

NPWS

**Ballymacoda (Clonpriest and Pillmore) SAC
(site code: 0077)**

**Conservation objectives supporting document -
Marine Habitats**

**Version 2
February 2015**

Introduction

Ballymacoda (Clonpriest and Pillmore) SAC is designated for the marine Annex I qualifying interests of Estuaries and Mudflats and sandflats not covered by seawater at low tide (Figures 1 and 2).

Intertidal and subtidal surveys were undertaken in 2011 (MERC, 2012a; MERC, 2012b); these data were used to determine the physical and biological nature of this SAC and the overlapping Special Protection Area: Ballymacoda Bay SPA (site code 4023).

Aspects of the biology and ecology of the Annex I habitats 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 Ballymacoda (Clonpriest and Pillmore) SAC, two community types are recorded. Their occurrence within the Annex I habitats and the SPA is presented in table 1; a description of each community type is given below.

Community Type	SAC Annex I Habitats		SPA
	Estuaries (1130)	Mudflats and sandflats not covered by seawater at low tide (1140)	
Sandy mud with <i>Hediste diversicolor</i> and <i>Tubificoides benedii</i> community	✓	✓	✓
Sand with polychaetes and bivalves community complex	✓	✓	✓

Table 1 The community types recorded in Ballymacoda (Clonpriest and Pillmore) SAC and their occurrence in the Annex I habitats and the adjacent SPA.

Estimated areas of each community type within the Annex I habitats, 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 Ballymacoda (Clonpriest and Pillmore) 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.

SANDY MUD WITH *HEDISTE DIVERSICOLOR* AND *TUBIFICOIDES BENEDII* COMMUNITY

This community occurs intertidally in the Womanagh River Estuary west of Ring Point and in the shallow subtidal in the inner reaches of this estuary west of Clonpriest East (Figure 3).

The sediment is that of sandy mud with very fine sand and silt-clay ranging from 8.9% to 45% and 36.1% to 73.4%, respectively; the amounts of gravel within the sediment is general low (3.6%) with the exception of the inner reaches of The Duck where amounts of 35.4% are recorded.

The distinguishing species for this community are the polychaete *Hediste diversicolor*, the oligochaete *Tubificoides benedii*, the gastropod *Peringia ulvae* and the bivalve *Scrobicularia plana* (Table 2).

Hediste diversicolor and *Tubificoides benedii* occur in moderate to low abundances and high abundances respectively in the outer reaches of the estuary; this distribution is reversed in the inner estuary. *P. ulvae* is recorded in low abundances within the complex, it is absent along with *T. benedii* from the beach of Youghal Bay. *Scrobicularia plana* occurs in low abundances within the community but is not recorded in the inner estuary.

The amphipod *Corophium volutator* and the bivalve *Macoma balthica* are also recorded within this community; mats of the green algae *Ulva* sp. may also occur.

Distinguishing species of Sandy mud with <i>Hediste diversicolor</i> and <i>Tubificoides benedii</i> community	
<i>Hediste diversicolor</i>	<i>Peringia ulvae</i>
<i>Tubificoides benedii</i>	<i>Scrobicularia plana</i>

Table 2 Distinguishing species of the Sandy mud with *Hediste diversicolor* and *Tubificoides benedii* community.

SAND WITH POLYCHAETES AND BIVALVES COMMUNITY COMPLEX

This community complex occurs intertidally and subtidally in Youghal Bay and extends subtidally into the estuary as far as Clonpriest East (Figure 3). It occurs in water depths of between 0m and 3m.

The sediment of this community complex is that of fine sand (ranging from 13.3% to 78.8%). The proportion of medium sand is greater in the intertidal areas of Youghal Bay (ranging from 21.4% to 77.1%) while in the subtidal channel and its vicinity it is generally less than 10%. With the exception of the estuary where it is recorded at greater than 9%, silt-clay amounts are negligible (1.5%); gravel is similarly negligible (<5%), with the exception of the upper shore of the spit north of Ballykinealy.

The distinguishing species of this community complex are the bivalves *Angulus tenuis* and *Cerastoderma edule* and the polychaetes *Pygospio elegans*, *Nephtys cirrosa* and *Scoloplos (Scoloplos) armiger* and *Scolelepis (Scolelepis) squamata*. The exposed aspect of the beach and shallow subtidal results in a highly mobile sediment, as a result the distinguishing species exhibit a variable distribution and generally occur in low abundances. *Angulus tenuis* and *Cerastoderma edule* are recorded in the intertidal and together with *Scoloplos (Scoloplos) armiger* are locally abundant at Ballykinealy; *Scolelepis (Scolelepis) squamata* is also locally

abundant at Clonard East in the north of the site. *Nephtys cirrosa* is recorded in moderate abundances in the extreme south of the site.

The polychaetes *Arenicola marina* and *Lanice conchilega* also occur within this community complex. The amphipods *Deshayesorchestia deshayesii* and *Talitrus saltator* and oligochaetes of the family Enchytraeidae are also recorded here.

Distinguishing species of the Sand with polychaetes and bivalves community complex	
<i>Angulus tenuis</i>	<i>Nephtys cirrosa</i>
<i>Pygospio elegans</i>	<i>Scoloplos (Scoloplos) armiger</i>
<i>Cerastoderma edule</i>	<i>Scoelepis (Scoelepis) squamata</i>

Table 2 Distinguishing species of the Sand with polychaetes and bivalves 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 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 Ballymacoda (Clonpriest and Pillmore) 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	Conserve the following community types in a natural condition: Sandy mud with <i>Hediste diversicolor</i> and <i>Tubificoides benedii</i> community; Sand with polychaetes and bivalves community complex.
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- A semi-quantitative description of these community types has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 3.
- The estimated areas of these community types 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:
 - Sandy mud with *Hediste diversicolor* and *Tubificoides benedii* community - 91ha
 - Sand with polychaetes and bivalves community complex - 211ha

- 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.

Objective To maintain the favourable conservation condition of Estuaries in Ballymacoda (Clonpriest and Pillmore) 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 habitat also encompasses the Annex I habitat of Mudflats and sandflats not covered by seawater at low tide. In such areas, the specific targets for that Annex I habitat will address requirements within the Annex I habitat estuaries.
- 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 types a natural condition: Sandy mud with *Hediste diversicolor* and *Tubificoides benedii* community; Sand with polychaetes and bivalves community complex.

- A semi-quantitative description of these community types has been provided in Section 1.
- An interpolation of their likely distribution is provided in figure 3.
- The estimated area of these community types within the Estuaries habitat given below is based on spatial interpolation and therefore should be considered indicative:
 - Sandy mud with *Hediste diversicolor* and *Tubificoides benedii* community - 96ha
 - Sand with polychaetes and bivalves community complex - 6ha
- Significant continuous or ongoing disturbance of communities should not exceed an approximate area of 15% of the interpolated area, 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 Survey of Ballymacoda Bay (Clonpriest and Pillmore) SAC and Ballymacoda Bay SPA. Carried out by MERC on behalf of National Parks and Wildlife Service, Department of Environment, Heritage and Local Government and the Marine Institute.

MERC (2012). Subtidal Benthic Survey of Ballymacoda Bay (Clonpriest and Pillmore) SAC and Ballymacoda Bay SPA. Carried out by MERC on behalf of National Parks and Wildlife Service, Department of Environment, Heritage and Local Government and the Marine Institute.

Figure 1. Extent of Mudflats and sandflats not covered by seawater at low tide in Ballymacoda (Clonpriest and Pillmore) SAC

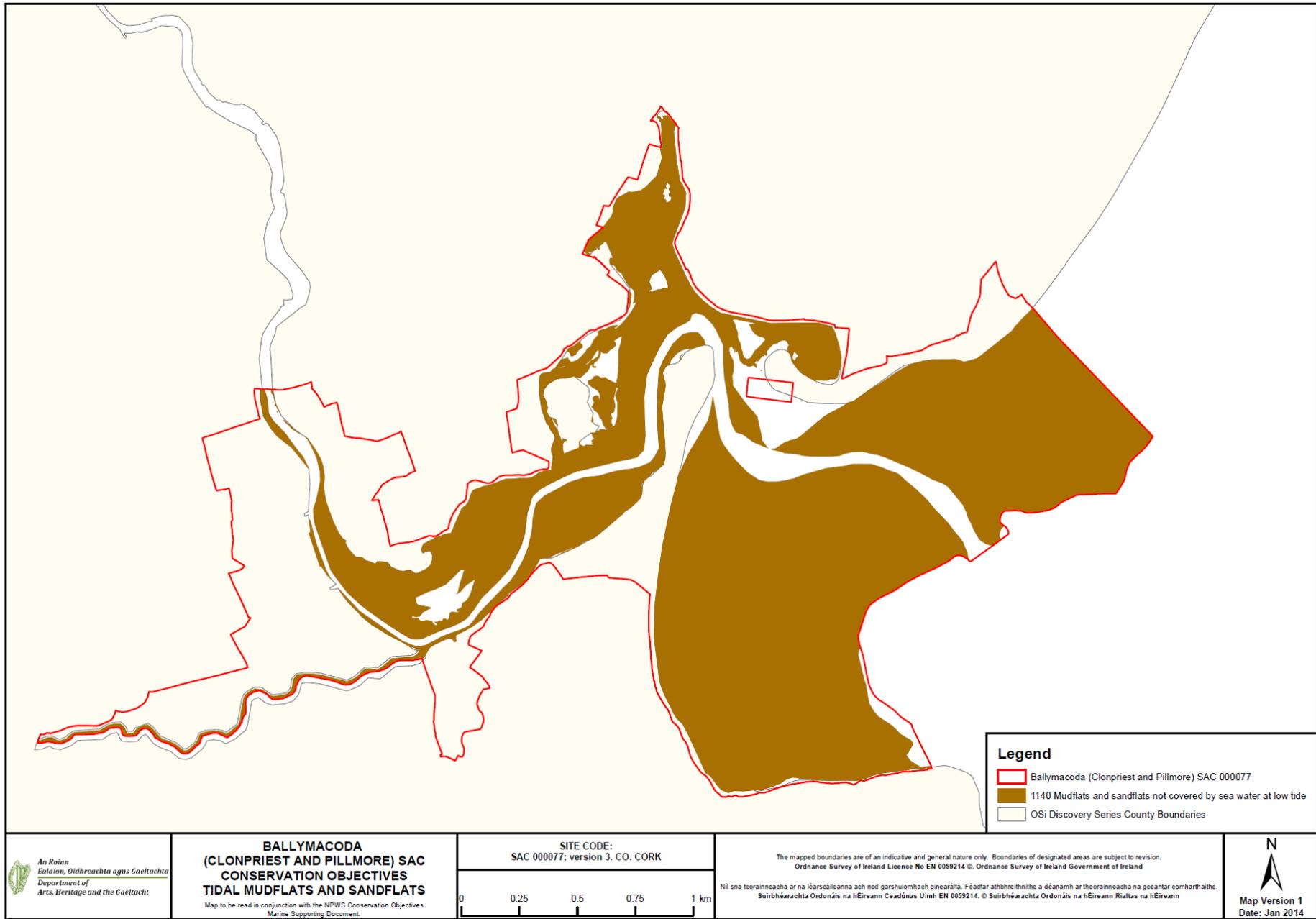


Figure 2. Extent of Estuaries in Ballymacoda (Clonpriest and Pillmore) SAC

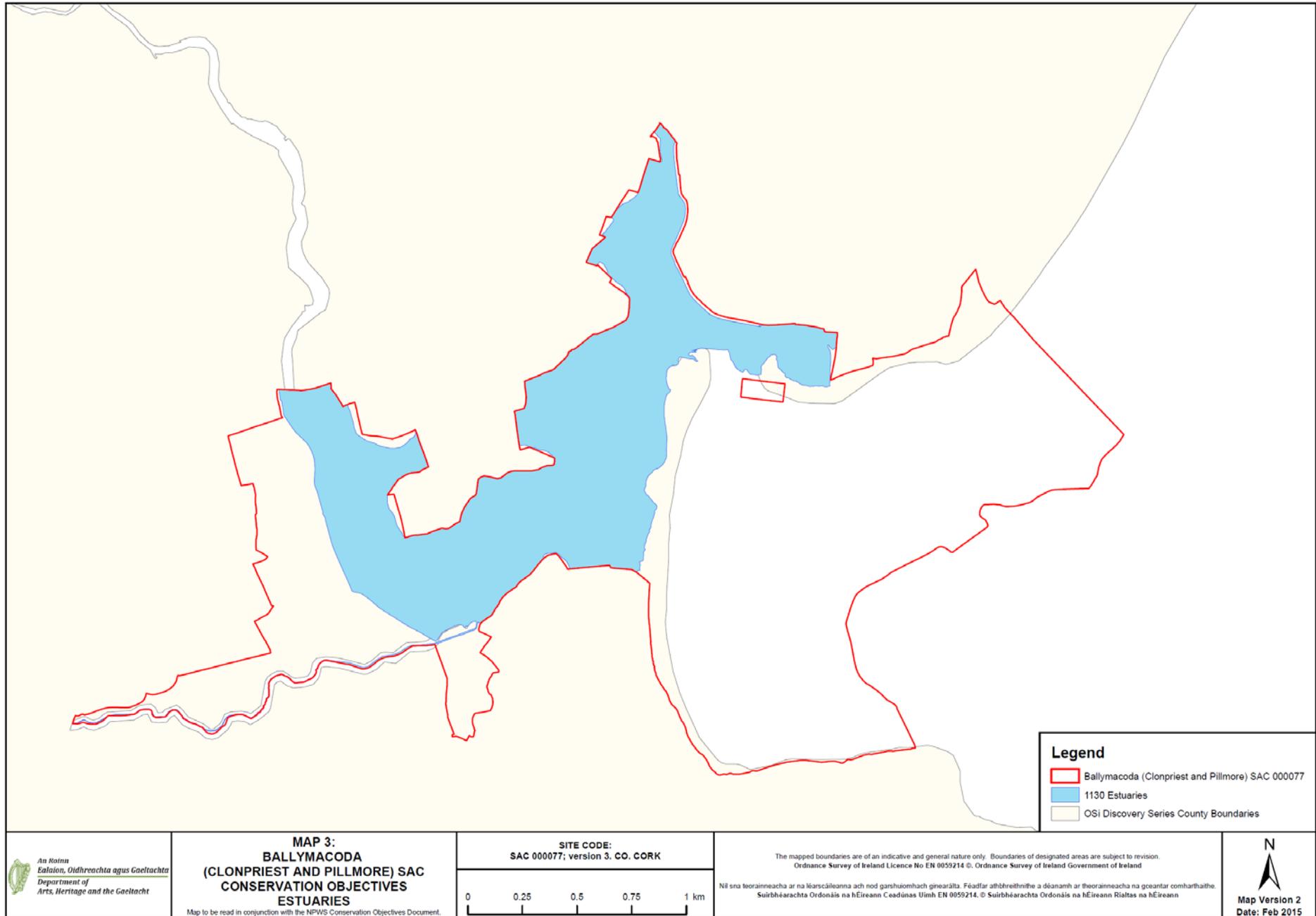


Figure 3. Distribution of community types in Ballymacoda (Clonpriest and Pillmore) SAC

