



# Pre Consultation on a Review of Management Measures in the Solent Bivalve Fisheries

## Summary of responses

1<sup>st</sup> March 2018

## Contents

<b>Introduction .....</b>	<b>3</b>
<b>Vision .....</b>	<b>3</b>
<b>Permit byelaws .....</b>	<b>3</b>
<b>Objectives.....</b>	<b>4</b>
<b>Responses.....</b>	<b>4</b>
<b>Summary of responses to pre-consultation .....</b>	<b>5</b>
<b>The pre-consultation.....</b>	<b>5</b>
Southern IFCA response: .....	6
<b>Permit byelaws .....</b>	<b>6</b>
<b>Solent clam fishery .....</b>	<b>6</b>
<b>Reintroduction of a pump scoop dredge fishery.....</b>	<b>7</b>
<b>Solent oyster fishery .....</b>	<b>7</b>
<b>Solent scallop fishery .....</b>	<b>7</b>
<b>Other variables .....</b>	<b>8</b>
Southern IFCA response: .....	8
Water quality .....	8
Shellfish bed classifications.....	8
<b>Next steps .....</b>	<b>8</b>

## Annexes

<b>Annex A: Reponses by sector.....</b>	<b>10</b>
<b>Annex B: Summary of responses .....</b>	<b>11</b>
<b>Annex C: Pre-consultation questions .....</b>	<b>18</b>
<b>Annex D: Current Southern IFCA Byelaws .....</b>	<b>19</b>

## Introduction

The Southern Inshore Fisheries and Conservation Authorities' (IFCA) pre-consultation on the proposals to review the Solent bivalve fisheries closed on the 21<sup>st</sup> January 2018 after running for a period of 21 days. The pre-consultation sought to review the existing management measures governing these fisheries, as well as consider the possible development of a permit byelaw to enable a flexible approach to the management of these fisheries.

At present there are seven separate byelaws, which govern the Solent bivalve fisheries, two of which are Southern IFCA byelaws introduced in 2016 and five of which are legacy byelaws inherited from the Sea Fisheries Committees. These are illustrated in Annex D.

The Solent bivalve fishery is an important and valuable fishery. Stock assessments for oysters (*Ostrea edulis*) spanning the last five years have indicated that this fishery has been in decline, as such it has been subject to a series of closures via implementation of the Temporary Closure of Shellfish Beds Legacy Byelaw, to protect the stock. More recently landing trends for manila clams (*Ruditapes philippinarum/Venerupis philippinarum*) suggest that within Solent waters there has been a decline.

In order to ensure that these fisheries recover (oysters) and remain viable (clams) in years to come, Southern IFCA held a pre-consultation seeking views on the sustainable exploration of stocks and measures that could be introduced to enhance the sustainability of the Solent bivalve fisheries.

## Vision

Southern IFCA have set out a long-term vision for the Solent bivalve fisheries which seeks to balance socioeconomic and environmental considerations, with a view to increasing yields and value, whilst protecting the marine environment. This vision complements a number of on-going strategies, which are invested in enhancing the status of the Solent bivalve fisheries. These include the Solent Oyster Restoration Project, The Southern IFCA Solent Manila Clam Management Plan and the Southern IFCA Solent Oyster Management Plan. These documents provide general frameworks and specific guidance for implementing a strategic, coordinated and multi partner management approach that seeks to ensure healthy seas, sustainable fisheries and a viable industry moving forward. It is hoped that the proposed new governance strategy will further complement these areas of work and support the fisheries over the years to come.

***'...To achieve a well-managed bivalve fishery in the Solent, which can be described as abundant and self-sustaining, occurring throughout the Solent, whilst performing important ecological roles and supporting the fishing industry...'***

Southern IFCA vision for the Solent bivalve fisheries

## Permit byelaws

Under Section 155 of The Marine and Coastal Access Act (MaCAA, 2009), Southern IFCA have the ability to develop permit byelaws. Unlike traditional byelaws they provide flexibility in management, for example:

- It is a requirement for the byelaw permits conditions to be reviewed on a three-year cycle, or before if triggered through the needs of the permit holders or Southern IFCA.
- A call for a review of existing measures automatically triggers a consultation period, allowing for management to be more reactive to the changing marine environment, e.g.

reopening/closing of grounds as a result of stock assessments, changes in temporal restrictions, or to reflect the introduction of new technologies.

- During the review process, Southern IFCA are required to consult with permit holders in lieu of any changes in the permit conditions. As such industry can drive and take ownership for changes in management within their own fishery.
- Traditional byelaws do not provide provisions for this level of engagement and thus offer less bespoke management to changing marine environments.
- Any changes in permit conditions can be made in a more efficient and timely manner, often within a period of months. Currently traditional byelaws are required to be revoked and re-written to accommodate for changes, this process can take a number of years.

## Objectives

The objectives of the Solent bivalve fisheries review is to (1) explore potential ways to harmonise and amalgamate existing management measures, (2) to seek views on the proposal to introduce a permit byelaw to enable Southern IFCA as regulators and the fishing industry as direct stakeholders to achieve bespoke and tailored governance of the Solent bivalve fisheries, and (3) to seek views on the sustainable exploration of stocks and measures which could be introduced to enhance the sustainability of the Solent bivalve fisheries.

## Responses

Between 1<sup>st</sup> January and 21<sup>st</sup> January 2018 seventy-seven relevant fishers (those registered and licensed for commercial fishing as per Southern IFCA records), three merchants, two harbour authorities and one conservation body were approached directly in writing via a pre-consultation document. In total eighty-four letters were posted. The specific questions posed within the pre-consultation document are presented in Annex C. In addition, the pre-consultation document was also advertised on a range of social media platforms.

We received a total of 40 individual responses. Twenty-nine were from the commercial fishing sector, seven from the fish processing and retail sector, two from relevant harbour authorities, one from the marine science sector and one from a Conservation Body. A full summary of the responses by sector is provided in Annex B.

## Summary of responses to pre-consultation

The views provided by respondents to the pre-consultation covered the following main areas:

- The pre-consultation
- Permit byelaws
- Solent clam fishery
- Reintroduction of a pump scoop dredge fishery
- Solent oyster fishery
- Solent scallop fishery
- Other variables

The summary of responses reflect both the feedback received in response to the ten questions posed in the Pre-Consultation document, as well as an account of the less structured written responses and the verbal responses received during pre-consultation engagement. A full transcript of responses can be found in Annex B and the pre-consultation questions can be found in Annex C.

Where appropriate, Southern IFCA have provided a response to some of the concerns raised and in addition have sought to highlight relevant areas of on-going work which are helping to complement understandings of the fisheries in question and further, discuss on-going partnership work which are of relevance to the wider Solent marine environment.

### The pre-consultation

The majority of respondents (63%) who expressed an opinion, support the Southern IFCA 's proposals for a review of existing management measures currently governing the Solent bivalve fisheries, as well as consider the possible development of a permit byelaw to enable a flexible approach to the management of these fisheries (56%). Those who did not agree with this view (30%) would like to see a delay in the introduction of management measures to enable the fisheries to respond following the implementation of the Solent Dredge Fishing Byelaw (2016) and the Bottom Towed Fishing Gear Byelaw (2016). Forty percent of those who did not agree would welcome the induction of a permit byelaw if a pump scoop dredge fishery were to be reintroduced into Solent waters.

The timing of the pre-consultation was not well received by 34% of fishermen and 42% of the fish processing and retail sector. These respondents believe that the recent measures introduced under the Solent Dredge Fishing Byelaw (2016) and the Bottom Towed Fishing Gear Byelaw (2016) have had a detrimental affect on the fishing industry in recent months, and as such feel that further changes at present are not necessary. In addition, these respondents stated that the pre-consultation document was not clear in the provision of objectives or visions and used what were thought to be inappropriate terminologies such as 'exploit' and 'restrictions'. A number of representatives from the processing and retail sector would have liked a greater understanding of the scientific underpinnings driving the pre-consultation.

Forty eight per cent of commercial fishermen and all representatives from one fish processing and retail company have lost faith in the way in which Southern IFCA undertook the previous 2016 byelaw consultations. These respondents discussed a failure by Southern IFCA to maintain relevant communications and provide feedback prior to the byelaw formulation and its implementation.

## **Southern IFCA response:**

Southern IFCA recognise the frustrations across industry regarding the consultation process and implementation of The Solent Dredge Fishing Byelaw (2016) and the Bottom Towed Fishing Gear Byelaw (2016). These management strategies were introduced in order to achieve commitments in response to the Governments' Revised Approach to the Management of Commercial Fisheries in European Marine Sites. The challenge in managing the competing objectives presented by both conservation and fisheries representatives were further compounded by the timescales set by the Department of Environment, Food and Rural Affairs (Defra) for completion. That said, Southern IFCA recognise the importance of maintaining full transparency with industry at all stages of byelaw implementation and recognise that due to resourcing and the time constants placed upon us by an external body, Southern IFCA were not able to maintain the desired level of communication with industry throughout the process. Southern IFCA are committed to ensure that stakeholder engagement remains central to our delivery in line with our responsibilities outlined in Southern IFCA policies and procedures.

Southern IFCA recognise the need to apply sensitivity to the use of language and terminology and would like to express that there was no intent to infer any negative connotations in the delivery of the pre-consultation document.

Results of the annual and biannual stock assessments are available directly from the Southern IFCA offices or on the Southern IFCA website.

It is hoped that this summary of responses, as read alongside supporting documents, specifically the Southern IFCA Solent Clam Management Plan and the Southern IFCA Solent Oyster Management Plan (both of which accompany this document) will address some of the issues raised in the delivery of the pre-consultation document.

## **Permit byelaws**

Where an opinion was expressed (16/40) the majority of respondents (56%) support the use of a permit byelaw and view it as a positive management tool, enabling reactive and bespoke management in response to the changing Solent fisheries. A number of respondents from the commercial fishing sector (38%) expressed a need to set a number of criteria for eligibility of permits and have expressed an interest to be involved in a consultation to decide these criterions.

The majority (46%) of respondents who expressed an opinion (35/40) consider that there should be a cost associated with a permit. Of these, 25% believe that the cost should be minimal (no more than £25) to cover the cost of administration only, 25% specified £100, 20% would pay for a permit if they were able to fish via pump scoop methods and 19% believe the cost should be based on the economic viability and yield of the fisheries.

Twenty per cent do not agree that there should be a cost for the permit.

## **Solent clam fishery**

Of those who expressed an opinion (5/40), all five respondents from the commercial fishing industry do not agree that there has been a decline in the clam fishery and deem a reduction in landings to be the result of better fisheries management in the Solent, making reference to a reduction in landings of undersize clams.

The overwhelming majority of respondents (70%) proposed the introduction of minimum size bar spacing on clam dredges to limit the number of undersize organisms being caught. Where preference was given the range was from 14 millimetres to 19 millimetres bar spacing.

Seventy six per cent of respondents who expressed an opinion (21/40) would like to see an extension to the current four-month season clam dredge season. In addition, of those who expressed an opinion (19/40), 89% would like a review on the current temporal restrictions to take into account the tides.

## **Reintroduction of a pump scoop dredge fishery**

As part of the scope of the pre-consultation, Southern IFCA have informally made contact with Defra to discuss the possibility of revoking the existing Statutory Instrument currently in place in the Solent (Statutory Instrument No. 2696, The Solent European Marine Site [Prohibition of Method of Dredging] Order, 2004), which prevents the use of a 'dredge', in conjunction with any means of injecting water into the dredge or into the vicinity of the dredge within the Solent European Marine Site. It has been part of this pre-consultation to find out whether there is an appetite across industry to explore further discussions with Defra regarding the possible reintroduction of the pump scoop fishery.

The majority (41%) of fishers who expressed an opinion (29/40) support the potential reintroduction of a pump scoop fishery in the Solent and of these all would like the pump scoop dredge to undergo a trial period in the Solent to determine its capability. Sixty nine per cent of all fishers would like the box dredge to remain a permitted gear type if the pump scoop fishery were to be reintroduced.

In managing expectations across industry, discussions surrounding the possibility of revoking the Statutory Instrument will require further discussion and consideration with Defra, who will need to carry out a review of the regulatory provisions in the Solent to ensure that adequate protection is provided to the Solent European Marine Site through the introduction of the Southern IFCA Byelaws, if the Statutory Instrument were to be revoked. As such, given the time frames it is not the intent to delay the potential implementation of a permit byelaw based solely upon a pump scoop dredge fishery being reintroduced into the Solent, however Southern IFCA are committed to exploring this option and will seek to continue discussions with Defra following the positive response received during this pre-consultation.

## **Solent oyster fishery**

All of those who expressed an opinion regarding the oyster fishery (18/40) believe that in recent years the decline in this fishery is the result of a number of anthropogenic factors, to include water quality, capital dredging and closures of fishing grounds. All of these respondents (18) feel that in closed areas the seabed should be turned to encourage the uptake of spat and to limit the settling of silt.

## **Solent scallop fishery**

Of those who expressed an opinion regarding the scallop fishery (7/40), the majority (71%) would like to see permitted adaptations for oyster dredges to harvest this fishery. Conversely 29% of respondents deem the use of adapted oyster dredges to be more damaging to the seabed in comparison to spring loaded scallop dredges.

## Other variables

The majority of commercial fishers (83%), representatives from the fish processing and retail sector (86%) and one marine science representatives believe that there are a number of variables which are contributing to the compromised sustainability of the Solent bivalve fisheries. These are water quality (pollution), closed areas (unclassified shellfish beds, MPAs), capital dredging (silt) and invasive species (tingles, slipper limpets and starfish).

### Southern IFCA response:

Although Southern IFCA have no direct legislative direction with regard to the points raised above, we recognise the need to work with other agencies and organisations to promote a healthy marine environment. Below provides information on any relevant and on going areas of work, which Southern IFCA are currently undertaking.

### Water quality

There are a number of European Union (EU) and national regulatory drivers, which seek to improve the health of the marine environment<sup>1</sup>. Although Southern IFCA have no direct legislative direction with regard to water quality, we recognise the need to work with other agencies and organisations to promote a healthy marine environment. As such, Southern IFCA are currently working with the Environment Agency to provide a robust evidence base to enable an evaluation and valuation of the socioeconomic and environmental benefits of improving water quality in Solent waters using an ecosystem services framework. In presenting a narrative of the wider value and ecosystem services that shellfish beds provide and modelling the benefits of water quality improvements, the aim of this project is to demonstrate that investment in better water quality and shellfish productivity can obtain wider social benefits.

### Shellfish bed classifications

Despite falling outside of the SIFCA legislative remit, in line with SIFCA Vision Statement and as a competent authority we recognise a need to encourage and coordinate management strategies across all partner agencies to support the fishing industry. As such, we are currently working with The Centre for Environment, Fisheries and Aquaculture Science (Cefas) and Local Authorities, which represent the Solent waters, in order to assess and review the current status of shellfish bed classifications in the Solent.

## Next steps

This document will be presented to the Southern Inshore Fisheries and Conservation Authority on March 1<sup>st</sup> 2018. At this meeting the following recommendations will be made:

1. For the summary of responses to be disseminated to industry and advertised on social media platforms
2. For approval to make a formal approach to Defra with the view to discuss the potential revocation of Statutory Instrument 2696: The Solent European Marine Site (Prohibition of Method of Dredging) Order 2004.
3. For a Byelaw Working Group (March, 2018) to be set up to enable the development of measures in response to the initial pre-consultation.

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<sup>1</sup> These include: EC Directive 56/2008 Marine Strategy Framework Directive, EC Directive 60/2000 Water Framework Directive, EC Directive 92/43 Habitats Directive, EC 147/2009 Birds Directives

4. For a 4-week public consultation on proposed measures to commence during March-April 2018
5. For a further Byelaw Working Group (April, 2018) to consider the responses to the public consultation.

**For any further information on the progress of this workstream please contact:**

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## Annex A: Responses by sector

Table 1: Breakdown of responses by sector

Summary of responses by sector			
Commercial Fishing	Written	19	29
	Face to face engagement	18	
Merchants, fish processing and retail	Written	6	7
	Face to face engagement	4	
Marine Science	Written	1	1
	Face to face engagement	0	
Harbour Authorities	Written	2	2
	Face to face engagement	1	
Conservation Bodies	Written	1	1
	Face to face engagement	1	
		<b>Total*</b>	<b>40</b>

\* Total figure reflects number of individual responses – where both written and verbal responses were received only one response was counted

## Annex B: Summary of responses

Table 2: Responses relating to the pre-consultation

<b>The pre-consultation</b>	
<b>Points raised</b>	
<b>The need for a review of management measures in the Solent Bivalve Fishery</b>	<p>The majority of respondents who expressed an opinion (17/27) support the proposals for a review of current management measures in order to provide a holistic management plan for the Solent bivalve fisheries. Of these eleven were commercial fisherman, three were representatives from the fish processing and retail sector, one was from a marine conservation body, one from the marine science sector and one was a harbour authority representative.</p> <p>Of those stakeholders (10/27) who stated they were not in support of the proposals, the following reasons were provided, (3/10) fishers believe that we should wait until the impact of the recently introduced Solent Dredge Byelaw 2016 and the Bottom Towed Byelaw 2016 can be ascertained before further measures are introduced. Four fishers from one port location deem that adequate legislation is already in place; however these fishers would support the introduction of a management plan if the opportunity to fish using a pump scoop became viable. A representative from the marine science sector and one from the fish processing and retail sector support the need for an intervention, however believe this should be aimed at improving water quality, rather than the implementation of additional restrictions on the fishing industry. One representative from the processing and retail sector would like all management restrictions to be lifted in the Solent.</p>
<b>The timing of the pre-consultation</b>	<p>The timing of this consultation was not well received by 10/29 fishermen and 3/7 merchant representatives, with both sectors making specific reference to the recent implementation of The Solent Dredge Byelaw 2016 and The Bottom Towed Byelaw 2016 and the associated impact these management measures have had on the fishing industry.</p>
<b>The pre-consultation document</b>	<p>1 merchant and 2 fishers stated that the pre-consultation document did not provide enough explanation of the main issues outlined, nor provided quantification of what a viable fishing industry should look like.</p> <p>Two representatives from the fishing community stated an inappropriate use of select terminology within the pre-consultation document, with specific regard to the use of 'exploit' rather than 'harvest', and the use of the word 'restrictions' rather than 'management plan'</p> <p>There was a general uncertainty from a number of respondents that the proposed permit byelaw under consultation would introduce new restrictions in the Solent Fishery.</p>
<b>Previous consultations</b>	<p>(14/29) of commercial fishers and (6/7) of merchants have lost confidence in the Southern IFCA following the roll out of the 2016 byelaws, due to a general belief that the input and feedback provided by industry during the consultation meetings were not carried forward or reflected in the byelaws now in place. Of these one fisher discussed the perceived failure of the recent Sussex IFCA byelaw implemented in Chichester Harbour and two fishers mentioned the breakdown of the Chichester Harbour Oyster Partnership Initiative (CHOPI) as examples of how the fishing industry had been failed by regulatory bodies.</p>
<b>Scientific underpinnings</b>	<p>4/7 of fish processing and retail representatives believe that there is not enough scientific underpinning to warrant a change in management regime and asked where they could read the stock assessments relevant to these fisheries.</p> <p>One fisher identified a difference between how a fisherman determines economic viability, verses the maximum sustainable yield (MSY) that the Southern IFCA use to justify actions.</p>

Table 3: Responses relating to permit byelaws

<b>Permit byelaws</b>	
<b>Points raised</b>	
<b>The use of a permit byelaw as a management tool</b>	Of those who stated an opinion 9/16 respondents support the permit scheme. Of these, one merchant and two fishermen would like to see the Solent bivalve fisheries managed like the Poole Harbour Fishery (with specific reference to the successes since the introduction of the permit byelaw in 2015). One fisher believes that the average fisherman would benefit from a permit scheme. One fisher has experience of the Sussex permit byelaw and believes this is a good way of controlling the fishery.
	7/16 respondents (4 fishers, 2 merchants and one representative from the marine science sector) do not support the proposed use of a permit byelaw. Of these, one merchant believes that you can not permit a public fishery, one fisher thought that a permit byelaw wouldn't be of use when dealing with water quality and one fisher believes that a permit scheme has failed in Poole, one fisher stated that as he has 'unspecified dredge' listed on his fishing licence, there is no need for a permit to fish.
	One fisher is unsure about the scheme, and one representative from the marine science sector believes that open and closed seasons and rotation of these areas would be a better way of managing the fishery, rather than through a permit byelaw.
<b>Cost of permits</b>	Of those who provided a response regarding the cost of a permit (16/35), 46% believe that there should be a cost associated with a permit. Where a preference was provided: 2 fishers, and one representative from a harbour authority quoted that a fee of £25 to reflect the cost of administration would be reasonable, as it takes into account financial pressures on industry to include the reduced stocks and recent implementation of byelaws. One fisher suggested that the cost should be based on yield, thus upon introduction of a permit byelaw a nominal amount should be paid (such as £25 to cover basic admin), until determination of yield and regeneration is understood. In accordance with this two fishers suggested there should be a cost if the fishery is economically viable. Two fishers suggested that the cost should be based on the length of season and number of dredges used, with one specifying a £100 cost per dredge. Four fishers from one port suggested that £100 would be a reasonable price. One fisher thinks the cost should be the same regardless of the number of dredges in use. One representative from a merchant and a marine scientist support the need for an associated cost, and would like to see this go back into the fishery, for example for stock assessments. One Conservation Body suggests that the cost should represent a significant investment and commitment from any persons wishing to engage in these fisheries and suggested that an upper limit should be consistent with the Poole Harbour Permit Byelaw (£500). One merchant specified a figure of 7.5% of a fisherman's annual earnings to be reasonable amount. One fisher thinks the cost should depend on the length of season and number of dredges in use.
	(8/35) respondents placed conditions on a cost, of these seven thought a fee would only be applicable if a pump scoop dredge fishery was reintroduced, and one fisher expressed an interest in paying for a permit if shellfish classifications were reviewed with the hope to open further fishing grounds.
	(7/35) 5 fishers and 2 merchants believe that there should be no fee associated with a permit, of those who expressed a rationale, two representatives of the processing and retail sector believe that there should be no cost to an open fishery, especially as fisherman are already licenced. One fisher thought that fulltime fishermen should receive a permit free of charge on an annual basis and not be penalised if they choose to not take it out one year.
	4 fishers were unsure whether a permit should have an cost associated.

Table 3: *Continued*

<b>Permit byelaws <i>continued</i></b>	
<b>Points raised</b>	
<b>Eligibility</b>	There were general concerns across the fishing industry that the introduction of a permit could limit new entrants into the fishery if eligibility was based on track record.
	Twelve respondents (11 fishers, 1 merchant) thought that individuals with fisheries offences should not be eligible for a permit.
	Eleven fishermen expressed a need for clarification with regard to permit eligibility and requested a further stage of consultation would be necessary to ensure appropriate criteria were set.
	The number of fishermen asked if there would be a limited number of permits issued.
	Seven fishers representing one fishing port believed that the number of permits should be based on the capacity and sustainability of a given fishery, with considerations for eligibility based on moorings/berths held within relevant estuaries (2 year minimum) and postcode.
	Four fishers from one port thought that permits could be limited to Southern IFCA licenced vessels only.
	One fisherman believed that eligibility should be based on a track record of fishing within Portsmouth Harbour, Langstone Harbour or Southampton Waters.
<b>Flexibility of permit byelaw</b>	Eleven respondents (8 fishers, 1 harbour authority, 1 merchant, 1 conservation body) believe that the flexibility of a permit byelaw would be positive as a management tool. Of these one fisher thinks the permit scheme would be a positive move for industry by providing a 'voice' and ownership. One fisher believes that the flexible permit conditions, which can be altered in response to evidence, will enable competent members of the fishing community to continue to make a living from the sea. Two fishers recognise the benefits of having a 3-year review of permit conditions via consultation. Representatives from a harbour authority thought that the flexibility of the permits would enable reactive management based on what's happening on the ground. A representative from a conservation body thought that the reactivity of a permit scheme would promote the management of stocks, due to overfishing or other anthropogenic impacts, and also enable introduction of new gears, methods or new technologies in the fisheries.
	Two fishers and a representative of a merchant would like the flexibility to enable the removal of a permit if anyone is found to be breaking the byelaw, thus resolving issues of persistent offending.
	One fisher opposes the permit scheme as is concerned that the flexibility will reduce the ability for fishermen to influence management measures
	One port of fishers suggested the need to have individual permits for each of the shellfish fisheries.
<b>Other</b>	One conservation body suggested the need to consult wider than permit holders when reviewing permit conditions (as per Poole Harbour Permit Scheme at present)
<b>Gear</b>	Three industry representatives (1 fishers and two merchants) asked if there would be any EMFF grants available if there was a change in gear required under new management measures. One fisher quoted a cost of between £700-£1000 per dredge if gear restrictions were implemented. One fisher stated his current dredges are valued at £7200.

Table 4: responses relating to the Solent clam fishery

<b>The Solent clam fishery</b>	
Points raised	
<b>A decline in the Clam fishery</b>	Five fishers disagree that there is a decline in the clam stocks and that the stocks do not need to recover. Of these, two fishers suggest that the reported decline in landings of clams is a reflection of fewer undersize clams being landed as such a result of better management with a focus on preventing the landing of undersize organisms. One fisherman believes that the clam grounds are self-regulating when fished regularly.
<b>The need for a permit</b>	<p>Seven fishers representing one fishing one port have indicated they will not be willing to apply for a permit for use of a box dredge, as they deem this gear type to be environmentally unsustainable.</p> <p>Three fishers contest the need to permit the clam fishery as there are only a small number of vessels working on the grounds and under current byelaws there are only four months where clams can be targeted, as such the beds have plenty of time to recover. These fishers would like any further management to be delayed following a review of how the clam fishery responds following the recent introduction of the 2016 byelaws.</p>
<b>Minimum size</b>	<p>Thirteen fishers and one merchant suggest an increased level of monitoring and policing is needed in merchant premises to ensure compliance with undersize bivalves, as a key measure to ensure sustainability of the stocks.</p> <p>Two fishers suggested the need to review the methods by which a minimum size of clam is measured, suggesting that it should be should based on the width of the animal, rather than length and measured using a 17 mm riddle rather than a 35 mm gauge.</p>
<b>Technical specifications on a Box dredge</b>	<p>(28/40) respondents (26 fishers, 2 merchants) would like to see a minimum size bar spacing to be introduced to minimise the capture of undersize clams. Where size preference was given:</p> <ul style="list-style-type: none"> <li>• One fisher suggests 14 mm bar spacing</li> <li>• One fisher suggest 16 mm bar spacing</li> <li>• One fisher suggests no smaller than 16 mm bar spacing</li> <li>• Two fishers suggest 17 mm bar spacing</li> <li>• Three fishers suggest no less than 17 mm bar spacing</li> <li>• One fisher suggests 18 mm</li> <li>• Four fishers suggests either 17.5 mm or 18 mm bar spacing</li> <li>• Seven fishers suggest either 18 mm or 19 mm bar spacing</li> </ul> <p>One fisher believes there should be a maximum of 2 dredges permitted, which are a total combined width of 2 metres and that there should be no restrictions for single dredges to enable single handed fishermen have level playing field and further, would like the traditional box dredge fishery to remain a viable option for industry.</p> <p>One fisher believes that a clam dredge construction should be designed to inflict as less stress as possible to the Shellfish and it's environment. Stating that construction should consist of a wide mouth dredge that funnels down to a collection basket that will then produce greater water pressure flowing through the dredge enabling cleaning of the shellfish far less stressful and damaging than being bounced and slammed around inside the dredge. At the back of the dredge a rear facing blade should be fixed that will enable the dredge to smooth back over the marks left by the teeth on the mouth of the dredge leaving the seabed in the same condition as it was before the dredge passed over it.</p> <p>One fisherman believes that there should be a restriction on teeth (6") to enable the winter clam fishery to be viable, as during the winter the clams bury deeper and, further that there should be no weight restrictions on the gears in use and allow dive blades.</p> <p>One fisher suggests the need to have a minimum dredge size.</p>

Table 4: *continued*

<b>The Solent clam fishery- <i>continued</i></b>	
<b>Points raised</b>	
<b>Gear Innovation</b>	Eleven fishermen have asked for innovative practice to be supported if gear restrictions are introduced, and feel that fishermen should have the freedom to trial and adapt gear types to optimise efficiency.
<b>Managing Effort</b>	One fisherman raised concerns that Catch Per Unit Effort (CPUE) is an unfair way of managing a fishery, as it is dependent on the efficiency of each vessel
<b>Seasonal Changes</b>	The majority of fishers, merchants and marine scientists believe that temporary closures should be implemented when shellfish are breeding. One merchant specified that they would like the fishery closed during July, August and September, as the clams are weak during these months, and further suggested that the processing and retail sector could trigger the temporary closure when they receive evidence of spatting/spawning during processing.
	13 fishers and 3 merchants would like to see a change in the current four month clam fishery, with ten of the respondents highlighting that the current season falls over the Christmas and New Year period, which is restrictive as a result of seasonal commitments and poor weather. Of these, 8 fishers would like an additional 2 months and suggest these are April and October
	Five fishers think that the current season length is adequate, and time should be allowed for benefits to be seen following implementation of the 2016 Solent byelaws
	Four fishers representing one port would like to see the coordinated introduction of a wider Solent season (outside harbours) so when the harbour fisheries are closed, the Solent opens, dissipating the effort and enabling fishing effort on different stock to continue throughout the year
<b>Temporal changes</b>	17 respondents (14 fishers, 3 merchants) would like to see a review of the existing temporal restrictions under the Solent Dredge Byelaw 2016 to take into account tidal restrictions. Of these, seven fishers representing one fishing port suggested a 05:00-20:00 daily restriction, one fisher stated that he could only fish two hours either side of high water. Conversely two fishers believe that the current temporal measures are adequate to prevent poaching of clams at night
	One fisher asked for a restriction on weekend fishing to be introduced
	Two fishers and one representative from the processing and retail sector would like the Solent Clam fishery to be consistent and aligned with the Poole Harbour Clam fishery (7 month fishery, open 06:00-18:00 daily) and make specific reference to the size of the Solent (in comparison to Poole Harbour), which will enable where effort to be dissipated over a wider area.
	Seven fishers representing one port would like a six-day fishery, which is open as per current temporal restrictions (07:00-17:00 daily). These fishers believe that the time-spent fishing would equate to approximately a 4-month season
<b>Closed areas</b>	Five fishers expressed a desire to clam dredge in the Southern IFCA side of Chichester harbour.
	Five fishers feel that the permanent closed areas in Langstone harbour should be reviewed.
	One fisher would like an amendment to the closed area line in Calshot, to move slightly west on the SW end of Southampton harbour
<b>Other Management initiatives</b>	Five fishers suggest capping the number of fishing vessels in the clam fishery
	One fisher and one representative from a fish processing and retail sector suggested the introduction of a days at sea regime.
	One fisher suggested a 100-kilogram daily limit in catch

Table 5: Responses relating to the pump scoop fishery

<b>The pump scoop fishery</b>	
<b>Points raised</b>	
<b>Reintroduction of a Pump Scoop Dredge</b>	12/29 fishers would support the potential reintroduction of a pump scoop fishery in the Solent and recognise its potential as a sustainable gear type. Of these, all would like a pump scoop trial period to be carried out prior reintroduction, to enable greater understanding of the gear type and its application to Solent fisheries. One fisher suggested a 12-month trial period.
	The 20/29 fishers who expressed an opinion, think that if a pump scoop dredge fishery is reintroduced then the use of a box dredge would still need to be an approved gear type. Conversely, seven fishers representing one fishing port believe that the box dredge should be phased out if the pump scoop fishery is reintroduced.
	One fisher as believes that a pump scoop fishery should not be reintroduced as believes it is too efficient. He discussed the decline in landings in Poole Harbour, from 60 bags per day to 20 bags per day. As such he believes this gear type is unsustainable.
<b>Management of a pump scoop fishery</b>	Four fishers representing one port suggested that if a pump scoop fishery was reintroduced, then there would need to be considerations of horsepower restrictions and vessel sizes which are specific to the Solent fishery.
	One fisher identified that a pump scoop operation is more sensitive to weather; as such this would need to be considered when and if a season restriction is applied.

Table 6: Responses relating to the Solent oyster fishery

<b>The Solent oyster fishery</b>	
<b>Points raised</b>	
<b>Permitted fishery</b>	Three fishermen who expressed an opinion see no point in introducing a permit to this fishery at present time, as there are no stocks. However, when this fishery is replenished a permit specifying a quota would need to be introduced.
<b>Cause of decline in fishery</b>	It is the general feeling across industry that the decline in the oyster fishery was due to overfishing years ago, but more recently it has been compromised by poor water quality as a result of pollution (increase nitrates and weeds), the dredging of Southampton port (increase of silt) and the result of ground not being turned (a result of a reduced fishing fleet, compounded by closures of oyster beds). A number of fishers (13) and merchants (5/7) who expressed an opinion suggest the need for the ground to be turned in order to promote spat settling during the summer months, through a reduction of silt settling, with a general consensus that shellfish beds which, have been subject to closures would benefit from being 'turned over' to support the rejuvenation of shell fisheries. One fisherman gave the example of Ryde middle, where a good fishery is supported as the strong tides limit the settling of sediments and silt, keeping the ground clean. Six fishers have asked that any existing and planned closures are time limited and take into consideration oyster overpopulation issues which are creating high mortality rates due to starvation and suffocating levels of dead shellfish and faecal deposits.
<b>Harvesting</b>	One fisher would like to see that if Sinah Lake gets oyster stock, that this could be harvested and re-laid

Table 7: Response relating to the Solent scallop fishery

The Solent scallop fishery	
Points raised	
Gear type: dredges	Five fishers believe that the use of adapted oyster dredges are more sustainable and viable in the Solent when targeting scallops, as the gear is lighter on the ground, doesn't have teeth and safer for smaller boats to operate. Conversely, two fishers believe that the use of oyster dredges when targeting scallops is more damaging than scallop dredges as they don't have springs and require more tows to achieve the same level of catch uptake, emphasising that lighter gear does not equate with efficiency and environmental protection, as more tows are needed.
	Four fishers from one port have asked that Southern IFCA to explore dispensations for Solent fishermen with regard to the Scallop Fishing Order 2283/2012, to enable use of oyster dredges to target scallops.
	Two fishers have asked that consideration be made within any new byelaw to account for fishermen fishing for scallops outside of Southern IFCA district – e.g. carriage order.
Closed areas	Two fishers who expressed an opinion would like Sandown Bay to be opened during the winter months for 2-3 weeks, as the fishing activity can not be carried out over the protected reefs, as such is not having an impact on the MPA or compromising the conservation objectives.

Table 8: Responses relating to other variables and miscellaneous

Other variables and miscellaneous	
Points raised	
Other variables compromising Solent bivalve fisheries	The majority of commercial fishers (83%), representatives from the fish processing and retail sector (86%) and one marine science representatives believe that there are a number of variables which are contributing to the compromised sustainability of the Solent bivalve fisheries. These are water quality (pollution), closed areas (unclassified shellfish beds, MPAs), capital dredging (silt) and invasive species (tingles, slipper limpets and starfish). All fishermen from one port (7) and six others believe that capital dredging has not only destroyed previously viable shellfish fisheries, but is responsible for on-going high levels of silt in the water, which is preventing spawning of shellfish. Ten of these respondents believe that there should be financial compensation as a result of reductions in fishing opportunity.
Invasive and/or predatory species	Two fishermen suggest that Tingles need to be killed when they lay eggs in May/June, as they are having a direct effect on shellfish populations
	One representative of the marine science sector suggested compulsory landings of these slipper limpets as a by-catch.
	One merchant and one fisherman believe that the number of starfish on shellfish beds is smothering the shellfish.
Hand gathering	Five fishers asked what impact hand gatherers are having on shellfish stocks
Stock assessments	One fisher believes that the current Southern IFCA stock assessment undertaken in the Solent should be undertaken via dredging of a 10 metre square box for 7 days for an accurate representation of the shellfish on the grounds.
Management tools	One fisher suggests that the Solent bivalve fisheries are managed as per aquaculture management.

## Annex C: Pre-consultation questions

Table 9: Pre-consultation questions

1	Please tell us your name and your interest in dredge fishing within the Solent.
2	Do you agree that intervention is necessary to enhance the sustainability and economic viability bivalve shellfish fisheries in the Solent?
3	Do you agree that the introduction of a new dredge permit byelaw is the best way to manage the recovery of these fisheries?
4	If you do not agree with the dredge permit byelaw, what other measures do you believe could be taken?
5	Are our proposals likely to have a financial effect on your activities and how?
6	Do you have any additional evidence on the impacts of a dredge permit byelaw, both positive and negative, that could inform the development of an impact assessment to accompany this byelaw?
7	What do you feel would be an appropriate maximum cost to pay for a permit to use a dredge in the district?
8	What restrictions do you believe should be applied to the design and construction of clam dredges under the proposed byelaw?
9	How would you like to see temporary closure restrictions applied to dredge fisheries in the district?
10	Do you think there are any issues that we have not identified in this consultation document?

## Annex D: Current Southern IFCA Byelaws

Table 10: Existing Legislation governing the Solent Bivalve Fisheries

Southern IFCA Byelaws	Bottom Towed Fishing Gear Byelaw, 2016	Closed areas as part of MPA network
	Solent Dredge Fishing Byelaw, 2016	Seasonal Closures in Southampton Water, Portsmouth Harbour and Langstone Harbour. Closed between 1 <sup>st</sup> March – 31 <sup>st</sup> October inclusive Closed between 17:00-07:00 daily
Southern IFCA Legacy Byelaws (Sea Fisheries Committee Byelaws)	Temporary Closure of Shellfish Beds	Ability to temporary close shellfish beds which are deemed to be depleted
	Fishing for Oyster, Mussels and Clams	Handpicking provisions Dredge specification
	Oyster Dredges	Dredge specifications
	Oyster Closed Season	Closed 1 <sup>st</sup> March – 31 <sup>st</sup> October
	Oyster Minimum Size	70 mm