Marine Scotland

LUCE BAY AND SANDS SAC
Addendum Report
Luce Bay SAC – Addendum Report

1.1. Purpose

1.1.1. The purpose of this addendum report is to describe action taken since 11 June 2015 to finalise a management solution for the Luce Bay and Sands SAC.

1.1.2. After publication of the consultation report on 11 June it was brought to the attention of Marine Scotland that some consultation responses had been sent to the wrong mailbox. This other mailbox was still active but not being monitored on a daily basis. The 78 responses are included in this report.

1.1.3. Sections called “introduction” and “we asked” have not been changed and are the same as the original report.

1.1.4. The section called “You said” has been updated to include the other 78 responses.

1.1.5. The section called “We did” has also been updated. It includes details of all actions since 11 June to finalise the management measures.

1.2. Introduction

1.2.1. Luce Bay was designated as a SAC for its large shallow inlet and bay and its dunes. The consultation presented three possible management approaches for the Luce Bay SAC:

- Approach 1 would prohibit the use of demersal trawls, mechanical dredges, or suction dredges (boat or diver operated) throughout the SAC.
- Approach 2 would be the same as Approach 1 but with a derogation to allow mechanical dredging on a seasonal basis in the inner part of the bay.
- Approach 3 would prohibit the use of demersal trawls, or suction dredges (boat or diver operated) throughout the SAC. Mechanical dredging would be managed on a zonal basis. This approach would require industry participation in a monitoring programme.

1.3. We Asked

1.3.1. The consultation asked: ‘Do you support the preferred approach (number 2) for managing this protected area?’ A follow up question asking about support for the alternate approaches were also asked.

1.3.2. The consultation also asked ‘Do you agree with the economic, social, and environmental assessments of the impact of the management approaches?’
1.4. **You Said**

1.4.1. In answer to whether respondents supported the preferred management approach eight answered ‘yes’ and 49 answered ‘no’. All seventy-eight of the ‘missing’ responses also answered ‘no’ Table 1.1 summarises the responses received.

1.4.2. Twenty-five of the respondents that answered this question, 24 that answered ‘no’ and one who answered ‘yes’, commented only on Luce Bay and no other areas discussed within the consultation. Twenty of the 25 were individual respondents and the remainder were three recreation/tourism, one local group and an inshore fisheries group.

1.4.3. Seventy-three of the ‘missing’ respondents that answered ‘no’ only commented on Luce Bay. These consisted of fifty-six from the scallop catching and processing sector, 14 individuals, and 3 angling groups.

1.4.4. All recreation/tourism organisations, mobile fishing respondents and local groups that answered were opposed to the proposed approach, together with the one Inshore Fisheries Group that answered. Views were more mixed amongst environment/conservation organisations, static fishing respondents and individuals, although more opposed than supported Approach 2.

**Table 1.1: Luce Bay SAC - Support for preferred management approach**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Other comments</th>
<th>No reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals (133)</td>
<td>5</td>
<td>23</td>
<td>-</td>
<td>105</td>
</tr>
<tr>
<td>Environment / Conservation (17)</td>
<td>2</td>
<td>8</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Inshore Fisheries Group (IFG) (3)</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Industry / Transport (6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Mobile fishing (8)</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Local authority (3)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Local group (7)</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Recreation / Tourism (13)</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Static fishing (4)</td>
<td>1</td>
<td>3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other (2)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Missing responses (78)</td>
<td>78</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total (274)</strong></td>
<td>8</td>
<td>127</td>
<td>2</td>
<td>137</td>
</tr>
</tbody>
</table>

1.4.5. Two respondents, a local group and an environment/conservation respondent, commented without giving an indication of support or otherwise and these are counted in the ‘other comments’ column in the table above.

1.4.6. A total of twenty-one respondents added comments, five of those who supported the approach, the two respondents who answered neither ‘yes’ nor ‘no’ and 14 who did not support Approach 2.

1.4.7. Seventy-two of the ‘missing’ respondents added comments. None of these supported the preferred approach.
1.4.8. A key theme emerging from additional comments related to scallop dredging; distinct and conflicting views were expressed. Some environment /conservation and recreation /tourism organisations as well as a local group expressed serious concerns regarding Approach 2, including:

- that it will fail to meet conservation objectives, undermine site integrity and will potentially result in a breach of duties set out in the Habitats Directive.
- that mechanical dredging in the inner bay may disturb Greenland white-fronted geese.
- that Approach 2 appears to differ dramatically from the approach proposed in 2014 workshops and that some stakeholders expected to go forward with only minor changes.
- that an assessment of two potential Annex 1 habitats is required.
- that insufficient attention and weight is given to the potential value that might be realised in the recreational sector as a trade off against potential losses in mobile fishing.

1.4.9. In contrast, some individuals as well as static and mobile fishing respondents and a local group expressed concern that Approach 2 impacts on the viability of scallop fishing in the area.

1.4.10. Those who did not support Approach 2 were asked: ‘Do you support one of the other approaches?’ and 39 respondents indicated that they supported Approach 1, whilst ten answered ‘no’ suggesting they supported none of the approaches outlined in the consultation. The environment /conservation respondent who had commented on the proposed approach, without indicating definitive support or otherwise, answered here that they preferred Approach 1.

1.4.11. The key recurring theme in additional comments made by respondents supporting Approach 1 was that all mobile activity and/or scallop dredging specifically should be totally prohibited throughout the SAC.

1.4.12. The recurring theme from those respondents that indicated they supported none of the approaches was that Approach 3 is the nearest to their preferred approach but without the imposition of a ‘curfew’.

1.4.13. Five respondents referred to a recent meeting between stakeholders and Marine Scotland and a subsequent proposed alternative map (Figure 1.1) of restricted areas ‘without a curfew’ as a potential solution. Seventy-two of the ‘missing’ responses also voiced support for this alternative approach. The map referenced in these comments is reproduced overleaf for reference.
1.4.14. Eight respondents, comprising four individuals, two local groups and two static fishing respondents answered ‘yes’ in response to whether they agreed with the economic, social, and environmental assessments of the impact of the management approaches; 18 respondents from across a wide range of groupings answered ‘no’.

1.4.15. Twenty-two respondents made further comments, including four that had answered neither ‘yes’ nor ‘no’.

1.4.16. The main theme from those that commented related to economic impacts on local businesses; two different views emerged.

1.4.17. Four recreation/tourism respondents commented that declining fish stocks are resulting in diminishing visitor numbers and that loss of business from sea anglers and other tourists is adversely affecting revenue and viability. An environment/conservation respondent also commented more broadly on the potential value of the recreational sector and another noted the importance of good environmental condition of the bay for tourism.

1.4.18. Conversely, one recreation/tourism respondent, a static fishing organisation and three individuals commented on the business derived locally from expenditure by scallop fishing crews during winter months. The static fishing respondent also noted the employment created locally in scallop processing and the manufacture of fishing gear.
1.4.19. Three environment /conservation respondents expressed concerns again at this question regarding potential breach of the Habitats Directive and commented on the need for an appropriate assessment within the site.

1.4.20. Two mobile fishing respondents referred to a lack of time to consider the environmental report and reservations regarding the relevance and completeness of data provided in economic and social assessments.

1.4.21. As seen in other areas, three environment /conservation respondents commented that the assessment fails to take account of wider benefits that some of the proposals would bring.

1.4.22. Six respondents felt the economic values and alternative fishing grounds described in the consultation document were wrong, with one respondent offering an alternative value of £200,000 expected cost if scallop dredging were to be prohibited in Luce Bay.

1.4.23. Three respondents (recreation, conservation and individual) raised concerns that prohibition of scallop dredging in Luce Bay would negatively affect the regions “fragile economy”. With a further three (commercial fishing and individual) stating that hundreds of families on Kirkcudbright are dependent on the income from fishing in Luce Bay.

1.4.24. One mobile fishing respondent commented that Luce Bay is an important bad weather fishery.

1.4.25. The environmental and one recreational organisation expressed concerns that the main threat to small shark species was the inexperience of the contractor carrying out the tagging programme. Further concern that the mortality figures have been passed to SNH with no comment received. Calls for a review of the tagging programme.

1.4.26. A recreation respondent has concerns that the marina in Kirkcudbright could be under threat if the harbour has to close down.

1.4.27. Three respondents (commercial fishing and individual) felt the information provided within the consultation document was “misleading” and did not go through a “full and robust engagement process.”
1.5. **We Did**

1.5.1. The original consultation report stated that a workshop would be held on 26\textsuperscript{th} June 2015 to consider and discuss possible management arrangements.

1.5.2. Prior to the workshop further advice was received from Scottish Natural Heritage. This provided details of the minimum proportion of each habitat type that would be needed to be protected to maintain site integrity. Details of this advice are in appendix A.

1.5.3. The preferred approach from the consultation, and the fishermen’s proposal were both tested against the new criteria. Both failed on protection of certain habitats. Details are in appendix B.

1.5.4. An example approach that met the minimum criteria was developed ahead of the workshop and was used as a basis for discussion at the workshop. This is shown in appendix C.

1.5.5. Through the discussion at the workshop a new approach was developed. A note of the workshop and a map of this revised approach are in Appendix D.

1.5.6. Further comments on the revised approach were invited from stakeholders who had attended the workshop. Details of this and our responses where appropriate can be found below.
2. The revised proposal

2.1. Introduction
2.1.1. On 06 August 2015 we sent a copy of the revised proposal, additional advice from Scottish Natural Heritage, and the meeting note to stakeholders who had attended the workshop for comment.

2.2. We Asked
2.2.1. Whether stakeholders supported the revised approach as a management solution.

2.3. You Said
2.3.1. Thirteen further representations received concerning the Luce Bay SAC following a stakeholder engagement workshop on the 26th June 2015.
2.3.2. Three responses were received from mobile fishing associations, four from individuals associated with the local mobile fishing industry, three from local sea angling associations, one from an individual affiliated with one of these associations, one from the local static gear fishermen’s association and one response from an eNGO.
2.3.3. One respondent complained the meeting on the 26th June was too inconvenient (too far away from the area in question/ during working hours) and could not make it in person.
2.3.4. Seven respondents (all associated with the mobile fishing sector and a sea angling clubs) stated they support the management proposal developed at the meeting on the 26th June.
2.3.5. The same respondents also commented this would be a “workable” approach that would help to sustain the local fishing industry, allowing the important “bad weather” fishing ground to remain open, also alleviating safety concerns of a full closure. One other mobile fishing respondent reiterated that there are no other available fishing grounds in a SW wind and Luce Bay is vital to fishing in the winter months.
2.3.6. The three individuals associated with the local mobile fishing industry and the sea angling club stated that the government now has a responsibility to communicate the new restrictions clearly and effectively with industry.
2.3.7. Two mobile fishing associations stated that the workshop on the 26th June was a good example of pragmatic stakeholder engagement but were disappointed the same opportunity for further engagement was not available for the 4 sites covered by Marine Conservation Orders.
2.3.8. The same two respondents commented that statements made by eNGOs claiming to represent the views of society are wrong as fishermen and their families are part of society and their views should be considered. A further two respondents (static and mobile fishing) also commented that the
management decisions taken for the other sites seemed to be based on pressure from campaigns run by eNGOs and have ignored scientific advice.

2.3.9. One mobile fishing respondent stated concerns with the economic values used by Marine Scotland throughout the consultation period and made further claims of eNGOs blackmailing the government. Two other respondents (static and mobile fishing) reiterate the fact that scallop fishing is extremely important to the local communities, contributing to the local economy throughout the year. One sea angling club highlights the importance to the area’s economy of recreational sea angling, through competitions etc. Two respondents (a local sea angling organisation and the eNGO) stated they do not agree with the proposal developed on the 26th June 2015 and instead would ideally like to see approach 1 from the consultation (a completed cessation of mobile activity in the Bay) applied.

2.3.10. Both of these respondents also expressed concerns that it was made clear to them by Marine Scotland representatives that prohibition of mobile activity was never a realistic option.

2.3.11. The local sea angling club also stated they would like to see the ‘Polo’ model reintroduced as an option, with a 2 mile exclusion zone introduced around the coast. Furthermore the “tenuous” link between Luce Bay and offshore sites is questioned and it is suggested this site would be better compared to the Clyde.

2.3.12. Both this respondent and the affiliated individual claim there is delicate reef habitat to the north west of the bay which has so far been excluded from SNH survey reports (except perhaps the 2007 survey). They further state this used to be an important habitat for black bream until the reef structure was damaged by scallop dredging.

2.3.13. Another local sea angling club also highlights the reef feature between Ardwell and Drummore and indicates this is important seasonal habitat for smoothhounds and tope.

2.3.14. The eNGO state concern that the issue of management remains unresolved and have provided details of an alternative management proposal which will afford greater protection to the kelp and seaweed habitats, as well as introducing larger buffers around the important features.

2.3.15. This respondent also states that moving forward, ecological monitoring will be key to assess the effectiveness of the implemented management measures.

2.3.16. Two respondents (sea angling club and eNGO) reference legal terminology by stating that fishing is considered a ‘plan or project’ and as such an appropriate assessment or HRA (Habitats Regulation Appraisal) must be carried out if mobile fishing is allowed to continue in the site. Both express concerns the site management will be in breach of the EU Habitats Directive if this is not done.

2.3.17. One mobile fishing respondent stated they felt their views and contributions to the MPA process so far had been ignored.
2.3.18. The static gear fishermen’s association highlights the current successful voluntary agreement between mobile and static gear fishermen in Luce Bay and expresses concern that “forced diversification” of the mobile fleet to static fishing will have a negative impact not only on the static fishing fleet but also on the protected features as static fishing is already at the maximum sustainable capacity. One mobile fishing respondent also references the already “spatially challenged local potting fleet.”

2.3.19. The same two respondents also comment on the fact that scallop dredging has been active in this area since the 1950’s and state that if the conservation objective for the features is ‘Maintain’ this shows that dredging can work in harmony with the environment.

2.3.20. One sea angling club states concern over illegal electrofishing for razorfish and the negative effect this is having on small fish populations in the area.

2.4. We Did

2.4.1. The fishing industry support for the revised proposal is welcomed given the difficult discussions that ensued at the workshop.

2.4.2. Every survey of Luce Bay has attempted to identify the alleged reef habitat in the north west of the bay. However, despite specific targeting of this area in a recent survey none of these studies have identified a feature that conforms to the EU habitat description for reefs.

2.4.3. Luce Bay could be compared with the Clyde Sea Sill MPA which has similar sand and gravel habitats. It also has a relatively high energy exposure which is similar to offshore sites in the North Sea. Therefore the comparison and minimum percentages advised are considered appropriate.

2.4.4. Of the mapped kelp records in the bay over 70% of the broad scale polygons are protected. In addition there is a considerable buffer between the proposed derogated areas in the revised proposal and the “unmapped” kelp records referred to by the eNGO. Of these 66% of the Laminaria records would be protected, 74% of the L. hyperborea records, and 64% of S. latissima records.

2.4.5. A minor adjustment of the derogated area in the SW corner has been made because a 100m buffer had not been applied to the reef habitat there.

2.4.6. In terms of Habitat Regulations Appraisal you only need to proceed to a full appropriate assessment if there is a likely significant effect. In the case of this proposal the package of measures (winter only opening with a strict spatial constraint) would still leave some scallop dredging in parts of the site for 4 months of the year. As there will still be an interaction between the activity and the habitats during this time likely significant effect cannot be ruled out and this was therefore considered further under an appropriate assessment. However, any effects that occur during the “fishing” season can be recovered from. Marine Scotland therefore conclude there will be no adverse effect on site integrity.
2.4.7. This revised approach was tested against the proportion criteria and failed on one habitat. Marine Scotland concludes no adverse effect based on the evidence given by SNH. Details of assessment against the criteria, including and the additional advice can be found in Appendix E and a Habitats Regulations Appraisal at Appendix F.

3. Our Conclusion
3.1.1. Our conclusion is that the proposed zonal management arrangement is sufficient to achieve compliance with Article 6 of the EU Habitats Directive. Therefore that proposal will be implemented.
Appendix A

Natura / Habitat Regulations Appraisal (HRA) process and application to fisheries management proposals for Luce Bay and Sands Special Area of Conservation (SAC)

Special Areas of Conservation (SACs) are designated under the EU Habitats Directive and Special protection Areas (SPAs) are classified under the Wild Birds Directive. There is legal requirement on the Scottish Government to protect SACs and SPAs. Proposed activities (referred to as plans or projects) in SACs or SPAs are subject a Habitat Regulations Appraisal (HRA).

Luce Bay is designated as a SAC for the habitats reefs, large shallow inlet and bay and subtidal sandbanks. The potential outcomes for Luce Bay and Sands SAC, will differ in terms of the requirement to undertake a HRA and are outlined below.

1. **Site fully closed to mobile gear.** The statutory instrument to achieve this would not require a Habitat Regulations Appraisal because it meets the first test of HRA. This is because the proposal is directly connected with or necessary for site management for nature conservation and there would be no demersal/mobile fishing within the site.

2. **Zonal site management that meets the minimum criteria.** The statutory instrument would be for nature conservation, but still allowing some demersal mobile/active fishing to continue. In adopting such an approach we would need to be sure that this level of fishing would result in no adverse effect on site integrity. The following tables outline the minimum proportion of each biotope component that is recommended for inclusion within the overall area closed to demersal mobile/active fishing within the Luce Bay and Sands SAC. It is considered that this should be adequate to ensure that the conservation objectives of the site can be met and result in an HRA conclusion that there is no adverse effect on site integrity.

3. Any zonal management approach that does not meet the minimum criteria would require further evidence and full Appropriate Assessment. This would not be possible before 01 November 2015. Therefore if industry wished to pursue such an option there would need to be management under paragraph 1 or 2 implemented. This would remain in place until completion of a HRA that concludes that an alternative approach would not have an adverse effect on site integrity.

Any zonal management arrangement will remain the subject of a seasonal restriction from 01 March to 31 October each year.
## Minimum protection criteria

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Biotope code(s)</th>
<th>Mobile gear advice</th>
<th>Min. proportion to be protected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sabellaria reef</td>
<td>SS.SMp.Mrl.Pcal, CR.MCR.EcCr, CR.MCR.EcCr.FaAlCr</td>
<td>Remove / avoid</td>
<td>100% of each habitat</td>
</tr>
<tr>
<td>Maerl beds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reef (Echinoderms and Crustose Communities; Faunal and Algal crusts on Circalittoral Rock)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coarse Sediments with Reef / Echinoderms and Crustose Communities (reef)</td>
<td>SS.SCS.CCS, CR.MCR.EcCr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Rationale / discussion points

*Sabellaria* reef, maerl beds and reef (bedrock and stony - cobble and boulder) are all considered to have high sensitivity to the pressures associated with demersal mobile gear as previously outlined in the approaches document consulted on. Hence, the advice is remove/avoid pressures over these habitats and the proportion of the features to be closed to demersal mobile gear within the site is recommended as 100%. This has been our advice for other NCMPAs and SACs where these features are present.

The mosaic habitat (Coarse Sediments with Reef - Echinoderms and Crustose Communities) has a mixed sensitivity, with the reef areas being of high sensitivity and the coarse sediments being of low-medium sensitivity. The resolution of the existing broadscale mapping of the habitats within this part of the site does not provide certainty regarding the distribution of the most sensitive components (reef). Allowing fishing to continue over this area would therefore risk achievement of the conservation objectives. Our advice is therefore to remove/avoid the pressure over this mosaic habitat and that 100% of the feature should be closed to demersal mobile gear.

If the industry wished to examine the potential for reopening some of this area they would need to provide more detailed information on the distribution and extent of reef habitat versus coarse sediments. Such information could be generated by additional drop-down video sampling, perhaps in conjunction with acoustic survey. Drop-down video work in 2012 suggests that there may be areas more dominated by SS.CSC.CCS. It may be possible to better define these habitats through additional sampling. This could inform a future HRA for an alternative zoned approach.
<table>
<thead>
<tr>
<th>Habitat</th>
<th>Biotope code(s)</th>
<th>Mobile gear advice</th>
<th>Min. proportion to be protected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infra litoral coarse sediment</td>
<td>SS.SCS.ICS</td>
<td>Reduce / limit</td>
<td>40% of each biotope listed</td>
</tr>
<tr>
<td><em>Moerella</em> with venerid bivalves in gravelly sand</td>
<td>SS.SCS.ICS.MoeVen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infra litoral mixed sediment</td>
<td>SS.SMx.IMx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infra litoral muddy sand or mixed sediment</td>
<td>SS.SS.a.IMuSa / SS.SMx.IMx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infra litoral muddy sand</td>
<td>SS.SS.a.IMuSa</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Arenicola marina</em> in infra litoral fine or muddy sand</td>
<td>SS.SS.a.IMuSa.SsubNhom</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rationale / discussion points**

ICES provided advice to the FIMPAS project in relation to the Dogger Bank SAC which includes some similar sediment types e.g. more mobile coarse sediments. The request asked whether a proportionate approach of between 20 and 40% of these habitats would be a sufficient level of protection. ICES were of the view that such a proportion would contribute to achieving the conservation objectives. These proportions need to represent all the different benthic communities. In some cases greater protection may be required.

Coarse, mobile sediments are the least sensitive to physical disturbance relative to the other habitats in Luce Bay and have some ability to recover, hence the reduce/limit pressure advice. Luce Bay also includes more stable soft sediments e.g. muddy sands so we recommend adopting a 40% threshold. This is comparable with the proportion of soft sediment habitats included within the proposed closed areas at some of the Marine Protected Areas.

If the industry wished to examine the potential for reopening more of these sedimentary habitats, detailed studies of would be needed to compare attributes such as extent, sediment structure, community structure e.g. biomass/abundance of the non-fished areas compared to the fished areas to determine the degree to which any remaining fishing was impacting the habitats through direct or indirect effects. It would need to be determined whether allowing additional activity in other areas would be detrimental in terms of a cumulative impact that would put the conservation objectives at risk. Any further reopening of these habitats would need to be subject to HRA.
Appendix B

LUCE BAY SAC - Fishermans proposal from consultation (does not meet criteria)

management proposal
no demersal trawl, beam trawl, suction dredge, or mechanical dredge permitted in SAC.

by way of derogation mechanical dredge would be permitted in the hatched areas in January, February, November and December each year

© Crown Copyright, 2015. All rights reserved. License No. EK001-201404001. Not to be used for Navigation. Using Habitat data provided by SNH in August 2014.
Projection: Lambert Azimuthal Equal Area Datum: ETRS 1989 Scale 1:160,000
Luce Bay SAC – Fisherman’s proposal

Ecological value

<table>
<thead>
<tr>
<th>Biotope Code</th>
<th>Area in site</th>
<th>Minimum % to be protected</th>
<th>Area required</th>
<th>Area included</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR. MCR. EcCr</td>
<td>26.45</td>
<td>100</td>
<td>26.45</td>
<td>25.55</td>
<td>Fail</td>
</tr>
<tr>
<td>CR. MCR. EcCr. FaAlCr</td>
<td>32.91</td>
<td>100</td>
<td>32.91</td>
<td>32.57</td>
<td>Fail</td>
</tr>
<tr>
<td>SS. SCS. CCS / CR. MCR. EcCr</td>
<td>88.46</td>
<td>100</td>
<td>88.46</td>
<td>77.01</td>
<td>Fail</td>
</tr>
<tr>
<td>SS. Smp. KSwSS. LsacR</td>
<td>22.43</td>
<td>70</td>
<td>15.701</td>
<td>0.91</td>
<td>Fail</td>
</tr>
<tr>
<td>SS. SCS. ICS</td>
<td>59.1</td>
<td>40</td>
<td>23.64</td>
<td>30.21</td>
<td>Pass</td>
</tr>
<tr>
<td>SS. SCS. ICS. MoeVen</td>
<td>1.59</td>
<td>40</td>
<td>0.636</td>
<td>0</td>
<td>Fail</td>
</tr>
<tr>
<td>SS. Smx. IMx</td>
<td>23.98</td>
<td>40</td>
<td>9.592</td>
<td>0.83</td>
<td>Fail</td>
</tr>
<tr>
<td>SS. Ssa. IMuSa / SS. Smx. IMx</td>
<td>14.99</td>
<td>40</td>
<td>5.996</td>
<td>12</td>
<td>Pass</td>
</tr>
<tr>
<td>SS. Ssa. IMuSa</td>
<td>150.32</td>
<td>40</td>
<td>60.128</td>
<td>83.76</td>
<td>Pass</td>
</tr>
<tr>
<td>SS. Ssa. IMuSa. SsubNhom</td>
<td>22.43</td>
<td>40</td>
<td>8.972</td>
<td>13.6</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>442.66</strong></td>
<td></td>
<td><strong>272.485</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sabellaria reefs and maerl beds not included in table but 100% protected

Economic impact

Over 15m

<table>
<thead>
<tr>
<th>Approach</th>
<th>Site Value</th>
<th>Value Affected</th>
<th>% affected</th>
<th>Hours in site</th>
<th>Hours affected</th>
<th>% affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishermans proposal</td>
<td>90,000</td>
<td>14,000</td>
<td>15.56</td>
<td>976</td>
<td>171</td>
<td>17.52</td>
</tr>
</tbody>
</table>

Under 15m

<table>
<thead>
<tr>
<th>Approach</th>
<th>Site value</th>
<th>Value affected</th>
<th>Days in site</th>
<th>Days affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishermans proposal</td>
<td>24,000</td>
<td>4,200</td>
<td>17</td>
<td>3</td>
</tr>
</tbody>
</table>
LUCE BAY SAC - Approach 2 from consultation (does not meet criteria)

- SAC boundary
- CR.MCR.EcCr
- CR.MCR.EcCr.FaAlCr
- SS.SCS.CCS/CR.MCR.EcCr
- SS.SCS.ICS
- SS.SCS.ICS.MoeVen
- SS.SMp.KSw.SS.LsacR
- SS.SMx.IMx
- SS.SSA.IMuSa.SsubNhom
- SS.SSa.IMuSa
- SS.SSa.IMuSa/SS.Sm.x.IMx

Management proposal:
- no demersal trawl, beam trawl, suction dredge, or mechanical dredge permitted in SAC.

By way of derogation mechanical dredge would be permitted in the hatched areas in January, February, November and December each year.

© Crown Copyright, 2015. All rights reserved. License No. EK001-201404001. Not to be used for Navigation. Using Habitat data provided by SNH in August 2014. Projection: Lambert Azimuthal Equal Area Datum: ETRS 1989 Scale 1:160,000
Luce Bay SAC – Consultation approach 2

Ecological value

<table>
<thead>
<tr>
<th>Biotope Code</th>
<th>Area in site</th>
<th>Minimum % to be protected</th>
<th>Area required</th>
<th>Area protected</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR.MCR.EcCr</td>
<td>26.45</td>
<td>100</td>
<td>26.45</td>
<td>26.45</td>
<td>Pass</td>
</tr>
<tr>
<td>CR.MCR.EcCr.FaAlCr</td>
<td>32.91</td>
<td>100</td>
<td>32.91</td>
<td>32.91</td>
<td>Pass</td>
</tr>
<tr>
<td>SS.SCS.CCS/CR.MCR.EcCr</td>
<td>88.46</td>
<td>100</td>
<td>88.46</td>
<td>88.46</td>
<td>Pass</td>
</tr>
<tr>
<td>SS.SMp.KSwSS.LsacR</td>
<td>22.43</td>
<td>70</td>
<td>15.701</td>
<td>22.4</td>
<td>Fail</td>
</tr>
<tr>
<td>SS.SCS.ICS</td>
<td>59.1</td>
<td>40</td>
<td>23.64</td>
<td>25.55</td>
<td>Pass</td>
</tr>
<tr>
<td>SS.SCS.ICS.MoeVen</td>
<td>1.59</td>
<td>40</td>
<td>0.636</td>
<td>0</td>
<td>Fail</td>
</tr>
<tr>
<td>SS.SMx.IMx</td>
<td>23.98</td>
<td>40</td>
<td>9.592</td>
<td>6.42</td>
<td>Fail</td>
</tr>
<tr>
<td>SS.SSa.IMuSa/SS.SMx.IMx</td>
<td>14.99</td>
<td>40</td>
<td>5.996</td>
<td>0.81</td>
<td>Fail</td>
</tr>
<tr>
<td>SS.SSa.IMuSa</td>
<td>150.32</td>
<td>40</td>
<td>60.128</td>
<td>13.26</td>
<td>Fail</td>
</tr>
<tr>
<td>SS.SSa.IMuSa.SsubNhom</td>
<td>22.43</td>
<td>40</td>
<td>8.972</td>
<td>10.03</td>
<td>Pass</td>
</tr>
<tr>
<td>TOTAL</td>
<td>442.66</td>
<td>272.485</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sabellaria reefs and maerl beds not included in table but 100% protected

Economic impact

Over 15m

<table>
<thead>
<tr>
<th>Approach</th>
<th>Site Value</th>
<th>Value Affected</th>
<th>% affected</th>
<th>Hours in site</th>
<th>Hours affected</th>
<th>% affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation 2</td>
<td>90,000</td>
<td>40,000</td>
<td>44.44</td>
<td>976</td>
<td>376</td>
<td>38.52</td>
</tr>
</tbody>
</table>

Under 15m

<table>
<thead>
<tr>
<th>Approach</th>
<th>site value</th>
<th>Value affected</th>
<th>Days in site</th>
<th>Days affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation 2</td>
<td>24,000</td>
<td>9,300</td>
<td>17</td>
<td>6.5</td>
</tr>
</tbody>
</table>

17
Appendix C

LUCE BAY SAC - Example approach that meets minimum criteria

management proposal

no demersal trawl, beam trawl, suction dredge, or mechanical dredge permitted in SAC.

by way of derogation mechanical dredge would be permitted in the hatched areas in January, February, November and December each year

© Crown Copyright, 2015. All rights reserved. License No. EK001-201404001. Not to be used for Navigation. Using Habitat data provided by SNH in August 2014.
Projection: Lambert Azimuthal Equal Area Datum: ETRS 1989 Scale 1:160,000
Luce Bay SAC – example that meets the criteria

Ecological value

<table>
<thead>
<tr>
<th>Biotope Code</th>
<th>Area in site</th>
<th>Minimum % to be protected</th>
<th>Area required</th>
<th>area protected</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR, MCR. EcCr</td>
<td>26.45</td>
<td>100</td>
<td>26.45</td>
<td>26.45</td>
<td>pass</td>
</tr>
<tr>
<td>CR, MCR. EcCr, FaAlCr</td>
<td>32.91</td>
<td>100</td>
<td>32.91</td>
<td>32.91</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SCS, CCS / CR, MCR. EcCr</td>
<td>88.46</td>
<td>100</td>
<td>88.46</td>
<td>88.46</td>
<td>pass</td>
</tr>
<tr>
<td>SS, Smp, KSwSS, LsacR</td>
<td>22.43</td>
<td>70</td>
<td>15.701</td>
<td>15.91</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SCS, ICS</td>
<td>59.1</td>
<td>40</td>
<td>23.64</td>
<td>34.09</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SCS, ICS, MoeVen</td>
<td>1.59</td>
<td>40</td>
<td>0.636</td>
<td>1.13</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SMx, IMx</td>
<td>23.98</td>
<td>40</td>
<td>9.592</td>
<td>13.02</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SSA., IMusA / SS, SMx, IMx</td>
<td>14.99</td>
<td>40</td>
<td>5.996</td>
<td>11.96</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SSA., IMusA</td>
<td>150.32</td>
<td>40</td>
<td>60.128</td>
<td>81.81</td>
<td>pass</td>
</tr>
<tr>
<td>SS, SSA., IMusA, SubNhom</td>
<td>22.43</td>
<td>40</td>
<td>8.972</td>
<td>15.33</td>
<td>pass</td>
</tr>
<tr>
<td>TOTALS</td>
<td>442.66</td>
<td></td>
<td>272.485</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sabellaria reefs and maerl beds not included in table but 100% protected

Economic impact

Over 15m

<table>
<thead>
<tr>
<th>Approach</th>
<th>Site Value</th>
<th>Value Affected</th>
<th>% affected</th>
<th>Hours in site</th>
<th>Hours affected</th>
<th>% affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>New criteria approach</td>
<td>90,000</td>
<td>40,000</td>
<td>44.44</td>
<td>976</td>
<td>423</td>
<td>43.34</td>
</tr>
</tbody>
</table>

Under 15m

<table>
<thead>
<tr>
<th>Approach</th>
<th>site value</th>
<th>Value affected</th>
<th>Days in site</th>
<th>Days affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>New criteria approach</td>
<td>24,000</td>
<td>10,400</td>
<td>17</td>
<td>7.5</td>
</tr>
</tbody>
</table>
Appendix D

Luce Bay SAC management meeting
26th June 2015
Easterbrook Hall, Dumfries

ATTENDEES

Marine Scotland: Mike Palmer, David Mallon, Eamon Murphy, Rhona Cairns, Liam Mason, Michael McLeod
Scottish Natural Heritage: Jon Warren, David Donnan
Galloway Static Gear Fisherman’s Association: Paul MaGuire, Sean McGuire, Frazer Scott
D&G Council: Councillor Jane Maitland
Solway Firth Partnership: Pam Taylor
Scottish Fisherman’s Federation: Kenny Coull, Ian Fletcher, John McAlister
West Coast Sea Products: John King, Stuart King
Scottish Sea Angling Conservation Network: Ian Burret, Tom Stevenson
Scottish Environment Link: Calum Duncan
SW IFG: Alastair McNeill
Commercial fishermen: Steven Girgan, Gerald Kosak, unknown
Recreational sea angler: Steve Unsworth

AGENDA

1. Introduction
2. Background to Luce Bay management
3. Assessment Criteria
4. Luce Bay management proposals
5. Next steps

Apologies from local dive club.
1. INTRODUCTION

- Marine Scotland explained that the purpose of the workshop was to allow them to get a clear idea of all issues from all stakeholder interests to reflect back to Ministers.

- Luce Bay is the only site in the first tranche of protected sites which is at an extra stage of discussion. This recognises the particular history and sensitivity attached to this site. This is the culmination of a long process, the decisions on the other 1st tranche sites have been taken and announced.

- Marine Scotland explained that this workshop would help inform decisions and ideally Marine Scotland would like to come to a consensus on potential management options, while noting that no decisions would be taken at the workshop and that the Minister may decide not to adopt any of the management options discussed. There would be an opportunity to make written representations on the options discussed before final decisions were taken.

- SNH had provided further advice giving greater clarity on the scientific criteria and parameters and providing important context for discussion. The proposal worked up at the meeting in January did not meet these criteria, nor did the preferred approach from the public consultation.

- There was some concern expressed by stakeholders who felt the January meeting had worked hard to produce a management solution which was now deemed unsuitable.

- SNH noted that there had been no clear criteria in January against which to judge the proposal. They had made clear at the meeting in January that the proposal would have to be thoroughly checked to ensure the conservation objectives would be met. If this was not the case then the proposal would have to be considered further.

- They had since worked on refining further advice (which had been influenced and informed by issues raised at the January meeting) to provide a clearer more robust evidence base with which to inform decision making. This was a positive development.

- Marine Scotland noted that the SNH advice was now definitive and laid out clear parameters around which to work and base a management proposal. Research carried out at other sites with similar protected features had informed the advice.

- Luce Bay is designated under the EU Habitats Directive therefore Marine Scotland have a legal obligation under EU law to meet the conservation objectives for the protected features to ensure the integrity of site is maintained.
• Some stakeholders asked why Richard Lochhead himself was not at the workshop today. Marine Scotland officials provided a reassurance that they would accurately reflect back to him the views expressed.

• Some industry representatives expressed their concerns at the recent decisions taken by the Minister in relation to other sites, which they felt had departed significantly from what had been discussed during the MPA consultation. Marine Scotland noted this and reassured stakeholders that during the consultation all views from all stakeholders had been carefully considered.

• Marine Scotland also noted that the Cabinet Secretary sought to weigh fairly the interests and concerns of all sectors in deciding on management measures. In doing so, his decisions were not based on the number of responses from any one sector but were the result of a careful assessment of the impacts, be they social, economic or environmental. His decisions were also, clearly, constrained by his obligations under the relevant legislation.

• Marine Scotland noted that 64 responses were sent to the incorrect email inbox – they have been located and considered and will be included in an addendum to the consultation report.

• For the future Marine Scotland would deal with inactive mailboxes to avoid future confusion.

2. BACKGROUND

• The Luce Bay SAC was designated in 2005 as a large shallow inlet and bay meaning every habitat within the site is protected. Vulnerable marine features are deemed to occur throughout the site and management of the site has been a topic of debate for over 10 years.

• Sensitive habitats protection criteria are based on the level of sensitivity to disturbance, and the level of sensitivity is reflected in the level of protection required to enable management measures to meet the conservation objectives. The habitats considered most sensitive to physical disturbance include maerl, rocky reef and also Sabellaria worm reefs. For these habitats 100% protection is required.

• Those habitats containing kelp are classified as moderately sensitive. The kelp habitats include those which grow on bedrock and boulder substrate, and those where the kelp is found on predominantly sediment substrate (this is usually the kelp known as sugar kelp). As a general rule kelp can recover its biomass in 3 – 4 years, but it can take up to seven years for the species associated with kelp to return to their former level. Consequently, the minimum proportion of protection required for these habitats is lower (at 70%).
• The habitats of lowest sensitivity are predominantly sediment substrate and have a relatively high capacity for recovery, and a lower proportion required for protection (40% is appropriate).

• Recent legal opinions regarding fishing in SACs and SPAs had established that fishing constitutes a 'plan or project', placing further obligations on Marine Scotland to manage fishing activity within a protected site.

• Scallop dredging is already reduced in Luce Bay due to seasonal restrictions but other activities (angling in particular) have increased.

3. ASSESSMENT CRITERIA

• As outlined at the outset of the meeting, SNH had previously provided advice with a view to working towards a package of measures that would meet the conservation objectives and maintain integrity of the SAC. Given the range of measures and options for the spatial restriction it was felt that it would be helpful to refine the advice to enable a more quantitative/structured approach to comparing alternative options. This was done using the sensitivity information plus drawing on scientific advice that had been prepared for sites with similarly complex issues.

• If they wished industry could pursue the proposal they had put forward at the January meeting but they would need to provide evidence that it would not have an adverse effect on site integrity.

• The conservation objective for all features is 'maintain'; industry stakeholders felt that this showed the site was still in good condition after 60 years of dredging.

• SNH replied that studies in other areas had shown that scallop dredging has the potential to have a negative impact on features.

• Legal requirements mean that the impacts of fishing in protected areas throughout the UK must be considered and management implemented where necessary.

The SNH advice stipulates the following percentages of habitats requiring protection:

- Maerl beds, sabellaria reefs, and other reef habitat 100%
- Kelp and red seaweeds on infralittoral sediments 70%
- Other sedimentary habitats 40%

• SNH used the upper limit of ICES advice for the Dogger Bank SAC to calculate the % of sedimentary habitats requiring protection. SNH are confident the science is robust and fit for purpose. No scientific advice is ever 100% accurate due to the difficulties in surveying the whole area. Scientific information and confidence assessments have been published on the SNH website.
The workshop is looking at three scenarios for Luce Bay:

- Scenario 1: site closure.
- Scenario 2 – a zonal management proposal which meets the criteria specified by SNH.
- Scenario 3 – industry (or others) can proceed with the management option discussed at the January workshop, or an alternative proposal, but would have to provide evidence that could be used in an Appropriate Assessment of the proposal, as required by legislation. In the meantime Marine Scotland would need to ensure no deterioration of the site while evidence was gathered, taking interim measures accordingly.

- The SEA report on the management approaches concluded that a solution that did not result in 100% displacement from Luce Bay (unless absolutely necessary to achieve the conservation objectives) would be the best outcome. However this analysis did not consider the potential for activity to displace to other parts of the Irish Sea.

- Scottish Environment Link felt that management of the seabed was for the good of the wider public and measures had to consider all sectors and interests. They were in favour of Option 1 – Luce Bay was a mosaic of habitats that interconnected and supported different species. In their view the 'Sweetman' ruling had set out a legal requirement that site integrity is not jeopardised; therefore the whole site needed protection.

- Consultation responses suggested that if mobile fishing stopped lower level activities such as static fishing and scuba diving would increase. If that happened, SNH confirmed that they would be monitored and advice with regard to their management would be provided if required.

- A local shellfish processor reported that there was a scallop processing value of some £250,000 per year landed from Luce Bay; some scallops are caught in Luce Bay but landed elsewhere up the coast. Industry felt that 200 jobs could be impacted in Kirkcudbright.

- Industry stakeholders also gave the example of Broad Bay, Stornoway, where they think ecological diversity has declined since scallop dredging was stopped in the 1980s. SNH said they were not aware of any study carried out by Marine Scotland Science to verify this. A dedicated scientific study in Broad Bay would be required to prove the hypothesis.

- Marine Scotland said they were happy to discuss economic impacts following the workshop if industry reps felt that the estimates were too low.
Industry noted that there were only 8 weeks of fishing available per year but these were crucial as these were just before important Christmas markets. It is a safe haven in winter storms when there are no alternative grounds during prevailing SW gales. If the grounds were shut there could be zero income for affected boats before Christmas.

The Solway Firth Partnership had studied fishing activity and conducted interviews with local fishermen in Luce Bay as a precursor to Scotmap and feel that the economic figures presented were wrong. Data had been submitted by the Partnership to the Marine Laboratory in Aberdeen.

SNH informed the workshop that it has a new underwater camera available. This can be used to carry out survey work in Luce Bay to examine seabed habitats if local vessels would be willing to participate in a survey.

4. LUCE BAY MANAGEMENT PROPOSALS

Marine Scotland presented a new zonal management proposal to meet the new assessment criteria provided by SNH and to deliver on minimum legislative requirements. This retained fishing areas for mobile gear.

The industry pointed out that fishing effort had been much reduced in recent years and asked if this had been taken into account. It was confirmed that this had been accounted for.

Local creel fishermen wanted reassurance that creel management wouldn’t be introduced in the future. SNH replied that they have not given advice regarding creels. Some research work had been carried out on creel impacts but the results did not illustrate the need for management and therefore no advice had been provided.

There was an extended discussion, using maps showing VMS tracks, of alternative zonal management options which might accommodate current fishing grounds and bad weather havens while meeting the needs of the assessment criteria.

Some concern was expressed that these options could result in in gear conflict between static and mobile fishermen.

An angling representative suggested a 2 nautical mile closed zone around the bay. Industry felt this would push vessels too far from shore in bad weather.

It was suggested that a permit system could be used to control the number of vessels fishing in Luce Bay.
Ultimately an adjusted zonal management option was identified as a possible way forward by most in the workshop, although the SSACN angling representative dissented (expressing a wish for the ‘Polo’ option to be reinstated) and the Environmental Link representative could not agree to anything without checking with his membership.

Marine Scotland felt the management option identified by the majority at the workshop was potentially workable but they wished to check the status of one particular proposed patch of seabed open to mobile gear and whether it could be brought in line with the assessment criteria (see additional advice since received from SNH.)

5. NEXT STEPS

Marine Scotland said the zonal management option based on the day’s discussions would be fully assessed. If suitable, the Cabinet Secretary would consider this and the option to close the site completely, taking into account impacts, statutory obligations, and the broad range of views from stakeholders.

Local stakeholders asked to have decisions before November. Marine Scotland noted that a period for written representations had been provided for the other sites. Final announcements for these sites plus Luce Bay were expected in September 2015.

Environmental Link said they would reflect on the analysis. There had been an improvement on previous approaches but Link members would need to be consulted. The discussions had been helpful and pragmatic.

Marine Scotland will issue a draft note of the workshop for agreement and will notify stakeholders of next steps and forthcoming deadlines. Stakeholders are encouraged to make written submissions if they wish with any additional points that were not discussed today and are asked to encourage others who were not in attendance today to write in with their views.

Marine Scotland
07 August 2015
Management proposal
No demersal trawl, beam trawl, suction dredge, or mechanical dredge permitted in SAC.

Mechanical dredge would be permitted in the hatched areas in January, February, November and December each year.

NOTE: Hatched areas subject to further discussion.

LUCE BAY SAC - Approach discussed in Dumfries on 26 June 2015

Not to be used for navigation © Crown Copyright, 2015. All rights reserved. Ordnance Survey License No. 100024555.

Using Geodatabase of Marine Features Adjacent to Scotland (GEMS i12 - May 2014)
Using additional habitats data provided by Scottish Natural Heritage (August 2014)
Projection: Mercator, Datum: WGS 1984, Scale 1:160,000
Additional SNH advice on Luce Bay and Sands SAC given to Marine Scotland

Revised zonal management approach

Conclusion

The revised spatial restriction would be defensible in terms of the likelihood of meeting site integrity and the conservation objectives, when taken in-combination with other management measures. In particular restricting the fishery to the winter months – January, February, November, and December each year.

Advice

This outcome will broadly meet the suggested proportions for the biotopes/biotope complexes indicated in our advice circulated prior to the workshop.

The SS.SCS.ICS.MoeVen biotope polygon is the one exception as it would be within the revised ‘fished’ area. There are, however, factors that lead us to conclude that this is acceptable.

Firstly, this biotope is considered to have a relatively high capacity for recovery from abrasion/disturbance. Therefore, even though it would remain within the ‘fished’ zone, the seasonal closure means the exposure to fishing is greatly reduced.

Also, the new proposal provides the added benefit of including a slightly greater proportion of habitat with higher sensitivity. In particular the biotopes containing Laminaria on both the east and west sides of the bay. This is, on balance, a more desirable outcome than seeking to retain some of the SS.SCS.ICS.MoeVen. This is consistent with the advice given in 2012 on the relative sensitivities of the habitats in the bay.

This advice is given in the context of an adaptive approach to management measures being subject to review in the light of new/improved information or results of monitoring.

29 July 2015
Appendix E

LUCE BAY SAC - Final zonal management proposal

- SAC boundary
- DEROGATED AREAS FOR SCALLOP DREDGE
- Sabellaria reefs
- CR.MCR.EcCr
- CR.MCR.EcCr.FaAlCr
- SS.SCS.CCS/CR.MCR.EcCr
- SS.SCS.ICS
- SS.SCS.MoYCr
- SS.SMp.KSwSS.LsarR
- SS.SMx.IMx
- SS.SSA.IMuSa.SsubNhorn
- SS.SSa.IMuSa
- SS.SSa.IMuSa.GS.Smx.IMx

management proposal

- no demersal trawl, beam trawl, suction dredge, or mechanical dredge permitted in SAC.
- by way of derogation mechanical dredge would be permitted in the hatched areas in January, February, November and December each year.

© Crown Copyright, 2015. All rights reserved. License No. EK001-201404001. Not to be used for Navigation. Using Habitat data provided by SNH in August 2014.
Projection: Lambert Azimuthal Equal Area Datum: ETRS 1989 Scale 1:160,000
Final zonal management proposal

Ecological value

<table>
<thead>
<tr>
<th>Biotope Code</th>
<th>Area in site</th>
<th>Minimum % to be protected</th>
<th>Area required</th>
<th>Area included</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR.MCR.EcCr</td>
<td>26.45</td>
<td>100</td>
<td>26.45</td>
<td>26.45</td>
<td>pass</td>
</tr>
<tr>
<td>CR.MCR.EcCr.FaAlCr</td>
<td>32.91</td>
<td>100</td>
<td>32.91</td>
<td>32.91</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SCS.CCS / CR.MCR.EcCr</td>
<td>88.46</td>
<td>100</td>
<td>88.46</td>
<td>88.46</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SSp.KSwSS.LsacR</td>
<td>22.43</td>
<td>70</td>
<td>15.701</td>
<td>17.93</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SCS.ICS</td>
<td>59.1</td>
<td>40</td>
<td>23.64</td>
<td>30.52</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SCS.ICS.MoeVen</td>
<td>1.59</td>
<td>40</td>
<td>0.636</td>
<td>0</td>
<td>fail</td>
</tr>
<tr>
<td>SS.SMx.IMx</td>
<td>23.98</td>
<td>40</td>
<td>9.592</td>
<td>9.75</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SSa.IMuSa / SS.SMx.IMx</td>
<td>14.99</td>
<td>40</td>
<td>5.996</td>
<td>11.96</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SSa.IMuSa</td>
<td>150.32</td>
<td>40</td>
<td>60.128</td>
<td>71.65</td>
<td>pass</td>
</tr>
<tr>
<td>SS.SSa.IMuSa.SsubNhom</td>
<td>22.43</td>
<td>40</td>
<td>8.972</td>
<td>15.33</td>
<td>pass</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>442.66</strong></td>
<td></td>
<td><strong>272.485</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Economic Assessment

This is provided in the Business and Regulatory Impact Assessment that is accompanying the Order.
Appendix F

Habitats regulations appraisal Proforma for Zonal Management of fisheries in Luce Bay and Sands SAC

IS THE PLAN OR PROJECT DIRECTLY CONNECTED WITH OR NECESSARY TO SITE MANAGEMENT FOR NATURE CONSERVATION?

The statutory instrument for implementing the spatial zonation and temporal closure would be for nature conservation in order to protect the designated marine habitats of the site (reefs, large shallow inlet and bay and subtidal sandbanks) from the effects of demersal mobile/active gear in order that the conservation objectives of the site can be met. Therefore the answer to the first test in this regard would be yes and therefore no further appraisal is determined necessary.

However, the spatial measure would still allow some demersal mobile/active fishing to continue which is not directly connected with or necessary to site management for nature conservation. There is a clear connection with the conservation objectives of the site as the remaining fishing activity would be operating on some component habitats of the designated features of the site. Therefore, further appraisal of this is required to ensure that the level of fishing remaining would result in no adverse effect on site integrity.

IS THE PLAN OR PROJECT (EITHER ALONE OR IN COMBINATION WITH OTHER PLANS OR PROJECTS) LIKELY TO HAVE A SIGNIFICANT EFFECT ON THE SITE?

Yes. In the case of this proposal the package of measures (winter only opening with a strict spatial constraint as outlined in Appendix E) would still leave some scallop dredging in a proportion of the site for four months of the year. As there will still be disturbance of component habitats of the large shallow inlet and bay and subtidal sandbanks features during four months of the year, likely significant effect cannot be ruled out.
UNDEARTAKE AN APPROPRIATE ASSESSMENT OF THE IMPLICATIONS FOR THE SITE IN VIEW OF ITS CONSERVATION OBJECTIVES

The appropriate assessment has been based on considering the effects of the spatial restriction on the various component biotopes of the Annex I features as mapped in the broadscale mapping presented in Appendix E.

**Reef (including *Sabellaria* reef)**

All mapped reef habitat reef (biotopes CR.MCR.EcCr, CR.MCR.EcCr.FaAlCr, SS.SCS.CCS / CR.MCR.EcCr) and *Sabellaria* reef will be included within the spatial restriction with a sufficient buffer distance and therefore will not be exposed to the direct (physical effects) or indirect (sedimentation) effects of demersal mobile/active gear to which they are sensitive (as outlined in Appendix A and in the consultation document).

**Large shallow inlet and bay/subtidal sandbanks**

The remaining biotopes mapped fall under one or both of the qualifying features large shallow inlet and bay and subtidal sandbanks.

**Subtidal sandbanks - Maerl bed**

All of the known extent of the maerl bed within the site will be included within the spatial restriction with a sufficient buffer distance and therefore will not be exposed to the direct (physical effects) or indirect (sedimentation) effects of demersal mobile/active gear to which it is highly sensitive (as outlined in Appendix A and in the consultation document).

**Subtidal sandbanks - Kelp and seaweed communities on sublittoral sediment**

This habitat is less sensitive to the pressures associated with mobile fishing gear than maerl beds and reef habitats described above but more sensitive than the other soft sediment habitats present within the Luce Bay SAC. The degree to which demersal towed gears may cause damage to this habitat will depend on the amount of 'natural' disturbance, with low energy sites with dense coverage of kelp and seaweeds being most sensitive. Scallop dredging within the site currently only occurs during the winter months when kelp and seaweeds die back and there is greater natural disturbance from storms. The kelp and seaweed habitat in the broadscale map is within higher energy areas of the site (on the outer edges near the entrance). Therefore, whilst these areas may have more resilience and better recovery potential, it is currently not clear whether the added physical interaction with demersal mobile gear limits the habitat’s resilience / seasonal recovery here. Additionally, drop-down video surveys conducted in 2012 (after the 2007 broadscale mapping survey, the products of which have been used to inform these management discussions to date) recorded the presence of reef habitats in a number of locations along the western and eastern margins of the site within the
areas currently mapped as SS.SMp.KSwSS Kelp and seaweed communities on sublittoral sediments.  

SNH therefore advised that a minimum of 70% of this feature was included within areas closed to mobile / active demersal gear. SNH advice in other MPAs e.g. Wester Ross, Fetlar to Haroldwick, South Arran for kelp and seaweed communities on sublittoral sediment has been to reduce/limit demersal mobile/active gear on the habitat. The exception to this was for Wyre and Rousay Sound NCMPA because the kelp and seaweed habitats there are present in a complex mosaic with the maerl beds – and thus the remove/avoid advice for the more sensitive feature (maerl) had to apply. Therefore the SNH advice for Luce Bay and Sands in relation to this biotope is consistent with other MPAs. The minimum proportion of the biotope area of 70% protected, would be exceeded by the spatial restriction measure.

Protection afforded to kelp records within the SAC from Marine Recorder which were not included in the broad scale mapping were also considered in terms of the protection afforded to them by the spatial restriction. Of these 66% of the Laminaria records would be protected, 74% of L. hyperborea records and 64% of S. latissima records. Therefore this is very close to or exceeds the minimum requirement advised. On the east side there is around 900m buffer between the derogation area and these unmapped kelp records. On the west side in the section between Drummore to Mull of Galloway, the records here are at least 200m from the derogation. In both cases it is considered that an adequate buffer has been used to ensure that there are no indirect effects of sedimentation from demersal mobile/active fishing activity on the feature.

Large shallow inlets and bays/Subtidal sandbanks - other soft sediment biotopes

As outlined in Appendix A, SNH advised the minimum amount of each biotope which would require to be protected through the spatial exclusion to allow a conclusion to be reached of no adverse effect on site integrity. ICES provided advice to the FIMPAS project in relation to the Dogger Bank SAC which includes some similar sediment types e.g. more mobile coarse sediments. The request asked whether a proportionate approach of between 20 and 40% of these habitats would be a sufficient level of protection. ICES were of the view that such a proportion would contribute to achieving the conservation objectives. These proportions need to represent all the different benthic communities. In some cases greater protection may be required. Coarse, mobile sediments are the least sensitive to physical disturbance relative to the other habitats in Luce Bay and have some ability to recover, hence the reduce/limit pressure advice. Luce Bay also includes more stable soft sediments e.g. muddy sands so SNH recommended adopting a 40% threshold. This is comparable with the proportion of soft sediment habitats included within the proposed closed areas at some of the Marine Protected
Areas such as Doggar Bank.

The minimum area for all the soft sediment biotopes would be included within the spatial restriction with the exception of SS.SCS.ICS.MoeVen which would not be offered any spatial protection. There are, however, factors that lead us to conclude that this would not stop us reaching a conclusion of no adverse effect on site integrity. MoeVen is considered to have a relatively high capacity for recovery from abrasion/disturbance caused by demersal mobile/active fishing (Feast). Therefore, even though it would remain within the ‘fished’ zone, the seasonal closure means the exposure to fishing is greatly reduced. SNH have advised that it is also important to note that the MoeVen polygon is relatively small and it is identified solely on the basis of an acoustic data signature. It is also similar to surrounding biotopes e.g. SS.SCS.ICS in sensitivity as well as component species, and more than the minimum area of these habitats has been included in the spatial restriction.

CAN IT BE ASCERTAINED THAT THE PROPOSAL WILL NOT ADVERSELY AFFECT THE INTEGRITY OF THE SITE?

Marine Scotland considers that it has been ascertained that the proposed spatial zonation will not adversely affect the integrity of the site.