

Habitats Regulations Assessment document: FARNE – tLSE 025

European Marine Site:	Farne Islands SPA
Generic sub-feature(s):	Tideswept communities, Intertidal bedrock reef, Intertidal boulder and cobble reef, Water column
Gear type(s):	Pots/creels
NIFCA tLSE type:	Detailed
Gear/feature interaction reference(s):	FARNE-365 FARNE-366 FARNE-367 FARNE-255

Revision history		
<i>Date</i>	<i>Revision</i>	<i>Editor</i>
21/01/2016	Document created	VR
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Has Natural England been formally consulted on this tLSE (and do they agree)?	Yes
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Date of document completion/'sign-off':	13/06/2016
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Test for Likely Significant Effect (LSE)

FARNE-365: Tideswept Communities

<p>1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?</p>	<p>No</p>
<p>2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)?</p> <p><i>*Sensitivities as listed are based on DRAFT Interim conservation advice. No Regulation 33 or 35 Advice is available for the Farne Islands SPA and best judgement has been used to determine which of these pressures are truly exerted by the gear type(s).</i></p>	<p>Abrasion/disturbance of the substrate on the surface of the seabed (Sensitive)¹</p> <p>Introduction or spread of non-indigenous species (Sensitive)²</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion (Sensitive)³</p> <p>Removal of non-target species⁴</p> <p>Removal of target species</p>
<p>3. Is the feature potentially exposed to the pressure(s)?</p>	<p>Yes</p>
<p>4. What are the conservation objectives for the feature?</p> <p><i>*DRAFT interim conservation advice does not give definitive conservation objectives. However, completing an HRA without COs is difficult. The CO as listed in this document is based on current knowledge of the status, and the pressures, affecting designated features (see sections 4 &5).</i></p> <p><i>Expert judgement has been used to determine which features may be exposed to the pressure(s) resulting in inferred COs. These COs are assigned a degree of uncertainty i.e. a subjective confidence level based on evidence 'High', 'Medium,' 'Low', and 'Unknown'.</i></p>	<p>The conservation objectives for Submerged or partially submerged sea caves (of which Tideswept communities are an attribute): Maintain*</p> <ul style="list-style-type: none"> - The total extent and distribution of all sea caves - <u>The presence and spatial distribution of sea cave communities</u> - The characteristic morphological regime of the cave(s) - The surface and structural complexity of the sea caves - <u>The abundance of listed typical species</u> - <u>The species composition of component communities</u> - The natural physical energy resulting from waves/tides and other flows of water - The natural light availability to the caves - The natural physico-chemical properties of the water - The natural rate of sediment deposition - Natural levels of turbidity - Restrict or Reduce: Surface sediment contaminant levels - Restrict or Reduce: the introduction and spread of non-native species and pathogens <p><i>Those conservation objectives that might be affected by potting or creel activities are underlined.</i></p> <p><i>*Confidence level for interim, inferred Conservation Objective: LOW (see section 6 for detail).</i></p>

<p>5. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?</p>	<p>'Tideswept communities' refer to communities within narrow gullies/caves and crevices, some of which may be present within the Farne Islands SPA, as a supporting habitat for designated SPA bird features. The main impact on these communities from potting is deemed to be 'Abrasion/disturbance of the substrate on the surface of the seabed (Sensitive)² and removal of target species.</p> <p>Potting can occur in these environments, however this is highly space and weather dependant and therefore levels of activity/exposure are low and tideswept communities are generally considered to be subject to naturally high levels of physical disturbance, with recovery predicted to be medium and therefore having a low sensitivity to potting⁵. In addition 'stable but tideswept cobbles, pebbles and gravel' have been assessed as having low sensitivity to all levels of potting activity⁶.</p>	
<p>6. Condition and Conservation Objective Inferences</p>	<p>No evidence is available on the current condition of 'Submerged or partially submerged sea caves' or associated 'Tideswept communities' within the Farne Islands SPA.</p> <p>In lieu of any evidence or a definitive conservation objective for this feature, a conservation objective of 'Maintain' is inferred with a low level of confidence.</p>	
<p>7. Is the potential scale or magnitude of any effect likely to be significant?</p>	<p>Alone:</p> <p>No</p>	<p>OR In-combination</p> <p>No</p>
<p>8. Have NE been consulted on this LSE test? If yes, what was NE's advice?</p>	<p>Yes</p> <p>Synthesis of evidence and local knowledge informing this decision occurred between January 2014 and the date of this document's creation with stakeholders (where appropriate) and other statutory authorities. Natural England (CS) was involved with this formal process.</p>	

Conclusion

Is the proposal likely to have a significant effect 'alone or in combination' on the Farne Islands SPA?

No

Test for Likely Significant Effect (LSE)

FARNE-366: Intertidal bedrock reef

FARNE-367: Intertidal boulder and cobble reef

<p>1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?</p>	<p>No</p>
<p>2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)?</p> <p><i>*Sensitivities as listed are based on DRAFT Interim conservation advice. No Regulation 33 or 35 Advice is available for the Farne Islands SPA and best judgement has been used to determine which of these pressures are truly exerted by the gear type(s).</i></p>	<p>Abrasion/disturbance of the substrate on the surface of the seabed (Sensitive)¹</p> <p>Introduction or spread of non-indigenous species (Sensitive)²</p> <p>Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion (Sensitive)³</p> <p>Removal of non-target species (Sensitive)⁴</p> <p>Removal of target species</p>
<p>3. Is the feature potentially exposed to the pressure(s)?</p>	<p>Yes</p>
<p>4. What are the conservation objectives for the feature?</p> <p><i>*DRAFT interim conservation advice does not give definitive conservation objectives. However, completing an HRA without COs is difficult. The CO as listed in this document is based on Regulation 33 advice (June 2000), current knowledge of the status, and the pressures affecting designated features (see sections 4 &5).</i></p> <p><i>Expert judgement has been used to determine which features may be exposed to the pressure(s) resulting in inferred COs. These COs are assigned a degree of uncertainty i.e. a subjective confidence level based on evidence 'High', 'Medium', 'Low', and 'Unknown'.</i></p>	<p>The conservation objectives for Intertidal rock [within the Farne Islands SPA] are to Maintain*:</p> <ul style="list-style-type: none"> - The total extent and spatial distribution of intertidal rock - <u>The presence and spatial distribution of intertidal rock communities</u> - <u>The surface and structural complexity of the reef</u> - <u>The abundance of listed typical species</u> - <u>The species composition of component communities</u> - The natural physical energy resulting from waves, tides and other water flows - The natural physico-chemical properties of the water - The natural rate of sediment deposition - Natural levels of turbidity - Restrict or Reduce: <u>The introduction and spread of non-native species and pathogens</u> - Availability of key prey items (e.g. sandeel, sprat, coarse fish, crustacea, annelids) at preferred prey sizes. <p><i>Those conservation objectives that might be affected by potting activity are underlined.</i></p> <p><i>*Confidence level for interim, inferred Conservation Objective: LOW (see section 6 for detail).</i></p>

<p>5. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?</p>	<p>Potting for European lobster <i>Homarus gammarus</i> and brown crab <i>Cancer pagurus</i> is the principle fishery within the Northumberland IFCA district, with 115 active commercial shellfish permit holders in 2015 and approximately 38,000 [commercial] pots fished within the district (2014). Potting occurs predominantly on subtidal hard substrates, although some activity may occur on intertidal rocky reef where the greatest impact may occur as a result of 'Abrasion/disturbance of the substrate on the surface of the seabed (Sensitive)¹ and removal of target species. Potting within the intertidal zone is more typical of recreational fishing activity and landing by members of the public is restricted on the Farne to two islands, where no fishing is allowed (Rebecca Hetherington, National Trust pers. comms. 11/08/2015). Therefore little to no potting activity occurs within the intertidal zone in the Farne Islands SPA (John Walton, National Trust pers. comms. 17/04/2014).</p> <p>Exposure levels from potting on intertidal reef in the Farne Islands SPA are therefore low. Additionally, "this feature is subject to naturally high levels of physical disturbance and recovery is predicted to be medium⁵".</p>	
<p>6. Condition and Conservation Objective Inferences</p>	<p>No evidence is available on the current condition of 'Intertidal bedrock reef' or 'Intertidal boulder and cobble reef' within the Farne Islands SPA.</p> <p>In lieu of any evidence or a definitive conservation objective for this feature, a conservation objective of 'Maintain' is inferred with a low level of confidence.</p>	
<p>7. Is the potential scale or magnitude of any effect likely to be significant?</p>	<p>Alone:</p> <p>No</p>	<p>OR In-combination</p> <p>No</p>
<p>8. Have NE been consulted on this LSE test? If yes, what was NE's advice?</p>	<p>Yes</p> <p>Synthesis of evidence and local knowledge informing this decision occurred between January 2014 and the date of this document's creation with stakeholders (where appropriate) and other statutory authorities. Natural England (CS) was involved with this informal process.</p>	

Conclusion

Is the proposal likely to have a significant effect 'alone or in combination' on the Farne Islands SPA?

No

Test for Likely Significant Effect (LSE)

FARNE-255: Water Column

<p>1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?</p>	<p>No</p>
<p>2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)?</p> <p><i>*Sensitivities as listed are based on DRAFT Interim conservation advice. No Regulation 33 or 35 Advice is available for the Farne Islands SPA and best judgement has been used to determine which of these pressures are truly exerted by the gear type(s).</i></p>	<p>Barrier to species movement⁷</p> <p>Genetic modification & translocation of indigenous species⁸</p> <p>Hydrocarbon & PAH contamination⁹</p> <p>Introduction of light¹⁰</p> <p>Introduction of other substances (solid, liquid or gas)⁹</p> <p>Introduction or spread of non-indigenous species¹¹</p> <p>Litter</p> <p>Removal of non-target species¹²</p> <p>Synthetic compound contamination¹³</p> <p>Transition elements & organo-metal (e.g. TBT) contamination¹³.</p> <p>Underwater noise changes¹⁴</p> <p>Visual disturbance¹⁵</p> <p>Removal of target species</p> <p>Removal of non-target species</p> <p>Abrasion/disturbance of the substrate on the surface of the seabed</p>
<p>3. Is the feature potentially exposed to the pressure(s)?</p>	<p>Yes</p>

<p>4. What are the conservation objectives for the feature?</p> <p><i>*DRAFT interim conservation advice does not give definitive conservation objectives. However, completing an HRA without COs is difficult. The CO as listed in this document is based on current knowledge of the status, and the pressures, affecting designated features (see sections 4 &5).</i></p> <p><i>Expert judgement has been used to determine which features may be exposed to the pressure(s) resulting in inferred COs. These COs are assigned a degree of uncertainty i.e. a subjective confidence level based on evidence 'High', 'Medium,' 'Low', and 'Unknown'.</i></p>	<p>Conservation objectives for supporting habitat 'Coastal and offshore waters' for <u>all</u> designated SPA bird features are to Maintain*:</p> <ul style="list-style-type: none"> - <u>availability of preferred prey species (e.g. sandeel and sprat) at preferred prey sizes (Arctic tern and Sandwich tern)</u> <p><i>*Confidence level for interim, inferred Conservation Objective: LOW (see section 6 for detail).</i></p>	
<p>5. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?</p> <p><i>(reference to conservation objectives)</i></p>	<p>Potting for European lobster <i>Homarus gammarus</i> and brown crab <i>Cancer pagurus</i> is the principle fishery within the Northumberland IFCA district, with 115 active commercial shellfish permit holders in 2015 and approximately 38,000 [commercial] pots fished within the district (2014). Potting does take place in the vicinity of the Farne Islands (John Walton, National Trust pers. comms. 17/04/2014).</p> <p>The greatest risk from potting in the Farne Islands SPA is deemed to come from physical abrasion of the seabed, however this is unlikely to affect availability of key prey species for designated bird features (and therefore affect the condition of the water column). Furthermore the mesh size of pots is too large to entrap smaller prey species such as sandeel or sprat. Ropes attached to lobster pots may act as a barrier to species movement within the water column, however there have been no incidents of classified bird species being bycaught in lobster pots/lines (John Walton, National Trust pers. comms. 17/04/2014).</p>	
<p>6. Condition and Conservation Objective Inferences</p>	<p>No evidence is available on the current condition of the 'water column' within the Farne Islands SPA and in lieu of a definitive conservation objective for this feature, a CO of 'Maintain' has been inferred, based on a low level of confidence.</p>	
<p>7. Is the potential scale or magnitude of any effect likely to be significant?</p>	<p>Alone:</p> <p>No</p>	<p>OR In-combination</p> <p>No</p>

8. Have NE been consulted on this LSE test? If yes, what was NE's advice?	Yes Synthesis of evidence and local knowledge informing this decision occurred between January 2014 and the date of this document's creation with stakeholders (where appropriate) and other statutory authorities. Natural England (CS) was involved with this formal process.
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Conclusion

Is the proposal likely to have a significant effect 'alone or in combination' on the Farne Islands SPA?

No

References

1. Gubbay and Knapman, 1999; Kaiser et al., 2001; Polet and Depestele, 2010; Roberts et al., 2010; Sewell et al., 2007; Sewell and Hiscock, 2005; Wildfowl and Wetlands Trust (WWT) Consulting, 2012. AP_Justification ref. **560**
(UK0017072_Berwickshire_and_North_Northumberland_Coast_SAC_Advice_on_Operations)
2. ICES (International Council for Exploration of the Sea), 2009. AP_Justification ref. **619**
(UK0017072_Berwickshire_and_North_Northumberland_Coast_SAC_Advice_on_Operations)
3. Gubbay and Knapman, 1999; Polet and Depestele, 2010; Sewell et al., 2007; Sewell and Hiscock, 2005. AP_Justification ref. **549**
(UK0017072_Berwickshire_and_North_Northumberland_Coast_SAC_Advice_on_Operations)
4. Gubbay and Knapman, 1999; ICES (International Council for Exploration of the Sea), 2013; Kaiser et al., 2001; Sewell et al., 2007; Sewell and Hiscock, 2005; Wildfowl and Wetlands Trust (WWT) Consulting, 2012. AP_Justification ref. **548**
(UK0017072_Berwickshire_and_North_Northumberland_Coast_SAC_Advice_on_Operations)
5. Tilin, H.M., Hull, S.C., Tyler-Walters, H. 21. Development of a sensitivity Matrix (pressures-MCZ/MPA features). Report to the Department of Environment, Food and Rural Affairs from ABPMer, Southampton and the Marine Life Information Network (MarLIN) Plymouth:Marine Biological Association of the UK. Defra Contract No. MB12 Task 3A, Report No. 22
6. Eno, N.C., Frid, C.L.J., Hall, K., Ramsay, K., Sharp, R.A.M., Brazier, D.P., Hearn, S., Dernie, K.M., Robinson, K.A., Paramor, O.A.L. and Robinson, L.A. 2013. Assessing the sensitivity of habitats to fishing: from seabed maps to sensitivity maps. Journal of Fish Biology.
7. No reference. "While unlikely this could occur as a result of setting nets in confined water bodies/estuaries, or behavioural effects from the use of 'pingers' on nets – the impacts from the latter may be better covered under 'under water noise' pressures." **704**
(UK9006011_Lindisfarne_SPA_Advice_on_Operations)
8. Gubbay and Knapman, 1999; Kaiser et al., 2001; Sewell et al., 2007; Sewell and Hiscock, 2005. AP_Justification ref. **256**
(UK9006011_Lindisfarne_SPA_Advice_on_Operations)
9. Ware 2009. AP_Justification ref. **258,684** **(UK9006011_Lindisfarne_SPA_Advice_on_Operations)**
10. Birdlife International, 2012b. AP_Justification ref. **323** **(UK9006011_Lindisfarne_SPA_Advice_on_Operations)**
11. ICES (International Council for Exploration of the Sea), 2009. AP_Justification ref. **619**
(UK9006011_Lindisfarne_SPA_Advice_on_Operations)
12. Gubbay and Knapman, 1999; ICES (International Council for Exploration of the Sea), 2013; Kaiser et al., 2001; Sewell et al., 2007; Sewell and Hiscock, 2005; Wildfowl and Wetlands Trust (WWT) Consulting, 2012. AP_Justification ref. **548**
(UK9006011_Lindisfarne_SPA_Advice_on_Operations)
13. Ospar Commission, 2012. AP_Justification ref. **166** **(UK9006011_Lindisfarne_SPA_Advice_on_Operations)**
14. Thomsen and Intersessional correspondence group on underwater noise (2007 - 2009), 2009. AP_Justification ref. **533**
(UK9006011_Lindisfarne_SPA_Advice_on_Operations)
15. Stillman et al., 2007; Wildfowl and Wetlands Trust (WWT) Consulting, 2012. AP_Justification ref. **362**
(UK9006011_Lindisfarne_SPA_Advice_on_Operations)