

Fisheries in European Marine Sites (EMS): Habitats Regulations Assessment Fal Fishery Order 2016 – 2025/26 Season

Site and features/ sub-features assessed:

European Marine Site:	Fal and Helford Special Area of Conservation (SAC) UK0013112	
Qualifying feature(s):	1110 Sandbanks which are slightly covered by seawater all the time 1130 Estuaries ¹ 1140 Mudflats and sandflats not covered by seawater at low tide 1160 Large shallow inlets and bays 1170 Reefs ¹ 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)	
Annex I sub-feature(s):	Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Intertidal coarse sediment Intertidal seagrass beds Intertidal rock Infralittoral rock Atlantic salt meadows	Subtidal mixed sediments Subtidal mud Subtidal sand Subtidal coarse sediment Subtidal seagrass beds Circalittoral rock Maerl beds
Annex II species	1441 Shore dock (<i>Rumex rupestris</i>)	

Fishing activities assessed at this site: Fal Fishery Order 2016

	Simple Screen	LSE	Appropriate assessment
Intertidal mixed sediments	X	X	X
Intertidal mud	X	X	X
Intertidal sand and muddy sand	X	X	X
Intertidal coarse sediment	X	X	X
Subtidal mixed sediments	X	X	X
Subtidal mud	X	X	X
Subtidal sand	X	X	X
Subtidal coarse sediment	X	X	X
Intertidal rock	X	X	X
Infralittoral rock	X	X	X
Circalittoral rock	X	X	X
Maerl beds	X	X	X
Intertidal seagrass beds	X	X	X
Subtidal seagrass beds	X	X	X
Atlantic salt meadows	X	X	X
Shore dock	X		

Summary of what this assessment covers:

This assessment covers the issuing of licences to use hand hauled oyster dredges towed by sail and oar powered vessels, and hand gathering under Regulation of the Fal Fishery Order 2016 in line with the associated management for the 2025-26 season and the subsequent potential impact of the activity with all features of the Fal and Helford Special Area of Conservation (SAC) inshore of six nautical miles. This assessment was carried out by Cornwall Inshore Fisheries and Conservation Authority (Cornwall IFCA).

Cornwall IFCA reference
HRA_F&H_FOF_2025

¹ Annex I habitats present as a qualifying feature, but not a primary reason for selection of the site.

Document Control

Title	The Fal and Helford SAC Assessment – Fal Fishery Order 2016
Author	S Sturgeon
Approver	C Trundle
Owner	Cornwall IFCA
Version	Final
Date of final report	22/01/2026
Review period	This will be reviewed every year, or if the levels of activity increase above the effort levels specified in Section 17.

Revision History

Date	Author	Version	Status	Reason
21/10/2025	S Sturgeon	V0.1	Draft	
30/10/2025	S Sturgeon	V0.1	Draft	Inclusion of 2024-25 licence holder returns data and update to trigger levels
04/11/2025	S Sturgeon	V0.1	Draft	Inclusion of water quality to Section 11
27/11/2025	S Sturgeon	V0.1	Draft	Addition of Annex 2 maps
02/12/2025	C Trundle A Jenkin	V0.2	Draft	QA
22/01/2026	S Sturgeon	V0.3	Final	Formal advice from Natural England

Distribution List

This document has been distributed for information and comment to:

Organisation	Date sent	Comments
Natural England	18/12/2025	Sent for formal advice

HRA_F&H_FOF_2025

1. Introduction

1.1 Need for a HRA assessment

As a competent authority, Cornwall IFCA (Inshore Fisheries and Conservation Authority) has important statutory duties and responsibilities as defined in the Conservation of Habitats and Species Regulations 2010 (as amended) ('the Habitats Regulations'), which transpose the European Habitats Directive 1992 and Wild Birds Directive 2009 ('the Directives') into English law.

The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species which are designated as being of European nature conservation importance. The European Directive (79/409/EEC) on the Conservation of Wild Birds (the Birds Directive) provides a comprehensive scheme of protection for all wild bird species naturally occurring in the EU.

The Habitats Directive establishes a network of internationally important sites, designated for their ecological status. These are known as Natura 2000 sites or European sites. These sites include candidate and Special Areas of Conservation SACs (cSACs and SACs), designated under the Habitats Directive and potential and Special Protection Areas (pSPAs and SPAs), designated under the Birds Directive.

In accordance with the Habitats Regulations, all English competent authorities, including Cornwall IFCA, must undertake a formal assessment of the implications of any new plans or projects which are capable of affecting the designated interest features of European Sites before deciding whether to undertake, permit or authorise such a plan or project.

The assessment comprises several distinct stages which are conveniently and collectively described as a 'Habitats Regulations Assessment' (or HRA). A HRA is required where any plan, alone or 'in combination' with other plans, could have a significant effect on the integrity of international sites. It is required to assess the potential effects arising from a plan against the conservation objectives of any site designated for its nature conservation importance.

For all plans and projects which are not wholly directly connected with or necessary to the conservation management of the site's qualifying features, this will include formal screening for any Likely Significant Effects (LSE) (either alone or in combination with other plans or projects). Where these effects cannot be excluded, assessing them in more detail through an appropriate assessment (AA) is required to ascertain whether an adverse effect on the integrity of the site can be ruled out. Where such an adverse effect on the site cannot be ruled out, and no alternative solutions can be identified, then the project can only then proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured.

Article 6 (3) of the Habitats Directive gives the following guidance on when HRA should be undertaken:

'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'

The issuing of permits/ licences constitutes as a plan or project under the ruling of the European Court of Justice Waddenzee case (Case C-127/02, 2004). This ruling is being incorporated as licences are issued under the Fal Fishery Order 2016.

Assessments of existing fisheries activities, plans and projects are being carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive and the Habitats Regulation Assessment (HRA) process. For existing plans and projects, site specific assessments are being

HRA_F&H_FOF_2025

completed under the provision of Article 6(3) of the Habitats Directive and Regulation 9 of the Habitats Regulations 2010. The purpose of this assessment is to ascertain whether the fishing activities stated above (front page) have an effect equivalent to a LSE, or an Adverse Effect on Integrity (AEOI) of, the feature/ sub-features of the European Marine Sites EMS(s). The assessment will determine whether management measures are required in order to ensure that assessed fishing activity or activities will have no adverse effect on the integrity of the EMS.

Cornwall IFCA is implementing the assessment process in three stages:

- **Simple screening:** Is the activity capable of adversely affecting the feature?
Does the activity take place within the SAC?
- **Test for Likely Significant Effect (LSE) (Stage 1):** Is the activity capable of having a 'likely significant effect', either individually or in combination with other plans and projects on the integrity of the site.
- **Appropriate Assessment (Stage 2):** Triggered if any plan or project can have a LSE either individually or in combination with other plans or projects.

1.2 Documents reviewed to inform this assessment

- Natural England's risk assessment matrix of fishing activities and European habitat features and protected species²
- Natural England's Conservation Objectives for Fal and Helford SAC (Natural England, 2018)
- Natural England's Citation for Fal and Helford SAC (Natural England, 2014)
- Natural England's Conservation Advice (Natural England, 2025)
- Reference List (Section 19)
- Site map (Annex 1)
- Feature map (Annex 2)
- Fishing activity levels (Annex 3)
- Adaptive risk review process (Annex 4)
- Natural England's consultation advice (Annex 5)

2. Information about the SAC

- Fal and Helford SAC³

The Fal and Helford SAC is located on the southern coastline of west Cornwall. The seaward boundary of the site is defined by a line that runs between Zone Point in the northeast of the site and Manacle Point in the southwest.

The site is complex comprising of the Fal and Helford ria systems (drowned river valleys) and Falmouth Bay. Both ria systems receive low freshwater input and therefore contain a notable range of fully marine habitats with a high diversity of species across the majority of the site. These habitats are highly influenced by the degree of exposure of the site which varies greatly from extremely sheltered mudflats in the upper Fal to more exposed rocky coastal areas around the mouth of the Helford. Furthermore, the south-westerly location promotes warmer seawater temperatures which allow species to occur that are usually more southerly in their distribution.

The majority of the shores of the upper Fal and Helford are fringed by sheltered intertidal sandflats and mudflats which are recognised for their important sediment dwelling species and communities. These

² See Fisheries in EMS matrix: <https://www.gov.uk/government/publications/fisheries-in-european-marine-sites-matrix>

³ Natural England (2024)

HRA_F&H_FOF_2025

mudflats and sandflats support a wide range of invertebrate and bird communities, which make a vital contribution to the structure and function of the Fal and Helford system.

In several areas of the upper reaches of the estuaries, Atlantic salt meadows are present. Salt meadow transition from mudflats through to woodland also occurs which is a rare occurrence in the UK.

In the lower Fal and Falmouth Bay, extensive beds of the unattached coralline red algae maerl are present which support a high diversity of flora and fauna, including large numbers of thornback rays *Raja clavata*. These maerl beds are classified as Habitats of Principal Importance/ Priority Habitats under the Natural Environment and Rural Communities Act 2006 (NERC) and are the most south-westerly examples in Britain. Other Priority Habitats within the site include subtidal seagrass beds *Zostera marina*, which are present in both the Fal and the Helford. These seagrass beds act as nursery areas for species such as bass *Dicentrarchus labrax*, and cuttlefish, and also important habitats for a variety of other species. Intertidal seagrass beds are present in the Fal Ruan. The site also supports a population of native oyster *Ostrea edulis*, which supports a traditional commercial fishery.

Both intertidal and subtidal rocky reef features are also present in the SAC. This includes circalittoral reef in Falmouth Bay which supports the nationally important pink sea fan *Eunicella verrucosa*. Other rocky habitats include highly productive kelp forest communities, estuarine reef and littoral rocky shore communities.

A chart showing the location of the Fal and Helford SAC is shown in Annex 1.

HRA_F&H_FOF_2025

2.1 Overview and qualifying features⁴

Annex I habitats that are a primary reason for selection of this site

- **1110 Sandbanks which are slightly covered by seawater all of the time**
 - Sub-tidal mixed sediments
 - Sub-tidal coarse sediments
 - Sub-tidal sand
 - Subtidal seagrass beds
 - Maerl beds
- **1140 Mudflats and sandflats not covered by seawater at low tide**
 - Intertidal mixed sediments
 - Intertidal coarse sediments
 - Intertidal mud
 - Intertidal sand and muddy sand
 - Intertidal seagrass beds
- **1160 Large shallow inlets and bays**
 - Intertidal coarse sediment
 - Intertidal sand and muddy sand
 - Sub-tidal mixed sediments
 - Sub-tidal mud
 - Sub-tidal sand
 - Subtidal seagrass beds
 - Intertidal rock
 - Infralittoral rock
 - Circalittoral rock
 - Maerl beds
- **1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)**

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

- **1130 Estuaries**
 - Intertidal coarse sediment
 - Intertidal mixed sediments
 - Intertidal mud
 - Intertidal sand and muddy sand
 - Sub-tidal mixed sediments
 - Sub-tidal mud
 - Subtidal seagrass beds
 - Infralittoral rock
 - Maerl beds
- **1170 Reefs**
 - Intertidal rock
 - Infralittoral rock
 - Circalittoral rock

Annex II species that are a primary reason for selection of this site

- **1441 Shore dock (*Rumex rupestris*)**

⁴ JNCC (2020)

HRA_F&H_FOF_2025

Intertidal coarse sediments

Intertidal coarse sediments occur infrequently by comparison with other intertidal sediments found in the site. The majority of coarse sediments are present in the Helford and Gillan creek, although there are small patches found in the Percuil River at Amsterdam Point which are exposed to fully marine conditions at the mouth of the Fal. In the few areas of the site where intertidal coarse sediments are found, the larger size sediment fraction provides habitat for seaweeds which support species including the common shore crab *Carcinus maenas*, the periwinkle *Littorina littorea*, and the flat top shell *Gibbula umbilicalis* (Tompsett and H.M.V.C.A. Group, 2011).

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A2.1 - Intertidal coarse sediment	01/06/2018	Unfavourable - No Change	Low
H1160 Large shallow inlets and bays	A2.1 - Intertidal coarse sediment	01/06/2018	Unfavourable - No Change	Low
H1140 Mudflats and sandflats not covered by seawater at low tide	A2.1 - Intertidal coarse sediment	01/06/2018	Unfavourable - No Change	Low

Intertidal mixed sediments

Intertidal mixed sediments can be found in both estuaries with areas also present in Gillan Creek and the Percuil River. Within the site, mixed sediments include a full range of sediment sizes from fine silts and clays through to pebbles. The intertidal mixed sediments provide habitats for a variety of species, primarily bivalves such as the common cockle *Cerastoderma edule* as well as the native oyster *Ostrea edulis*, a Biodiversity Action Plan (BAP) species. In some areas of the site, mixed sediments also support small beds of blue mussel *Mytilus edulis* (Curtis, 2011). Interesting species associated with this feature in the site include the massive sponge *Hymeniacion perleve*, and peacock worm *Sabella pavorina*, which is found on the lower shore between Helford Point and Frenchman's Creek. In Gillan creek, a small area of gravelly muddy sand is present. Infauna includes the common cockle *Cerastoderma edule* and various oligochaetes and polychaetes. Fauna includes common shore crabs *Carcinus maenus*, and flat top shells *Gibbula umbilicalis* (Curtis, 2011). Further patches of mixed sediment are found on the Helford which support a diverse seaweed assemblage as well as a variety of infauna including the sand mason worm *Lanice conchilega* (Curtis, 2011).

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A2.4 - Intertidal mixed sediments	02/03/2020	Unfavourable - No Change	Low
H1140 Mudflats and sandflats not covered by seawater at low tide	A2.4 - Intertidal mixed sediments	02/03/2020	Unfavourable - No Change	Low

Intertidal sand and muddy sand

Sand and muddy sand habitats are extensive and highly productive habitats which are important to both the structure and functioning of the wider interest feature. These sediment zones are a common feature of both the upper Fal and Helford Estuaries and associated tributaries and creeks. Intertidal sand and muddy sand can also be found in the Percuil River. At Amsterdam Point, species associated with these sandier sediments such as the sea cucumber *Trachythyone elongata*, have only been recorded in this locality. Other characteristic species recorded on the site include the burrowing heart urchin *Echinocardium cordatum*, and the razor shell *Ensis arcuatus*. The common and black brittle stars *Ophiura ophiura* and *Amphiura brachiata* respectively which have a preference for sandy substrates and high salinity have also been recorded (Moore *et al.*, 1999). Intertidal sand south of Ardevora Veor in the River Fal supports the only area of intertidal seagrass *Zostera noltii* found within the site. This feature supports other rich and diverse

HRA_F&H_FOF_2025

communities throughout the site including species of common cockle *Cerastoderma edule*, the peacock worm *Sabella pavonina*, and dense beds of sand mason worm *Lanice conchilega*.

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A2.2 - Intertidal sand and muddy sand	02/03/2020	Unfavourable - No Change	Low
H1160 Large shallow inlets and bays	A2.2 - Intertidal sand and muddy sand	02/03/2020	Unfavourable - No Change	Low
H1140 Mudflats and sandflats not covered by seawater at low tide	A2.2 - Intertidal sand and muddy sand	02/03/2020	Unfavourable - No Change	Low

Intertidal mud

Areas of intertidal mud found within the site are highly productive systems and form a critical part of the food chain. The mudflats contain extensive and varied infaunal communities which are dominated by burrowing worms, as well as rich in bivalves and other invertebrates. Intertidal mud characterises the upper reaches of both the Fal and Helford Estuaries. In the Fal, these intertidal muds are present in the upper Tresillian River and River Fal, and in the Helford, they dominate many of the creeks and upper estuary areas. The infaunal communities inhabiting these mud flats vary throughout the site although common species are present throughout this habitat which include; the catworm *Nephtys hombergii* and ragworm *Hediste diversicolor*. Species of oligochaetes and gastropod snails are also recorded in high numbers (Curtis, 2011). Other species of interest include the Baltic tellin *Macoma balthica*, the peacock worm *Sabella pavonina*, and the peppery furrow shell *Scrobicularia plana*. In some areas the intertidal mudflats provide important feeding grounds for internationally important numbers of wildfowl.

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A2.3 - Intertidal mud	02/03/2020	Unfavourable - No Change	Low
H1140 Mudflats and sandflats not covered by seawater at low tide	A2.3 - Intertidal mud	02/03/2020	Unfavourable - No Change	Medium

Subtidal coarse sediment

Subtidal coarse sediment complements the full range of sediments present within the site. These coarser sediments, range through coarse sands to pebbles and small boulders, in some instances exist with a proportion of dead crushed maerl and are mainly restricted to patches throughout the open Falmouth Bay. This habitat provides attachment for hydroids and erect bryozoans attached to stones and shells, with dense brittle star beds also recorded (Davies and Sotheran, 1995).

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1110 Sandbanks which are slightly covered by sea water all the time	A5.1 - Subtidal coarse sediment	01/06/2018	Favourable	Low

Subtidal mixed sediments

Throughout the Fal and Helford estuaries and Falmouth Bay, extensive areas of mixed sediment are found. Their composition varies according to their location, however they all provide important habitats for a range of species and the presence of surface shells and stone in several of these locations, has enabled the development of diverse epifaunal communities (Allen and Proctor, 2003). Within the site, mixed sediments

HRA_F&H_FOF_2025

forming part of the subtidal sandbanks are present in much of the Helford particularly west of the Helford Passage extending up the estuary to Groyne Point. From Groyne Point west, the mixed sediment appears to be more classically estuarine with a higher mud component (Moore *et al.*, 1999). With exception of the deep channel, the upper Carrick Roads is also characterised by subtidal mixed sediments. In the upper Carrick Roads, the native oyster *Ostrea edulis* is present along with the peacock worm *Sabella pavonina* and the anemone *Sagartiogeton undatus*. Large numbers of tube worms have been identified in the Helford along with several species of burrowing anemones. In Falmouth Bay, mixed sediment habitats exhibit characteristic epifauna including several species of brittle star, the common starfish *Asterias rubens*, the spiny starfish *Marthasterias glacialis* and the hermit crab *Pagurus bernhardus* (Ware and Meadows, 2012).

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A5.4 - Subtidal mixed sediments	02/03/2020	Unfavourable - No Change	Medium
H1160 Large shallow inlets and bays	A5.4 - Subtidal mixed sediments	02/03/2020	Unfavourable - No Change	Medium
H1110 Sandbanks which are slightly covered by sea water all the time	A5.4 - Subtidal mixed sediments	02/03/2020	Unfavourable - No Change	Medium

Subtidal sand

Subtidal sand communities are found principally in the lower reaches of the ria systems and found at the mouth of the Helford River and around the coastal fringes of the site, as well as in some areas of Falmouth Bay. The main sandbanks are found at The Gew and Toll Point, with further significant areas found in the lower Percuil River and the Carrick Roads. At the mouth of the Helford River, east of The Gew and Toll Point, subtidal gravelly sands and sandy gravels are dominated by worms including nematodes and various species of polychaetes (Allen and Proctor, 2003). The rich fauna also includes bivalve molluscs and other typical sand-dwelling species such as the sea potato *Echinocardium cordatum* (Moore *et al.*, 1999). In Gillan Harbour, the sand mason worm *Lanice conchilega* reaches high abundances in shallow sandy substrates, and in some areas, dense growths of the red algae *Ceramium virgatum* cover the sand. Common fauna include the starfish *Asterias rubens*, the hermit crab *Pagurus bernhardus*, razor shells *Ensis spp.* and terebellid worms (Moore *et al.*, 1999).

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1160 Large shallow inlets and bays	A5.2 - Subtidal sand	01/06/2018	Unfavourable - No Change	Low
H1110 Sandbanks which are slightly covered by sea water all the time	A5.2 - Subtidal sand	02/03/2020	Unfavourable - No Change	Low

Subtidal mud

Subtidal muddy sediments of the Fal and Helford SAC contribute significantly to the overall functioning of the system by providing important feeding grounds for fish and are integral to maintaining the intertidal areas. The main subtidal muddy area of the site consist partly of the deep water channel running through the Carrick Roads as well as areas in the Percuil River, Falmouth Harbour and the upper Fal (Rostron and Nature Conservancy Council, 1986; Moore *et al.*, 1999; Allen and Proctor, 2003). The sediment composition varies depending on location with sandy muds present in the Helford and fine soft muds present in the upper Fal which in some places are a result of china clay deposits. Subtidal muds present in the estuaries support various oligochaete and polychaete species. Animal communities are generally more diverse in the shallower Percuil River in comparison with deeper channels found in the Carrick Roads. These shallower areas of subtidal mud support species including the common shore crab *Carcinus maenas*, the plumose anemone *Metridium senile*, and snakelock's anemone *Anemonia viridis* (Rostron and Nature Conservancy Council, 1986).

HRA_F&H_FOF_2025

Condition assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A5.3 - Subtidal mud	01/06/2018	Unfavourable – No Change	Medium
H1160 Large shallow inlets and bays	A5.3 - Subtidal mud	02/03/2020	Unfavourable – No Change	Medium

Intertidal seagrass beds

Intertidal seagrass historically was fairly widespread on the Helford and as recently as the late 1980s, was recorded as including the largest area of intertidal *Zostera marina* in Cornwall (Hocking and Tompsett, 2002). Since site designation however, the intertidal seagrass species *Zostera noltii* has only been recorded as present in the upper reaches of the Fal Ruan towards Ardevora Veor (Environment Agency (EA), 2014).

Condition Assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1140 Mudflats and sandflats not covered by seawater at low tide	A2.61 - Intertidal seagrass beds	01/06/2018	Favourable	Low

Subtidal seagrass beds

Subtidal seagrass beds and their rich associated flora and fauna are found throughout the lower reaches of the SAC. Within the site they provide habitat for a variety of species of fish, mollusc, cnidarian, polychaete, crustacean and algae (Sutton *et al.*, 2000).

The largest seagrass beds are found in the Helford, between Polgwidden Cove and Toll Point, at Maenporth, and in the lower Percuil between Amsterdam Point and Carricknath Point, with further beds found in various sheltered shallow areas of the site (Curtis, 2015; Allen *et al.*, 2014; Hocking *et al.*, 2002).

The seagrass within the site provides habitat for a variety of species including various species of crab, the common starfish *Asterias rubens*, various species of brittle star, and the heart urchin *Echinocardium cordatum* (Rostron and Nature Conservancy Council, 1986; Ware and Meadows, 2012). The subtidal seagrass provides an important nursery zone for species including young pollack *Pollachius pollachius* and bass *Dicentrarchus labrax*. The seagrass within the site also provides an important attachment point for some organisms, the most recognisable of these being the colourful snakelocks anemone *Anemonia viridis*. Many other species live attached to the seagrass with species of sea plume hydroid and various algae also identified in the site (Hocking *et al.*, 2002).

Condition Assessment: (Natural England, 2020).

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A5.53 - Subtidal seagrass beds	01/06/2018	Unfavourable - No Change	Low
H1160 Large shallow inlets and bays	A5.53 - Subtidal seagrass beds	01/06/2018	Unfavourable - No Change	Low
H1110 Sandbanks which are slightly covered by sea water all the time	A5.53 - Subtidal seagrass beds	01/06/2018	Unfavourable - No Change	Low

Intertidal rock

Although representing just over 1 percent of the total area of the SAC, intertidal rocky reefs found in the site are important for their high diversity of communities, species richness and high productivity. This habitat supports a wide range of common and rare plant and animal species, including the rare giant goby *Gobius*

HRA_F&H_FOF_2025

cobitis, which has been recorded in shallow pools near Rosemullion Head (Potts *et al.*, 1991; Potts and Swaby, 1993), and stalked jellyfish recorded in the Helford (Russel and Selley, 2013). Rocky shores are found in both the Fal and the Helford. In the Helford these shores are largely limited to the mouth of the ria and in the Fal, rocky headlands and outcrops with gullies, overhangs and pools are typical of the area around St Anthony Head (Roberts and Edwards, 1996). Intertidal rocky shores also dominate some areas of shoreline in the Carrick Roads. Differing wave exposures found throughout the site have resulted in the diverse communities present. Classic fucoid algal zonation can be found along the upper reaches of both inlets (Roberts and Edwards, 1996) with rich algal communities present in lower shore rock pools of the Helford. Rich animal communities are also associated with this subfeature within the site and particularly with boulders or overhanging surfaces on the lower shore (Moore *et al.*, 1999).

Condition Assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1160 Large shallow inlets and bays	A1 - Intertidal rock	02/03/2020	Unfavourable - No Change	Medium
H1170 Reefs	A1 - Intertidal rock	02/03/2020	Unfavourable - No Change	Medium

Infralittoral rock

Infralittoral rock with kelp forest communities and estuarine bedrock, boulder and cobble communities have been recorded supporting nationally scarce species including the trumpet anemones *Aiptasia mutabilis* (Gainey, 1997), and in the Helford, the ginger tiny anemone *Isozoanthus sulcatus*. Other nationally scarce species include; the scarlet and gold star coral *Balanophyllia regia* and the sea squirt *Phallusia mammillata* (Roberts and Edwards, 1996) which have been recorded in other areas of the SAC, as well as the Devonshire cup coral *Caryophyllia smithii* (Gainey, 1997). This subfeature is present in both estuarine areas and the shallow areas of Falmouth Bay. Kelp forest communities are generally found around the mouth of the Helford and off Pendennis castle, with the main areas of estuarine bedrock and boulder found in the lower estuarine sections of the Fal River. Kelp communities include *Laminaria hyperborea* growing over moderately exposed bedrock fringing the entrance to the Fal, to *Laminaria ochroleuca* found further up the inlet adjacent to St Mawes Castle. *L. ochroleuca* occurs in mixed populations with *L. hyperborea* and *Saccorhiza polyschides* (Howson *et al.*, 2004) while *L. saccharina* and *L. digitata* are found together on shallow sublittoral- fringe bedrock and boulders in the lower Fal (Moore *et al.*, 1999). A diverse red algal community has been recorded in association with these kelp species (Howson *et al.*, 2004). The estuarine rock and boulder habitats support similar kelp communities as well as species of foliose red algae and filter-feeding sessile fauna.

Condition Assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A3 - Infralittoral rock	01/06/2018	Favourable	Low
H1160 Large shallow inlets and bays	A3 - Infralittoral rock	02/03/2020	Favourable	Low
H1170 Reefs	A3 - Infralittoral rock	02/03/2020	Favourable	Low

Circalittoral rock

The circalittoral rocky reefs of the site are of particular importance for fragile species such as Ross coral *Pentapora foliacea*, the slow growing, long lived, nationally important sea fan *Eunicella verrucosa* and dead man's fingers *Alcyonium digitatum* (Ware and Meadows, 2012; Davies and Sotheran, 1995) Within the Fal and Helford SAC, circalittoral rock is generally restricted to Falmouth Bay. Here a diverse range of habitats have been identified including tide-swept, wave exposed bedrock extending out to the seaward boundary, to more sheltered areas further inshore (Ware and Meadows, 2012). These habitats typically support a range of species including encrusting and cushion sponges, the Devonshire cup coral *Caryophyllia smithii*, and hydroids such as *Nemertesia* spp. (Ware and Meadows, 2012). Mobile species recorded with this biotope include the predatory spiny starfish *Marthasterias glacialis*, edible sea urchin *Echinus esculentus*

HRA_F&H_FOF_2025

and the cotton-spinner sea cucumber *Holothuria forskali* (Ware and Meadows, 2012). The erect bryozoan *Flustra foliacea* and baked bean sea squirt *Dendrodoa grossularia* (on vertical surfaces) have also been recorded (Davies and Sotheran, 1995).

Condition Assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1160 Large shallow inlets and bays	A4 - Circalittoral rock	02/03/2020	Unfavourable - No Change	Low
H1170 Reefs	A4 - Circalittoral rock	02/03/2020	Unfavourable - No Change	Low

Maerl beds

The maerl beds within the Fal and Helford SAC are the largest outside of Scotland, Brittany or Ireland. The Fal and Helford maerl bed habitats range from pristine live maerl beds with up to 100% coverage to extensive areas of dead maerl with little to no live maerl. Two species of maerl occur on the site including the nationally scarce *Lithothamnion corallioides* and *Phymatolithon calcareum*.

The live maerl bed at St. Mawes is the largest and probably best known maerl habitat within the SAC. The large bed to the northwest and the smaller bed to the west of Castle Point are dominated by *L. corallioides* with a smaller area of *P. calcareum* found in the centre of the larger, northwest bed (Howson *et al.*, 2004; Allen *et al.*, 2014). Live maerl is also found in a large bed at Helford Passage (Gall, 2014) and throughout Falmouth Bay and Carrick Roads (Allen *et al.*, 2014).

There are extensive areas of dead and crushed maerl, and living maerl overlaying dead maerl found within the site (Howson *et al.*, 2004; Allen *et al.*, 2014), as well as areas of maerl in sediment. These areas of mixed maerl and sediments are comprised of maerl fragments combined with various sediment types including coarse sand, fine sediment, shells and stones. In places, expanses of maerl in sediment form small undulations on the sea floor (Scottish Natural Heritage (SNH), 1994).

Over fifty species of seaweed and many animal species associated with maerl habitats have been recorded at the site, including rare species such as the red algae *Gracilaria multipartita* and Halymenia species, and the rarely recorded Couch's goby *Gobius couchi*. Maerl sediments provide important habitat for a range of species including deep burrowing species, attached seaweed, bivalves and crustaceans (Moore *et al.*, 1999). Infaunal core samples from dead maerl in the Outer Carrick Roads recorded in excess of 230 taxa at genus level (Posford Haskoning, 2004), highlighting that both live and dead maerl habitats support diverse communities.

Condition Assessment: (Natural England, 2020)

Feature	Sub feature name	Assessment date	Feature condition	Confidence
H1130 Estuaries	A5.51 - Maerl beds	02/03/2020	Unfavourable - Declining	High
H1160 Large shallow inlets and bays	A5.51 - Maerl beds	02/03/2020	Unfavourable - Declining	High
H1110 Sandbanks which are slightly covered by sea water all the time	A5.51 - Maerl beds	02/03/2020	Unfavourable - Declining	High

Atlantic salt meadows

The presence of natural saltmarsh within the site is an important natural resource which is rare or non-existent in other estuaries. Examples of saltmarsh vegetation in rias are restricted to south-west England and west Wales. The salt marshes and mudflats form two elements of an interconnected and dynamic system which is vital to the structure and function of the Fal and Helford estuarine river systems (Stapleton *et al.*, 1996).

HRA_F&H_FOF_2025

Within the site there is a narrow zonation, typical of rias, which ranges from low to upper saltmarsh and, in places, transitions further into woodland which is a rare occurrence in the UK. Saltmarsh is found fringing the extremely sheltered upper creeks of both estuaries, however is found more extensively in the Fal. It is present towards the tidal limits of the Fal Ruan creek near Sett Bridge, in Calenick creek, Tresillian River, and on the Helford in the upper reaches of Mawgan creek.

These saltmarsh species support a variety of animals including polychaete worms, crustaceans, and bivalves, the open edges are also ideal nursery areas for young bass and other fish. The patches of saltmarsh within the site are also important areas of feeding, roosting and nesting for wading birds as well as providing a natural form of sea defence (Covey and Hocking, 1987).

Condition Assessment: not included in the current Marine Condition Assessment (Natural England, 2020)

Shore dock

Shore dock is one of the rarest plants in Britain, being known only from the Isles of Scilly, Cornwall, Devon and Wales (Neil *et al.*, 2001). It is a Red List Species (categorised as Endangered), and is listed as a priority species in the UK Biodiversity Action Plan. The populations on the Devon and Cornwall coasts within the Fal and Helford SAC are therefore very important nationally. These populations are also important internationally with shore dock's world status listed as Vulnerable (Neil *et al.*, 2001).

Shore dock occurs in five locations within the SAC: Great Molunan (near St Anthony Head), Raven's Hole (1 km south of Portscatho), Peter's Splash (0.5 km south of Portscatho), Porthbean Beach, and Pendower Beach (McDonnell and King, 2000). At Great Molunan, shore dock occurs on damp rocks below the steep cliffs and on seeping vegetated rocks (McDonnell and King, 2000). Shore dock is found in three sub-sites at Raven's Hole (north, central, and south). Raven's Hole south is typical of shore dock's favoured habitat: a sandy beach backed by well-vegetated cliffs formed of beach head deposits with a freshwater seepage (McDonnell and King, 2000). This type of habitat is also present at the Peter's Splash, Porthbean Beach, and Pendower Beach sites (Neil *et al.*, 2001).

Condition Assessment: not included in the current Marine Condition Assessment (Natural England, 2020)

2.2 Conservation Objectives

The Conservation Objective(s) for the Fal and Helford SAC features are as follows:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

2.3 Sites of Special Scientific Interest

Large areas of intertidal within the Upper Fal are designated as Sites of Special Scientific Interest (SSSIs), these are: Upper Fal Estuary and Woods SSSI and Malpas Estuary SSSI. Saltmarsh within the SAC occurs within the intertidal SSSIs. Intertidal activities within the SSSIs that are included on the SSSI 'Operations requiring Natural England's Consent' (ORNEC) list, formerly the Operations Likely to Damage (OLD) list, would require SSSI consent from Natural England where the activity is undertaken or permitted by a SSSI owner or occupier. Fisheries activities on the ORNEC/ OLD lists for these SSSIs include: 'The killing or removal of any wild animal, including pest control (Ref. 10); 'The introduction of coastal fishing and changes in coastal fishing practice or fisheries management and seafood or marine life collection, including the use of traps or fish cages' (Ref. 16b); 'Bait digging in intertidal areas' (Ref. 18) and 'Use of vehicles or

HRA_F&H_FOF_2025

craft likely to damage or disturb features of interest' (Ref. 26) (Natural England, 2015a; Natural England, 2015b).

3. HRA Process

3.1 Overview of the assessment process

The assessment of commercial fishing activities within the site will be undertaken using a step wise process.

The assessment process comprises of three parts; simple screening, Stage 1 Test for Likely Significant Effect (TLSE) screening and Stage 2 Appropriate Assessment.

3.2 Simple Screening

The simple screening stage was carried out to establish whether an activity occurs within the site and if it does, whether the activity is capable of affecting (other than insignificantly) the designated features of the SAC.

The screening stage is assessed on the following criteria;

1. The activity is capable of affecting (other than insignificantly) either (i) the protected features of an SAC; or (ii) any ecological or geomorphological process on which the conservation of any protected feature of an SAC is (wholly or in part) dependent; and
2. The activity is taking place within or near an area being put forward or already designated as a SAC.

Individual gear types identified in Defra's matrix were assessed and grouped into broad gear types.

3.3 Stage 1 Test for Likely Significant Effect (LSE)

The Test for Likely Significant Effect (LSE) is required by article 6(3) of the Habitats Directive. The aim of the Stage 1 assessment is to assess what potential pressures are exerted on the designated features by the activity and if the pressures are capable of affecting (other than insignificantly) the protected features of the SAC.

The screening of commercial fishing activities in the SAC was undertaken using broad gear type categories as used by Natural England. Sightings data collected by Cornwall IFCA together with officers' knowledge was used to ascertain whether each activity occurs within the site. For these occurring/potentially occurring activities, an assessment of pressures upon the SAC designated features was undertaken using Natural England's Advice on Operations (AoO) (Natural England, 2025).

Fishing activities which were identified as occurring within the site were screened with respect to potential pressures upon designated features. This screening exercise was undertaken using Natural England's AoO for the SAC. This advice provides a broad scale assessment of the sensitivity of designated features to different activity-derived pressures, using nationally available evidence on their resilience (an ability to recover) and resistance (the level of tolerance) to physical, chemical and biological pressures. The assessments of sensitivity to these pressures are measured against a benchmark. It should be noted that these benchmarks are representative of the likely intensity of a pressure caused by typical activities, and do not represent a threshold of an 'acceptable' intensity of a pressure. It is, therefore, necessary to consider how the level of fishing intensity observed within the SAC compares with these benchmarks when screening individual activities.

Due to the broad-scale nature of the sensitivity assessments provided in Natural England's AoO, each pressure is assigned a risk profile based upon the likelihood of the pressure occurring and the magnitude of

HRA_F&H_FOF_2025

the impact should that pressure occur. These risk profiles have been used, together with site-specific knowledge, to identify those pressures which could significantly affect the designated features.

The resultant fisheries activity pressure-feature interactions which have been included for further assessment are included in Section 8. Where there is insufficient evidence on the sensitivity of a designated feature to fishing-related pressures, and these pressures present a risk to designated features, these pressure-feature interactions have been included for further assessment.

Activities were screened out for further Stage 2 assessment if they satisfied one or more of the following criteria:

1. The activity does not occur within the site, does not have the potential to occur and/or is not anticipated to occur in the foreseeable future.
2. The activity does occur but the pressure(s) does not significantly affect/interact with the designated feature(s).
3. The activity does occur but the designated feature(s) is not sensitive to the pressure(s) exerted by the activity.

Fishing activities and their associated pressures which are not screened out in the Stage 1 assessment are then subject to a more detailed Stage 2 assessment.

3.4 Stage 2 Appropriate Assessment

The Appropriate Assessment is required by article 6(3) of the Habitats Directive. The aim of this assessment is to determine whether there is an adverse effect on the integrity of the site in view of the conservation objectives of the SAC.

Each resultant pressure from Section 8 was included and the likelihood of the impacts occurring or the level of exposure to that pressure was considered in Section 9. Mitigation measures were considered and other restrictions and/ or modifications. It was then determined if the pressure would cause an adverse effect on the integrity of the site.

If the Stage 2 assessment is unable to conclude that there is no significant risk of an activity causing an adverse effect on the integrity of the site in view of the conservation objectives of the SAC, then the activity may be subject to management.

4. Interest feature(s) of the EMS categorised as ‘Red’ risk and overview of management measure(s) (if applicable)

A red risk interaction of bottom towed gears and reef features was addressed with the creation of the Cornwall IFCA Closed Areas (European Marine Sites) No 2 Byelaw⁵, which prohibits the use of bottom towed fishing gear within the Land’s End, Lizard, Eddystone Reefs, Fal and Helford, and Plymouth Sound areas.

Under Regulation 9 of the Fal Fishery Order 2016 Exclusion Zone 1 restricts fishing to ensure compliance with the Conservation of Habitats and Species Regulations 2017 for seagrass bed communities (see Figure 2).

The southern limit of the Fal Fishery was moved further north from the previous limit as set out in the Truro Port Fishery Regulating Order (1936 amended 1975) to exclude maerl bed communities and seagrass extents from the Fal Fishery Area as set out in the Fal Fishery Order 2016.

⁵ More information available from:

https://secure.toolkitfiles.co.uk/clients/17099/sitedata/Byelaws%20and%20orders/Cornwall_SFC/Closed-Areas-EMS-byelaw-No-2.pdf [Accessed: 30/10/2025]

5. Fishing activities assessed

This assessment covers the issuing of licences to dredge and hand gather prescribed molluscan bivalves under the Fal Fishery Order 2016 occurring in the Fal Fishery Area within the Fal and Helford SAC site and is part of a suite of assessments for fisheries activities (netting, potting, shore-based activities, diving and pelagic) within the SAC.

All fishing activity/feature interactions at this site identified as 'amber' in the matrix of fisheries gear types and European marine site protected features were considered for inclusion in this assessment. Fishing activity-feature interactions identified as 'green' are also assessed if there are in-combination effects with other activities.

Table 1 shows the fishing activities with amber interactions assessed at this site. The 'matrix gear type' column shows the categories used in the matrix. These are matched to the 'aggregated method' categories used in Natural England conservation advice packages.

Table 1: Fishing activities with amber interactions to be included for assessment

Matrix Gear Type	Natural England Aggregated Method	Feature
Dredges (towed): Oysters	Fishing: Dredges	Intertidal mixed sediments
		Intertidal mud
		Intertidal sand and muddy sand
		Intertidal coarse sediment
		Subtidal mixed sediments
		Subtidal mud
		Subtidal sand
		Subtidal coarse sediment
Intertidal hand work	Fishing: Shore-based activities	Intertidal seagrass beds
		Subtidal seagrass beds
		Intertidal rock
		Infralittoral rock
		Cirralittoral rock
		Maerl beds
		Atlantic salt meadows
		Shore dock

Commercial fishing has the potential to vary in nature and intensity over time. This assessment considers activities occurring at the current time.

6. Information about the fishing activities within the site

6.1 Evidence Sources

To determine the levels of fishing activity, the following evidence sources and analyses were used:

- Expert opinion from Cornwall IFCA enforcement and scientific officers
- Cornwall IFCA data from Fal Fishery Order 2016 shellfish catch statistics
- Informal consultation with fishermen

6.2 Fishing activities under consideration

The Fal Oyster Fishery is the last known remaining wild capture native oyster (*Ostrea edulis*) fishery in England (with the oyster fisheries in the Solent⁶ and Thames Estuary⁷ no longer viable) (Long *et al.*, 2017). The Fishery is exploited by hand gathering and hand hauled dredging from non-powered vessels, either haul /tow punts or sailing boats. It is thought to be the last commercial sailing fleet in Europe (Long *et al.*, 2017). In recognition of the specific nature of the fishery, Fal oysters have been awarded the Product of Designated Origin (PDO) label.

The Fishery is described as a traditional fishery, in that it is restricted to sail or hand-powered vessels. Two types of boat are used for dredging native oysters. The first is the gaff cutter, driven by sail and used in the more open, deeper waters of the estuary. The second is the oyster punt, pulled by hand to drag up oysters in shallower parts of the estuary or in the more open waters during periods of light winds.

There are three recognised methods of collecting oysters from the Fishery. These are explained in more detail below;

6.2.1 Dredging using Sail Boat

Gaff cutters of 18 to 32 ft length try to work the longest lines given the wind conditions on the day (e.g. on a northerly they will work downwind but on a southerly they may use a broad reach to work across the banks) towing two to four dredges usually two per crew member. The dredges are dragged along the seabed and then periodically hauled to the deck by hand and the contents emptied out onto sorting trays known as cultch boards.

The contents are sorted and any marketable/legal oysters or queen scallops are retained. Undersize oysters, queens and dead shell, etc. are returned to the fishery. The dredges vary in size but consist of a triangular metal frame holding the mouth open and a bag attached with the bottom made of iron or steel rings that comes into contact with the seabed and the top is made of net. The weight and size of the dredge is restricted itself to what can be handled by hand. The bags vary in length between 0.5 to 1.0 m and have a width between 0.6 and 1.0 m.

6.2.2 Dredging using Haul /Tow Punt

This is traditionally done with 15 ft open oyster punts with 'cotton reel' type hand winches using one dredge and very occasionally two. An anchor is set out attached to the end of the headline and the boat rowed astern (sheaving) paying out the line from one reel.

Once stopped at the end of the headline, the dredge is attached to the warp and is deployed over the stern. The headline winch is then engaged so that the dredge and boat are pulled back towards the anchor. When back at the anchoring point, the dredge warp reel is engaged and the dredge hauled to the surface. The contents are emptied onto the cultch boards and sorted. The process is then repeated. The weight and size of the dredge is restricted itself to what can be handled by hand. The bags vary in length between 0.5 to 1.0 m and have a width between 0.6 and 1.0 m.

6.2.3 Collection by hand

⁶ Under the Southern IFCA Solent Dredge Permit Byelaw, Category B Permits are required in order to fish for native oysters. Following the results of the Southern IFCA annual native oyster survey the IFCA's Technical Advisory Committee agreed to close the native oyster beds in the Solent. On this basis, no Category B permits have been issued for the 2024-25 season. Available from: <https://www.southern-ifca.gov.uk/solent-dredge-permit-byelaw> [Accessed 30/10/2025]

⁷ Managed by Kent and Essex IFCA. Within the Blackwater, Crouch, Roach and Colne MCZ native oyster are currently below the level required to allow for a public native oyster fishery and the fishery in the MCZ has been closed since 2015. Available from: <https://www.kentandessex-ifca.gov.uk/im-interested-in/research/native-oyster-research> [Accessed 30/10/2025]

HRA_F&H_FOF_2025

During periods of exceptionally low tides, some licence holders pick oysters, mussels and other shellfish by hand from intertidal areas.

These are expanded upon in more detail below (section 6.3 and section 6.4).

6.3 Existing fisheries management measures

This section relates to current fisheries management relating to the Fal Fishery Order 2016⁸.

Oysters have been fished from the estuary since Roman times. The native oyster (*O. edulis*) is now listed as a species “of principle importance for the purpose of conservation of biodiversity” under the Natural Environment and Rural Communities (NERC) Act 2006 and a UK Biodiversity Action Plan (UKBAP) Priority Species. It is also on the OSPAR List of Threatened and/or Declining Species and Habitats (Region II – Greater North Sea and Region III – Celtic Sea).

The Fishery was previously regulated by the Port of Truro under the Truro Port Fishery Regulating Order (1936 amended 1975) which expired on the 31st July 2014. Since the expiry of the Truro Port Fishery Order in 2014 and the subsequent temporary legislative measures, the Fishery is now managed by Cornwall IFCA under the Fal Oyster Fishery 2016 Regulating Order.

As Grantee of the Regulating Order, Cornwall IFCA has a responsibility for monitoring and managing the stocks of oysters within the Fishery. Monitoring is achieved through annual dredge surveys and monthly catch statistics submitted by all licence holders. Dredge surveys are conducted by Cornwall IFCA in January and describe the catch rates and distribution of native oysters within the Fishery at the time of survey.

6.3.1 Regulations

The Fal Fishery Order 2016 manages the fishery by setting regulations that control the effort directed to the fishery and a number of technical measures⁹.

- A licence needs to be issued by the Authority to dredge, fish for or take oysters or mussels in the Fishery area.
- Dredging can only be carried out by a fishing boat powered by sails or oars; or using a winch or other device which can only be operated by hand.
- A dredge must not incorporate any teeth, tines or other digging projections; exceed 20 kg or exceed overall width of 1.2 m.
- No dredge to be used during the closed season (1st April to 30th September). Dredges are permitted between 1st October and 31st March each year.
- During the closed season (1st April to 30th September) dredges can fish for or take oysters over an oyster lay area only if outside the excluded period (14th of May to 4th of August). Anyone wishing to dredge for oysters on a recognised lay area outside the fishing season is required to give advance notice to Cornwall IFCA.
- Sixteen oyster lay areas within the Fal Fishery limits are defined in the Regulations⁸
- No dredges can be used in Exclusion Zone 1
- The hours of fishing are restricted to between 0900 and 1500 (local time) daily Monday to Friday and between 0900 and 1300 (local time) on Saturdays. Fishing is not permitted on Sundays.
- Year-round intertidal hand gathering of bivalve and gastropod species by license holders is permitted while the dredge is not in use. It is however, an offence under the Shellfish Act 1967 to sell native oysters between 14th of May and the 4th of August in any year.
- Licence holders must provide monthly catch statistics to the Authority.
- A person must not remove from the fishery area any oyster (*Ostrea edulis*) which will pass through a circular aperture of 72 mm diameter when the shell is laid flat across the aperture, but shall immediately return the oyster to the sea.

⁸ The Fal Fishery Order 2016 available from: <https://www.legislation.gov.uk/ukSI/2016/716/made> [Accessed: 07/08/2024]

⁹ More details on the Regulations under the Fal Fishery Order 2016 can be found here: https://secure.toolkitfiles.co.uk/clients/17099/sitedata/Fal_Fishery/2025-Regulations-under-the-FFO-2016.pdf [Accessed: 21/10/2025]

HRA_F&H_FOF_2025

- The minimum length for mussels (*Mytilus spp.*) is 50 mm.
- There is no minimum size for Pacific oysters (*Magallana gigas*) and if caught they must not be returned alive to the Fishery.

Enforcement of the above conditions within the Regulating Order is undertaken by officers from Cornwall IFCA.

The Fal Fishery Management Committee (FFMC) exists to discuss improvement and management matters for oysters and mussels within the regulated fishery and make recommendations to Cornwall IFCA. FFMC includes representatives from the fishing and merchanting sectors, as well as from other relevant regulatory organisations. Its members provide detailed, expert input into the ongoing management process and help with the development of any new measures.

6.3.2 Limits of the Fishery

The Fishery only operates within the boundaries shown in Figure 1.

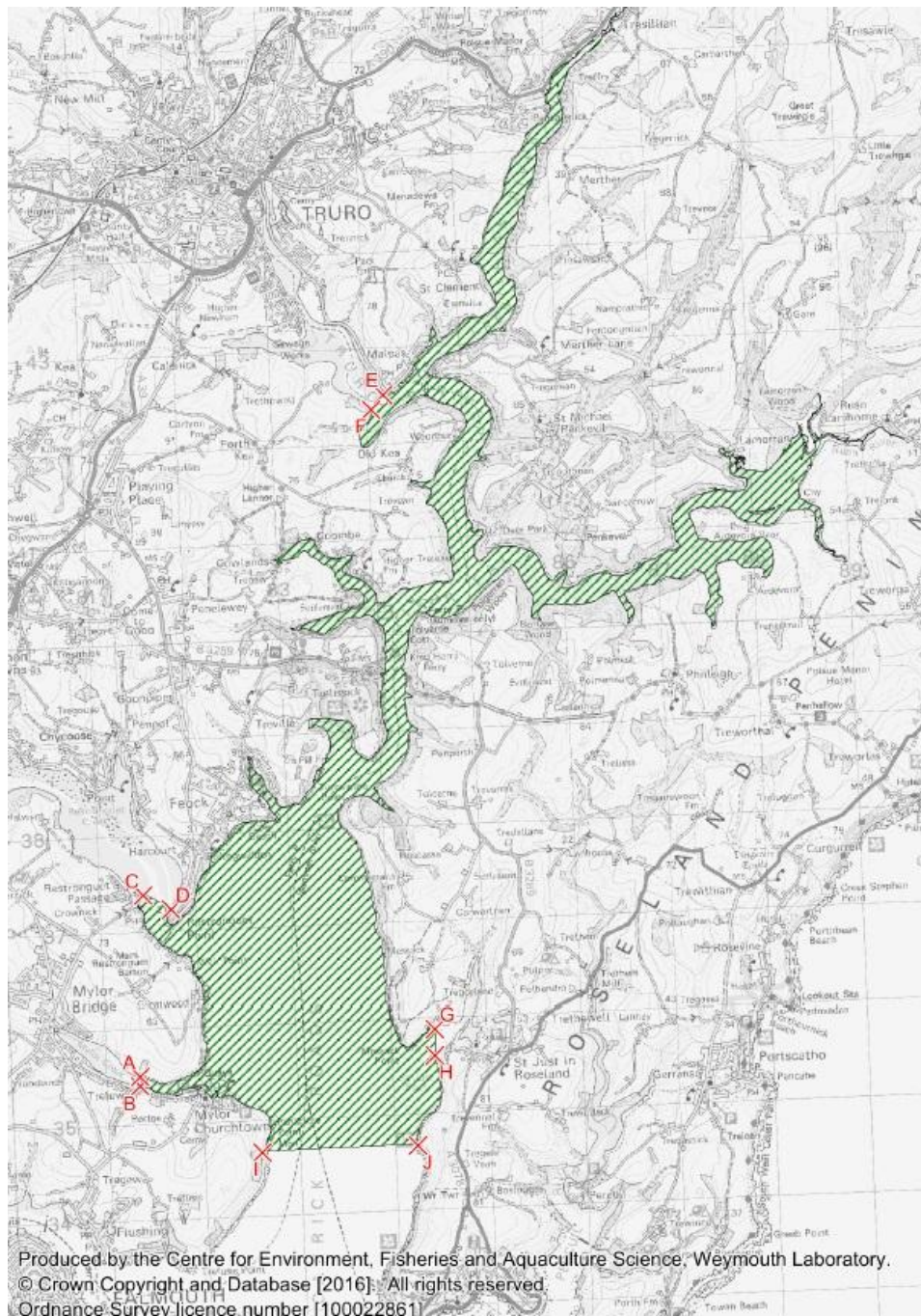


Figure 1: Fal Fishery Order 2016 area boundary within the River Fal.

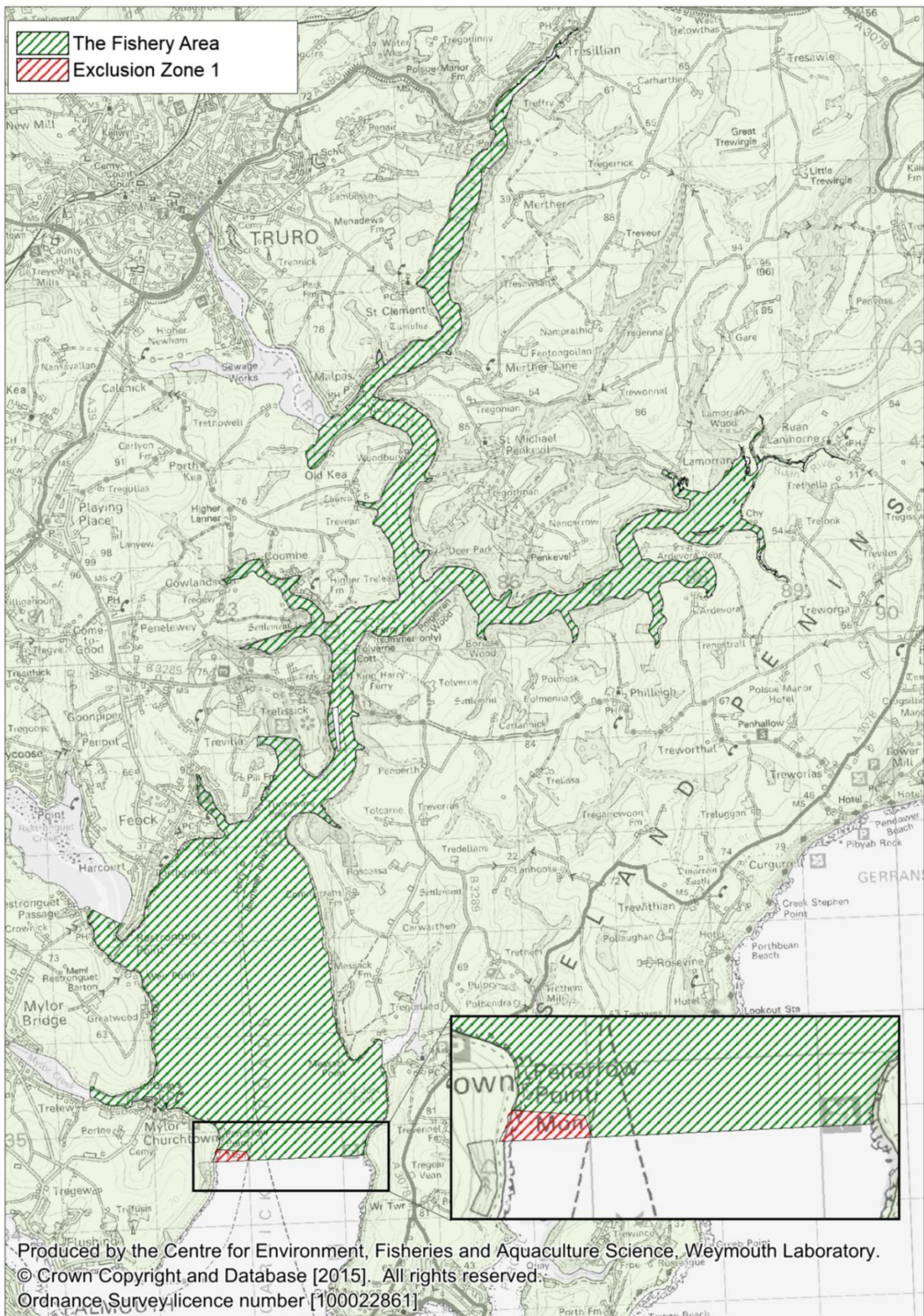


Figure 2: Fal Fishery Order 2016 area boundary and Exclusion Zone 1 within the River Fal.

The area is based upon the boundary for the previous Truro Port Fishery Regulating Order (Figure 3) but the southern boundary has been amended to remove the areas of maerl and seagrass which were previously within the fishery and includes the Fal Fishery Exclusion Zone 1 (Figure 2).

HRA_F&H_FOF_2025

The southern boundary and Fal Fishery Exclusion Zone 1 were set following a meeting between licence holders, Natural England and Cornwall IFCA in 2014¹⁰. The data from a side scan sonar and drop down camera survey carried out in December 2013 and January 2014 of the area were presented to Natural England to allow them to provide advice to the Authority as to the selection of an appropriate southern boundary¹¹. A further survey was carried out in July 2014 to map the extent of the Trefusis seagrass bed which led to the inclusion of the Fal Fishery Exclusion Zone 1. The result of the discussion with Natural England was a southern Fishery boundary that was moved 1.7km north from the existing boundary. Moving the southern boundary north reduced the Fal Fishery 2016 Fishery Area by 2.8km² compared to the Fishery Area as set out in the previous Truro Port Fishery Order 1936. The reduction in Fishery Area ensured that the delicate habitats of maerl and seagrass were not impacted by the Fishery.

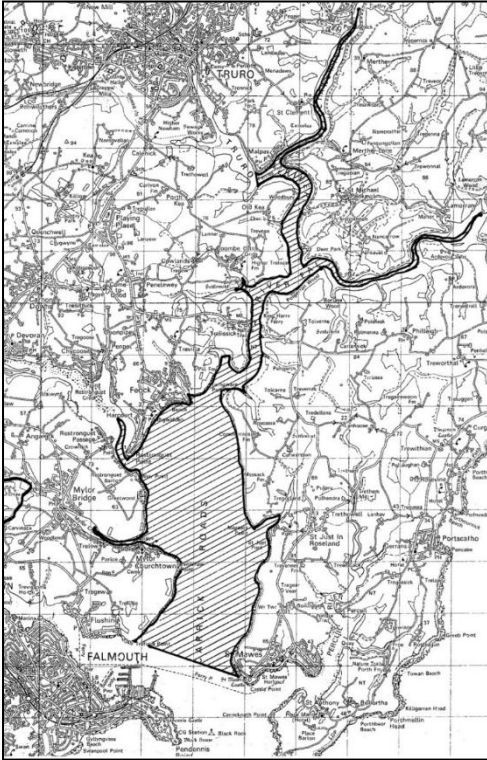


Figure 3: Historic Limit of the Fishery under Truro Port Fishery Order 1936 as varied by the Truro Port Fishery (Variation) Order 1975

Oyster lay areas are defined in the Regulations⁷. After fishermen have initially harvested the shellfish, they sometimes move the shellfish to shallow beds in adjacent rivers and creeks of the Fal River into areas which are commonly referred to as lays. This is done to manage peaks in supply and to ensure a safe product is being supplied under the hygiene requirements.

The Fishery is split into three management areas A, B and C (Figure 4). The monthly catch statistics are reported by area fished. Areas A and B cover the area from the southern boundary of the fishery to Turnaware Point and are fished predominantly by sail and Area C covers the area from Turnaware Point to Malpas and is fished by oyster punts using haul /tow methods.

¹⁰ Further information can be found in Cornwall IFCA Committee Report from September 2014. Available from: <https://democracy.cornwall.gov.uk/documents/g5184/Public%20reports%20pack%2019th-Sep-2014%2010.00%20Cornwall%20Inshore%20Fisheries%20and%20Conservation%20Authority.pdf?T=10> [Accessed 02/12/2025]

¹¹ Further information can be found in Cornwall IFCA Committee Report from March 2014. Available from: <https://democracy.cornwall.gov.uk/documents/g4763/Public%20reports%20pack%2014th-Mar-2014%2010.00%20Cornwall%20Inshore%20Fisheries%20and%20Conservation%20Authority.pdf?T=10> [Accessed 02/12/2025]

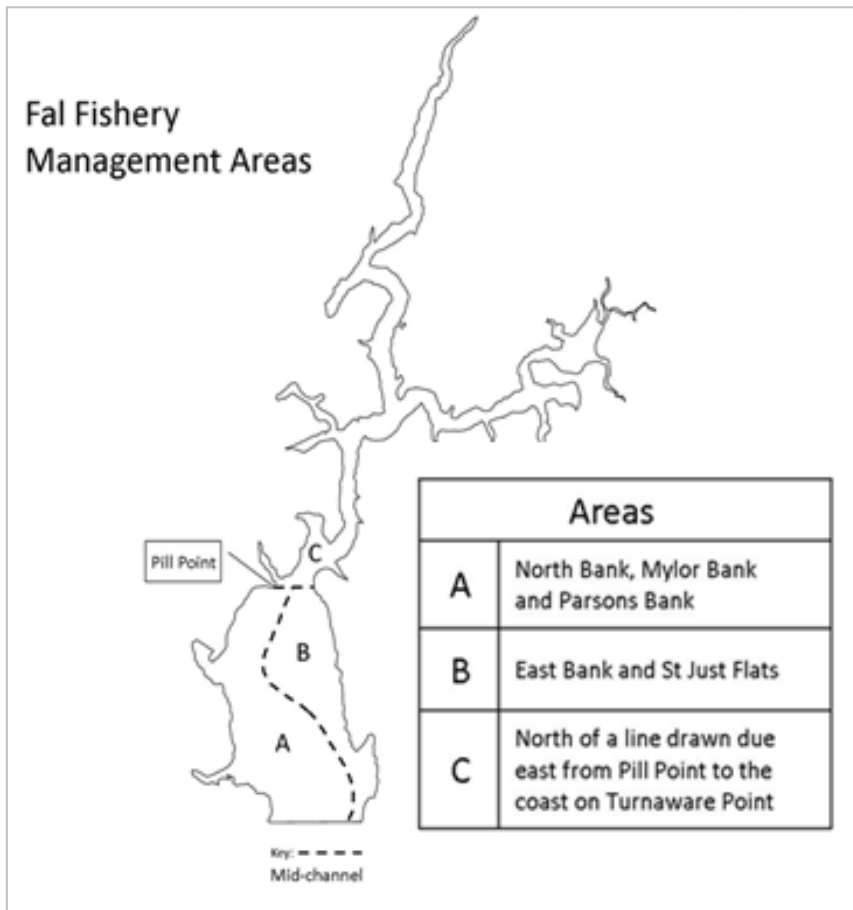


Figure 4: Fal Fishery Management Areas

6.3.3 Licensing of Fishery

No person is permitted to dredge, fish for or take, within the limits of the fishery, prescribed species of shellfish except under the authority of a licence issued by Cornwall IFCA. A licence can only be used by the named licence holder and are issued seasonally.

For the 2024-2025 Season, Cornwall IFCA issued 38 dredge licences, representing 24 licence holders (Table 2). These licences are used by a total of 13 sail boats, 21 haul /tow punts (including tenders), with 8 licence holders using both sail and punts.

The number of licences active are determined by any fishing activity submitted by each licence holder during the season. The total licences active is lower than those which were issued each season (Table 2).

HRA_F&H_FOF_2025

Table 2: Total number of Fal Fishery licences issued by Cornwall IFCA and active from 2014-15 to 2025-26

Season	Number of licence holders (persons)	Number of dredge licences issues	Number of hand gathering only licences issues	Total licences issued	Total licences active
2014/15	34	57	1	58	50
2015/16	32	53	1	54	47
2016/17	35	59	3	62	53
2017/18	41	63	3	66	58
2018/19	37	59	1	60	55
2019/20	33	50	1	51	47
2020/21	30	44	1	45	42
2021/22	28	43	1	44	40
2022/23	25	38	0	38	31
2023/24	26	32	1	33	29
2024/25	24	38	0	38	38
2025/26	27	40	1	41	<i>Not Available</i>

The number of dredges is not capped but applications for dredges fluctuate annually in line with available stocks within the fishery (Figure 5).

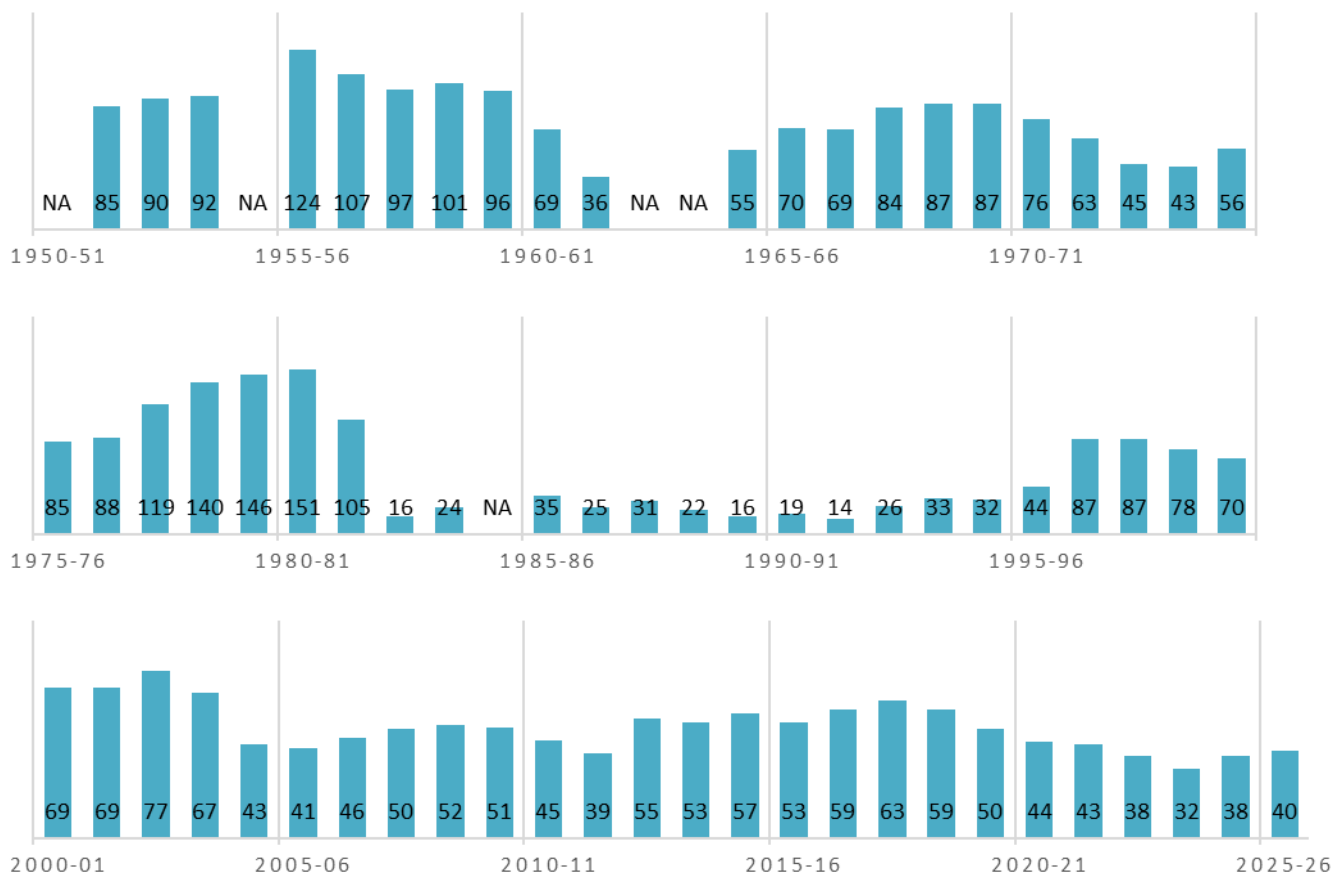


Figure 5: Fal Fishery dredge licences issued since 1951-52 to 2025-26

6.3.4 Changes to the Regulations of the Fal Fishery Order 2016:

Changes to the Regulations made under the Fal Fishery Order 2016 were made in 2017 where by-catch restrictions for bivalve or gastropod species were removed. Previously by-catch species could not exceed 20% of the weight of native oysters or mussels retained on board. Since the season of 2016-2017 and the 21

HRA_F&H_FOF_2025

changes of the Regulations a market has developed for queen scallops, locally referred to as *queenies*. They have been recorded on the statistical returns forms as 'queens'. Cornwall IFCA officers believe the species identified to primarily be the variegated scallop (*Mimachlamys varia*) as opposed to the more commonly referred to queen scallop (*Aequipecten opercularis*) (Jenkin *et al.*, 2020). For simplicity the term 'queen scallop' has been used to describe this species for the entirety of the HRA.

After consultations began in 2023, on 18th August 2025 a change to the regulations to raise the measurement of native oysters in the Fal Fishery by 5 mm (increasing minimum size to 72 mm) was confirmed by Defra. The aim of increasing the oyster minimum size is to retain a larger percentage of the smaller oysters within the fishery, allowing them to grow on and support the Fal Fishery's long-term future by increasing the overall breeding stock.

6.3.5 Cornwall IFCA surveys

Cornwall IFCA will continue to complete an annual oyster survey to assess potential recruitment to the fishery and catch rates of fishable stock. The survey method will follow that used in previous surveys so comparisons can be drawn. Since 2016 the abundance and distribution of queen scallops has been included. Additionally, habitat surveys are undertaken to assess the condition of the features of the SAC within the boundary of the Regulating Order. Additional research will be commissioned to inform the ongoing management regime and to support the actions of the management committee.

Cornwall IFCA carried out an Oyster Relay Trial in the Fal Fishery using native oysters purchased from licence holders. The relay trial was carried out on 9th May 2025 and a total of 10,263 oysters (just under 1.2 tonnes) were distributed within the Fal Fishery Area. The project was funded by The Fishmongers' Charitable Trust and Cornwall IFCA. The trial was part of a wider project which was set up to try to improve larval production of native oysters within the Fal Fishery by increasing the density of oysters in what was understood to be a key area in the Fishery (Jenkin *et al.*, 2025b).

Cornwall IFCA have produced annual reports of the oyster surveys, the most recent report can be found on the Cornwall IFCA website¹².

6.4 Scale of the activities

Licence holder returns data

Regulations under the Fal Fishery Order 2016 require licence holders to submit monthly catch statistics to the Authority¹³. Below is a summary of the catch statistics from seasons 2014-15 through to 2024-25. The full analysis methodology can be seen in Sturgeon *et al.*, (2022) and previous analysis of licence holder returns statistics of the Fal Oyster Fishery for past seasons can be found on the Cornwall IFCA website¹⁴.

Compliance with submission of monthly catch statistics at the time of writing this HRA (October 2025) was 97% for October 2024 to March 2025.

6.4.1 Overall Statistics

The weight of all shellfish removed from the Fishery for the past seasons is presented in Table 3.

¹² Fal Oyster Fishery survey reports available from: https://www.cornwall-ifca.gov.uk/Research_Environment [Accessed: 21/10/2025]

¹³ Fal Fishery catch statistics form available from: <https://www.cornwall-ifca.gov.uk/fal-fishery> [Accessed: 21/10/2025]

¹⁴ Fal Oyster Fishery permit statistics reports available from: https://www.cornwall-ifca.gov.uk/Research_Environment [Accessed: 21/10/2025]

HRA_F&H_FOF_2025

Table 3: Season (October to September) totals of landed shellfish (kg) for the whole Fal Fishery, dredge and hand gathered (including all data submitted, no removals for lack of attribute data). * Excludes weight of native oysters removed and placed onto lays. N.B. '–' denotes where data was not recorded.

Season	*Native Oysters (kg)	Mussels (kg)	Queen Scallops (kg)	Scallops (kg)	Pacific Oysters (kg)	Cockles (kg)	Winkles (kg)	Whelks (kg)
2014-2015	90,641	14,767	1,047	359	-	36	-	-
2015-2016	67,595	10,811	180	33	-	86	-	-
2016-2017	68,341	20,626	7,078	525	50	60	-	-
2017-2018	50,220	22,069	71,488	704	725	64	1,642	0
2018-2019	36,076	4,443	82,335	843	2,101	225	702	20
2019-2020	19,244	1,840	91,731	1,038	10,213	0	594	0
2020-2021	12,332	686	87,876	331	492	0	639	0
2021-2022	13,197	4,879	65,458	206	280	0	485	0
2022-2023	20,071	7,030	39,270	185	548	0	719	0
2023-2024	32,670	212	23,138	616	25	0	585	0
2024-2025	28,821	577	4,030	90	1,459	0	815	0

6.4.2 Hand gathering

The totals of shellfish landed by hand gathering can be seen in Table 4. Hand gathering hours directed towards oysters and mussels can be seen in Table 5.

Table 4: Season totals (October to September) of landed shellfish (kg) by hand gathering in the Fal Fishery. *Excludes weight of native oysters removed and placed onto lays. N.B. '–' denotes where data was not recorded.

Season	Hand gathering Hours	*Native Oysters (kg)	Mussels (kg)	Queen Scallops (kg)	Scallops (kg)	Pacific Oysters (kg)	Cockles (kg)	Winkles (kg)	Whelks (kg)
2016-2017	330	4,256	6,443	13	0	0	1	-	-
2017-2018	842	3,588	20,518	5	241	455	0	225	0
2018-2019	375	1,934	3,674	167	0	1,538	50	126	0
2019-2020	141	881	1,228	50	0	10,199	0	230	0
2020-2021	60	382	349	0	0	232	0	0	0
2021-2022	293	569	2,310	90	0	182	0	330	0
2022-2023	112	538	619	0	0	363	0	107	0
2023-2024	77	331	55	0	5	0	0	260	0
2024-2025	129	74	398	0	0	442	0	705	0

Table 5: Total weight of native oysters (kg's) and mussels (kg's) removed from the Fishery by hand gathering each season (October to September), total hand gathering hours and Landings Per Unit Effort (LPUE) (kg oysters or mussels/ hand gathering hours). * Excludes weight of native oysters removed and placed onto lays.

Season	Native oysters			Mussels		
	Hand gathering Hours	*Native Oysters landed (kg)	LPUE (kg oysters/ hour fished)	Hand gathering Hours	Mussels landed (kg)	LPUE (kg mussels/ hour fished)
2016-2017	100	946	9.43	214	6,243	29.17
2017-2018	260	3,588	13.79	570	20,518	36.00
2018-2019	107	1,934	18.12	130	3,674	28.26
2019-2020	53	881	16.78	40	1,228	30.51
2020-2021	26	382	14.70	15	349	23.27
2021-2022	51	569	11.16	183	2,310	12.62

HRA_F&H_FOF_2025

2022-2023	62	538	8.74	14	619	44.21
2023-2024	28	331	12.03	2	55	27.50
2024-2025	8	74	9.25	16	398	25.68

6.4.3 Dredging

The totals of all shellfish species landed by dredging from October to March can be seen in Table 6 and Landings Per Unit Effort (LPUE) of native oysters and queen scallops can be seen in Table 7.

Table 6: Season totals (October to March) of landed shellfish (kg) by dredging in the Fal Fishery. * Excludes weight of native oysters removed and placed onto lays. N.B. ‘-’ denotes where data was not recorded.

Season	Fishing Hours	Dredge Hours	*Native Oysters (kg)	Mussels (kg)	Queen Scallops (kg)	Scallops (kg)	Pacific Oysters (kg)	Cockles (kg)	Winkles (kg)	Whelks (kg)
2014-2015	7,605	15,728	87,298	1,322	1,047	359	-	36	-	-
2015-2016	7,638	14,068	66,023	1,290	140	33	-	86	-	-
2016-2017	8,239	15,170	56,792	3,604	4,040	117	0	10	-	-
2017-2018	7,785	17,234	44,605	414	69,220	462	151	64	381	-
2018-2019	6,907	16,545	30,896	359	74,472	841	318	175	469	20
2019-2020	5,271	11,897	16,491	419	71,408	1,008	14	0	220	0
2020-2021	5,271	10,845	11,550	282	85,721	231	60	0	375	0
2021-2022	4,898	9,676	12,549	417	63,948	170	98	0	35	0
2022-2023	4,112	8,630	17,710	5,194	27,663	61	77	0	16	0
2023-2024	4,913	8,533	30,927	157	20,693	525	23	0	0	0
2024-2025	4,199	8,518	28,747	29	4,030	90	17	0	0	0

Table 7: Total weight of native oysters and queen scallops (kg's) removed from the Fishery by dredging each season (October to March) total dredge hours and Landings Per Unit Effort (LPUE) (kg oysters or queen scallops/dredge hours). * Excludes weight of native oysters removed and placed onto lays.

Season	Dredge Hours	*Native Oysters (kg)	LPUE (kg oysters/ dredge hour)	Queen Scallops (kg)	LPUE (kg queens/ dredge hour)
2014-2015	15,728	87,298	5.55	1047	0.07
2015-2016	14,068	66,023	4.69	140	0.01
2016-2017	15,170	56,792	3.74	4,040	0.27
2017-2018	17,234	44,605	2.59	69,220	4.01
2018-2019	16,545	30,896	1.87	74,472	4.50
2019-2020	11,897	16,491	1.39	71,408	6.00
2020-2021	10,845	11,550	1.06	85,721	7.90
2021-2022	9,676	12,549	1.30	63,948	6.61
2022-2023	8,630	17,710	2.05	27,663	3.21
2023-2024	8,533	30,927	3.62	20,693	2.43
2024-2025	8,518	28,747	3.37	4,030	0.47

Slipper limpets (*Crepidula fornicata*), a non-native species, are also removed from the fishery by licence holders and the total weight removed can be seen in Table 8.

HRA_F&H_FOF_2025

Table 8: Total weight of slipper limpets (kg) removed from the Fal Fishery by dredging between October to March each season. *some quantities missing from totals as not provided weight removed

Season	Slipper limpets removed (kg's)
2014-2015	5,111
2015-2016	2,363
2016-2017	1,863
2017-2018	2,429
2018-2019	2,497
2019-2020	1,045
2020-2021	1,391
2021-2022	903
2022-2023	1,018
2023-2024	154*
2024-2025	61*

6.4.4 Lays

The weight of native oysters fished (by both dredging and hand gathering) and placed on lay areas were kept separate as these remained within the Fishery. The total weight of native oysters placed onto lays can be seen in Table 9.

Table 9: Total weight of native oysters (kg) placed on and removed from lay areas in the Fal Fishery, dredge and hand gathered, between October to September each season.

Season	Total native oysters placed on lays (kg)	Total native oysters removed from lays (kg)
2014-2015	15,377	20,594
2015-2016	2,758	5,590
2016-2017	6,641	7,818
2017-2018	11,268	5,103
2018-2019	11,329	4,074
2019-2020	7,444	5,294
2020-2021	8,687	4,413
2021-2022	3,511	3,129
2022-2023	8,118	3,028
2023-2024	7,049	2,807
2024-2025	9,467	4,715

HRA_F&H_FOF_2025

6.5 Fal Fishery Trigger Levels

The triggers for the Fal Fishery have been updated following Natural England informal advice. The triggers have been updated to be in line with other Cornwall IFCA assessments based on a five year baseline average.

Number of licenses issued:

The five year baseline average from 2017-18 to 2021-22 was 53 total licences issued. The maximum trigger was set as the baseline plus standard deviation of 10. This equals a maximum trigger of 63 total licences issued.

The number of Fal Fishery licences issued and the trigger level, including the licences which were active are shown in Figure 6 (*Licensing – Figure 1*).

Dredge hours:

The five year baseline average from 2017-18 to 2021-22 was 13,239 dredge hours. The maximum trigger was set as the baseline plus standard deviation of 3,432. This equals a maximum trigger of 16,671 dredge hours (October to March).

Hand working hours:

The five year baseline average from 2017-18 to 2021-22 was 342 hand gathering hours. The maximum trigger was set as the baseline plus standard deviation of 306. This equals a maximum trigger of 648 hand gathering hours.

The Fal Fishery licence holder return data trigger levels for dredging and hand gathering effort are shown in Figure 6 (*Dredging hours and Hand Working hours – Figure 2*).



Cornwall IFCA
Inshore Fisheries and Conservation Authority

Cornwall IFCA Monitoring and Control Plans

Fal and Helford SAC

Fal Fishery Order 2016

Report 2025



Information Classification: CONTROLLED

Adaptive Risk Review Process:

Fal Fishery Max Trigger Levels

Number of licences issued (dredge and hand working only combined): **63**

Effort per season:

- Dredging Hours (October to March): **16,671**
- Hand Working Hours (October to September): **648**

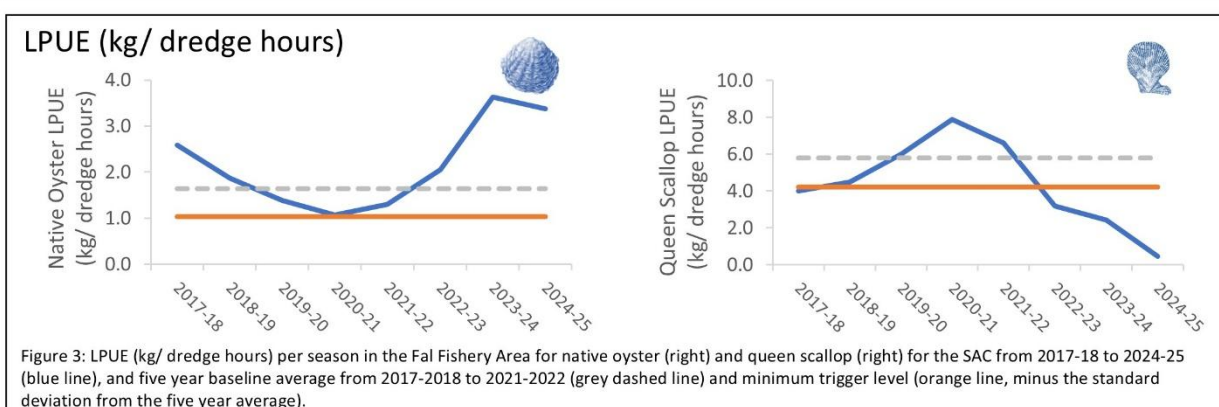
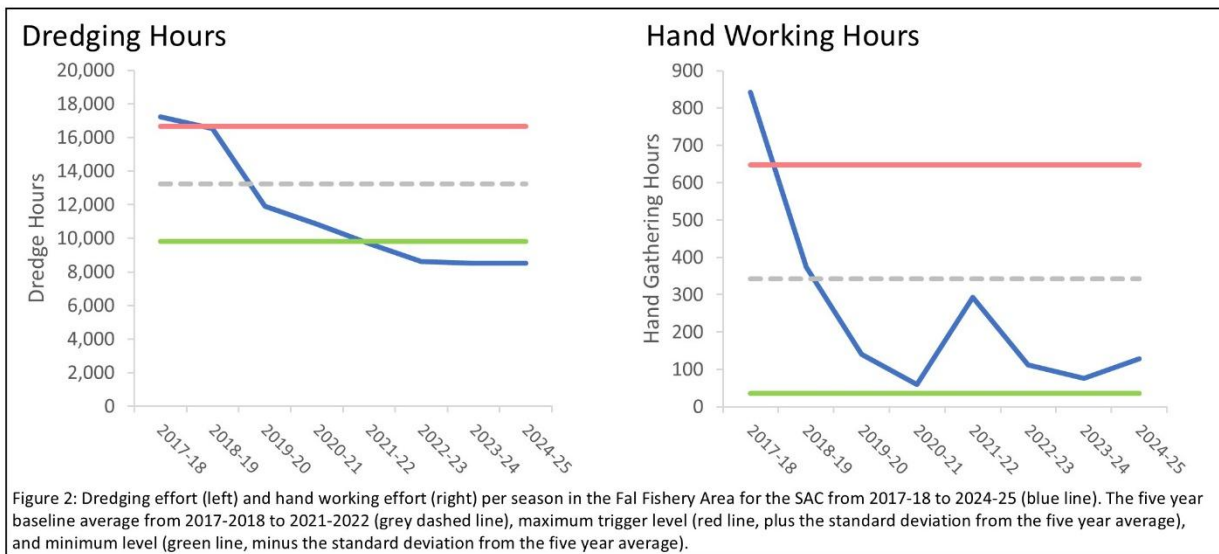
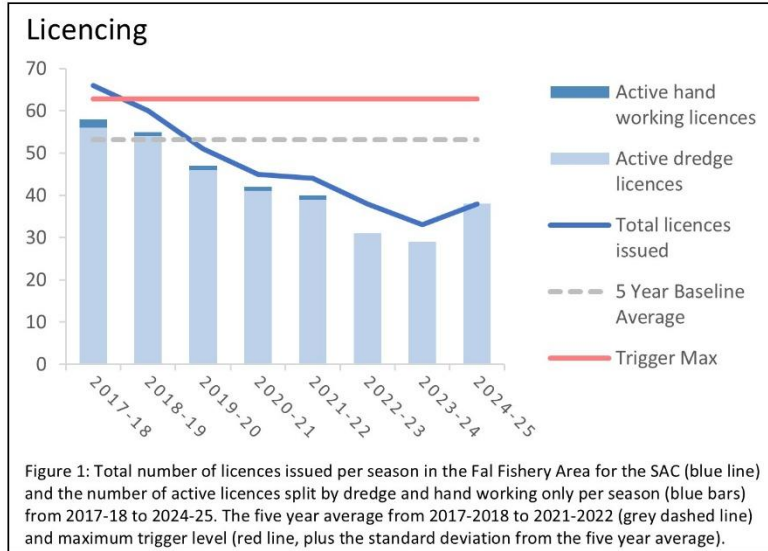


Figure 6: Licence holder returns data trigger levels for Fal Fishery within the Fal and Helford SAC.

7. Simple screening

7.1 Simple screening results

Table 10 shows the results of the simple screening phase. Section 6 and Annex 3 indicates if the specified fishing activity is taking place, and which other fishing activities are taking place. The full list of fisheries activities occurring has been included for the 'in-combination' assessment.

For the specified fishing activity, the following questions were asked:

- Is the activity capable of affecting the features of the SAC? (Table 10)

Table 10 indicates if the specified fishing activity is capable of affecting the designated features of the SAC by using the risk ratings from the fisheries in European marine sites matrix.

Interactions are defined as;

Red Interaction: Where it is clear that the conservation objectives for a feature (or sub-feature) will not be achieved because of its sensitivity to a type of fishing, - irrespective of feature condition, level of pressure, or background environmental conditions in all EMSs where that feature occurs - suitable management measures will be identified and introduced as a priority to protect those features from that fishing activity or activities.

Amber Interaction: Where there is doubt as to whether conservation objectives for a feature (or sub-feature) will be achieved because of its sensitivity to a type of fishing, in all EMSs where that feature occurs, the effect of that activity or activities on such features will need to be assessed in detail at a site specific level. Appropriate management action should then be taken based on that assessment.

Green Interaction: Where it is clear that the achievement of the conservation objectives for a feature is highly unlikely¹⁵ be affected by a type of fishing activity or activities, in all EMSs where that feature occurs, further action is not likely to be required, unless there is the potential for *in combination* effects¹⁶.

Blue interaction: For gear types where there can be no feasible interaction¹⁷ between the gear types and habitat features, a fourth categorisation of blue is used, and no management action should be necessary.

¹⁵ In theory, Green and Amber categories exist along a continuum of risk, for example it is theoretically possible for what is widely recognised to be a benign activity to cause a significant impact on a feature, if carried out at extremely high levels. As result, an assumption has been made that activities categorised as Green are assumed to have no impact on the feature or sub-feature at current maximum levels of commercial fishing effort, to be re-evaluated if conditions change.

¹⁶ In other words, where a type of fishing activity which on its own would not affect the achievement of conservation objectives for the feature, but which in combination with other activities might do so.

¹⁷ On this basis – where there is a feasible (even if unlikely) interaction, activities will be categorised as Red or Amber or Green by Cornwall IFCA.

HRA_F&H_FOF_2025

Table 10: Result of simple screening for gear/feature interactions (A = Amber, B = Blue, R = Red)

Broad fishing gear type	Activity/Feature Interaction	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock
Dredges (towed)	Oysters	A	A	A	A	A	A	A	A	R	R	R	R	R	R	A	A
Shore-based activities	Hand working (access from vessel)	A	A	A	A	B	B	B	B	R	R	A	B	B	B	A	A
	Hand working (access from land)	A	A	A	A	B	B	B	B	R	R	A	B	B	B	A	A

- Does the activity take place within the SAC? (Section 6 and Annex 3)

Yes: Dredges (towed): oysters and Shore-based activities: Intertidal hand working

Any fishing activities indicated as not taking place in the SAC and not likely to occur in the future have been excluded from further assessment.

- Stage 1 (Test for LSE) assessment necessary?

Yes: Dredges (towed): oysters and Shore-based activities: Intertidal hand working

(Green, Amber or Red interactions only for activities which are or might be taking place within the SAC, no further assessment necessary if a Blue interaction as no interaction)

8. Test for Likely Significant Effect (LSE)

The Habitats Regulations assessment (HRA) is a step-wise process and is first subject to a coarse test of whether a plan or project will cause a likely significant effect on an EMS¹⁸. The assessment of LSE is shown in Table 11 to Table 14.

For the specified fishing activity, the following questions were asked:

1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?	No
2. What are the potential pressures exerted by the activity on the feature and is the feature potentially exposed to the pressure(s)?	Dredges: oysters Table 11 Intertidal hand working Table 13
3. What are the potential effects/impacts of the pressure(s) on the feature and is there a LSE?	Dredges: oysters Table 12 Intertidal hand working Table 14

Table 12 and Table 14 show the results of the LSE stage, which identifies the potential pressures. 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. This includes ecological or geomorphological processes on which the conservation of any protected feature of the SAC is (wholly or in part) dependent.

Table 12 and Table 14 show the potential impacts that the pressures identified in Table 11 and Table 13 could have on the designated features of the SAC.

¹⁸ Managing Natura 2000 sites: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

HRA_F&H_FOF_2025

Table 11: Potential pressures for oyster dredging fishing activities (Aggregated fish method: Dredges) for the features of the Fal and Helford SAC (Key: S = Sensitive, NS = Not Sensitive, IE = Insufficient Evidence, NA = Not Assessed, greyed out = Not Relevant)

Pressures/Features	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Screening justification	Risk profile
Abrasion/disturbance of the substrate on the surface of the seabed	S	S	S	NS	S	S	S	S	S	S	S	S	S	S			IN	Medium to High
Changes in suspended solids (water clarity)	S	S	S	NS	S	S	S	S	S	S	S	S	S	S			IN	Medium to High
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	S	S	S	NS	S	S	S	S	S	S	S	S	S	S			IN	Medium to High
Removal of non-target species	S	S	S		S	S	S	S	S	S	S	S	S	S	S		IN	Medium to High
Removal of target species	S	S	S		S	S	S	S	S	S		S	S				IN	Medium to High
Smothering and siltation rate changes (Light)	S	S	S	NS	S	S	S	S	S	S	S	S	S	S			IN	Medium to High
Visual disturbance			NS		NS	NS	NS				NS	NS	NS				OUT	Medium to High
Deoxygenation	S	NS	S	NS	S	S	S	S	NS	NS	S	S	S	S	NS		IN	Low
Hydrocarbon & PAH contamination	NA	S	S	NA	S	S	NA	NA	S	S	NA	S	S	S	NA		IN	Low
Introduction of light	IE	NS	S		IE	NS	S	S	S	S	S	S	IE	S			IN	Low
Introduction of microbial pathogens	S	S	S		S	S	S	S	S	S	S	S	S	IE	S		IN	Low
Introduction or spread of invasive non-indigenous species (INIS)	S	S	S		S	S	S	S	S	S	S	S	S	S			IN	Low
Litter	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	S		IN	Low
Nutrient enrichment	NS	NS	NS	NS	NS	IE	NS	NS	S	S	IE	NS	NS	NS	NS		IN	Low
Organic enrichment	NS	NS	NS	NS	S	S	S	S	S	S	S	S	S	S	NS		IN	Low
Physical change (to another seabed type)											S	S	S				IN	Low
Physical change (to another sediment type)	S	S	S	S	S	S	S	S	S	S				NS			IN	Low
Synthetic compound contamination (incl. pesticides, antifoulants, pharmaceuticals)	NA	S	S	NA	S	S	NA	NA	S	S	NA	S	S	IE	NA		IN	Low
Transition elements & organo-metal (e.g. TBT) contamination	NA	S	S	NA	S	S	NA	NA	NS	NS	NA	S	S	IE	NA		IN	Low
Underwater noise changes					NS	NS	NS				IE		NS				OUT	Low

HRA_F&H_FOF_2025

The associated impacts of the potential pressures are identified as shown in Table 12 (Natural England, 2025);

Table 12: Summary of pressures that are capable of affecting the protected features of the SAC (Aggregated fish method: Dredges)

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹	
Abrasion/ disturbance of the substrate on the surface of the seabed	The pressure results where the gear makes contact with the seafloor. The area affected is determined by the footprint of the gear and the amount of movement across the seabed. The different gear components will make variable contributions to the total physical disturbance of the seabed and its associated biota, and hence the pressure will vary according to factors such as gear type, design/modifications, size and weight, method of operation (including towing speed) and habitat characteristics (e.g. topography) (Lart, 2012; Suuronen <i>et al.</i> , 2012; Polet and Depestele, 2010). Towed bottom fishing gears are used to catch species that live in, on or in association with the seabed and therefore are designed to remain in close contact with the seabed. That interaction with the seabed can lead to disturbance of the upper layers of the seabed (e.g. see pressures 'Siltation rate changes (low)', 'Changes in suspended solids'); direct removal (e.g. see pressures 'Removal of target species', 'Removal of non-target species'), damage, displacement or death of the benthic flora and fauna; short-term attraction of scavengers; and the alteration of habitat structure (e.g. flattening of wave forms, removal of rock, removal of structural organisms) (Sewell and Hiscock, 2005; Kaiser <i>et al.</i> , 2002; Kaiser <i>et al.</i> , 2001; Collie <i>et al.</i> , 2000; Gubbay and Knapman, 1999). Due to their penetrative nature and close contact with the seabed, scallop dredges cause																		Yes

¹⁹ The pressure-feature interactions were included for assessment in Stage 2 if:
the feature is exposed to the pressure, or is likely to be in the future; and
the pressure is capable of affecting (other than insignificantly) the feature; or
it is not possible to determine whether the pressure is capable of affecting (other than insignificantly) the feature.

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	<p>substantial physical disruption to the seafloor by ploughing sediments and damaging organisms. The Newhaven dredges used by the UK king scallop fishery are likely to be one of the most damaging types of scallop dredge due to the effect of their long teeth, which can penetrate 3-10 cm into the seabed (Howarth and Stewart, 2014; Hinz <i>et al.</i>, 2012). The magnitude of the immediate response to fishing disturbance, cumulative effects and recovery times varies significantly according to factors such as the type of fishing gear and fishing intensity, the habitat and sediment type, levels of natural disturbance and among different taxa (Boulcott <i>et al.</i>, 2014; Hinz <i>et al.</i>, 2009; Kaiser <i>et al.</i>, 2006; Kaiser <i>et al.</i>, 2001; Collie <i>et al.</i>, 2000).</p>																	
<p>Changes in suspended solids (water clarity)</p>	<p>This pressure may result from physical disturbance of the sediment, along with hydrodynamic action caused by the passage of towed gear, leading to entrainment and suspension of the substrate behind and around the gear components (Lart, 2012; Dale <i>et al.</i>, 2011; O'Neill and Summerbell, 2011; O'Neill <i>et al.</i>, 2008; Sewell <i>et al.</i>, 2007; Kaiser <i>et al.</i>, 2002; Gubbay and Knapman, 1999; Riemann and Hoffmann, 1991). The quantity of suspended material and its spatial and temporal persistence will depend on factors associated with the gear (such as type/design, weight, towing speed), sediment (particle size, composition, compactness), the intensity of the activity and the background hydrographic conditions (Dale <i>et al.</i>, 2011; O'Neill and Summerbell, 2011; Sewell <i>et al.</i>, 2007; Kaiser <i>et al.</i>, 2002). Turbid plumes can reduce light levels and smother feeding and respiratory organs. Prolonged exposure to the pressure may result in changes in sediment composition through suspension and transport of finer material. There are also concerns over resuspension of phytoplankton cysts and copepod eggs (O'Neill and Summerbell, 2011; Sewell <i>et al.</i>, 2007; Kaiser <i>et al.</i>, 2002; Kaiser <i>et al.</i>, 2001; Gubbay and Knapman, 1999). Further</p>																	<p>Yes</p>

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	effects are also considered under the pressures: Deoxygenation, Nutrient enrichment and Organic enrichment.																	
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	The pressure results where the gear makes contact with the seafloor. The area affected is determined by the footprint of the gear and the amount of movement across the seabed. The different gear components will make variable contributions to the total physical disturbance of the seabed and its associated biota, and hence the pressure will vary according to factors such as gear type, design/modifications, size and weight, method of operation (including towing speed) and habitat characteristics (e.g. topography) (Lart, 2012; Suuronen <i>et al.</i> , 2012; Polet and Depestele, 2010). Towed bottom fishing gears are used to catch species that live in, on or in association with the seabed and therefore are designed to remain in close contact with the seabed. That interaction with the seabed can lead to disturbance of the upper layers of the seabed (e.g. see pressures 'Siltation rate changes (low)', 'Changes in suspended solids'); direct removal (e.g. see pressures 'Removal of target species', 'Removal of non-target species'), damage, displacement or death of the benthic flora and fauna; short-term attraction of scavengers; and the alteration of habitat structure (e.g. flattening of wave forms, removal of rock, removal of structural organisms) (Sewell and Hiscock, 2005; Kaiser <i>et al.</i> , 2002; Kaiser <i>et al.</i> , 2001; Collie <i>et al.</i> , 2000; Gubbay and Knapman, 1999). Due to their penetrative nature and close contact with the seabed, scallop dredges cause substantial physical disruption to the seafloor by ploughing sediments and damaging organisms. The Newhaven dredges used by the UK king scallop fishery are likely to be one of the most damaging types of scallop dredge due to the effect of their long teeth, which can penetrate 3-10 cm into the seabed (Howarth and Stewart, 2014; Hinz <i>et al.</i> , 2012). The magnitude of the immediate response to fishing																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	disturbance, cumulative effects and recovery times varies significantly according to factors such as the type of fishing gear and fishing intensity, the habitat and sediment type, levels of natural disturbance and among different taxa (Boulcott <i>et al.</i> , 2014; Hinz <i>et al.</i> , 2009; Kaiser <i>et al.</i> , 2006; Kaiser <i>et al.</i> , 2001; Collie <i>et al.</i> , 2000).																	
Removal of non-target species	Bycatch (i.e. discarded catch) is associated with almost all fishing activities and is related to factors such as the gear type and its design (i.e. its selectivity), the targeted species and effort. There are significant concerns over the impacts of discards on marine ecosystems, including changes in population abundance and demographics of affected species and altered species assemblages and food web structures (Kaiser <i>et al.</i> , 2001; Alverson <i>et al.</i> , 1994). However, discards also provide important food resources for some scavenging species, including seabirds (Heath <i>et al.</i> , 2014; Jennings and Kaiser, 1998). Dredging can result in bycatch of fish, crustaceans and other invertebrates, turtles and even marine mammals (Craven <i>et al.</i> , 2013; Hinz <i>et al.</i> , 2012; NOAA Fisheries, 2012; Sewell and Hiscock, 2005; Gubbay and Knapman, 1999). Of all the fishing gears, scallop dredges are considered to be the most damaging to non-target benthic communities (Howarth and Stewart, 2014).																	Yes
Removal of target species	Dredges are used to collect a variety of shellfish species. Examples of species that can be directly removed from intertidal and subtidal habitats as result of a targeted fishery include oysters (<i>Ostrea edulis</i>), mussels (<i>Mytilus edulis</i>), scallops (<i>Pecten</i> spp.), cockles (<i>Cerastoderma edule</i>), and razor clams (<i>Ensis</i> spp.). These may themselves be features/sub-features of designated sites (e.g. mussel beds/oyster beds/biogenic reefs), or may be species forming part of the biotope (e.g. bivalves in sediment features) or wider community composition associated with the																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	designated feature (Joint Nature Conservation Council (JNCC) and Natural England (NE), 2011; Sewell and Hiscock, 2005; Gubbay and Knapman, 1999).																	
Smothering and siltation rate changes (Light)	This pressure may result from physical disturbance of the sediment, along with hydrodynamic action caused by the passage of towed gear, leading to entrainment and suspension of the substrate behind and around the gear components and subsequent siltation (Lart, 2012; Dale <i>et al.</i> , 2011; O'Neill and Summerbell, 2011; O'Neill <i>et al.</i> , 2008; Sewell <i>et al.</i> , 2007; Kaiser <i>et al.</i> , 2002; Gubbay and Knapman, 1999; Riemann and Hoffmann, 1991). The quantity of suspended material, its spatial and temporal persistence and subsequent patterns of deposition will depend on factors associated with the gear (such as type/design, weight, towing speed), sediment (particle size, composition, compactness), the intensity of the activity and the background hydrographic conditions (Dale <i>et al.</i> , 2011; O'Neill and Summerbell, 2011; Sewell <i>et al.</i> , 2007; Kaiser <i>et al.</i> , 2002). Sediment remobilisation and deposition can affect the settlement, feeding, and survival of biota through smothering of feeding and respiratory organs. Prolonged exposure of an area to the pressure may result in changes in sediment composition (O'Neill and Summerbell, 2011; Sewell <i>et al.</i> , 2007; Kaiser <i>et al.</i> , 2002; Kaiser <i>et al.</i> , 2001; Gubbay and Knapman, 1999). Further effects are also considered under the pressures: Deoxygenation, Nutrient enrichment and Organic enrichment.																	Yes
Deoxygenation	This pressure is associated with sediment mobilisation as well as the deposition of organic matter. The spatial and temporal persistence of any change will depend on factors such as the gear type and intensity of the activity, levels of natural disturbance, temperature and the sediment type/composition, resulting in many changes being																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	relatively short lived and localised (Centre for Environment, 2011; ABPmer, 2008; O'Neill <i>et al.</i> , 2008; Dale <i>et al.</i> , 2011). Resuspension of organic rich sediments in the wake of towed gears can result in localised removal of oxygen in the water column or more anoxic conditions in the remaining substrate (Centre for Environment, 2011; Dale <i>et al.</i> , 2011; O'Neill <i>et al.</i> , 2008; Sewell <i>et al.</i> , 2007; Sewell and Hiscock, 2005; Kaiser <i>et al.</i> , 2002; Gubbay and Knapman, 1999; English Nature, 1992; Riemann and Hoffmann, 1991). Further, organic matter at the surface may be buried within anaerobic subsurface layers or conversely anaerobic sediments may be exposed to aerobic conditions by such mixing (Pilskaln <i>et al.</i> , 1998). In fisheries where discards are spatially concentrated, particularly in areas of low current flow, discards may cause localized hypoxia or anoxia of the seabed (Gilman <i>et al.</i> , 2012; Dayton <i>et al.</i> , 1995).																	
Hydrocarbon & PAH contamination	Pressure primarily relates to vessels associated with this sub-activity and their movement, but potentially also mobilisation of contaminated sediments. The primary chemicals of environmental concern in vessel oil and fuel are polycyclic aromatic hydrocarbons (PAHs). Deliberate discharges of oil or oil/water mixtures from ships are prohibited within the North West European Waters Special Area, established by the International Maritime Organization under MARPOL Annex I in 1999. This includes all waters around the UK and its approaches. However, accidental discharges still occur. Information on accidental discharges of oil from ships and offshore platforms is compiled annually by the Advisory Committee on Protection of the Sea (ACOPS) on behalf of the Maritime and Coastguard Agency. Although the majority of incidents are minor, several incidents occur annually that lead to the actual or potential release of significant amounts of oil (typically from large shipping vessels and tankers) (Defra and																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	UK MMAS, 2010; The Green Blue, 2009; Ware, 2009; The Green Blue, 2006). Further, sediment disturbance by fishing activities could result in the remobilisation of contaminants/substances (Eggleton and Thomas, 2004; Kaiser <i>et al.</i> , 2002). However, the likelihood and severity of any impact depends upon factors such as the type and degree of existing contamination, the sediment type and intensity of activity. In many cases, natural disturbance may contribute the majority of contaminated sediment resuspension (Roberts, 2012).																	
Introduction of light	Pressure relates to vessels associated with this sub-activity e.g. operational and navigation lighting. Marine birds are frequently attracted to or become disorientated by artificial light sources, which can result in collision and therefore injury or death (Thompson, 2013; BirdLife International, 2012; Montevecchi, 2006; Ryan, 1991). Disturbance caused by light from vessels may also be of concern, particularly where significant levels of activity occur in close proximity to sensitive bird habitats including coastal inshore waters (Montevecchi, 2006; Hill, 1992). However there are also concerns about the potential wider impacts of light pollution in the aquatic, particularly coastal, environment on the behaviour, reproduction and survival of marine invertebrates, amphibians and fish (Depledge <i>et al.</i> , 2010).																	Yes
Introduction of microbial pathogens	Bivalve parasites such as <i>Marteilia refringens</i> and <i>Bonamia ostreae</i> can devastate populations of species such as <i>Ostrea edulis</i> with diseases maritelliosis and bonamiosis. The methods of infection transmission are not well understood. Direct transmission can occur but it is likely that secondary, intermediary, agents (such as zooplankton) are also required. Environmental conditions also play a key role in determining disease prevalence (UK Government (GOV.UK), 2015; ICES, 2012). Therefore, shellfish fisheries occurring in areas of																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	parasite prevalence have the potential of transmitting the disease to infection free areas, although the likelihood of this is probably quite low.																	
Introduction or spread of non-indigenous species	Aquatic organisms may be transferred to new locations as biofouling on vessels and gear and can be harmful and invasive in locations where they do not naturally occur (Tidbury <i>et al.</i> , 2014; Pearce <i>et al.</i> , 2012; Dafforn <i>et al.</i> , 2011; ICES (International Council for Exploration of the Sea), 2009; Ware, 2009). All craft have some biofouling, even if recently cleaned or anti-fouled (International Maritime Organisation (IMO), 2012; Davidson <i>et al.</i> , 2010). In addition, this pressure could result from intentional or accidental release of seed stock associated with shellfishery activities (OSPAR Commission, 2011b).																	Yes
Litter	Marine litter is items made or used by people and deliberately discarded or unintentionally lost into the sea and on beaches. Despite international legislation such as Annex V of the International Convention for the Prevention of Pollution from Ships, 1973 (International Maritime Organisation, 1983 - 2005), maritime activity is still a major source of litter. Fishing is an important source of marine litter. For example, 14 % of the litter identified during the UK Beachwatch survey (2006) was fishing related (Lozano and Mouat, 2009), net loss in UK fisheries has been estimated at 36 km per year (Brown and Macfadyen, 2007) and surveys across 32 sites in European waters (continental shelves to canyons) found that derelict fishing gear was the second most abundant item encountered (34 % of total) (Pham <i>et al.</i> , 2014). Various types of litter result from fishing in general including galley waste, fish boxes, floats/buoys, nets, ropes, lines, pots, weights and micro-plastic particles resulting from disintegration of plastic gear (Bowmer and Kershaw, 2010; Lozano and Mouat, 2009). Impacts of such litter include entanglement of marine wildlife including mammals and birds, ingestion and																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	ghost fishing (Wildfowl and Wetlands Trust (WWT) Consulting, 2012; Defra and UK MMAS, 2010; Lozano and Mouat, 2009; Brown and Macfadyen, 2007; Matsuoka <i>et al.</i> , 2005; Derraik, 2002). Ghost gears can also damage benthic habitats (through abrasion, 'plucking' of organisms or meshes closing around them, and the translocation of seabed features) (Brown and Macfadyen, 2007). Alongside existing legislation, potential mitigation measures are discussed in various sources of literature (Lozano and Mouat, 2009; Brown and Macfadyen, 2007; Derraik, 2002).																	
Nutrient enrichment	This pressure may result from disturbance and resuspension of the sediment in the wake of towed gears (Dale <i>et al.</i> , 2011; Sewell <i>et al.</i> , 2007; Riemann and Hoffmann, 1991), which can trigger considerable productivity pulses due to the rate of release of dissolved and particulate nutrients and have consequences for biogeochemical cycling (Polet and Depestele, 2010; Allen and Clarke, 2007; Kaiser <i>et al.</i> , 2002; Pilskaln <i>et al.</i> , 1998). The spatial and temporal persistence of any change will depend on factors such as the gear type and intensity of the activity, levels of natural disturbance and primary production, and the type/composition of the substrate and biota (including abundance of filter feeders) (Dale <i>et al.</i> , 2011; Allen and Clarke, 2007; Lohrer and Wetz, 2003; Pilskaln <i>et al.</i> , 1998).																	Yes
Organic enrichment	This pressure is associated with sediment mobilisation as well as the deposition of organic matter. The spatial and temporal persistence of any change will depend on factors such as the gear type and intensity of the activity, levels of natural disturbance, temperature and the sediment type/composition, resulting in many changes being relatively short lived and localised (Centre for Environment, 2011; Dale <i>et al.</i> , 2011; ABPmer, 2008; O'Neill <i>et al.</i> , 2008). For fishing, the pressure may																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	<p>result from disturbance of the sediment in the wake of towed gears and resuspension of organic rich sediments (Centre for Environment, 2011; Dale <i>et al.</i>, 2011; O'Neill <i>et al.</i>, 2008; Sewell <i>et al.</i>, 2007; Sewell and Hiscock, 2005; Gubbay and Knapman, 1999; English Nature, 1992; Riemann and Hoffmann, 1991). Further, organic matter at the surface may be buried within anaerobic subsurface layers (Pilskaln <i>et al.</i>, 1998). In fisheries where discards are spatially concentrated, particularly in areas of low current flow, discards may result in localised increases in organic matter and potentially hypoxia or anoxia of the seabed (Gilman <i>et al.</i>, 2012; Dayton <i>et al.</i>, 1995).</p>																	
Physical change (to another seabed type)	<p>Mobile fishing gear is one of the best known sources of anthropogenic degradation of seabed habitat and associated benthic communities (see 'Abrasion' pressure). Whilst the physical damage caused by persistent interaction with bottom towed gear could result in loss of certain sensitive habitats such as seagrass, the change is unlikely to be permanent if the activity were to cease, although recovery rates may be slow in some cases. Therefore there may be few examples of where the association between the activity and this particular pressure is actually realised, but it should be taken into consideration (Kaiser <i>et al.</i>, 2002; Kaiser <i>et al.</i>, 2001).</p>																	Yes
Physical change (to another sediment type)	<p>Mobile fishing gear is one of the best known sources of anthropogenic degradation of seabed habitat and associated benthic communities (see 'Abrasion' pressure). Whilst the physical damage caused by persistent interaction with bottom towed gear could result in loss of certain sensitive habitats such as seagrass, the change is unlikely to be permanent if the activity were to cease, although recovery rates may be slow in some cases. Therefore there may be few examples of where the association between the activity and this particular pressure is actually</p>																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	realised, but it should be taken into consideration (Kaiser <i>et al.</i> , 2002; Kaiser <i>et al.</i> , 2001).																	
Synthetic compound contamination (incl. pesticides, antifoulants, pharmaceuticals)	<p>Pressure primarily relates to vessels associated with this sub-activity and their movement, but potentially also mobilisation of contaminated sediments. The primary chemicals of environmental concern in vessel oil and fuel are polycyclic aromatic hydrocarbons (PAHs). Deliberate discharges of oil or oil/water mixtures from ships are prohibited within the North West European Waters Special Area, established by the International Maritime Organization under MARPOL Annex I in 1999. This includes all waters around the UK and its approaches. However, accidental discharges still occur. Information on accidental discharges of oil from ships and offshore platforms is compiled annually by the Advisory Committee on Protection of the Sea (ACOPS) on behalf of the Maritime and Coastguard Agency. Although the majority of incidents are minor, several incidents occur annually that lead to the actual or potential release of significant amounts of oil (typically from large shipping vessels and tankers). Antifouling compounds like tributyltin (TBT; banned on vessels under 25 m in the UK since 1987, however) and copper wash from ship coatings enter and persist in the marine environment, with highest concentrations generally found in heavily used shipping routes or within harbours (OSPAR Commission, 2011a; Defra and UK MMAS, 2010; Turner, 2010; The Green Blue, 2009; Ware, 2009; The Green Blue, 2006). Further, sediment disturbance by fishing activities could result in the remobilisation of contaminants/substances (Eggleton and Thomas, 2004; Kaiser <i>et al.</i>, 2002). However, the likelihood and severity of any impact depends upon factors such as the type and degree of existing contamination, the sediment type and intensity of activity. In many cases, natural disturbance may contribute the majority of</p>																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ¹⁹
	contaminated sediment resuspension (Roberts, 2012).																	
Transition elements & organo-metal (e.g. TBT) contamination	<p>Pressure primarily relates to vessels associated with this sub-activity and their movement, but potentially also mobilisation of contaminated sediments. The primary chemicals of environmental concern in vessel oil and fuel are polycyclic aromatic hydrocarbons (PAHs). Deliberate discharges of oil or oil/water mixtures from ships are prohibited within the North West European Waters Special Area, established by the International Maritime Organization under MARPOL Annex I in 1999. This includes all waters around the UK and its approaches. However, accidental discharges still occur. Information on accidental discharges of oil from ships and offshore platforms is compiled annually by the Advisory Committee on Protection of the Sea (ACOPS) on behalf of the Maritime and Coastguard Agency. Although the majority of incidents are minor, several incidents occur annually that lead to the actual or potential release of significant amounts of oil (typically from large shipping vessels and tankers). Antifouling compounds like tributyltin (TBT; banned on vessels under 25 m in the UK since 1987, however) and copper wash from ship coatings enter and persist in the marine environment, with highest concentrations generally found in heavily used shipping routes or within harbours (OSPAR Commission, 2011a; Defra and UK MMAS, 2010; Turner, 2010; The Green Blue, 2009; Ware, 2009; The Green Blue, 2006). Further, sediment disturbance by fishing activities could result in the remobilisation of contaminants/substances (Eggleton and Thomas, 2004; Kaiser <i>et al.</i>, 2002). However, the likelihood and severity of any impact depends upon factors such as the type and degree of existing contamination, the sediment type and intensity of activity. In many cases, natural disturbance may contribute the majority of</p>																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? <small>19</small>
	contaminated sediment resuspension (Roberts, 2012).																	

HRA_F&H_FOF_2025

Table 13: Potential pressures for hand working fishing activities (Aggregated fish method: Shore-based activities) for the features of the Fal and Helford SAC (Key: S = Sensitive, NS = Not Sensitive, IE = Insufficient Evidence, NA = Not Assessed, greyed out = Not Relevant)

Pressures/Features	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Screening justification	Risk profile
Abrasion/disturbance of the substrate on the surface of the seabed	S	S	S	NS					S	S	S				S	NA	IN	Medium to High
Habitat structure changes - removal of substratum (extraction)	S	S	S	S					S	S	S				S	NA	IN	Medium to High
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	S	S	S	NS					S	S	S				S	NA	IN	Medium to High
Removal of non-target species	S	S	S						S	S	S				S	NA	IN	Medium to High
Removal of target species	S	S	S						S		S					NA	IN	Medium to High
Visual disturbance			NS								NS						OUT	Medium to High
Collision ABOVE water with static or moving objects not naturally found in the marine environment (e.g., boats, machinery, and structures)																NA	OUT	Low
Deoxygenation	S	NS	S	NS					NS	NS	S				NS	NA	IN	Low
Hydrocarbon & PAH contamination	NA	S	S	NA					S	S	NA				NA	NA	IN	Low
Introduction of light	IE	NS	S						S	S	S					NA	IN	Low
Introduction or spread of invasive non-indigenous species (INIS)	S	S	S						S	S	S				S		IN	Low
Litter	NA	NA	NA	NA					NA	NA	NA				S	NA	IN	Low
Synthetic compound contamination (incl. pesticides, antifoulants, pharmaceuticals)	NA	S	S	NA					S	S	NA				NA	NA	IN	Low
Transition elements & organo-metal (e.g. TBT) contamination	NA	S	S	NA					NS	NS	NA				NA	NA	OUT	Low
Underwater noise changes											IE						OUT	Low

HRA_F&H_FOF_2025

The associated impacts of the potential pressures are identified as shown in Table 14 (Natural England, 2025);

Table 14: Summary of pressures that are capable of affecting the protected features of the SAC (Aggregated fish method: Shore-based activities)

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ²⁰	
Abrasion/ disturbance of the substrate on the surface of the seabed	Pressure would be exerted on intertidal habitats through harvesting of target species by hand or with apparatus such as rakes and forks. Further, abrasion is associated with the movement of people ('trampling') or indeed any vehicles used for access or participation in the fishing activity, and can result in damage to infauna and epifauna as well as sensitive habitats such as seagrass (Sheehan <i>et al.</i> , 2010; Rossi <i>et al.</i> , 2007; Alexandre <i>et al.</i> , 2005; Cabaco <i>et al.</i> , 2005; Sewell and Hiscock, 2005; Eckrich and Holmquist, 2000; Gubbay and Knapman, 1999; Eno <i>et al.</i> , 1997; Brosnan and Crumrine, 1994). Where vessels are used to provide access the pressure is likely to be associated with any anchors, which can cause damage to the seabed surface and subsurface layers upon deployment/recovery and due to dragging (Collins <i>et al.</i> , 2002), or the vessel (including e.g. the propellor/wash) itself may cause abrasion if it comes into contact with the seabed in shallow water.																		Yes
Habitat structure changes - removal of substratum (extraction)	Activities such as bait digging could cause this pressure through the displacement/removal of intertidal substrate (Fowler, 1999). However, the magnitude of the pressure will depend on the nature, scale, intensity and duration of the activity.																		Yes
Penetration and/or	Pressure would be exerted on intertidal habitats through harvesting of target species by hand or with																		Yes

²⁰ The pressure-feature interactions were included for assessment in Stage 2 if:
 the feature is exposed to the pressure, or is likely to be in the future; and
 the pressure is capable of affecting (other than insignificantly) the feature; or
 it is not possible to determine whether the pressure is capable of affecting (other than insignificantly) the feature.

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? 20	
disturbance of the substratum below the surface of the seabed, including abrasion	apparatus such as rakes and forks. Further, abrasion is associated with the movement of people ('trampling') or indeed any vehicles used for access or participation in the fishing activity, and can result in damage to infauna and epifauna as well as sensitive habitats such as seagrass (Sheehan <i>et al.</i> , 2010; Rossi <i>et al.</i> , 2007; Alexandre <i>et al.</i> , 2005; Cabaco <i>et al.</i> , 2005; Sewell and Hiscock, 2005; Eckrich and Holmquist, 2000; Gubbay and Knapman, 1999; Eno <i>et al.</i> , 1997; Brosnan and Crumrine, 1994). here vessels are used to provide access the pressure is likely to be associated with any anchors, which can cause damage to the seabed surface and subsurface layers upon deployment/recovery and due to dragging (Collins <i>et al.</i> , 2002), or the vessel (including e.g. the propellor/wash) itself may cause abrasion if it comes into contact with the seabed in shallow water.																		
Removal of non-target species	Bycatch (i.e. discarded catch) is associated with almost all fishing activities and is related to factors such as the gear type and its design (i.e. its selectivity), the targeted species and effort. There are significant concerns over the impacts of discards on marine ecosystems, including changes in population abundance and demographics of affected species and altered species assemblages and food web structures (Kaiser <i>et al.</i> , 2001; Alverson <i>et al.</i> , 1994). However, discards also provide important food resources for some scavenging species, including seabirds (Heath <i>et al.</i> , 2014; Jennings and Kaiser, 1998). Similarly to their use at sea, nets and pots deployed from the shore, along with other shore-based activities such as angling, shellfish collection by hand (e.g. undersize target species damaged or exposed to predation, desiccation or freezing) and even bait digging can result in bycatch of fish, invertebrates and birds (Donaldson <i>et al.</i> , 2010; Sewell and Hiscock, 2005; Cullen and McCarthy, 2002; Fowler, 1999; Gubbay and Knapman, 1999; Eno <i>et al.</i> , 1997).																		Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? 20
	Although many fish captured by anglers are released (approaching 100 percent for some species), there can be substantial post release mortality as well as more subtle sublethal effects on growth and fitness. Release mortality in recreational fisheries is analogous to bycatch discards in commercial fisheries, an internationally recognized conservation problem (Arlinghaus <i>et al.</i> , 2007; Bartholomew and Bohnsack, 2005; Cooke and Cowx, 2004).																	
Removal of target species	Shore-based fishing activities include bait collection, shellfish collection by hand, rod and line angling and the use of pots and nets from the shore. These activities target a range of crustacean, fish and bivalve species. Targeted species may themselves be of conservation importance, or may form part of the biotope or the wider community composition associated with designated features/sub-features (Joint Nature Conservation Council (JNCC) and Natural England (NE), 2011; Sewell and Hiscock, 2005; Gubbay and Knapman, 1999).																	Yes
Deoxygenation	Intensive bait digging can result in exposure of anoxic sediment layers (Howell, 1985), leading to reduced oxygen availability in surface sediments. High numbers of structures associated with activities such as crab tiling may change patterns of water movement over intertidal habitats and hence changes in sediment characteristics, such as a shallower oxygenated zone (Fowler, 1999). The spatial and temporal persistence of any change will depend on factors such as the intensity of the activity and levels of natural disturbance.																	Yes
Hydrocarbon & PAH contamination	Pressure primarily relates to vessels/vehicles associated with this sub-activity and their movement, but potentially also mobilisation of contaminated sediments. The primary chemicals of environmental concern in vessel oil and fuel are polycyclic aromatic hydrocarbons (PAHs). Deliberate discharges of oil or oil/water mixtures from ships are prohibited within the																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Circalittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? 20
	<p>North West European Waters Special Area, established by the International Maritime Organization under MARPOL Annex I in 1999. This includes all waters around the UK and its approaches. However, accidental discharges still occur. Information on accidental discharges of oil from ships and offshore platforms is compiled annually by the Advisory Committee on Protection of the Sea (ACOPS) on behalf of the Maritime and Coastguard Agency. Although the majority of incidents are minor, several incidents occur annually that lead to the actual or potential release of significant amounts of oil (typically from large shipping vessels and tankers) (Defra and UK MMAS, 2010; The Green Blue, 2009; Ware, 2009; The Green Blue, 2006). Further, sediment disturbance by fishing activities could result in the remobilisation of contaminants/substances (Eggleton and Thomas, 2004; Fowler, 1999; Howell, 1985). However, the likelihood and severity of any impact depends upon factors such as the type and degree of existing contamination, the sediment type and intensity of activity. In many cases, natural disturbance may contribute the majority of contaminated sediment resuspension (Roberts, 2012).</p>																	
Introduction of light	<p>Pressure relates to vessels and potentially gear associated with this sub-activity e.g. operational and navigation lighting. Marine birds are frequently attracted to or become disorientated by artificial light sources, which can result in collision and therefore injury or death (Thompson., 2013; BirdLife International, 2012; Montevecchi, 2006; Ryan, 1991). Disturbance caused by light from vessels may also be of concern, particularly where significant levels of activity occur in close proximity to sensitive bird habitats including coastal inshore waters (Montevecchi, 2006; Hill, 1992). However there are also concerns about the potential wider impacts of light pollution in the aquatic,</p>																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? ²⁰
	particularly coastal, environment on the behaviour, reproduction and survival of marine invertebrates, amphibians and fish (Depledge <i>et al.</i> , 2010).																	
Introduction or spread of invasive non-indigenous species (INIS)	Aquatic organisms may be transferred to new locations as biofouling on vessels and gear and can be harmful and invasive in locations where they do not naturally occur (Ware, 2009; ICES, 2009; Dafforn <i>et al.</i> , 2011; Tidbury <i>et al.</i> , 2014; Pearce, <i>et al.</i> , 2012). All craft have some biofouling, even if recently cleaned or anti-fouled (IMO, 2012; Davidson <i>et al.</i> , 2010). In addition, this pressure could result from intentional or accidental release of seed stock associated with shellfishery activities (OSPAR Commission, 2011b).																	Yes
Litter	Marine litter is items made or used by people and deliberately discarded or unintentionally lost into the sea and on beaches. Despite international legislation such as Annex V of the International Convention for the Prevention of Pollution from Ships, 1973 (International Maritime Organisation, 1983 - 2005), maritime activity is still a major source of litter. Fishing is an important source of marine litter. For example, 14 % of the litter identified during the UK Beachwatch survey (2006) was fishing related (Lozano and Mouat, 2009), net loss in UK fisheries has been estimated at 36 km per year (Brown and Macfadyen, 2007) and surveys across 32 sites in European waters (continental shelves to canyons) found that derelict fishing gear was the second most abundant item encountered (34 % of total) (Pham <i>et al.</i> , 2014). Various types of litter result from fishing in general including galley waste, fish boxes, floats/buoys, nets, ropes, lines, pots, weights and micro-plastic particles resulting from disintegration of plastic gear (Bowmer and Kershaw, 2010; Lozano and Mouat, 2009). Impacts of such litter include entanglement of marine wildlife including mammals and birds, ingestion and ghost fishing (Wildfowl and Wetlands Trust (WWT))																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? 20
	<p>Consulting, 2012; Defra and UK MMAS, 2010; Lozano and Mouat, 2009; Brown and Macfadyen, 2007; Matsuoka <i>et al.</i>, 2005; Derraik, 2002). Ghost gears can also damage benthic habitats (through abrasion, 'plucking' of organisms or meshes closing around them, and the translocation of seabed features) (Brown and Macfadyen, 2007). Alongside existing legislation, potential mitigation measures are discussed in various sources of literature (Lozano and Mouat, 2009; Brown and Macfadyen, 2007; Derraik, 2002).</p>																	
<p>Synthetic compound contamination (incl. pesticides, antifoulants, pharmaceuticals)</p>	<p>Pressure primarily relates to vessels/vehicles associated with this sub-activity and their movement, but potentially also mobilisation of contaminated sediments. The primary chemicals of environmental concern in vessel oil and fuel are polycyclic aromatic hydrocarbons (PAHs). Deliberate discharges of oil or oil/water mixtures from ships are prohibited within the North West European Waters Special Area, established by the International Maritime Organization under MARPOL Annex I in 1999. This includes all waters around the UK and its approaches. However, accidental discharges still occur. Information on accidental discharges of oil from ships and offshore platforms is compiled annually by the Advisory Committee on Protection of the Sea (ACOPS) on behalf of the Maritime and Coastguard Agency. Although the majority of incidents are minor, several incidents occur annually that lead to the actual or potential release of significant amounts of oil (typically from large shipping vessels and tankers). Antifouling compounds like tributyltin (TBT; banned on vessels under 25 m in the UK since 1987, however) and copper wash from ship coatings enter and persist in the marine environment, with highest concentrations generally found in heavily used shipping routes or within harbours (OSPAR Commission, 2011a; Defra and UK MMAS, 2010; Turner, 2010; The Green Blue, 2009; Ware, 2009; The Green Blue, 2006). Further,</p>																	<p>Yes</p>

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? 20
	sediment disturbance by fishing activities could result in the remobilisation of contaminants/substances (Eggleton and Thomas, 2004; Fowler, 1999; Howell, 1985). However, the likelihood and severity of any impact depends upon factors such as the type and degree of existing contamination, the sediment type and intensity of activity. In many cases, natural disturbance may contribute the majority of contaminated sediment resuspension (Roberts, 2012).																	
Transition elements & organo-metal (e.g. TBT) contamination	Pressure primarily relates to vessels associated with this sub-activity and their movement, but potentially also mobilisation of contaminated sediments. The primary chemicals of environmental concern in vessel oil and fuel are polycyclic aromatic hydrocarbons (PAHs). Deliberate discharges of oil or oil/water mixtures from ships are prohibited within the North West European Waters Special Area, established by the International Maritime Organization under MARPOL Annex I in 1999. This includes all waters around the UK and its approaches. However, accidental discharges still occur. Information on accidental discharges of oil from ships and offshore platforms is compiled annually by the Advisory Committee on Protection of the Sea (ACOPS) on behalf of the Maritime and Coastguard Agency. Although the majority of incidents are minor, several incidents occur annually that lead to the actual or potential release of significant amounts of oil (typically from large shipping vessels and tankers). Antifouling compounds like tributyltin (TBT; banned on vessels under 25 m in the UK since 1987, however) and copper wash from ship coatings enter and persist in the marine environment, with highest concentrations generally found in heavily used shipping routes or within harbours (OSPAR Commission, 2011a; Defra and UK MMAS, 2010; Turner, 2010; The Green Blue, 2009; Ware, 2009; The Green Blue, 2006). Further, sediment disturbance by fishing activities could result																	Yes

HRA F&H FOF 2025

Pressure	Potential Impact	Intertidal mixed sediments	Intertidal mud	Intertidal sand and muddy sand	Intertidal coarse sediment	Subtidal mixed sediments	Subtidal mud	Subtidal sand	Subtidal coarse sediment	Intertidal seagrass beds	Subtidal seagrass beds	Intertidal rock	Infralittoral rock	Cirralittoral rock	Maerl beds	Atlantic salt meadows	Shore dock	Appropriate assessment necessary? 20
	<p>in the remobilisation of contaminants/substances (Eggleton and Thomas, 2004; Kaiser <i>et al.</i>, 2002). However, the likelihood and severity of any impact depends upon factors such as the type and degree of existing contamination, the sediment type and intensity of activity. In many cases, natural disturbance may contribute the majority of contaminated sediment resuspension (Roberts, 2012).</p>																	

	Activity	Feature
4. Is the potential scale or magnitude of any effect likely to be significant alone and require appropriate assessment? ²¹²²	Yes: Dredges (towed): oysters	Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Intertidal coarse sediment Subtidal mixed sediments Subtidal mud Subtidal sand Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Circalittoral rock Maerl beds Atlantic salt meadows
	Yes: Shore-based activities: Intertidal hand working	Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Intertidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Atlantic salt meadows

For each activity assessed in Stage 1 (LSE), there were two possible outcomes for each identified pressure-feature interaction:

The pressure-feature interactions were not included for assessment in Stage 2 (Appropriate Assessment) if:

the feature is not exposed to the pressure, and is not likely to be in the future; or
the pressures are not capable of affecting (other than insignificantly) the protected features of the SAC.

The pressure-feature interactions were included for assessment in Stage 2 if:

the feature is exposed to the pressure, or is likely to be in the future; and
the pressure is capable of affecting (other than insignificantly) the feature; or
it is not possible to determine whether the pressure is capable of affecting (other than insignificantly) the feature.

²¹ Yes or uncertain: completion of AA required (Section 9). If no: LSE required only.

²² Activity levels explained in Section 6 and Annex 3.

9. Appropriate Assessment

If a Test of Likely Significant Effect (Section 8) identified the potential for a significant effect on the site features/ sub-features it is followed by an Appropriate Assessment to assess if the potential significant effect is likely to have an adverse effect on the integrity of the site.

9.1 Potential risks to features

The potential pressures, ecological impacts, level of exposure and mitigation measures are summarised in Table 15.

Table 15: Summary of impacts

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
<p>Estuaries; Intertidal coarse sediment, Intertidal mixed sediments, Intertidal mud, Intertidal sand and muddy sand</p> <p>Subtidal mixed sediments, Subtidal mud</p> <p>Large shallow inlets and bays (LSIB); Intertidal coarse sediment, Intertidal sand and muddy sand</p> <p>Subtidal mixed sediments,</p>	<p>Distribution: presence and spatial distribution of biological communities</p>	<p>Maintain the presence and spatial distribution of [Mudflats and sandflats] communities</p> <p>Restore the presence and spatial distribution of [Estuary/ LSIB/ Subtidal sandbank] communities</p> <p>Maintain the presence and spatial distribution of [intertidal coarse sediment/ intertidal mixed sediment/ intertidal mud/ intertidal sand</p>	<p>Operation: FISHING Activity DREDGES</p> <p>Abrasion/ disturbance of the substrate on the surface of the seabed</p> <p>Changes in suspended solids (water clarity)</p> <p>Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>The Fal Fishery falls within part of the SAC, the Fishery limits can be seen in Figure 1 (Section 6.3.2).</p> <p>Sail boats mainly operate in areas A and B (Figure 4) and work the longest tow lines possible given the wind conditions whilst towing dredge gear. Haul /tow boats are small punts and operate in the River section (Area C). The dredge is towed as the fishermen winches, by hand, back to an anchor deployed a short distance away.</p> <p>The dredge contents from the 2025 Cornwall IFCA Fal oyster survey gives an indication of substrate type within the fishery (Annex Figure C).</p> <p>The Fishery area within Carrick Roads is predominantly sublittoral mixed sediments (A5.4) (Magic, 2020). The Upper Carrick Roads is characterised by mixed muddy sand</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Under requirements of the Habitats Directive, relevant for SACs, Natural England report on the conservation status of the habitats and species listed under Annexes I and II of the Directive, reporting to the Secretary of State every six years. Natural England's condition monitoring provides evidence for the condition of the site features within the SAC.</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p style="text-align: center;">NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
<p>Subtidal mud, Subtidal sand</p> <p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Intertidal coarse sediment, Intertidal mixed sediments, Intertidal mud, Intertidal sand and muddy sand</p> <p>Sandbanks which are slightly covered by sea water all the time;</p> <p>Subtidal coarse sediment, Subtidal mixed sediment, Subtidal sand</p>	<p>Extent and distribution</p>	<p>and muddy sand] communities</p> <p>Maintain the presence and spatial distribution of [subtidal coarse sediment/ subtidal sand/ subtidal mud] communities</p> <p>Restore the presence and spatial distribution of [subtidal mixed sediment] communities</p> <p>Maintain the total extent and spatial distribution of the [Estuary/ LSIB/ Mudflats and sandflats/ Subtidal sandbank] to ensure no loss of integrity, whilst allowing for natural change and succession</p> <p>Maintain the total extent and</p>	<p>Smothering and siltation rate changes (Light)</p> <p>Physical change (to another sediment type)</p>	<p>and shell sediments with the exception being the deep central channel which is composed predominantly of subtidal mud. Additional patches of subtidal mud extend into the lower Carrick Roads (Howson <i>et al.</i>, 2004; Allen and Proctor, 2003). Soft estuarine muds are present in the upper reaches of the Fal and its constituent tributaries (Allen and Proctor, 2003; Moore <i>et al.</i>, 1999).</p> <p>In the estuaries it is typically the '<i>Aphelocheata marioni</i> and <i>Tubificoides</i> spp in variable salinity infralittoral mud' communities which dominate the sublittoral mud. Further into the Carrick Roads, <i>Melinna palmata</i> with <i>Magelona</i> spp. and <i>Thyasira</i> spp. in infralittoral sandy mud' (A5.334) is present (Allen and Proctor, 2003).</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. These measures ensure that the physical disturbance of the fishery is minimal.</p> <p>A person must not dredge for, fish for or take oysters in the fishery area unless licensed to do so by the Authority (Cornwall IFCA).</p> <p>The fishery is restricted to sail or hand-powered vessels which limits the impact on the habitats</p> <p>Dredging is restricted to certain times of year; the fishery may only be dredged from 1st October to 31st March in any year. Dredging</p>	<p>Monitoring of effort via monthly catch statistics is in place.</p> <p>The triggers for the Fal Fishery have been updated to be in line with other Cornwall IFCA assessments based on a five year baseline average.</p> <p>The five year baseline average from 2017-18 to 2021-22 was 53 total licences issued. The maximum trigger was set as the baseline plus standard deviation of 10. This equals a maximum trigger of 63 total licences issued. This was not breached from 2018-19 to 2024-25 (See section 6.5).</p> <p>For the upcoming 2025-26 fishery season, there have been 40 dredge licences issued (plus one hand gathering licence).</p> <p>The five year baseline average from 2017-18 to 2021-22 was 13,239 dredge hours. The maximum trigger was set as the baseline plus standard deviation of 3,432. This equals a</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Structure and function: presence and abundance of key structural and influential species</p>	<p>spatial distribution of [intertidal coarse sediment/ intertidal mixed sediment/ intertidal mud/ intertidal sand and muddy sand].</p> <p>Maintain the total extent and spatial distribution of [subtidal coarse sediment/ subtidal sand/ subtidal mud/ subtidal mixed sediment].</p> <p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat.</p>		<p>on lays can occur outside of this, although there is an exclusion period between for native oysters from 14th of May to 4th of August and requires consent from the Authority.</p> <p>The fishery is restricted to certain times of day within the open period; between the hours of 09:00 and 15:00 Monday to Friday and between the hours of 09:00 and 13:00 on a Saturday. No fishing is permitted on Sundays.</p> <p>LOW EXPOSURE</p>	<p>maximum trigger of 16,671 dredge hours (October to March). This was not breached from 2018-19 to 2024-25 (See section 6.5).</p> <p>For 2024-25 compliance with submission of monthly catch statistics was 97% for October 2024 to March 2025. Additionally this season has seen an improvement with no dredge hours unaccounted for where attribute data was missing for landings of native oysters or queen scallops.</p> <p>Cornwall IFCA officers monitor the fishery through boarding's of vessels at sea, inspections of harvesting and lay areas and quayside inspections of landings.</p> <p>Should total licences issued exceed 63, dredge hours exceed 16,671 (October to March), or an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if necessary (See Section</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	Structure: species composition of component communities	Maintain [LSIB] the species composition of component communities			17/ Annex 4). This assessment is also subject to annual review. NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY	
		Restore [Estuary/ Mudflats and sandflats/ Subtidal sandbank] the species composition of component communities Maintain [intertidal mud] the species composition of component communities.		Changes in suspended solids (water clarity) The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. These measures ensure that the physical disturbance of the fishery is minimal. The fishery is restricted to sail or hand-powered vessels which limits the impact on the habitats. LOW EXPOSURE	Changes in suspended solids (water clarity) See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 55).	Changes in suspended solids (water clarity) NO
		Restore [intertidal coarse sediment/ intertidal mixed sediment/ intertidal sand and muddy sand] the species composition of component communities. Maintain [subtidal sand/		Smothering and siltation rate changes (Light) The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. These measures ensure that the physical disturbance of the fishery is minimal.	Smothering and siltation rate changes (Light) See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 55).	Smothering and siltation rate changes (Light) NO

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
		<p>subtidal mixed sediments/ subtidal coarse sediment] the species composition of component communities.</p> <p>Restore [subtidal mud] the species composition of component communities.</p>		<p>The fishery is restricted to sail or hand-powered vessels which limits the impact on the habitats.</p> <p>LOW EXPOSURE</p> <p>Physical change (to another sediment type)</p> <p>The fishery has an exclusion zone which ensures sensitive habitats (including seagrass beds and maerl beds) are avoided.</p> <p>Cultch is a natural material, mainly comprised of dead shell, which is scattered on the seabed to provide a rough surface to which the oyster spat can easily attach. Small amounts of cultch (less than 1 tonne) have been laid within the fishery and periodically, approximately every two to three years although it is not thought that large quantities of cultch have been laid for 30 years. Some dead slipper limpet shells were laid on Maggoty Bank over the last ten years and some oyster shell from the Falmouth Oyster Festival was re-laid in positions to the East of Carrick Carly's Rocks and on Parsons Bank. Permission was sought from the Falmouth and Truro Port Health Authority for this. This activity would now require a marine licence from the Marine Management Organisation.</p> <p>This activity is not known to have occurred in recent memory and is not likely to occur due to the risk of the introduction of pests (P Ferris 2017, pers. comm).</p> <p>The deposit of cultch has not occurred in recent years and would now require a marine license to be permitted.</p>	<p></p> <p>Physical change (to another sediment type)</p> <p>N/A</p>	<p></p> <p>Physical change (to another sediment type)</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
				No potential for a physical change to be caused due to oyster dredging within the SAC. NO EXPOSURE		
<p>Estuaries; Subtidal seagrass beds</p> <p>Large shallow inlet and bays; Subtidal seagrass beds</p> <p>Mudflats and sandflats not covered by seawater at low tide Intertidal seagrass beds</p> <p>Sandbanks which are slightly covered by sea water all the time; Subtidal seagrass beds</p>	<p>Distribution: presence and spatial distribution of biological communities</p>	<p>Maintain the presence and spatial distribution of [Mudflats and sandflats] communities</p> <p>Restore the presence and spatial distribution of [Estuary/ LSIB/ Subtidal sandbanks] communities</p> <p>Maintain the presence and spatial distribution of intertidal seagrass bed communities</p> <p>Restore the presence and spatial distribution of subtidal seagrass bed communities</p>	<p>Operation: FISHING Activity <u>DREDGES</u></p> <p>Abrasion/ disturbance of the substrate on the surface of the seabed</p> <p>Changes in suspended solids (water clarity)</p> <p>Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Smothering and siltation rate changes (Light)</p> <p>Physical change (to another sediment type)</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed</p> <p>Resistance: Low Resilience: Medium Sensitivity: Medium (d'Avack, <i>et al.</i>, 2022a). <u>AND</u> Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Resistance: None Resilience: Low Sensitivity: High (d'Avack, <i>et al.</i>, 2022a).</p> <p>A small bed of subtidal seagrass lies south of Penarrow Point which is included in the boundary of the Fal Fishery Order 2016 (Annex Figure I). An exclusion zone was introduced through the 2017 Regulations under the Fal Fishery Order 2016 which prevents dredging from occurring in most of the habitat. A small section close inshore at Penarrow Point remains within the fishery (Annex Figure I).</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>'<i>Zostera marina</i> beds on lower shore or infralittoral clean or muddy sand' (A5.5331) is the biotope for the subtidal feature within the site (Natural England, 2025). The seagrass bed was surveyed in 2015 by Ecospan as part of the feature condition assessment (Curtis,</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed <u>AND</u> Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Under requirements of the Habitats Directive, relevant for SACs, Natural England report on the conservation status of the habitats and species listed under Annexes I and II of the Directive, reporting to the Secretary of State every six years. Natural England's condition monitoring provides evidence for the condition of the site features within the SAC.</p> <p>Cornwall IFCA will continue to monitor the seagrass beds within the Fal Fishery area as part of routine monitoring.</p> <p>Under Regulation 9 of the Fal Fishery Order 2016 dredging is prohibited in</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed <u>AND</u> Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p style="text-align: center;">NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
	<p>Extent and distribution</p> <p>Extent of supporting habitat</p>	<p>Maintain the total extent and spatial distribution of [Estuary/ LSIB/ Mudflats and sandflats/ Subtidal sandbanks] to ensure no loss of integrity, whilst allowing for natural change and succession</p> <p>Maintain the total extent and spatial distribution of [intertidal] seagrass beds.</p> <p>Restore the total extent and spatial distribution of [subtidal] seagrass beds.</p> <p>Maintain the area of habitat which is likely to support the subfeature.</p>		<p>2015). The total area of seagrass which qualified as a bed at Penarrow Point was 7.48 ha. The mean percentage of seagrass cover within that extent was just 34%. The seagrass at Penarrow Point was extremely fragmented, 31% and 64% of the total area of bed was considered to be 'sparse' or 'very sparse' respectively (Curtis, 2015).</p> <p>A small seagrass bed, near Carclase Point, is within the boundary of the Fal Fishery Order 2016 (Annex Figure I). This bed is at the northern end of the larger St Mawes Bank seagrass bed (Curtis, 2015). The total area of seagrass $\geq 5\%$ cover at St Mawes Bank was 8.14 ha, the mean percentage cover within that total area was 63%. The seagrass rarely extended beyond 60 m from the shore, and at the outer periphery of the bed percentage cover values of 90% were frequently recorded which quickly dissipated to 0% within the space of 20 m (Curtis, 2015).</p> <p>The area near Penarrow was surveyed in July 2017 when 14 drop down video tows were carried out in and near the exclusion zone (Davies <i>et al.</i>, 2018). The majority of the habitat recorded consisted of mixed sediment, including maerl, and seagrass was found to be patchy when recorded. Seagrass was not recorded outside of the exclusion zone.</p> <p>In 2021 Cornwall IFCA surveyed the seagrass beds within the Fal and Helford SAC using an MX Aquatic Habitat Echosounder and recorded the extent and height of the seagrass including the beds near Penarrow and St Mawes Bank (Jenkin <i>et al.</i>, 2021). The seagrass beds at Penarrow and St Mawes</p>	<p>Exclusion Zone 1 to ensure compliance with the Conservation of Habitats and Species Regulations 2010 for seagrass bed communities (see Figure 2).</p> <p>Cornwall IFCA enforcement officers will continue to patrol the fishery and ensure that the exclusion zone is adhered to.</p> <p>If an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if necessary (See Section 17/ Annex 4). This assessment is also subject to annual review.</p> <p>NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Structure and function: presence and abundance of key structural and influential species</p> <p>Structure: biomass</p>	<p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat</p> <p>Maintain the [intertidal seagrass] leaf / shoot density, length, percentage cover, and rhizome mat across the feature at natural levels (as far as possible), to ensure a healthy, resilient habitat.</p> <p>Restore the [subtidal seagrass] leaf / shoot density, length, percentage cover, and rhizome mat</p>		<p>Bank followed the extent found by Curtis (2015). The area (ha) of plant coverage $\geq 5\%$ to 100% for the seagrass bed at Penarrow Point was 9.38 ha and St.Mawes Bank was 3.77 ha. The results can be seen in Annex Figure J and Annex Figure K.</p> <p>The two areas of seagrass within the fishery are situated close inshore fringed by rock, extending up to 40 m into the channel. Due to the positioning and depth of the beds it is not reachable by the sail boats and extremely unlikely that the area would be fished by oyster punts.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the subtidal seagrass beds as unfavourable due to abrasion/ disturbance and penetration/ disturbance due to recreation (moorings and anchoring) and nutrient enrichment.</p> <p>Seagrass beds (<i>Zostera marina</i>) are assessed as being moderately sensitive but also has moderate recoverability to abrasion and physical disturbance (Tyler-Walters, 2008).</p> <p>MEDIUM EXPOSURE</p> <p>Changes in suspended solids (water clarity)</p> <p>Resistance: Low Resilience: Low Sensitivity: High (d'Avack, <i>et al.</i>, 2022a).</p> <p>A small bed of subtidal seagrass lies south of Penarrow Point which is included in the boundary of the Fal Fishery Order 2016</p>	<p>Changes in suspended solids (water clarity)</p> <p>See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 60).</p>	<p>Changes in suspended solids (water clarity)</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
	<p>Structure: rhizome structure and reproduction</p> <p>Structure: species composition of component communities</p>	<p>across the feature at natural levels (as far as possible), to ensure a healthy, resilient habitat.</p> <p>Maintain the [intertidal seagrass] extent and structure of the rhizome mats across the site, and conditions to allow for regeneration of seagrass beds.</p> <p>Restore the [subtidal seagrass] extent and structure of the rhizome mats across the site, and conditions to allow for regeneration of seagrass beds.</p> <p>Maintain [LSIB] the species composition of component communities</p>		<p>(Annex Figure I). An exclusion zone was introduced through the 2017 Regulations under the Fal Fishery Order 2016 which prevents dredging from occurring in most of the habitat. A small section close inshore at Penarrow Point remains within the fishery (Annex Figure I).</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>A small seagrass bed, near Carclase Point, is within the boundary of the Fal Fishery Order 2016 (Annex Figure I). This bed is at the northern end of the larger St Mawes Bank seagrass bed (Curtis, 2015).</p> <p>In 2021 Cornwall IFCA surveyed the seagrass beds within the Fal and Helford SAC using an MX Aquatic Habitat Echosounder and the results can be seen in Annex Figure J and Annex Figure K.</p> <p>The two areas of seagrass within the fishery are situated close inshore fringed by rock, extending up to 40 m into the channel. Due to the positioning and depth of the beds it is not reachable by the sail boats and extremely unlikely that the area would be fished by oyster punts.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the subtidal seagrass beds as unfavourable due to abrasion/ disturbance and penetration/ disturbance due to recreation (moorings and anchoring) and nutrient enrichment.</p>		

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
		<p>Restore [Estuary/ Mudflats and Sandflats/ Subtidal sandbanks] the species composition of component communities</p> <p>Maintain [intertidal and subtidal seagrass beds] the species composition of component communities</p>		<p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. The fishery is restricted to sail or hand-powered vessels, and these measures ensure that the physical disturbance of the fishery is minimal.</p> <p>LOW EXPOSURE</p> <p>Smothering and siltation rate changes (Light)</p> <p>Resistance: Low Resilience: Medium Sensitivity: Medium (d'Avack, <i>et al.</i>, 2022a).</p> <p>A small bed of subtidal seagrass lies south of Penarrow Point which is included in the boundary of the Fal Fishery Order 2016 (Annex Figure I). An exclusion zone was introduced through the 2017 Regulations under the Fal Fishery Order 2016 which prevents dredging from occurring in most of the habitat. A small section close inshore at Penarrow Point remains within the fishery (Annex Figure I).</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>A small seagrass bed, near Carclase Point, is within the boundary of the Fal Fishery Order 2016 (Annex Figure I). This bed is at the northern end of the larger St Mawes Bank seagrass bed (Curtis, 2015).</p>	<p></p> <p>Smothering and siltation rate changes (Light)</p> <p>See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 60).</p>	<p></p> <p>Smothering and siltation rate changes (Light)</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
				<p>In 2021 Cornwall IFCA surveyed the seagrass beds within the Fal and Helford SAC using an MX Aquatic Habitat Echosounder and the results can be seen in Annex Figure J and Annex Figure K.</p> <p>The two areas of seagrass within the fishery are situated close inshore fringed by rock, extending up to 40 m into the channel. Due to the positioning and depth of the beds it is not reachable by the sail boats and extremely unlikely that the area would be fished by oyster punts.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the subtidal seagrass beds as unfavourable due to abrasion/ disturbance and penetration/ disturbance due to recreation (moorings and anchoring) and nutrient enrichment.</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. The fishery is restricted to sail or hand-powered vessels, and these measures ensure that the physical disturbance of the fishery is minimal.</p> <p>LOW EXPOSURE</p>		
				<p>Physical change (to another sediment type)</p>	<p>Physical change (to another sediment type)</p> <p>See above 'Abrasion/ disturbance of the</p>	<p>Physical change (to another sediment type)</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
				<p>Resistance: Low Resilience: Very low Sensitivity: High (d'Avack, <i>et al.</i>, 2022a).</p> <p>A small bed of subtidal seagrass lies south of Penarrow Point which is included in the boundary of the Fal Fishery Order 2016 (Annex Figure I). An exclusion zone was introduced through the 2017 Regulations under the Fal Fishery Order 2016 which prevents dredging from occurring in most of the habitat. A small section close inshore at Penarrow Point remains within the fishery (Annex Figure I).</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>'<i>Zostera marina</i> beds on lower shore or infralittoral clean or muddy sand' (A5.5331) is the biotope for the subtidal feature within the site (Natural England, 2025). The seagrass bed was surveyed in 2015 by Ecospan as part of the feature condition assessment (Curtis, 2015). The total area of seagrass which qualified as a bed at Penarrow Point was 7.48 ha. The mean percentage of seagrass cover within that extent was just 34%. The seagrass at Penarrow Point was extremely fragmented, 31% and 64% of the total area of bed was considered to be 'sparse' or 'very sparse' respectively (Curtis, 2015).</p> <p>A small seagrass bed, near Carclase Point, is within the boundary of the Fal Fishery Order 2016 (Annex Figure I). This bed is at the northern end of the larger St Mawes Bank seagrass bed (Curtis, 2015). The total area of</p>	substrate on the surface of the seabed' mitigation measures (Page 60).	NO

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
				<p>seagrass $\geq 5\%$ cover at St Mawes Bank was 8.14 ha, the mean percentage cover within that total area was 63%. The seagrass rarely extended beyond 60 m from the shore, and at the outer periphery of the bed percentage cover values of 90% were frequently recorded which quickly dissipated to 0% within the space of 20 m (Curtis, 2015).</p> <p>The area near Penarrow was surveyed in July 2017 when 14 drop down video tows were carried out in and near the exclusion zone (Davies <i>et al.</i>, 2018). The majority of the habitat recorded consisted of mixed sediment, including maerl, and seagrass was found to be patchy when recorded. Seagrass was not recorded outside of the exclusion zone.</p> <p>In 2021 Cornwall IFCA surveyed the seagrass beds within the Fal and Helford SAC using an MX Aquatic Habitat Echosounder and recorded the extent and height of the seagrass including the beds near Penarrow and St Mawes Bank (Jenkin <i>et al.</i>, 2021). The seagrass beds at Penarrow and St Mawes Bank followed the extent found by Curtis (2015). The area (ha) of plant coverage $\geq 5\%$ to 100% for the seagrass bed at Penarrow Point was 9.38 ha and St.Mawes Bank was 3.77 ha. The results can be seen in Annex Figure J and Annex Figure K.</p> <p>The two areas of seagrass within the fishery are situated close inshore fringed by rock, extending up to 40 m into the channel. Due to the positioning and depth of the beds it is not reachable by the sail boats and extremely</p>		

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
				<p>unlikely that the area would be fished by oyster punts.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the subtidal seagrass beds as unfavourable due to abrasion/ disturbance and penetration/ disturbance due to recreation (moorings and anchoring) and nutrient enrichment.</p> <p>Seagrass beds (<i>Zostera marina</i>) are assessed as being moderately sensitive but also has moderate recoverability to abrasion and physical disturbance (Tyler-Walters, 2008).</p> <p>LOW EXPOSURE</p>		
<p>Estuaries; Infralittoral rock</p> <p>Large shallow inlet and bays; Intertidal rock, Infralittoral rock, Circalittoral rock</p> <p>Reefs; Intertidal rock, Infralittoral rock, Circalittoral rock</p>	<p>Distribution: presence and spatial distribution of biological communities</p>	<p>Restore the presence and spatial distribution of [Estuary/ LSIB/ Reefs] communities</p> <p>Maintain the presence and spatial distribution of [intertidal rock/ infralittoral rock] communities</p> <p>Restore the presence and spatial distribution of</p>	<p>Operation: FISHING Activity DREDGES</p> <p>Abrasion/ disturbance of the substrate on the surface of the seabed</p> <p>Changes in suspended solids (water clarity)</p> <p>Penetration and/or disturbance of the substratum below the surface of the seabed,</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Circalittoral rock is generally restricted to Falmouth Bay (Natural England, 2025). Infralittoral rock is present in estuarine areas with the main areas of estuarine bedrock and boulder found in the lower estuarine sections of the Fal River.</p> <p>The estuarine rock and boulder habitats support kelp communities (<i>Laminaria hyperborean</i>, <i>Laminaria ochroleuca</i> and <i>Saccorhiza polyschides</i>) as well as species of foliose red algae and filter-feeding sessile fauna (Natural England, 2025).</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Under requirements of the Habitats Directive, relevant for SACs, Natural England report on the conservation status of the habitats and species listed under Annexes I and II of the Directive, reporting to the Secretary of State every six years. Natural England's condition monitoring provides</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p style="text-align: center;">NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Extent and distribution</p>	<p>[circalittoral rock] communities</p> <p>Maintain the total extent and spatial distribution of the [Estuary/ LSIB] to ensure no loss of integrity, while allowing for natural change and succession</p> <p>Maintain the total extent, spatial distribution and types of [Reef] (and each of its sub-features), subject to natural variation in sediment veneer</p>	<p>including abrasion</p> <p>Smothering and siltation rate changes (Light)</p> <p>Physical change (to another seabed type)</p>	<p>in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. These measures ensure that the physical disturbance of the fishery is minimal.</p> <p>The fishery is restricted to sail or hand-powered vessels which limits the impact on the habitats.</p> <p>Sub-tidal reef communities are spatially separate from the areas in which oyster dredges are used. The oyster dredge is hand hauled lightweight gear, restricted to sail or hand-powered vessels, and not sufficiently robust to use on rough ground; therefore, fishers will actively avoid areas of potential reef/ rocky ground to prevent gear damage/ loss.</p> <p>LOW EXPOSURE</p>	<p>evidence for the condition of the site features within the SAC.</p> <p>Should an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if necessary (See Section 17/ Annex 4). This assessment is also subject to annual review.</p> <p>NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY</p>	
		<p>Maintain the total extent and spatial distribution of [intertidal rock/ infralittoral rock/ circalittoral rock], subject to natural variation in sediment veneer.</p>		<p>Changes in suspended solids (water clarity)</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. The fishery is restricted to sail or hand-powered vessels, and these measures ensure that the physical disturbance of the fishery is minimal.</p> <p>LOW EXPOSURE</p>	<p>Changes in suspended solids (water clarity)</p> <p>See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 68).</p>	<p>Changes in suspended solids (water clarity)</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Structure and function: presence and abundance of key structural and influential species</p>	<p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat</p>		<p>Smothering and siltation rate changes (Light)</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. The fishery is restricted to sail or hand-powered vessels, and these measures ensure that the physical disturbance of the fishery is minimal.</p> <p>LOW EXPOSURE</p>	<p>Smothering and siltation rate changes (Light)</p> <p>See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 68).</p>	<p>Smothering and siltation rate changes (Light)</p> <p style="text-align: center;">NO</p>
	<p>Structure: species composition of component communities</p>	<p>Maintain [LSIB/ Reefs] the species composition of component communities</p> <p>Restore [Estuary] the species composition of component communities</p> <p>Maintain [intertidal rock/ infralittoral rock/ circalittoral rock/] the species composition of component communities.</p>		<p>Physical change (to another seabed type)</p> <p>No potential for a physical change to be caused due to oyster dredging within the SAC.</p> <p>NO EXPOSURE</p>	<p>Physical change (to another seabed type)</p> <p>N/A</p>	<p>Physical change (to another seabed type)</p> <p style="text-align: center;">NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Extent of supporting habitat</p> <p>Structure and function: presence and abundance of key structural and influential species</p> <p>Structure: age / size frequency</p> <p>Structure: biomass</p>	<p>spatial distribution of maerl in sediment.</p> <p>Maintain the area of habitat which is likely to support the subfeature.</p> <p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat</p> <p>Restore the size structure and composition of maerl thalli across the site.</p> <p>Restore the biomass of maerl to natural levels within the site, to</p>		<p>present. In the lower Carrick Roads, dead maerl beds are present towards the entrance of Falmouth Harbour (Sheehan <i>et al.</i>, 2014).</p> <p>Dense live maerl beds are not within the fishery limit. The southern limit of the Fal Fishery was changed from the previous limit within the Truro Port Fishery (Variation) Order 1975 to exclude maerl bed communities from the boundary of the Fal Fishery Order 2016.</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>However, fragments of live maerl were recorded in eight sites within the Fal Oyster Survey 2019. At seven of these sites there was one fragment of live maerl and one site which had five fragments (Jenkin <i>et al.</i>, 2019). Low amounts of dead maerl fragments were recorded at 11 sites during the survey. Most of the fragments were recorded in the southern part of the Fishery. During the Fal Oyster Survey 2020 live maerl (seven fragments) was recorded at one site and fragments of dead maerl were recorded at 10 sites (Annex Figure H) (Jenkin <i>et al.</i>, 2020). In 2021, no live or dead maerl was recorded (Annex Figure G). In 2022 live maerl (one fragment) was recorded at one site and fragments of dead maerl were recorded at six sites (Annex Figure F) (Jenkin <i>et al.</i>, 2022c). In 2023 no live maerl was recorded and fragments of dead maerl were recorded at 13 sites (Annex Figure E) (Jenkin <i>et al.</i>, 2023). In 2024 live maerl was recorded at five sites (one fragment at three sites, five fragments at one site and seven fragments at one site) and</p>	<p>implemented if necessary (See Section 17/ Annex 4). This assessment is also subject to annual review.</p> <p>NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Structure: population abundance</p> <p>Structure: species composition of component communities</p>	<p>ensure a healthy, resilient habitat.</p> <p>Restore the abundance of maerl across the subfeature.</p> <p>Maintain [LSIB] the species composition of component communities</p> <p>Restore [Estuary/ Subtidal sandbanks] the species composition of component communities</p> <p>Restore [maerl beds] the species composition of component communities</p>		<p>fragments of dead maerl were recorded at 14 sites (Annex Figure D) (Jenkin <i>et al.</i>, 2024). In 2025 live maerl was recorded at two sites (one fragment per site) and fragments of dead maerl recorded at ten sites which can be seen in Annex Figure C. Live maerl has never constituted as 5% of the dredge therefore is not included in the dredge volume pie charts (Annex Figure C).</p> <p>The area in and around the exclusion zone was last surveyed in July 2017 when 14 tows were carried out (Davies <i>et al.</i>, 2018). The majority of the habitat recorded consisted of mixed sediment, including maerl, and seagrass was found to be patchy when recorded. Live maerl was recorded outside of the exclusion zone.</p> <p>Cornwall IFCA are carrying out a drop down video survey in the Fal and Helford for Envision Ltd. and as part of the 61 sites to be surveyed, six tows are within the fishery.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the maerl beds as unfavourable due to removal of substratum from historic aggregate extraction, abrasion/ disturbance from historic fishing, nutrient enrichment and on-going anchoring of commercial vessels.</p> <p>MEDIUM EXPOSURE</p>		
				<p>Changes in suspended solids (water clarity)</p> <p>Resistance: Medium Resilience: Very low Sensitivity: Medium (Perry <i>et al.</i>, 2024).</p>	<p>Changes in suspended solids (water clarity)</p> <p>See above 'Abrasion/ disturbance of the substrate on the surface of</p>	<p>Changes in suspended solids (water clarity)</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
				<p>Dense live maerl beds are not within the fishery limit. The southern limit of the Fal Fishery was changed from the previous limit within the Truro Port Fishery (Variation) Order 1975 to exclude maerl bed communities from the boundary of the Fal Fishery Order 2016.</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the maerl beds as unfavourable due to removal of substratum from historic aggregate extraction, abrasion/ disturbance from historic fishing, nutrient enrichment and on-going anchoring of commercial vessels.</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. The fishery is restricted to sail or hand-powered vessels, and these measures ensure that the physical disturbance of the fishery is minimal.</p> <p>LOW EXPOSURE</p>	the seabed' mitigation measures (Page 71).	NO
				<p>Smothering and siltation rate changes (Light)</p> <p>Resistance: None Resilience: Very low Sensitivity: High (Perry <i>et al.</i>, 2024).</p> <p>Dense live maerl beds are not within the fishery limit. The southern limit of the Fal</p>	<p>Smothering and siltation rate changes (Light)</p> <p>See above 'Abrasion/ disturbance of the substrate on the surface of the seabed' mitigation measures (Page 71).</p>	<p>Smothering and siltation rate changes (Light)</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
				<p>Fishery was changed from the previous limit within the Truro Port Fishery (Variation) Order 1975 to exclude maerl bed communities from the boundary of the Fal Fishery Order 2016.</p> <p>Appropriate signage in the form of a yellow buoy clearly delineates the northern and eastern boundaries of the Exclusion Zone.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the maerl beds as unfavourable due to removal of substratum from historic aggregate extraction, abrasion/ disturbance from historic fishing, nutrient enrichment and on-going anchoring of commercial vessels.</p> <p>The dredges used in the Fishery are lightweight as they are hand hauled. It states in the Regulations that a person must not use a dredge for taking shellfish which incorporates any teeth, tines or other digging projections, exceeds a weight of 20kg or exceeds an overall width of 1.20m. The fishery is restricted to sail or hand-powered vessels, and these measures ensure that the physical disturbance of the fishery is minimal.</p> <p>LOW EXPOSURE</p>		
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	Distribution of the feature, including associated transitional	Maintain the range and continuity of the habitat and its natural transitions within	Operation: FISHING Activity <u>DREDGES</u> Litter	Litter The areas of saltmarsh located within the limits of the Fal Fishery Order 2016 are not targeted by dredges. NO EXPOSURE	Litter N/A	Litter NO

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
Estuaries; Atlantic salt meadows	habitats, within the site	saltmarsh types and to other habitats seaward and landward	Operation: FISHING Activity SHORE-BASED ACTIVITIES	Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion
	Distribution: presence and spatial distribution of biological communities	Restore the presence and spatial distribution of estuary communities	Abrasion/ disturbance of the substrate on the surface of the seabed	The areas of saltmarsh located within the limits of the Fal Fishery Order 2016 are not targeted by licenced hand gatherers. NO EXPOSURE	N/A	NO
	Extent and distribution	Maintain the total extent and spatial distribution of the estuary to ensure no loss of integrity, whilst allowing for natural change and succession	Habitat structure changes - removal of substratum (extraction)	Habitat structure changes - removal of substratum (extraction)	Habitat structure changes	Habitat structure changes
	Extent of the feature within the site	Maintain the total extent of the feature.	Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	Hand-gatherers in the fishery only target certain bivalve and gastropod shellfish species and no intertidal substrate is removed during this process.	N/A	NO
Structure and function: presence and abundance of key structural and	[Maintain OR Restore] the abundance of the species listed to enable each of them to be a viable	Litter	The areas of saltmarsh located within the limits of the Fal Fishery Order 2016 are not targeted by licenced hand gatherers. NO EXPOSURE	Litter	Litter	
			Litter	Litter	Litter	
				The areas of saltmarsh located within the limits of the Fal Fishery Order 2016 are not targeted by licenced hand gatherers.	N/A	NO

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>influential species</p> <p>Structure: species composition of component communities</p>	<p>component of the Annex I habitat feature</p> <p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat.</p> <p>Restore the [Estuary] species composition of component communities</p>		NO EXPOSURE		
<p>Estuaries;</p> <p>Intertidal coarse sediment, Intertidal mixed sediments, Intertidal mud, Intertidal sand and muddy sand</p> <p>Large shallow inlets and bays (LSIB);</p>	<p>Distribution: presence and spatial distribution of biological communities</p>	<p>Maintain the presence and spatial distribution of [Mudflats and sandflats] communities</p> <p>Restore the presence and spatial distribution of [Estuary/ LSIB/ Subtidal</p>	<p>Operation: FISHING Activity <u>SHORE-BASED ACTIVITIES</u></p> <p>Abrasion/ disturbance of the substrate on the surface of the seabed</p> <p>Habitat structure changes - removal of</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>The Fal Fishery falls within part of the SAC, the Fishery limits can be seen in Figure 1 (Section 6.3.2).</p> <p>The species targeted by hand gathering are namely native oysters, mussels, pacific oysters and winkles. Other species such as cockles, scallops, queen scallops and whelks</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p> <p>Under requirements of the Habitats Directive, relevant for SACs, Natural England report on the conservation status of the habitats and species listed</p>	<p>Abrasion/ disturbance of the substrate on the surface of the seabed AND Penetration and/or disturbance of the substratum below the surface of the seabed,</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
<p>Intertidal coarse sediment, Intertidal sand and muddy sand</p> <p>Intertidal rock</p> <p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Intertidal coarse sediment, Intertidal mixed sediments, Intertidal mud, Intertidal sand and muddy sand</p> <p>Reefs;</p> <p>Intertidal rock</p>	<p>Extent and distribution</p>	<p>sandbank/ Reefs] communities</p> <p>Maintain the presence and spatial distribution of [intertidal coarse sediment/ intertidal mixed sediment/ intertidal mud/ intertidal sand and muddy sand] communities</p> <p>Maintain the presence and spatial distribution of [intertidal rock] communities</p> <p>Maintain the total extent and spatial distribution of the [Estuary/ LSIB/ Mudflats and sandflats] to ensure no loss of integrity, whilst allowing for natural change and succession</p>	<p>substratum (extraction)</p> <p>Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion</p>	<p>are also taken. The shellfish totals removed by hand-gathering can be seen in Table 4.</p> <p>Hand-gathering only takes place on spring low tides when the target species are exposed. Hand gathering generally occurs over lay areas for native oysters. Elsewhere in the fishery, hand-gatherers mainly collect oysters and queen scallops from Turnaware. Winkles are collected from accessible intertidal rock with algal cover.</p> <p>Year-round intertidal hand gathering of bivalve and gastropod species by license holders is permitted while the dredge is not in use. It is however, an offence under the Shellfish Act 1967 to sell native oysters between 14th of May and the 4th of August in any year.</p> <p>The fishery is restricted to certain times of day within the open period; between the hours of 09:00 and 15:00 Monday to Friday and between the hours of 09:00 and 13:00 on a Saturday. No fishing is permitted on Sundays.</p> <p>LOW EXPOSURE</p>	<p>under Annexes I and II of the Directive, reporting to the Secretary of State every six years. Natural England's condition monitoring provides evidence for the condition of the site features within the SAC.</p> <p>Monitoring of effort via monthly catch statistics is in place.</p> <p>The triggers for the Fal Fishery have been updated to be in line with other Cornwall IFCA assessments based on a five year baseline average.</p> <p>The five year baseline average from 2017-18 to 2021-22 was 342 hand gathering hours. The maximum trigger was set as the baseline plus standard deviation of 306. This equals a maximum trigger of 648 hand gathering hours. This was not breached from 2018-19 to 2024-25 (See section 6.5).</p> <p>A total of 129 hand gathering hours were</p>	<p>including abrasion</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
	<p>Structure and function: presence and</p>	<p>Maintain the total extent, spatial distribution and types of [Reefs] (and each of its sub-features), subject to natural variation in sediment veneer</p> <p>Maintain the total extent and spatial distribution of [intertidal coarse sediment/ intertidal mixed sediment/ intertidal mud/ intertidal sand and muddy sand].</p> <p>Maintain the total extent and spatial distribution of [intertidal rock], subject to natural variation in sediment veneer.</p> <p>[Maintain OR Recover OR Restore] the</p>			<p>reported for October 2024 to September 2025.</p> <p>This is a slight under representation of the actual value due to missing attribute data. This is from where gear, number of licences or hours fished were not advised on the returns forms for 650 kg native oysters removed from lay area, 150 kg mussels, 110 kg winkles and 1,000 kg pacific oysters.</p> <p>For 2024-25 compliance with submission of monthly catch statistics was 97% for October 2024 to March 2025.</p> <p>Progress still needs to be made on missing gear type, number of licences or hours fished on returns forms.</p> <p>Under Article 7 of the Order, the number of hand gatherers permitted to remove shellfish from the fishery is limited to the number of dredge licences issued and provided the dredge is not in use at the time.</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
	<p>abundance of key structural and influential species</p> <p>Structure: species composition of component communities</p>	<p>abundance of listed typical species, to enable each of them to be a viable component of the habitat.</p> <p>Maintain [LSIB/ Reefs] the species composition of component communities</p> <p>Restore [Estuary/ Mudflats and sandflats/ Subtidal sandbank] the species composition of component communities</p> <p>Maintain [intertidal mud] the species composition of component communities.</p> <p>Restore [intertidal coarse sediment/</p>			<p>The five year baseline average from 2017-18 to 2021-22 was 53 total licences issued. The maximum trigger was set as the baseline plus standard deviation of 10. This equals a maximum trigger of 63 total licences issued. This was not breached from 2018-19 to 2024-25 (See section 6.5).</p> <p>For the upcoming 2025-26 fishery season, there have been 40 dredge licences issued (plus one hand gathering licence).</p> <p>Cornwall IFCA officers monitor the fishery through boarding's of vessels at sea, inspections of harvesting and lay areas and quayside inspections of landings.</p> <p>Should total licences issued exceed 63, hand gathering hours exceed 648 (October to September), or an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
<p>slightly covered by sea water all the time;</p> <p>Subtidal seagrass beds</p>	<p>Extent and distribution</p>	<p>distribution of intertidal seagrass bed communities</p> <p>Restore the presence and spatial distribution of subtidal seagrass bed communities</p> <p>Maintain the total extent and spatial distribution of [Estuary/ LSIB/ Mudflats and sandflats/ Subtidal sandbanks] to ensure no loss of integrity, whilst allowing for natural change and succession</p>	<p>below the surface of the seabed, including abrasion</p>	<p>seagrass biotope present (Natural England, 2025).</p> <p>A small bed of subtidal seagrass lies south of Penarrow Point which is included in the boundary of the Fal Fishery order 2016. 'Zostera marina beds on lower shore or infralittoral clean or muddy sand' (A5.5331) is the biotope for the subtidal feature within the site (Natural England, 2025).</p> <p>Hand-gathering only takes place on spring low tides when the target species are exposed.</p> <p>The areas of seagrass located within the limits of the Fal Fishery Order 2016 are not targeted by licenced hand gatherers.</p> <p>The Condition Assessment of the Fal and Helford SAC (Natural England, 2020) has identified the subtidal seagrass beds as unfavourable due to abrasion/ disturbance and penetration/ disturbance due to recreation (moorings and anchoring) and nutrient enrichment.</p> <p>LOW EXPOSURE</p>	<p>monitoring provides evidence for the condition of the site features within the SAC.</p> <p>Cornwall IFCA will continue to monitor the seagrass beds within the Fal Fishery area as part of routine monitoring.</p> <p>If an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if necessary (See Section 17/ Annex 4). This assessment is also subject to annual review.</p> <p>NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY</p>	
		<p>Maintain the total extent and spatial distribution of [intertidal] seagrass beds.</p> <p>Restore the total extent and spatial distribution of</p>		<p>Habitat structure changes - removal of substratum (extraction)</p> <p>Resistance: None Resilience: Very low Sensitivity: High (d'Avack <i>et al.</i>, 2022b).</p> <p>Hand-gatherers in the fishery only target certain bivalve and gastropod shellfish species and no intertidal substrate is removed during this process.</p>	<p>Habitat structure changes</p> <p>N/A</p>	<p>Habitat structure changes</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Extent of supporting habitat</p> <p>Structure and function: presence and abundance of key structural and influential species</p> <p>Structure: biomass</p>	<p>[subtidal] seagrass beds.</p> <p>Maintain the area of habitat which is likely to support the subfeature.</p> <p>[Maintain OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat</p> <p>Maintain the [intertidal seagrass] and Restore the [subtidal seagrass] leaf / shoot density, length, percentage cover, and rhizome mat across the feature at natural levels (as far as</p>		<p>The areas of seagrass located within the limits of the Fal Fishery Order 2016 are not targeted by licenced hand gatherers.</p> <p>NO EXPOSURE</p>		

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
	<p>Structure: rhizome structure and reproduction</p> <p>Structure: species composition of component communities</p>	<p>possible), to ensure a healthy, resilient habitat.</p> <p>Maintain the [intertidal seagrass] and Restore the [subtidal seagrass] extent and structure of the rhizome mats across the site, and conditions to allow for regeneration of seagrass beds.</p> <p>Maintain [LSIB] the species composition of component communities</p> <p>Restore [Estuary/ Mudflats and Sandflats/ Subtidal sandbanks] the species composition of component communities</p>				

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
		<p>Maintain [intertidal and subtidal seagrass beds] the species composition of component communities</p>				
<p>Features: Estuaries; Large shallow inlet and bays; Mudflats and sandflats not covered by seawater at low tide Reefs; Sandbanks which are slightly covered by sea water all the time;</p> <p>Sub-features: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand</p>	<p>Distribution: presence and spatial distribution of biological communities</p>	<p>Maintain the presence and spatial distribution of [Mudflats and sandflats] communities</p> <p>Restore the presence and spatial distribution of [Estuary/ LSIB/ Subtidal sandbank/ Reefs] communities</p> <p>Maintain the presence and spatial distribution of [intertidal mixed sediment/ intertidal mud/ intertidal sand and muddy sand/ subtidal coarse sediment/ subtidal sand/ subtidal mud/</p>	<p>Operation: FISHING Activity SHORE-BASED ACTIVITIES and DREDGES</p> <p>Removal of non-target species</p>	<p>Removal of non-target species</p> <p>Cornwall IFCA carries out annual monitoring of the fishery during a survey which is normally carried out in January each year. The survey monitors the stock of oysters, queen scallops and records the presence of non-natives.</p> <p>A list of by-catch was recorded during the Cornwall IFCA 2019 oyster survey which was carried out by dredge (Jenkin <i>et al.</i>, 2019; Section 3.6 and Annex 6 within report). This was not a primary objective of the survey and the list should not be considered definitive.</p> <p>Arthropods and molluscs were the most commonly observed families in the bycatch. Six species of crab were regularly seen; common shore crab (<i>Carcinus maenas</i>), navigator crab (<i>Liocarcinus navigator</i>), harbour crab (<i>Liocarcinus depurator</i>), long-legged spider crab (<i>Macrapodia</i> sp.), hermit crab (<i>Pagurus bernhardus</i>) and long-clawed porcelain crab (<i>Pisidia longicornis</i>). Of these, the navigator crab and hermit crab were particularly noticeable, recorded in 54 and 51 of the 83 dredge samples respectively. Commonly seen molluscs included; slipper limpets (<i>Crepidula fornicata</i>), saddle oysters</p>	<p>Removal of non-target species</p> <p>All non-target species are returned to sea (except slipper limpets and pacific oysters).</p> <p>Cornwall IFCA officers monitor the fishery through boarding's of vessels at sea, inspections of harvesting and lay areas and quayside inspections of landings.</p> <p>The licence holders must submit information to Cornwall IFCA, which includes the weight in kilograms of shellfish (oysters (<i>O. edulis</i>), mussels (<i>Mytilus</i> spp.) and other bivalve or gastropod shellfish) landed or removed from the fishery, the weight in kilograms of discarded shellfish, the areas fished, the fishing</p>	<p>Removal of non-target species</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
Subtidal mixed sediments Subtidal mud Subtidal sand Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Circalittoral rock Maerl beds Atlantic salt meadows	<p>Structure and function: presence and abundance of key structural and influential species</p> <p>Structure: species composition of component communities</p>	<p>intertidal seagrass bed/ intertidal rock/ infralittoral rock/ maerl bed] communities</p> <p>Restore the presence and spatial distribution of [subtidal mixed sediment/ subtidal seagrass bed / circalittoral rock] communities</p> <p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat.</p> <p>Maintain [LSIB/ Reefs] the species composition of component communities</p>		<p>(<i>Anomia ephippium</i>), topshells (<i>Gibbula</i> spp.), chitons (<i>Lepidochitona cinerea</i>), mussels (<i>Mytilus edulis</i>) and spiral shells (<i>Turitella / Bittium</i> sp.). Two species of red algae; coralline algae (<i>Lithophyllum</i> sp.) (which was likely under-recorded) and red string weed (<i>Soliera chordalis</i>) were also commonly seen. Sponges were noticeable throughout the survey, but often couldn't be identified to species level and will therefore be under-reported. One particular species that was under-recorded is <i>Suberites ficus</i>, seen as an orange layer on the shells of scallops, but only positively identified on the final day. The most notable species recorded was a short snouted seahorse (<i>Hippocampus hippocampus</i>). This species hadn't been recorded by Cornwall IFCA during a survey previously and only one official record exists for the Fal estuary, with another diver record confirmed (pers. comms, Natural England).</p> <p>It was noted by Cornwall IFCA officers that by-catch appeared to be in a good condition, and species such as the delicate long legged spider crab (<i>Macropodia rostrate</i>) were unharmed by the dredge.</p> <p>In the fishery, upon hauling, fishers sort the dredge contents (cultch) and select target species of size to retain and the rest of the dredge contents (including by-catch) is returned to sea immediately. There should be no removal of non-target species by hand gatherers as their catch should be targeted.</p> <p>LOW EXPOSURE</p>	<p>method used, the gear type and quantity used, the type of vessel used and the number of person fishing under the licence.</p> <p>The information provided by the licence holder will be analysed by Cornwall IFCA officers along with the results of the Fal Oyster Survey annually to monitor the impact to the fishery.</p> <p>Should total licences issued exceed 63, dredge hours exceed 16,671 (October to March), hand gathering hours exceed 648 (October to September), or an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if necessary (See Section 17/ Annex 4). This assessment is also subject to annual review.</p> <p>NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
		<p>Restore [Estuary/ Mudflats and sandflats/ Subtidal sandbank] the species composition of component communities</p> <p>Maintain [intertidal mud/ subtidal sand/ subtidal mixed sediments/ subtidal coarse sediment/ intertidal and subtidal seagrass beds/ intertidal rock/ infralittoral rock/ circalittoral rock] the species composition of component communities.</p> <p>Restore [intertidal mixed sediment/ intertidal sand and muddy sand/ subtidal mud/ maerl beds] the species composition of</p>				

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
		component communities.				
<p>Features:</p> <p>Estuaries;</p> <p>Large shallow inlet and bays;</p> <p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Reefs;</p> <p>Sandbanks which are slightly covered by sea water all the time;</p> <p>Sub-features:</p> <p>Intertidal mixed sediments</p> <p>Intertidal mud</p> <p>Intertidal sand and muddy sand</p> <p>Subtidal mixed sediments</p> <p>Subtidal mud</p> <p>Subtidal sand</p>	<p>Distribution: presence and spatial distribution of biological communities</p>	<p>Maintain the presence and spatial distribution of [Mudflats and sandflats] communities</p> <p>Restore the presence and spatial distribution of [Estuary/ LSIB/ Subtidal sandbank/ Reefs] communities</p> <p>Maintain the presence and spatial distribution of [intertidal mixed sediment/ intertidal mud/ intertidal sand and muddy sand/ subtidal coarse sediment/ subtidal sand/ subtidal mud/ intertidal seagrass bed/ intertidal rock/</p>	<p>Operation: FISHING Activity</p> <p><u>SHORE-BASED ACTIVITIES</u> and <u>DREDGES</u></p> <p>Removal of target species</p>	<p>Removal of target species</p> <p>A number of species are targeted by the fishery. The main species include the native oyster (<i>O. edulis</i>), mussels (<i>Mytilus</i> spp.) and queenies which include the queen scallop, <i>Aequipecten opercularis</i> and the variegated scallop, <i>Mimachlamys varia</i>.</p> <p>Previously, in the Fal Fishery Order 2016, a person that retained on board or landed native species of bivalve or gastropod shellfish had to ensure that the combined weight of species other than oysters (<i>O. edulis</i>) and mussels (<i>M. edulis</i>) did not exceed 20% of the weight of all the native species retained on board or landed. In the Fal Fishery Order 2016 this regulation was removed in 2017 which has changed queen scallops to a target species.</p> <p>Analysis of the 2021-22 licence holder returns data showed 63,948 kg of queen scallops were landed by dredging compared to 12,549 kg of native oysters landed for sale. Whereas for 2024-25 season approximately 4,030 kg of queen scallops were landed and 28,747 kg of native oysters landed for sale by dredging (Table 6).</p> <p>A major wholesale buyer of queen scallops from the Fal Fishery closed (as of October 2022) which has significantly reduced the quantity of queen scallops landed during the</p>	<p>Removal of target species</p> <p>Only licence holders are permitted to remove shellfish species such as native oysters, queen scallops and mussels from the fishery.</p> <p>Cornwall IFCA officers monitor the fishery through boarding's of vessels at sea, inspections of harvesting and lay areas and quayside inspections of landings. All oysters and mussels landed and stored in the Fal fishery area must be in bags labelled with a numbered tag attributable to the permit holder.</p> <p>The licence holders must submit information to Cornwall IFCA, which includes the weight in kilograms of shellfish (oysters (<i>O. edulis</i>), mussels (<i>Mytilus</i> spp). and other bivalve or gastropod shellfish) landed or</p>	<p>Removal of target species</p> <p style="text-align: center;">NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Circalittoral rock	<p>Structure and function: presence and abundance of key structural and influential species</p> <p>Structure: species composition of component communities</p>	<p>infralittoral rock] communities</p> <p>Restore the presence and spatial distribution of [subtidal mixed sediment/ subtidal seagrass bed / circalittoral rock] communities</p> <p>[Maintain OR Recover OR Restore] the abundance of listed typical species, to enable each of them to be a viable component of the habitat.</p> <p>Maintain [LSIB/ Reefs] the species composition of component communities</p> <p>Restore [Estuary/ Mudflats and sandflats/</p>		<p>past three seasons (2022-23, 2023-24 and 2024-25).</p> <p>Since 2017-18 season, there have been issues with the market for native oysters. The production of oysters in Europe, mainly in France has been very successful over the last couple of years meaning the supply is good weakening the demand for oysters from the UK and their value is low. A 70 g minimum weight was also applied by the merchants, likely due to oysters being sent to restaurants and not relay markets.</p> <p>In February and March 2020 the fishery was impacted by limited export of shellfish outside of UK and local restrictions due to COVID-19. Then the market was impacted further in January to March 2021 by limited to no export of shellfish outside of the UK after Brexit. During the 2021-2022 season and subsequent seasons the market for native oysters locally remains suppressed.</p> <p>Previously, with the reduction in market for native oysters or if fishable stocks were low, effort (in terms of dredge hours) would have reduced as it would have not been economical viable to continue dredging. However, it appears that fishing effort continued and was directed towards queen scallops until 2021-2022 season.</p> <p>Long <i>et al.</i> (2017) described that the Fal Oyster Fishery's longevity may be due to the fishery's inefficient capture method which ensures a low CPUE and effort would decrease before over-exploitation of native oysters occurred allowing stock recovery.</p>	<p>removed from the fishery, the weight in kilograms of discarded shellfish, the areas fished, the fishing method used, the gear type and quantity used, the type of vessel used and the number of person fishing under the licence.</p> <p>The information provided by the licence holder will be analysed by Cornwall IFCA officers along with the results of the Fal Oyster Survey annually to monitor the impact to the fishery.</p> <p>Should total licences issued exceed 63, dredge hours exceed 16,671 (October to March), hand gathering hours exceed 648 (October to September), or an adverse effect or a risk of adverse effect on the features/sub-features arise, re-assessment and mitigation measures will be implemented if necessary (See Section 17/ Annex 4). This assessment is also subject to annual review.</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
		<p>Subtidal sandbank] the species composition of component communities</p> <p>Maintain [intertidal mud/ subtidal sand/ subtidal mixed sediments/ subtidal coarse sediment/ intertidal and subtidal seagrass beds/ intertidal rock/ infralittoral rock/ circalittoral rock] the species composition of component communities.</p> <p>Restore [intertidal mixed sediment/ intertidal sand and muddy sand/ subtidal mud] the species composition of component communities.</p>		<p>However, effort is not influenced by the abundance of native oysters with queen scallops also being a target species.</p> <p>Since the 2019-20 season, fishing effort has reduced and been significantly lower compared to the previous five seasons (2014-15 to 2018-19).</p> <p>The total native oysters placed on lays between October and March 2023-24 was 9,467 kg and 2,980 kg removed from lays (Table 9). These totals for lays include dredging and hand gathering.</p> <p>Hand-gathering only takes place on spring low tides when the target species are exposed. The shellfish totals removed by hand-gathering can be seen in Table 4. The species targeted by hand gathering are namely native oysters, mussels, pacific oysters and winkles. Other species such as cockles, scallops, queen scallops and whelks are also taken.</p> <p>A species which is now considered a target species is the Pacific oyster (<i>Magallana gigas</i>). Under Regulation 6 of the Fal Fishery Order 2016 any that are retained on board a vessel or in any container must not be returned to the fishery. In 2024-25, a total of 1,459 kg of pacific oysters have been landed.</p> <p>The minimum sizes for the three main target species are;</p> <p>Native oyster (<i>O. edulis</i>): when laid flat will not pass through a circular aperture of 72 mm diameter (Regulation 2, Fal Fishery Order 2016). This increased from 67 mm in August 2025.</p>	<p>NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
				<p>Mussels (<i>Mytilus</i> spp.): 50 mm in length (Regulation 3, Fal Fishery Order 2016).</p> <p>Queen scallop (<i>Chlamys</i> spp.): 40 mm (Council Regulation 850/98 Annex XII) the minimum conservation reference size (MCRS) of queen scallops (<i>Chlamys</i> spp.) is 40 mm under Council Regulation 1241/19 Annex VI²³. Due to the nature of the vessels targeting the fishery, they are not subject to the MCRS for <i>Chlamys</i> spp. as this applies to commercial fishing vessels that are registered and licensed.</p> <p>LOW EXPOSURE</p>		
<p>Features:</p> <p>Estuaries;</p> <p>Large shallow inlet and bays;</p> <p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Reefs;</p> <p>Sandbanks which are slightly covered by sea water all the time;</p> <p>Sub-features:</p>	<p>Supporting processes:</p> <p>water quality - dissolved oxygen</p>	<p>Maintain the dissolved oxygen concentration at levels equating to High Ecological Status[(specifically ≥ 5.7 mg per litre (at 35 salinity) for 95 % of the year)], avoiding deterioration from existing levels.</p>	<p>Operation: FISHING Activity <u>SHORE-BASED ACTIVITIES</u> and <u>DREDGES</u></p> <p>Deoxygenation</p>	<p>Deoxygenation</p> <p>No potential for deoxygenation to be caused due to oyster dredging and hand gathering activities within the SAC.</p> <p>NO EXPOSURE</p>	<p>Deoxygenation</p> <p>N/A</p>	<p>Deoxygenation</p> <p>NO</p>

²³ Regulation (EU) 2019/1241 of the European Parliament and of the Council. Available from: <https://www.legislation.gov.uk/eur/2019/1241/annex/VI> [Accessed: 27/09/2022].

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
Intertidal mixed sediments Intertidal sand and muddy sand Subtidal mixed sediments Subtidal mud Subtidal sand Subtidal coarse sediment Intertidal rock Infralittoral rock Circalittoral rock Maerl beds						
Features: Estuaries; Large shallow inlet and bays; Mudflats and sandflats not covered by seawater at low tide Reefs; Sandbanks which are slightly covered by sea water all the time; Sub-features:	Supporting processes: light levels	Maintain the natural light availability	Operation: FISHING Activity <u>SHORE-BASED ACTIVITIES</u> and <u>DREDGES</u> Introduction of light	Introduction of light The fishery is restricted to certain times of day within the open period; between the hours of 09:00 and 15:00 Monday to Friday and between the hours of 09:00 and 13:00 on a Saturday. No fishing is permitted on Sundays. The Fal Fishery is only permitted to operate during daylight hours therefore there is no need for additional light sources to be used in this fishery. NO EXPOSURE	Introduction of light N/A	Introduction of light NO

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
Intertidal sand and muddy sand Subtidal sand Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Maerl beds						
Features: Estuaries; Large shallow inlet and bays; Mudflats and sandflats not covered by seawater at low tide Reefs; Sandbanks which are slightly covered by sea water all the time; Atlantic salt meadows; Sub-features:	Structure: non-native species and pathogens	Reduce the introduction of non-native species and pathogens, and their impacts.	Operation: FISHING Activity <u>DREDGES</u> Introduction of microbial pathogens	Introduction of microbial pathogens Bivalve parasites such as <i>Marteilia refringens</i> and <i>Bonamia ostreae</i> can devastate populations of species such as <i>O. edulis</i> with diseases martelliosis and bonamiosis. The first recorded incidence of <i>B. ostreae</i> in the British Isles occurred in 1982 in the River Fal and caused large mortalities in the oyster stocks. The Fal is a Confirmed Designation number CD Area 01 (2015 v.2) for the control of <i>Bonamia ostreae</i> (Cefas, 2015). This designation issued under the Aquatic Animal Health (England and Wales) Regulations 2009 restricts the movement of any oysters from within the designated area without the prior written consent of the Fish Health Inspectorate at Cefas. Cefas undertook disease surveillance sampling of 150 <i>O. edulis</i> individuals within the Fal Estuary in 2020. Of these seven	Introduction of microbial pathogens Cornwall IFCA have a biosecurity plan for the Fal Fishery. The plan contains identified risks to the fishery, mitigation of the identified risks, a monitoring plan and a contingency plan. NO ADDITIONAL MITIGATION MEASURES ARE NECESSARY	Introduction of microbial pathogens NO

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIO) of the site?
Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal mixed sediments Subtidal mud Subtidal sand Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Circalittoral rock Atlantic salt meadows				<p>individuals tested positive for <i>Bonamia ostreae</i> (five from Messack, one from Truenaware point and one from Ruan Creek. <i>B. ostreae</i> is a microscopic single-celled parasite from the phylum Haplosporidia. It has no impact on other shellfish or on human health and does not affect the taste of oysters in anyway or pose a health risk to a consumer. However, it can result in significant mortalities in affected oyster stocks of up to 90% mortality when initially introduced (Culloty and Mulcahy, 2007). It is transmitted through proximity and there is currently no known treatment (Cefas, 2005). The samples were negative for <i>Marteilia refringens</i> and <i>Bonamia exitiosa</i>.</p> <p>The main level of control in preventing the disease spreading is by restricting live movements between stocks.</p> <p>Under Regulation 10, a person must not deposit any shellfish within the fishery area, where such shellfish originated from outside the fishery area, without authorisation from the Authority.</p> <p>LOW EXPOSURE</p>		
Features: Estuaries; Large shallow inlet and bays; Mudflats and sandflats not covered by seawater at low tide	Structure: non-native species and pathogens	Reduce the introduction of non-native species and pathogens, and their impacts.	Operation: FISHING Activity <u>SHORE-BASED ACTIVITIES</u> and <u>DREDGES</u> Introduction or spread of non-indigenous species	Introduction or spread of non-indigenous species Commercial fishing vessels are predominantly local vessels, using gear within a geographically restricted area. From the licence holder returns (Table 3.), the 2019-20 season saw the most Pacific oysters reported to be landed and removed from the fishery (10,213 kg). The total weight of pacific	Introduction or spread of non-indigenous species Cornwall IFCA have a biosecurity plan for the Fal Fishery. The plan contains identified risks to the fishery, mitigation of the identified risks, a	Introduction or spread of non-indigenous species <p style="text-align: center;">NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
<p>Reefs;</p> <p>Sandbanks which are slightly covered by sea water all the time;</p> <p>Atlantic salt meadows;</p> <p>Sub-features: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal mixed sediments Subtidal mud Subtidal sand Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Circalittoral rock Maerl beds Atlantic salt meadows</p>				<p>oysters landed had increased since the 2017-18 season, this was likely due to a more directed fishery with a market for pacific oysters. However since 2019-20 the quantity landed has fluctuated with only 25 kg of pacific oysters landed in 2023-24 and 1,459 kg in 2024-25.</p> <p>Additionally, the change in the Regulations in 2017 to not return pacific oysters the to the Fishery once caught would have influenced the landings.</p> <p>Slipper limpets, <i>Crepidula fornicata</i>, is a non-native species listed under Schedule 9 of the Wildlife and Countryside Act 1981 and are prohibited from release into the wild.</p> <p>The weight of slipper limpets removed is also recorded on the licence holder returns forms. This is recorded as 61 kg of slipper limpets in 2024-25 season, with the majority (50%) removed from Area B. For the previous seven seasons (2017-18 to 2024-25) the majority of slipper limpets removed has come from Area A. The number of slipper limpets reported as removed has reduced in the last two seasons.</p> <p>During Cornwall IFCA surveys the presence of non-native species are recorded as standard (Jenkin <i>et al.</i>, 2025a). Three non-native species were found during the survey; slipper limpets (<i>C. fornicate</i>), a Pacific oyster and three leathery sea-squirts, (<i>Styela clava</i>). During the 2023 survey one Portuguese oyster (<i>Crassostrea angulate</i>) was found (Jenkin <i>et al.</i>, 2023). All non-native species found during the survey were retained on board and removed from the fishery. A total of</p>	<p>monitoring plan and a contingency plan.</p> <p>The vessels and gear for this fishery remain in a relatively small area reducing the risk of non-natives.</p> <p>NO ADDITIONAL MITIGATION MEASURES ARE REQUIRED</p>	

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEOI) of the site?
				<p>2,063 slipper limpets were recorded during the 2025 survey. The number of slipper limpets has decreased since 2019.</p> <p>Densities of slipper limpets are highest either side of the channel running between the East Bank and North Bank. The total number of slipper limpets were highest in Area A, corresponding with the licence holder returns data.</p> <p>LOW EXPOSURE</p>		
<p>Features: Estuaries; Large shallow inlet and bays; Mudflats and sandflats not covered by seawater at low tide Reefs; Sandbanks which are slightly covered by sea water all the time; Sub-features: Intertidal seagrass beds Subtidal seagrass beds</p>	<p>Supporting processes: water quality - nutrients</p>	<p>Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels.</p>	<p>Operation: FISHING Activity <u>DREDGES</u> Nutrient enrichment</p>	<p>Nutrient enrichment</p> <p>No potential for nutrient enrichment to be caused due to oyster dredging within the SAC.</p> <p>NO EXPOSURE</p>	<p>Nutrient enrichment</p> <p>N/A</p>	<p>Nutrient enrichment</p> <p>NO</p>

HRA F&H FOF 2025

Feature(s)/ Sub features(s)	Attribute	Target for relevant attribute based on conservation objectives	Potential pressure(s) (associated impacts in Table 12 and Table 14)	Likelihood of impacts occurring/level of exposure to pressure	Mitigation measures if feature(s) is/are exposed to the pressure	Adverse effect on integrity (AEIOI) of the site?
<p>Features: Estuaries; Large shallow inlet and bays; Mudflats and sandflats not covered by seawater at low tide Reefs; Sandbanks which are slightly covered by sea water all the time; Sub-features: Subtidal mixed sediment Subtidal mud Subtidal sand Subtidal coarse sediment Intertidal seagrass beds Subtidal seagrass beds Intertidal rock Infralittoral rock Circalittoral rock Maerl beds</p>	<p>Supporting processes: water quality - nutrients</p>	<p>Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels.</p>	<p>Operation: FISHING Activity <u>DREDGES</u> Organic enrichment</p>	<p>Organic enrichment No potential for organic enrichment to be caused due to oyster dredging within the SAC. NO EXPOSURE</p>	<p>Organic enrichment N/A</p>	<p>Organic enrichment NO</p>

10. Conclusion alone²⁴

Is there an adverse effect on site integrity (AEIOI) of the site?	No
If yes, what feature does this risk apply to?	N/A
Can Cornwall IFCA exercise its functions to further the conservation objectives of the site?	Yes
If yes, what are the options?	Monitor activity levels and review (Sections 14, 17 and 18) for all features

Cornwall IFCA have made this assessment and concluded that there will be no adverse effect of dredging and hand working activities associated with the Fal Fishery Order 2016 on the features of the Fal and Helford SAC alone.

11. In-combination assessment

Oyster dredging and hand working fishing activities currently occur in the SAC alongside other fishing activities, commercial plans or projects and recreational activities; therefore, there is the potential for this activity to have a likely significant effect on site features/ sub-features when combined with other fishing activities, plans or projects and an in-combination assessment is required. To determine which other activities should be included in this assessment, a five square kilometre buffer was applied to the site.

Some licence holders utilise multiple fishing activities (e.g. potting, netting) throughout the year, within and outside of the Fal Fishery Area. The in-combination effect with other activities is shown in Table 16.

The Marine Management Organisation's Public Register of Marine Licence Applications (MMO, 2025) was checked (31/10/2025) for developments within the Fal and Helford SAC. All other current plans and projects within the SAC were screened out and considered not likely to impact the features of the SAC in-combination (Table 16). The impact of future plans or projects will require assessment in their own right, including accounting for any in-combination effects, alongside existing activities.

Any activities, including fishing activities and marine works licensed by the MMO within this area were identified. Relevant activities in or close to the SAC are shown in Table 16.

Table 16: Other relevant activities occurring in or close to the site

Other fishing activities being considered (Annex 3)			
Activity	Description	Potential Pressure (Natural England, 2025)	In-combination effect?
Towed demersal trawls and dredges (excluding oyster dredges)	The Cornwall IFCA Closed Areas (European Marine Sites) No. 2 Byelaw prohibits a person using bottom towed fishing gear within the SAC. This removes any potential for an in-combination effect.	Abrasion/disturbance of the substrate on the surface of the seabed Changes in suspended solids (water clarity) Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion Removal of non-target species Removal of target species Smothering and siltation rate changes Deoxygenation Introduction or spread of non-indigenous species Organic enrichment	No

²⁴ If conclusion of adverse effect alone an in-combination assessment is not required (but has been included for 'completeness').

HRA F&H FOF 2025

		Physical change (to another seabed type)	
Intertidal fishing activities	<p>Cornwall IFCA officers are aware of intertidal fishing activities occurring within the wider SAC, which include Hand working (access from vessel and land), Crab tiling, Digging with forks/ Bait digging, Beach seines, Shrimp push-nets and Fyke and stake nets.</p> <p>Shore-based activities are selective and only target species are removed and at current levels, the in-combination effect is minimal.</p>	<p>Abrasion/disturbance of the substrate on the surface of the seabed</p> <p>Habitat structure changes - removal of substratum (extraction)</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion</p> <p>Removal of target species</p> <p>Removal of non-target species</p> <p>Introduction or spread of non-indigenous species</p>	No
Potting	<p>Pots for crustacea and cuttle pots for cuttlefish are used within Fal and Helford SAC. Pots targeting crustacea are generally set on the reef/ sediment interface within Fal and Helford SAC. In many cases the vessels themselves are utilised for multiple fishing activities (e.g. potting, netting and/or lining).</p> <p>The oyster beds are not targeted by pots and traps and fishermen avoid the areas targeted by the oyster fishery to prevent gear becoming tangled.</p> <p>Further information is to be gathered on potting activities within the Fal and Helford SAC and its interaction with seagrass beds and maerl feature.</p> <p>Cornwall IFCA officers have suggested bringing in management measures for potting activities on seagrass beds and the maerl feature (only in areas categorised as Dense Maerl, NE category A1).</p> <p>As a result of this Cornwall IFCA have issued fishery guidance to minimise the impact of static gear on sensitive habitats (seagrass beds and dense live maerl beds) and other features within MPAs²⁵.</p> <p>There is no in-combination effect with the potting activity.</p>	<p>Abrasion/disturbance of the substrate on the surface of the seabed</p> <p>Removal of non-target species</p> <p>Removal of target species</p> <p>Introduction or spread of non-indigenous species</p> <p>Organic enrichment</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion</p>	No
Static and passive nets/lines	<p>Netting activities (Gill nets, Trammels and Entangling) are used within the SAC.</p> <p>The use of demersal nets within the SAC is indicated to be low. Nets targeting crustacea are generally set on the edges of rocks and reefs as well as sediment features. In many cases the vessels themselves are utilised for multiple fishing activities (e.g. potting, netting and/or lining).</p> <p>The use of nets (except ebb nets and sand eel seines under a Cornwall IFCA Permit) within the Fal (upstream of a line drawn from Pendennis Point and Saint Anthony Head) are prohibited by the Cornwall IFCA River and Estuarine Fishing Nets Byelaw 2017.</p>	<p>Abrasion/disturbance of the substrate on the surface of the seabed</p> <p>Removal of non-target species</p> <p>Removal of target species</p> <p>Introduction or spread of non-indigenous species</p> <p>Organic enrichment</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion</p>	No

²⁵ Available from: <https://www.cornwall-ifca.gov.uk/advice>

HRA F&H FOF 2025

	No in-combination effect is thought to be possible.		
Commercial Diving	Commercial diving activities occurring within the SAC are thought to occur at a low level. Due to the low level of commercial diving activities, no in-combination effect is thought to be possible.	Removal of target species Abrasion/disturbance of the substrate on the surface of the seabed Introduction or spread of non-indigenous species Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion	No
Pelagic activities	An in-combination effect from pelagic gear, including hand-lining and/or charter angling can be ruled out as these do not interact with the seabed. The use of nets (except ebb nets and sand eel seines under a Cornwall IFCA Permit) within the Fal (upstream of a line drawn from Pendennis Point and Saint Anthony Head) are prohibited by the Cornwall IFCA River and Estuarine Fishing Nets Byelaw 2017. This includes ring nets. An in-combination effect from pelagic gear can be ruled out.	Abrasion/disturbance of the substrate on the surface of the seabed Changes in suspended solids (water clarity) Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion Removal of non-target species Smothering and siltation rate changes Deoxygenation Introduction or spread of non-indigenous species Organic enrichment Physical change (to another seabed type)	No
Plans and Projects (Marine Licence Applications)			
Activity	Description	Potential Pressure (Natural England, 2025)	In-combination effect
Construction of landing stage and stairs Case ref: MLA/2025/004 26 Consultation open until 19 th Nov 2025	Construction of replacement landing stage and stairs at a property near Restronguet Point, Feock. The proposed landing stage is located immediately adjacent to and similar to MLA/2025/00065, which has been consented. The construction is outside of the Fishery Area.	AoO activity used: COASTAL INFRASTRUCTURE: Slipway (maintenance/construction) Abrasion/disturbance of the substrate on the surface of the seabed Changes in suspended solids (water clarity) Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion Physical change (to another seabed/ sediment type) Physical loss (to land or freshwater habitat) Smothering and siltation rate changes (Heavy/ Light) Water flow (tidal current) changes, including sediment transport considerations Wave exposure changes	There is currently no in-combination effect.
Falmouth Seagrass Restoration Case ref: MLA/2025/002 40	Falmouth seagrass restoration at Swanpool and Gyllyanvase subtidal seagrass beds adding approximately 10% of Falmouth Bays current seagrass extent (create >10 ha additional habitat). All restoration planting operations will be conducted by hand with divers.	AoO activity used: FISHING: Diving Abrasion/disturbance of the substrate on the surface of the seabed Introduction or spread of non-indigenous species	There is currently no in-combination effect.

HRA F&H FOF 2025

Consultation open until 7 th Nov 2025		Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion	
Falmouth Docks Development Case ref: MLA/2025/001 57 Submitted (in progress)	Seeking approval to redevelop Falmouth Docks. The project aims to repair the aging dock infrastructure, enhancing berth capacity for alongside docking to support current business and future needs, including cruise and cargo capacity, and floating offshore wind (FLOW) market support. Application - Construction of new works, Decommissioning of works, Disposal of dredged material, Maintenance of existing works, Navigational dredging (capital), Navigational dredging (maintenance).	AoO activity used: PORTS AND HARBOURS (construction): Construction of port and harbour structures Abrasion/disturbance of the substrate on the surface of the seabed Barrier to species movement Changes in suspended solids (water clarity) Emergence regime changes, including tidal level change considerations Introduction of light Habitat structure changes - removal of substratum (extraction) Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion Physical change (to another seabed/ sediment type) Physical loss (to land or freshwater habitat) Removal of non-target species Smothering and siltation rate changes (Heavy/ Light) Water flow (tidal current) changes, including sediment transport considerations Wave exposure changes	There is currently no in-combination effect. However Cornwall IFCA have responded to the Marine Licence Application consultation regarding the works and recently submitted a second response.
Other recreational/ commercial activities (Medium to High risk pressures only)			
Activity	Description	Potential Pressure	In-combination effect
Commercial Anchoring	See section 11.1	AoO activity used: PORTS AND HARBOURS (operation): Berths/moorings/anchorages Abrasion/disturbance of the substrate on the surface of the seabed Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion Physical change (to another sediment type)	No
Recreational anchoring	See section 11.1	AoO activity used: RECREATION: Powerboating or sailing: mooring and/or anchoring Abrasion/disturbance of the substrate on the surface of the seabed Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion Physical change (to another seabed/ sediment type)	No

HRA F&H FOF 2025

Mooring	See section 11.1	<p>AoO activity used: PORTS AND HARBOURS (operation): Berths/moorings/anchorages</p> <p>Abrasion/disturbance of the substrate on the surface of the seabed</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion</p> <p>Physical change (to another sediment type)</p>	No
Water quality	<p>Freshwater pollution, water pollution, discharge</p> <p>See section 11.2</p>	<p>AoO activity used: COASTAL INFRASTRUCTURE: Outfalls/ Intake pipes (maintenance/construction/usage)</p> <p>Abrasion/disturbance of the substrate on the surface of the seabed</p> <p>Barrier to species movement</p> <p>Changes in suspended solids (water clarity)</p> <p>Habitat structure changes - removal of substratum (extraction)</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion</p> <p>Physical change (to another seabed/ sediment type)</p> <p>Physical loss (to land or freshwater habitat)</p> <p>Smothering and siltation rate changes (Heavy/ Light)</p> <p>Taken from condition assessment:</p> <p>Nutrient enrichment</p> <p>Deoxygenation</p>	No
Leisure	Includes swimming and rockpooling.	<p>AoO activity used: RECREATION: Leisure (e.g. swimming, rock pooling)</p> <p>No pressures listed as medium to high risk.</p> <p>Low risk: Abrasion/disturbance of the substrate on the surface of the seabed</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion</p>	No

11.1 Anchoring and mooring

The need for management of anchoring and mooring within protected areas is being reviewed due to the responsibility of Relevant Authorities under Article 6(2) of the Habitats Directive to 'avoid the deterioration of natural habitats and habitats of species' in European Sites and to ensure that the conservation objectives for protected species and habitats are met. The outputs from a DEFRA led study on the impacts of recreational and commercial anchoring and impacts of moorings in marine protected areas in Wales and England highlighted the highlighted the Fal and Helford SAC 18th out of 173 sites of 173 sites for exposure to anchoring and mooring activity (Griffiths *et al.*, 2017).

HRA_F&H_FOF_2025

The LIFE Recreation ReMEDIES Project is raising awareness on the impact recreational boating can have on seagrass and maerl habitats and encourage the use of best practice from The Green Blue guide to anchoring and moorings (The Green Blue, 2022).

The Environmental Code of Practice for the ports of Falmouth, Truro, Penryn and St Mawes highlights sensitive areas (seagrass and maerl beds) in the Carrick Roads and asks people to avoid anchoring, launching and making contact with motor or hull in these sensitive habitats (SAC Management Forum, 2021).

Falmouth Harbour, working with the Ocean Conservation Trust, have installed markers²⁶ for identifying and raising awareness of sensitive habitats of seagrass and maerl beds within Falmouth Bay and Carrick Roads, however anchoring can still occur in these areas.

11.2 Water Quality

The commercial gathering of bivalves for human consumption is subject to them being taken from a designated area where water quality is monitored and classified as suitable by the Food Standards Agency. Designated classified bivalve mollusc production areas for native oysters (*O. Edulis*), mussels (*Mytilus* spp.), pacific oysters (*M. gigas*) and variegated scallop (*M. varia*) are located in the upper and lower Fal and parts of the Helford (Cefas, 2025; Food Standards Agency, 2025).

Bivalve mollusc (shellfish) harvesting areas are classified according to the extent of contamination shown by monitoring *E. coli* in shellfish flesh. The Fal (Lower and Upper) is classified as Class B and shellfish can be supplied for human consumption after one of three processes, purification in an approved establishment, relaying for at least one month in a classified Class A relaying area or an approved heat treatment process. Additionally some areas for oysters and mussels have a long term classification (B-LT) which is when a Class B production area has stable compliance over a 5-year period (Cefas, 2025; Food Standards Agency, 2025).

The Environment Agency is responsible for water quality in England and has to carry out functions to comply with The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The WFD Regulations provide a framework for managing the water environment in England, including the preparation of River Basin Management Plans (RBMP). The Fal catchment area is covered in the South West river basin district RBMP. The plans aim to ensure that all water bodies are in good ecological status.

The Carrick Roads Inner water body covers the Fal Fishery area and was classified as Moderate ecological status in 2022 (EA, 2023). The reasons for not achieving good status included:

Diffuse Sources:

- Poor nutrient and livestock management derived from agriculture and rural land management classified by Dissolved Inorganic Nitrogen
- Contaminated water body bed sediments from urban and transport pollution classified by Tributyltin Compounds

Point Source:

- Sewage discharge (intermittent and continuous) from the water industry classified by Dissolved Inorganic Nitrogen

The EA regulates and monitors the frequency and duration of storm overflow spills from water and sewerage companies by an Event Duration Monitor (EDM) at each storm overflow site. The EDM measures the level of sewage in the system and indicates whether the overflow is active, and for how long.

The Fal Estuary is covered by South West Water and the Storm Overflow Annual Return data detailed that sewage releases were recorded 1,978 times, lasting 16,688 hours at 41 sites in 2023 and 1,627 times, 13,945 hours at 44 sites in 2024 (EA, 2025). The Fal Estuary was ranked as the second most polluted shellfish area in England and Wales by duration of sewage overflows as reported by the water companies in 2023, and third in 2024 (Top-Of-The-Poops CC-BY-SA 4.0, 2024).

²⁶ Charts of the markers available from: <https://www.falmouthharbour.co.uk/wp-content/uploads/2022/05/220505-Notice-to-mariners-charts-1.pdf> [Accessed 17/11/2022]

HRA_F&H_FOF_2025

For pollution reports within the Fal Fishery licence holders (and other interested bodies such processing plants etc.) are notified by the Cornwall Port Health Authority via the Local Action Group (LAG) email.

South West Water is carrying out the Falmouth Stormwater Overflow Improvement Scheme to reduce the frequency and impact of storm overflow spills and protect estuary waters. The project involves building a new underground storm tank, upgrading screens, and fixing issues with groundwater infiltration into sewer pipes which is being undertaken in 2025-2026 (South West Water, 2025).

Local initiatives addressing agricultural pollution includes the Fal Rivers to Reef Project. Fal Rivers to Reef is a Cornwall Council project taking a source-to-sea approach to restore the Fal catchment, from its rivers to the marine environment. It aims to make the area a biodiversity hotspot by restoring clean water, supporting native species, large-scale habitat restoration and creation on land, protecting marine habitats, and strengthening farming businesses through regenerative practices (Cornwall Council, 2025).

11.3 Climate change

After fishing pressure, climate change is one of the most severe threats to target stocks and the fishing industry (Pinnegar *et al.*, 2020).

The UK has experienced an increase in winter storms in recent years, with some climatic modelling suggesting this frequency could continue to increase in the future (Wolf *et al.*, 2020). This also has significant implications for where and when fishers are able to operate. Storms present a physical danger to fishers, their vessels and gear, as well as lead to financial hardship in fishing communities. Increasing frequency of storms, prevents fishers from recovering their gear, increasing risk of physical damage from nets and pots on the seabed, and increasing the risk of lost gear and ghost fishing. Increased storms events also lead to an increase in rainwater run off which can lead to an excess of nutrients and contaminants.

Climate change is causing sea levels to rise. Organisms with preferred depth ranges, such as some juvenile crustaceans, will migrate towards the shore to maintain their preferred depth (Hall *et al.*, 2019) and the extent of intertidal habitats may change over time.

Increasing sea surface temperatures (SST) are also changing the species that inhabit the waters within the Cornwall IFCA District (Stebbing *et al.*, 2002). Rising SST can impact the distribution, recruitment, the timing of spawning, hatching and seasonal migration events, the abundance of invasive species and changes in trophic structures (Simpson *et al.*, 2013; ICES, 2011; Rijnsdorp *et al.*, 2009). The distribution of species is changing with common species moving further north and fish which are typical of the Mediterranean being caught off Cornwall (Herdson, 2021).

Climate change increases dissolved carbon dioxide concentrations in the oceans (ocean acidification) which may impact crustaceans as the shells of crabs and lobsters may take longer to harden or the shells might dissolve. It is likely that bacterial shell disease will increase. Reductions in oxygen concentrations in oceans due to eutrophication and/ or climate change have been suggested as a potential threat to fisheries and marine ecosystems (Townhill *et al.*, 2017; UNEP, 2004), it is unknown the impact this may have on stocks and the fisheries in the Cornwall IFCA District.

11.4 Blue Carbon

Species and habitats found within MPAs provide an important function by storing carbon dioxide from the water and atmosphere. Important habitats and species include seagrass beds, maerl, saltmarsh, kelp and sediment amongst others. Cornwall IFCA has been involved with data collection of seagrass extents within the Cornwall IFCA District for projects assessing the carbon stock of seagrass habitat within MPAs (Jenkin *et al.*, 2021; 2022a; 2022b) and for maerl extents within the Fal and Helford SAC (Laing and Hobson, 2023).

HRA_F&H_FOF_2025

12. Conclusion in-combination

Cornwall IFCA have made this assessment and concluded that there will be no adverse effect of dredging and hand working activities associated with the Fal Fishery Order 2016 on the features of the Fal and Helford SAC in-combination.

13. Summary of consultation with Natural England

Natural England provided informal advice on 02/10/2024 for the previous season HRA (2024-25) which has been incorporated into this assessment.

This assessment was sent to Natural England on 18/12/2025 for formal advice. Natural England provided formal advice on 22/01/2026 and can be seen in Annex 5.

14. Management options for all features

Option 1: Current activity levels acceptable, appropriate management established.

Option 2: Further management measures required.

For all features of the SAC **Option 1** is the most appropriate option to best further the conservation objectives of the site.

15. Overall conclusion

Cornwall IFCA conclude that there no adverse effect of oyster dredging and hand working at current levels on the features of the Fal and Helford SAC alone or in-combination.

16. Integrity test

It can be concluded that the activities assessed in this HRA, alone or in-combination, do not adversely affect the features of the Fal and Helford SAC and that future activity, at the levels anticipated, will not foreseeably have an adverse effect on the integrity of the site.

17. Adaptive risk review process

Monitoring of dredging and shore-based activities will occur through ongoing surveys, statistics returns, and patrols by Cornwall IFCA. If the total number of licences issued increase above 63, dredging hours increase over 16,671 (October to March), hand-gathering hours exceed 648 (October to September) (for detail see Figure 6), or if an adverse effect on the site features is noted, this will trigger a review of the assessment to assess the level and distribution of the activity, current site condition and potential changes to the Regulations and action these as and when necessary and appropriate.

For activities within the SAC, any subsequent evidence gathered would be used to assess the need for further management options which would be subject to scrutiny through Cornwall IFCA's Byelaw working group and full committee. Any management options decided through this process would be subject to public consultation.

The Fal Fishery Management Committee (FFMC) exists to discuss improvement and management matters for oysters and mussels within the regulated fishery and make recommendations to Cornwall IFCA. FFMC includes representatives from the fishing and merchanting sectors, as well as from other relevant regulatory organisations. Its members provide detailed, expert input into the ongoing management process and help with the development of any new measures.

This process is illustrated in Annex 4.

HRA_F&H_FOF_2025

18. Management Plan

Under the Fal Fishery Order 2016 Article 3 enquires the Authority to publish and review its management plan for the fishery. The purpose of this plan, which is reviewed annually following consultation with interested parties, is to set out the objectives for the fishery and actions for the following year. Please refer to the 'Fal Fishery Order Management Plan 2020-21' for more details²⁷. The Fal Fishery Order Management Plan 2020-21 is still valid as no changes were considered necessary for the 2025-26 season.

²⁷ The Fal Fishery Order Management Plan 2020-21 available from:
https://secure.toolkitfiles.co.uk/clients/17099/sitedata/Fal_Fishery/Fal-Fishery-Order-Management-Plan-2020-21.pdf
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HRA_F&H_FOF_2025

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HRA_F&H_FOF_2025

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HRA_F&H_FOF_2025

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Annex 1: Site Map

MAGiC

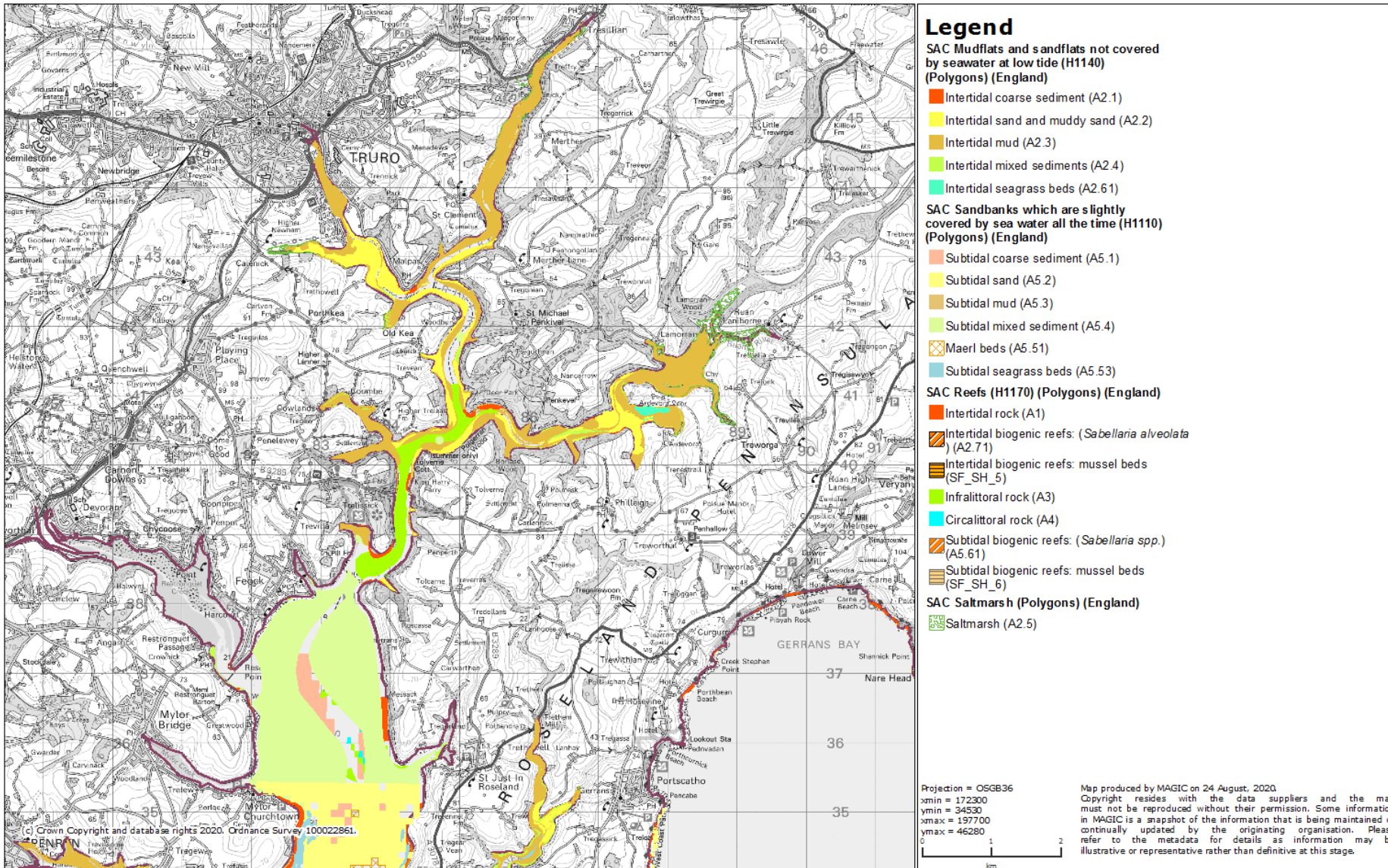
Fal and Helford SAC



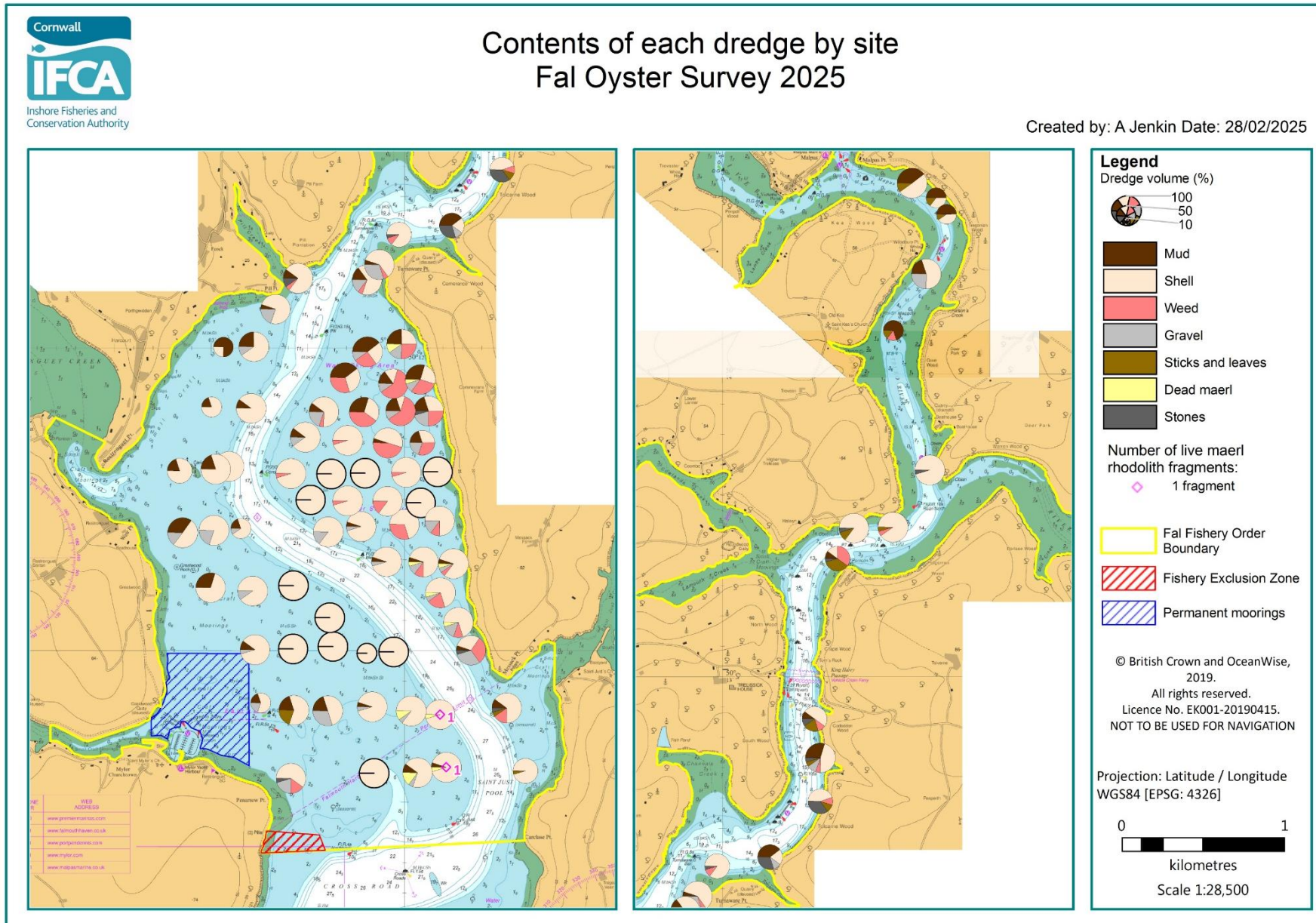
<p>Legend Special Areas of Conservation (Marine Components GB)</p> <ul style="list-style-type: none"> Candidate Designated Possible 		<p>0 2.5 5</p> <p>km</p>
<p>Projection = OSGB36 xmin = 160100 ymin = 22580 xmax = 203400 ymax = 44450 Map produced by MAGiC on 12 March, 2020. Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.</p>		

Annex Figure A: Fal and Helford SAC Site Map (Magic, 2020).

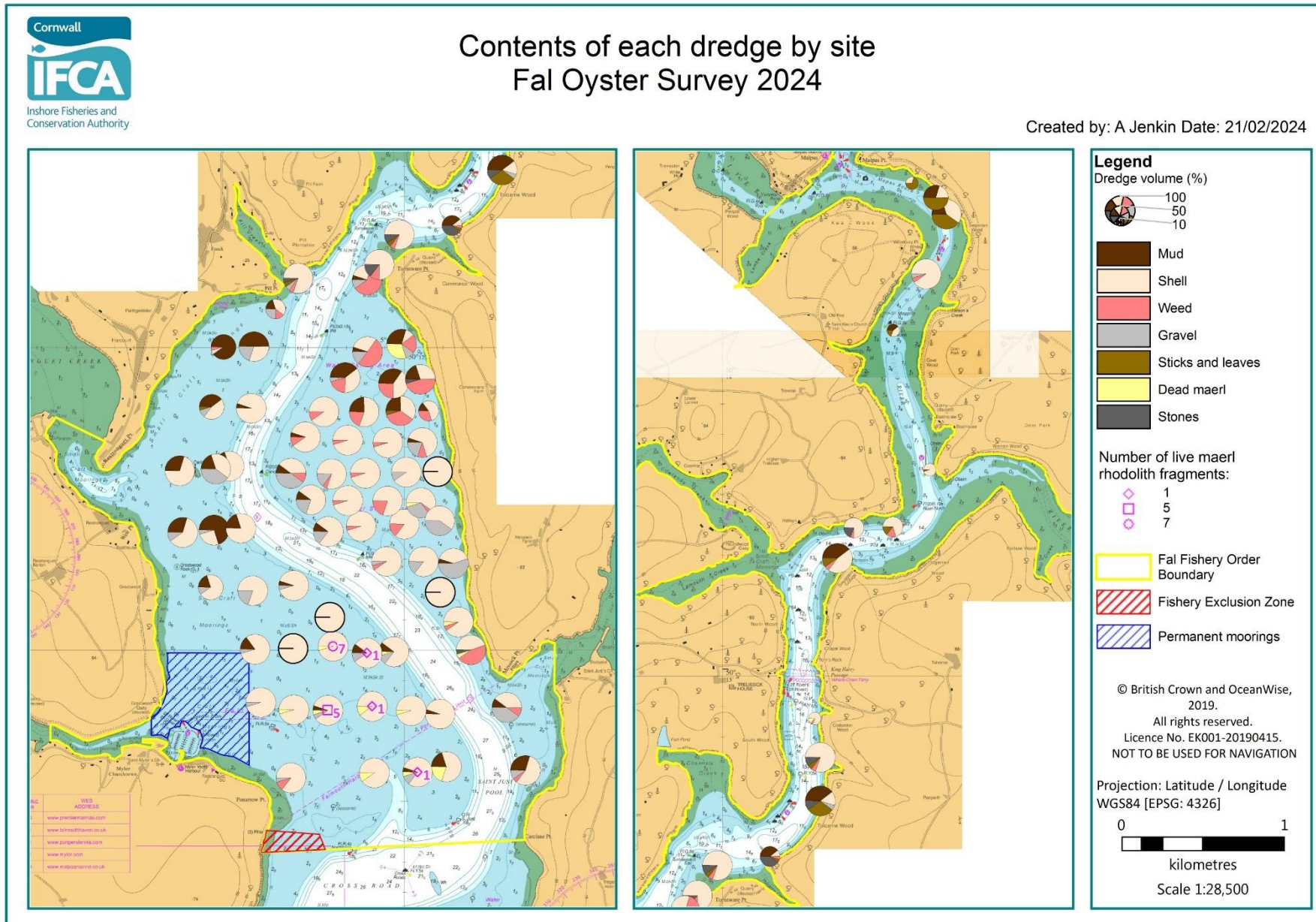
Annex 2: SAC feature map



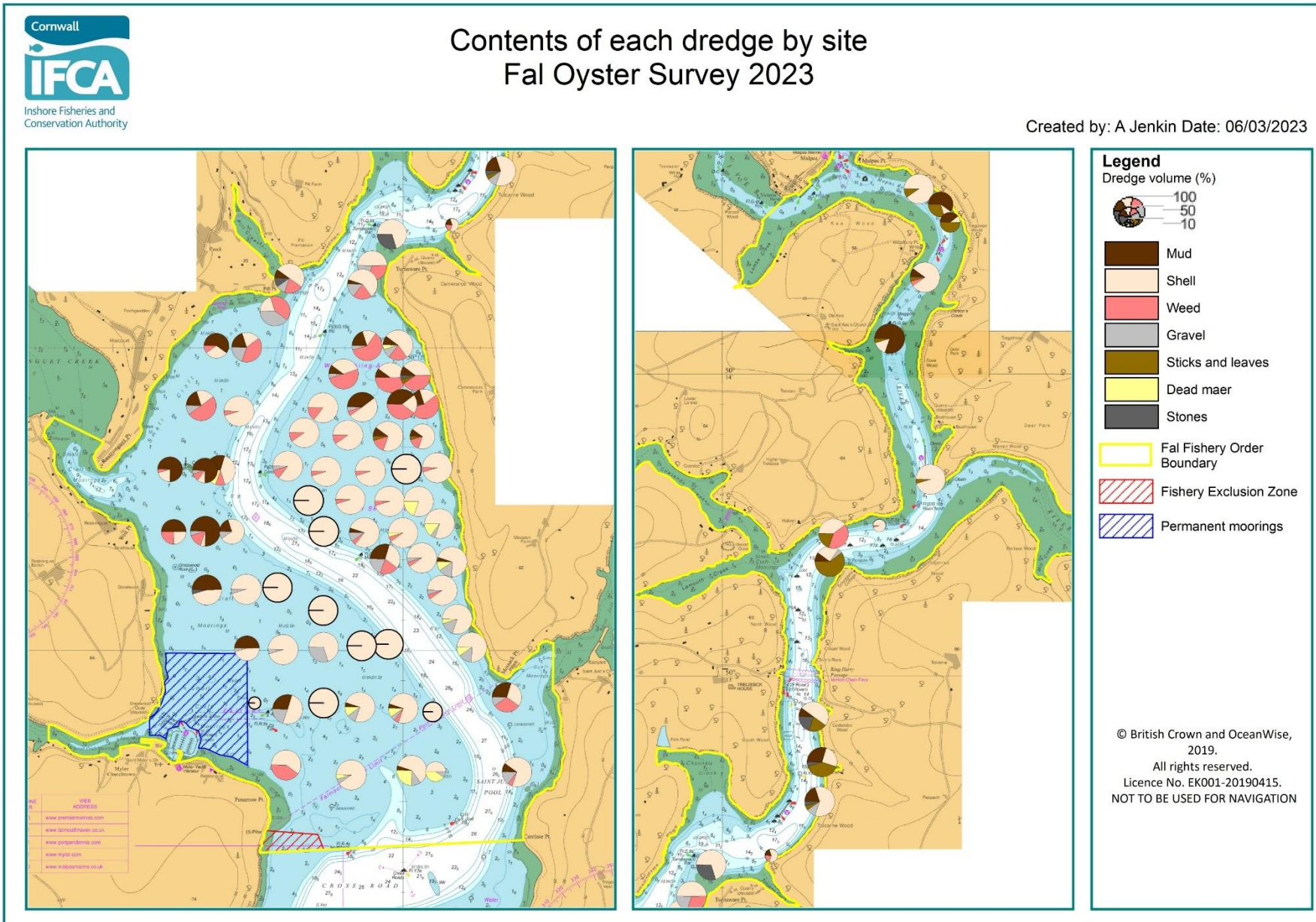
Annex Figure B: Fal and Helford SAC feature map (Magic, 2020)



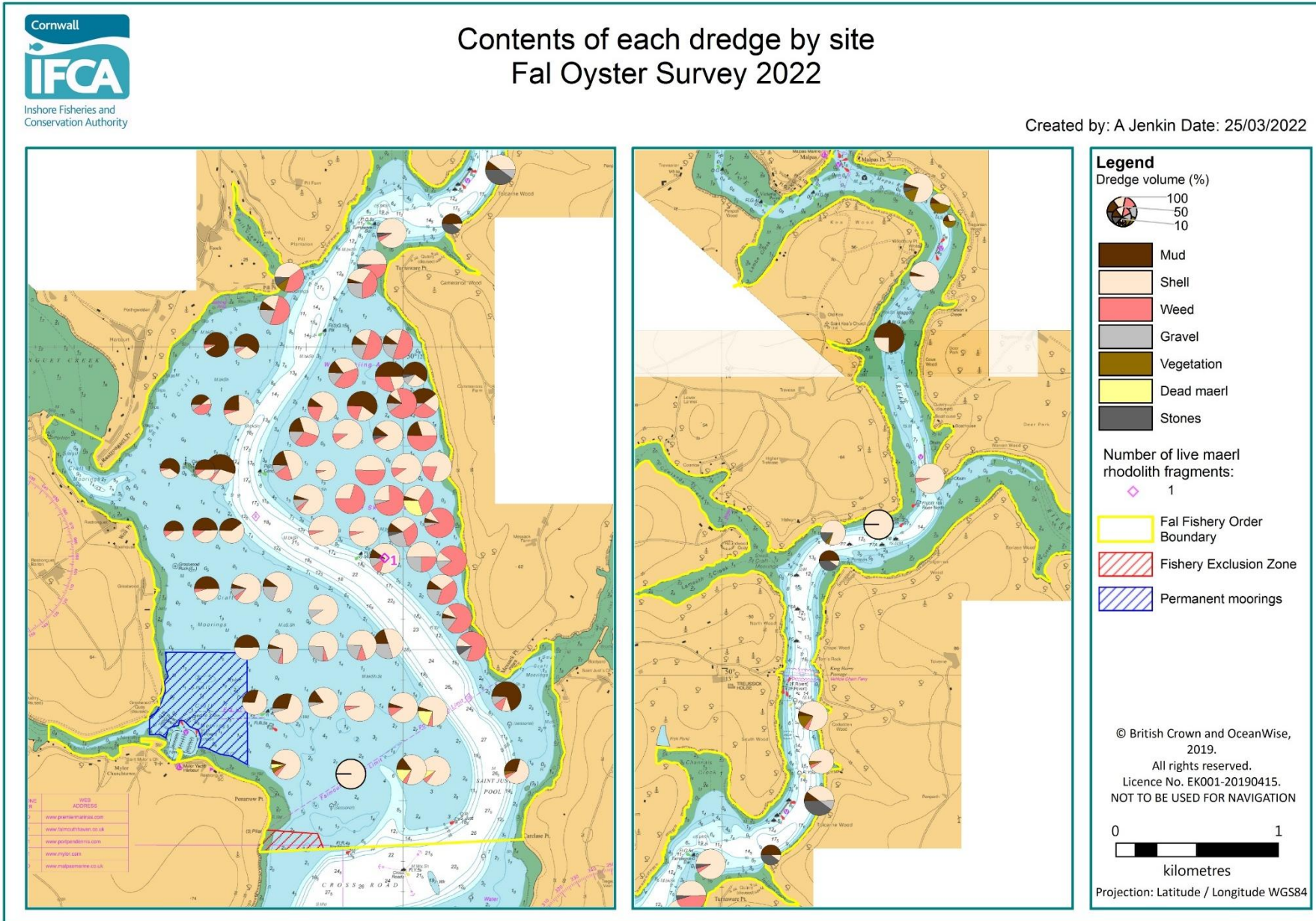
Annex Figure C: The dredge volume and the contents of each dredge per site recorded during the Fal oyster survey 2025.



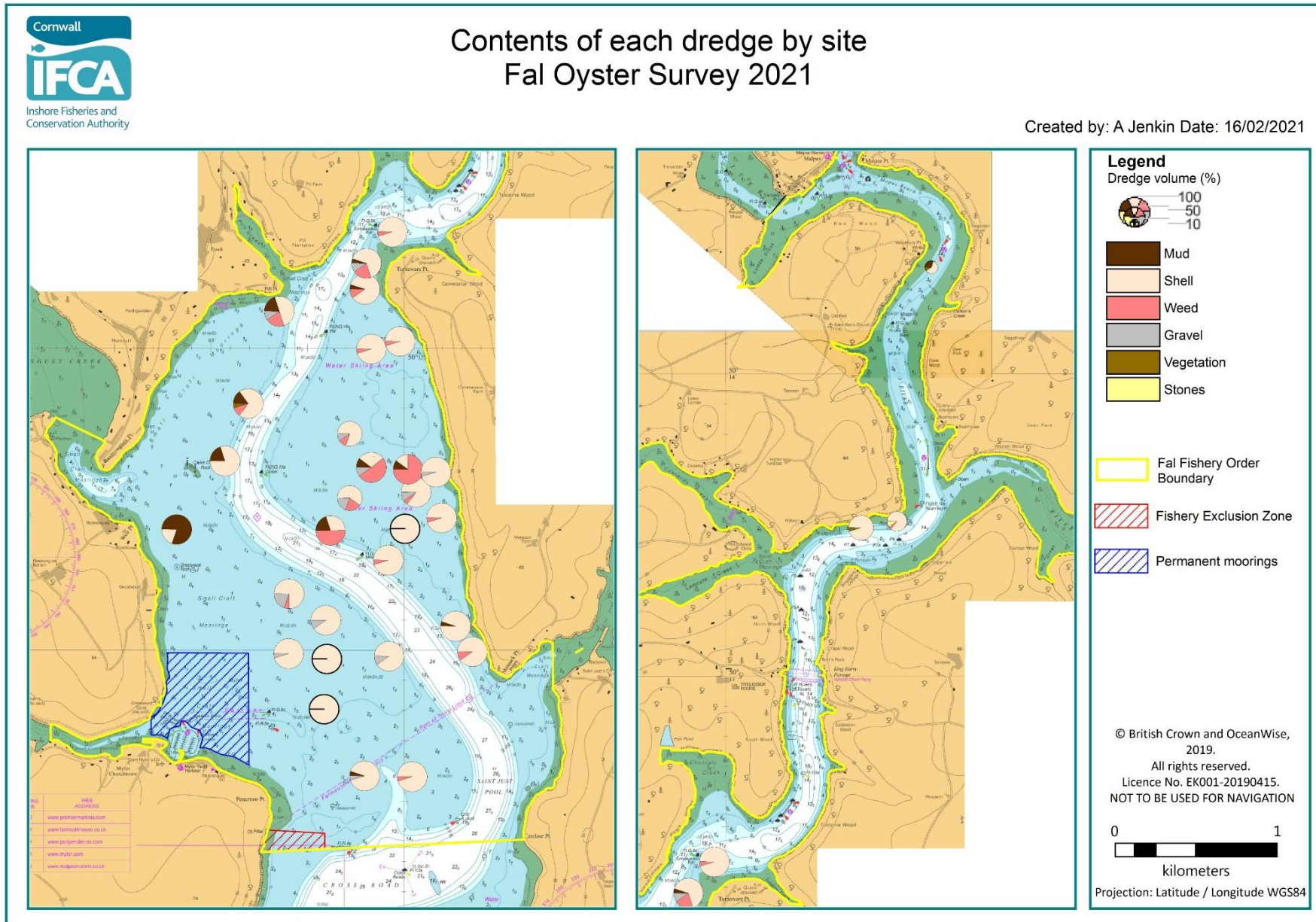
Annex Figure D: The dredge volume and the contents of each dredge per site recorded during the Fal oyster survey 2024.



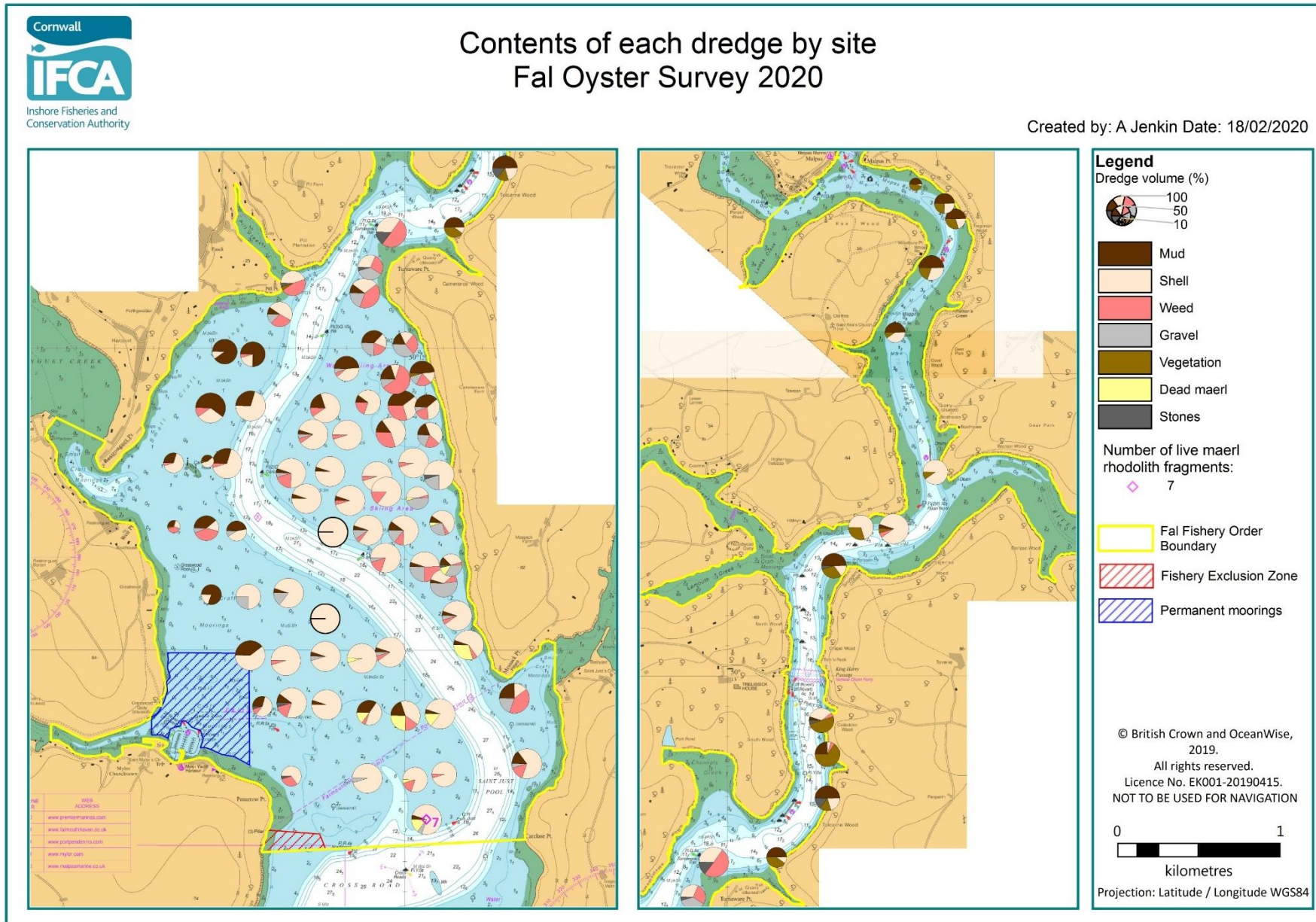
Annex Figure E: The dredge volume and the contents of each dredge per site recorded during the Fal oyster survey 2023.



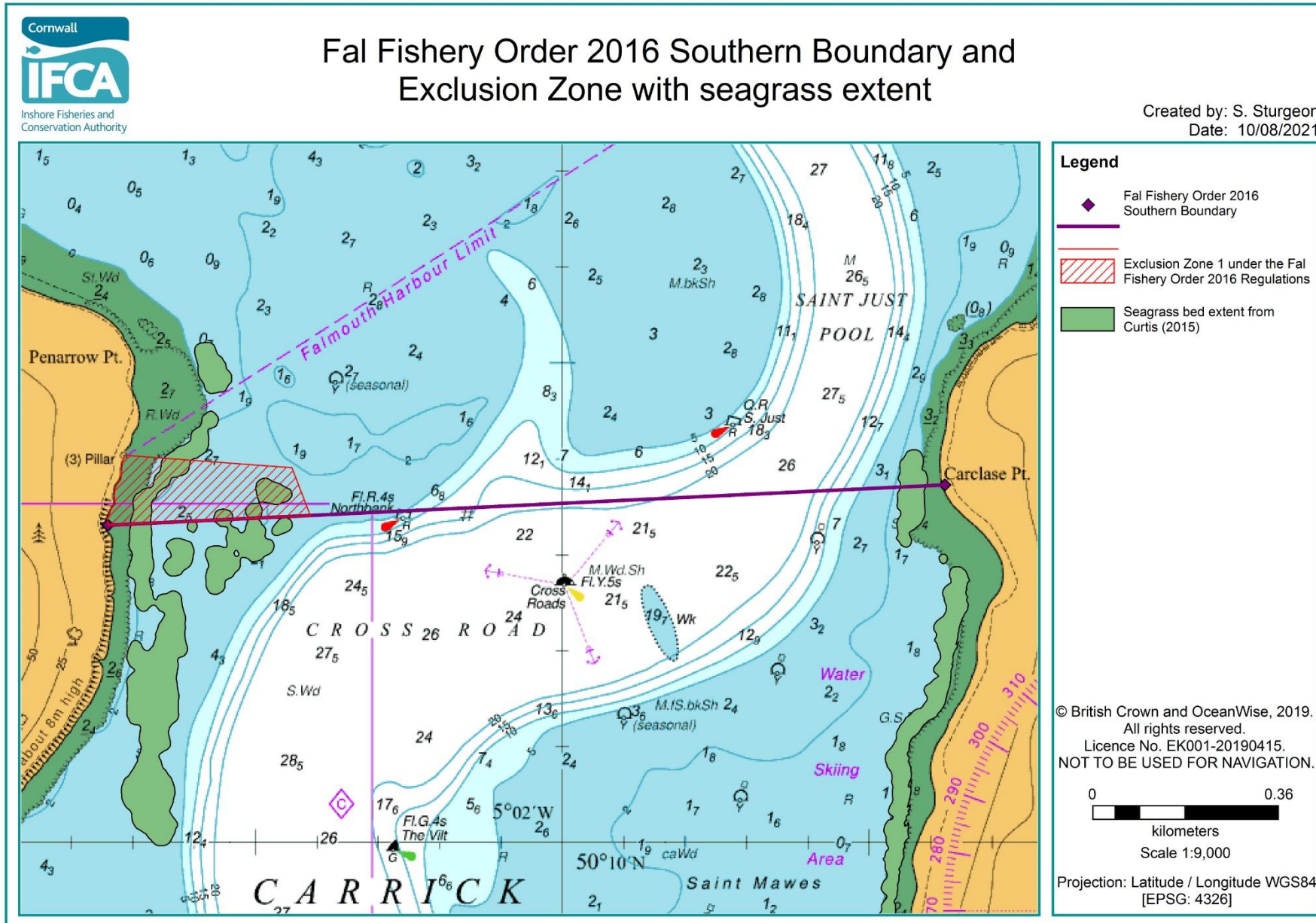
Annex Figure F: The dredge volume and the contents of each dredge per site recorded during the Fal oyster survey 2022.



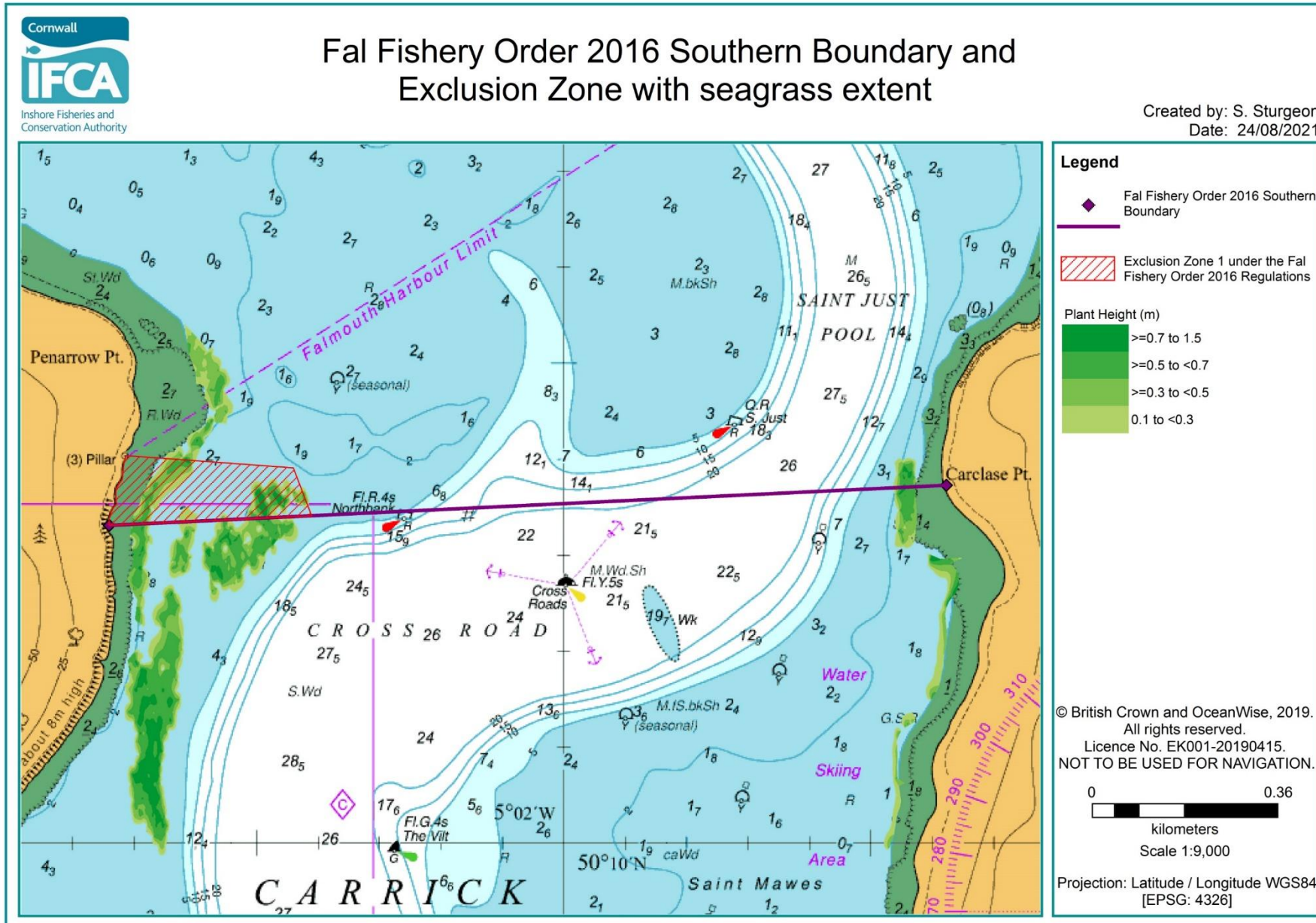
Annex Figure G: The dredge volume and the contents of each dredge per site recorded during the Fal oyster survey 2021.



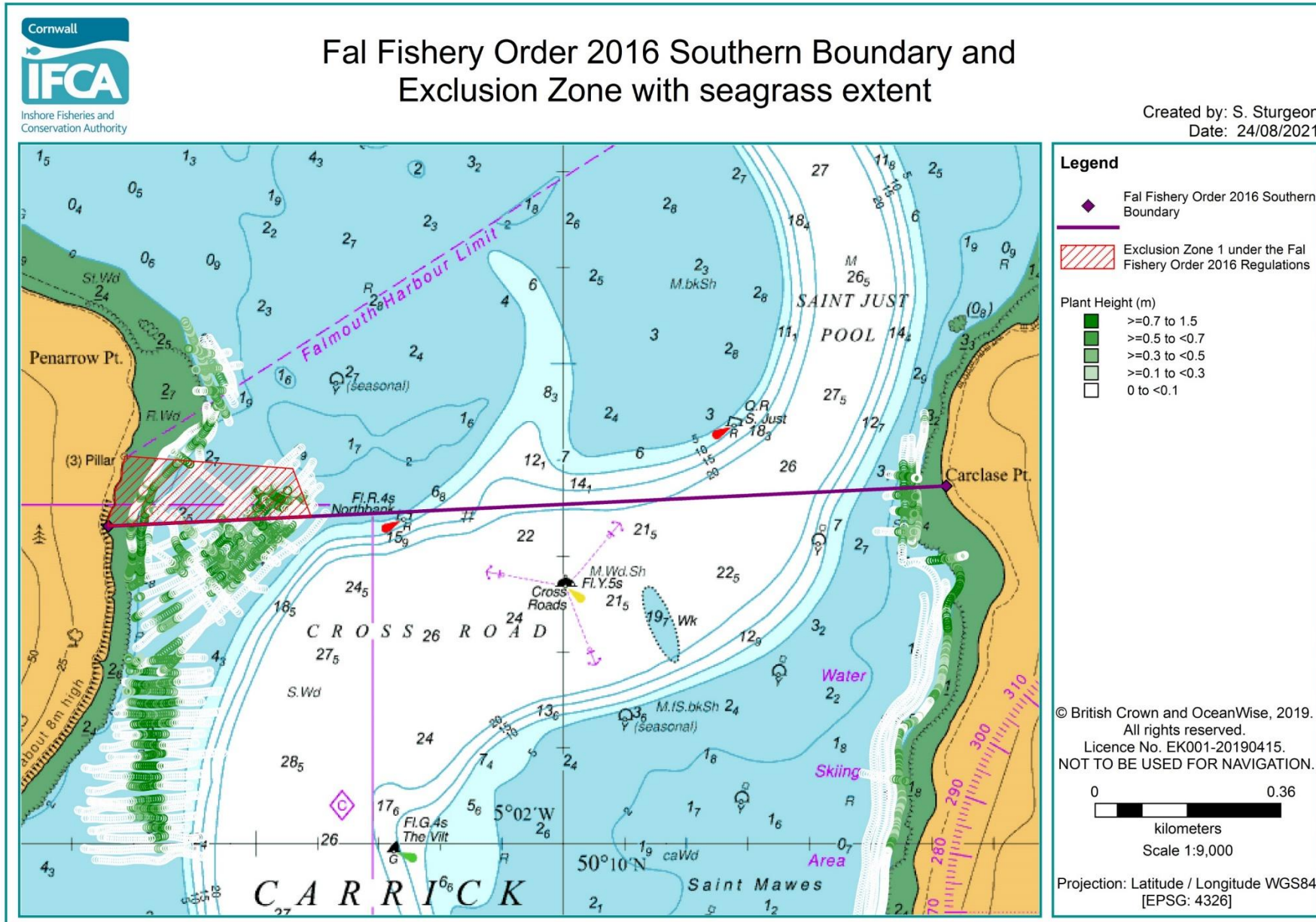
Annex Figure H: The dredge volume and the contents of each dredge per site recorded during the Fal oyster survey 2020.



Annex Figure I: The extent of seagrass beds within and near the southern boundary of the Fal Fishery Order 2016 and the Exclusion Zone. Seagrass extent is from the Fal and Helford SAC Seagrass Condition Assessment in 2015 carried out by EcoSpan (Curtis, 2015)



Annex Figure J: Contour plot displaying height (m) of seagrass recorded using a MX Aquatic Habitat Echosounder by Cornwall IFCA in 2021 within and near the southern boundary of the Fal Fishery Order 2016 and the Exclusion Zone.



Annex Figure K: Survey lines and height (m) of seagrass recorded using a MX Aquatic Habitat Echosounder by Cornwall IFCA in 2021 within and near the southern boundary of the Fal Fishery Order 2016 and the Exclusion Zone.

HRA_F&H_FOF_2025

Annex 3: Fishing Activities within the site

Annex Table A: Fishing activity levels within the Fal and Helford SAC

Natural England Aggregated Method	Matrix Gear Type	Specific Gear Type	Does the fishing activity take place within the SAC?	Level of the activity occurring	Justification/Evidence used	
Demersal trawl	Towed (demersal)	Beam trawl (whitefish)	N	Activity prohibited under Cornwall IFCA Closed Areas (European Marine Sites) No. 2 Byelaw		
		Beam trawl (shrimp)	N			
		Beam trawl (pulse/wing)	N			
		Heavy otter trawl	N			
		Multi-rig trawls	N			
		Light otter trawl	N			
		Pair trawl	N			
		Anchor seine	N			
Dredges	Dredges (towed)	Scallops	N	Activity prohibited under Cornwall IFCA Closed Areas (European Marine Sites) No. 2 Byelaw		
		Mussels, clams, oysters	N (except in the Fal Fishery from a non-mechanically propelled vessel with hand hauled dredges and multiple dredge licences available)			
		Pump scoop (cockles, clams)	N			
	Dredges (other)	Suction (cockles...)	N			
		Tractor	N			
Pelagic fishing	Towed (pelagic)	Mid-water trawl (single)	N	Cornwall IFCA officer knowledge		
		Mid-water trawl (pair)	N			
		Industrial trawls	N			
	Passive - nets	Drift nets (pelagic)	Maybe			Not aware of this activity occurring – but might do
	Ebb nets	Ebb net (pelagic)	Y			
	Lines	Longlines (pelagic)	Maybe			Not aware of this activity occurring – but might do
		Handlines (rod/gurdy etc)	Y			
		Jigging/trolling	Y			
Seine nets and other	Purse seine/ring nets	Y (ring netting)				
Traps	Static - pots/traps	Pots/creels (crustacea/gastropods)	Y			
		Cuttle pots	Y			
		Fish traps	N			
Anchored Nets/ Lines	Static - fixed nets	Gill nets	Y			
		Trammels	Y			
		Entangling	Y			
	Lines	Longlines (demersal)	Maybe	Not aware of this activity occurring – but might do		
Diving	Miscellaneous	Commercial diving	Y			
Shore-based activities	Intertidal handwork	Hand working (access from vessel)	Maybe			
		Hand work (access from land)	Y			
	Bait collection	Bait dragging	N			
		Crab tiling	Y			

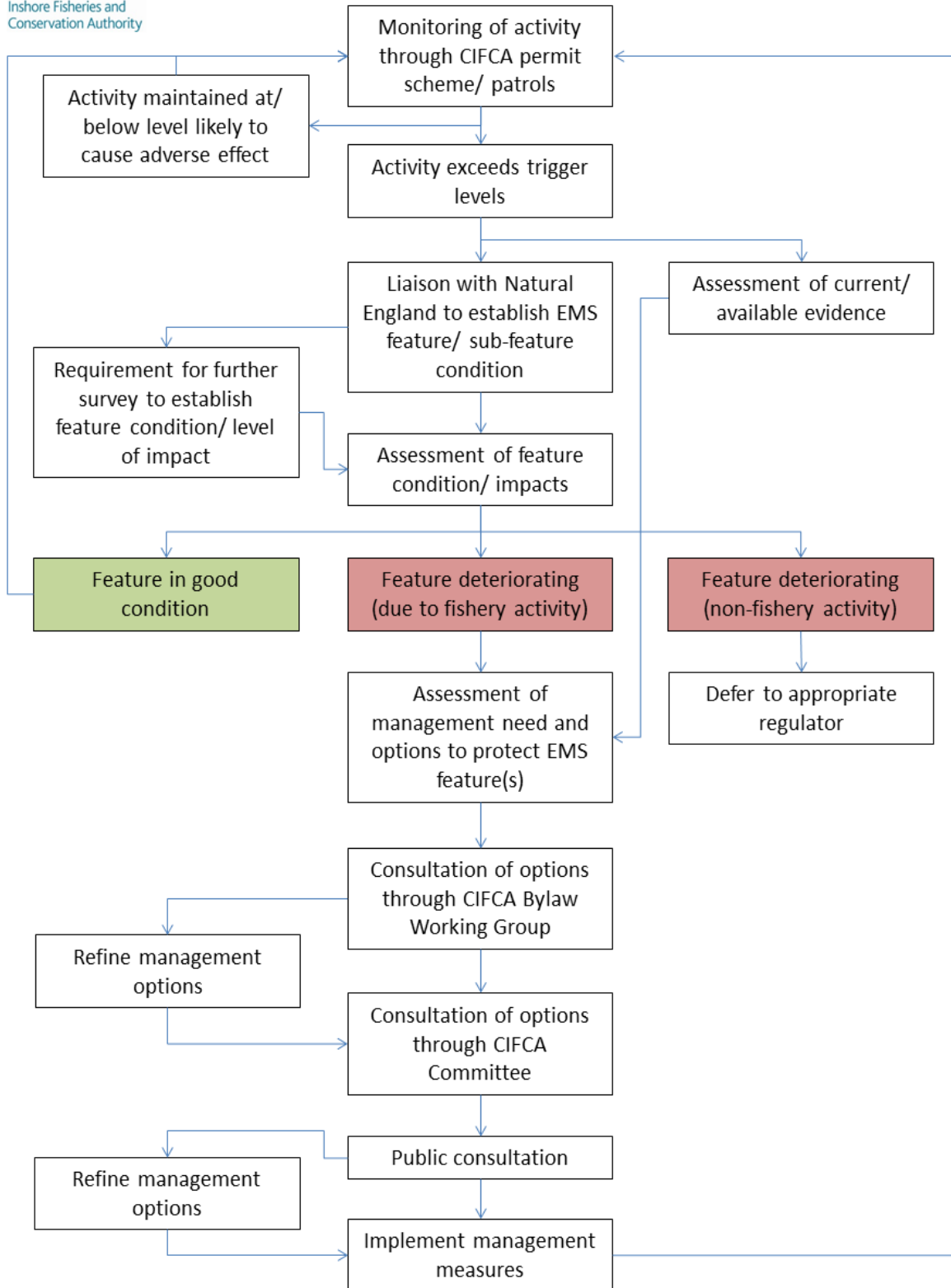
HRA F&H FOF 2025

Natural England Aggregated Method	Matrix Gear Type	Specific Gear Type	Does the fishing activity take place within the SAC?	Level of the activity occurring	Justification/ Evidence used
		Digging with forks/ Bait digging	Y		
	Seine nets and other	Beach seines	Maybe		
		Shrimp push-nets	Y	Not aware of this activity occurring – but might do	
		Fyke and stake nets	Maybe		

Annex 4: Adaptive risk review process



Adaptive Risk Review Process



HRA_F&H_FOF_2025

Annex 5: Natural England's Consultation Advice

Via Email:

From: SM-NE-Marine - South West (NE)

Sent: 22 January 2026 14:41

To: Stephanie Sturgeon

Subject: RE: HRA for Fal Fishery Order 2016 (2025-26 season)

Dear Steph,

Re: HRA for Fal Fishery Order 2016 (2025-26 season)

Many thanks for consulting Natural England on your HRA for the Fal Fishery Order 2016 (2025-26 season), and for your flexibility on the deadline for our response. Please consider this our formal advice.

Thank you for incorporating Natural England's previous informal advice into this assessment.

I can confirm that Natural England concurs with your conclusion that there will be no adverse effect of dredging and hand working activities associated with the Fal Fishery Order 2016 on the features of the Fal and Helford SAC alone or in-combination.

We advise that an HRA for Falmouth Bay to St Austell Bay SPA should also be carried out. Although dredging and hand-working are blue interactions for diving birds, they are not blue interactions for the supporting habitats. Should you conclude no Likely Significant Effect in your HRA, Natural England would not need to be consulted. Natural England is a statutory consultee on the Appropriate Assessment stage of the Habitats Regulations Assessment process.

Other relevant matters

We note that maerl surveys have recently been undertaken within the Fal Fishery Order area. We would welcome a discussion around this evidence once it is published.

Kind regards,

Liz Bailey

Marine Officer

Devon, Cornwall & Isles of Scilly Team

Email: marine-southwest@naturalengland.org.uk

For information or advice from the Natural England Devon, Cornwall and Isles of Scilly Team please email us at: DevonCornwallandIslesofScilly@naturalengland.org.uk

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