Torbay (rMCZ22) Evidence Review

Region	Finding Sanctuary	
Site Name/number	Torbay rMCZ FS22	
ENG Features present and proposed for inclusion within MCZ designation	BSH	• Moderate energy intertidal rock • Low energy intertidal rock • Intertidal coarse sediment • Intertidal sand and muddy sand • Intertidal mud • Intertidal mixed sediments • Subtidal mud
	Habitat FOCI	• Seagrass beds • Honeycomb worm *Sabellaria alveolata* reefs • Intertidal underboulder communities
	Species FOCI	• *Padina pavonica* • *Hippocampus guttulatus* • *Ostrea edulis* • *Paludinella littorina*
ENG Features present but not proposed for inclusion within MCZ designation	BSH	• High energy infralittoral rock • Moderate energy infralittoral rock • Low energy infralittoral rock • Moderate energy circalittoral rock • Subtidal sands and gravels • Subtidal sand
	Habitat FOCI	-
	Species FOCI	• *Hippocampus hippocampus*
Non-ENG Features (Geological/geomorphological/ biological)		• *Gavia arctica* • *Gavia immer* • *Podiceps cristatus* • *Podiceps nigricollis* • *Podiceps grisegena* • *Podiceps auritus* • *Phocoena phocoena* • *Uria aalge*

Evidence Summary – data provided by Regional MCZ Projects

Feature	Evidence Summary	Key Sources
Moderate energy intertidal rock	Presence and extent based on predicted modelled polygon and point data from MESH/ MB0102. Point data from NE geo-referenced photographs for MCZ feature specific studies. CCO aerial imagery	MESH/ MB0102 CCO NE
Low energy intertidal rock	Presence and extent based on predicted modelled polygon data from MESH/	MESH/ MB0102 CCO

	MB0102 and one data point from MESH. Point data from NE geo-referenced photographs for MCZ feature specific studies. CCO aerial imagery	NE
Intertidal coarse sediment	Presence and extent based on predicted modelled polygon data from MESH/ MB0102. Point data from NE geo-referenced photographs for MCZ feature specific studies and CCO aerial imagery	MESH/ MB0102 CCO NE
Intertidal sand and muddy sand	Presence and extent based on predicted modelled polygon data and data points from MESH/ MB0102. Point data from NE geo-referenced photographs for MCZ feature specific studies. CCO aerial imagery	MESH/ MB0102 CCO NE
Intertidal mud	Presence and extent based on predicted modelled polygon data from MESH/ MB0102. No data points. CCO aerial imagery	MESH/ MB0102 CCO
Intertidal mixed sediments	Presence and extent based on predicted modelled polygon data from MESH/ MB0102. No data points. CCO aerial imagery	MESH/ MB0102 CCO
Subtidal mud	Presence and extent based on predicted modelled polygon data from MESH/ UKSeaMap and data points from MESH/ MB0102	MESH/ MB0102
Seagrass beds	Presence and extent based on four areas of polygon data and validating data points from surveys. The polygon data is evidence collated during the Defra project MB0102. The sampled data points were collected as part of MESH/MB0102	MB102, MESH
Intertidal under boulder communities	Presence and extent based on data points from MESH/ MB0102	MESH/ MB0102
Honeycomb worm *Sabellaria alveolata* reefs	Presence and extent based on four data points from MESH/ MB0102. No polygon data available.	MESH/ MB0102
Padina pavonica	Presence and extent based on four data points from MB0102.	MB0102
Hippocampus guttulatus	Presence and extent based on one point record from MB0102.	MB0102
Ostrea edulis	Presence and extent based on five data points from MB0102	MB0102
Paludinella littorina	Presence and extent based on one data point from MB0102.	MB0102

Description of New Evidence Identified by MB0116 project

Anecdotal evidence supplied by NE to MB0116 project

Evidence Description	Source	Feature
Polygon data from SW_Habitat_Mapping (South_Devon_legend_Apr_16_2010_MCZ) and SW_Habitat_Mapping_BAP (County_Devon_All_MCZ) .	SW_Habitat_Mapping (South Devon)	Intertidal coarse sediment Intertidal mud Intertidal under boulder communities
Data points	Marine Recorder - MBA	Subtidal mud Intertidal under boulder communities
Data points from SeaSearch Surveys	SeaSearch	Seagrass beds Intertidal under boulder communities *Ostrea edulis*
Killeen, I. J. and J. M. Light (2000). "Sabellaria, a polychaete host for the gastropods Noemiamea dolioliformis and Graphis albida."	Journal of the Marine Biological Association of the UK 80(03): 571-573.	Honeycomb worm Sabellaria alveolata reefs
Herbert et al. (2012). Status and sensitivity of the BAP priority marine alga *Padina pavonica.*	Final Report, SITA TRUST. Enriching Nature. Medina Valley Centre for Environmental & Outdoor Education	*Padina pavonica*

Evidence That Could Not Be Acquired by MB0116 project

Evidence Description	Source	Feature
Rock and thin sediment shape files.	British Geological Society	Broadscale habitats
Sightings of Hippocampus sp.	The Seahorse Trust database.	*Hippocampus* sp.
Prawle Point to Plymouth Sound & Eddystone cSAC drop down video survey 2011	NE contractor (Plymouth University)	Subtidal mud

Confidence Assessment undertaken by MB0116 project

Feature	Presence	Extent	Condition	Boundaries (site)
Moderate energy intertidal rock	High	High	Low	Low
Low energy intertidal rock	High	Moderate	Low	
Intertidal coarse	High	Moderate	Low	

sediment				
Intertidal sand and muddy sand	High	Moderate	Low	
Intertidal mud	Low	Low	Low	
Intertidal mixed sediments	Moderate	Moderate	Low	
Subtidal mud	Low	Low	Low	
Seagrass beds	Moderate	Moderate	Moderate	
Intertidal under boulder communities	Low	Low	Low	
Honeycomb worm *Sabellaria alveolata* reefs	Low	Low	Low	
Padina pavonica	Moderate	Low	Low	
Hippocampus guttulatus	Low	Low	Low	
Ostrea edulis	Moderate	Low	Low	
Paludinella littorina	Low	Low	Low	

The confidence assessment for 'Moderate energy intertidal rock' was based upon MESH polygons with 100% of data points sharing the parent feature, and therefore a 'high' score was obtained for presence which was backed up by visual confirmation from aerial photography. , Although there no Level 3 feature data points agreed with the polygons the aerial photography showed that the feature covered the polygon area and as such a 'high' score was obtained for extent.

The confidence assessments for 'Low energy intertidal rock' and 'Intertidal coarse sediment' were based upon MESH polygons with 100% of data points sharing the parent feature and aerial photography confirming the presence of the feature were considered to be 'high'. A 'moderate' score was obtained for extent because the data points did not overlap the feature polygons however the aerial photography covered over 50% of the polygon areas.

The presence 'Intertidal sand and muddy sand' is considered to be 'high' because although no feature points or parent feature data points that overlap the feature polygon the aerial photography provides visual confirmation of the feature. When the aerial imagery is overlain the feature polygon it covers over 50% of the area, thus the extent is considered to be 'moderate'.

'Intertidal mud' was assessed as 'low' for presence and extent due to the lack of validation points and no feature points occur within the site.

The MESH confidence score for 'Intertidal mixed sediments' is less than 58,and there are no feature or parent data points however the aerial photography provided visual confirmation giving an assessment score of 'moderate'. The photographic evidence covers more than 50% of the polygon features and therefore is considered as 'moderate'.

The confidence assessment of ‘Subtidal mud’ was based on polygon data and 41% of parent feature data points agreeing with feature polygon. This resulted in a ‘low’ confidence for presence and there were multiple validation points with a distribution of less than 50% of the feature the confidence score was considered to be ‘moderate. However, the confidence score assigned to extent was reduced to ‘low’ to reflect the low confidence score assigned to the presence of this feature.

A single ground truthed record overlapping polygons for ‘Intertidal underboulder communities’ gives a ‘low’ confidence for both presence and extent of this HOCI.
The presence of ‘Honeycomb worm *Sabellaria alveolata* reefs’ was recorded by Killeen and Light (2000), with 4 additional point records but no polygon data. Due to the variable nature of this habitat, 12 year old records provide ‘low’ in presence or extent.

A ‘moderate’ score was obtained for both presence and extent of ‘Seagrass beds’ since 6/8 (75%) data points overlapping with feature polygons agreed with habitat type and the sample data was not distributed over more than 50% of the feature.

The presence and extent of Species (SOCI) was based on point data alone. All species obtained ‘low’ scores for presence and extent due to limited (1 datapoint only) or data collected more than 12 years ago. The recent record of *O. edulis* raises the confidence in its presence to ‘moderate’. Anecdotal evidence from 2012 details the presence of *Padina pavonica* within Torquay Bay, however as this evidence is only shown as a single location a distribution map therefore the presence confidence score is adjusted to ‘moderate’.

The condition assessments for all the features, apart from ‘Seagrass beds’, were based on a Vulnerability Assessment and could not be improved beyond a ‘low’ confidence score. ‘Seagrass beds’ overlap with benthic trawling metiers and therefore scored a ‘moderate’ confidence score.

The confidence assessment in the boundary of the site was classified as ‘low’ primarily because the overall confidence in the extent of the respective BSH and Habitat FOCI was determined as ‘low’.