

# SITE SUMMARY DOCUMENT

## Carlingford Lough Marine Conservation Zone (MCZ)

Sea-pen (*Virgularia mirabilis*) in Subtidal mud @Claire Goodwin



Department of  
**Agriculture, Environment  
and Rural Affairs**

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# Carlingford Lough MCZ

Carlingford Lough is a narrow and shallow sea lough that lies on the east coast of Ireland, located at the border of Northern Ireland and the Republic of Ireland (Figure 1). The MCZ is located off the northern shore and lies north of the navigation channel in the inner part of the Lough.

Carlingford Lough has an extensive intertidal area of sand and mudflats that provide key feeding grounds for overwintering birds.

The MCZ consists of a shallow subtidal area of fine mud encompassing 3.23km<sup>2</sup>. The MCZ has been designated as it supports the habitat *Philine aperta* (White lobe shell) and *Virgularia mirabilis* (Sea-pen) in soft stable infralittoral mud. This habitat is only present in Carlingford Lough; individual records of *P. aperta* and *V. mirabilis* occur throughout Northern Ireland (Figures 2 and 3). Both *P. aperta* and *V. mirabilis* occur in high densities within the MCZ and this habitat is thought to be a temporal variant of other sublittoral cohesive mud and sandy mud communities.



**Figure 1** Location of Carlingford Lough MCZ

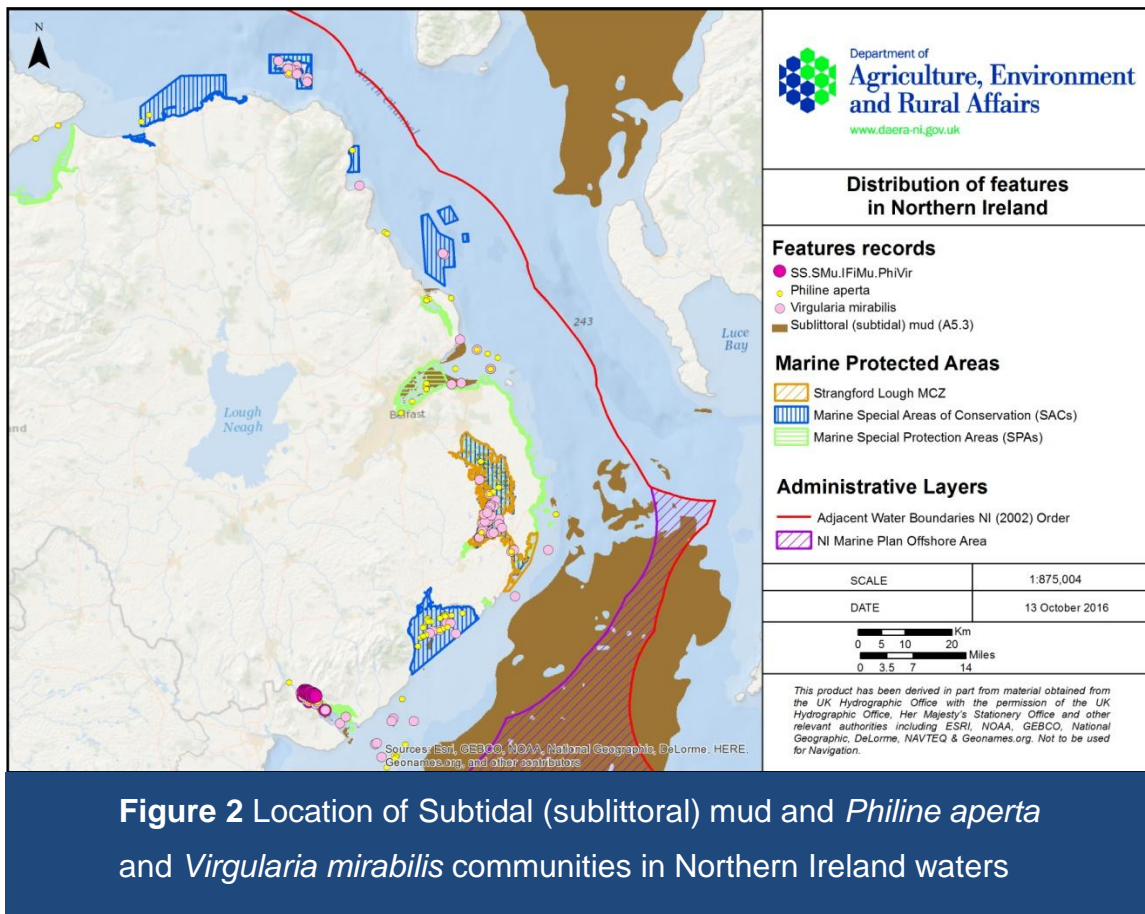
Subtidal (sublittoral) mud habitats generally occur in water depths greater than 20-30m but may occur in shallower sea lough waters such as Carlingford Lough. As this site is sheltered from wave action, these soft mud communities are present in shallow depths (<15m).

High densities of the White lobe shell (*P. aperta*) usually characterise this feature; however, in Carlingford Lough the MCZ also contains one of the densest beds of Sea-pens (*V. mirabilis*) recorded in Northern Ireland.

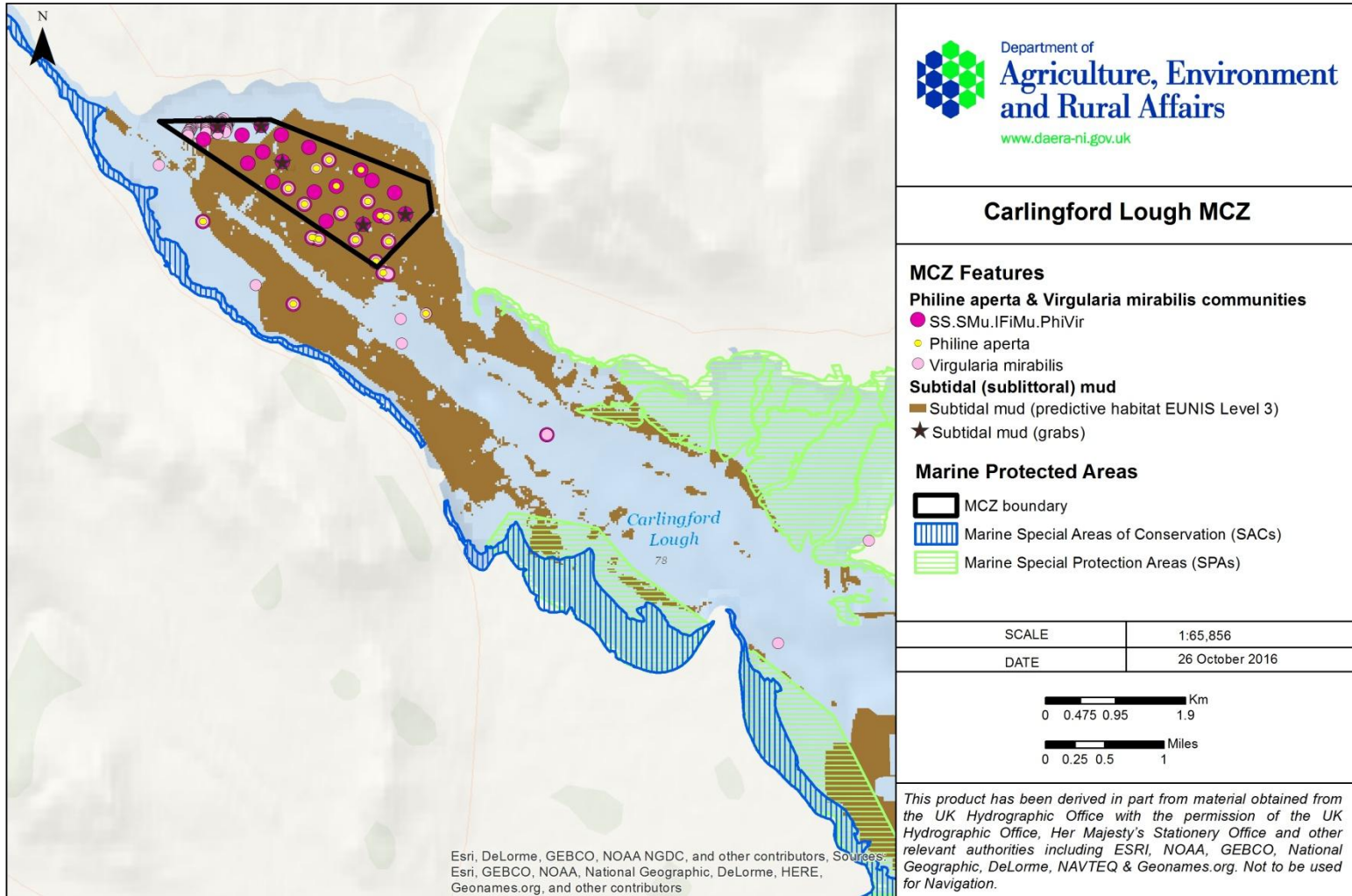
The biotope '*Philine aperta* and *Virgularia mirabilis* in soft stable infralittoral mud' is characterised on the basis of its epifauna. The habitat created by the Sea-pens offer shelter, food and oxygen to a diverse range of small benthic infaunal organisms such as the very rare sea cucumber, *Ocnus planci*, which has regularly been observed in the MCZ. Apart from occasional Norway lobster (*Nephrops norvegicus*), burrowing crustacean megafauna are mainly absent from this habitat in Carlingford Lough.

High densities of Sea-pen (*Virgularia mirabilis*) in Subtidal (sublittoral) mud in Carlingford Lough





The boundary (Figure 3) was drawn following the extent of *P. aperta* and *V. mirabilis* records. This enables the site integrity of the MCZ to be conserved while representing the range in diversity of Subtidal (sublittoral) mud habitats within the area. A buffer zone of 100m from aquaculture sites (north to south-east borders) was incorporated into the MCZ boundary following pre-consultation discussion and advice with industry representatives. This will enable shellfish operations to continue without impacting the conservation objectives or the integrity and diversity of the site. For the southern extent of the boundary an administrative mid-line was used.



**Figure 3** Location of the boundary and features in Carlingford Lough MCZ

**Location (Centroid): 54° 05.291' N 6° 12.893' W**

**Area: 3.230km<sup>2</sup>**



White lobe shell (*Philine aperta*) in Subtidal (sublittoral) mud

### MCZ Features

Habitat:

- Subtidal (sublittoral) mud:
  - *Philine aperta* and *Virgularia mirabilis* in soft stable infralittoral mud (Biotope: SS.SMu.IFiMu.PhiVir)

### Management options in the network

Management options include preventing demersal trawling and anchoring within the MCZ and preventing the disposal of dredge material where they are likely to impact the MCZ features.

Anchoring in emergency situations will not be restricted.

At present, the '*Philine aperta* and *Virgularia mirabilis* in soft stable infralittoral mud' habitat is not on any conservation list. However it is rare due to the shortened height of the individual *Virgularia* and overall density of the population in MCZ. *V. mirabilis* is a Northern Ireland Priority Species.

Historical records of the biotope are reported from 1968. This has been supplemented with additional surveys conducted as part of this site designation process. The data sources include:

1. Northern Ireland Sublittoral Survey (NISS) (1982-1985)
2. Sublittoral Survey Northern Ireland (SSNI) (2006-2012)
3. AFBI Carlingford Lough Survey (2012)
4. DOE Carlingford Lough pMCZ spyball survey 2015

## Further Information

Further information on 'Carlingford Lough MCZ' and the MCZ process includes:

- Guidance on selection and designation of Marine Conservation Zones (MCZs) in the Northern Ireland Inshore Region
- Justification report for selection of proposed Marine Conservation Zones (pMCZ) features
- Guidance on the development of Conservation Objectives and potential Management Options
- Carlingford Lough Marine Conservation Zone (MCZ) Conservation Objectives and potential Management Options
- Assessment against the Selection Guidelines for Carlingford Lough Marine Conservation Zone
- Data Confidence Assessment for Carlingford Lough Marine Conservation Zone (MCZ)

All documents are available from our website:

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Left, Sea cucumber (*Ocnus planci*); Right, *Amphiura* sp. (right) in Subtidal (sublittoral) mud in Carlingford Lough





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Photos represent Priority Marine Features found throughout the Northern Ireland Inshore Region

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