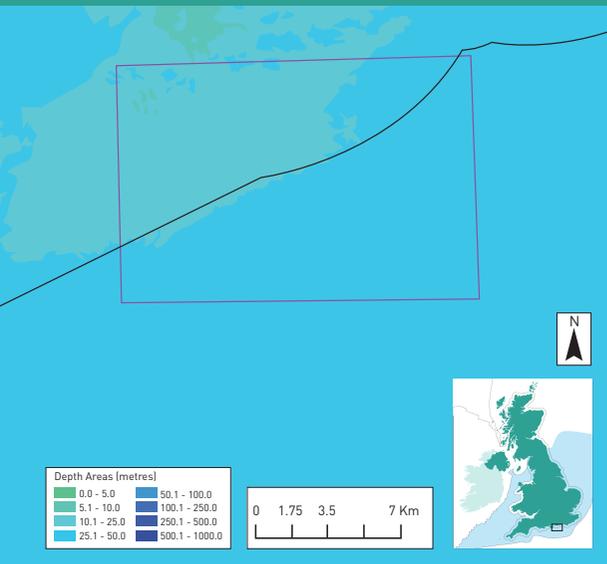


OFFSHORE OVERFALLS RECOMMENDED MCZ



THE SITE

This rMCZ lies about 18 km south-east of the Isle of Wight and straddles the 12 nm inshore-offshore boundary. It covers depths between 1 - 35 m. The seabed is mainly sand and sediments, which are highly productive and support a wide variety of fish of both commercial and recreational value. The main feature is the 'Overfalls', an area in the north-west corner of the site. The rMCZ, and particularly the Overfalls area, is used by large numbers of anglers, who would benefit from its protection. It is also used by both UK and non-UK fishery vessels who would be affected by gear regulation. There would also be a cost to the ports sector if the rMCZ is designated.

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 Offshore Overfalls of £515,000/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 £5,866,000/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 Offshore Overfalls, if the MCZ were to be designated, scores for all these values are positive (→3). Compared to other sites across the UK, Offshore Overfalls is in the middle third (medium green) of site rankings for providing memorable experiences (impact on life), having health and social benefits, and giving people a sense of belonging. Some people also feel the site provides education, enjoyment and inspiration (engagement with nature) and spiritual benefits (light green).

Impact on life	4.33
Health	4.06
Social benefit	4.05
Sense of belonging	3.73
Engagement with nature	3.94
Spiritual value	3.81

RECREATION

The rMCZ, particularly the 'Overfalls' area, is used extensively by anglers. Hundreds of anglers visit it annually on charter and private boats and a survey in 2006 indicated that total annual expenditure related to the area is an estimated £100,000-£200,000. Subtidal coarse sediments, sand and mixed sediment habitats are important nursery areas for species, such as flatfishes and bass, which are of value to anglers. No additional management of angling is expected in an MCZ, and so anglers will benefit if designation results in an increase in the size and diversity of target fish. Diving occurs very occasionally, the main interest being the wrecks. The designation may lead to an increase in angling and diving visits to the site, which may benefit the local economy.

RESEARCH AND EDUCATION

Research and monitoring within designated sites will increase our understanding of marine ecosystems and how they are useful to us. Monitoring of the rMCZ will help us to understand how the marine environment changes as a result of natural impacts and also changes in fishing pressure as a result of management. The rMCZ could 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 feature may result in improvement in its condition and thus its capacity to process waste.

GAS AND CLIMATE REGULATION

Marine sediments, through processes that occur in their upper layers, play an important role in the global cycling of carbon and nitrogen. Protection of these habitats, resulting in improved condition, may increase site benthic biodiversity and biomass, and thus improve their regulating capacity.

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, all of which are a result of climate change, will damage ecosystems. Protected sites with healthy diverse ecosystems will be more resilient to such threats, in the same way as healthy humans tend to be more resistant to stress and disease.

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.

ESTIMATED BENEFITS AND COSTS PER YEAR



FEATURES PROPOSED FOR PROTECTION



3 Broad scale habitats:

- Subtidal coarse sediment
- Subtidal sand
- Subtidal mixed sediment

1 Geological feature:

- English Channel outburst flood feature

OFFSHORE OVERFALLS RECOMMENDED MCZ

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. Offshore Overfalls rMCZ would form part of the network and thus help to fulfil this obligation.

IMPORTANCE OF THIS rMCZ WITHIN THE MPA NETWORK

This rMCZ will protect subtidal sand and is the only option to fill this major network gap. Sand habitats may appear like deserts, but provide critical habitat for flat fish and sand eels that live on the surface, and worms and bivalves that live within it. The rMCZ provides replicates for subtidal mixed sediments and subtidal coarse sediment and has the second largest area of subtidal mixed sediment in the region. The varied nature of mixed sediments means that they support a wide range of animals, both on and in the sediment such as worms, bivalves, starfish and urchins, anemones, sea fans and sea mats.

The 'Overfalls' is an area of mixed sediments, sands and gravels distinct from the surrounding habitats and characterised by several unusual morphological features. These 'sand waves', 'mega-ripples' and large relic glacial deposits form a series of banks in an area of high tidal currents and provide important habitat for fish including sand eels, blonde rays, bass, turbot, brill, cod, tope, brown crab, as well as sessile and encrusting species.

The English Channel outburst flood feature was formed at the end of the last glaciation by the collapse of either ice sheets or glaciers and provides evidence of a mega-flood that occurred some 200,000 years ago when a huge glacial lake in the North Sea burst through the Dover Straits Isthmus which contained it, separating England from mainland Europe.

COSTS TO BUSINESS PER YEAR



UK COMMERCIAL FISHERIES

The area is used by under and over 15 metre vessels, including otter trawlers which fish in the south-east part of the site, vessels towing beam trawls and scallop dredges and other vessels using static gear such as set nets. The best cost estimate to the UK fishing sector, in the light of potential management scenarios is £4,900.



NON-UK COMMERCIAL FISHING

The eastern and southern parts of the rMCZ are heavily fished by non-UK vessels, both in the area within 6-12 nm where some countries have historical fishing rights, and in the area beyond 12 nm. These include: France - bottom trawls and dredges (accounting for 72% of revenue from the site) and static gears (0.5%); Belgium - seasonal fishing using bottom trawls (20%); Germany - mid-water otter trawls (6%); and Denmark - pelagic trawls (1.5%). Estimated total revenue from non-UK fishing in the site is £188,000/yr of which 92% comes from bottom trawlers and dredgers. The best estimate of the cost of designation to the non-UK fishery is £82,000/yr. N.B. these costs are not included in the UK costs to business.



PORTS, HARBOURS AND SHIPPING

The rMCZ is located close to the Nab Tower dredging spoil disposal site. If the site is designated, licence applications for dredging and use of the disposal site will require assessment of the impact on the protected features; the best estimate cost for this is £37,200/yr but this is considered to be an over-estimate due to economies of scale savings from multiple dredge disposal applications.



AGGREGATES

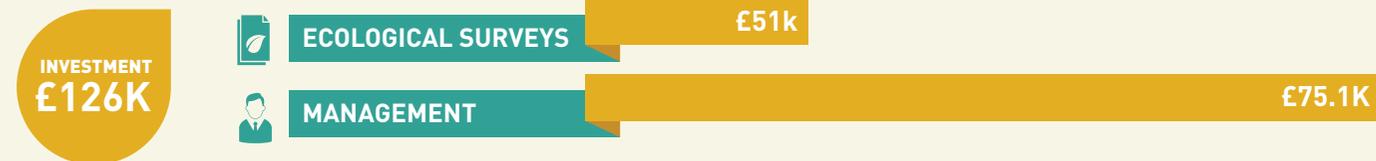
There are three aggregate dredging areas near the site. There may be additional costs incurred when carrying out EIAs for future licence applications. The best estimate cost for this is £6,900/yr.



RENEWABLE ENERGY - TIDAL

This rMCZ overlaps with the East of Isle of Wight Area of Potential. All licence applications would need to take into account the impact of the development on the features in the site if it is protected. This may increase the cost of the licence applications by £700/yr.

PUBLIC SECTOR INVESTMENT PER YEAR



MANAGEMENT

The broad scale habitats in the site are considered to be in unfavourable condition and thus require regulation of fishing activities by the MMO. Management of static and towed gear may be required due to the sensitivity of the features recommended for protection. It is unlikely that any management will be required for mid-water and pelagic gear fisheries. The best estimate cost for management of the ten tranche 2 sites that require fisheries regulation is £751,000/yr, so the average cost/site for fisheries management is £75,100/yr. Costs cover enforcement and surveillance and do not take account of possible savings through single measures for several MCZs.



ECOLOGICAL SURVEYS

JNCC/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; as the methods used for the Defra IA are not known, a best estimate cost of £1,171,000 is provided for all 23 rMCZs. The average cost/site is thus £50,913/yr.

SECTORS UNLIKELY TO BE AFFECTED



RECREATIONAL ANGLING

Private and charter boats.



SHIPPING

Transit of vessels.



CABLES

Potential overlap with National Grid France-England Electricity Interconnector.