Medway Estuary rMCZ no 6

Marine Conservation Zone: Selection Assessment Document

Version and Issue date	Amendments made
V1.0 07.09.11	Draft final recommendations refined by the RSG and Local groups in July 2011 and finalised by the RSG 2/3 August 2011.

1. Site name Medway Estuary rMCZ 6	**3. Site surface area** 6483 ha 64.83 km^2
2. Site centre location ETRS89 N51 24' 55.486" E0 39' 12.297" N51 24.925' E0 39.205' (**N.B.** WGS 84 UTM 31N coordinates are provided in the map vertices)	**4. Biogeographic region** Southern North Sea

5. Features proposed for designation within Medway Estuary [1]

Feature type	Feature name	Area / No. of records [2]
Broad-scale habitats	A1.3 low energy intertidal rock	0.45 km^2
	A2.2 intertidal sand/muddy sand	0.11 km^2
	A2.4 intertidal mixed sediments	0.06 km^2
	A5.1 subtidal coarse sediment	4.10 km^2
	A5.2 subtidal sand	3.16 km^2
	A5.3 subtidal mud	19.64 km^2
Habitat FOCI	Estuarine rocky habitats	0.02 km^2
	Peat and clay exposures	312.57m^2
	Sheltered muddy gravels	41 records
Species FOCI Low mobility	Tentacled Lagoon Worm (*Alkmaria romijni*)	12 records

6. Features within Medway Estuary not proposed for designation [3]

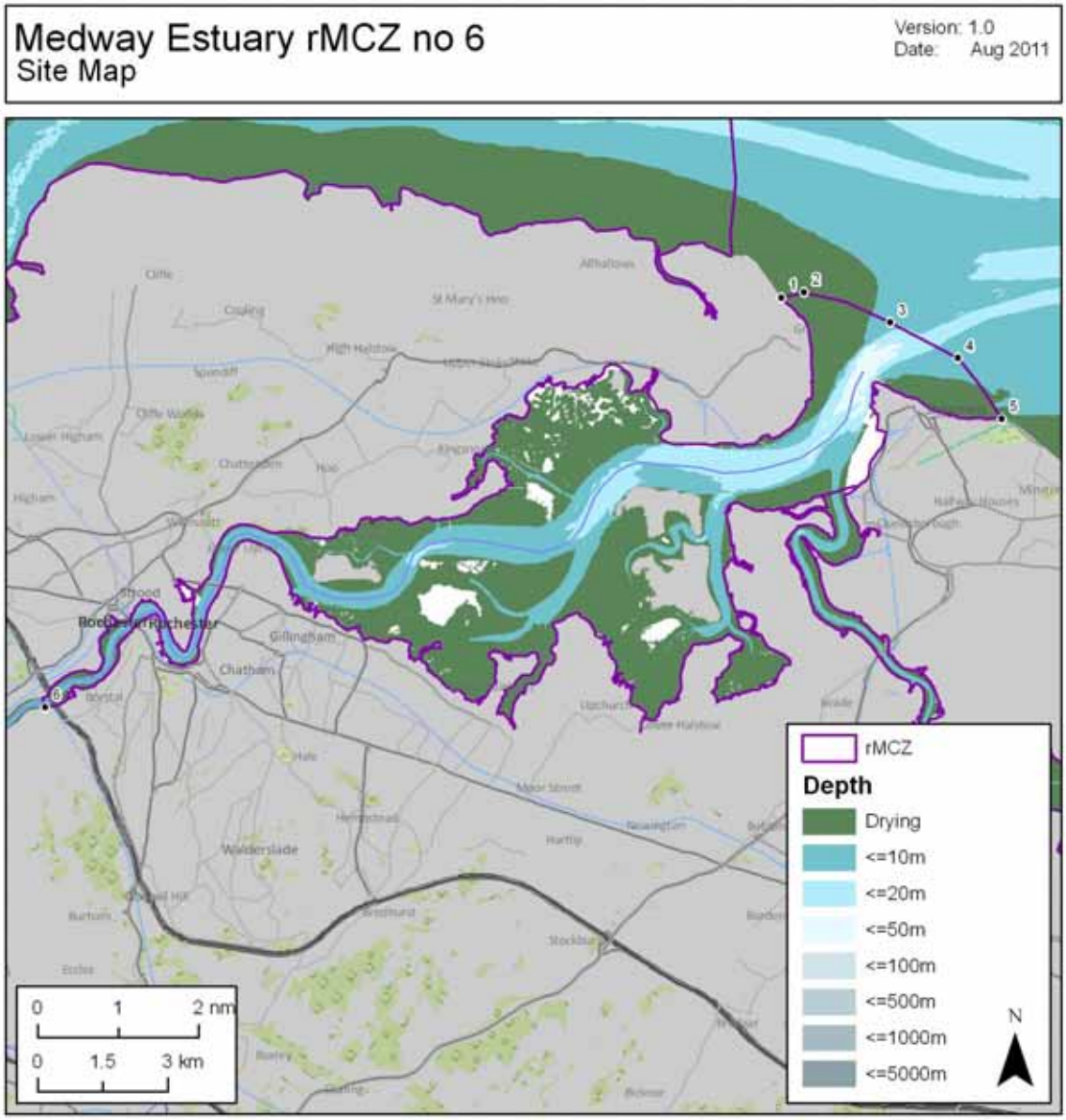
Feature type	Feature name	Comments
Broad-scale habitats	A2.3 intertidal mud	Fully protected by Medway Estuary and Marshes SSSI and SPA
	A2.5 coastal saltmarshes/saline reedbeds	Fully protected by Medway Estuary and Marshes SSSI
	A2.6 intertidal sediments (aquatic angiosperms)	Fully protected by Medway Estuary and Marshes SSSI
	Mosaic of A2.3, A2.5	Fully protected within the Medway Estuary and Marshes SSSI and SPA
Habitat FOCI	Blue mussel beds	Not great examples (RSG 6) Water has lots of sediment. Includes intertidal and subtidal examples
	Rossworm (*Sabellaria spinulosa*) reef	One small point
	Seagrass beds	Fully protected by Medway Estuary and Marshes SSSI
	Subtidal sands and gravels	Not considered a high priority but it might be a supporting habitat so needs attention
Species FOCI High mobility	European Eel (*Anguilla anguilla*)	This would be one of the top 3 areas for eel recovery in the region, though this is disputed.
	Smelt (*Osmerus eperlanus*)	Low occurrence.

[1] Sources of information relating to these features are listed in Section 13.

[2] Areas have been calculated according to spatial GIS data and are indicative only. A "record" is a survey point where a single individual, population or habitat has been found.

[3] Features may occur in both tables (sections 5 & 6) if the rMCZ overlaps with an existing MPA where the features are protected.

7. Map of site



Boundary coordinates

Degrees Minutes Seconds / Degrees Decimal Minutes

ID	Latitude	Longitude	Latitude	Longitude
1	N51° 27' 50.692"	E0° 42' 44.431"	N51° 27.845'	E0° 42.741'
2	N51° 27' 55.080"	E0° 43' 11.197"	N51° 27.918'	E0° 43.187'
3	N51° 27' 34.542"	E0° 44' 55.366"	N51° 27.576'	E0° 44.923'
4	N51° 27' 9.619"	E0° 46' 17.378"	N51° 27.160'	E0° 46.290'
5	N51° 26' 25.192"	E0° 47' 12.174"	N51° 26.420'	E0° 47.203'
6	N51° 22' 26.875"	E0° 28' 22.536"	N51° 22.448'	E0° 28.376'

Map and coordinates displayed in WGS84, UTM Zone 31 North.

8. Site summary

This site aims to provide protection for the subtidal broad-scale habitats additional to that which is already in place under existing designations for most of the intertidal broad-scale habitats. The site itself is almost entirely intertidal or subtidal mud, a relatively geographically restricted habitat in the region, with small patches of coastal saltmarsh, saline reedbeds, low energy intertidal rock, intertidal sand/muddy sand and intertidal mixed sediments. Towards the mouth of the estuary, the habitat becomes dominated by subtidal coarse sediments and subtidal sand. The site contains good examples of estuarine rocky habitats and small patches of sheltered muddy gravels, as well as peat and clay exposures. One, possibly two, populations of Tentacled Lagoon Worm (*Alkmaria romijni)* occur in the much narrower channel further upstream. The site is considered to be a nursery area for skates and other commercial fish species, as well as rarer species, such as sea trout and a subspecies of herring.

Current levels of activities in this site are thought to be compatible with the draft conservation objectives for the site, since a Medway Ports already has a maintenance dredging protocol in place and current anchoring thought to have low impact.

9. Detailed site description

The following is a description of the site based on extracts from literature held by the Balanced Seas Project and stakeholder correspondence. It does not constitute a complete literature review or ecological description of the site.

This site encompasses the Medway Estuary from the upper reaches at Cuxton down to the mouth, including part of the seaward extent from Grain to Sheerness. The Medway Estuary is a complex and dynamic ecosystem where the mix of fresh and sea waters with tidal movement create changing levels of salinity and nutrient richness that provide a fertile environment for large populations of animals, particularly invertebrates, fish and birds (Medway Swale Estuary Partnership, 2011). A mosaic of habitat types exists within the Medway estuary with inter-tidal mud flats, salt marshes, coastal grazing marsh, ditches and seawalls (Medway and Swale Shoreline Management Plan 2010).

According to the UKSeaMap/MESH map of unprotected broad-scale habitats (JNCC 2011 v.7), this site is predominantly subtidal mud (A5.3), a relatively geographically restricted habitat in the region (see Broad-scale habitats map). Smaller areas of low energy intertidal rock (A1.3), intertidal sand/muddy sand (A2.2) and mixed sediments (A2.4), subtidal coarse sediment (A5.1) and subtidal sand (A5.2) occur, which have been included in the site to complete the seabed protection afforded by the number of existing protected areas. A database of various benthic biotope sample surveys collated by the Environment Agency concurs with these modelled habitat distributions.

Of the habitat FOCI features identified for protection, distributional data for estuarine rocky habitats and peat and clay exposures has been provided by the national contract data, and some members of the RSG reported that this is a good site for protection of the former habitat (see FOCI map). The Environment Agency have created a database of biotopes recorded from a large number of independent surveys which shows that this site supports a particularly biodiverse example of the sheltered muddy gravels habitat. Although both subtidal and intertidal forms of Blue Mussel beds occur, at RSG meeting 6, stakeholders suggested that these are not good examples of the feature. Rossworm (*Sabellaria spinulosa*) reef is thought to occur in only one very small patch and so is not recommended for designation. Subtidal sands and gravels were also not selected, but should be considered as a supporting feature in the site. The Medway is one of the Key Inshore Biodiversity Areas in the Balanced Seas Region recommended as an MCZ by the South East England Biodiversity Forum (SEEBF, 2010).

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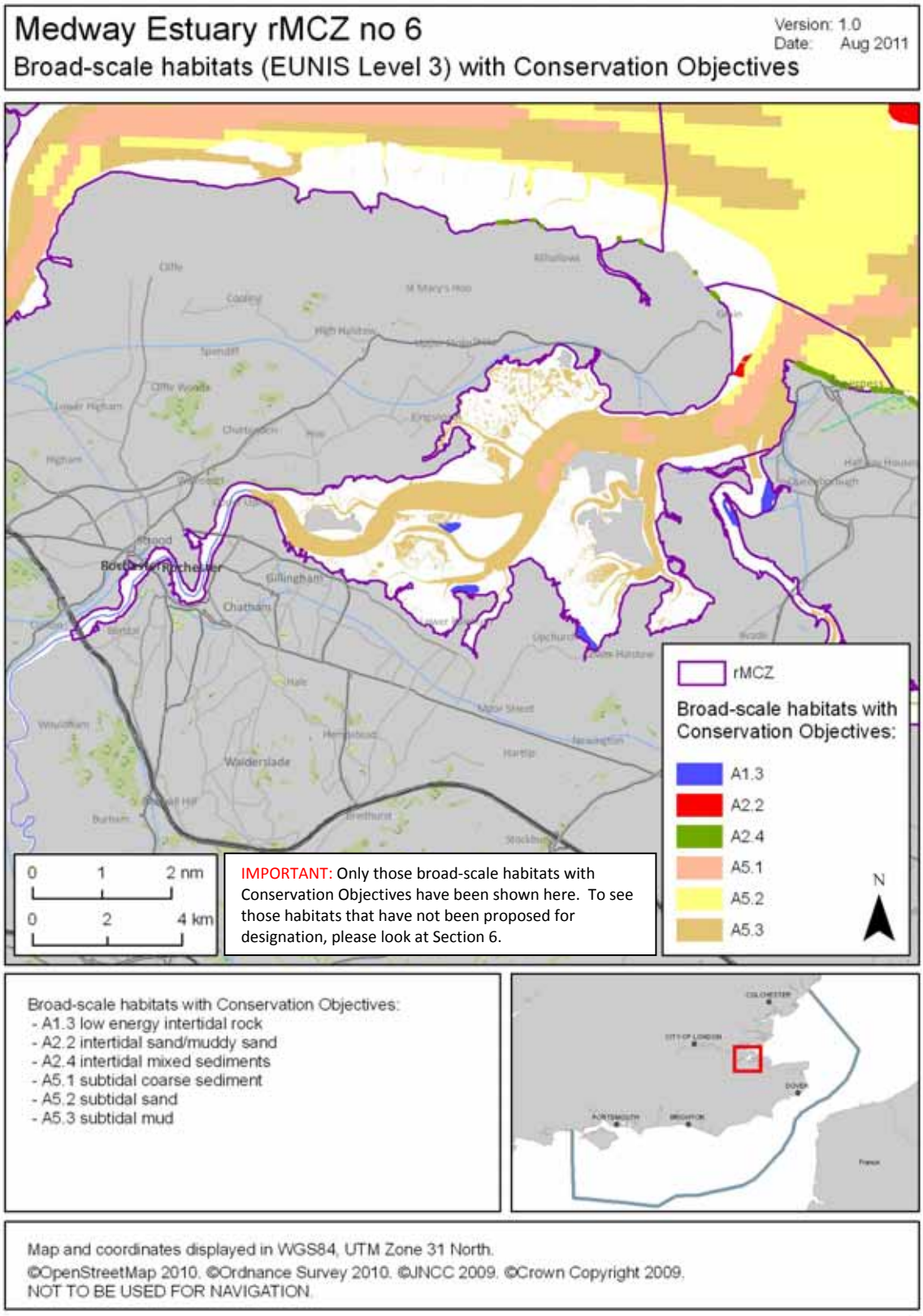
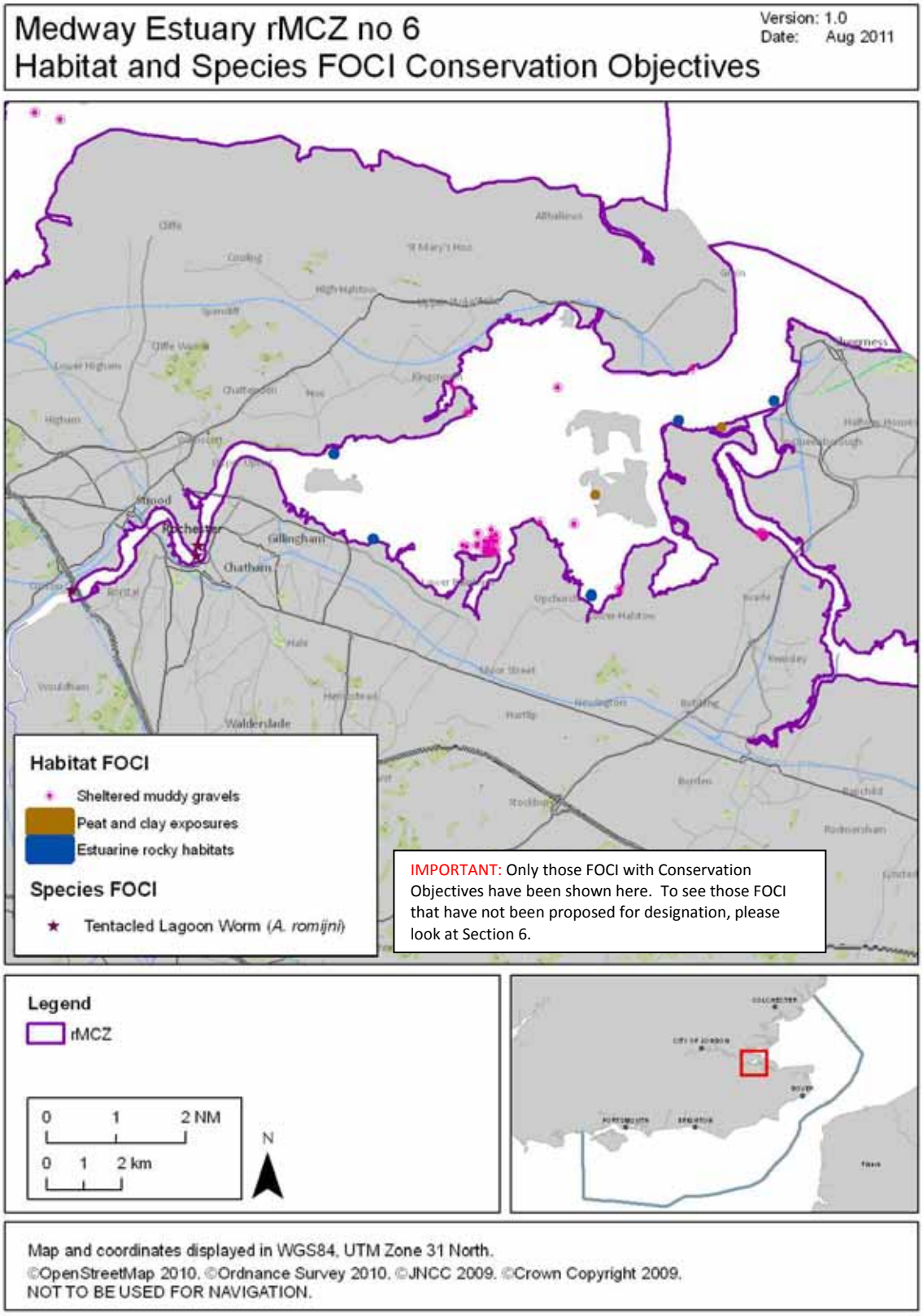
The Medway is one of only three locations where the Tentacled Lagoon Worm (*Alkmaria romijni)* is thought to occur in the region. According to the biotope data collated by the Environment Agency, this species is located in the upper stretches of the Medway River at Rochester and in a single brackish lagoon on Common Marsh, at Cuxton.

The KEIFCA and EA have stated that there is sparse occurrence of Smelt and European Eel here, so the RSG did not select them for protection in this MCZ, but noted that the Medway might be one the most suitable areas for Eel recovery in the future (Balanced Seas RSG meeting 6, 26/27 Jan 2011). Catchments which drain into the estuaries in South East of England within the boundaries of Balanced Seas project all support high quality freshwater fish communities, including species such as Smelt and Eel, and in the Medway, the former extends as far upstream as Wouldham, which is strong evidence of local recruitment (Colclough, 2010). The site has been noted for its nursery grounds for Bass, Herring, Plaice, Sole and Cod (KEIFCA, Balanced Seas RSG Inshore Task Group meeting, December 2010). The estuary is also home to migratory species, such as Salmon and Sea Trout (Colclough, 2010), and is an important site for seal foraging (Balanced Seas RSG Inshore Task Group meeting, December 2010).

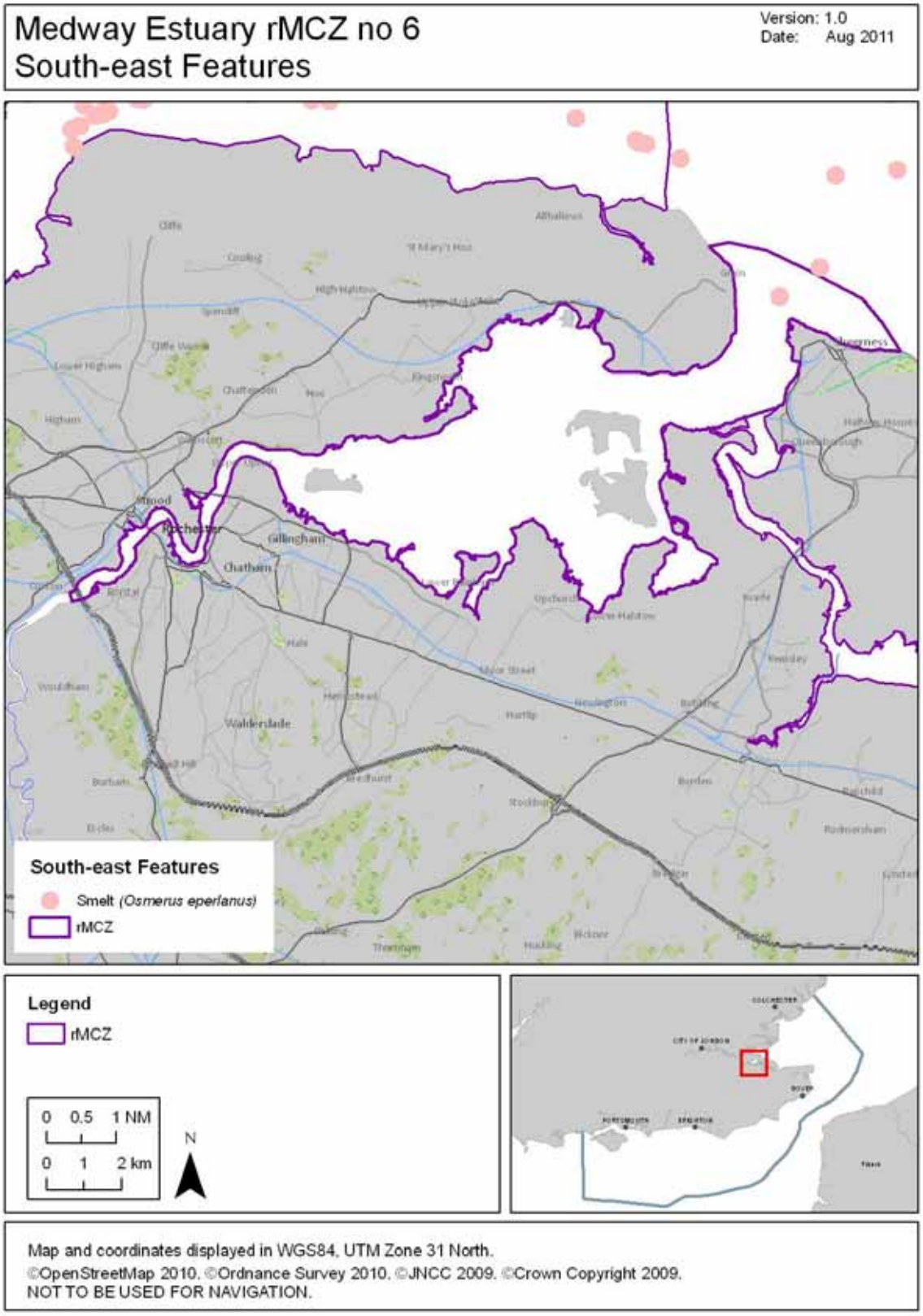
The RSPB have suggested that the important colony of Sandwich Terns at Burntwick Island should be considered as supporting features of the site (Local Group meeting April). The birds forage on both the intertidal and subtidal areas not currently protected in the SPA and will benefit from the additional protection given by the MCZ.


Medway Estuary rMCZ no 6
Broad-scale habitats (EUNIS Level 3) with Conservation Objectives
Version: 1.0
Date: Aug 2011
rMCZ
Broad-scale habitats with Conservation Objectives:
A1.3
A2.2
A2.4
A5.1
A5.2
A5.3
N
0 1 2 nm
0 2 4 km
IMPORTANT: Only those broad-scale habitats with Conservation Objectives have been shown here. To see those habitats that have not been proposed for designation, please look at Section 6.
Broad-scale habitats with Conservation Objectives:
- A1.3 low energy intertidal rock
- A2.2 intertidal sand/muddy sand
- A2.4 intertidal mixed sediments
- A5.1 subtidal coarse sediment
- A5.2 subtidal sand
- A5.3 subtidal mud
Map and coordinates displayed in WGS84, UTM Zone 31 North.
©OpenStreetMap 2010. ©Ordnance Survey 2010. ©JNCC 2009. ©Crown Copyright 2009.
NOT TO BE USED FOR NAVIGATION.

Medway Estuary rMCZ no 6



Medway Estuary rMCZ no 6



10. Site boundary

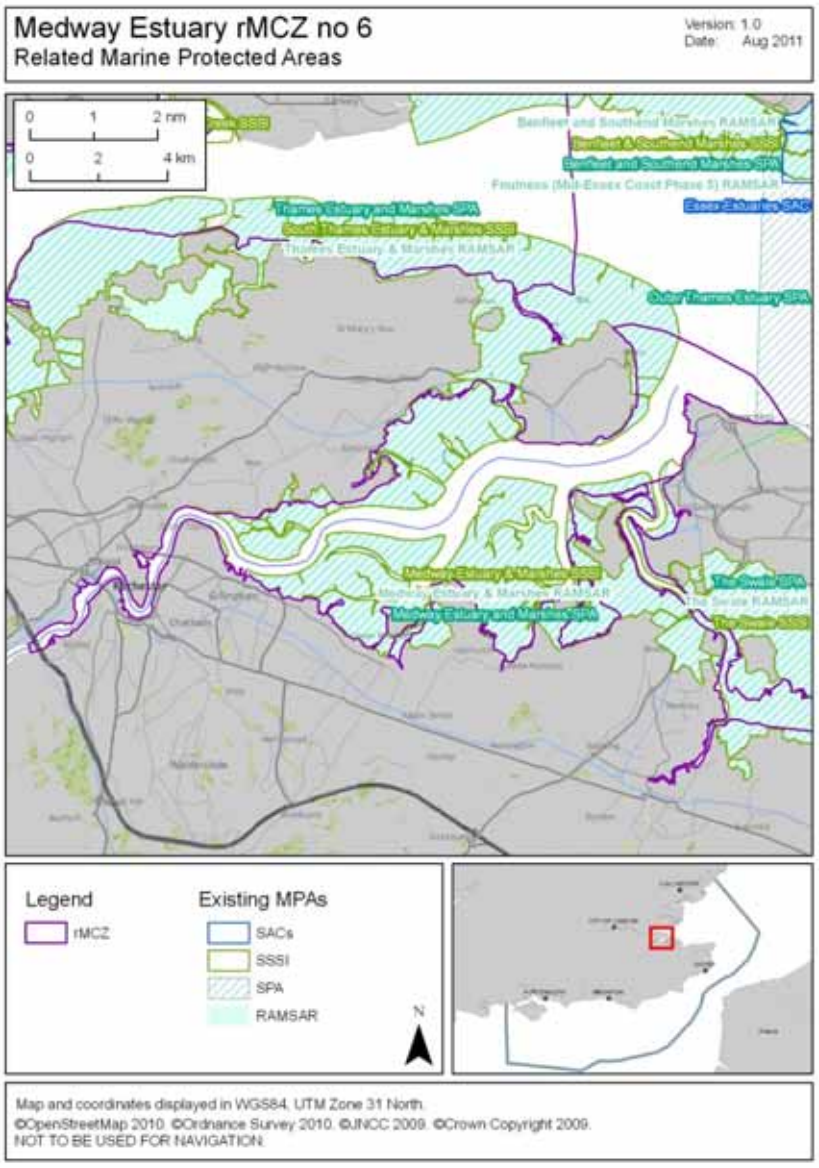
The landward boundary is mostly determined by the Mean High Water extent of the Medway Estuary, extending upstream as far as the Medway Bridge to include two populations of Tentacled Lagoon Worm. The seaward boundary has been drawn to ensure that protection is given to the estuary as a whole, though considerable discussion has occurred regarding the boundary in relation to the major ports that are located here (London Thamesport, Chatham Docks and Port of Sheerness).

11. Conservation objectives

Individual conservation objective forms for each feature can be found in Appendix 1. For a site-based summary of the conservation objectives and proposed management measures, please see Section 15.

12. Sites to which this site is related

The site completely contains the Medway Estuary & Marshes SSSI but partially overlaps the South Thames Estuary & Marshes SSSI, the Medway Estuary and Marshes SPA and Ramsar site, and the Thames Estuary & Marshes SPA and Ramsar site.



13. Supporting documentation (information relating to ENG features only)

Information	Type of information	Source	Name of survey	Date
Broad-scale habitats	Modelled and survey Data	JNCC V.7 Combined UKSeaMap and MESH	Combined	June 2011
Blue mussel beds	Survey	National contract data, DEFRA MB102 2C	JNCCMNCR10316812	04/06/1993
Blue mussel beds	Survey	Kent Wildlife Trust		24/02/2007
Rossworm (*Sabellaria spinulosa*) reef	Survey	Environment Agency database		01/Mar/1999
Sheltered muddy gravels	Survey	National contract data, DEFRA MB102 2C	JNCCMNCR10316847	06/06/1993
Peat and clay exposures	Survey	Kent Wildlife Trust		28/09/2006
Estuarine rocky habitats	Survey	National contract data, DEFRA MB102 2C		1993
Subtidal sands and gravels	Survey	National contract data, DEFRA MB102 2C		13/09/2006
Seagrass beds	Survey	National contract data, DEFRA MB102 2C		2006-2008
Tentacled Lagoon Worm (*A. Romijni*)	Survey	EA Southern (Maidstone) (Sourced from: Environment Agency database)	MIDWAY SUN PIER AND CHATHAM NESS (TQ7545 6825)	09/May/2000 And 27/May/1999

References (additional information can be found in the Bibliography)

COLCLOUGH, S. 2010. Marine *Fish Nursery Function in the Medway Estuary.* Environment Agency, United Kingdom.

KENT WILDLIFE TRUST. 2000. *Kent Red Data Book – Ruxley Gravel Pits.* Available at: <www.ruxley-gravel-pits.org.uk/PDFS/Kent%20Red%20Data%20Book.pdf > [Accessed 27th June 2011].

MEDWAY SWALE ESTUARY PARTNERSHIP, 2011. Available at: <www.msep.org.uk/theEstuary.php> [Accessed 2nd August 2011].

MEDWAY SWALE ESTUARY PARTNERSHIP. 2010. *Medway and Swale Shoreline Management Plan.* Halcrow Group Ltd, Swindon.

ROCHESTER OYSTER AND FLOATING FISHERY. 1991. *Admiralty Court Proceedings.*

SEELEY, B., HIGGS, S. LEAR, D. EVANS, J. NEILLY, M. CAMPBELL, M. WILKES, P. & ADAMS, L. 2010. *Accessing and Developing the Required Biophysical Dataset and Data Layers for Marine Protected Areas Network Planning and Wider Marine Spatial Planning Purposes. Report No 16: Mapping of Protected Habitats (Task 2C)*. DEFRA, London.

SOUTH EAST ENGLAND BIODIVERSITY FORUM (SEEBF) 2010. *Key Inshore Biodiversity Areas in the Balanced Seas Region for Recommendation as Marine Conservation Zones*. Letter and list to RSG and Balanced Seas Project Team, 22 Nov 2010.

14. Stakeholder support for this site

The RSG as a group reached consensus that this site should be put forward in their final recommendations. At their last meeting in July, the Local Group supported the RSG's recommendation, with some caveats raised regarding the activities occurring in the site (see comments in section 15). The Medway and Swale Estuary Partnership will provide a useful stakeholder forum for future discussions about this site as it goes forward.

Individual sectors wishing to note their support or concerns about the site recorded the following at the final RSG meeting in August 2011; their comments have been transcribed verbatim from the form that they completed:

SECTOR	ORGANISATION	COMMENT for Medway Estuary rMCZ 6
Yachting	RYA	Support.
Kite Surfing	British Kite Surfing Association	Great area for wildlife, supported.
Sea Angling		Medway Estuary support maintain to allow recreational anchoring.
Ports		Medway ports access and associated maintenance dredging will need to be able to continue.
Fishing - under 10s		(Tick)

(static gear)		
Fishing - FPO, beam trawling		Reasonable support if "maintain" CO.
Fishing - Over 10s, FPO, trawling sector (under and over 10m)	Gilson Co.	Happy.
Shipping	Chamber of Shipping	Broadly support on provision that anchoring and dredging are not restricted, allowing a good margin over current activity levels.
Birds	RSPB	Medway - support - very important for breeding seabirds - sandwich tern, little tern, common tern, black-headed gull, Mediterranean gull + wintering water birds. MCZ will support these features.
Wildlife Trusts	Hampshire Wildlife Trust	I support the site but as with MCZ 5, with all maintain targets what benefit will it bring.
Marine ecology	Seasearch	Strongly support this site, but with a maintain CO throughout it will achieve no biodiversity benefit. An extension along the north of Sheppey to capture good diversity was opposed by fishing interests.
Marine Wildlife	Marine Conservation Society	Support site but not "maintain" status. If no "recover" there will be no point. Paper park.
Statutory environmental	Environment Agency	Broadly support - issue as in 2 above.
IFCA	Kent & Essex IFCA	General support - subject to discussion.
Heritage and Archaeology	English Heritage	Medway Estuary. Support if protected wrecks in others can be investigated.

15. Site summary of conservation objectives (COs) and proposed management measures

A conservation objective (CO) is a statement describing the desired quality of the feature. Existing MPAs in the UK use the term *Favourable Condition* to represent the desired state of their features. Some pressures caused by human activities may stop the feature attaining favourable condition if present at sufficient intensity.

MAINTAIN means that, the *stated levels of activity* currently occurring on the feature are considered acceptable, but features will be monitored and restrictions may have to be introduced if the condition declines.

RECOVER means that restrictions may be necessary on the activity causing the pressure, in order to allow the feature to recover to favourable condition. It does not necessarily mean that the activity will be prohibited, as other mitigation measures might be appropriate (e.g. change in gear type, reduction of intensity, seasonal restrictions, etc)

The table below documents the draft COs for ALL the features listed for protection within the site, as established by JNCC and NE through the Vulnerability Assessment (VA) process[4] and then sense-checked at the national level[5]. Where a RECOVER objective is noted, the associated activity causing the pressure is indicated. In some cases, where information and data warrant it, the RSG chose to adopt the changes to COs recommended by the public authorities: Inshore Fisheries and Conservation Authorities (IFCAs), Marine Management Organisation (MMO), Environment Agency (EA) or Natural England. Changes were only accepted when recommended by these authorities and have been clearly noted. Where the VA has not yet been undertaken, or there is considerable uncertainty surrounding the accuracy of the information being used to recommend a change to the conservation objective, it has been noted as 'TO BE ASSESSED'. Local and regional stakeholders were given the opportunity to comment on the COs and potential management measures and to provide additional information that might not have been taken into account in the VA work.

[4] The process of establishing conservation objectives is outlined in the Conservation Objectives Guidance (JJNCC /NE 2011)

[5] VA results were standardised across all four regional projects but the fisheries activity data is still undergoing assessment.

For greater detail on discussions relating to the site and the network, please refer to both RSG and Local Group stakeholder meeting reports at www.balancedseas.org.

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Feature	Draft CO	Activity exerting pressure	IFCA/MMO/EA/NE Comments	Stakeholder comments on draft COs and potential management measures
A1.3 Low energy intertidal rock	MAINTAIN		Maintenance dredging protocol in place for dredging undertaken by Medway Ports itself	At the LG meeting of July 2011 the following further activity information was noted: • Medway Ports undertakes maintenance dredging in the approach channel and berths (around Sheerness, Isle of Grain, Lower Halstow) but there is no overlap with feature • Recreational clubs undertake minor amounts of dredging elsewhere in the estuary (e.g. Chillingham Marina); extent of this is wider than previously recognised and operators are variable in the equipment they use. Medway Ports currently collating data on this "3rd party dredging" and hope to have this information available to incorporate 3rd party dredging into their dredging protocols by April 2012.
A2.2 intertidal sand/muddy sand	MAINTAIN		The vulnerability assessment and resulting CO were only completed for the final RSG meeting in August and were therefore not discussed at the Local Group meeting in July 2011.	
A2.4 intertidal mixed sediments	MAINTAIN		The vulnerability assessment and resulting CO were only completed for the final RSG meeting in August and were therefore not discussed at the Local Group meeting in July 2011.	
A5.1 Subtidal coarse sediment	MAINTAIN			At the LG meeting (July 2011), the Wildlife Trust felt that there is not enough information available to be certain that MAINTAIN is appropriate and consider these features should have a RECOVER CO until the maintenance dredging protocols have been checked, and all other 3rd party dredging methods reviewed. Current good practice was taken into account by Natural England in the vulnerability assessment, but WTs thought that better methods which are less impactful but achieve the same result may be possible and should be pursued.
A5.2 Subtidal sand	MAINTAIN			
A5.3 Subtidal mud	MAINTAIN			
Sheltered muddy gravels	MAINTAIN			At the LG meeting of July 2011, it was mentioned that crab collecting occurs over the feature.
Peat and clay exposures	MAINTAIN			
Estuarine rocky habitats	MAINTAIN			LG (July 2011) verified that commercial anchoring does not overlap with this feature.
Tentacled Lagoon Worm (*Alkmaria romijni)*	~~RECOVER~~ MAINTAIN (see LG comment)	Shipping (anchoring)	Port Authority responsible NE consider CO should be amended to MAINTAIN because area is not heavily used for anchoring, and current anchoring thought to have low impact	At the LG meeting (July 2011) the following further activity information was given: • Ports sector confirmed that the area is not used by large commercial vessel anchorages but is occasionally used by smaller vessels. NE agreed to change the CO to reflect this. There was a concern that the level of set netting might be damaging. • The Rochester Oyster Floating Fisheries (ROFF) has the rights to put set nets in this area, but have not done so for 3yrs; if they want to in future they will avoid the area where this species is found • Members of the ROFF trawl in the Medway but it is not thought that this overlaps with the distribution of this species. • Timber wharf boats can stir up sediment but their activity is at a low level • Rats Bay pumping station is located in this area but not likely to affect Lagoon worm population.

16. Evolution of the site recommendations

This site was identified in the first RSG meeting and has had considerable discussion regarding the appropriate features for protection. During RSG Mtg 5 (October 2010), the boundaries at the mouth of the estuary were discussed, with the ports sector requesting an alignment with the SPA to avoid port-activity restrictions, but the current seaward boundaries were eventually agreed in order to ensure appropriate protection for the features listed. The landward boundaries were also adjusted in RSG 6 to align with the SSSI for simplified management, though this was later changed to include the upper reaches of the Medway and the populations of Tentacled Lagoon Worm (April LG Mtg, RSG).

For greater detail on discussions relating to the site and the network, please refer to both RSG and Local Group stakeholder meeting reports at www.balancedseas.org.

17. Implications for stakeholders

The following issues are associated with this site:

- London Thamesport, Chatham Docks and Port of Sheerness all have anchorage and dredging activity requirements that must be maintained, which might not appear to be compatible with an MCZ. There has been discussion about exclusion of the port areas from the site, but without a full understanding of the longer-term potential activity restrictions no boundary change/exclusion has been undertaken. At the Local Group meeting of July 2011, the Medway Ports representative explained the various best management practices that are being put in place and that are likely to be adequate for any mitigation needed.
- The private Rochester Oyster and Floating Fishery have historic fishing rights from the mouth of the Medway up to Rochester and are very important stakeholders in this site, and are supportive of the process provided that the management practices they use are recognised as contributing to the improvement of the health of the estuary
- The Crown Estate have noted a proposed power cable, 8 active power cables, 4 active unknown cables, a proposed CCS pipeline and leases for wildfowling and outfalls, but support the site

This list represents only the major issues associated with the site. To see all stakeholder discussions, please refer to the Balanced Seas RSG and Local Group meeting reports at www.balancedseas.org.