Marine Management Organisation

MMO Stage 3 Site Assessment:

Start Point to Plymouth Sound and Eddystone MPA DRAFT

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MMO Stage 3 Site Assessment: Start Point to Plymouth Sound and Eddystone MPA

DRAFT

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Executive Summary

This assessment analyses the impact of anchored nets and lines, and traps on the designated features circalittoral and infralittoral rock in Start Point to Plymouth Sound and Eddystone Marine Protected Area (MPA) to determine whether an adverse effect on site integrity can be excluded. The assessment sets out the evidence considered and analyses the quality of that evidence.

The assessment finds that at the levels described, the ongoing use of traps on the features circalittoral rock and infralittoral rock will result in an adverse effect on site integrity of Start Point to Plymouth Sound and Eddystone MPA. As such, the Marine Management Organisation (MMO) concludes that management measures are required.

1 Introduction

This assessment considers whether fishing activities are compatible with the conservation objectives of Start Point to Plymouth Sound and Eddystone MPA.

This site is designated as a special area of conservation (SAC). This assessment uses the best available evidence to review site characteristics and fishing activity and determine if fishing activity is causing an adverse effect on the integrity of the site. If so, the Marine Management Organisation (MMO) will develop and introduce suitable management measures, such as MMO byelaws. If MMO byelaws are required, then these will be subject to public consultation and will require confirmation from the Secretary of State to come into effect.

2 Site information

2.1 Overview

The following Natural England conservation advice package was used for background on site geography, designations, features, and conservation objectives in this assessment: Natural England Conservation Advice - Start Point to Plymouth Sound and Eddystone SAC[1].

Start Point to Plymouth Sound and Eddystone MPA is comprised of three distinct geographical areas. Two of these areas are inshore of 6 nautical miles (nm) and one straddles the 6 nm boundary. It is located within the Western English Channel, on the south coast of Devon and Cornwall in the southwest of England and is approximately 324 km^2 in area (**Figure 1**). The site falls within three administrative areas:

1) the eastern portion of the site comprises of two distinct regions which fall inside the 6 nm limit and within the District of Devon and Severn Inshore Fisheries and Conservation Authority (IFCA);
2) the western portion of the site falls inside the 6 nm limit and within the District of Cornwall IFCA; and,
3) the 6 to 12 nm portion of the site (hereafter the 'MMO portion') extends outside of Cornwall IFCA's 0 to 6 nm District and into the administrative area where the MMO has responsibility (**Figure 1**)**.** The area of the site within MMO's jurisdiction is 13 km^2.

[1] Start Point to Plymouth Sound and Eddystone Conservation Advice Package: designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0030373 (last accessed 03 October 2023).

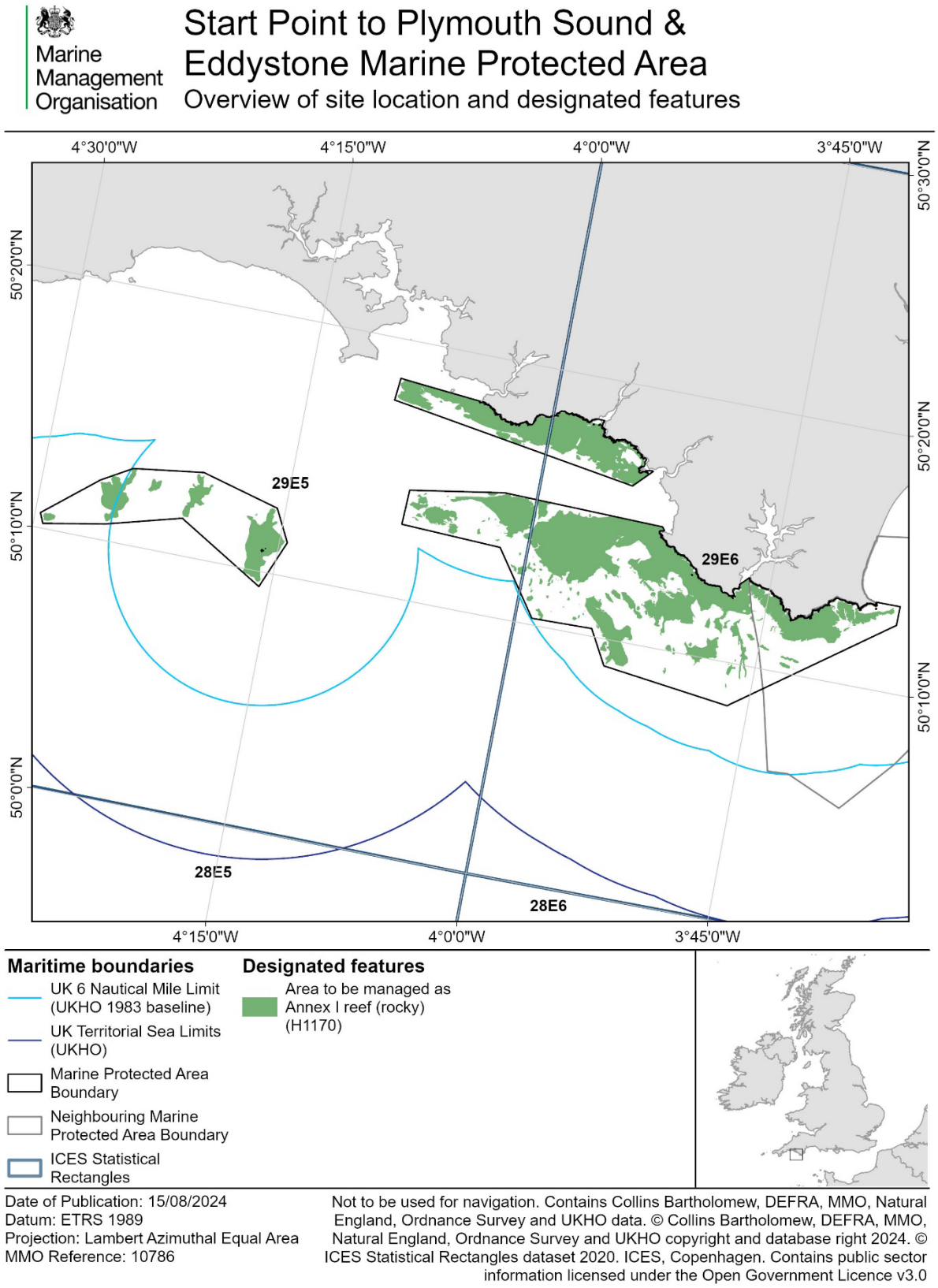

Figure 1. Site overview map.

Start Point to Plymouth Sound and Eddystone MPA was designated as an SAC in 2011. In the boundary of the MPA, there are three separate geographic areas where reef is present;

- The Eddystone reefs;
- Plymouth Sound to Bigbury Bay reefs; and
- West Rutts to Start Point reefs.

The reefs within this site are some of the most biologically diverse in the country and play an important role in supporting species that are considered rare or are occurring at the boundary of their biogeographical limit.

The Eddystone reefs lie offshore of Plymouth Sound straddling the 6 nm limit. These reefs have a complex topography created by a mosaic habitat of circalittoral and infralittoral rock which supports a wide variety of fauna and flora, and for this reason is a popular recreational dive site. There are vertical bedrock walls and boulders supporting species such as jewel anemones, dead man's fingers and branching sponges. Stable rocky surfaces (circalittoral rock) in the eastern and western sections of the Eddystone reefs are home to a range of key species including soft corals, cup corals, pink sea-fan and ross corals, some of which are of high conservation importance.

The shallower infralittoral zone of the Eddystone reefs, specifically Hatt Rock, which is located at the western boundary of the site supports various kelp and red algae communities that are able to withstand exposure to high energy conditions (wave and tidal action).

The designated features and their conservation objectives are set out in **Table 1**.

The conservation objectives for the features of Start Point to Plymouth Sound and Eddystone MPA have been set based on a direct assessment.

Table 1: Designated features, including supporting habitats, and conservation objectives.

Designated feature	Sub-feature	Conservation objective
Annex I Reefs	Circalittoral Rock	Maintain in a favourable condition.
	Infralittoral Rock	

Natural England conducted condition assessments in 2022 and reported the condition of designated features as favourable[2].

[2] Natural England Feature Condition Assessment – Start Point to Plymouth Sound and Eddystone SAC: naturalengland.org.uk (last accessed 28 August 2024)

2.2 Scope of this assessment

The scope of this assessment covers fishing activities alone, and relevant activities in combination with fishing. It does not cover areas of this site inshore of 6 nm, for which Devon and Severn, and Cornwall IFCA are the regulators.

Bottom towed gear interactions with the infralittoral and circalittoral reef features have not been included in this assessment as they have already been addressed and management has been enacted in the Start Point to Plymouth Sound and Eddystone European Marine Site (Specified Areas) Bottom Towed Gear Byelaw Start Point to Plymouth Sound and Eddystone European Marine Site (Specified Areas) Bottom Towed Fishing Gear Byelaw[3].

3 Part A - Identified pressures on the MPA

Part A of this assessment was carried out in a manner that is consistent with the 'likely significant effect (LSE)' test required by regulation 63 of the Conservation of Habitats and Species Regulations 2017[4] and regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017[5]

Part A assesses the interactions between pressures from fishing gears and the designated features of this site, screening for interactions that require further consideration. Assessment of interactions not screened out in Part A will form Part B of the assessment. For each activity assessed in Part A, there are two possible outcomes for each identified pressure-feature interaction:

1. The pressure-feature interactions **are not** included for assessment in Part B and screened out:
    a. if the feature is not exposed to the pressure, and is not likely to be in the future;
    b. if the effect/impact of the pressure is not likely to be significant; or
    c. if MMO has information that the activity or pressure is not occurring in the site and/or does not need to be considered further.

2. The pressure-feature interactions **are** included for assessment in Part B:
    a. if the feature is exposed to the pressure, or is likely to be in the future;
    b. if the potential scale or magnitude of any effect is likely to be significant;

[3] Start Point to Plymouth Sound and Eddystone European Marine Site (Specified areas) Bottom Towed Fishing Gear Byelaw: www.gov.uk/government/publications/start-point-to-plymouth-sound-and-eddystone-european-marine-site-specified-areas-bottom-towed-gear-byelaw (last accessed 01 November 2023)
[4] For more information see: www.legislation.gov.uk/uksi/2017/1012/regulation/63
[5] For more information see: www.legislation.gov.uk/uksi/2017/1013/regulation/28

c. if it is not possible to determine whether the magnitude of any effect is likely to be significant; or
d. if MMO has information that the activity or pressure is occurring in the site and/or does need to be considered further.

Consideration of a pressure on a protected feature in an MPA includes consideration of the pressure's exposure to, or effect on, any ecological or geomorphological process on which the conservation of the protected feature is wholly or in part dependent.

3.1 Activities taking place

Table 2 lists all commercial fishing gears included for assessment. All other gears have been screened out of further assessment as they do not take place and are not likely to take place in the future, as there are no vessel monitoring system (VMS) records present within the site linked to these gear codes, nor do they appear in landings data for International Council for the Exploration of the Sea (ICES) statistical rectangles that overlap the site.

To determine fishing activity occurring within the site, the following evidence sources were used:

- VMS data;
- fisheries landings data (logbooks and sales records); and
- ICES rectangle level fishing effort data in days (reference: MMO1264).

For more information about the above evidence sources, please see the Stage 3 MPA Fisheries Assessment Methodology document[6], which describes each type of fishing activity evidence and summarises the strengths and limitations of each source.

[6] Stage 3 MPA Fisheries Assessment Methodology: www.gov.uk/government/publications/stage-3-site-assessments (last accessed 08 August 2024)

Table 2: Fishing activities covered by this assessment present in VMS records (2016 to 2021) and landings data (2016 to 2020) for Start Point to Plymouth Sound and Eddystone MPA.

Gear type	Gear name	Gear code	Justification
Anchored nets and lines	Gill nets (not specified)	GN	Present in under 12 m landings data for ICES statistical rectangles that overlap the site.
	Gillnets and entangling nets	GEN	
	Set gillnet (anchored)	GNS	
	Trammel net	GTR	
	Longline (unspecified)	LL	
	Longlines (demersal)	LLS	Present in VMS records and in under 12 m landings data for ICES statistical rectangles that overlap the site.
Bottom towed gear	Towed dredge	DRB	
	Beam trawl	TBB	
	Bottom otter trawl	OTB	
	Twin bottom otter trawl	OTT	
	Bottom pair trawl	PTB	Present in under 12 m landings data for ICES statistical rectangles that overlap the site.
	Nephrops trawl	TBN	
	Otter trawls (unspecified)	OT	
Midwater gear	Drift gillnet	GND	
	Encircling gillnet	GNC	
	Hand fishing	HF	
	Hand-operated pole-and-line	LHP	
	Hook and line (unspecified)	LX	
	Purse seine (ring net)	PS	
	Midwater otter trawl	OTM	
	Midwater pair trawl	PTM	
Miscellaneous	Miscellaneous	MHX, MIS	
	Not known	NK	
Shore based	Hand dredge	DRH	
	Beach seine	SB	
Traps	Trap	FIX	
	Pot/Creel	FPO	Present in VMS records and in under 12 m landings data for ICES statistical rectangles that overlap the site.

3.2 Pressures, activities and features screened out

This section identifies activities and features that are **occurring but do not need to be considered** for Start Point to Plymouth Sound and Eddystone MPA.

The gear types and features screened out on this basis are listed below with justification:

- **Midwater gears:** although the use of midwater gears does occur within Start Point to Plymouth Sound and Eddystone MPA, there is no feasible pathway for gears of this type to interact with benthic designated features under normal operation. These gears are not designed to operate on or near the seabed and are deployed entirely within the water column. Therefore, the use of midwater gear within Start Point to Plymouth Sound and Eddystone MPA is not considered to be capable of affecting the designated features other than insignificantly and is not considered further within this assessment.
- **Bottom towed gear interactions with the rocky reef feature:** These interactions have not been included in this assessment as the use of bottom towed gears has been prohibited over the designated areas of reef since 2014 by the Start Point to Plymouth Sound and Eddystone European Marine Site (Specified Areas) Bottom Towed Gear Byelaw[3].
- **Shore based activities:** although landings data shows that fishing activity using hand dredging and beach seining techniques occurs within the site, this is based on all activity occurring within site-overlapping ICES rectangles. ICES rectangle 29E5 encompasses the majority of Start Point to Plymouth Sound and Eddystone MPA, but also covers a large area of coast where shore-based activities occur. As the MMO portion of the site lies beyond the 6 nm limit, it is not possible that shore-based activities would be capable of affecting the designated features due to distance; shore-based activities are therefore not considered further within this assessment.
- **Unknown gear:** 'other gear' has been declared as having been used to land fish from this ICES statistical rectangle. The gear code used to report these landings does not provide any further information relating to the fishing method used. It is therefore not possible to assess the likelihood of this fishing method interacting with the seabed and it is not considered further within this assessment.

3.3 Pressures to be taken forward to Part B

The Stage 3 Fishing Gear MPA Impacts Evidence documents detail all pressures created by fishing activity on features of interest. The documents justify which pressures should be taken forward for consideration for each feature. This is documented in Table A1.2 in each of the Impacts Evidence documents:

- Stage 3 Fishing Gear MPA Impacts Evidence Anchored Nets and Lines[7]; and
- Stage 3 Fishing Gear MPA Impacts Evidence Traps[8].

Bottom towed gear interactions with the infralittoral and circalittoral reef features have not been included in this assessment as they have already been addressed and management has been enacted in the Start Point to Plymouth Sound and Eddystone European Marine Site (Specified Areas) Bottom Towed Gear Byelaw[3].

To determine whether a pressure should be taken forward for this particular site, **Table 3** uses the information from the Impacts Evidence documents, alongside site level information, including sensitivity assessments, risk profiling of pressures from conservation advice packages, and Natural England advice to assess the sensitivities of pressures on the designated features of the site.

Table 3 details the pressures for each gear type - anchored nets and lines (A) and traps (T) - to be assessed in Part B, taking into account the pressures screened out in **sections 3.1** and **3.2**.

Key	
	Dark blue highlighting indicates that the feature is sensitive to this pressure from the gear type in this site, and that the interaction should be taken forward for consideration.
	Light blue highlighting indicates that feature is sensitive to the pressure in general, but the gear type is unlikely to exert this pressure to an extent where impacts are of concern in the site.
	Grey highlighting indicates that there is insufficient evidence to make sensitivity conclusions, or that a sensitivity assessment has not been made for this feature to this pressure from the gear type.
	If there is no highlighting within a cell, this indicates that the pressure from the gear type is not relevant to the feature, or that the feature is not sensitive to the pressure.

[7] Stage 3 Fishing Gear MPA Impacts Evidence Anchored Nets and Lines: www.gov.uk/government/publications/stage-3-impacts-evidence (last accessed 15 August 2024).
[8] Stage 3 Fishing Gear MPA Impacts Evidence Traps: www.gov.uk/government/publications/stage-3-impacts-evidence (last accessed 15 August 2024).

Table 3: Sensitivity to potential pressures from fishing activities on designated features.

Potential pressures	Designated feature			
	Annex I Reefs			
	Circalittoral rock		Infralittoral rock	
	A	T	A	T
Abrasion/disturbance of the substrate on the surface of the seabed				
Barrier to species movement				
Deoxygenation				
Hydrocarbon and PAH contamination				
Introduction of light				
Introduction or spread of invasive non-indigenous species (INIS)				
Organic enrichment				
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion				
Removal of non-target species				
Removal of target species				
Synthetic compound contamination (including pesticides, antifoulants, pharmaceuticals)				
Transition elements and organo-metal (eg TBT) contamination				

4 Part B - Fishing activity assessment

Part B of this assessment was carried out in a manner that is consistent with the 'appropriate assessment' required by regulation 63 of the Conservation of Habitats and Species Regulations 2017[4].

Table 3 shows the fishing activities and pressures identified in Part A which have been included for assessment in Part B. The most relevant attributes of the designated features that could be compromised by fishing pressures were identified using the Start Point to Plymouth Sound and Eddystone MPA conservation advice package and are shown in **Table 4**.

Table 4 shows which targets were identified as important. The impacts of pressures on features were assessed against these targets to determine whether the activities causing the pressures are compatible with the site's conservation objectives.

Table 4: Relevant favourable condition targets for identified pressures over the reef feature.

Attribute	Target	Relevant Pressures
Distribution: presence and spatial distribution of biological communities	Maintain the presence and spatial distribution of reef communities.	• Abrasion or disturbance of the substrate on the surface of the seabed; • Removal of non-target species; • Removal of target species; and • Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion.
Extent and distribution	Maintain the total extent of reef at 12,107 hectares and spatial distribution as defined on the map subject to natural variation in sediment veneer.	
Structure and function: presence and abundance of key structural and influential species	[Maintain OR Recover OR Restore] the abundance of listed species, to enable each of them to be a viable component of the habitat.	
Structure: physical structure of rocky substrate	Maintain the surface and structural complexity, and the stability of the reef structure.	
Structure: species composition of component communities	Maintain the species composition of component communities.	

4.1 Fisheries access and existing management

As the MMO portion of Start Point to Plymouth Sound and Eddystone MPA lies entirely within the 6 to 12 nm zone, the only non-UK vessels that can operate within the site are those from Belgium and France licensed by the UK to do so. VMS records indicate that the site is used by UK and French vessels only.

More information on non-UK vessel access to UK waters can be found on MMO's Single Issuing Authority page[9].

The Kingfisher fishing restriction map (Seafish, 2023) contains information on MPA management measures for the portion of the site inside of 6 nm.

Start Point to Plymouth Sound and Eddystone MPA is subject to the following relevant legislative restrictions that are applicable to fisheries occurring in the site:

- **Marine Management Organisation Start Point to Plymouth Sound and Eddystone European Marine Site (Specified Areas) Bottom Towed Gear Byelaw** – prohibiting bottom towed fishing gear within specified areas of Start Point to Plymouth Sound and Eddystone MPA including the designated reef feature within the MMO portion of MPA[3].

MMO will continue to engage directly with IFCAs regarding recommended management measures nearby/adjacent to their areas of jurisdiction.

4.2 Fishing activity summary

Table A1.1 to **Table A1.8** in **Annex 1** display a detailed breakdown of fishing activity within Start Point to Plymouth Sound and Eddystone MPA. VMS record counts were available from 2016 to 2021, and landings data and SAR values were available from 2016 to 2020. When discussing weights from landings in this section, figures used are a total of weights from UK and EU member states.

Of the fishing activities not screened out in Part A of this assessment, VMS data shows that the most prevalent gear type operated by over 12 m vessels within the Start Point to Plymouth Sound and Eddystone MPA are pots. Landings data show the most prevalent gears operated by under 12 m vessels within the site are gillnets, and pots. There is a current byelaw[3] in place to manage bottom towed gear over the two areas of designated reef features only, this allows for sustainable fishing practices to operate in the site where they will not have an adverse effect on the site integrity.

Anchored nets and lines

[9] The UK Single Issuing Authority: www.gov.uk/guidance/united-kingdom-single-issuing-authority-uksia (last accessed 26 July 2023).

According to VMS and landings data for over 12 m vessels, the use of anchored nets and lines in the area appears to be minimal with an annual average of 0.02 tonnes (t) landed.

Under 12 m vessels using anchored nets and lines landed approximately 2.4 t per year. Gillnets were the most used of the anchored nets and lines gear types for under 12 m vessels with an average of 2.23 t landed. Under 12 m landings are recorded at the ICES rectangle level and have been attributed to the MPA based on the 0.53 % of the ICES rectangle intersected by the MPA. Because of this, there are limitations on the accuracy of this data, as it is only possible to estimate how much activity is occurring in the MPA based on the average activity across the entire rectangle, rather than at specific locations within the site.

Total fishing effort recorded by UK vessels under 12 m in length using anchored nets and lines between 2016 and 2021 for the area of Start Point to Plymouth Sound and Eddystone MPA that intersects ICES rectangle 29E5 was 83 days, the average fishing effort recorded for anchored nets and lines between 2016 and 2021 was 8 days. Start Point to Plymouth Sound and Eddystone MPA is entirely within ICES rectangle 29E5 and takes up 0.53 % of the rectangle. Fishing effort days are derived from logbooks and is collected at ICES rectangle level and then apportioned accordingly.

Traps

Between 2019 and 2020 traps were the most frequently deployed gear type for vessels over 12 m in the Start Point to Plymouth Sound and Eddystone MPA, taking up approximately 55 % of fishing activity in the site in 2019 and 69 % in 2020. For over 12 m vessels VMS records show that for potting there was a total of 174 VMS records between 2016 and 2021 and an annual average of 26 VMS records per year, most of this activity was from the years 2019 to 2021 with 69 VMS records in 2019, 53 in 2020 and 16 in 2021. For vessels over 12 m, live weight landings from traps increased from 0 t in 2018 to 2.43 t in 2019 and 9.55 t in 2020.

For vessels under 12 m using traps activity has been consistent with a yearly landings average of approximately 1.69 t.

VMS activity data showed that traps have been used over the designated Annex I reefs to the southwest and east of the MMO portion of the site.

Average fishing effort recorded by UK vessels under 12 m in length using traps between 2016 and 2021 for the area of Start Point to Plymouth Sound and Eddystone MPA that intersects ICES rectangle 29E5 was 14 days, and the total fishing effort recorded using traps between 2016 and 2021 was 48 days.

4.3 Pressures by gear type

The Stage 3 Fishing Gear MPA Impacts Evidence documents for anchored nets and lines, and traps collate and analyse the best available evidence on the impacts of

different fishing gears on MPA features. This section summarises the analyses and conclusions of those documents, and considers these alongside site level information, including the nature and condition of the habitats and species present, the conservation objectives for designated features, intensity of fishing activity taking place and exposure to natural disturbance. MMO has published two Impacts Evidence documents of relevance to this assessment.

In the context of MPA assessment, the pressures removal of target and non-target species refer to any damage, loss, or removal of species defined as a designated feature or integral to the integrity of a designated feature (for example key structural or influential species). This may occur through intentional or unintentional catch associated with the act of commercial fishing. For the purposes of benthic feature assessments, the physical effects of fishing gears on seabed communities are best addressed through the assessment of abrasion and penetration pressures. As there are no designated species features associated with Start Point to Plymouth Sound and Eddystone MPA, and the detail of key structural and influential species is yet to be fully defined, we conclude that impacts from target and non-target removal pressures can be scoped out from further assessment of this site. We acknowledge that these pressures may require consideration as a result of any future evidence review, in conjunction with updated conservation advice from JNCC and Natural England.

Table 5: Rocky reef biotopes for circalittoral and infralittoral rock which may be found within the MMO portion of the Start Point to Plymouth Sound and Eddystone MPA and the sensitivities to abrasion from static gear.

Sub-feature	Biotope name	Sensitivity	Resistance	Resilience
Circalittoral rock	*Tubularia indivisa* on tide-swept circalittoral rock (Stamp and Tyler-Walters, 2018)	Low	Medium	High
	Sponge communities on deep circalittoral rock (Readman, 2018a)	High	Low	Very Low
	Eunicella verrucosa and *Pentapora foliacea* on wave-exposed circalittoral rock (Readman *et al.*, 2023)	High	Low	Very Low
	Pomatoceros triqueter with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles (Tyler-Walters, Tillin and Watson, 2024)	Low	Medium	High
	Mixed turf of bryozoans and erect sponges with *Sagartia*	Medium	Low	Medium

	elegans on tide-swept circalittoral rock (Readman, 2016)			
	Corynactis viridis and a mixed turf of crisiids, *Bugula*, *Scrupocellaria*, and *Cellaria* on moderately tide-swept exposed circalittoral rock (Stamp, Lloyd and Watson, 2016)	Low	Medium	High
	Sponges and anemones on vertical circalittoral bedrock (Readman, Lloyd and Watson, 2023)	Medium	Low	Medium
	Urticina felina and sand-tolerant fauna on sand-scoured or covered circalittoral rock (Tillin and Hiscock, 2016)	Medium	Low	Medium
	Sponges, cup corals and anthozoans on shaded or overhanging circalittoral rock (Readman, 2018b)	High	Low	Low
Infralittoral rock	*Laminaria hyperborea* forest with a faunal cushion (sponges and polyclinids) and foliose red seaweeds on very exposed infralittoral rock (Stamp, Hiscock and Garrard, 2023)	Medium	Low	Medium
	Laminaria hyperborea park with dense foliose red seaweeds on exposed lower infralittoral rock (Stamp, Hiscock and Garrard, 2023)	Medium	Low	Medium
	Foliose red seaweeds on exposed lower infralittoral rock (Tillin et al., 2023)	Low	Medium	High
	Laminaria saccharina and/or *Saccorhiza polyschides* on exposed infralittoral rock (Stamp et al., 2022)	Medium	None	High

	Laminaria saccharina, *Chorda filum* and dense red seaweeds on shallow unstable infralittoral boulders and cobbles (Hiscock et al., 2022)	Medium	None	High

4.3.1 Anchored nets and lines

The relevant pressures on the rocky reef feature (circalittoral and infralittoral rock) of Start Point to Plymouth Sound and Eddystone MPA from anchored nets and lines were identified in **Table 3** and are:

- abrasion or disturbance of the substrate on the surface of the seabed;
- removal of non-target species; and
- removal of target species.

As noted, impacts from target and non-target removal pressures have been scoped out of this assessment, as they are assessed more completely within the abrasion and penetration pressures.

Section 4.2 describes the fishing activity within Start Point to Plymouth Sound and Eddystone MPA and notes that, according to VMS records and landings data, the use of anchored nets and lines appears minimal and focussed on the east portion of the site within MMO's jurisdiction. Fishing effort data, however, suggests additional activity derived from the under 12 m UK fleet. However, fishing effort data and under 12 m landings are collected at ICES rectangle level and then apportioned as if they are distributed equally across the rectangle, which means that there is lower confidence as to the actual levels of activity taking place within the site.

Impacts on these features relating to abrasion occur primarily during setting and retrieval of nets and the associated ground lines and anchors, as well as by their movement over the seabed during rough weather.

As per section 7.3 of the anchored nets and lines Impacts Evidence document[7], while abrasion impacts from this gear type may cause sediment veneer disturbance and damage to epifaunal/epifloral communities, physical damage to the rock itself is unlikely. Some studies indicate that slow growing branching species and rock with erect branching species are considered particularly sensitive to damage from netting, whilst rock with low-lying fast growing faunal turf has been determined as having moderate sensitivity to moderate levels of netting. Repeated netting activity could damage reefs and the associated communities through cumulative damage. As the fishing activity data for the under 12 m fleet does not indicate where it occurs within the site, the use of anchored nets and lines may be occurring over the rocky reef feature.

Around the Eddystone reefs, the circalittoral habitats are known to support a number of biotopes. Of the nine biotopes found which may be found within the site (**Table 5**), three

are stated as having high sensitivity to the abrasion pressure; sponge communities on deep circalittoral rock (Readman, 2018a); *Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock (Readman *et al.*, 2023) and sponges, cup corals and anthozoans on shaded or overhanging circalittoral rock (Readman, 2018b). All are dominated by upright sessile organisms. Whilst they may occur in areas with reasonable hydrodynamic activity, *E. verrucosa* (pink sea-fan) are delicate, long-lived anthozoans with inconsistent reproduction making them vulnerable to disturbance as illustrated in their low resistance and very low resilience to abrasion.

Infralittoral rocky reef habitats occur throughout the site in areas of shallow water, the infralittoral zone around the Eddystone reefs is predominantly characterised by various kelp and red algae communities that can withstand exposed conditions and high hydrodynamic activity. The shallowest reef of the Eddystone reef complex included in this assessment is Hatt Rock at the western boundary of the site. This reef is characterised by five biotopes (**Table 5**) which have sparse populations of the kelp forests and red foliose seaweeds (Axelsson et al., 2006). Of the five biotopes, four have a medium sensitivity to abrasion, whilst the remaining biotope; Foliose red seaweeds on exposed lower infralittoral rock is noted as having low sensitivity, this could be in part due to its dense turf like structure and prevalence in high energy reefs and wave exposed areas.

Start Point to Plymouth Sound and Eddystone MPA is subject to high hydrodynamic energy and the biotopes are often found in high wave energy areas. It is therefore likely that these biotopes may have a level of acclimatisation to disturbance, especially for the infralittoral biotopes which are all listed as having a medium or high level of resistance to abrasion pressures. Given the level of anchored nets and lines activity within the site described in **section 4.2,** and the fact that it does not appear to be focussed on areas of known reef, together with the small footprint of impact from anchored nets and lines; the risk of abrasion damage is considered unlikely to occur above the pressure benchmark for the reef feature.

With regards to the discussion above, the assessed activity levels and the evidence available for the impact of anchored nets and lines, **MMO concludes that the impacts of abrasion or disturbance at the activity levels described, the use of anchored nets and lines does not pose a significant risk of adverse effect on site integrity for Start Point to Plymouth Sound and Eddystone MPA.**

4.3.2 Traps

The relevant pressures on the rocky reef feature (circalittoral and infralittoral rock) of Start Point to Plymouth Sound and Eddystone MPA from traps were identified in **Table 3** and are:

- abrasion or disturbance of the substrate on the surface of the seabed;
- removal of non-target species; and
- removal of target species.

As noted, impacts from target and non-target removal pressures have been scoped out of this assessment, as they are assessed more completely within the abrasion and penetration pressures.

Section 4.2 describes fishing activity within Start Point to Plymouth Sound MPA and notes that, according to VMS records and landings data, potting is prevalent within the site. For vessels over 12 m VMS records show that for potting there was a total of 174 VMS records between 2016 and 2021 and an annual average of 26 VMS records per year, most of this activity was from the years 2019 to 2021 with 69 VMS records in 2019, 53 in 2020 and 16 in 2021, and only 1 VMS record for the years 2016 to 2018. This demonstrates a clear increase in potting activity in this site. Furthermore, for vessels over 12 m in length VMS data shows that in 2019, 55% of fishing activity was attributed to pots, and in 2020 this increased to 69%. VMS records show activity to be focused over the designated rocky reefs to the southwest and east of the MMO portion of the site.

Impacts on these features relating to abrasion occur primarily during the setting and retrieval of traps/pots and their associated ropes, weights and anchors, as well as by their movement over the seabed during rough weather.

As per section 7.3 of the traps Impacts Evidence document[8], abrasion impacts from this gear type are unlikely to impact the rocky substrate itself but may impact associated taxa. Much of the literature before 2015 has suggested that traps are unlikely to significantly impact rocky reef biotopes. However, more recent studies suggest that traps will have negative impacts on the biological functions of reef habitats at increased spatial and temporal densities (Rees, 2018; Gall et al., 2020; Rees, Sheehan and Attrill, 2021). Studies show that upright and branching species that protrude from the reef (such as sponges or bryozoans) were found to be particularly vulnerable to damage from the hauling of pots. Moreover, a study of trap activities in Lyme Bay (UK) found that repetitive damage from sustained potting activity to biotopes potentially found in this site such as *Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock (Readman *et al.*, 2023), (Rees, 2018) has potential to cause a decline in abundance of these populations. This demonstrates that there is an increased risk of cumulative damage from fishing activity at high intensities.

Around the Eddystone reefs, the circalittoral habitats may support a number of biotopes (**Table 5**). Of the nine biotopes that could be found on the circalittoral rock feature within the site, three are recorded to have high sensitivity; sponge communities on deep circalittoral rock (Readman, 2018a); *Eunicella verrucosa* and *Pentapora foliacea* on wave-exposed circalittoral rock (Readman *et al.*, 2023); and sponges, cup corals and anthozoans on shaded or overhanging circalittoral rock (Readman, 2018b). These are categorised as sensitive because they include species that protrude from the surface of the feature that could be removed through abrasion.

The sponge communities on deeper circalittoral rock have been identified as highly sensitive with low resilience and very low resistance to the abrasion pressure. For these sponge communities, MarLIN identified that given the slow growth rate and the lack of observed recovery or recruitment in some species, any perturbation resulting in mortality is unlikely to result in a negligible recovery within 25 years (Readman, 2018a). *E. verrucosa* (pink sea-fan) have been identified as highly sensitive with low resistance and very low resilience. In the literature, these sessile epifauna have been recorded to recover following trap deployment and removal, however there may be more longer-term implications to their ability to withstand immediate pressure from traps, this is due to the colonisation of fouling organisms such as the invasive warm water barnacle which have been observed colonising pink sea-fan on the Eddystone reef near Plymouth (Southward et al., 2004). These organisms have appeared to initially settle on damaged areas of pink sea-fan and would suggest that trap activities lead to a greater susceptibility of pink sea-fan to fouling organisms, potentially leading to reduced survival over longer timescales.

Of the remaining biotopes, four have medium sensitivity, and two have low sensitivity to the impacts of abrasion from traps.

The infralittoral zone around the Eddystone reefs is predominantly characterised by various kelp and red algae communities that are able to withstand exposed high energy conditions. The shallowest reef of the Eddystone reef complex included in this assessment is Hatt Rock to the western corner of the site. This reef is characterised by five biotopes (**Table 5**)**.** Of the five of the biotopes that could be found on the infralittoral feature within the site, four are recorded to have medium sensitivity to abrasion from traps (*Laminaria hyperborea* forest with a faunal cushion (sponges and polyclinids) and foliose red seaweeds; *Laminaria hyperborea* park with dense foliose red seaweeds; *Laminaria saccharina and/or Saccorhiza polyschides*, and *Laminaria saccharina; Chorda filum* and dense red seaweeds (Hiscock *et al.*, 2022; Stamp *et al.*, 2022; Stamp, Hiscock and Garrard, 2023; Stamp, Tyler-Walters and Burdett, 2023). These biotopes have been categorised as sensitive because they include species that protrude from the surface of the feature that could be removed through abrasion. There is one remaining biotope on the infralittoral rock feature which is recorded to have low sensitivity. Ultimately, this feature is subject to moderate hydrodynamic energy of the Western Channel and Celtic Sea, therefore, it is likely that these biological communities are acclimatised to some level of natural disturbance.

Overall, for the MMO portion of this site, the known spatial distribution of potting activity based on VMS records focuses on the sensitive reef areas. Therefore, it is likely that this activity will cause disturbance to the substrate on the surface of the seabed. This disturbance will occur primarily during the setting and retrieval of pots and from their associated ropes, weights and anchors, as well as by their movement over the seabed during rough weather. Additionally, there is a consideration of the long-term impacts which potting activity could potentially have on biotopes present within the site, thus

affecting recovery and abundance. Based on this, it is therefore likely that the ongoing use of traps may pose a significant risk of hindering the achievement of the conservation objective of ‘maintain in favourable condition’ of this feature of Start Point to Plymouth Sound and Eddystone MPA.

With regards to the discussion above, the assessed activity levels and the evidence available for the impact of traps, **MMO concludes that the impacts of abrasion or disturbance at the activity levels described, the use of traps may pose a significant risk of adverse effect on site integrity for Start Point to Plymouth Sound and Eddystone MPA.**

4.4 Part B conclusion

The assessment of anchored nets and lines and traps on the circalittoral rock and infralittoral rock of Start Point to Plymouth Sound and Eddystone MPA has concluded that the ongoing use of traps will result in an adverse effect on the site integrity of the MPA. Management measures will therefore be implemented for traps for Start Point to Plymouth Sound and Eddystone MPA. **Section 6** contains further details of these measures.

5 Part C - In-combination assessment

This section assesses the impacts of fishing activities in-combination with relevant activities taking place. This includes the following:

- fishing interactions assessed in Part B but which were not considered, alone, to have an adverse effect on the site integrity; and
- other activities: such as marine development infrastructure plans and projects that occur in the MPA.

ArcGIS software has been used to check relevant activities that occur within, or adjacent to, the assessed site where there could be a pathway for impact. To determine relevant activities to be included in this part of the assessment, a distance of 5 km was selected as suitable to capture any potential way in which the activity could impact the benthic features of the site in combination with effects of the fishing activities assessed. Start Point to Plymouth Sound and Eddystone MPA straddles the 6 nm limit and therefore, only activities that are within 5 km of the portion of the site seawards of the 6 nm limit were considered. This assessment considers the in-combination impacts of marine licensable activities that are ongoing or upcoming, and with the same medium to high-risk pressure impact pathways as permitted fishing activity. As the models were run using ArcGIS in August 2023, any licences that ended before this date were screened out of the assessment. In accordance with the methodology detailed above, ArcGIS identified no other relevant activities occurring within or adjacent to the Start Point to Plymouth Sound and Eddystone MPA, within a 5 km buffer of the portion of the site seawards of the 6 nm limit.

The North Sea Transition Authority (NSTA) is responsible for regulating the oil, gas and carbon storage industries, and as such these activities fall outside of MMO's marine licensing remit. Oil, gas and carbon storage industry activities are not currently considered in this draft assessment, as information on the potential pressures exerted by associated activities is currently under review, and the likelihood of these activities resulting in an in-combination adverse effect on site integrity with fishing is expected to be very low. Following formal consultation, relevant oil, gas and carbon storage industry activities that could impact the site in combination with the effects of assessed fishing activities will be included before finalising this assessment, alongside marine licence applications submitted after August 2023.

There may be operational submarine cables within this MPA, these cables are already in-situ and are unlikely to have any residual abrasion/removal pressure in-combination with the assessed fishing activity. Any abrasion/removal pressure from submarine cable operation and maintenance activity will be temporary with limited seabed impacts and is therefore unlikely to have significant in-combination effects with assessed fishing.

Traps were identified in Part B as requiring management to avoid adverse effects to site integrity. Anchored nets and lines are the only remaining fishing activities occurring

within Start Point to Plymouth Sound and Eddystone MPA that interact with the seabed. This activity was assessed in part B of this assessment, and it was concluded that anchored nets and lines had no adverse effect on site integrity for Start Point to Plymouth Sound and Eddystone MPA.

As there are no other relevant fishing activities to assess for this site, and no marine licensable activities, there are no in-combination fishing interactions to assess.

5.1 Part C conclusion

MMO concludes that there are no in-combination fishing interactions for Start Point to Plymouth Sound and Eddystone MPA.

Further management measures will therefore not be implemented for fishing activities currently occurring within the MPA.

6 Conclusion and proposed management

Part A of this assessment concluded that anchored nets and lines and traps are all capable of affecting (other than insignificantly) may result in an adverse effect on site integrity for Start Point to Plymouth Sound and Eddystone MPA.

Part B of this assessment concluded that ongoing use of traps on the features circalittoral rock and infralittoral of Start Point to Plymouth Sound and Eddystone MPA may result in an adverse effect on site integrity the MPA as a result of the impacts of abrasion or disturbance.

There is a pre-existing byelaw, Start Point to Plymouth Sound and Eddystone European Marine Site (Specified Areas) Bottom Towed Gear Byelaw 2014[3] to prohibit bottom towed gear over the reef features in this site. Part C of this assessment concluded that there are no overlapping activities requiring marine licences in this site therefore no opportunity for in-combination effects between non-fishing and fishing activity. Part C also concluded that the ongoing use of anchored nets and lines alone does not pose a significant risk of adverse effect on site integrity of the MPA, therefore, there are no further fishing activities where in-combination effects could be assessed.

To ensure that fishing activities do not result in an adverse effect on site integrity of the MPA, MMO will implement a byelaw to prohibit the use of traps on the features circalittoral and infralittoral rock in Start Point to Plymouth Sound and Eddystone MPA.

Figure 2 shows the proposed management area in line with the conclusions set out above. The boundaries of the proposed management area include an appropriate buffer zone to prevent direct damaging physical interactions between fishing activities and the designated features to be protected. The rationale for determining buffer size can be found in in Annex 2 of the Stage 3 MPA Site Assessment Methodology[6] document.

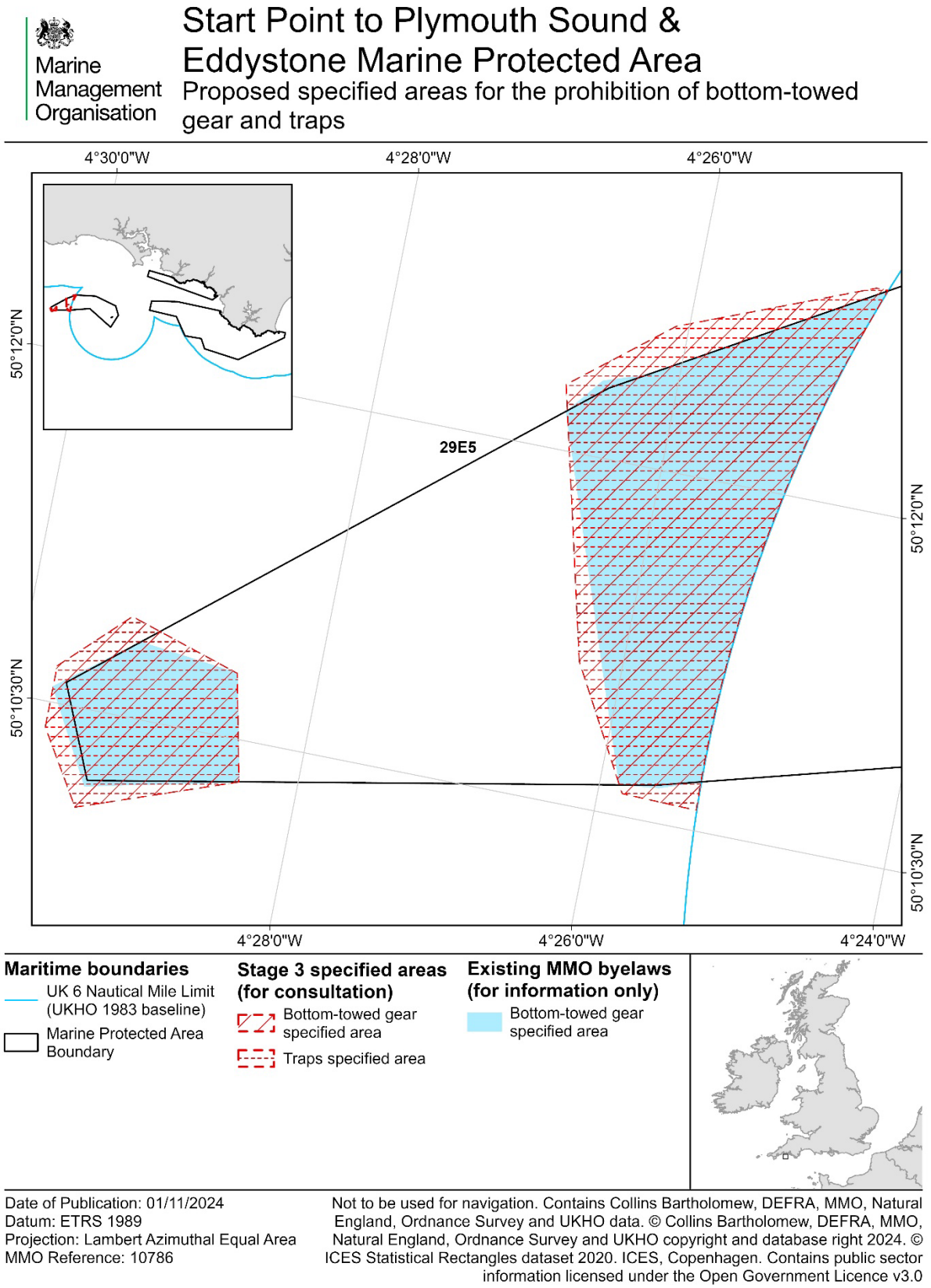

Figure 2. Map of proposed management.

7 Review of this assessment

MMO will review this assessment every five years, or earlier if significant new information is received. Such information could include:

- updated conservation advice
- updated advice on the condition of the site's feature(s)
- significant increase in activity levels.

To coordinate the collection and analysis of information regarding activity levels, and to ensure that any required management is implemented in a timely manner, a monitoring and control plan will be implemented for this site. This plan will be developed in line with MMO's Monitoring and Control Plan framework.

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Annexes

Annex 1: Fishing activity data

Table A1.1: VMS record count per nation group (UK and EU Member State) and proportional activity (%), per gear, per gear group, per year, totals and annual average (2016 to 2021) for Start Point to Plymouth Sound and Eddystone MPA. All numbers are rounded to the nearest whole number.

			2016		2017		2018		2019		2020		2021		Total (2016 to 2021)		Average annual (2016 to 2021)
Gear group	Gear code	Nation	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
Anchored nets and lines	LLS	UK	0	0	2	100	0	0	0	0	0	0	0	0	2	100	0
	LLS Total		**0**	**0**	**2**	**100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**100**	**0**
Anchored nets and lines total			**0**	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**
Demersal trawl	OTB	EU	26	81	16	80	7	15	4	22	7	88	5	100	65	50	11
	OTB	UK	6	19	4	20	41	85	14	78	1	13	0	0	66	50	11
	OTB Total		**32**	**100**	**20**	**100**	**48**	**100**	**18**	**100**	**8**	**47**	**5**	**83**	**131**	**93**	**22**
	OTT	UK	0	0	0	0	0	0	0	0	6	100	0	0	6	100	1
	OTT Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**35**	**0**	**0**	**6**	**4**	**1**
	TBB	UK	0	0	0	0	0	0	0	0	3	100	1	100	4	100	1
	TBB Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**18**	**1**	**17**	**4**	**3**	**1**
Demersal trawl total			**32**	**17**	**20**	**29**	**48**	**38**	**18**	**14**	**17**	**22**	**6**	**2**	**141**	**16**	**24**
Dredge	DRB	UK	153	100	48	100	79	100	39	100	7	100	258	100	584	100	97
	DRB Total		**153**	**100**	**48**	**100**	**79**	**100**	**39**	**100**	**7**	**100**	**258**	**100**	**584**	**100**	**97**
Dredge total			**153**	**82**	**48**	**69**	**79**	**62**	**39**	**31**	**7**	**9**	**258**	**82**	**584**	**65**	**97**
Traps	FPO	UK	1	100	0	0	0	0	69	100	53	100	51	100	174	100	29
	FPO Total		**1**	**100**	**0**	**0**	**0**	**0**	**69**	**100**	**53**	**100**	**51**	**100**	**174**	**100**	**29**

Gear group	Gear code	Nation	2016		2017		2018		2019		2020		2021		Total (2016 to 2021)		Average annual (2016 to 2021)
			Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
Traps total			**1**	**1**	**0**	**0**	**0**	**0**	**69**	**55**	**53**	**69**	**51**	**16**	**174**	**19**	**29**
Grand Total			**186**	**0**	**70**	**0**	**127**	**0**	**126**	**0**	**77**	**0**	**315**	**0**	**901**	**0**	**150**

Table A1.2: UK live weight landings tonnage (t) estimates by gear from vessels over 12 m in length in the MMO section of Start Point to Plymouth Sound and Eddystone MPA (2016 to 2020).

Gear group	Gear code	2016	2017	2018	2019	2020	Total (2016 to 2020)	Average (2016 to 2020)
Anchored nets and lines	LLS	0	0.10	0	0	0	0.10	0.02
Anchored nets and lines total		**0**	**0.10**	**0**	**0**	**0**	**0.10**	**0.02**
Demersal trawl	OT	0	0	0	0	0	0	0
Demersal trawl	OTB	0.56	0.31	1.25	0.11	0	2.24	0.45
Demersal trawl	OTT	0	0	0	0	0.03	0.03	0.01
Demersal trawl	TBB	0	0	0	0	0.23	0.23	0.05
Demersal trawl total		**0.56**	**0.31**	**1.25**	**0.11**	**0.25**	**2.49**	**0.50**
Dredge	DRB	4.07	2.04	4.22	1.38	0.66	12.38	2.48
Dredge	HMD	0	0	0	0	0	0	0
Dredge total		**4.07**	**2.04**	**4.22**	**1.38**	**0.66**	**12.38**	**2.48**
Traps	FPO	0.03	0	0	2.43	9.55	12.02	2.40
Traps total		**0.03**	**0**	**0**	**2.43**	**9.55**	**12.02**	**2.40**
Grand total		**4.67**	**2.45**	**5.47**	**3.93**	**10.46**	**26.99**	**5.40**

Table A1. 3: EU27 live weight landings tonnage (t) estimates by gear from vessels over 12 m in length in the MMO section of Start Point to Plymouth Sound and Eddystone MPA (2016 to 2020).

Gear group	Gear code	2016	2017	2018	2019	2020	Total (2016 to 2020)	Average (2016 to 2020)
Demersal trawl	OTB	3.00	1.53	0.68	0.40	0.78	6.39	1.28
Demersal trawl total		**3.00**	**1.53**	**0.68**	**0.40**	**0.78**	**6.39**	**1.28**
Grand total		**3.00**	**1.53**	**0.68**	**0.40**	**0.78**	**6.39**	**1.28**

Table A1.4: Percentage of each ICES rectangle intersected by the MMO section of Start Point to Plymouth Sound and Eddystone MPA.

ICES rectangle	Percentage overlap (%)
29E5	0.53

Table A1.5: UK live weight landings tonnage (t) estimates by gear from vessels under 12 m in length for the MMO section of Start Point to Plymouth Sound and Eddystone MPA (2016 to 2020).

Gear group	Gear code	2016	2017	2018	2019	2020	Total (2016 to 2020)	Average (2016 to 2020)
Anchored nets and lines	GEN	0.32	0.14	0	0	0	0.46	0.09
	GN	2.37	2.24	2.66	2.02	1.88	11.17	2.23
	GNS	0.04	0.18	0.05	0.04	0.03	0.34	0.07
	GTR	<0.01	<0.01	0	0	0	<0.01	<0.01
	LL	0.01	0.02	<0.01	0	0	0.04	0.01
Anchored nets and lines total		**2.75**	**2.59**	**2.71**	**2.06**	**1.91**	**12.01**	**2.40**
Demersal seine	SB	<0.01	0	0	0	0	<0.01	<0.01

Gear group	Gear code	2016	2017	2018	2019	2020	Total (2016 to 2020)	Average (2016 to 2020)
Demersal seine total		**<0.01**	**0**	**0**	**0**	**0**	**<0.01**	**<0.01**
Demersal trawl	OT	6.90	2.35	0	0	0	9.26	1.85
	OTB	<0.01	4.63	3.69	5.32	4.38	18.02	3.60
	OTT	0.05	<0.01	0	0	<0.01	0.06	0.01
	PTB	0	<0.01	0	0	<0.01	<0.01	<0.01
	TBB	0	0	0	0.18	0.18	0.36	0.07
	TBN	0	<0.01	0	0	0	<0.01	<0.01
Demersal trawl total		**6.96**	**6.98**	**3.69**	**5.50**	**4.56**	**27.69**	**5.54**
Dredge	DRB	4.42	4.45	4.56	3.85	2.19	19.47	3.89
	DRH	<0.01	0	0	0	0	<0.01	<0.01
Dredge total		**4.42**	**4.45**	**4.56**	**3.85**	**2.19**	**19.47**	**3.89**
Midwater gill drift	GND	0.28	0.23	0.11	0.11	0.05	0.77	0.15
Midwater gill drift total		**0.28**	**0.23**	**0.11**	**0.11**	**0.05**	**0.77**	**0.15**
Midwater gill encircling	GNC	4.00	4.48	3.26	2.42	2.77	16.93	3.39
Midwater gill encircling total		**4.00**	**4.48**	**3.26**	**2.42**	**2.77**	**16.93**	**3.39**
Midwater surrounding	PS	0	0.05	0.03	0	0.08	0.16	0.03
Midwater surrounding total		**0**	**0.05**	**0.03**	**0**	**0.08**	**0.16**	**0.03**
Midwater hook/lines	HF	<0.01	0	0	0	0	<0.01	<0.01
	LHP	2.38	1.66	1.11	0.79	0.73	6.67	1.33
	LX	0.03	0.08	0.05	0.03	0.05	0.23	0.05
Midwater hook/lines total		**2.41**	**1.73**	**1.16**	**0.82**	**0.78**	**6.90**	**1.38**
Midwater trawl	OTM	0	0	0	0	<0.01	<0.01	<0.01
Midwater trawl total		**0**	**0**	**0**	**0**	**<0.01**	**<0.01**	**<0.01**
Traps	FIX	0.03	0.01	0	0	0	0.04	0.01
	FPO	2.93	1.85	1.50	1.42	0.68	8.39	1.68

Gear group	Gear code	2016	2017	2018	2019	2020	Total (2016 to 2020)	Average (2016 to 2020)
Traps total		**2.96**	**1.86**	**1.50**	**1.42**	**0.68**	**8.43**	**1.69**
Unknown	MIS	0	0	0.02	<0.01	<0.01	0.03	0.01
	NK	0	0	0	0	<0.01	<0.01	<0.01
Unknown total		**0**	**0**	**0.02**	**<0.01**	**0.01**	**0.03**	**0.01**
Grand total		**23.78**	**22.38**	**17.04**	**16.18**	**13.03**	**92.40**	**18.48**

Table A1.6: EU27 live weight landings tonnage (t) estimates by gear from vessels under 12 m in length for the MMO section of Start Point to Plymouth Sound and Eddystone MPA (2016 to 2020).

Gear group	Gear code	2016	2017	2018	2019	2020	Total (2016 to 2020)	Average (2016 to 2020)
Anchored nets and lines	GTR	0	0	0	<0.01	0	<0.01	<0.01
Anchored nets and lines total		**0**	**0**	**0**	**<0.01**	**0**	**<0.01**	**<0.01**
Demersal trawl	OTT	0	0	0	0.01	0	0.01	0
Demersal trawl total		**0**	**0**	**0**	**0.01**	**0**	**0.01**	**0**
Traps	FPO	0	0	0	<0.01	<0.01	0.01	<0.01
Traps total		**0**	**0**	**0**	**<0.01**	**<0.01**	**0.01**	**<0.01**
Grand total		**0**	**0**	**0**	**0.01**	**<0.01**	**0.02**	**<0.01**

Table A1.7: Mean annual surface and subsurface SAR values for C-squares intersecting the MMO section of Start Point to Plymouth Sound and Eddystone MPA (2016 to 2020).

Gear group	SAR category	2016	2017	2018	2019	2020
Demersal seines	Surface	0	0	0.22	0	0
	Subsurface	0	0	0.01	0	0
Dredges	Surface	0.72	0.28	0.34	0.07	0.29
	Subsurface	0.72	0.28	0.34	0.07	0.29
Demersal trawls	Surface	2.26	1.32	1.90	1.22	1.49
	Subsurface	0.20	0.12	0.17	0.10	0.34
Bottom towed gear total	**Surface**	**2.99**	**1.59**	**2.46**	**1.29**	**1.78**
	Subsurface	**0.93**	**0.39**	**0.53**	**0.16**	**0.63**

Table A1.8: Fishing effort (days) recorded by UK vessels under 12 m in length, separated by gear type for the area of Start Point to Plymouth Sound and Eddystone MPA that intersects the marine portion of ICES rectangles 29E5 (2016 to 2021). ICES rectangle level data has been apportioned to the MPA based on the percentage area of the ICES rectangle that intersects the MPA (see Table A1.4).

Gear group	Fishing effort (days at sea)							
	2016	2017	2018	2019	2020	2021	Total (2016 to 2021)	Annual average (2016 to 2021)
Demersal seine	0.01	0	0	0	0	0	0.01	<0.1
Demersal trawl	21.46	16.75	12.21	13.61	12.52	11.87	88.42	14.74
Dredge	9.20	9.64	9.81	7.35	3.97	5.32	45.29	7.55
Bottom towed gear total	**30.67**	**26.40**	**22.02**	**20.96**	**16.49**	**17.19**	**133.73**	**22.29**
Midwater gill drift	2.09	1.56	1.04	0.85	0.35	0.47	6.36	1.06
Midwater gill encircling	0.54	0.66	0.46	0.26	0.28	0.20	2.40	0.40
Midwater surrounding	0	0.01	0.01	0	0.02	0	0.03	<0.01
Midwater trawl	0	0	0	0	0.03	0.04	0.07	0.01
Midwater hooks and lines	16.77	18.65	16.00	12.26	13.23	16.12	93.03	15.50
Midwater gear total	**19.40**	**20.88**	**17.51**	**13.37**	**13.90**	**16.83**	**101.88**	**16.98**
Traps	9.90	9.43	8.14	8.20	5.13	7.38	48.18	8.03
Anchored nets and lines	14.88	13.01	14.83	14.67	12.58	12.92	82.89	13.82
Static gear total	**24.79**	**22.45**	**22.96**	**22.87**	**17.71**	**20.30**	**131.08**	**21.85**
Unknown	0	0	0.06	0.04	0.09	0.05	0.25	0.04
Unknown total	**0**	**0**	**0.06**	**0.04**	**0.09**	**0.05**	**0.25**	**0.04**
MPA total	**74.85**	**69.72**	**62.54**	**57.24**	**48.20**	**54.38**	**366.93**	**61.15**