Marine Conservation Zone Assessment

Site name: Erme Estuary MCZ
UKMCZ0059

Protected feature(s):
High energy intertidal rock
Low energy intertidal rock
Moderate energy intertidal rock
Estuarine rocky habitats

Fishing activities assessed at this site:
Stage 1 Assessment
Static fixed nets: Gill nets, trammels, entangling
Passive nets: Drift nets (demersal),
Seine nets & other: Shrimp push nets, Fyke & stakenets, ring nets

Devon & Severn IFCA
Inshore Fisheries and Conservation Authority

D&S IFCA Reference
ERM-MCZ-008

Contents

Version control history			
Author	**Date**	**Comment**	**Version**
Sarah Curtin	October 2021	Draft assessment	0.1
	February 2022	Updated using other estuarine MCZ advice packages with similar habitat	0.2
	November 2022/ January 2023	Finalised assessment (J. Stewart) and Review (S. Clark)	1.0

1. Introduction

This assessment has been undertaken by Devon & Severn Inshore Fisheries and Conservation Authority (D&S IFCA) in order to document and determine whether management measures are required to achieve the conservation objectives of marine conservation zones (MCZs). The IFCA's responsibilities in relation to management of MCZs are laid out in Sections 124 to 126, & 154 to 157 of the Marine and Coastal Access Act 2009.

2. MCZ site name(s), and location

The Erme Estuary MCZ is an inshore site of approximately 1km^2 in size. The Erme is located in South Devon and opens into the Western Channel and Celtic Sea region. The MCZ designation covers the whole estuary from the mouth of the river to the limits of the tidal influence near the village of Ermington. The MCZ falls within the Erme Estuary Site of Special Scientific Interest as well as overlapping with the Prawle Point to Plymouth Sound and Eddystone Site of Community Importance at the mouth of the river.

The wide variety of habitats found within the Erme Estuary support a large number of important species including several that are rare, such as the tentacled lagoon worm, *Alkmaria romijni*. This tiny bristleworm grows up to 5mm in length and creates and lives in tubes within the mud habitats of the estuary. These worms have tentacles around their mouths used for gathering food from the surrounding muddy sediments. The tentacled lagoon worm is particularly vulnerable to activities that cause changes in its habitat.

Estuaries create important areas for wading and migratory birds to feed and rest and form nurseries for juvenile species of fish. The large areas of mudflats and muddy gravel produce films of algae which become exposed at low tide, making them important foraging grounds for several species. The estuarine rocky habitats provide a hard surface for algae and animals to attach in an area dominated by sand and mud with variable salinity. At low tide these areas become foraging grounds for birds and crustaceans and at high tide they create shelter for juvenile species of fish.

At the mouth of the river exposed rocks provide a hard surface for mussels, limpets and barnacles to attach to in areas dominated by sediment and muddy gravel (Defra, 2019).

Further information regarding the MCZ and its protected features can be found in the Erme Estuary MCZ Factsheet.

3. Feature(s) / habitat(s) of conservation importance (FOCI/HOCI) and conservation objectives

Table 1 - Protected features relevant to this assessment

Feature	General management approach
High energy intertidal rock	Maintain to favourable condition
Low energy intertidal rock	Maintain in favourable condition
Moderate energy intertidal rock	Maintain in favourable condition
Estuarine rocky habitats	Maintain in favourable condition

The conservation objectives for these features are that they remain in favourable condition.

4. Gear/feature interaction in the MCZ categorised as ‘red’ risk and overview of management measure

None - There are no gear/feature interactions in the MCZ that are categorised as ‘red’ risk.

5. Activities under consideration

- Static fixed nets: Gill nets, trammels and entangling
- Passive nets: Drift nets (demersal)
- Seine nets & other: Shrimp push nets, fyke & stakenets, ring nets

Gill Nets, trammels, entangling, drift nets (Demersal),shrimp push nets, fyke and stake nets fall under the D&S IFCA Netting Permit Byelaw and are currently not permitted to take place within the Erme Estuary MCZ.

Seine netting is permitted under the Netting Permit Byelaw permit conditions but has restrictions relating to length of net, limited catch for sandeels only, mesh size and deployment of the nets. However, there are no records of this currently occurring. See Curtin (2022) for more information regarding fishing activities occurring in the Erme Estuary MCZ.

6. Is there a risk that activities are hindering the conservation objectives of the MCZ?

No,
Evidence:

These activities fall under the D&S IFCA Netting Permit Byelaw and are currently not permitted to take place within the Erme Estuary MCZ. In the estuary landward of the coordinates set out in Annex 1; Figure 3, a permit holder or named representative is not authorised to use any net other than a seine net in accordance with paragraph 3.2 of the Netting Permit Conditions. Seine nets are considered in a separate MCZ assessment.

It should be noted that no conservation advice package is currently available (November 2022) for the Erme Estuary MCZ. Therefore, relevant advice on operations and supplementary advice tables for other sites with similar features were used (Table 2), alongside considering site specific information.

Table 2 - Fishing activities and pressures included in this assessment.

Feature	Conservation advice package used
High energy intertidal rock	No alternative CA package found, moderate energy intertidal rock used as proxy
Low energy intertidal rock	Dart Estuary MCZ
Estuarine rocky habitats	
Moderate energy intertidal rock	Devon Avon Estuary MCZ

7. Can D&S IFCA exercise its functions to further the conservation objectives of the site?

Yes,
Evidence: Monitoring and Control Arrangements

- Enforcement of current byelaws

- Monitoring and review of current byelaws
- Monitoring of fishing activity in the Estuary
- Changes can be made to the permit conditions, via consultation, if the D&S IFCA deems it to be necessary. This could include limitations or spatial/temporal restrictions. The permitting system allows for adaptive management.

8. Referenced supporting information to inform assessment

N/A

9. In-combination assessment

Table 3 - Relevant activities occurring in or close to the site

Plans and Projects		
Activity	**Description**	**Potential Pressure(s)**
No other plans or projects known to be occurring within Erme Estuary MCZ	The impact of future plans or projects will require assessment in their own right, including accounting for any in-combination effects, alongside existing activities.	N/A
Other activities being considered		
Activity	**Description**	**Potential Pressure(s)**
Crab tiling	There is no evidence that this activity is currently occurring. As the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect	Abrasion/disturbance of the substrate on the surface of the seabed Habitat structure changes-removal of substratum Removal of non-target species Removal of target species Changes in suspended solids (water clarity) Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion Smothering and siltation rate changes (Light) Genetic modification & translocation of indigenous species Introduction of
Bait digging	Activity may be occurring, but only at low levels and limited locations. Additionally, as the activities assessed (section 5) are not occurring in the intertidal it is thought there is no in-combination effect.	
Hand working (access from land/access from vessel)	Activity is occurring, but only at low levels. Additionally, as the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect.	
Static – pots/traps: Pots/creels, cuttlepots, fish traps	As there is little to no level of this activity in the Erme Estuary MCZ, no in-combination effect thought to be possible.	
Lines: Longlines (demersal)	As there is little to no level of this activity in the Erme Estuary MCZ, no in-combination effect thought to be possible.	
Seine netting	There is no evidence that this activity is currently occurring. Additionally, as the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect.	
Aquaculture	There is no evidence that this activity is currently occurring. Additionally, as the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect.	

		microbial pathogens Introduction or spread of invasive non indigenous species

D&S IFCA concludes there is no likelihood of significant adverse effect on the interest features from in-combination effects addressed within Table 3

10. NE consultation response

N/A Natural England has not been consulted at this stage.

11. Conclusion

The activities assessed fall under the D&S IFCA Netting Permit Byelaw and are currently not permitted to take place within the Erme Estuary MCZ. Therefore, D&S IFCA concludes that there is no significant risk of the activities hindering the achievement of the conservation objectives for Erme Estuary MCZ.

12. Summary table

Feature or habitat of Conservation interest	**Conservation objectives/ Target Attributes** (Natural England, 2021)	**Activity**	**Potential pressures from activity and sensitivity of habitats to pressures.** (Natural England, 2021)	**Potential exposure to pressures and mechanism of impact significance**	**Is there a risk that the activity could hinder the achievement of conservation objectives of the site?**	**Can D&S IFCA exercise its functions to further the conservation objectives of the site?** **If Yes, list management options**
High energy intertidal rock	Maintain the presence and spatial distribution of intertidal rock communities Maintain the total extent and spatial distribution of intertidal rock subject to natural variation in sediment veneer [Maintain OR Recover OR Restore] the abundance of listed species to enable each of them to be a viable component of the habitat	Commercial fishing; Static fixed nets: Gill nets Trammels Entangling Passive nets: Drift nets (demersal) Seine nets and other: Shrimp push nets Fyke & stakenets, ring nets	• Abrasion/Disturbance of the substrate on the surface of the seabed • Changes in suspended solids (water clarity) • Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion • Removal of non-target species • Removal of target species • Smothering and siltation rate changes (Light)	No exposure Netting not permitted to take place within the Erme Estuary MCZ as this activity falls under the D&S IFCA Netting Permit Byelaw	Activities not permitted to take place under the Netting Permit Byelaw. D&S IFCA conclude that there is no significant risk of the activities hindering the achievement of the conservation objectives.	Yes, Management measures could include: • Enforcement of current byelaws • Monitoring and review of current byelaws • Monitoring of fishing activity in the Estuary • Changes can be made to the permit conditions, via consultation, if the D&S IFCA deems it to be necessary. This could include limitations or spatial/temporal restrictions. The permitting system allows for adaptive management.

Low energy intertidal rock	Maintain the presence and spatial distribution of intertidal rock communities Maintain the total extent and spatial distribution of intertidal rock subject to natural variation in sediment veneer [Maintain OR Recover OR Restore] the abundance of listed species to enable each of them to be a viable component of the habitat	Commercial fishing; Static fixed nets: Gill nets Trammels Entangling Passive nets: Drift nets (demersal) Seine nets and other: Shrimp push nets Fyke & stakenets, ring nets	• Abrasion/Disturbance of the substrate on the surface of the seabed • Changes in suspended solids (water clarity) • Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion • Removal of non-target species • Removal of target species • Smothering and siltation rate changes (Light)	See above	See above	See above
Moderate energy intertidal rock	Maintain the presence and spatial distribution of intertidal rock communities Maintain the total extent and spatial distribution of	Commercial fishing; Static fixed nets: Gill nets Trammels Entangling Passive nets: Drift nets	• Abrasion/Disturbance of the substrate on the surface of the seabed • Changes in suspended solids (water clarity) • Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion • Removal of non-target species • Removal of target species	See above	See above	See above

	intertidal rock subject to natural variation in sediment veneer [Maintain OR Recover OR Restore] the abundance of listed species to enable each of them to be a viable component of the habitat	(demersal) Seine nets and other: Shrimp push nets Fyke & stakenets, ring nets	• Smothering and siltation rate changes (Light)			
Estuarine rocky habitats	Maintain the presence and spatial distribution of intertidal rock communities Maintain the total extent and spatial distribution of intertidal rock subject to natural variation in sediment veneer [Maintain OR Recover OR Restore] the abundance of listed species to	Commercial fishing; Static fixed nets: Gill nets Trammels Entangling Passive nets: Drift nets (demersal) Seine nets and other: Shrimp push nets Fyke & stakenets	• Abrasion/Disturbance of the substrate on the surface of the seabed • Changes in suspended solids (water clarity) • Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion • Removal of non-target species • Removal of target species • Smothering and siltation rate changes (Light)	See above	See above	See above

	enable each of them to be a viable component of the habitat					

13. References

Curtin. S. (2022) Erme Estuary MCZ Fishing Activity Report. Devon and Severn IFCA Report.

Defra. 2019. Erme Estuary Marine Conservation Zone factsheet. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/914618/mcz-erme-estuary-2019.pdf.

Natural England (2021) Draft Conservation Advice for Erme Estuary Marine Conservation Zone (MCZ)

Annex 1: Site Map(s)

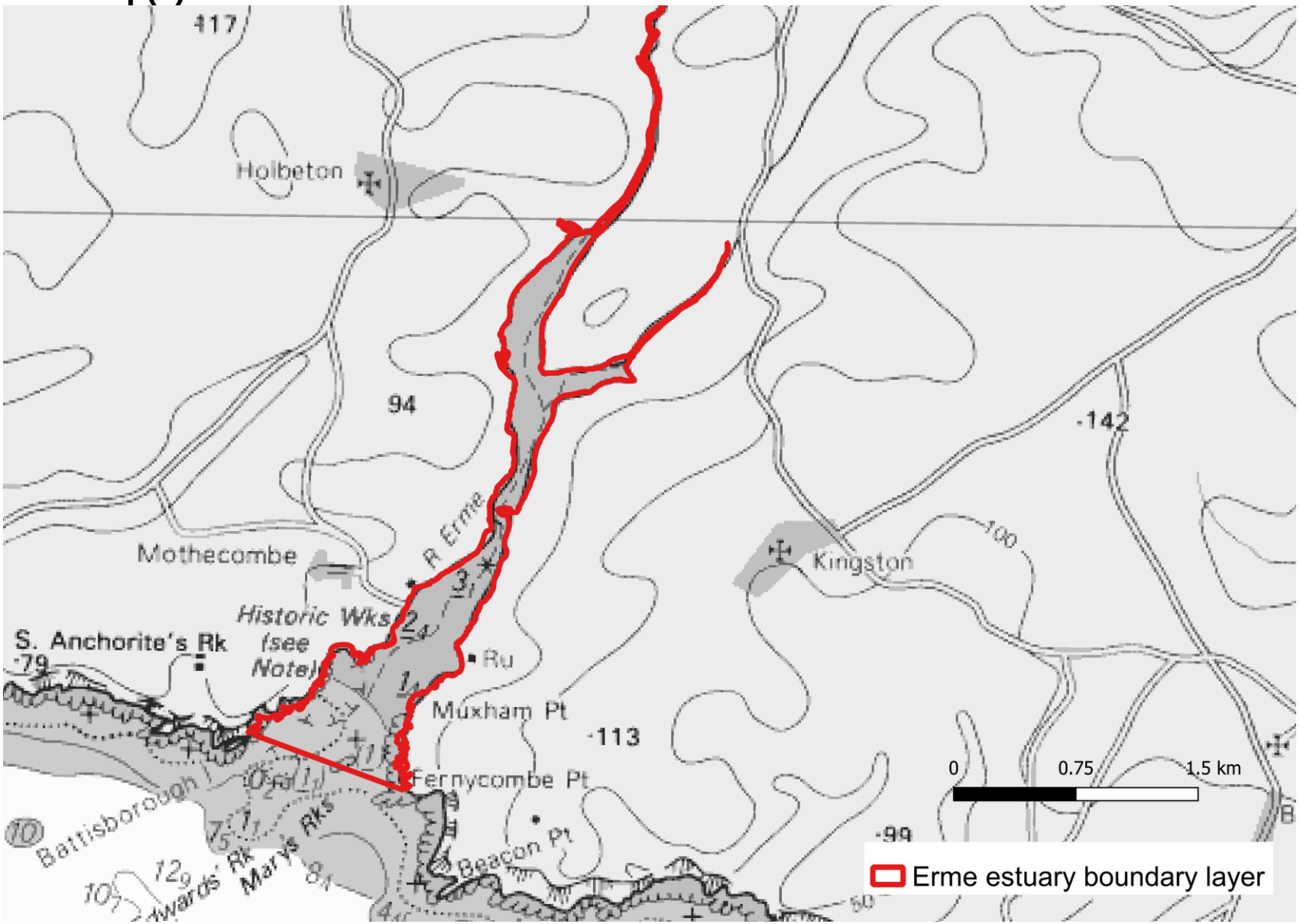


Figure 1 – Erme Estuary MCZ

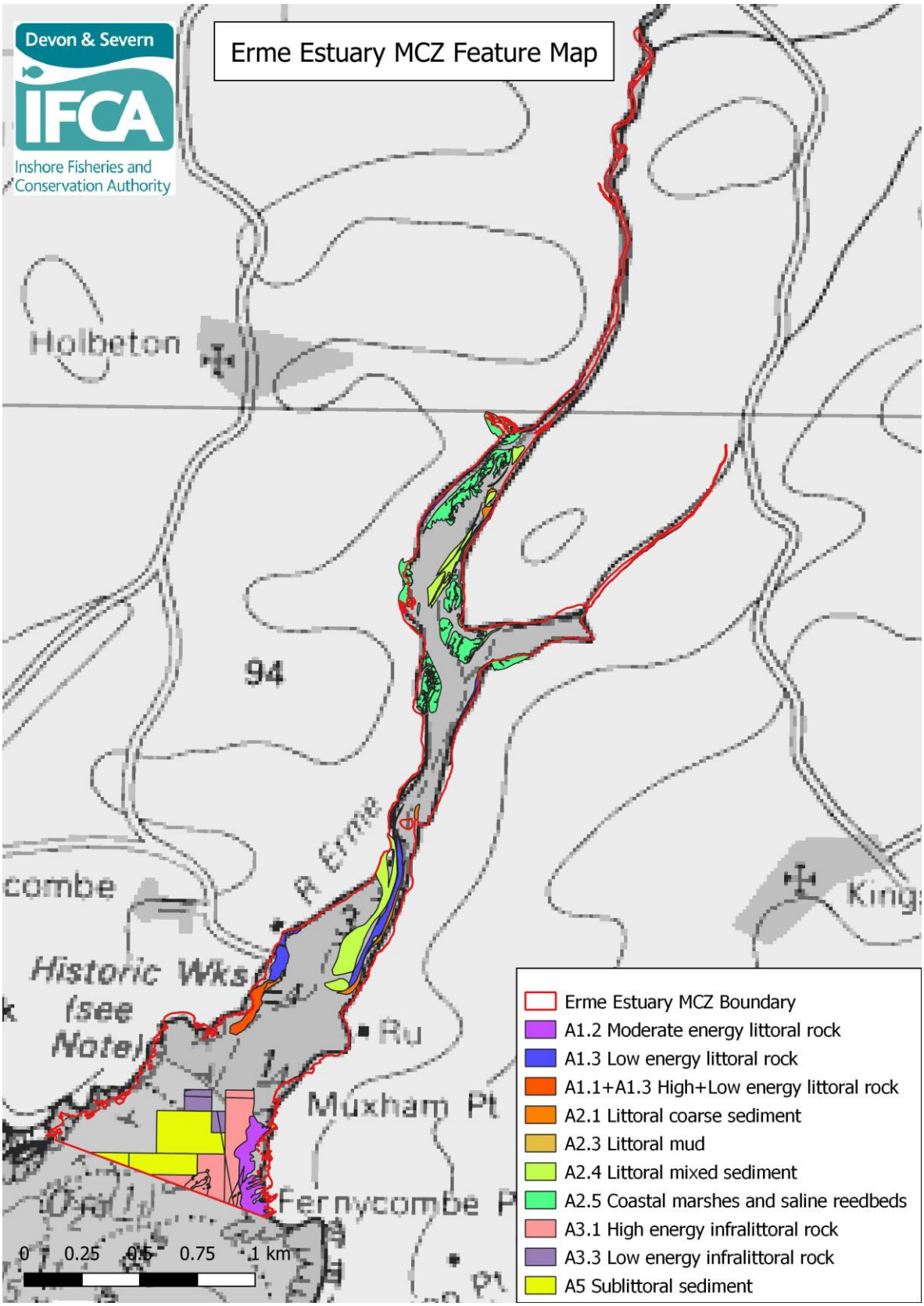
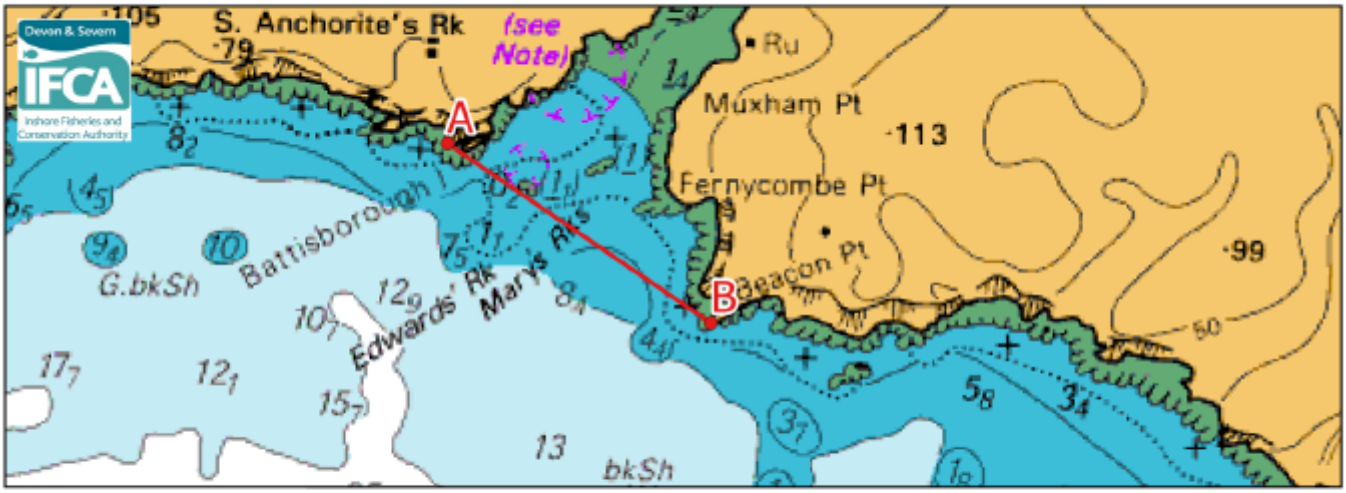


Figure 2: Extent of features designated in the Erme Estuary MCZ

Annex 2 Chart of River Erme closing line - No access to the use of nets other than a seine net in accordance with paragraph 3.2 of the Netting Permit Conditions



Estuary closing line

River Erme closing line latitude and longitude positions:

Point	Latitude	Longitude
A (Battisborough Island)	50° 18.243'N	003° 57.834'W
B (Beacon Point)	50° 17.750'N	003° 56.657'W

Figure 3: River Erme closing line latitude and longitude, from Annex 2 to the Netting Permit Byelaw. No access landward of the line to the use of nets other than a seine net in accordance with paragraph 3.2 of the Netting Permit Conditions.