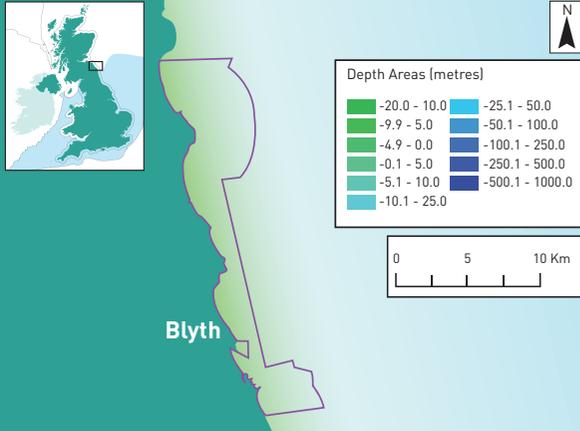


COQUET ST MARY'S RECOMMENDED MCZ



THE SITE

This inshore rMCZ lies along the Northumberland coast and extends out to Coquet and St Mary's Islands. The seafloor, up to 30 m deep, is a mosaic of habitats dominated by rock. The shoreline has many rocky cliffs, with the headlands fronted by rocky shore platforms and unique under boulder communities. There are several estuary mouths with both sediment-influenced communities and unusual estuarine rocky habitats. This diverse habitat supports thousands of seabirds and marine mammals. The seabed around St Mary's Island was designated as a Voluntary Marine Nature Reserve in 1996 to protect the rocky reefs around the island that provide habitat for large numbers of edible and shore crab and lobster. Coquet Island is an RSPB reserve.

BENEFITS TO PEOPLE

People draw many benefits from the environment which cannot readily be monetised. Many studies have tried to measure these benefits, whether non-use values of an area or the ecosystem services that a site provides. Where figures have been estimated, these are given; where not available, a qualitative description of the value is given.

NON-USE AND BEQUEST VALUE

People value places, habitats and species and want to protect them now and for future generations even if they never use the site themselves. Although this value cannot be directly measured, it can be estimated in different ways. One study gives a best estimate for Coquet St Marys of £843,400/yr, using information from divers and anglers. A method has been designed to extrapolate this to the wider public, which results in a best estimate of £3,252,900/yr.

HEALTH AND WELLBEING VALUES

The study using information from divers and anglers also ranked UK marine sites according to specific benefits related to health and well-being. For Coquet St Mary's, if the MCZ were to be designated, scores for all these values are positive (→3). Compared to other sites across the UK, Coquet St Mary's is in the upper third (dark green) of site rankings for providing memorable experiences. The site is in the middle third of UK sites (medium green) when it comes to peoples' sense that it contributes to health, education, enjoyment and inspiration and a sense of belonging. Some people also feel the site provides spiritual and social benefits (lower third of rankings – light green).

Impact on life	4.50	These scores re-inforce the MCS survey "Your Seas Your Voice" which found that Coquet St Mary was particularly valued by people, with 25 individual locations being nominated within this rMCZ.
Health	4.15	
Engagement with nature	4.02	
Sense of belonging	3.79	
Social benefit	3.85	
Spiritual value	3.81	

RESEARCH AND EDUCATION

Research within designated sites will increase our understanding of marine ecosystems and how they are useful to us. Regular monitoring of the MCZ will increase our understanding of how the marine environment changes as a result of human activities and management. The MCZ would play a role in education (e.g. television programmes, articles in magazines and newspapers, and educational resources developed for use in schools).

REGULATION OF POLLUTION (NUTRIENT CYCLING)

Subtidal sediments are known to act as pollution sinks. Protection of this habitat may result in improvement in its condition and thus its capacity to process waste.

GAS AND CLIMATE REGULATION

Intertidal mud takes up carbon very efficiently and thus contributes to gas and climate regulation. Protection of this habitat may result in a net increase in the rate of carbon sequestration.

NATURAL HAZARD PROTECTION

Estuaries help to protect the coastline by preventing erosion and flooding. Intertidal coarse sediment plays an important role in beach protection and intertidal rock habitat provides an important natural form of defence from erosion. Inclusion of these habitats within the MCZ may strengthen coastline protection.

ENVIRONMENTAL RESILIENCE

Rising sea temperatures and sea levels, greater storm frequency, increasing numbers of severe storm surges, and changes in the timing of plankton production, composition and distribution are all a result of climate change, and damage ecosystems. Protected sites with healthy diverse ecosystems will be more resilient to such threats, in the same way that healthy humans tend to be more resistant to stress and disease.

FEATURES PROPOSED FOR PROTECTION



13 Broad scale habitats:

- High energy intertidal rock
- Moderate energy intertidal rock
- Low energy intertidal rock
- Intertidal coarse sediment
- Intertidal mixed sediments
- Intertidal sand and muddy sand
- Intertidal mud
- High energy infralittoral rock
- Moderate energy infralittoral rock
- Moderate energy circalittoral rock
- Subtidal coarse sediment
- Subtidal mixed sediments
- Subtidal sand

2 Habitats of conservation importance:

- Intertidal under boulder communities
- Peat and clay exposures

ESTIMATED BENEFITS AND COSTS PER YEAR



FISH AND SHELL FISH FOR HUMAN CONSUMPTION

Many of the features to be protected, such as intertidal and subtidal sediments and rocky habitats, are important habitats for fish and shellfish. Once the site is managed, fish and shellfish may increase within and outside the boundaries, benefiting commercial fishers and anglers. Since all features are considered to be currently in favourable condition, the existing commercial fishery does not need to be regulated. About 80% of the total value of fisheries in the rMCZ comes from pots and traps. Estimated total value of landings from the site is £964,000/yr (2004-2010 data).

RECREATION

Wildlife watching, particularly seals and seabirds, is very popular within the rMCZ, particularly on St Mary's Island and Coquet Island, due to the site's close proximity to urban areas. Designation of the MCZ may lead to increases in wildlife populations, making these activities even more enjoyable. Diving and snorkelling are already popular because of the high species diversity, and MCZ designation will potentially result in more abundant and bigger species to look at. Local tourism and leisure industries would thus benefit if the MCZ results in healthy marine wildlife which attracts more anglers, divers, bird watchers and other visitors.

The Marine Socio Economics Project (MSEP www.mseproject.net) have developed a 'Infographic Impact Assessment' (IIA) for the Marine Conservation Zone (MCZ) process. The MSEP partners (New Economics Foundation, Marine Conservation Society, RSPB, the Wildlife Trusts and WWF) have used costs and benefits of protecting sites from the Defra consultation documents and relevant studies, and presented these in a visual way to make the trade-offs clearer than a simple Cost-Benefit Analysis (CBA) could achieve on the summary page of an Impact Assessment (IA). June 2015.

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CONTEXT

Although not often visible, the seas around our coast are home to some of the best marine wildlife in Europe, with a wide diversity of underwater landscapes habitats and species. The marine environment is also essential to our social, economic and environmental well-being providing many goods and services including food, building materials, recreation, transport, oil, gas, renewable energy, potential carbon capture and pollution control.

However, at present our seas and their wildlife are being damaged by many human activities. The Marine and Coastal Access Act requires that a network of MPAs, including examples of all features of UK waters, is created to help improve the health of the marine environment. A network of well managed MPAs will allow damaged marine ecosystems to recover, and protect those that are healthy, more effectively than would individual, unrelated protected sites. Coquet St Mary MCZ would form part of the network and thus help to fulfil this obligation.

IMPORTANCE OF THIS rMCZ WITHIN THE MPA NETWORK

This site fills major gaps in the MPA network for subtidal mixed sediment, infralittoral and circalittoral rock.

The subtidal habitats to be protected support numerous immobile and mobile plants and animals and create productive feeding and/or breeding areas for grey and common seals, harbour porpoises, white-beaked dolphins, and thousands of seabirds, including 90% of the UK Roseate tern population, England's rarest seabird, as well as puffins and terns (common, Arctic and sandwich). The waters adjacent to Coquet Island are used by foraging, loafing and rafting eider ducks.

The rMCZ is also the location of the first ever record of the Arctic cushion star in English waters. A sublittoral ridge of limestone known locally as 'the Trink' lies off Blyth, within the rMCZ. It is partly covered by gravels, cobbles and some boulders and is home to rare species including the sea spider.

Intertidal habitats include particularly rich underboulder communities with sea mats, sponges, and tufts of pink coralline seaweed encrusting the under surfaces of the boulders; sea slugs which feed on the sponges; brittle stars, porcelain crabs and squat lobsters which cling to the undersides of boulders; and other crabs, fish, and young edible lobsters which hide amongst the boulders.

The rMCZ is within a known spawning and/or nursery areas for plaice, cod, ling, anglerfish and sand eel.

COSTS TO BUSINESS PER YEAR



PORTS AND HARBOURS

The rMCZ is located close to the Port of Blyth. Since the initial recommendation, the site boundary has been modified to provide a 250 m buffer around the Blyth disposal site and to exclude part of the southern area of the statutory limits of the port, in order to reduce the impact on the port whilst retaining the ecological value of the rMCZ. If the site is designated, future licence applications for navigational dredging and use of the disposal site will require assessment of the impact on the protected features; the best estimate cost for this is £11,300. This is considered to be an overestimate due to economies of scale savings from multiple dredge disposal applications. The impact on features in the rMCZ will also need to be considered if there is any future port development.

PUBLIC SECTOR INVESTMENT PER YEAR



MANAGEMENT

No management of current commercial activities is anticipated (all proposed protected features are in favourable condition, and there are no requirements to manage current fisheries and recreation), and so there are no immediate management costs for this site.

ECOLOGICAL SURVEYS

Natural England will monitor the condition of the MCZ features in order to report on success of protection. Cost estimates for ecological surveys vary according to the number of features in a site. Defra provides a best estimate cost of £1,171,000 for all 23 rMCZs, and so average cost/site is estimated at £51,000/yr.

SECTORS UNLIKELY TO BE AFFECTED

COASTAL DEVELOPMENTS

Excluding ports and harbours.

RECREATION

Recreational boating, snorkelling and SCUBA diving, and existing wildfowling leases.

WATER ABSTRACTION

ANGLING

SEA COAL EXTRACTION

SHIPPING

Transit of vessels.

CABLES

One active power export cable crosses the site, and the planned Norway Interconnector (electricity – National Grid) will cross it.

EXISTING RENEWABLE ENERGY OPERATIONS

Including the Dogger Bank and Blyth wind-farms.

COMMERCIAL FISHERIES

All gear types currently used.

ARCHAEOLOGY

No current activity but archaeological artifacts occur in the site and so there is potential interest.

FLOOD AND COASTAL EROSION RISK MANAGEMENT

There are a number of schemes that are linked to this area but it is not thought that there will be any costs associated with designation of an MCZ.