Marine Conservation Zone Assessment

Site name:	Devon Avon Estuary MCZ UKMCZ0058
Protected feature(s):	Coastal saltmarshes and saline reed beds

Fishing activities assessed at this site:

Stage 1 Assessment

Intertidal handwork: Hand working (access from vessel)
Intertidal handwork: Hand working (access from land)
Miscellaneous: Crab tiling
Bait collection: Digging with forks

Devon & Severn IFCA Inshore Fisheries and Conservation Authority

D&S IFCA Reference
DAV-MCZ-004

Contents

Version control history			
Author	**Date**	**Comment**	**Version**
Lauren Henly	08/2021	First draft	0.1
	01/07/2022	Reviewed and updated by J Stewart	0.2
Lauren Henly	06/07/2022	Comments addressed	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 Devon Avon Estuary MCZ is an inshore site located on the coast of south Devon in the south west of England. The site covers an area of 2 km^2 and extends from the mouth of the estuary up to a tidal weir at Aveton Gifford. This site protects a wide range of habitats and species, including a number of rare species. Estuaries are important contributors to a healthy environment and have an important role as a nursery ground for juvenile fish and is potentially important for seahorse populations as it provides suitable food and shelter. Various species of worm, crustacean and shrimp can be found here, including the nationally scarce tentacled lagoon worm *Alkmaria romijni*. This is a tiny bristleworm which grows up to 5 mm in length. It 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.

The saltmarshes provide habitat for crustaceans (such as crabs, lobsters and barnacles), molluscs (such as mussels and oysters) and a nursery area for fish, as well as feeding grounds for birds.

Further information regarding the MCZ and its protected features can be found in the Devon Avon Estuary MCZ Factsheet (Defra, 2019).

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

To determine whether each pressure is capable of affecting (other than insignificantly) the site's feature(s), the sensitivity assessments and risk profiling of pressures from the advice on operations section of the Natural England conservation advice package were used (Natural England, 2021). Table 1 shows the fishing activities and pressures included for assessment. The justifications for the pressures chosen for inclusion in this assessment can be seen in Annex 2.

Table 1 - Protected features relevant to this assessment

Feature	General management approach
Coastal saltmarshes and saline reed beds	Maintain in favourable condition

The relevant targets for favourable condition were identified within Natural England's conservation advice supplementary advice tables (Natural England, 2021).
Table 2 shows which targets were identified as relevant to the activity assessed. The impacts of pressures on features were assessed against these targets to determine whether the activities causing the pressures are compatible with the site's conservation objectives.

Table 2 - Relevant favourable condition targets for identified pressures.

Feature	Attribute	Target
Coastal saltmarshes and saline reed beds	Distribution of the feature, including associated transitional habitats, within	Maintain the range and continuity of the habitat and its natural transitions within saltmarsh types and to other habitats seaward and landward.

	the site	
	Extent of the feature within the site	Maintain the total extent and spatial distribution of coastal saltmarshes and saline reedbeds.
	Future extent of habitat within the site and ability to respond to seasonal changes	Maintain the ability to achieve long-term fluctuations in the extent of habitat in response to coastal processes

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

- Intertidal handwork: Hand working (access from vessel)
- Intertidal handwork: Hand working (access from land)
- Miscellaneous: Crab tiling
- Bait collection: Digging with forks

See Henly (2021) for more information regarding fishing activities occurring in the Devon Avon Estuary MCZ.

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

No,
Evidence:
The shore-based activities that occur on the MCZ are not likely to overlap with the extent of this feature, and are not thought to occur in its vicinity, therefore there is no risk that the activities will hinder the conservation objectives of this feature.

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

Yes,
Evidence: Monitoring and Control Arrangements

- Monitor activity levels

- Introduction of a new Hand Working Permit Byelaw to manage the use of crab tiles, bait digging and many other hand gathering types of fishing activity.

On the 14th November 2019, the D&S IFCA Byelaw & Permitting Sub-Committee discussed the different options that exist to manage hand working types of fishing activity as set out in a report (D&S IFCA, 2019). The development of a new byelaw was the option selected, however it is envisaged that it will be a slightly different regulatory format as compared to the D&S IFCA permit based byelaws already implemented to manage other fishing activity.

The potential need for a permit to conduct the different activities will become a factor in the on-going drafting work. It is envisaged that the requirement for a permit to conduct bait collection and hand gathering will be dependent on the amounts of resource taken. The Hand Working Permit Byelaw would introduce fixed provisions that apply to all persons. Fixed provisions are expected to include a series of catch limits (bag limits) for different species (sea fisheries resources) that are targeted by different types of hand working fishing methods. The bag limits would provide an upper level of catch (a threshold) that would apply to all persons but providing the individual take of the specified species was below the levels set for personal use, it is not envisaged that a permit would be required for the collection of the resources. Commercial activity would exceed the bag limits for recreational take and would therefore be regulated by conditions of use that would be placed in the permits issued by D&S IFCA. In the near future D&S IFCA will be seeking the views of all stakeholders to better inform the decision making needed to set the initial bag limits.

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 Devon Avon 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)**
Static – pots/traps: Pots/creels, cuttlepots, fish traps	There this activity is currently occurring at low levels in the MCZ, but does not overlap with the features assessed, so no in-combination effect thought to be possible.	Abrasion/disturbance of the substrate on the surface of the seabed Habitat structure changes - removal of substratum (extraction) Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion Removal of non-target species
Seine nets & other: Beach seine/ring, shrimp push nets, Fyke and stakenets	There this activity is currently occurring at low levels in the MCZ, but does not overlap with the features assessed, so no in-combination effect thought to be possible.	
Aquaculture	There this activity is currently occurring in the MCZ, but does not overlap spatially with the features assessed, so no in-combination effect thought to be possible.	Abrasion/disturbance of the substrate on the surface of the seabed Changes in suspended solids (water clarity)

		Introduction of microbial pathogens Introduction or spread of invasive non-indigenous species (INIS) Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion Removal of non-target species Smothering and siltation rate changes (Light) Visual disturbance

D&S IFCA conclude there is no likelihood of significant adverse effect on the interest features from in-combination effects addressed within Table 4.

10. NE consultation response

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

11. Conclusion

The activities assessed are not believed to be occurring within the extent of this feature in the MCZ, or in the vicinity of the feature. Therefore, D&S IFCA concludes that there is no significant risk of the activities hindering the achievement of the conservation objectives for this feature in the Devon Avon Estuary MCZ.

12. Summary table

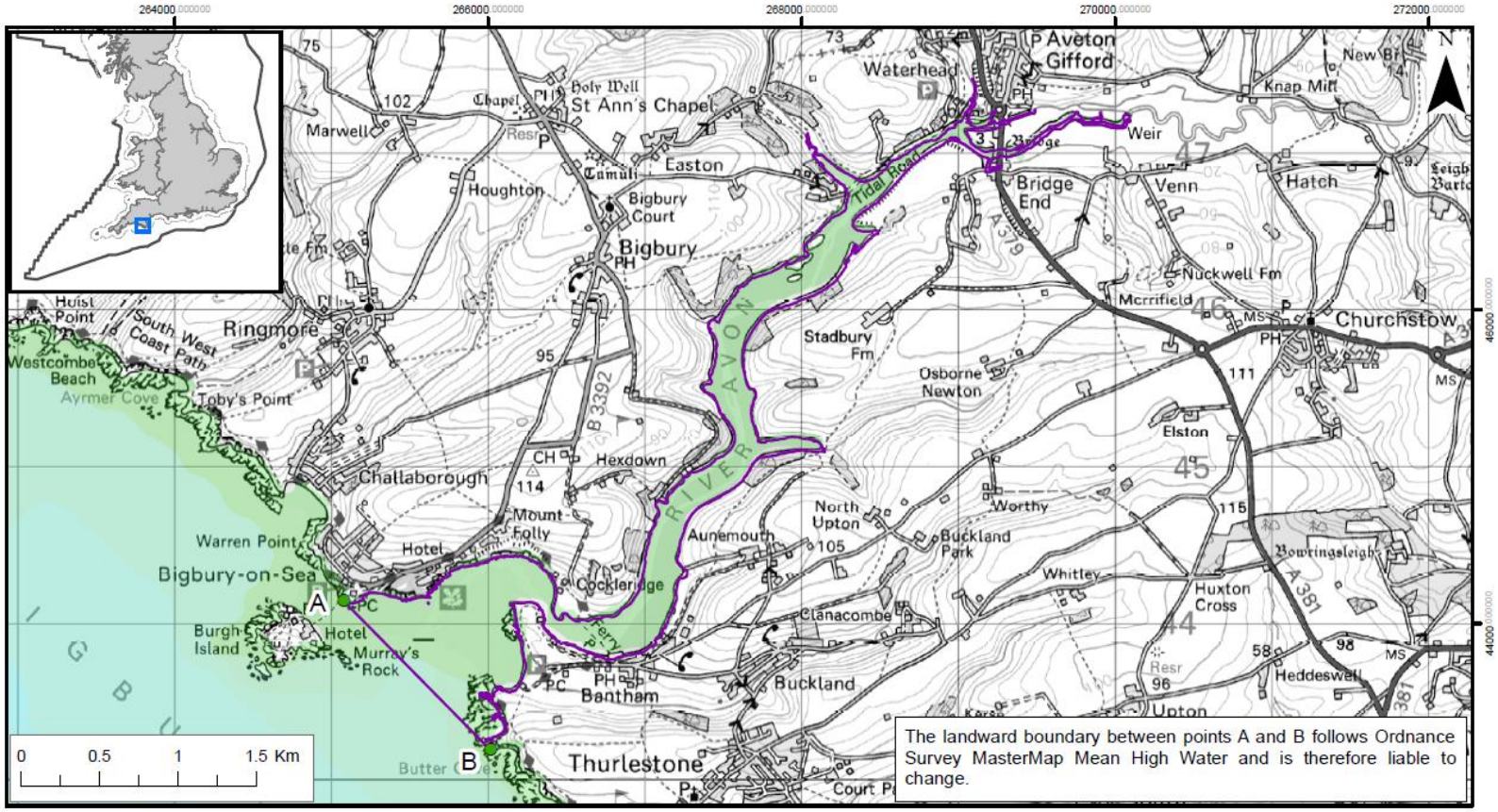
Feature or habitat of Conservation interest	**Conservation objectives/ Target Attributes** (Natural England, 2021)	**Activity**	**Potential pressures from activity and sensitivity of habitats to pressures.** (Natural England, 2021)	**Potential exposure to pressures and mechanism of impact significance**	**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**
Coastal saltmarshes and saline reed beds	Maintain the range and continuity of the habitat and its natural transitions within saltmarsh types and to other habitats seaward and landward. Maintain the total extent and spatial distribution of coastal saltmarshes and saline reedbeds. Maintain the ability to achieve long-term fluctuations in the extent of habitat in response to coastal processes	Commercial fishing;	• See Annex 2 for pressures audit trail	No exposure Activities not believed to be occurring within the extent of this feature in the MCZ	No	Yes, Management measures could include: 1. Monitor activity levels 2. Enforcement of byelaws 3. Monitoring and review of current byelaws

13. References

Defra. 2019. Devon Avon Estuary Marine Conservation Zone. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/914487/mcz-devon-avon-estuary-2019.pdf (Accessed 15 October 2021).

Natural England. 2021. Conservation Advice for Devon Avon Estuary Marine Conservation Zone (MCZ). https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UKMCZ0058&SiteName=Avon&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=&NumMarineSeasonality=&SiteNameDisplay=Devon%20Avon%20Estuary%20MCZ&HasCA=1&NumMarineSeasonality=0&SiteNameDisplay=Devon%20Avon%20Estuary%20MCZ (Accessed 14 October 2021).

Annex 1: Site Map(s)



Devon Avon Estuary MCZ Boundary

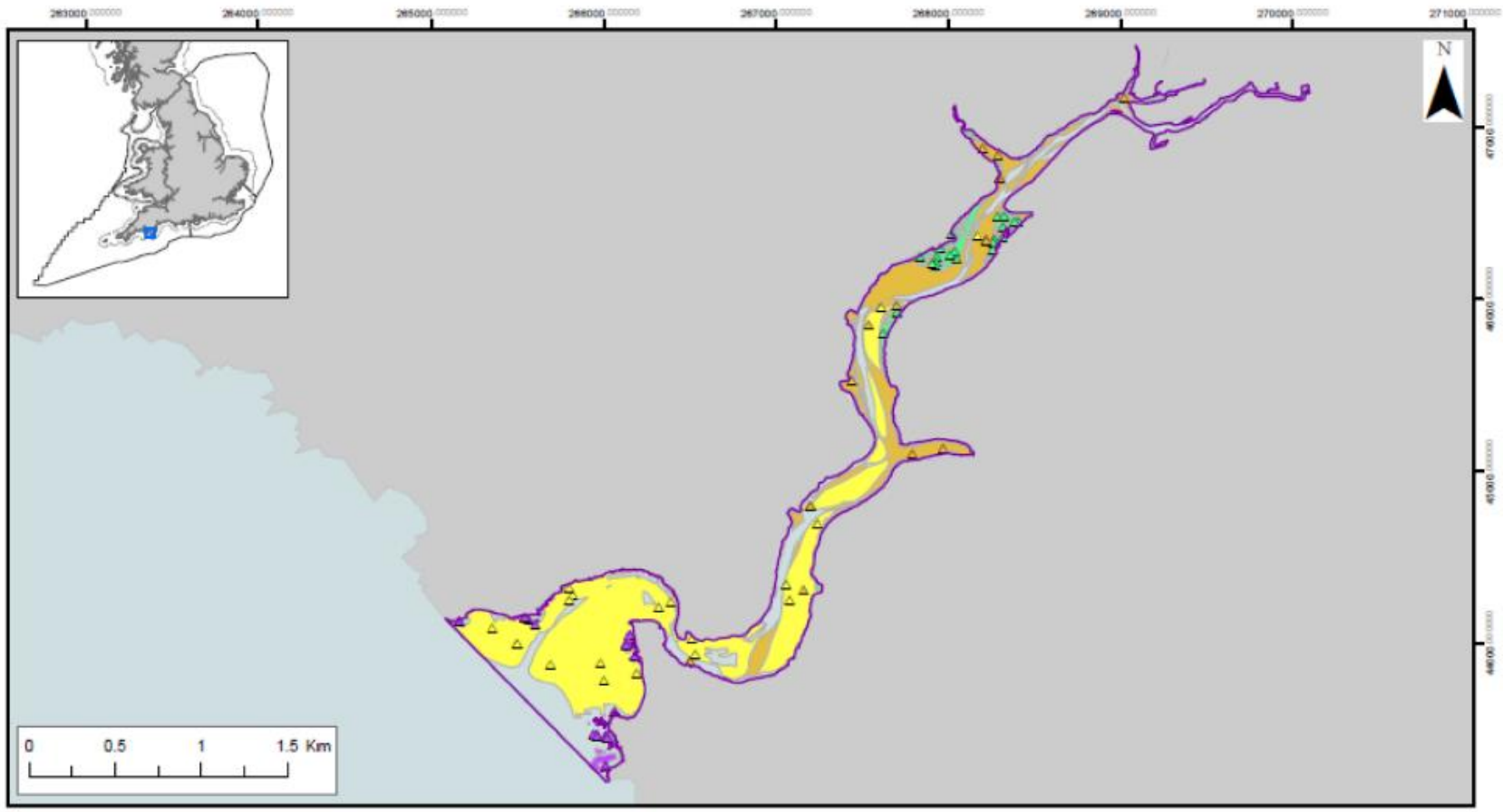
- Marine Conservation Zone
- MCZ boundary co-ordinates
- UK Continental Shelf
- 12nM Territorial Seas Limit
- Land

Point	Lat	Long
A	50° 16' 54.410" N	3° 53' 42.226" W
B	50° 16' 24.493" N	3° 52' 53.862" W

Depth Areas (metres)

-20.0 - -10.0	25.1 - 50.0
-9.9 - -5.0	50.1 - 100.0
-4.9 - 0.0	100.1 - 250.0
0.1 - 5.0	250.1 - 500.0
5.1 - 10.0	500.1 - 1000.0
10.1 - 25.0	

Figure 1 – Devon Avon Estuary MCZ



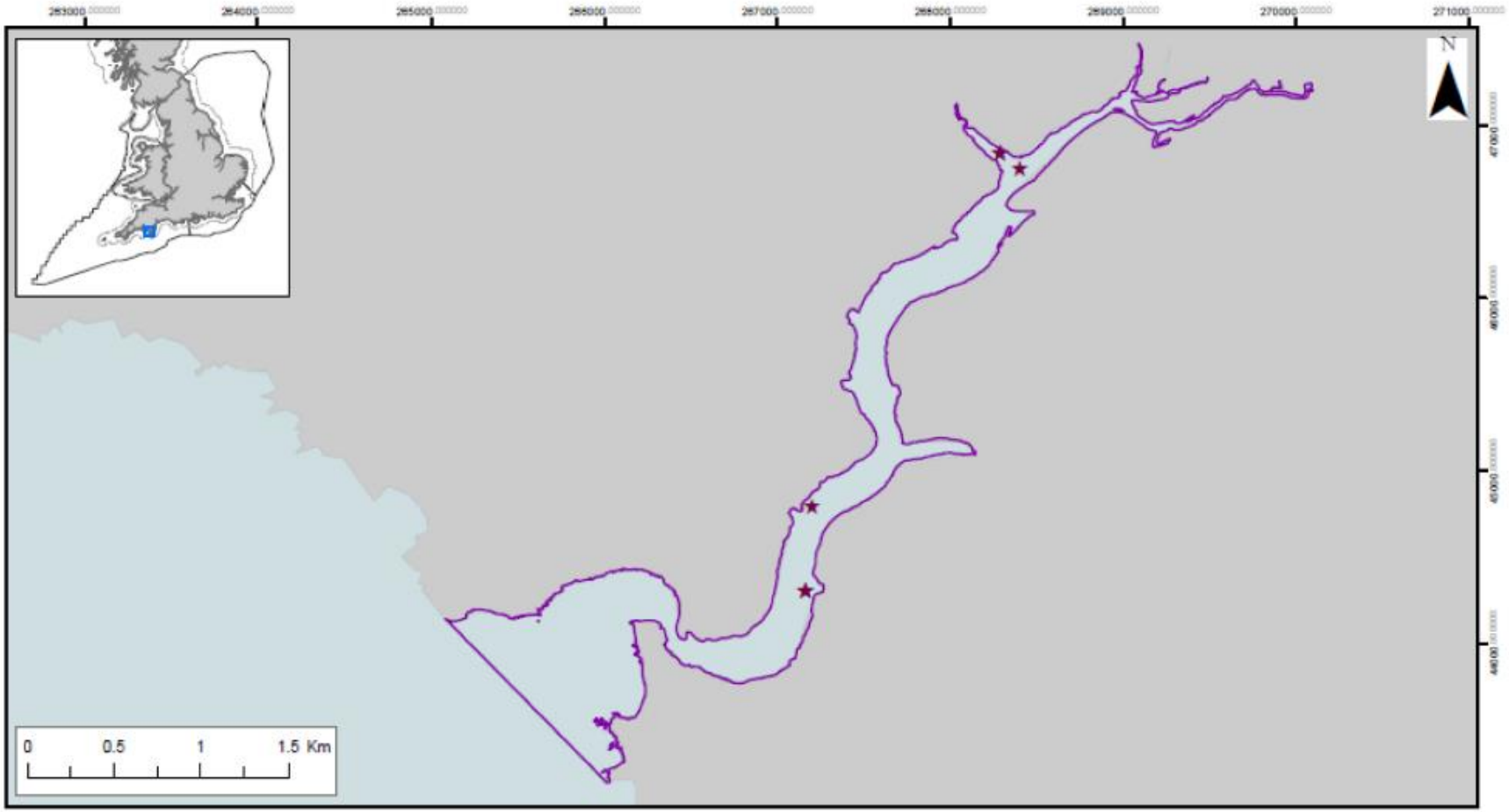
Devon Avon Estuary MCZ
Broad Scale Habitats

- Marine Conservation Zone
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land
- Moderate energy intertidal rock (A1.2)
- Intertidal sand and muddy sand (A2.2)
- Intertidal mud (A2.3)
- Coastal saltmarshes and saline reedbeds (A2.5)

Features designated in 2019

- Groundtruthing sampling points, such as diver survey, grab sampling, drop down video, walk over survey or core sampling
- Shaded areas represent habitats mapped according to data originating from surveys and mathematical models

Reference: Theme ID: 1477647
Map Projection: British National Grid



Devon Avon Estuary MCZ
Features of Conservation Importance

- Marine Conservation Zone
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

Features designated in 2019

- ★ Tentacled lagoon-worm (*Alkmaria romijni*)

Reference: Theme ID: 1477647
Map Projection: British National Grid

Annex 2: Pressures Audit Trail

Fishing Activity Pressures: Shore-based activities	**Habitat**				**Species**	
	Coastal saltmarshes and saline reedbeds	**Moderate energy intertidal rock**	**Intertidal mud**	**Intertidal sand and muddy sand**	**Tentacled lagoon-worm**	**Screening Justification**
Abrasion/disturbance of the substrate on the surface of the seabed	S	S	S	S	S	IN – Trampling associated with these activities may cause pressure to the features assessed. Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure
Habitat structure changes - removal of substratum (extraction)	S	S	S	S	S	IN - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	S	S	S	S	S	IN – Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure
Removal of non-target species	S	S	S	S	IE	IN - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure
Removal of target species		S	S	S		OUT – Not applicable

Visual disturbance		NS		NS		OUT – Not applicable
Deoxygenation	NS	S	NS	S	NS	OUT – Insufficient activity levels to pose risk at level of concern
Hydrocarbon & PAH contamination	NA	NA	NA	NA	NA	OUT - Not applicable
Introduction of light		S	NS	S		OUT - Not applicable
Introduction or spread of invasive non-indigenous species (INIS)	S	S	S	S	IE	OUT – Insufficient activity levels to pose risk of large scale pollution event
Litter	S	NA	NA	NA	NA	OUT – Insufficient activity levels to pose risk of large scale pollution event
Synthetic compound contamination (incl. pesticides, antifoulants, pharmaceuticals)	NA	NA	NA	NA	NA	OUT - Not applicable
Transition elements & organo-metal (e.g. TBT) contamination	NA	NA	NA	NA	NA	OUT - Not applicable