Monitoring and Control Plan for the Razor Clam Fishery

Background

A draft M&CP was considered at the Full Authority meeting on 18th June 2026. The paper presented to the Authority detailed what a M&CP is, what key elements need to be included, how the fishery would be monitored and define triggers for review and further potential management. Natural England provided advice regarding the proposed fishery and M&CP to D&S IFCA Officers at the meeting.

The following details Natural England's Management Considerations and their Recommendations:

Management Considerations

We welcome the IFCA's proposal to put in place a robust Monitoring and Control Plan, and plan for adaptive management, from the outset. We recommend setting out management objectives clearly, and planning for comprehensive monitoring of the fishery alongside frequent review in order to facilitate true adaptive management.

We welcome the proposal for requiring REM, and catch/effort reporting to contribute to initial stock assessments. Catch and bycatch monitoring will also be important to analyse impacts of the fishery.

Taking into account the biological constraints of the target species, and wider environmental concerns around potential habitat impacts, Natural England advise that management of this fishery should consider:

- Limiting effort/ catch within the fishery: starting with a more limited, trial fishery with the potential to expand from there should the fishery prove sustainable over time
- Investigating and avoiding the spawning season for targeted razor clam species e.g. a requirement for the fishery to cease when spawning is first apparent and resume following recovery of condition after spawning
- Increasing the minimum landing size (MLS) – current national Minimum Conservation Reference Size (MCRS) for all Ensis spp. is 100mm. Evidence suggests this is too low for at least some species of razor clam (particularly *E. siliqua*), and a larger MLS of 140mm plus would be more appropriate. The operator has informed D&S IFCA that they intend to target a market with a minimum landing size of 180mm so it would seem eminently feasible to set a MLS for this fishery at a more sustainable level, above the current national MCRS.
- Limitation of area(s) open to this fishery within the wider shellfish classification area: start small and expand from there if the fishery proves sustainable over time.

- Limit areas open to the fishery to areas that are already open to (and fished by) other towed gear (e.g. using iVMS tracks to define these areas).
- Exclude sensitive habitat types from areas open to the fishery e.g. sensitive habitats like sandstone reef. Areas open to the fishery should be higher energy, more mobile sandy habitats with the highest potential for recovery.
- Taking a zoned approach – clearly defining areas for the fishery to operate within, and considering application of closed areas/ rotation system

Recommendation

Natural England recommends that, if the fishery is progressed, it is done so under a clearly defined, precautionary management framework with monitoring, adaptive management, and safeguards to ensure alignment with wider environmental objectives. Robust adaptive management provides the opportunity to effectively monitor and respond to potential impacts associated with this new fishery.

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Officers were asked by the Authority to gather further information and review the draft M&CP in light of these recommendations. This annex details the revised M&CP and recognises Natural England's recommendations.

D&S IFCA Officers have undertaken a review of research and evidence (Agenda Item 8 Annex C) to provide information to the Authority Members regarding the razor clam fishery, to help inform the M&CP and remove previous identified uncertainties regarding the fishery, its location and potential impacts. The Research and Evidence Review also includes outputs from underwater video and side scan sonar surveys undertaken by D&S IFCA Officers (full survey report Agenda Item 8 Annex D). Initially three areas were considered as potential fishery areas. Using all the information gathered from the literature review and research and considering the criteria set for the fishery as discussed with Authority Members (as listed below), D&S IFCA Officers have narrowed down the location which meet the criteria where the initial fishery can take place:

- on sandy habitats,
- is in areas of moderate to high energy,
- is in an area that demersal towed gear activity takes place.

The initial fishery area now suggested is small (1.18km^2), which supports a recommendation by Natural England.

D&S IFCA Officers, through their experience of developing and implementing M&CPs in MPAs, looked to identify the gaps or uncertainties in evidence, the monitoring requirements and the triggers for adaptive management review. The M&CP will be used to assess the sustainability of the fishery, the impacts on the wider environment and support the use of adaptive management and the adaptive precautionary approach. The M&CP follows guidance provided by Natural England to its staff and IFCAs.

Monitoring and Control Plan (M&CP) for the Razor Clam Fishery

Contents

Monitoring and Control Plan (M&CP) for the Razor Clam Fishery 3

1. Definition and Scope of the Fishing Activity 4

1.1 Definition of the Fishery 4

1.2 Range of Technical Measures 4

1.3 Scale, Intensity and Extent of the Fishery 5

2. Residual Uncertainties: 5

2.1 Uncertainties regarding seasonality of the fishing activity: 5

2.2 Uncertainties regarding fishing effort: 5

2.3 Uncertainties regarding the habitat on which the activity is taking place: 6

3.0 Description of how the fishery will be monitored 6

3.1 Fishing Activity Location Monitoring: 6

3.2 Fishing Effort Monitoring 6

3.3 Species and Habitat Monitoring 7

4 Triggers to monitoring outcomes and management review: 7

4.1 Species Caught 7

4.2 Damage Rates 7

4.3 Changes in Size Frequency Distribution of the Target Species 7

4.4 Fishing Effort 7

4.5 Number of Vessels 8

4.6 Habitat 8

5 What does this mean for management? 8

1. Definition and Scope of the Fishing Activity

1.1 Definition of the Fishery

The razor clam fishery will involve the use of two vessels. The forward vessel tows the second vessel and puts pressure on the fishing gear via a warp and is essentially a very slow simple dredging operation. The second vessel, being towed by the first vessel, uses no powered propulsion during fishing. Both vessels used in the operation have Certificates of Registry and Fishing Licences. The method to be used in the South Devon Fishery uses a 1m wide water-powered razor dredge where the pressurised water jets clear the sand to a depth of 35-40 cm before the air lift system raises the clams to the surface onto the boat within 10 seconds of capture. A maximum of two 1m dredges may be deployed but initially the operation would be one 1m dredge only. The air lift method dictates that the pipe must remain as vertical as possible and that necessitates a second vessel being used to pull the dredge forward as the sand is cleared by the jets. Any forcing of the dredge through the sand results in broken shellfish so inshore small boats with low horsepower will be used. Due to the operational set up and slow speed, it will not be able to take place on too dense muddy habitats nor across cobbly and rocky habitats. The fishing operation requires calm weather to operate successfully so it will be limited by environmental conditions.

The weight on the seabed is approximately 500kg mainly to provide a stable platform for the air pipe. Forward motion is facilitated by rubber wheels and sand skis to diminish point loading. The dredge moves slowly into the space that the jets create, it does not get dragged through the ground.

1.2 Range of Technical Measures

Formal Management measures will be set out in the Mobile Fishing Permit Conditions:

- The maximum number of dredges will be two. The initial operation will be one 1m air lift dredge with the possible future increase to a twin dredge system.
- The Minimum Conservation Reference Size will be 140mm
- A REM system including IVMS and cameras. will be fitted to the towed catching vessel in order to observe the sorting table and water discharge, which will be used to understand the location, spatial extent of the fishery, the catch, bycatch and sediment type.
- The location where the fishery will take place.

The razor clams and bycatch will be delivered onto a sorting table once on board. The retained razor clams will be placed in saltwater tanks to recover. Bycatch and undersized clams are released immediately close of the original position of capture due to the ease of sorting and slow speed of the dredge over the ground.

There is the potential to introduce a closed season. Razor clams, like other bivalves, spawn in spring, losing their condition and shelf- life for up to two months. The fisher has stated that fishing is likely to stop at the first sign of gametes and resumes after spawning

and condition recovery. Research will be undertaken to determine the size of maturity and spawning season.

1.3 Scale, Intensity and Extent of the Fishery

Currently only one operator will be prosecuting the fishery. It is unlikely that any other operator will join due to complexity of the gear set up and operation using two vessels.

The location of the fishery will be within the areas classified by the FSA and FHI for harvesting of razor clams. The FSA and Cefas Shellfish classification team has determined the areas that will be classified for razor clam harvesting and the classification zone maps will be published in the near future. Annex 13 of the Mobile Fishing Permit Conditions will detail the access area for the fishery. Any developed fishery for razor clams will be limited to the area within the razor clam shellfish harvesting classification zone.

The location of the fishery for the M&CP has been determined through ground truthing using underwater Remotely Operated Video (ROV) and Side Scan Sonar (SSS). The habitats identified in the fishery area are muddy sand and sand (full report in Annex D Agenda Item 8). The location of the fishery is consistent with Natural England's recommendations that it should take place on sandy habitat types, in areas of moderate to higher wave energy at the seabed, and where there is existing active demersal towed gear activity. Agenda item 8 Annex C for the B&PSC meeting on 12th November 2026 provides a detailed Evidence and Research Review and has used to determine the fishery location and removes previously highlighted uncertainties.

2. Residual Uncertainties:

2.1 Uncertainties regarding seasonality of the fishing activity:

a) The seasonality of the fishery is unknown.
b) The literature review has provided an indication of the spawning season for the target species in more northerly locations; sampling will determine the spawning season in the south of D&S IFCA's District.

2.2 Uncertainties regarding fishing effort:

a) No current information on landings per unit effort (LPUE) and catch per Unit effort (CPUE) as the fishery has not commenced. As the fishery has not yet commenced catch rates are unknown.
b) The razor clam stock levels cannot be determined as the fishery has not yet commenced.
c) Whilst previous trials of the fishery have indicated the range of likely species caught, the actual bycatch from the fishery access area, in terms of species and numbers, cannot be determined until the fishery commences.

2.3 Uncertainties regarding the habitat on which the activity is taking place:

a) D&S IFCA's video (ROV) and SSS surveys have reduced the uncertainties of the type of habitats on which the fishery will take place
b) The in-depth Evidence and Research Review has detailed the habitat impacts of razor clam dredges.
c) Impact of the fishery on the habitat in the access area for the fishery cannot be fully assessed unless benthic sampling is undertaken. However, evidence gathered as outlined in a) and b), and the existence of demersal mobile gear activity in the area, minimise the likely impact from this fishery.

3.0 Description of how the fishery will be monitored

3.1 Fishing Activity Location Monitoring:

a) The fishery location will be detailed in Annex 13 of the Mobile Fishing Permit Byelaw Permit Conditions. It will take place in a small area within the classified shellfish harvesting zone outside the Exeter Port Authority jurisdiction and approximately 1.66km from Langstone Point in Dawlish Bay.
b) Geofences will be set up within the REM system so that alerts can be sent to Officers if the vessel fishes outside of the fishing access area. Officers will monitor the vessel's positional data to track the exact location of the operation (Annex 13 of the Mobile Fishing Permit Conditions).
c) Officers will calculate the footprint of the fishing activity through analysis of IVMS data and REM.

3.2 Fishing Effort Monitoring

a) D&S IFCA Officers will monitor mobile fishing vessels at sea and ashore to identify any activity that indicates preparation to join the razor clam dredge fishery including monitoring details set out in permit applications.
b) Officers will monitor the number of dredges in operation though REM and observer surveys.
c) Officers will monitor the REM system to determine when the air lift system is deployed and hauled back on deck.
d) Officers will record the number of days fishing, the number of hauls per day and the length of towing operations.
e) Officers will monitor the catch per unit effort (e.g. hauls/day, tows/day and days fishing) through monitoring the camera footage and having observers on board.
f) The operator will provide landings data to Officers so that landings per unit effort (e.g. per tow) can be calculated.
g) A MCRS of 140mm will be set as a permit condition in the Mobile Fishing Permit Conditions and compliance with the MCRS will be monitored through on board surveys and landings.

3.3 Species and Habitat Monitoring

a) Officers will monitor and assess the habitat type over which the fishery will take place, by identifying the substrate that is brought on board the vessel through REM, camera footage and observer surveys. These data will be compared with habitat ground truthing baseline evidence previously gathered through surveys undertaken by D&S IFCA's Officers.
b) Officers will analyse REM outputs and undertake data gathering during on board observer surveys to record catches of all species, size distribution of retained species, and number and size of juveniles to be returned. Through this monitoring Officers will assess changes in densities of key species both retained and returned to identify possible ecosystem impacts.
c) Officers will assess the level of discards and damage rates to all species through on board surveys and analysis of REM outputs.
d) Officers will undertake research to identity the spawning period, from meat yield, weight, and gonadal analysis, to potentially inform a closed season.
e) Officers will undertake post fishing monitoring of the seabed using the D&S IFCA remote operated vehicle (ROV) to determine how quickly trenches infill in sandy habitats that have different composition and grades (grain sizes) of sand.

4 Triggers to monitoring outcomes and management review:

4.1 Species Caught

A declining trend in catches of the target species and/or bycatch is identified in areas that have been fished. This may be challenging in the initial proposed area due to its size.

4.2 Damage Rates

High damage rates or an increasing damage rate of target species and/or bycatch are identified.

4.3 Changes in Size Frequency Distribution of the Target Species

Data will be analysed to identify a shift in normal size distribution towards the MCRS of 140mm. A length based approach can be used to determine size selectivity and population shifts.

4.4 Fishing Effort

If analysis of monthly CPUE and LPUE is possible and Officers are confident that declining trends in the fishery area can be identified, then a review of the fishery will take place. Fisheries depletion models can be used to identify declines in distribution, population levels and density.

4.5 Number of Vessels

If there is evidence that additional vessels are considering installing REM and fitting out the specialised gear to participate in the fishery, a review will take place.

4.6 Habitat

a) The habitat monitoring will help further define the sandier areas within Annex 13. If the fishing activity, through the monitoring of the habitat is observed to be taking place across substrates other than sandy habitats this will trigger a review of the area where the fishery can take place.
b) If trenches, within the habitat, caused by the fishing gear, are still identifiable after two months of the fishing activity taking place, a review will take place.

5 What does this mean for management?

a) The fishery will be reviewed if any of the above triggers are activated.
b) There will be further discussion by the B&PSC regarding potential changes in management, or the continuation of the fishery, if a trigger has been activated.
c) Reports on the development and outputs of the fishery will be presented to each B&PSC meeting.
d) Trigger points can be reviewed and reset as the fishery develops and in light of the research outputs.
e) Adaptive risk management can be achieved through regularly review and changes to Permit Conditions as necessary to achieve a sustainable razor clam fishery.
f) The M&CP will be reviewed at least every 12 months.

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Background Papers

Authority and B&PSC meeting papers and minutes (Section B Website Resource Library)