Marine Conservation Zone Assessment

Site name: Axe Estuary MCZ
UKMCZ0052

Protected feature(s):
Intertidal coarse sediment
Intertidal mixed sediment
Intertidal mud
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
AXE-MCZ-005

Contents

Version control history			
Author	**Date**	**Comment**	**Version**
Sarah Curtin	October 2021	Draft assessment	0.1
Sarah Curtin	February 2022	Updating assessments with call for information data	0.2
	March 2022	Reviewed by J. Stewart	0.3
	April 2022	Finalised by JS following alterations by SC	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 Axe Estuary MCZ is an inshore site of approximately 0.404km^2. The Axe Estuary runs from Colyford to Axmouth and Seaton, opening into Lyme Bay. The sites lies adjacent to the Seaton Wetlands which are a series of local nature reserves. The Axe Estuary forms an important link between the surrounding wetlands and the sea. The costal saltmarshes, intertidal sediments and rocky habitats are important nursery grounds for juvenile fish, including sea bass. In addition, these areas act as habitats for sensitive species of birds, crustaceans and molluscs. The estuary is also home to the critically endangered European eel.

Costal saltmarshes and saline reedbeds support a wide variety of species, providing important foraging ground for wading birds, wildfowl and providing shelter at high tide. They are one of the most productive ecosystems in the world, with significant economic value. The specialised salt and flood tolerant flowering plants not only help to stabilise the sediment and prevent erosion but the damp sediment surrounding the vegetation provides an important habitat for marine worms, crustaceans and tiny snails.

The areas of intertidal sediments, consisting of mud, coarse and mixed sediment, create a mosaic of different habitats supporting a wide variety of species. The shoreline habitats protected by the MCZ, in particular the rocky areas, saltmarshes and reed beds support a diverse range of species including juvenile fish, and shrimp like sandhoppers which feed on plant material washed up (Defra, 2019).

Further information regarding the MCZ and its protected features can be found in the Axe 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
Intertidal coarse sediment	Maintain in favourable condition
Intertidal mixed sediment	Maintain in favourable condition
Intertidal mud	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, ringets

See Curtin (2021) for more information regarding fishing activities occurring in the Axe 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 Axe 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.

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 2 - 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 Axe 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	Activity is occurring with 245 counted on the Axe estuary in 2020. This figure may increase once the west side of the estuary is surveyed. Additionally, 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

Bait digging	Activity is occurring, but only at low levels and in limited locations. Additionally, as the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect.	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 microbial pathogens Introduction or spread of invasive non indigenous species
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 Axe Estuary MCZ, no in-combination effect thought to be possible. Additionally, as the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect.	
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.	
Lines: Longlines (demersal)	As there is little to no level of this activity in the Axe Estuary MCZ, no in-combination effect thought to be possible. 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.	

D&S IFCA concludes there is no likelihood of significant adverse effect on the interest features from in-combination effects addressed within Table 2.

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 Axe Estuary MCZ. Therefore, D&S IFCA concludes that there is no significant risk of the activities hindering the achievement of the conservation objectives for Axe 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**
Intertidal coarse sediment	Maintain the presence and spatial distribution of intertidal coarse sediment communities Maintain the total extent and spatial distribution of intertidal coarse sediment [Maintain OR Recover OR Restore] the abundance of listed species to enable each of them to be a viable component of the habitat Maintain the species	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 These activities are not permitted to take place within the Axe Estuary MCZ as this activity falls under the D&S IFCA Netting Permit Byelaw	Activities not permitted to take place under the D&S IFCA Netting Permit Byelaw D&S IFCA concludes 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.

	composition of component communities					
Intertidal mixed sediment	Maintain the presence and spatial distribution of intertidal mixed sediment communities Maintain the total extent and spatial distribution of intertidal mixed sediment [Maintain OR Recover OR Restore] the abundance of listed species to enable each of them to be a viable component of the habitat Maintain the	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

	species composition of component communities					
Intertidal mud	Maintain the presence and spatial distribution of intertidal mud communities Maintain the total extent and spatial distribution of intertidal mud [Maintain OR Recover OR Restore] the abundance of listed species to enable each of them to be a viable component of the habitat Maintain the species composition of component communities	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

Estuarine rocky habitats	Maintain the presence and spatial distribution of estuarine rocky habitat communities. Maintain the total extent and spatial distribution of estuarine rocky habitat(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 Maintain the species composition of component communities	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

13. References

Curtin, S 2021. Fishing Activity Report - Axe Estuary MCZ. Devon & Severn IFCA, Brixham, Devon.

Defra. 2019. Axe Estuary Marine Conservation Zone factsheet. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/914337/mcz-axe-estuary-2019.pdf.

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

Annex 1: Site Map(s)

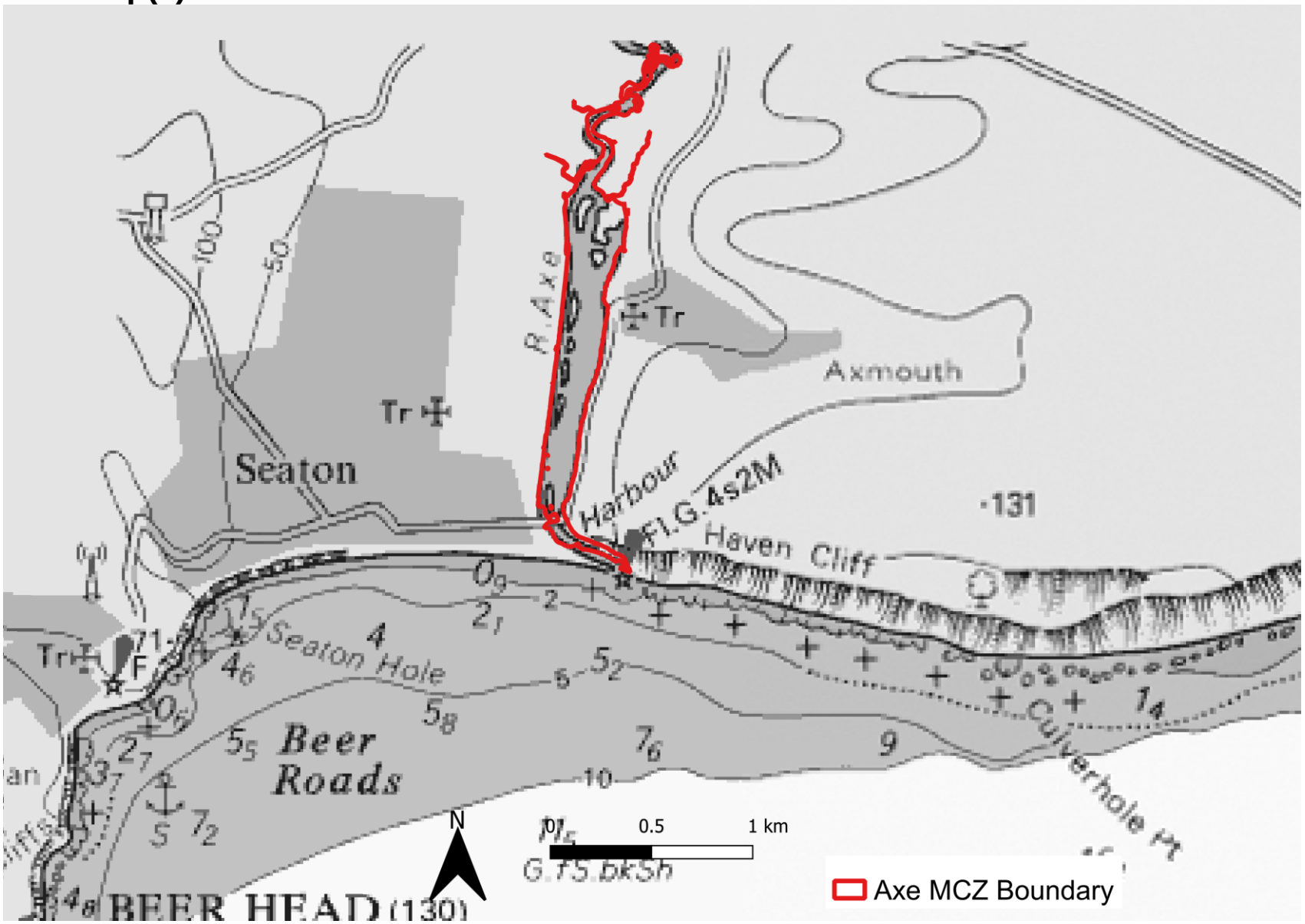


Figure 1 – Axe Estuary MCZ

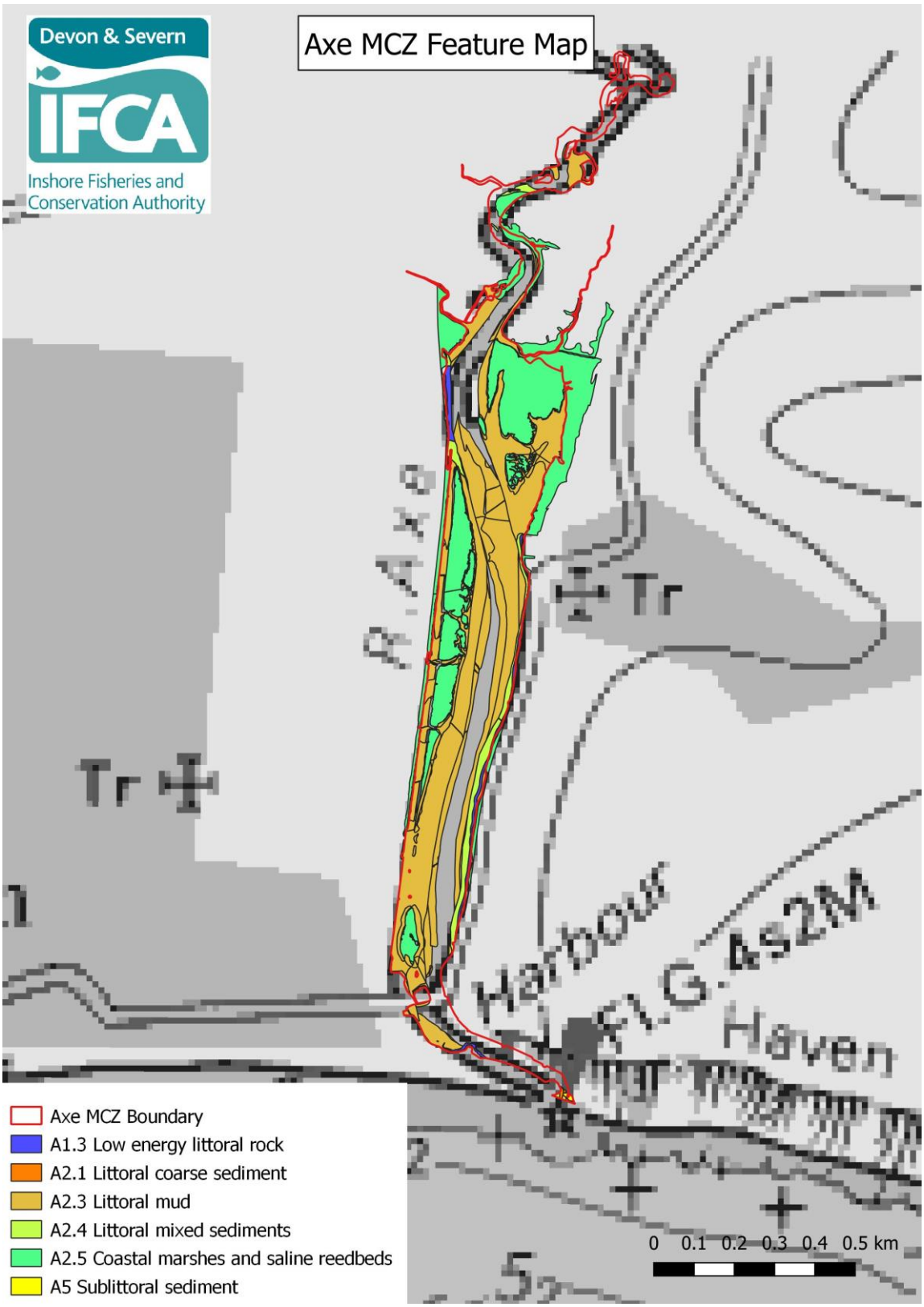
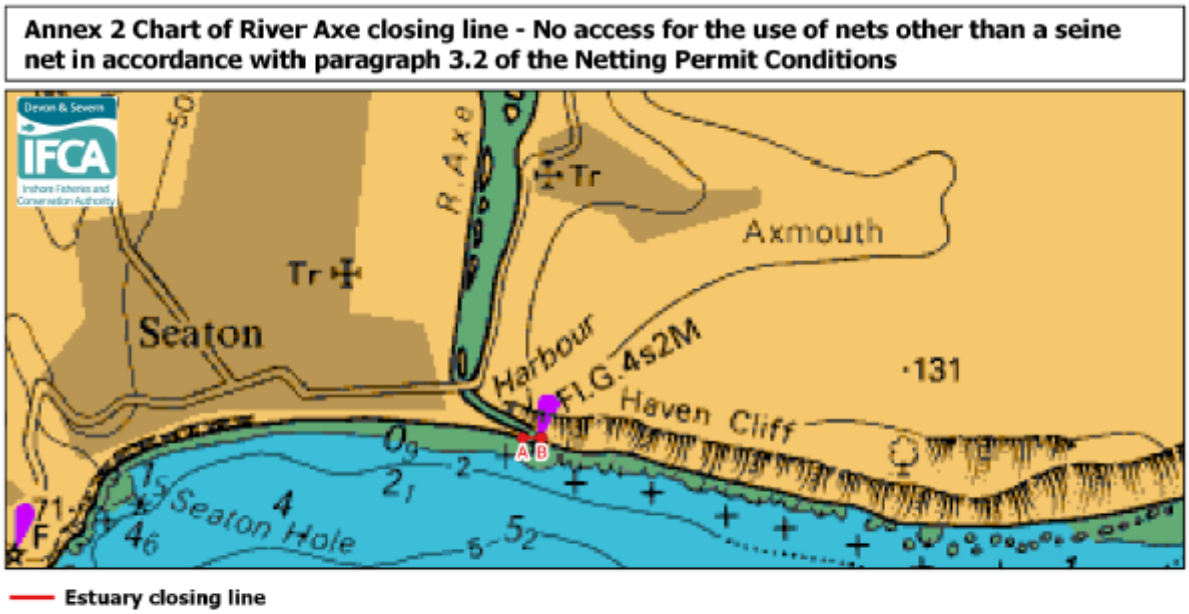


Figure 2: Extent of features (estuarine rocky habitats, intertidal coarse and mixed sediment, intertidal mud, and coastal saltmarshes and saline reedbeds) designated in the Axe Estuary MCZ



River Axe closing line latitude and longitude positions:

Point	Latitude	Longitude
A	50° 42.135'N	003° 3.354'W
B	50° 42.135'N	003° 3.274'W

Figure 3: River Axe 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.