Marine Conservation Zone Assessment

Site name: Dart Estuary MCZ
UKMCZ0057

Protected feature(s):
Estuarine rocky habitats
Tentacled Lagoon Worm (*Alkmaria romijni*)
Low energy intertidal rock
Intertidal mud

Fishing activities assessed at this site:
Stage 1 Assessment
Seine nets & other: Beach seine/ring, shrimp push nets, Fyke and stakenets

Devon & Severn IFCA
Inshore Fisheries and Conservation Authority

D&S IFCA Reference
DAR-MCZ-002

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Version control history			
Author	**Date**	**Comment**	**Version**
Lauren Henly	08/2021	First draft	0.1
	24/03/2022	Reviewed by J. Stewart	0.2
	24/03/2022	Comments addressed by L.Henly	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 Dart 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 471 ha and encompasses the upper part of the Dart Estuary down to Anchor Stone, south of Dittisham. 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. Large areas of the site consist of intertidal mud, which is a highly productive habitat and provides feeding and resting grounds for wading and migratory birds. This is also an important habitat for the nationally scarce tentacled lagoon worm *Alkmaria romijni*. This is a tiny bristleworm which 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.

The north of the site contains areas of coastal saltmarshes and reedbeds. These provide a refuge for wading birds during high tide and storms and are home to a wide variety of worms, molluscs and crustaceans living in the damp environment between the vegetation.

Estuarine rocky habitats form in flooded river valleys or 'rias', such as the Dart, and provide a hard surface for animals and seaweeds to attach to in areas dominated by sandy and muddy environments. The seaweed species that attach themselves to the rocks form foraging areas for crustaceans and birds at low tide as well as foraging areas and a refuge for juvenile fish at high tide from beaches of intertidal sand, which are exposed to the air at low tide and below water at high tide, to subtidal sediment and rock habitats, which are permanently submerged.

Further information regarding the MCZ and its protected feature can be found in the Dart 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
Estuarine rocky habitats	Recover to favourable condition
Tentacled lagoon-worm (Alkmaria romijni)	Maintain in favourable condition
Low energy intertidal rock	Recover to favourable condition
Intertidal mud	Maintain in favourable condition

The conservation objectives for these features are that they are brought to, and 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

- Seine nets & other: Beach seine/ring, shrimp push nets, Fyke and stakenets

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

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

No,
Evidence:

Seine netting in the Dart Estuary requires a netting permit. A permit holder or named representative may only use a seine net and providing that; a) the net measures no longer than 20 metres in length; b) all species caught other than sand eel are returned immediately to the water; and c) the size of mesh does not exceed 20mm. Seine netting has previously occurred in the estuary for salmon, however this activity is not licenced by D&S IFCA.

There are currently no records of seine netting for sand eel in the Dart Estuary MCZ. There is no evidence that it is not occurring at a low, undetected level and therefore cannot be completely ruled out.

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 further 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 Dart 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 4,674 counted on the Dart estuary in 2020. Reports from local stakeholders suggest there are a number of crab tiles that are not regularly visited. However, 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 Removal of non-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)
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.	
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 Dart 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.	
Static – fixed nets: Gill nets, Trammels, Entangling	This activity is currently not permitted to take place within the Dart Estuary MCZ as it falls under the D&S IFCA Netting Permit Byelaw. In the estuary landward of the coordinates set out in Annex 1, Figure 2 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. Therefore no in-combination effect is thought to be possible. Additionally, as the activities assessed (section 5) are not occurring, it is thought there is no in-combination effect.	
Passive – nets: Drift nets (demersal)	This activity is currently not permitted to take place within the Dart Estuary MCZ as it falls under the D&S IFCA Netting Permit Byelaw. In the estuary landward of the coordinates set out in Annex 1, Figure 2, 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. Therefore no in-combination effect is thought to be possible. 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 Dart 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	Activity is occurring, but as the activities assessed (section 5) are not occurring, no in-combination effect is thought to be possible.	

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 MCZ. Therefore, D&S IFCA conclude that there is no significant risk of the activities hindering the achievement of the conservation objectives for Dart 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, 2015)	**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**
Estuarine rocky habitats	Recover 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 Maintain the	Commercial fishing; Seine nets and other: Beach seine/ring nets Shrimp push nets Fyke & stakenets	• See Annex 2 for pressures audit trail	No exposure Activities not believed to be occurring within the MCZ.	No	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 further limitations or spatial/temporal restrictions. The permitting system allows for adaptive management.

	characteristic morphology of the habitat.					
Tentacled Lagoon Worm (Alkmaria romijni)	Maintain the population size within the site. Maintain the reproductive and recruitment capability of the species. Maintain the presence and spatial distribution of the species. Maintain biological connectivity.	Commercial fishing; Seine nets and other: Beach seine/ring nets Shrimp push nets Fyke & stakenets	• See Annex 2 for pressures audit trail	See above	See above	See above
Low energy intertidal rock	Recover 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	Commercial fishing; Seine nets and other: Beach seine/ring nets Shrimp push nets Fyke & stakenets	• See Annex 2 for pressures audit trail	See above	See above	See above

	veneer. [Maintain OR Recover OR Restore] the abundance of listed species*, to enable each of them to be a viable component of the habitat. Reduce the introduction and spread of non-native species and pathogens, and their impacts. Maintain the surface and structural complexity, and the stability of the rock structure.					
Intertidal mud	Maintain the presence and spatial distribution of intertidal mud communities. Maintain the total extent and spatial	Commercial fishing; Seine nets and other: Beach seine/ring nets Shrimp push	• See Annex 2 for pressures audit trail	See above	See above	See above

	distribution of intertidal mud.					

13. References

Henly, L. 2021. Dart Estuary MCZ Fishing Activity Report. Devon & Severn IFCA, Brixham, Devon.

Natural England. 2021. Conservation Advice for Dart Estuary Marine Conservation Zone (MCZ). https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UKMCZ0057&SiteName=Dart&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=&NumMarineSeasonality=,0&SiteNameDisplay=Dart%20Estuary%20MCZ&HasCA=1&NumMarineSeasonality=0&SiteNameDisplay=Dart%20Estuary%20MCZ#sitemaps (Accessed 3 August 2021).

Annex 1: Site Map(s)

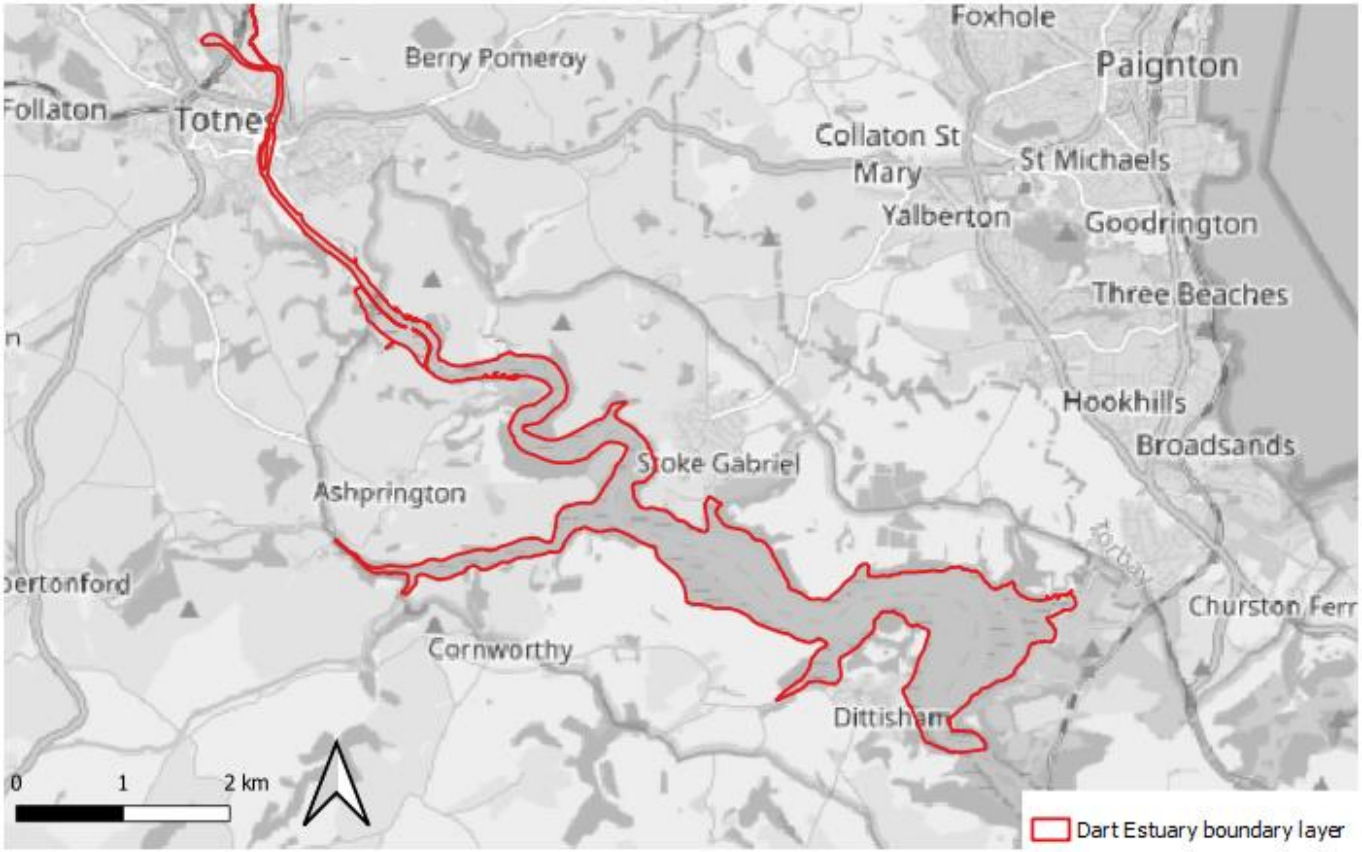
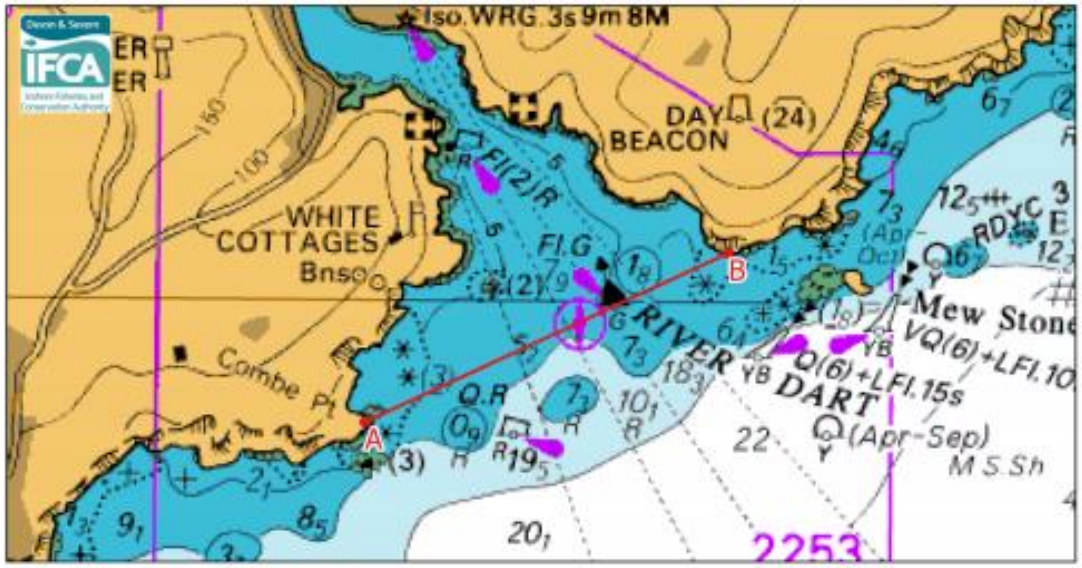


Figure 1 – Dart Estuary MCZ



River Dart closing line latitude and longitude positions:

Point	Latitude	Longitude
A (Combe Point)	50° 19.634'N	003° 34.266'W
B (Inner Froward Point)	50° 20.141'N	003° 32.583'W

Figure 2 - River Dart closing line latitude and longitude. 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, as described above.

Annex 2: Pressures Audit Trail

Fishing Activity Pressures: Shore-based activities (including setting nets from the shore)	**Coastal saltmarshes and saline reedbeds**	**Low energy intertidal rock**	**Intertidal mud**	**Estuarine rocky habitats**	**Tentacled lagoon worm**	**Screening Justification**
Abrasion/disturbance of the substrate on the surface of the seabed	S	S	S	S	S	IN - 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			IN - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure
Deoxygenation	NS	S	NS	NS	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 - Insufficient activity levels to pose risk of large scale pollution event
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 – Not applicable
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
Underwater noise changes		IE		IE		OUT - Not applicable