

Medway Estuary (rMCZ6) Evidence Review

Region	Balanced Seas	
Site Name/number	Medway Estuary rMCZ BS6	
ENG Features present and proposed for inclusion within MCZ designation	BSH	<ul style="list-style-type: none"> • Low energy intertidal rock • Intertidal sand and muddy sand • Intertidal mixed sediments • Subtidal coarse sediment • Subtidal sand • Subtidal mud.
	Habitat FOCI	<ul style="list-style-type: none"> • Estuarine rocky habitats • Peat and clay exposures • Sheltered muddy gravels.
	Species FOCI	<ul style="list-style-type: none"> • <i>Alkmaria romijni</i>
ENG Features present but not proposed for inclusion within MCZ designation	BSH	<ul style="list-style-type: none"> • Intertidal mud • Coastal saltmarshes and saline reedbeds • Intertidal sediments dominated by aquatic angiosperms.
	Habitat FOCI	<ul style="list-style-type: none"> • Blue Mussel beds (including intertidal beds on mixed and sandy sediments) • Ross worm <i>Sabellaria spinulosa</i> reefs • Seagrass beds • Subtidal sands and gravels.
	Species FOCI	<ul style="list-style-type: none"> • <i>Osmerus eperlanus</i> • <i>Anguilla anguilla</i>
Non-ENG Features (Geological/geomorphological)		<ul style="list-style-type: none"> • Mosaic of Intertidal mud and coastal saltmarsh and saline reedbed

Evidence Summary – data provided by Regional MCZ Projects

Feature	Evidence Summary	Key Sources
Low energy intertidal rock	Presence and extent based on predicted modelled polygon data from MESH/ MB0102 and data points from MESH. Photographic imagery from CCO	MESH/ MB0102 CCO
Intertidal sand and muddy sand	Presence and extent based on predicted modelled polygon data from MESH/ MB0102, a data point from MESH, and data points from Regional Project BS. Photographic imagery from CCO	MESH/ MB0120 and Regional Project BS CCO
Intertidal mixed sediments	Presence and extent based on predicted modelled polygon data from MESH/ MB0120, data points from	MESH/ MB0120 and Regional Project BS CCO

	MESH, and data points from Regional Project BS. Photographic imagery from CCO	
Subtidal coarse sediment	Presence and extent based on predicted modelled polygon data from MESH, polygon data from UKSeaMap, and data points from Regional Project BS.	MESH/UKSeaMap and Regional Project BS
Subtidal sand	Presence and extent based on predicted modelled polygon data from MESH, polygon data from UKSeaMap, and data points from Regional Project BS.	MESH/UKSeaMap and Regional Project BS
Subtidal mud	Presence and extent based on predicted modelled polygon data from MESH, polygon data from UKSeaMap, data points from MESH, and data points from Regional Project BS.	MESH/UKSeaMap and Regional Project BS
Estuarine rocky habitats	Presence and extent based on data points from MB0102/ MESH.	MB0102/ MESH
Peat and clay exposures	Presence and extent based on polygon data from MESH/ MB0102.	MESH/ MB0120
Sheltered muddy gravels	Presence and extent based on a datapoint from MB0102, a datapoint from MESH, and data points from Regional project BS.	MB0102/MESH and Regional Project BS
<i>Alkmaria romijni</i>	Presence and extent based on data points from the Regional Projects - BS derived from the Environment Agency and data points from the Environment Agency (from 1999 and 2000 surveys).	Environment Agency (Regional Projects – BS)

Description of New Evidence Identified by MB0116 project

Anecdotal evidence provided by NE to MB0116 project

Evidence Description	Source	Feature
Gilliland, P. and W. Sanderson (2000). "Re - evaluation of marine benthic species of nature conservation importance: a new perspective on certain 'lagoonal specialists' with particular emphasis on <i>Alkmaria romijni</i> Horst (Polychaeta: Ampharetidae)."	Aquatic Conservation: Marine and Freshwater Ecosystems 10(1): 1-12.	<i>Alkmaria romijni</i>

Evidence That Could Not Be Acquired by MB0116 project

Evidence Description	Source	Feature
Rock and thin sediment.	British Geological Society	Broadscale habitats
Evidence on flora and fauna identified from EIA in the Medway	Scottish and Southern Energy, Power stations, Medway, gas - EIA	Fauna/flora unknown
WFD Operational Benthic Infauna Survey - Medway Estuary	Environment Agency	Subtidal coarse sediment Subtidal mud Subtidal sand

Confidence Assessment undertaken by MB0116 project

Feature	Presence	Extent	Condition	Boundaries (site)
Low energy intertidal rock	Low	Low	Low	Low
Intertidal sand and muddy sand	High	Moderate	Low	
Intertidal mixed sediments	High	High	Low	
Subtidal coarse sediment	Moderate	Low	Low	
Subtidal sand	Moderate	Low	Low	
Subtidal mud	Low	Low	Low	
Estuarine rocky habitats	Moderate	Low	Low	
Peat and clay exposures	Low	Low	Low	
Sheltered muddy gravels	High	Low	Low	
<i>Alkmaria romijni</i>	Moderate	Moderate	Low	

The confidence in the presence and extent of 'Low energy intertidal rock' is 'low' since there are no overlapping feature data points.

The confidence assessment of 'Intertidal sand and muddy sand' resulted in a 'high' score for presence and a 'moderate' score for extent because although less than 50% of feature data points agreed with the feature polygon (and there were less than 90% of parent features agreeing), and the sample data was not well distributed over >50% of the feature, the aerial photography gives visual confirmation of the feature raising the confidence to high. In addition the aerial imagery covers the polygon area of the feature extends to a much larger area than the feature polygons. Similarly the presence and extent of 'Intertidal mixed sediments' are assessed as 'high' because the aerial photography gives visual confirmation above that given by the data points and polygons alone.

The confidence assessment of 'Subtidal coarse sediment' and 'Subtidal sand' resulted in a 'moderate' score for presence and a 'low' score for extent since >90% of parent features agreed with the parent feature polygon, but there were no L3 feature data points agreeing with the polygon.

'Subtidal mud' was assessed as 'low' for presence because there is a MESH confidence score of less than 58 and there was less than 50% agreement with the parent feature. The feature data points are distributed over less than 50% of the feature. However, the confidence score assigned to extent was reduced to 'low' to reflect the low confidence score assigned to the presence of this feature.

There is 'moderate' confidence in the presence of 'Estuarine rocky habitats' within the rMCZ. This is based on the high number of point records for the habitat. However, a 'low' score was obtained for extent since there was no polygon data available.

'Peat and clay exposures' are rated 'low' confidence in both presence and extent as there are no point data and very limited polygon data. There is 'high' confidence in the presence of 'Sheltered muddy gravels' within the rMCZ, based on the high number of point records, however a 'low' score was obtained for extent since there was no polygon data available.

There are 6 data points for *Alkmaria romijini* that were collected by specialists; two of which in the last 12 years giving confidence scores of 'moderate' for presence and extent. The anecdotal evidence shows one record of the feature within the Medway estuary however without greater detail the confidence score cannot be increased for either presence or extent.

The condition assessment for all the features was based on a Vulnerability Assessment and could not be improved beyond a 'low' confidence score. Project MB0102 considered that *Alkmaria romijini* was sensitive to human activities that lead to physical changes in sediment. Aggregate extraction does not occur at this site and although other relevant activities do occur in this rMCZ or are considered likely to occur (navigation dredging), the spatial scale of these is limited (waste disposal, aquaculture) and would not overlap with the entire site and are unlikely to lead to changes at the pressure benchmark against which sensitivity was assessed. Confidence in the condition is therefore assessed as low.

The confidence assessment in the boundary of the site was classified as 'low' primarily because the site boundary was not closely aligned to the boundary of the 'Subtidal Mud', 'Intertidal sand and muddy sand', 'Sheltered muddy gravels' and '*Alkmaria romijini*' features.