



**D&S IFCA's
Response to the Exmouth Marine Licence
Variation 2: PO050**

March 2020

D&S IFCA made a response to the scoping study for the Licence Variation 2 in September 2019. The Marine Space Desk-based Site Scoping and Characterisation report has been updated since August 2019 and D&S IFCA is now responding to the MLA/2016/00372/3 variation which requests a review of the previous licence, to re-open PO050 (Lyme Bay 2) and make changes to the quantities being dredged and disposed of at the site.

D&S IFCA still has concerns about the disposal of dredged material from Exmouth Marina at sea, at PO050. These concerns have not been abated by the changes to the revised scoping and characterisation report produce in December 2019.

The following points highlight the areas of concern:

- 1. Is disposal at sea appropriate?** Within the marine licence application it asks if the activity has been assessed in line with the waste hierarchy – ‘that disposal of dredged material to sea should be considered as a last resort and asks for details of alternatives that have been considered and the reasons why there is a proposal to dispose of the material to sea’. The applicant (Exmouth Marina) has said ‘no’ the activity was not assessed in line with the waste hierarchy and therefore this suggest alternatives were not considered. Within the Marine Space scoping report 2019, alternatives were considered. It states that ‘the sediment dredged from Exmouth Marina would not be appropriate for other disposal options such as beach nourishment or land reclamation due to its nature and volume proposed’. D&S IFCA would therefore question whether this material should be dumped at PO050 due to its nature, as the impact of disposal within spawning and nursery grounds for fish, essential fish habitats, an area where fish populations (shellfish and finfish) exist and inshore fishers are dependent for their livelihoods, would likely to be significant. No detailed and clearly referenced impact assessment has been undertaken. D&S IFCA believes that the alternative of the removal of the dredge material for dewatering on land and disposal at a registered site on land should still be explored as the most preferred option. The scoping report suggest that there is no land area available to undertake these works, but a floating pontoon could be used to hold the sediment whilst it is dewatered. As mentioned in D&S IFCA’s previous response to the scoping report of August 2019, Noss Marina has applied for an application to do just this with quantities much larger that the annual mount that has been proposed in the licence variation for Exmouth Marina. D&S IFCA does not agree that the re-opening of PO050 is appropriate and it believes that the impacts of this to the ecosystem, habitats, fish, shellfish and fisheries has not been clearly evidence and assessed within the scoping report.
- 2. Are the results of the Cefas sediment testing representative of the quality of material to be dredged from 1m metre depth?** When the Exmouth Marina sediment was tested by Cefas, to investigated levels of contaminants including heavy metals, organotin, PAH and PCBS, only three samples were taken from the Marina and these were taken at a shallow depth (30cm)– not from 1m below the surface, which is the depth the application suggests material will be dredged from the Marina. The surface sediment within the Marina is likely to be more similar to the sediment found on the intertidal areas of the Exe Estuary such as reddish brown sandy/muddy sediment. Material dredged below the surface to 1m depth is likely to be black anoxic mud with an accumulation of metals, organotins and other chemicals, which is similar to the black sludge that was disposed of at Sprey Pint and ended up on the

beaches in Teignmouth. Also, it was the northeast corner of the Marina that was previously dredged, and material disposed of at Sprey Point, which was not an area of the marina that was sampled by Cefas. If the licence variation is granted what level of sampling and monitoring of the material to be dredged would take place to ensure there is not contamination of the areas within and around PO050? The results of the sediment testing show some elevated metals (see table 1 below) and as there were only three samples used to assess the sediment quality, D&S IFCA would like to see an extensive sampling regime of the sediment at the depth to which the sediment is dredged to assess the quality and its suitability to be disposed of at land or sea.

Exmouth Marina Sediment Samples Analysis		All in dry wt ppm													
		Arsenic	Cadmium	Chromium	Copper	Mercury	Nickel	Lead	Zinc	Orgotins; TBT,	DBT	PCBs	PAH =ppb	DDT	Dieldrin
Result os sample 2015/00023Area 1	Samples 1+2+3	17.62	0.29	42.82	34.03	0.12	34.66	46.96	139.6	0.007	<0.002	no samples analysed	279	no samples analysed	no samples analysed
*Cefas Action level 1- guideline for disposal		20	0.4	40	40	0.3	20	50	130	0.1					
*Cefas Action level 2- guideline for disposal		100	5	400	400	3	200	500	800	1					
Samples greater or less than Action levels		<	<	>	<	<	>	<	>						

Table 1 Results of analysis of three samples from Exmouth Marina

The Cefas Action Levels (* in Table 1) are used as a guide to the need for further assessment, as follows:

The action levels are not 'pass/fail' criteria but triggers for further assessment. In general, contaminant levels in dredged material below action level 1 are of no concern and are unlikely to influence the licensing decision. However, dredged material with contaminant levels above action level 2 is generally considered unsuitable for sea disposal. Dredged material with contaminant levels between action levels 1 and 2 requires further consideration and testing before a decision can be made.

- Limitations of the Sediment Plume Modelling.** Whilst the prevailing winds are south-westerly, and the site may be afforded some protection from the land, storms and gales are normally from the south or south east and these would likely have a demonstrative impact on sediment plume movement in this part of the Lyme Bay. Any sediment disposal impacts by a southerly or south easterly gale would cause the sediment to be transported towards the Exe Estuary SPA, the Exe Estuary shellfish production areas, the *S. Spisula* harvesting areas at the mouth the Exe Estuary, the Teign Estuary shellfish production areas, and the rope grown mussel farms in Labrador Bay and Lyme Bay. Concern also arises from the material that will be in suspension as describes in section 3.3 and how this will impact the bivalve shellfish grown and harvested in these areas and the impact on their quality for human consumption. Figure 3.1 indicates the maximum footprint of the sediment dispersion. This footprint may be influenced by storm winds, prevailing winds and currents, and potentially could be larger than predicted. The maximum footprint also extends close to the rope grown mussel farm in Labrador Bay and the boundary of the Torbay part of the Torbay and Lyme Bay SAC, and MCZ. The maximum footprint displayed in Figure 3.1 comes within 2km of the Labrador Bay rope grown mussel farm. If the

sediment disperses farther during storm conditions this may reach the farm site. In this regard, D&S IFCA does not agree that the dispersal of sediment will be confined to the site and immediately area during easterly and south easterly storms and the increase in sediment loading may have an impact on ecosystem, fisheries, aquaculture sites and habitats within and extending out from the disposal site

4. **Who will monitor the disposal of the dredged material across the site?** Under section 3.3.1. it suggests that under the worst-case scenario 40,000m³ will be deposited evenly over the 96-hour dispersion envelope and would equate to an average thickness of 0.13m. Whilst this maybe theoretically correct who will undertake monitoring of the disposal and ensure that it is evenly distributed? How will this monitoring be reported and to whom? A concern would be that the dredged material would be disposed of at the closed point to Exmouth and therefore would likely skew any dispersal modelling of the sediment.
5. **Changes to the time restriction on lowering the silt curtain.** D&S IFCA would like to understand how the MMO coastal officers came to the conclusion to change the 2hour restriction on lowering the silt curtain to 30 minutes? What previous evidence was used to reach this conclusion? D&S IFCA would like to understand what monitoring will be undertaken and whether the time restriction will be increased, once the dredging takes place closer to the mouth of the Marina, to afford greater protection to the Exe Estuary SPA and shellfisheries from excessive sediment loadings at these times.

6. Marine Ecology:

- a. **Fish** - The scoping report clearly indicates some of the prime nursery and spawning grounds for many fish species in the area and within PO050. Therefore, these areas of the South Devon coast are important fish habitats and therefore provide ecosystem services on many levels. It is difficult therefore to understand the conclusion that the disposal of dredged material from Exmouth Marina would have a negligible impact on the fish receptors. Within the scoping report no evidence, in the form of peer reviewed literature, is used to confirm this assessment.
- b. **Shellfish** - Whilst the shellfish production and harvesting sites are over 6km from PO050, the modelled maximum extend of the possible dispersal of dredged material is much closer to these food production areas, and this raises some concerns on the impact of sediment with potential elevated levels of metals and other chemicals on the shellfish quality and the consequence impact on human health. Disposal at PO050 may have a direct impact on crustacea and bivalve species found in the area, e.g. scallops. No evidence in the form of a literature review has been provided on the lack of impacts of dredge disposal on shellfish and their ecology and biology.
- c. **Benthic Habitats** – D&S IFCA is concerned that there is no evidence provided to confirm that the impacts on the benthos will be negligible. There may be species that could be impacted by smothering from the disposed material (such as Pink Sea Fans, located to the SW of the site, which have been assessed as having a medium sensitivity to smothering) and evidence

indicating no impact is needed to support the assumptions made in the scoping report.

7. **Marine Nature Conservation.** Table 5.2 has incorrectly detailed the distance from the site of the Lyme Bay to Torbay SAC. This SAC is split into two sections and the proposed disposal site PO50 lies approximately 6/7km from the Torbay part of the Lyme Bay and Torbay SAC.
8. **Commercial Fisheries.** Under 5.4.1 more detail has been given about the commercial fisheries in the area to highlight the activity, but this does not include all the detail provided by D&S IFCA in its response to the previous scoping report in September 2019. Whilst many of the boats inshore will be under 10m this is not the case for the demersal fishing vessels that operate in that area. Within D&S IFCA's response in September 2019, the fishing activity was clearly outlined, and fishing activity charts were included. Please see below for this information reproduced here again:

D&S IFCA has, in the past, undertaken fishing activity surveys with a proportion of fishermen responding to the survey. A survey of the potting and netting fisheries in 2014 from East Devon ports, Exmouth, Teignmouth and Torbay had responses from 25 potters fishing from these ports (out of 79 currently holding D&S IFCA permits) and 23 netters (out of 62 currently holding D&S IFCA permits). The areas fished by those fishers responding to the survey are shown in figures 5 and 6. It can clearly be seen that for these two fishing activities the grounds targeted are on or close to the PO50 site. The grounds are important for crabs, lobsters, whelks and for cod, plaice, bass, rays to name a few species. The smothering and contamination by the dumping of dredged sediment could severely impact the fisheries in the area and hence the inshore fishing industry along this part of the coast.

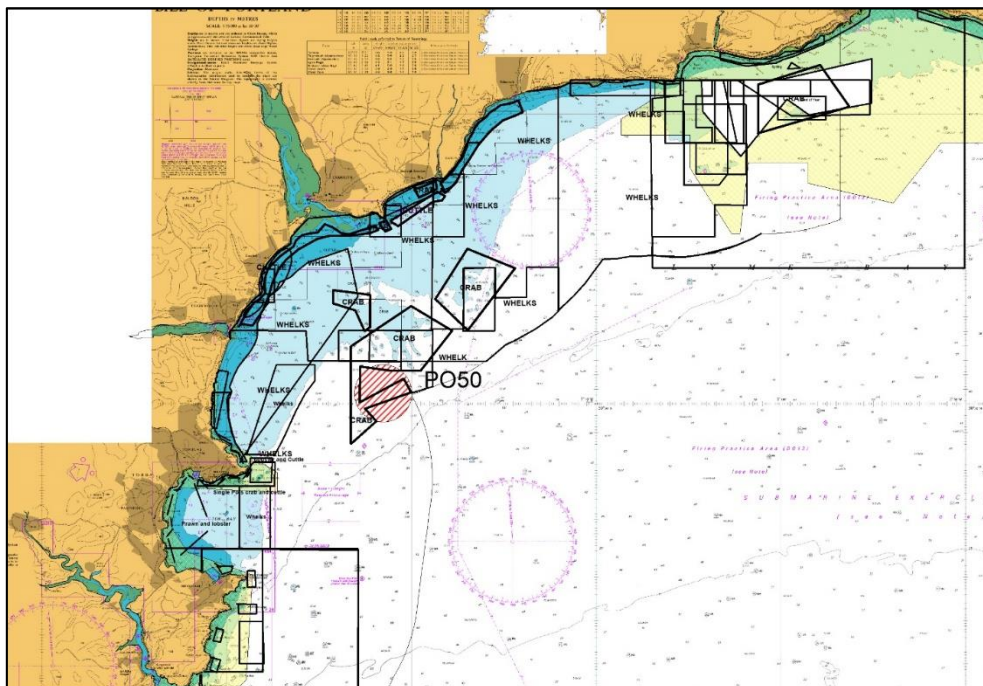


Figure 1 Potting Activity 2014

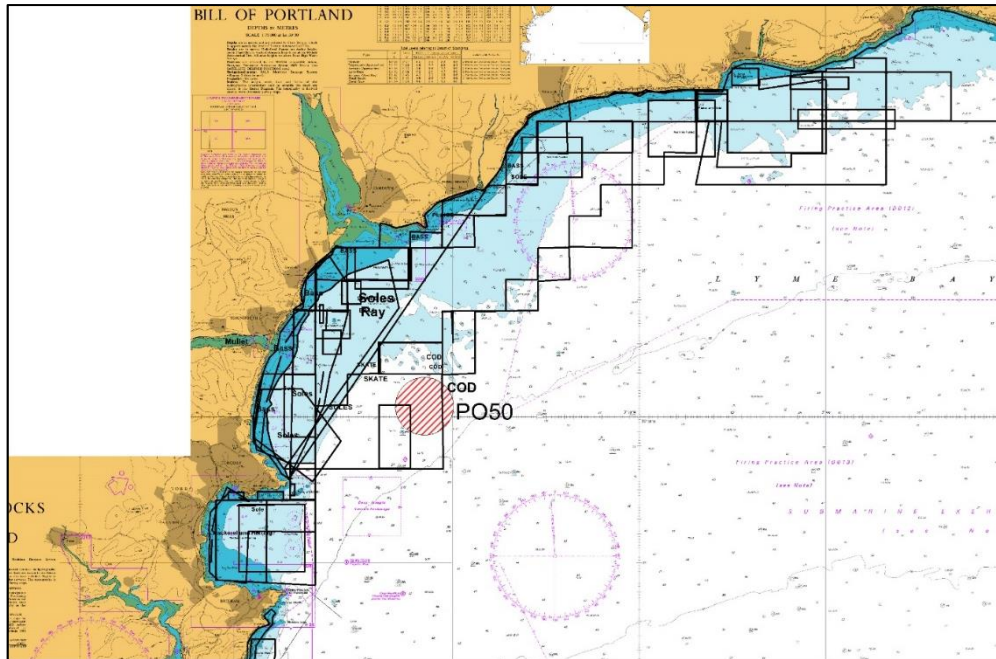


Figure 2 Netting Activity

Figs 5 and 6 only show the location of potters and netters recorded in 2014 and who responded to the survey. This may have changed or increased since this date especially in terms of potting for shellfish and whelks.

There is also a large mobile fishing fleet (demersal, pelagic and scallop dredging) that operate in the area of PO050 targeting a variety of fish including flatfish such as plaice, bream and flounder; sprats and herrings; mackerel; monkfish; pollack; ling; skates and rays, and scallops. D&S IFCA is aware of at least 20 vessels operating in the PO050 area (at times during the year many more vessels will come into this area and will fish in this part of the South Coast of Devon). Fish are targeted on a seasonal basis by trawlers and scallopers. Figures 7-12 show the VMS tracks of six of the vessels who operated in the area during October 2018. It is clear from these images that the area is important to this fishing sector. Due to limited time and resources D&S IFCA has only produced this snapshot of the mobile fishing fleet's use of the area, which is submitted here, but the activity is much greater than is shown in these plots.

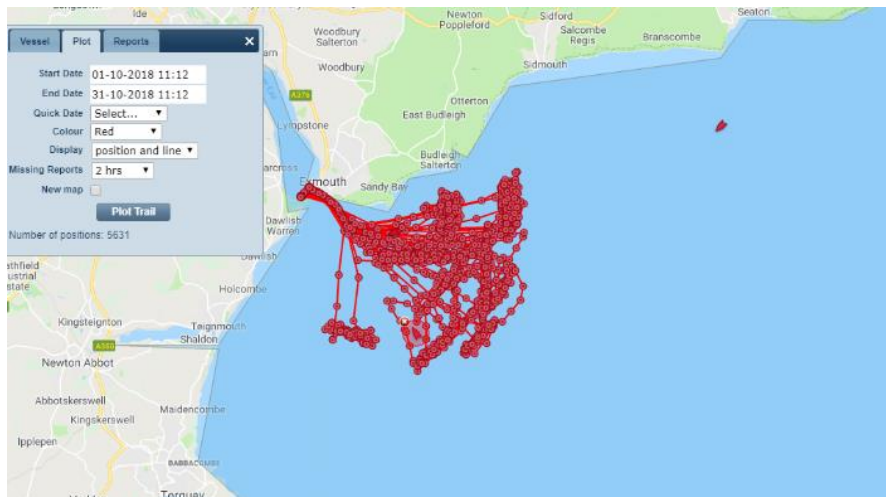


Figure 3 VMS tracks of mobile fishing vessel

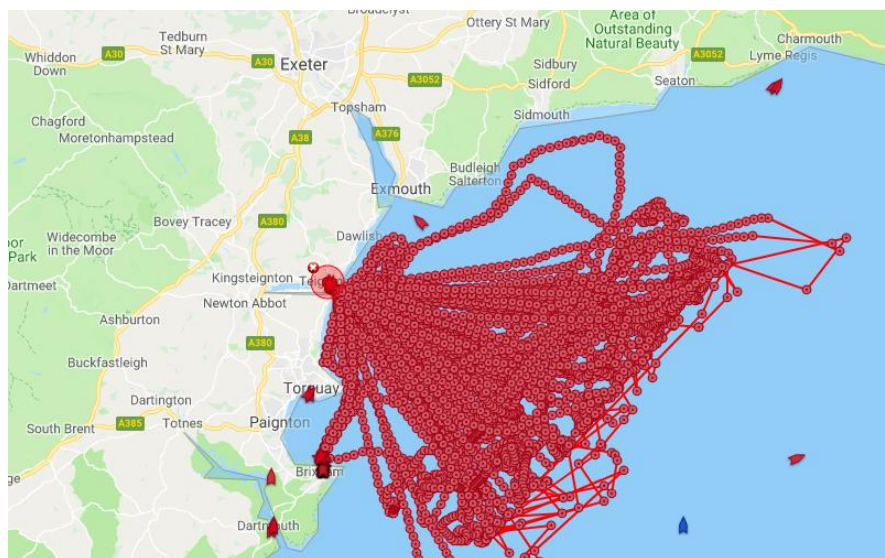


Figure 4 VMS tracks of mobile fishing vessel

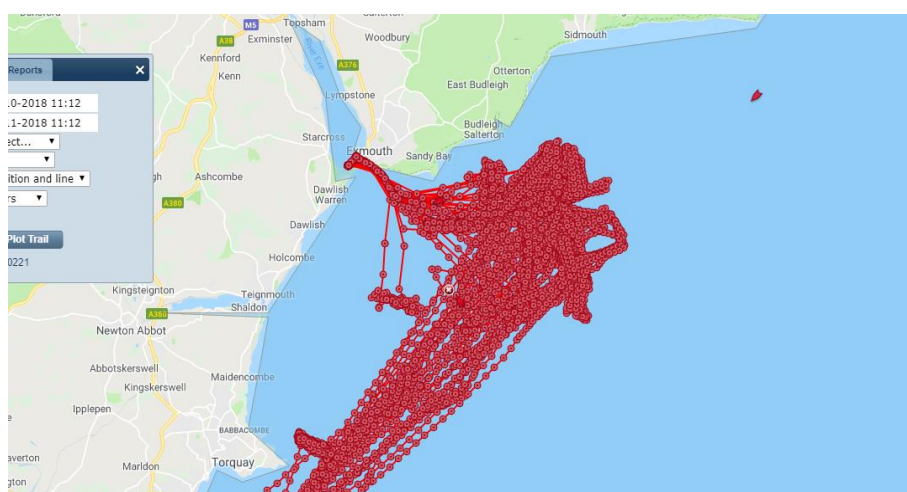


Figure 5 VMS tracks of mobile fishing vessel

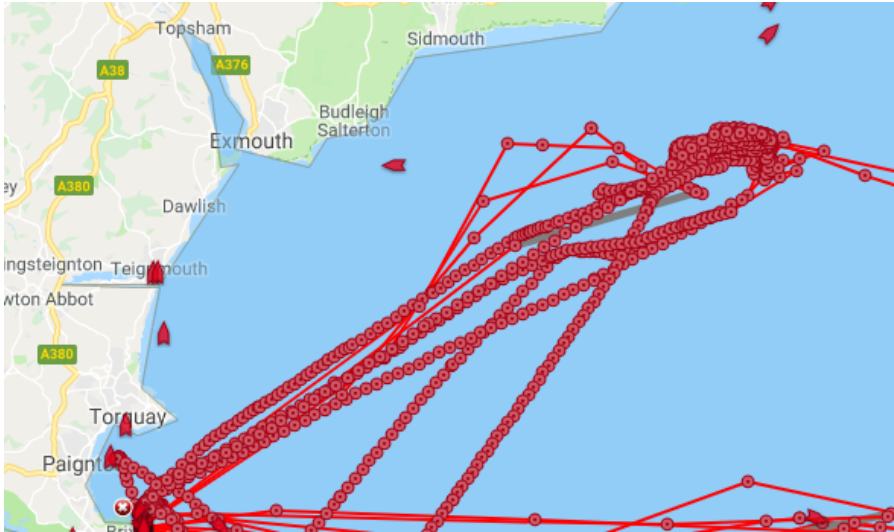


Figure 6 VMS tracks of mobile fishing vessel



Figure 7 VMS tracks of mobile fishing vessel

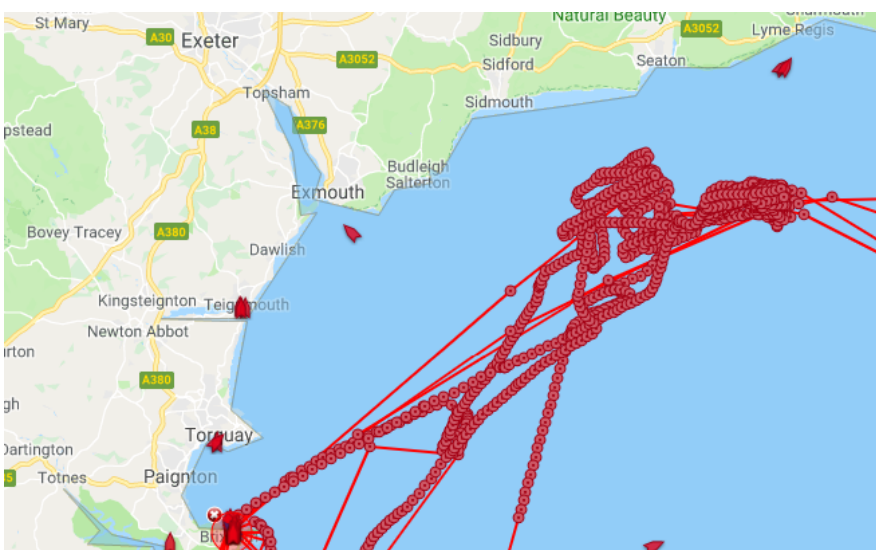


Figure 8 VMS track of mobile fishing vessel

There are recreational fishing activities in this area including recreational angling that may be impacted by the dredging especially if it covers the spawning or nursery ground of species likely to be targeted such as rays.

Under section 6.8 commercial fisheries have been assessed and it has been highlighted that an increase in suspended sediment and deposition could impact target species for commercial fisheries and may impact commercial fishing grounds. A suggestion for mitigation was to disposal to the south east of the central point of PO050 may be more favourable but the report suggests that as the amount to be disposed under this variation is less than previously stated it would only have a minor effect. D&S IFCA does not concur with this conclusion and believes that the disposal of 8,000m³ per annum may have an impact on the commercial fisheries and fish habitats in the area of PO050, and therefore may have a greater impact rather than negligible to minor, as assessed in the report.

9. **Aquaculture.** There are numerous aquaculture sites close to the proposed disposal site at PO050 which have been mentioned in the report in Section 5.4.1.1 but not detailed. In fact, South Devon between Lyme Bay and Torbay is a hub of mariculture. The report incorrectly states that the closest mussel farm lies 9km northwest of PO050. This is the Offshore Mussel farm site. However, there is a rope grown mussel farm site in Labrador Bay which 7km from PO050 and approximately 2km from the maximum dispersal area. The aquaculture sites were details in D&S IFCA's previous response and are reproduced below:

Fig 1 shows the location of aquaculture sites within 8km of the site. The mussel farm in Labrador Bay is closest to the site - 6km from PO050- and would face the impact of sediment during easterly storms. The Offshore Mussel Farms lie directly north east of the site and as the prevailing wind is in a south westerly direction the sediment spread would most likely be towards these aquaculture sites and could impact the quality and feeding ability of the shellfish. As identified from the analysis of the sediment to be dredged from the marina there are elevated levels of chromium, copper, zinc, TBT, PCBs and PAHs. These will affect shellfish quality, shellfish survival, and food safety. Huge investments have been made by the mariculture industry members in developing these sites and they have to undergo rigorous sampling regimes to meet shellfish quality and shellfish hygiene legislation requirements.

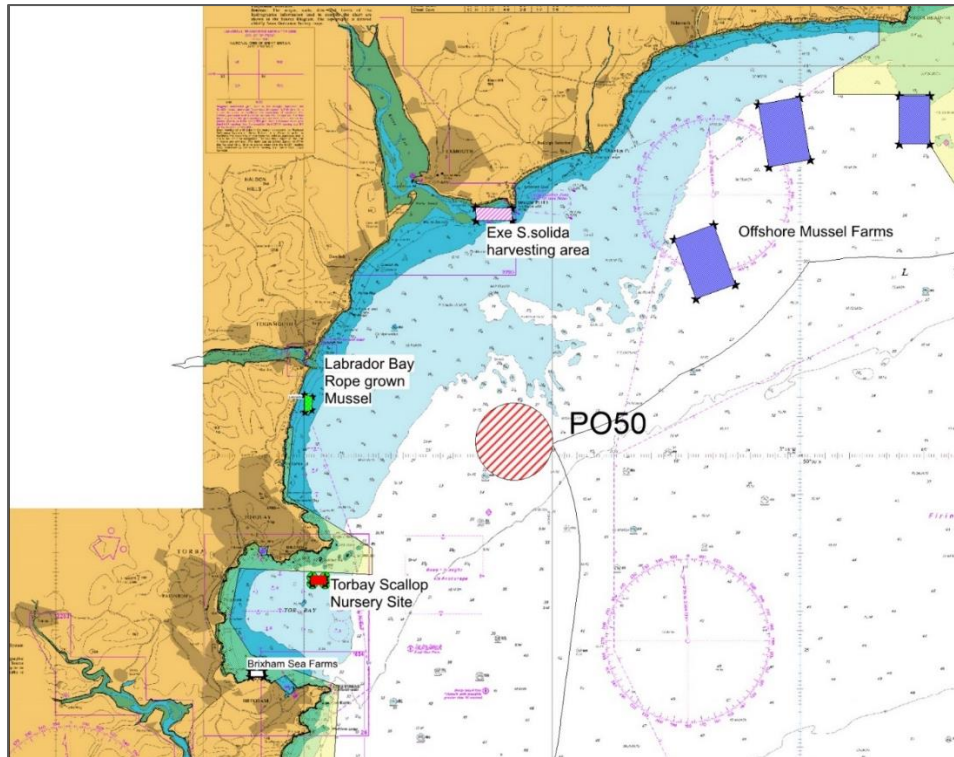
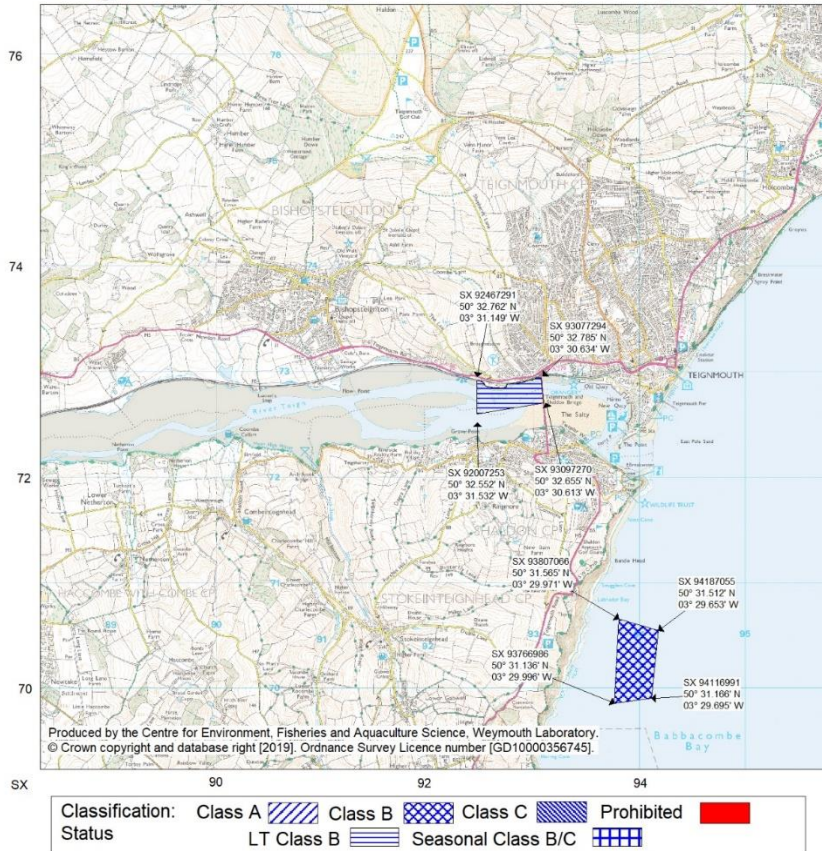


Figure 1 Mariculture sites in the vicinity of PO050

Some of the shellfish harvesting areas around the disposal site are shown below. Fig 2, 3 and 4 indicating Cefas charts of classified shellfish production sites. The shellfisheries of the Exe Estuary and Teign Estuary have not been included here but can be viewed at [Cefas - Classification zone maps](#). There is also a scallop range and Brixham rope grown mussel farm in Torbay which are shown in Fig 1. South Devon is a key area for aquaculture and the lack of consideration in the scoping report is disappointing. The environmental characteristics of the area – prevailing winds, tides, currents - mean that dispersal of dredged material will likely impact these sites and therefore there needs to be alternative consideration of how to dispose of the dredged material rather than dumping it at PO050. Many of the shellfish farmers and businesses have reported their concerns to D&S IFCA on the potential impact of the dredged material if disposed of at PO050. They are also concerned, as is D&S IFCA, that no consideration of likely impacts to their production areas and businesses has been explored or discussed within the scoping study.

Teign - Mytilus spp.

Scale - 1: 35000



Classification of Bivalve Mollusc Production Areas: Effective from 1 September 2019

The areas delineated above are those classified as bivalve mollusc production areas under EU Regulation 854/2004.

Further details on the classified species and the areas may be obtained from the responsible Food Authority. Enquiries regarding the maps should be directed to: Shellfish Microbiology, CEFAS Weymouth Laboratory, Barrack Road, The Nothe, Weymouth, Dorset DT4 8UB. (Tel: 01305 206600 Fax: 01305 206601)

N.B. Lat/Longs quoted are WGS84

Unless otherwise stated, non-straight line boundaries between co-ordinates follow the OS 1:25,000 mean high water line.

Separate map available for *C. gigas* at Teign

Food Authority: Teignbridge District Council

Figure 9 Teign Shellfish Production Areas

Lyme Bay - Mytilus spp.

Scale - 1:70000



Classification of Bivalve Mollusc Production Areas: Effective from 1 September 2019

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Unless otherwise stated, non-straight line boundaries between co-ordinates follow the OS 1:25,000 mean high water line.

Food Authority: Torbay BC

Figure 10 Lyme Bay- Offshore Mussel Areas

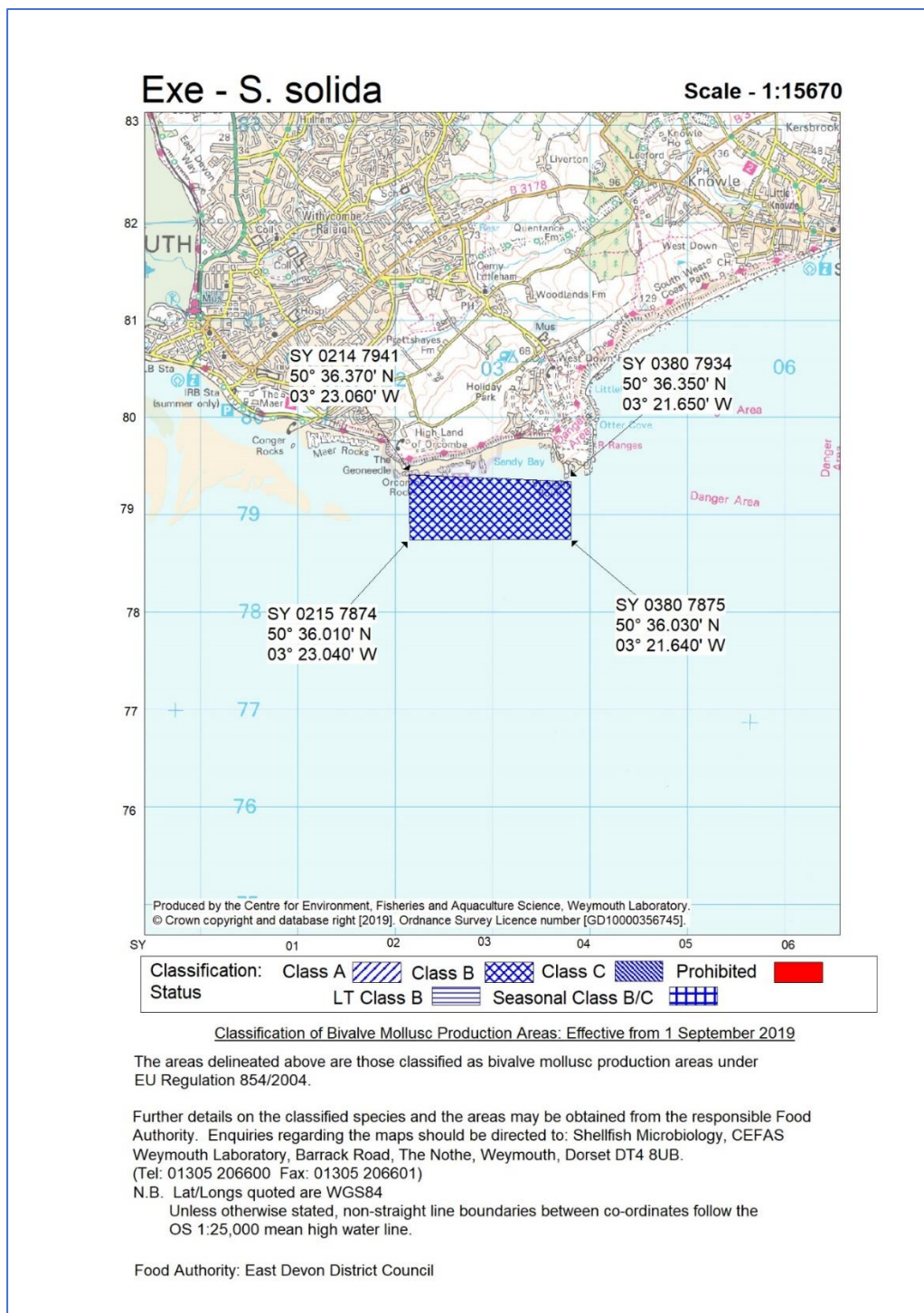


Figure 11 *S. solida* harvesting area outside the Exe Estuary

Conclusion

D&S IFCA would like Exmouth Marina and consultants to further explore the removal of the dredge material for dewatering on land and disposal at a registered site on land. This could be achieved by considering a system similar to the one proposed by Noss Marina but by using floating pontoons in Exmouth Marina. As stated in the Marine Licence Application

'disposal at sea should be considered as a last resort' and D&S IFCA believes the potential impacts of opening up a site, which has been closed for many years, to dispose of dredge material from Exmouth Marina is not acceptable. There are alternatives available. D&S IFCA considers there is a lack of knowledge and evidence of the impacts of disposal to PO050 and its surrounds, and a repeat of the environmental impact, after the disposal at Sprey Point, must not be allowed to happen. The precautionary principle should be used in this instance and this would remove any potential marine environmental damage and remove detrimental impacts to the existing users in and around PO050.