

<b>Title:</b> Crustacean and Molluscan Fisheries (Vessel Specification) Byelaw 2024  <b>Date:</b> 27/12/2024  <b>Organisation:</b> Cornwall IFCA	<b>De-Minimis Assessment (DMA)</b>	
	<b>Stage:</b> Formal consultation draft	
	<b>Source of intervention:</b>	
	<b>Type of measure:</b> IFCA byelaw	
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<b>Summary: Rationale and Options</b>		
<b>Total Net Present Value</b>	<b>Business Net Present Value</b>	<b>Net Cost to Business per year</b>
£0.00m	£0.00m	£0.00m

**Rational for intervention and intended outcomes.**

This measure is the first stage of a wider review of management of effort in the crustacean fishery in the CIFCA District with the intention of:

- applying a stakeholder led management approach, responding to local fishers’ concerns,
- relieving pressure on crab and lobster stocks in light of declining LPUE, and the prolonged fishing season,
- allowing fairer access to the fishery by creating more opportunities for smaller, less capable vessels in the fleet with the view to supporting the wider coastal communities supported by their fishing activity.

**Describe the policy options considered**

**Option 0:** Do Nothing.

**Option 1:** Self Regulation- Introduce voluntary measures

**Option 2 (preferred option):** Restriction on maximum vessel size and capability in the District

**Rationale for DMA rating:**

A DMA has been produced because the cost of the preferred management option, Option 2, is deemed to be negligible (less than £5million).

Officers have also presented costs and benefits of Option 0. It is in Officers opinion that the potential cost of Option 0 far exceeds that of Option 2.

Will the policy be reviewed? <b>Yes</b>		If applicable, set review date: <b>5 years following confirmation</b>		
Are these organisations in scope?	Micro <b>Yes</b>	Small <b>Yes</b>	Medium <b>No</b>	Large <b>No</b>

## 1. Supporting Evidence

### 1.1. Rational for intervention and Intended Effects

This measure is part one of a wider review of the management of fishing effort in the crustacean fishery in the District with the intention of:

- applying a stakeholder led management approach, responding to local fishers concerns,
- relieving pressure on crab and lobster stocks in light of declining LPUE, and the prolonged fishing season,
- allowing fairer access to the fishery by opening up more opportunities to the smaller, less capable vessels in the fleet with the view to supporting the wider coastal communities supported by their fishing activity.

#### 1.1.1. Process to date

The process to date has been codeveloped through extensive engagement and consultation with the local fishing industry, using their ideas to identify options to address challenges which they have highlighted as needing urgent action. The implementation of the national Fisheries Management Plan (FMP) for the crab and lobster fishery in England is under development and includes objectives to address fishing effort for these species. Cornwall IFCA is working at a local level to create a Crustacean Fishery Management Plan for the inshore waters within its IFCA District limits, engaging with stakeholders to provide local solutions to local issues to link into and complement the delivery of the national fisheries management plan.

To start this process, in 2021, a Stakeholder Questionnaire was sent to all Cornwall IFCA Lobster, Crawfish and Crab Fishing Permit Byelaw permit holders. Many of the responses to that questionnaire identified rising fishing effort as being the biggest threat to the long-term future of this important fishery which supports over 270 commercial vessels in over 42 ports in Cornwall (Street *et al.*, 2022). This concern is also a repeated theme in the comments section on the Cornwall IFCA shellfish fisheries permit activity returns data, which are collected directly from inshore fishermen. Additionally, a concern raised by the fishing industry was that the larger, more capable vessels fished in the District year-round, when many other vessels in the fleet are unable to do so due to the weather conditions during the winter months (Street *et al.*, 2022). Traditionally the areas of seabed used for crustacean fishing would have time to ‘rest’ in the winter months when it was not being fished.

Concerns about increasing potting effort for edible crab and lobster were also shared with Cornwall IFCA during a consultation in December 2022 for the introduction of an emergency byelaw to limit effort from larger vessels operating in the District. Although that byelaw was not introduced, there has been continued support across the Cornwall IFCA District for fishing effort to be managed, particularly for edible crab.

In the 2021 permit holder’s questionnaire, over 60% of respondents suggested that further effort management in the crab and lobster fishery was medium-high in usefulness as a form of fisheries management measure (Street *et al.*, 2022). Therefore, to address this, between 17 May 2023 and 14 June 2023, Cornwall IFCA ran an open Call for Evidence to collect detailed stakeholder views on a selection of potential management interventions for limiting effort in potting for crabs and lobsters within the Cornwall IFCA District. The options for managing effort were pot limits, gear construction and marking, changing the maximum vessel size, closed periods and management of recreational fishing for crustaceans. The option with the highest level of support, 74%, was in favour of changing the maximum vessel size, followed by 69% supporting the use of pot limits (Daniels *et al.*, 2023).

Between 19<sup>th</sup> July 2024 and 8<sup>th</sup> August 2024 Cornwall IFCA opened an informal consultation with proposals for addressing the capacity of vessels fishing for crabs and lobsters (the option with the highest level of support in the Call for Evidence). The overall response to the measures taken across all respondents was 60% in support of a maximum mono-hull overall length of 10m, with a further 11% supporting a 12m maximum overall length. For multihulls (e.g. catamarans), 67% supported a maximum overall length of 10m. 56% of responses were in favour of prohibiting the use of viviers completely whilst 31% supporting the existing maximum overall length of 16.46m for these vessels.

Following a decision taken by the full IFCA Authority membership at its quarterly statutory meeting in September 2024, a new byelaw was drafted to address fishing effort in the crustacean fishery within the Cornwall IFCA district, for submission to its next meeting on 20 December 2024, with a recommendation that the byelaw is made.

This document examines the potential impacts of the introduction of this byelaw.

### *Summary*

A review of the 2023 Cornwall IFCA Crustacean Permits of vessels using pots to retain crustaceans showed there were no over 10m catamarans reporting fishing in the Cornwall IFCA District, or vessels over 12m without vivier tanks. There were 10 permits issued to vessels with vivier tanks, however four did not report retaining crustaceans in the Cornwall IFCA District in 2023.

Overall vivier vessels represent a small proportion of the fleet, however, have a far greater proportion of the effort and catch in the District (see 1.1.2). This effort, in terms of pot hauls, has increased from 2016 levels (see 1.1.2). The vessels are far more capable due to their size and construction and can therefore work in more adverse weather than the smaller vessels, maintaining a fishery in the winter when grounds were traditionally left to 'rest' as vessels could not go out to fish (see 1.1.2).

The following data has been compiled from the Cornwall IFCA crustacean permit return data from 2016 to 2023.

#### *1.1.2. Effort*

The number of active viviers in the District has increased from five to six active vessels between 2016 and 2023. There were also four additional permits issued in 2023 although these four vessels have not reported any fishing inside the District.

From 2016 to 2023, the number of pot hauls from the vivier fleet in the Cornwall IFCA District doubled from 165,420 pot hauls reported in 2016 to 405,474 pot hauls reported in 2023 (Figure 1). In the same period, the number of pot hauls from the remainder of the fleet has declined by nearly 40% (Figure 1).

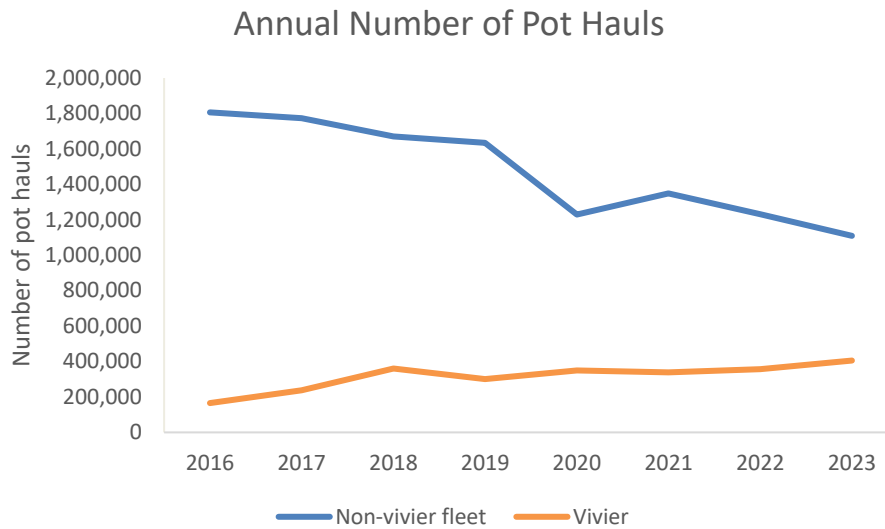


Figure 1: The total number of annual pot hauls for the active potting fleet (lines), split by non-viviers (blue) and viviers (green).

Vivier vessels represented 3% of the potting fleet operating in the Cornwall IFCA District in 2023 in terms of the number of vessels but are responsible for 26.8% of the pot hauls. On average, each vivier vessel will carry out 67,579 pot hauls annually in the Cornwall IFCA District. This is in comparison to 5,996 pot hauls by a non-vivier vessel in the fleet, ranging from 1,454 pot hauls in the under 6 fleet to 25,856 pot hauls in the 10 to 12m fleet ( Annex Table A).

As previously stated, vivier vessels represented only 3% of the crustacean potting fleet in 2023, however, the sector contributed 7.8% of the total pot fishing days in the District (Annex Table A). On average in 2023 a vivier vessel fished with pots 105.7 days in the Cornwall IFCA District, compared to 40.2 days fishing with pots in the District by a non-vivier vessel in the fleet (Annex Table A).

In 2023, as shown in Figure 2 below, over half of the active vivier fleet (four vessels) reported fishing in January whilst less than 20% of the non-vivier fleet reporting fishing at that time (37 vessels). The average number of monthly fishing days per vessel was consistently higher for vivier vessels throughout 2023.

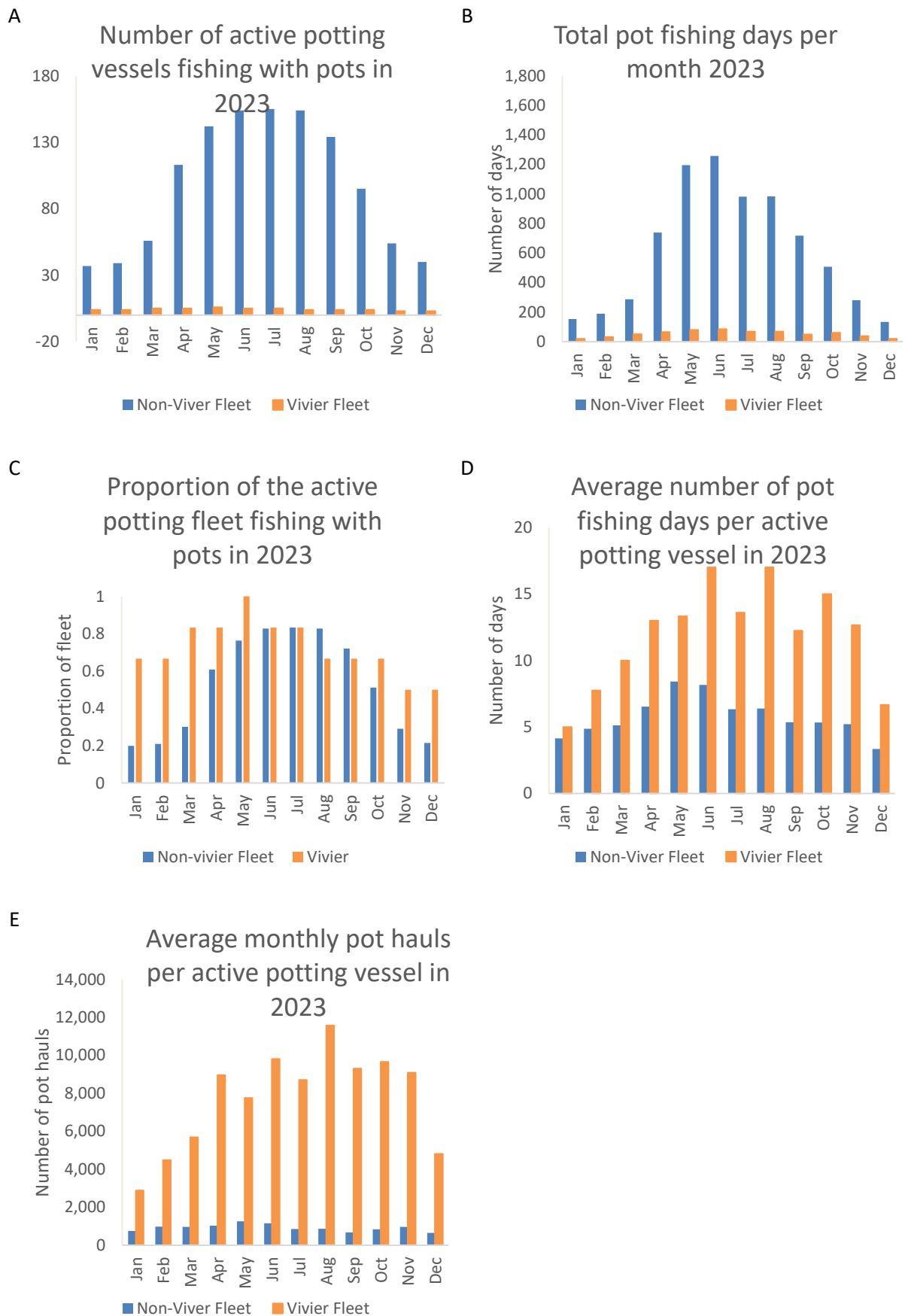


Figure 2: 2023 monthly permit data split into two fleets; the non-vivier fleet (blue) and vivier fleet (green) showing, the number of vessels fishing (A), the total number of fishing days per month for the fleets (B), the proportion of the fleet

actively fishing (C), the average number of days fished per month for the vessels fishing at that time (D) and the average monthly pot hauls per active potting vessel in 2023 (E). 'Active potting vessels' are permits where crustacean have been reported to be removed from the District using pots in 2023.

### 1.1.3. Landings

In the non-vivier fleet, landings of edible crabs have declined (Figure 3), however in the vivier fleet landings have fluctuated over the reporting period with an overall increase in landed weight of edible crab (Figure 3).

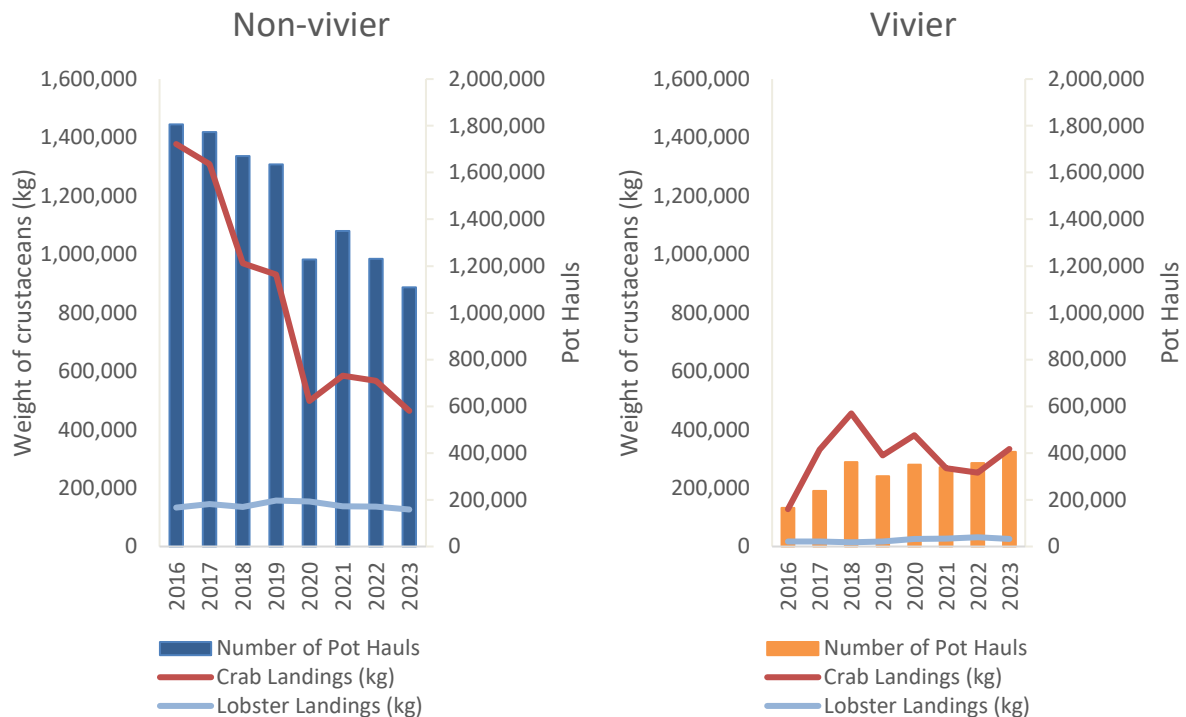


Figure 3: The combined number of annual pot hauls, and total annual weight in kg of edible crab and lobster removed from the Cornwall IFCA District using pots from 2016 to 2023 in the non-vivier potting fleet (left) and vivier potting fleet (right)

The vivier fleet represented 3% of the fleet in 2023, however in 2023 they landed 41.86% of the catch of edible crabs and 17.25% of the catch of lobsters (Annex Table A).

On average<sup>1</sup> one vivier vessel landed 55,715kg of edible crab in 2023 (Annex Table A), 22 times more than the average for vessels in the remainder of the fleet (2,509kg, Annex Table A), and over double that of the next most capable vessels in the fleet, the 10 to 12m vessels, where the average annual landing of edible crab was 24,763kg (Annex Table A). This trend was consistent through the year in 2023 (Figure 4).

<sup>1</sup> Average values have been calculated by dividing the total landed annual weight per fleet sector and divided by the number of vessels actively potting for crustaceans in that year.

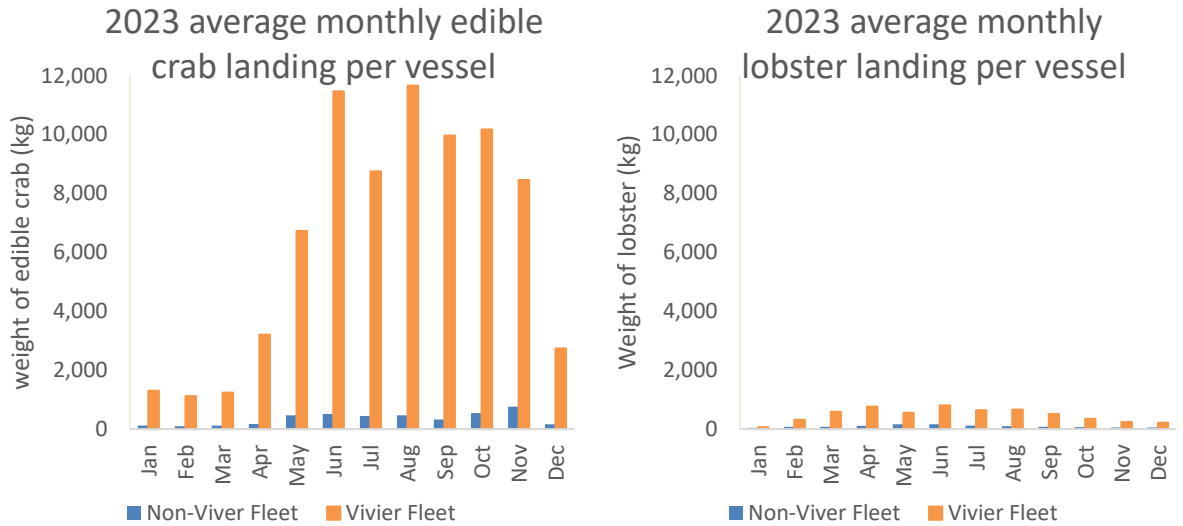


Figure 4: Edible crab and lobster catch monthly on average per vessel from pots in the non-vivier and vivier active potting fleets in 2023

#### 1.1.4. Employment

From Cornwall IFCA 2023 Crustacean Permit Returns, on average, 5.0 people are employed on average per vessel in the vivier fleet (Annex Table A), compared to 1.2 people per vessel in the non-vivier active crustacean fishing fleet that have pots (this includes both full and part time workers). In total in 2023, 30 people were reported to be employed on vivier vessels fishing in the Cornwall IFCA District, and 273 people were reported in the non-vivier fleet that were actively fishing for crustaceans and reported pots, again this includes both full and part time workers (**Error! Reference source not found.**).

#### 1.1.5. Other Metrics

In 2023 for every 10 tonnes (10,000kg) of edible crab landed the non-vivier fleet, it is estimated that on average 3.98 vessels were used and 5.88 people were employed as crew on the vessels, compared to in the vivier fleet where it was estimated at 0.18 vessels and 0.90 crew members (Annex Table B).

## 2. Policy Options considered, including alternatives to regulation

- Option 0: Do nothing
- Option 1: No statutory restrictions. Introduce a voluntary agreement
- Option 2: Restriction on maximum vessel size and capability in the District (preferred option)

## 3. Policy Objectives and intended effects

Option 0 has been discounted as the landings and effort data from the shellfish permit scheme illustrates the decline in edible crab landings for the majority of the fleet operating inshore. Extensive stakeholder engagement has identified an urgent need to address the impact of fishing effort.

Option 1 has been discounted as it would not secure the changes in fishing effort required as a voluntary measure would not be observed.

The preferred option, Option 2, would enable Cornwall IFCA to fulfil many of its obligations under the Marine and Coastal Access Act and the Fisheries Act as detailed below, and would be the first measure in the process of the review of the management of effort in the crustacean fishery.

### *Marine and Coastal Access Act*

Part 6, Chapter 1 of the Marine and Coastal Act provides for the management of inshore fisheries. Sections 149 to 186. Under Section. 153(1) an IFCA must manage the exploitation of sea fisheries resources in its District. In turn, section 153(2) states that in performing its duty under s.153(1), an IFCA must -

- (a) seek to ensure that the exploitation of sea fisheries resources is carried out in a sustainable way.
- (b) seek to balance the social and economic benefits of exploiting the sea fisheries resources of the district with the need to protect the marine environment from, or promote its recovery from, the effects of such exploitation,
- (c) take any other steps which in the authority's opinion are necessary or expedient for making a contribution to the achievement of sustainable development, and
- (d) seek to balance the different needs of persons engaged in the exploitation of sea fisheries resources in the district.

The aims of this byelaw are consistent with section 153(1) and (2).

### *The Fisheries Act*

The Authority is bound by the Fisheries Act 2020, including the following fisheries objectives which are directly relevant to this fishery of:

- (1) the sustainability objective,
  - a) That fish and aquaculture activities are—
    - (i) environmentally sustainable in the long term, and
    - (ii) managed so as to achieve economic, social and employment benefits and contribute to the availability of food supplies, and
  - b) the fishing capacity of fleets is such that fleets are economically viable but do not overexploit marine stocks.
- (2) the precautionary objective,
  - (a) the precautionary approach to fisheries management is applied, and

- (b) exploitation of marine stocks restores and maintains populations of harvested species above biomass levels capable of producing maximum sustainable yield.
- (3) the scientific evidence objective,
  - (c) the management of fish and aquaculture activities is based on the best available scientific advice.
- (4) the national benefit objective,
  - the “national benefit objective” is that fishing activities of UK fishing boats bring social or economic benefits to the United Kingdom or any part of the United Kingdom.

Cornwall IFCA has a duty to effectively manage the exploitation of sea fisheries resources in its district in a manner that is consistent with its obligations under section 153 of MaCAA, as well as delivering those duties in a manner which is consistent with the aims of the fisheries objectives as set out in the Fisheries Act 2020. The Crustacean and Molluscan Fisheries (Vessel Specification) Byelaw 2024 will deliver against the objectives listed above, which are also identified in the relevant section of the crab and lobster fisheries management plan.

#### *Environmental Improvement Plan 2023 for England*

This plan details the goals that government will pursue to improve the environment within a generation. It sets out how marine biodiversity will be protected and restored, and how the management of fishing should take an ‘environment first’ approach. It sets out a series of ambitious targets, with the following target of direct relevance to this byelaw: *Ensuring that all fish stocks are recovered to and maintained at levels that can produce their maximum sustainable yield.*

This byelaw is consistent with the approach of the EIP and will help to deliver against the target stated above.

#### *The UK Marine Strategy (and good environmental status)*

The UK Marine Strategy provides the framework for delivering clean, healthy, safe, productive and biologically diverse oceans and seas. It consists of a simple three stage framework for achieving good environmental status (GES) in our seas through protecting the marine environment, preventing its deterioration and restoring it, where practical, while allowing the sustainable use of marine resources. This byelaw will contribute to the overall achievement of GES within inshore waters around Cornwall through delivery of responsibly and responsively managed crab and lobster fisheries which are profitable and capable of delivering social and economic benefits. It will also contribute to achieving GES for UK Marine Strategy descriptor 3 – commercial fish and shellfish stocks, in English waters.

#### *Crab and Lobster Fisheries Management Plan (2023)*

In its key goals and proposed actions, this fisheries management plan (FMP) states that, *‘Stakeholders noted that a ‘one size fits all’ approach to management is not appropriate for a fishery characterised by local stocks and fleet variation. So regional- or local-based management is needed (with harmonisation across jurisdictional boundaries where appropriate), together with better species and fisheries data, to ensure the long-term sustainability of these fisheries’.*

In the proposed initial management interventions, Proposal 4: Progress work to develop an effort management strategy for crab and lobster, states *‘developing measures to limit fishing effort at sustainable levels in crab and lobster fisheries is a high priority’*

In its initial management measures, it identifies key proposals including wider effort management measures, in addition to piloting finer-scale management of both edible crab and lobster fisheries.

Objective 5 (for edible crab and for European lobster) aims to *‘devise and implement a short- to medium-term management approach proposal that considers the external regulatory environment’*, with a rationale that *‘under a changing landscape post-EU exit, it will be important to implement interim management measures based on best available scientific evidence in order to protect crab stocks against over-exploitation, while an increased time series of data required for responsive, evidence-based management is assembled’* .

Objective 7, also for both edible crab and European lobster, aims to *‘explore trade-offs between access arrangements for crab fisheries that will ensure both long-term environmental sustainability and economic profitability - rationale: Appropriate access arrangements will support thriving crab fisheries in terms of both economic and environmental sustainability.’*

The byelaw seeks to deliver management which is consistent with these objectives in a short to medium term timescale because of the urgency of the requirement to address effort management within the crab and lobster management units in which the Cornwall IFCA district is located.

#### *South West Inshore and South West Offshore Marine Plan 2021*

The byelaw is spatially located entirely within the south west inshore marine plan area and contributes to the achievement of the following objective:

*Achieving a sustainable marine economy (2) - the marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future.*

In addition, it is consistent with the following plan policies:

SW-FISH-1 Proposals that support a sustainable fishing industry, including the industry's diversification, should be supported.

SW-FISH-3 Proposals that enhance essential fish habitat, including spawning, nursery and feeding grounds, and migratory routes, should be supported.

## 4. Expected Level of Business Impact

The preferred option is option 2. Analysis of data from the 2023 crustacean potting effort and landings data has been used as a basis for estimating financial impacts in sectors of the fleet which may be affected by the proposed measure (**Error! Reference source not found.**). Additionally, this data has been used to estimate potential costs of Option 0, where no new measures are introduced (4.2).

### 4.1. Option 2 (preferred option)

#### *4.1.1. Cost to Industry*

In 2023, there were no over 10m catamarans, and no over 12m monohulls without vivier tanks that reported fishing in the Cornwall IFCA District for crustaceans. As a result, there would be no impact

on businesses in scope of this byelaw. There were six vivier vessels actively fishing the District in 2023 which would be impacted by Option 2. It is foreseen that these excluded vessels are of sufficient size and capability to be able to fish outside of the Cornwall IFCA district, and therefore their ability to fish would not be removed, although their steaming times would increase due to greater distances to fishing grounds. Therefore, costs would be minimal but would include:

- Increased fuel costs,
- Increased associated costs to increased steaming time including engine maintenance costs, and potentially crew wages.

It is expected that these costs will be quantified in responses during the formal consultation process from fishing businesses within scope of the provisions of the byelaw and this data will be incorporated into later versions of this document.

#### *4.1.2. Familiarisation Costs*

The familiarisation cost is the cost to fishers of reading the byelaw. In 2023 there were 10 vivier vessels with permits, which were owned by five companies. Officers assume that one person per company will be required to read the document and update skippers and crew accordingly. This time is seen to be negligible, i.e. less than an hour, and therefore familiarisation costs have not been calculated.

#### *4.1.3. Monitoring and Compliance*

There would be a continuation of current risk-based enforcement by Cornwall IFCA where currently a larger maximum vessel size enforced. Therefore, there would be no increase in cost of enforcement.

#### *4.1.4. Total Monetised Costs*

Total monetised costs could be calculated as:

$$\text{Business Impact Cost} + \text{Familiarisation Cost} + \text{Monitoring and Compliance}$$

Officers have estimated that the actual costs are likely to be negligible in all three categories, therefore overall the initial monetised costs are deemed to also be negligible.

#### *4.1.5. Non-Monetised Costs*

*Potential non-monetised costs of Option 2 include:*

- fishing pressure displacement of vivier vessels to other areas.

#### *4.1.6. Non-Monetised Benefits*

*Potential non-monetised benefits of Option 2 include:*

- maintaining fleet composition and potentially increasing profitability of smaller vessels. This could lead to:
  - maintaining and/or increasing catching sector jobs
  - maintaining and/or increasing seafood subsector jobs,
  - maintaining and enhancing coastal communities; small ports continuing to be used for fishing vessels, leading to,
  - maintaining cultural identity; much of Cornwall's coastal cultural heritage is centred around fishing from small day boats, leading to,
  - maintaining and enhancing tourism appeal and therefore revenue from the tourism trade.
  - increased food security with industry comprised of a larger number of vessels and businesses.

- reducing effort in the pot fishery in the winter months, allowing for potential ‘rest periods’ for crab and lobster stocks
- reducing effort in the pot fishery, allowing for potential ecosystem recovery and marine net gain.

## 4.2. Option 0

If option 0 is chosen, there is the potential for the number of vivier vessels working within the Cornwall IFCA District to increase. In 2023, there were four additional vessels with Cornwall IFCA permits that did not report fishing in the District, representing a latent capacity which could be immediately used within the District. The Cornwall IFCA permit system does not limit the number of permits than can be issued annually.

### 4.2.1. Cost to Industry

Estimations show that hypothetically, 14 vivier vessels could land the total weight of edible crab retained from the District in 2023 from the entire fleet (Annex Table B). This would equate to 71 catching sector jobs, and an estimated 1,065 seafood subsector jobs (based on the estimation of 15 seafood subsector jobs per catching sector job (Plunkett-Cole and Curtis, 2023), although at a cost of the current 185 non-vivier vessels with 273 catching sector jobs, and an estimated 4,095 seafood subsector jobs.

### 4.2.2. Familiarisation Costs

In Option 0 there would be no change to management, therefore no familiarisation costs.

### 4.2.3. Monitoring and Compliance

Option 0 would require a continuation of current risk-based enforcement by Cornwall IFCA therefore, there would be no increase in cost of this enforcement.

### 4.2.4. Total Monetised Costs

Total monetised costs could be calculated as:

$$\text{Business Impact Cost} + \text{Familiarisation Cost} + \text{Monitoring and Compliance}$$

Initially there would be no business impact cost as there would be no change to management, as with familiarisation costs and monitoring and compliance costs. Therefore overall, the initial total monetised costs are deemed to be negligible.

### 4.2.5. Non-Monetised Costs

Potential non-monetised costs of Option 0 include:

- changes to fleet composition; smaller vessels may no longer be profitable and could be lost from the fleet. This could lead to:
  - loss of catching sector jobs
  - loss of seafood subsector jobs,
  - small ports no longer being used for fishing vessels, leading to,
  - loss of cultural identity; much of Cornwall’s coastal cultural heritage is centred around fishing from small day boats, leading to,
  - reduction in tourism appeal and therefore revenue from the tourism trade.
  - less food security if the industry becomes reliant on only a small number of vessels and businesses.
- Maintaining or increasing effort in the pot fishery in the winter months, inhibiting ‘rest periods’ for crab and lobster stocks.

- Maintaining or increasing effort in the pot fishery, inhibiting ecosystem recovery and marine net gain.

#### 4.2.6. Non-Monetised Benefits

*Potential non-monetised benefits of Option 0 include:*

- No displacement of vessels to other fishing grounds.

### 4.3. Business Impact Target Calculations

This section will be completed following the formal consultation, in light of relevant financial information received.

## 5. Risks and unintended consequences

The byelaw and its measures contained within the byelaw will be included in Cornwall IFCA's risk based enforcement plan and it will be assigned a risk rating. Compliance will be delivered through existing routine enforcement activity, supplemented by data gathered through the crustacean shellfish permit system.

## 6. Wider impacts

*Equalities Impact Assessment:* this byelaw will not have an impact with respect to this duty.

*Justice Impact test:* Not applicable at this stage. If required, will be considered at the final stage of completing this document.

*Trade Impact:* not applicable

## 7. Post implementation review

This byelaw will be reviewed every five years, from when it comes into force, to ensure its continued suitability.

## 8. Annex

Annex Table A: Summary data for 2023 permit returns of active potting vessels (vessels which reported retaining crustaceans when fishing with pots)

2023	Under 6	6 to 8	8 to 10	10 to 12	Over 12	Catamarans under 10m	Non-vivier fleet	Vivier	V % of total
Number of <b>active fishing vessels</b>	78	53	33	3	0	18	185	6	3.14
<b>Total</b> annual <b>number fishing days</b> using pots	2,145	2,454	1,599	256	0	975	7,429	634	7.86
<b>Average<sup>2</sup></b> annual <b>number of fishing days per vessel</b>	27.5	46.3	48.5	85.3		54.2	40.2	105.7	
<b>Total</b> number of annual <b>pot hauls</b>	113,475	341,122	304,017	77,570	0	273,087	1,109,271	405,474	26.77
<b>Average<sup>2</sup></b> annual <b>pot hauls per vessel</b>	1,454.8	6,436.3	9,212.6	25,856.7		15,171.5	5,996.1	67,579.0	
<b>Total</b> weight of annual <b>edible crab landings (kg)</b>	15,255	180,210	121,021	74,289	0	73,490	464,264	334,287	41.86
<b>Average<sup>2</sup></b> weight of annual <b>edible crab landings (kg) per vessel</b>	195.6	3,400.2	3,667.3	24,762.9		4,082.8	2,509.5	55,714.5	
<b>Total</b> weight of annual <b>lobster landings (kg)</b>	22519.36	32880.36	31885.09	7278.9	0	32101.5	126,665	26403	17.25
<b>Average<sup>2</sup></b> weight of annual <b>lobster landings (kg) per vessel</b>	288.7	620.4	966.2	2,426.3		1,783.4	684.7	4,400.5	
<b>Total</b> number of <b>people employed</b> on vessels	91	71	57	9	0	45	273	30	9.90
<b>Average<sup>2</sup></b> number of <b>people employed</b> on vessels <b>per vessel</b>	1.2	1.3	1.7	3.0		2.5	1.5	5.0	

<sup>2</sup> Average values calculated by dividing the relevant total value (of fishing days, pot hauls, weight of edible crab, weight of lobster, number of people employed) by the number of active potting vessels in that category (active potting vessels being vessels which reported landing crustaceans from pots from the Cornwall IFCA District in 2023).

Annex Table B: Hypothetical of the numbers of vessels and associated crew that would be required to catch the same volume of edible crab as was landed in 2023 if the fleet composition were different<sup>3</sup>.

	Non- vivier fleet						Non-vivier fleet	Vivier	Whole fleet
	Under 6	6 to 8	8 to 10	10 to 12	Over 12 non-vivier	Catamaran under 10m			
<b>2023 Values</b>									
Number of vessels actively potting	78	53	33	3	0	18	185	6	191
Landed weight of edible crab (kg)	15,255	180,210	121,021	74,289	0	73,490	464,264	334,287	798,551
Number of crew employed on vessels	91	71	57	9	0	45	273	30	303
<b>Vessels Estimations</b>									
Number of vessels required to land 798,551kg edible crab (2023 <b>whole fleet value</b> ) <sup>4</sup>	4,083.14	234.86	217.75	32.25	na	195.59	318.21	14.33	191.00
<b>Crew Estimations</b>									
Average number of crew required to land 10,000kg of edible crab <sup>5</sup>	59.65	3.94	4.71	1.21	na	6.12	5.88	0.90	3.79
Number of crew required to land 798,551kg edible crab (2023 <b>whole fleet value</b> ) <sup>6</sup>	4,763.67	314.62	376.11	96.74	na	488.98	469.57	71.66	303.00

<sup>3</sup> These estimations are purely hypothetical to illustrate the differences between fleet sectors and are based on many assumptions including that there was no change in edible crab populations or catchability, and there was no change in fishing practices. Differences in part- or full-time employees have not been taken into consideration.

<sup>4</sup> Calculated by dividing the number of vessels actively potting for crustaceans in the Cornwall IFCA District in 2023 by the 2023 landed weight of edible crab for that vessel category, then multiplying by the total crab landed by the whole fleet combined in 2023

<sup>5</sup> Calculated by dividing the number of crew employed in 2023 by the 2023 landed weight of edible crab for that vessel category, multiplied by 10,000.

<sup>6</sup> Calculated by dividing the number of crew employed in 2023 by the 2023 landed weight of edible crab for that vessel category, then multiplying by the total crab landed by the whole fleet combined in 2023

## 9. References

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