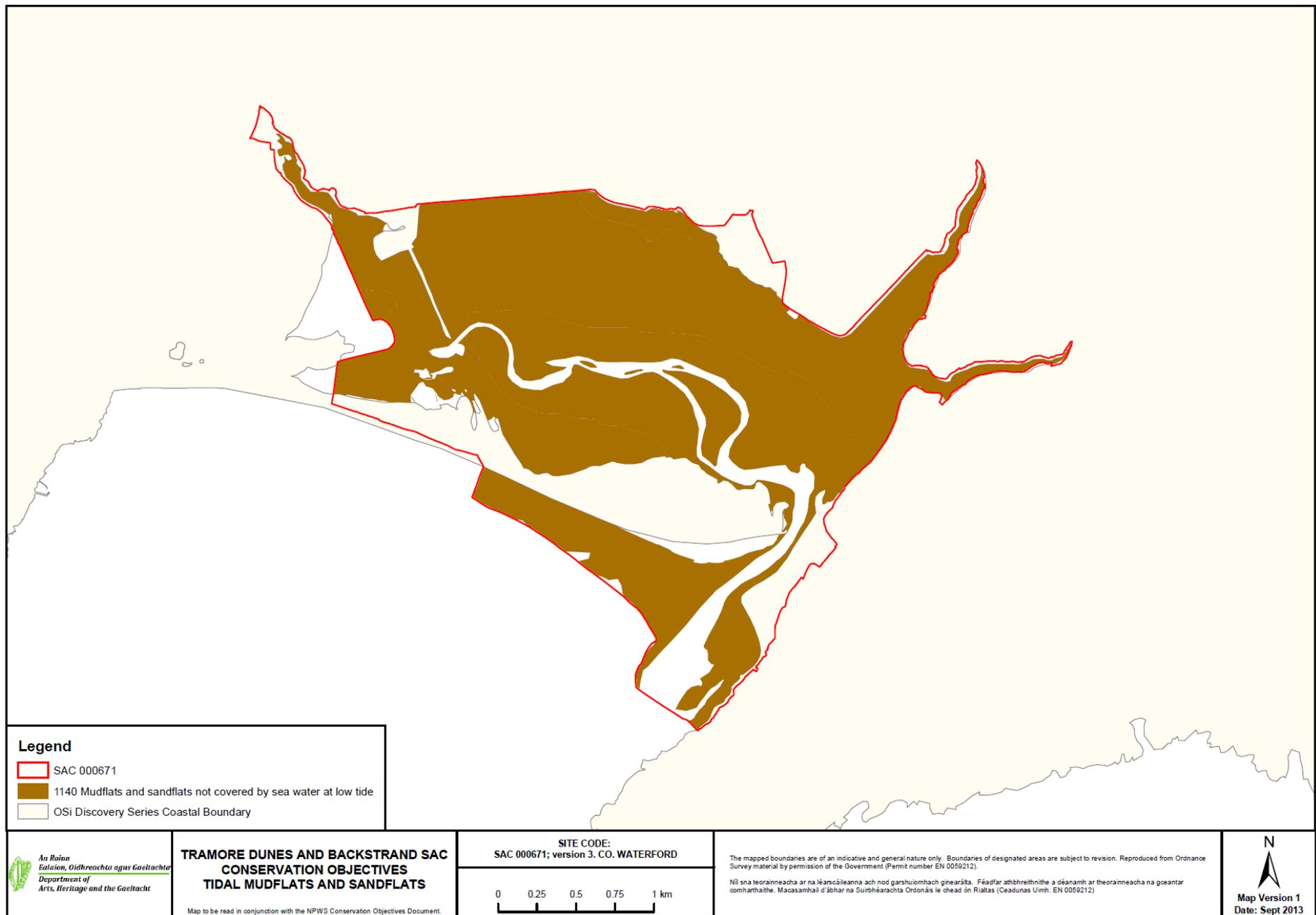


Figure 2 Broadscale community distribution in Tramore Dunes and Backstrand SAC and adjacent areas.

