

Whelk Permit Byelaw 2016: Flexible Permit Conditions Review

November 2024



This report is intended to inform a review of the effectiveness of flexible permit conditions issued under the Whelk Permit Byelaw 2016. The report has been augmented by context provided by the responses to the consultation with fishery stakeholders. In particular, data analysis was re-run to consider fishery metrics by 'season' (1 August to 31 July) rather than Calander year.

1. Introduction

The whelk fishery was previously a winter-time, marginal fishery which did not attract much fishing effort within the district. In 2014, the Authority identified that whelk landings had increased significantly and introduced an Emergency Byelaw to manage the fishery and gather data.

Eastern IFCA replaced the emergency byelaw with the Whelk Permit Byelaw 2016 and has managed whelk fisheries within the district under this byelaw. This flexible permit byelaw enables the Authority to introduce, vary or revoke management meases as flexible permit conditions to ensure that the fishery operates sustainably and within environmental parameters.

The Byelaw requires that permit conditions are reviewed at least every four years and that such a review includes consultation with stakeholders and consideration of stock evidence and advice from other bodies (including Cefas for example).

Permit conditions under review

The permit conditions under review are as follows:

Permit Conditions	Intended effects
Commercial Fishing Pot Limitation (500 pots)	Intended to reduce the risk of further increases in fishing effort whilst still enabling other fishermen to diversify into the fishery. Also intended to ensure that the fishery is not dominated by a single business model or impacted by larger, nomadic vessels which can deploy a significant amount of pots.
Recreational Fishing Pot Limitation (5 pots)	Intended to reduce the risk of further increases in fishing effort.
Minimum Legal Size (55mm)	Intended to enhance the sustainability of the fishery noting that the national minimum conservation reference size is considered to be too low to enable whelks to spawn prior to being harvested.
Requirement to sort catch over a riddle with spacing of at least 24mm	Intended to enhance the effectiveness of the minimum legal size requirement.
Requirement for pots to have at least 2 escape holes with a	Intended to enhance the effectiveness of the minimum legal size requirement.

diameter of 24mm positioned at least 150mm from the top of the pot <u>or</u> no more than 50mm from the bottom.	
Maximum internal whelk pot volume of 30 litres	Intended to prevent circumvention of the pot limitation by creating larger pots.

The above permit conditions have been in place since the byelaw came into effect in 2016.

In 2020, the permit conditions were reviewed and it was found initially that fishing effort may be too high in The Wash and that additional measures may be required to reduce fishing effort¹. Additional measures which primarily sought to increase the effectiveness of existing measures (by increasing the deterrent effect including, for example, eligibility criteria which prohibited fishing after a person had committed an offence) were proposed² and consulted on. However, during their development, the risk to the whelk fishery decreased as the health of the Wash stock improved, the associated risk reduced (Annual Strategic Assessment 2023³) and instead, the Authority undertook a new monitoring workstream in lieu of bringing new measures into effect.

Scope of this review

This review analyses whelk fishing data (primarily data obtained from whelk permit catch returns) and the feedback from whelk permit holders to assess the state of the fishery and review the permit conditions in this context.

Whelk permit holders consultation

Views from fishery stakeholders were sought during a consultation between 25 October and 22 November 2024. The consultation was also supported by a meeting held online on 20 November 2024. The consultation was advertised on the Authority's website, individual letters were sent to all persons named on Whelk Permits between 2020 and 2024 and the same were sent text messages via mobile phone to remind them of the consultation and the meeting. Further, IFCOs engaged whelk fishers during patrols to provide information about the permit condition review and a summary of the information from an initial situational report on the fishery.

No written responses were received to the consultation. However, the online meeting was successfully held and IFCOs gathered some views during engagement during patrols from the period 2021 to 2024 (inclusive).

2. Fishery overview

Landings data

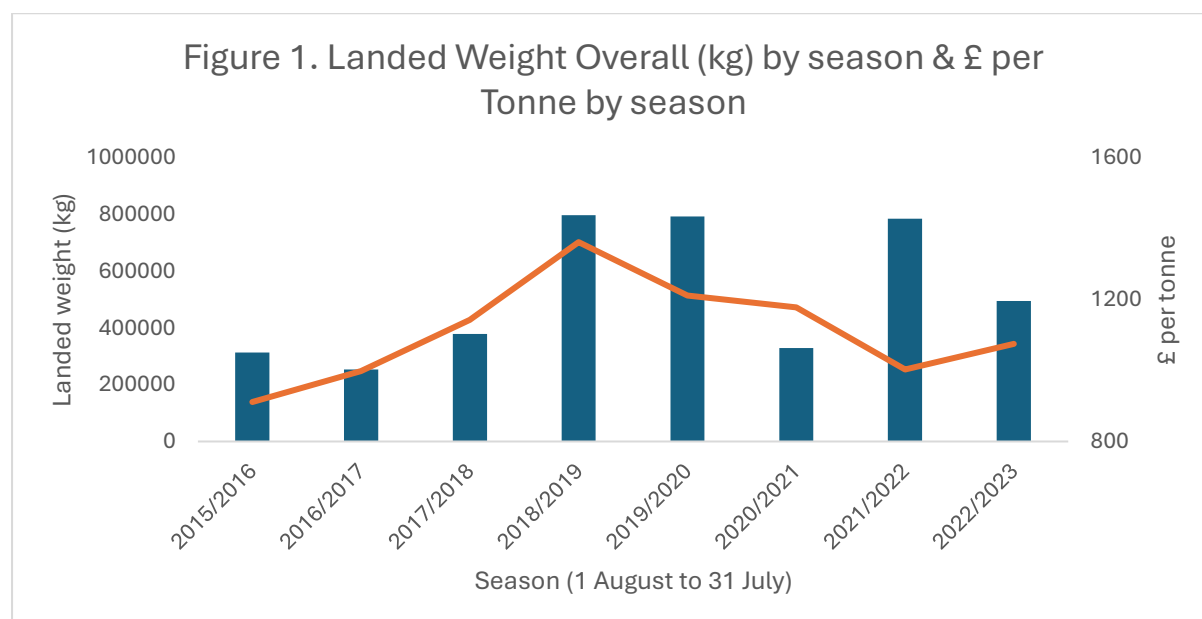
Figure 1 (below) is produced from Eastern IFCA data gathering, representing whelk landings from within the district. Whelk landings appear to fluctuate between circa 300 tonnes and circa 750 tonnes per season. Increases in landed weight appear to follow increases in the value of catch until the 2019/20 season, during which landed weight remained high despite a

¹ Minutes and Papers for Action Item 9 of the 41st Eastern IFCA Meeting

² Minutes and Papers for Action Item 10 of the 42nd Eastern IFCA Meeting

³ [2023_02_20_Strategic_Assessment_FINAL.pdf](#)

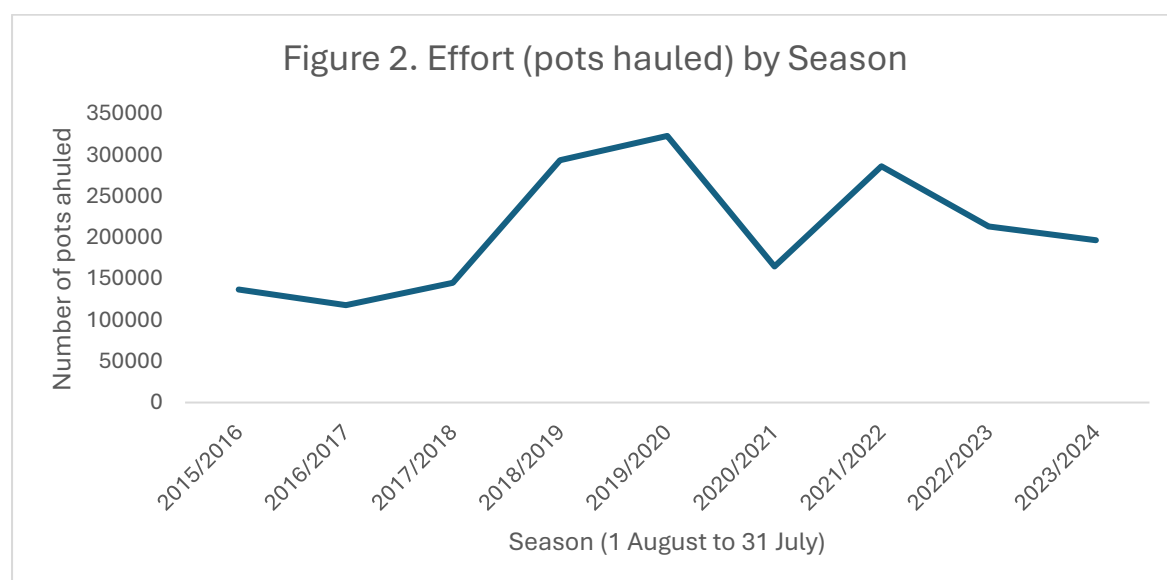
reduction in the market value. In addition, landed weight in 2021/22 increased despite a reduction in value and decreased in 2022/23 despite an increase in the value.

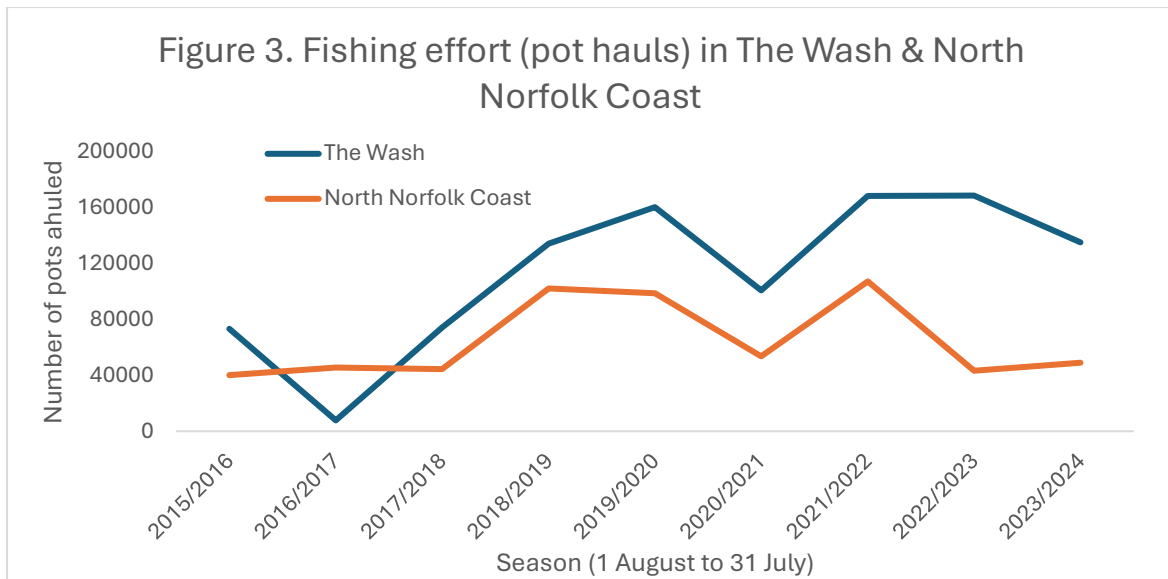


Fishing effort

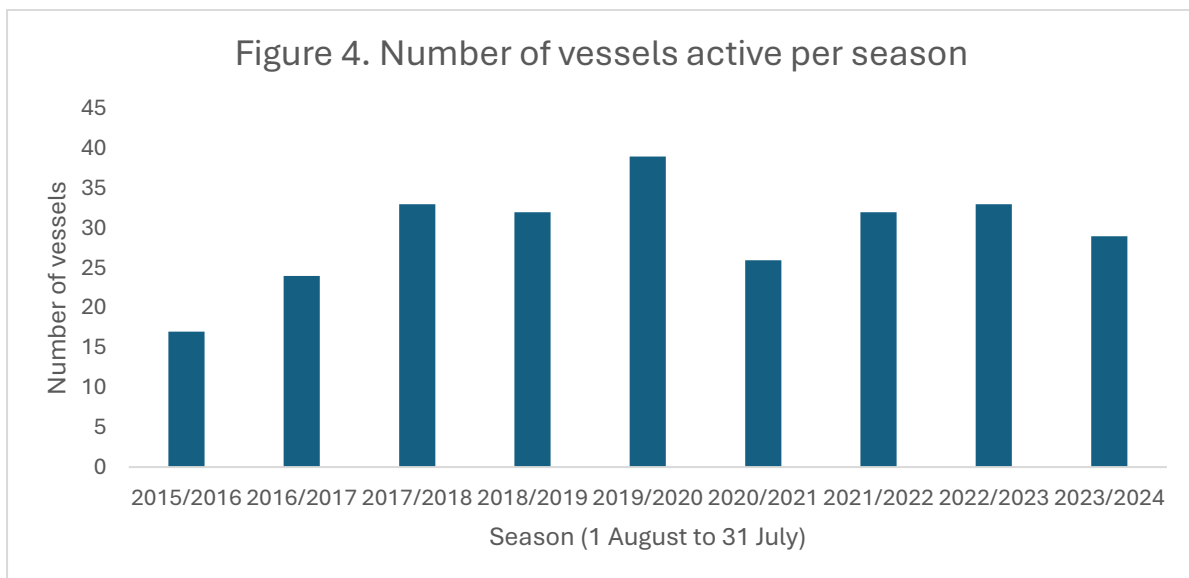
Fishing effort has fluctuated over time, with sharp increases seen between 2017/18 and 2021/22 followed by a series of increases and declines (Figure 2).

Fishing effort is concentrated in The Wash and the North Norfolk Coast (representing over 90% of fishing effort since 2020/21). Fishing effort in The Wash now represents the majority of fishing (68% in 2022/23), gradually increasing since the fishery established in The Wash in 2016/17 (Figure 3) whereas it is understood that historically, whelk fishing effort was more focussed off the North Norfolk Coast.



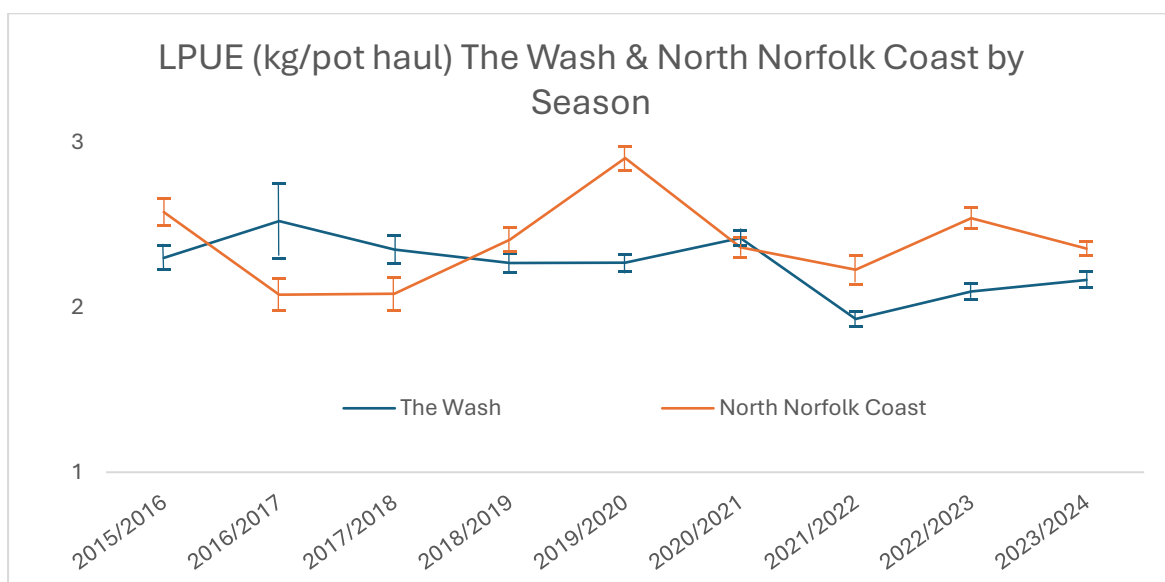
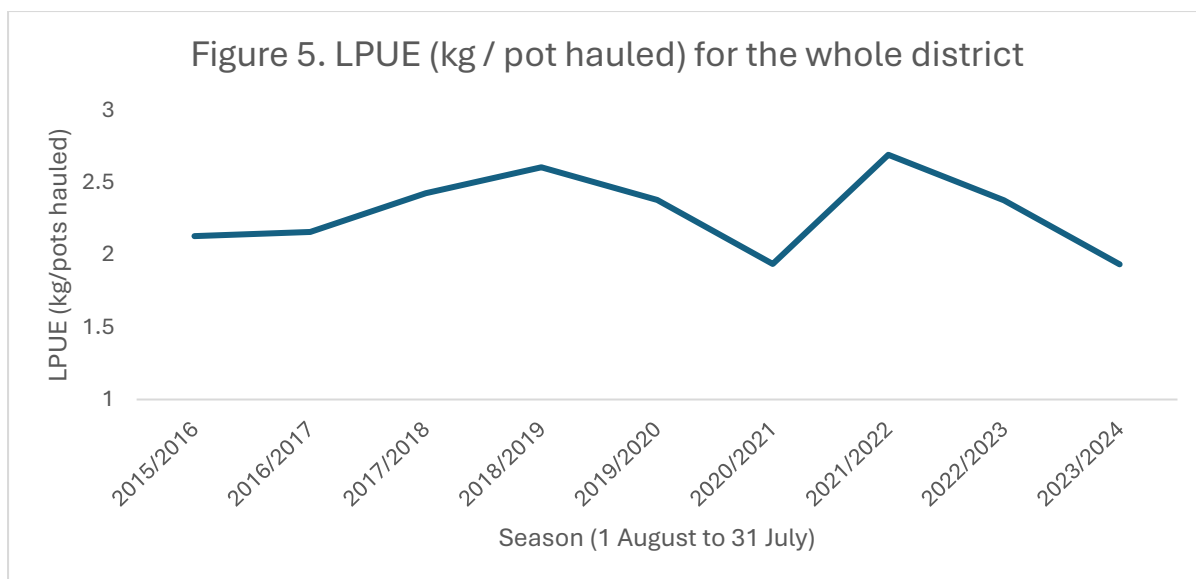


The number of vessels operating in the also fluctuated in line with effort changes over time (Figure 4). Of particular note is that vessel number decreased between 2019/20 and 2021/22 but effort (in terms of pots hauled) increased.



Landings Per Unit Effort (LPUE)

In the absence of a stock assessment, LPUE is monitored as an indication of the health of the fishery. Where LPUE is stable, it is an indication that the fishery is sustainable. A decline in LPUE indicates that the stocks may be suffering from over-fishing.



* error bars provided are calculated using standard error ($\text{Standard deviation} / \text{the square root of sample size}$).

LPUE has fluctuated to an extent over time, with initial increases between 2015/16 to 2018/19 potentially indicative of an emerging fishery prosecuting previously un-exploited stocks. Over the course of time, LPUE decreases and increases mostly within the range 2-2.5 kg per pot (Fig 5).

Consideration of LPUE over time within the two main areas identifies similar increases and decreases over time (Fig 6). LPUE in the Wash was relatively stable above 2kg per pot before declining significantly in 2021/22. Since then, LPUE in the Wash has increased over the subsequent two seasons, but has not recovered to within the range previously observed.

3. Discussion

The whelk fishery within the district increased in importance from 2014 onwards and Eastern IFCA management and monitoring came into effect during 2015. Since then, landings and effort have varied annually. Analysis of Marine Management Organisation 'buyers and

sellers' data indicates that the fluctuations in effort and landings follow market fluctuations until 2021/22. Market conditions and the emergence of the fishery since 2015 most likely explain the variation in activity up until 2021/22.

LPUE follows a similar pattern, with initial increases indicative of an emerging fishery and subsequent declines indicating that the fishery has reached a point where over-fishing may occur. However, LPUE is within a comparatively healthy range, with overall LPUE typically similar to that observed in other IFCA districts for which LPUE is available^{4,5,6}.

Declines in LPUE in The Wash, which represents the main fishing ground, represent the highest risk, particularly the inability of the fishery to recover to the LPUE seen between 2015/16 and 2020/21, despite increases over the last two years.

Views amongst stakeholders are mixed on this matter, with some concerned that whelk fishing is in decline and others reporting healthy catches being maintained. Stakeholders also reported persistent north-easterly winds impacting the whelk fishery during 2021/22 and higher than usual summer temperatures impacting the whelk fishery during 2022/23.

There appears to be consensus that fishing activity outside of the Authority's district (i.e. outside of the 6nm boundary) is too high however and potentially resulting in over-fishing. In particular, larger, nomadic vessels outside the 6nm boundary are of concern.

Several stakeholders identified that costs have increased in the last four years however, particularly in relation to fuel and bait, and that this is impacting on the viability of the fishery and potentially driving additional fishing effort in poorer market conditions and in the context of lower LPUE.

Noting that whelk fisheries are particularly prone to over-fishing and were historically observed as 'boom and bust' fisheries, it is noteworthy that the fishery has not 'crashed' and has been remained productive over a number of years. It is considered likely that the management measures have contributed to the sustainability of the fishery and that, in the context of concerns regarding non-compliance (with the pot limitation), the increased minimum size for the district (55mm compared with 45mm outside of the district) has contributed to preventing removal of whelks to the extent that stocks are 'fished out'.

4. Consideration of other relevant survey data and scientific advice

The Whelk Fisheries Management Plan⁷ was published in December 2023. This highlights the lack of fisheries evidence to support whelk fisheries management in the UK at this time but also provides a framework for delivering additional research. In particular, the FMP highlights the need to develop stock assessment methodology and how size of maturity varies around the UK. At this time however, there is no additional evidence to inform this assessment specifically.

⁴ [agenda-item-b3-whelk-report-1674118521.pdf](#)

⁵ [Whelk-Survey-Report-2023.pdf](#)

⁶ [Whelk-Survey-24.pdf](#)

⁷ [Fisheries management plan for whelk in English waters - GOV.UK](#)

5. Review of permit conditions

Consultation with stakeholders

Consultation with stakeholders on the permit review generated no responses and only limited feedback during a meeting held on 20 November 2024 (*ante*). However, the views of stakeholders with regards to the effectiveness of the permit conditions gathered during the meeting and from general engagement are summarised below.

Non-compliance with pot limitation

A key concern of whelk fishery stakeholders is that there is a significant amount of non-compliance with the commercial pot limitation (of 500 pots). Some stakeholders were of the view that on-compliance was impacting the health of the fishery, with some describing certain areas as over-fished as a result. Interestingly, the general consensus is that the pot limitation is appropriate, but it is perceived as too difficult to enforce to be effective.

Conflict between whelk fishers

Another common theme during engagement between 2021 to 2024 is that there is conflict between whelk fishers, with reports of fishing gear being emptied, moved or damaged by other fishermen.

Rotary riddles

A rotary riddle typically consists of a cylindrical set of bars with appropriate spacing in which whelk is placed to be sorted mechanically. As the cylinder spins, small whelk fall through the bar spacings and ultimately returned to sea. There are conflicting messages from stakeholders in this regard with some raising concerns that the mechanised sorting equipment will disorientate or damage the whelk, increasing bycatch mortality as a result, and others believing that the same pose no risk and even being preferred by other IFCA's (*pers coms* Kent and Essex IFCA) as they increase the likelihood of catch being sorted effectively. At this time, the use of rotary riddles within the district is very limited however, there is little information or evidence available as to whether incidental mortality increases as a result of their use.

Escape holes in pots

Those present at the whelk consultation meeting were of the view that escape holes are not effective, particularly in the context that whelk are sorted after being brought aboard. However, dialogue with whelk fishery stakeholders generally identifies polarised views on the matter, with some suggesting more or larger escape holes should be required.

One suggestion from the consultation meeting was that smaller holes will still be effective at reducing the likelihood of small whelks being retained and that as most whelk pots come with holes for drainage (typically 20mm), these should be considered sufficient. However, this is not supported by the available evidence which indicates that escape holes at a given size are effective at excluding undersize whelk⁸.

Minimum legal size

Historically, it is understood that Suffolk-based fishers are of the view that the minimum size of 55mm is too high to enable a viable fishery within the 6nm boundary. This is reflected in

⁸ [c5691-whelk-selective-gear-trials-final-report-1675415257.pdf](#)

catch returns data for the area which shows very little activity inshore, with the limited whelk fishers who prosecute the area fishing outside of the 6nm boundary typically.

Whelks are thought to form localised 'stocklets' with often distinct biological characteristics including different sizes of maturity (i.e. the length at which whelks become sexually mature and reproduce). A study is ongoing to gather evidence as to the size of maturity of whelks in Suffolk, but the project has suffered from a lack of samples to test and has been impacted by resource requirements for other priorities.

It is noteworthy that Kent and Essex IFCA identified that the size of maturity for whelks in Essex is circa 44mm but have opted to keep the minimum size at 53mm to provide enhanced protection to pre-spawning whelk in the area.

Effectiveness of the management measures generally

As above, the key concern amongst stakeholders appears to be non-compliance with the measures rather than the current measures themselves. In Suffolk however, there remains a concern that the minimum legal size is too high to provide viable fishing opportunities in the area.

Feedback from the consultation identified that this measure is not impacting business models and that 500 pots is considered sufficient to enable a viable fishery. However, a minority of stakeholders have historically reported that additional pots are required to support their business model, but also that the pot limit should be less than 500 pots.

Suggestions for additional measures

The only additional measures suggested related to a potential ban on rotary riddles (*ante*) and consideration of closures (seasonally) to reduce pressure on some grounds however, these suggestions came from a limited number of stakeholders.

Further, based primarily on general dialogue with stakeholders, adoption of Inshore Vessel Monitoring Systems is generally well supported as a means of increasing the deterrent to non-compliance.

Matters not within scope of the current review

Some of the engagement regarding the permit conditions review was about matters other than permit conditions. These will be considered further during the 2025 Strategic Assessment.

Some stakeholders were also of the view that having to provide the Authority with catch returns was overly burdensome, particularly in relation to providing monthly 'nil-returns' (i.e. to say that they have not been fishing) and in the context that under 10m vessels now report catches to the national database via the 'under 10m catch app'.

There was also concern raised about the requirement to pay a fee annually (in the context of rising costs generally) and the timing of the whelk permit year (i.e. that administratively it is more burdensome being from 1 April as most fishermen are fishing at this time).

Finally, the requirement to replace whelk pot tags annually and the prohibition on use of edible crab as bait were also raised as concerns. Both of these matters are being addressed currently under separate workstreams (through an amendment to the Whelk Permit Byelaw via the Cromer Shoal Chalk Beds Byelaw 2023 and amendment to Byelaw 5 (Prohibition on use of edible crab as bait)).

Conclusions from the perspective of the permit condition review

Of particular concern is the reduction in LPUE in The Wash during the 2021/22 season and the limited recovery since that time despite increases in LPUE on two consecutive seasons. However, these seasons were reportedly (according to stakeholders) characterised by poor fishing conditions which could also explain the limited recovery in LPUE. Further, LPUE increased in The Wash during 2023/24 despite higher fishing effort & landings during the preceding year which implies that fishing mortality may not be ultimately causal to the reduction in LPUE.

Unfortunately, the concerns raised by stakeholders regarding the level of non-compliance with the pot limitation may indicate that the data on which the assessment is based is flawed. In particular, if individuals are fishing for whelk using additional pots, but reporting that only 500 pots are used, the data may be over-estimating LPUE. Non-compliance with pot limitation measures is persistently noted as a high-risk enforcement priority (as determined through Tactical Coordination Group Meetings, *pers coms* Senior IFCO Compliance, Eastern IFCA).

Importantly, the implementation of Inshore Vessel Monitoring Systems (I-VMS) is considered a key mitigation to this concern as it will provide information on where pots are set to inform enforcement activities (i.e. hauling pots and undertaking compliance checks at sea) and that this will provide a significant deterrent to non-compliance. However, the implementation of I-VMS will be limited to under 12m vessels and is out of the Authority's control, with the measures to be introduced via a national Statutory Instrument.

In addition, the minimum legal size for whelks in Suffolk may be impacting fisheries viability. To understand the extent to which this is the case, further information on the size of maturity is required from within Suffolk fisheries and which can be used to undertake a cost/benefit analysis to consider whether a revised minimum size is required. In lieu of research to identify a different minimum size in Suffolk however, maintaining the current minimum size is in keeping with Fisheries Act objectives with regards to the sustainability, precautionary and scientific evidence objectives.

Overall, the current permit conditions appear to be having a protective effect on the sustainability of the whelk fisheries in the district and have prevented a 'boom and bust' fishery dynamic which was anecdotally observed historically. For this reason, it is concluded that maintaining the current permit conditions is required to ensure that the fishery is sustainable and operates within environmental parameters. In addition, the fishery appears to be supporting a relatively stable number of vessels indicating, particularly in lieu of stakeholder feedback to the contrary, that the measures are not impacting business models or a significant risk to business continuity.

It is further concluded however that given the increased risk associated with whelk fisheries in The Wash and the inability of the Size of Maturity research programme come to a conclusion in Suffolk, these areas should be a focus for development prior to the next review of permit conditions (i.e. prior to 2028).