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**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE
ELECTRICITY ACT 1989, A DECLARATION UNDER SECTION 36A
OF THE ELECTRICITY ACT 1989 AND APPLICATIONS FOR TWO
MARINE LICENCES UNDER THE MARINE (SCOTLAND) ACT 2010
FOR THE CONSTRUCTION AND OPERATION OF THE DOUNREAY
TRÌ FLOATING WIND DEMONSTRATION PROJECT.**

MARINE SCOTLAND'S ASSESSMENT OF THE PROJECT'S IMPLICATIONS FOR DESIGNATED SPECIAL AREAS OF CONSERVATION ("SACs"), SPECIAL PROTECTION AREAS ("SPAs") AND PROPOSED SPECIAL PROTECTION AREAS ("pSPAs") IN VIEW OF THE SITES' CONSERVATION OBJECTIVES.

SITE DETAILS: DOUNREAY TRÌ LIMITED – A TWO TURBINE FLOATING WIND DEMONSTRATION PROJECT APPROXIMATELY 6 KM OFF DOUNREAY, CAITHNESS

FILE REF: 028/OW/HDTP

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APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989, A DECLARATION UNDER SECTION 36A OF THE ELECTRICITY ACT 1989 AND APPLICATIONS FOR TWO MARINE LICENCES UNDER THE MARINE (SCOTLAND) ACT 2010 FOR THE CONSTRUCTION AND OPERATION OF THE DOUNREAY TRÌ FLOATING WIND DEMONSTRATION PROJECT.

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SECTION 1: BACKGROUND

1 Appropriate Assessment ("AA") Conclusion

MS-LOT concludes that, based on the content of the following assessment, the proposed Dounreay Trì Floating Wind Demonstration Project will not on its own, or in combination with other projects, adversely affect the integrity of the SPAs listed in section 9.2.

2 Introduction

- 2.1 This is a record of the appropriate assessment ("AA") undertaken in regards to the Dounreay Trì floating wind demonstration project ("the Development") to develop a two turbine floating windfarm 6 km off the coast of Dounreay in Caithness. This assessment is required to be undertaken under Council Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora ("the Habitats Directive") under a process referred to as Habitats Regulations Appraisal ("HRA").
- 2.2 As the Development will be within 12 nautical miles ("nm") of the mainland this assessment is undertaken under the following regulations (referred to in this assessment as "the Regulations"):
- Regulation 61 of the Conservation of Habitats and Species Regulations 2010 ("the 2010 Regulations"), which applies to the Electricity Act 1989 section 36 consent regime; and
 - Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 ("the 1994 Regulations"), which applies to the marine licensing regime.
- 2.3 The AA has been undertaken by the Marine Scotland Licensing Operations Team ("MS-LOT") on behalf of the Scottish Ministers.

3 Background to including assessment of new marine SPAs

- 3.1 Scottish Ministers, as the 'competent authority' under the Regulations, must be satisfied that the proposal will not adversely affect the integrity of any European site (special areas of conservation ("SACs") and special protection areas ("SPAs")) (known as Natura sites) either alone or in combination with other plans or projects before authorisations can be given for the proposal.
- 3.2 In Scotland, Scottish Ministers are currently in the process of identifying a suite of new marine SPAs. In 2014 advice was received from the statutory nature conservation bodies ("SNCBs") on the sites most suitable for designation and at this stage they became draft SPAs ("dSPAs"). Once Scottish Ministers have agreed the case for a dSPA to be the subject of a public consultation, the proposal is given the status of proposed SPA ("pSPA") and receives policy protection, which effectively puts such sites in the same position as designated sites, from that point forward until a decision on classification of the site is made. This policy protection for pSPAs is provided by Scottish Planning Policy (paragraph 210), the UK Marine Policy Statement (paragraph 3.1.3) and the National Marine Plan for Scotland (paragraph 4.45).
- 3.3 It is not a legal requirement under the Habitats Directive or relevant domestic regulations for this assessment to assess the implications of the proposal on the pSPAs. The assessment includes an assessment of implications upon those sites in accordance with domestic policy. Scottish Ministers are also required to consider article 4(4) of Council Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") in respect of the pSPAs. The considerations under article 4(4) of the Birds Directive are separate and distinct to the considerations which must be assessed under this Habitats Directive assessment but they are, nevertheless, set out within this assessment (see paragraph 11.3.1).
- 3.4 In accordance with regulation 50 of the 1994 Regulations and regulation 63 of the 2010 Regulations the Scottish Ministers will, as soon as reasonably practicable following the formal designation of the pSPAs, review their decisions if the proposal is authorised. This will include a supplementary AA being undertaken concerning the implications of the proposal on the sites as designated (as they are currently pSPAs their conservation objectives are currently in draft form, their conservation objectives are finalised at the point the sites are designated).

4 Details of proposed operation

- 4.1 The Development will consist of a demonstration floating offshore wind farm called Dounreay Tri which shall consist of:
- A two turbine offshore wind farm with an installed capacity of between 8 to 12 megawatts (MW), at least 6km off Dounreay, Caithness;
 - A single, 33kV, export cable to bring the power to shore immediately to the west of the Dounreay Restoration Site fence line; and

- Subject to a Connection Offer from Scottish and Southern Energy Power Distribution (SSEPD), the associated onshore electrical infrastructure to connect the Project at, or near, the existing substation at Dounreay.

4.2 The main offshore components will include:

- Two offshore wind turbines;
- A floating foundation;
- Mooring clump weight;
- Mooring chain and/or steel lines;
- Drag embedment anchors;
- One cable to bring the renewable electricity ashore; and
- Scour protection for the anchors and the export cable, where necessary.

4.3 A full description of the project can be found in chapter 4 of the Environmental Statement (“ES”) for the Development.

5 Consultation

5.1 The application for the Development, which included an ES and information to inform a HRA was submitted on 17 October 2016. MS-LOT accepted the application and sent the documents to the SNCBs and other relevant consultees on 19 October 2016 for a 42 day consultation period.

5.2 Detailed comments in relation to HRA were received from Scottish Natural Heritage (“SNH”), the Royal Society for the Protection of Birds (“RSPB”), and Whale and Dolphin Conservation (“WDC”). The Caithness District Salmon Fishery Board (“Caithness DSFB”) and the Northern District Salmon Fishery Board (“Northern DSFB”) responded and noted they had no specific comments and that the ES deals adequately with the potential issues. Marine Scotland Science (“MSS”) provided scientific advice on specific aspects of the ES.

6 Main issues raised during consultation

6.1 The main points raised by each of the respondents that included HRA specific comments are summarised below:

SNH

6.1.1.1 Do not object to the Development and concluded that the Development is unlikely to have a significant effect on the qualifying interests of the following SACs:

- Faray and Holm of Faray SAC and North Rona SAC – grey seals
- Sanday SAC – harbour seals
- River Thurso SAC, River Borgie SAC and River Naver SAC – Atlantic salmon
- River Borgie SAC and River Naver SAC – Atlantic salmon and freshwater pearl mussel

- 6.1.1.2 For the SPAs SNH concluded that for some species there would be no likely significant effect (“LSE”) but for others there would be a LSE. For those qualifying interests for which there was a LSE SNH provided further advice to inform an AA.

RSPB

- 6.1.1.3 Supported the Development subject to conditions in relation to implementing an environmental monitoring programme being part of any consents that may be granted. Noted that, while supporting the Development, they did have some concerns regarding the marine ornithological assessment and provided detailed comments that they felt should be addressed in any proposals for future projects or phases.

WDC

- 6.1.1.4 Agreed with the ES and that the level of impact on marine mammals in the area would be negligible as long as pile driving is not required. Noted they would like to be involved in developing a vessel management plan and would like to see marine mammal observers (“MMO”) used at all times during the construction and deployment of the wind farm floating platform and cable laying. WDC agreed with the overall conclusion of the HRA that there will be no adverse effect on the SACs.

7 Advice received from Marine Scotland Science

MSS

- 7.1.1.1 Agreed with the list of impacts assessed and that the lack of pile driving presents a much reduced risk of acoustic injury or disturbance to marine mammals. Noted that the Inner Hebrides and the Minches candidate SAC (“cSAC”) should have been included in the assessment although considered it unlikely that the Development will have an adverse effect on the cSAC. Agreed a vessel management plan should be used during construction and recommended that a similar plan is used during the operation of the wind farm.
- 7.1.1.2 Recommended that the number of vessels and their duration on site is reduced as much as reasonably possible and that the operation of the vessels is in line with the Scottish marine wildlife watching code.
- 7.1.1.3 MSS agreed that the risk of entanglement for marine mammals in the vertical clump lines (mooring lines attached to the floating turbine structure and the clump weights) is very small as is the risk of entanglement for seals and cetaceans in the catenary lines. Noted that it is difficult to quantify the risk of derelict fishing gear becoming entangled in the mooring lines and thereby having the potential to entangle marine mammals. MSS recommended a monitoring programme is put in place to inspect the mooring lines for such debris and, where possible, remove it and that details of the frequency of inspections and their outcome are reported to MS-LOT.

- 7.1.1.4 For diadromous fish MSS agreed with the conclusion of no LSE. MSS noted there needed to be further discussion with the developer, MSS and MS-LOT on what level of engagement with the National Research and Monitoring Strategy for Diadromous Fish would be appropriate for this Development.

SECTION 2: INFORMATION ON NATURA SITES

8 Information about the Natura sites considered in this assessment

- 8.1 This section provides links to the SNH Interactive ("SNHi") website where the background information on the sites being considered in this assessment is available. The qualifying interests for each site are listed as are the conservation objectives for each. Maps are provided in Figure 1 and Figure 2 showing the location of the Development, the Natura sites listed in paragraph 8.2 and the other developments considered for the in-combination assessment.

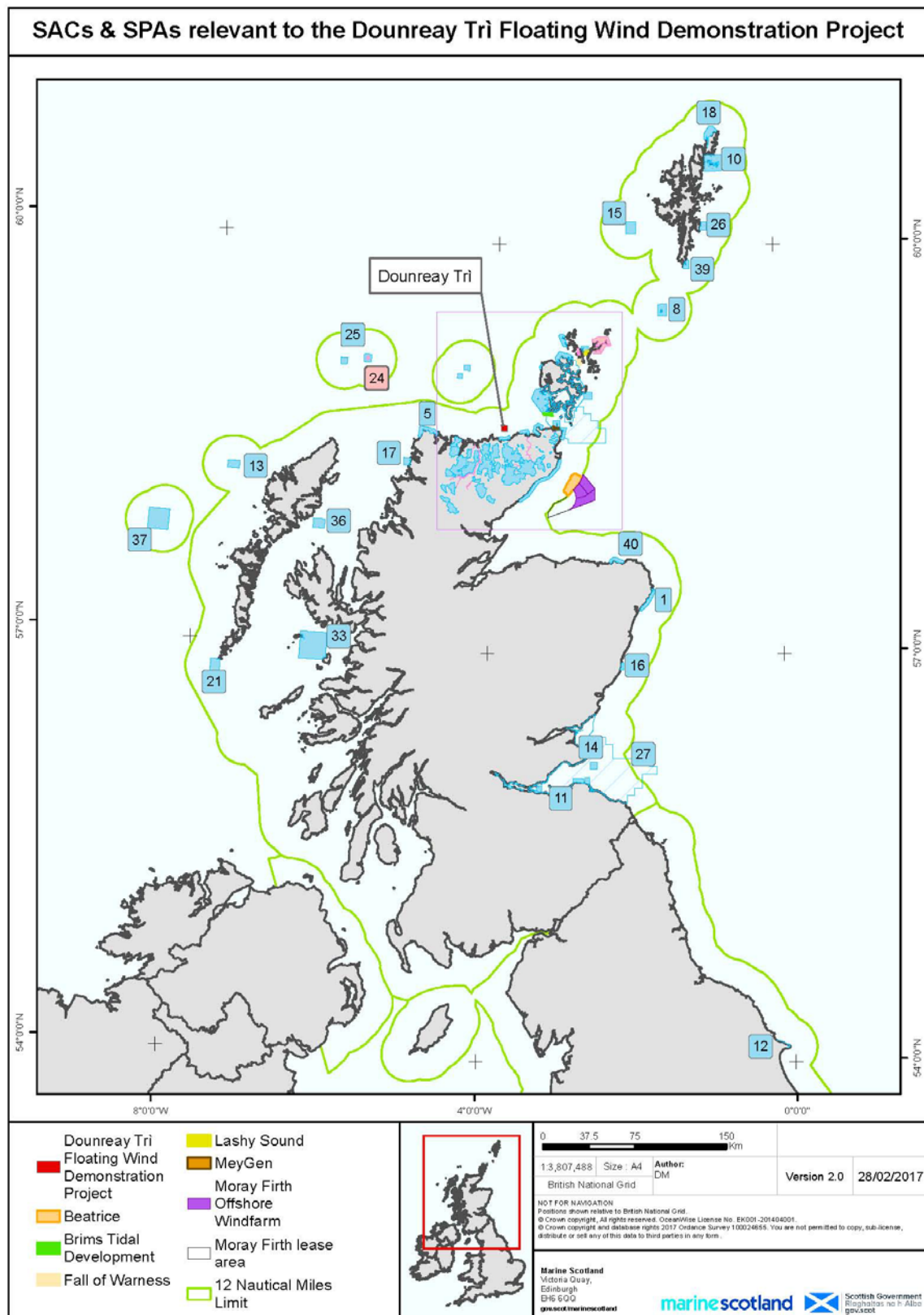


Figure 1 SACs and SPAs relevant to the Dounreay Tri Floating Wind Demonstration Project (see Figure 2 for detail in inset).

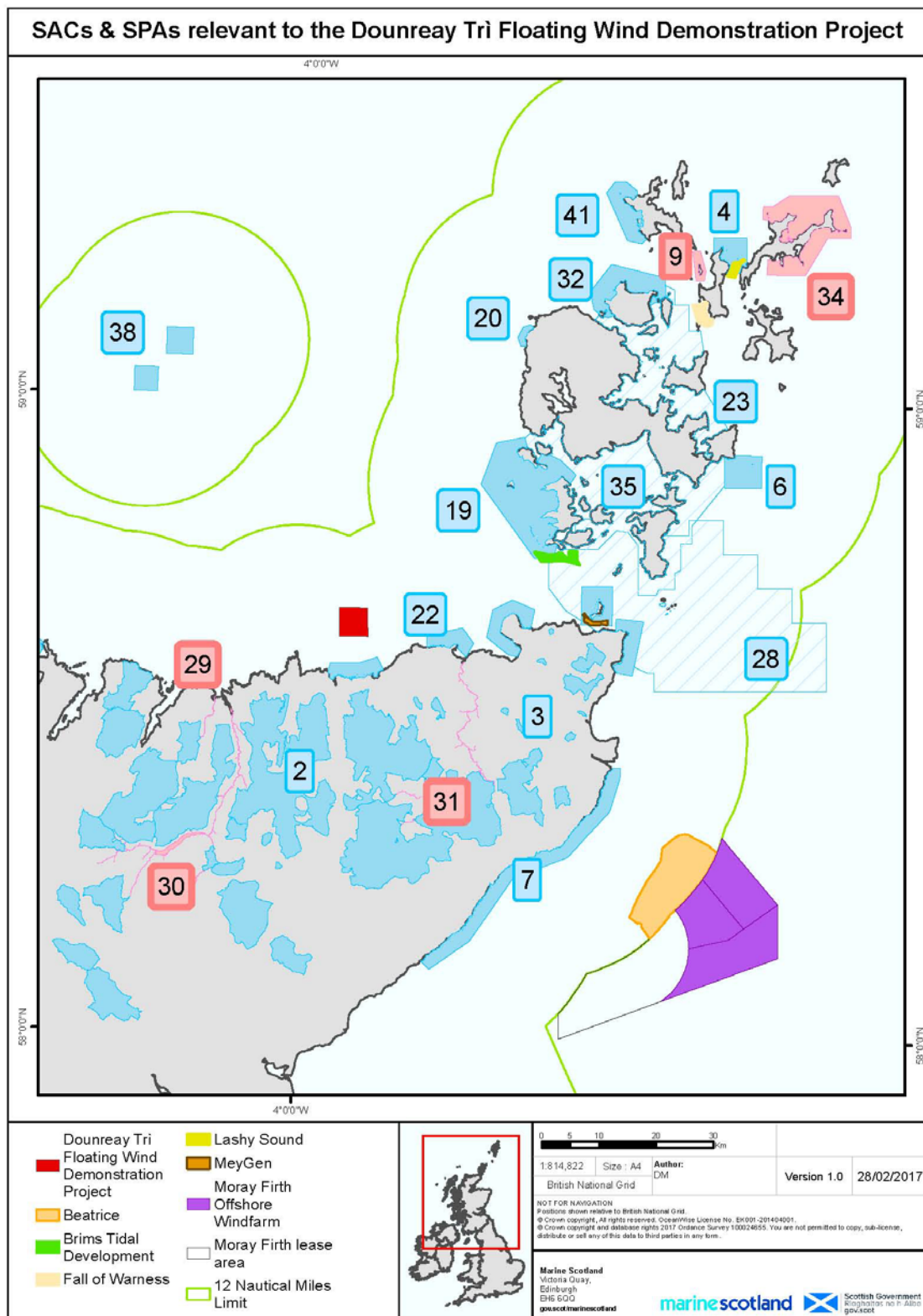


Figure 2 SACs and SPAs relevant to the Dounreay Tri Floating Wind Demonstration Project. Detail from inset in Figure 1.

8.2 Name of Natura sites and current status

1. Buchan Ness to Collieston Coast SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8473
2. Caithness Lochs SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8477
3. Caithness and Sutherland Peatlands SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8476
4. Calf of Eday SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8478
5. Cape Wrath SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8481
6. Copinsay SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8485
7. East Caithness Cliffs SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8492
8. Fair Isle SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8496
9. Faray and Holm of Faray SAC
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8254
10. Fetlar SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8498
11. Firth of Forth SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8499
12. Flamborough Head and Bempton Cliffs SPA
<http://jncc.defra.gov.uk/pdf/SPA/UK9006101.pdf>
13. Flannan Isles SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8502
14. Forth Islands SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8500
15. Foula SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8504
16. Fowlsheugh SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8505
17. Handa SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8511
18. Hermaness, Saxa Vord and Valla Field SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8512
19. Hoy SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8513
20. Marwick Head SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8544
21. Mingulay and Berneray SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8545
22. North Caithness Cliffs SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8554
23. North Orkney pSPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=10481
24. North Rona SAC
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8340

25. North Rona and Sula Sgeir SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8558
26. Noss SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8561
27. Outer Firth of Forth and St Andrews Bay Complex pSPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=10478
28. Pentland Firth pSPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=10509
29. River Borgie SAC
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8356
30. River Naver SAC
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8362
31. River Thurso SAC
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8368
32. Rousay SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8573
33. Rum SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8574
34. Sanday SAC
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8372
35. Scapa Flow pSPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=10510
36. Shiant Isles SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8575
37. St Kilda SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8580
38. Sule Skerry and Sule Stack SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8581
39. Sumburgh Head SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8582
40. Troup, Pennan and Lion's Heads SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8587
41. West Westray SPA
http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8589

8.3 European qualifying interests

Table 1 Qualifying interests for each site

1. Buchan Ness and Collieston SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

2. Caithness Lochs SPA

- Greenland white-fronted goose (*Anser albifrons flavirostris*), non-breeding

- Greylag goose (*Anser anser*), non-breeding
- Whooper swan (*Cygnus cygnus*), non-breeding

3. Caithness and Sutherland Peatlands SPA

- Black-throated diver (*Gavia arctica*), breeding
- Common scoter (*Melanitta nigra*), breeding
- Dunlin (*Calidris alpina schinzii*), breeding
- Golden eagle (*Aquila chrysaetos*), breeding
- Golden plover (*Pluvialis apricaria*), breeding
- Greenshank (*Tringa nebularia*), breeding
- Hen harrier (*Circus cyaneus*), breeding
- Merlin (*Falco columbarius*), breeding
- Red-throated diver (*Gavia stellata*), breeding
- Short-eared owl (*Asio flammeus*), breeding
- Wigeon (*Anas penelope*), breeding
- Wood sandpiper (*Tringa glareola*), breeding

4. Calf of Eday SPA

- Cormorant (*Phalacrocorax carbo*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Great black-backed gull (*Larus marinus*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Seabird assemblage, breeding

5. Cape Wrath SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

6. Copinsay SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Great black-backed gull (*Larus marinus*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Seabird assemblage, breeding

7. East Caithness Cliffs SPA

- Cormorant (*Phalacrocorax carbo*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Great black-backed gull (*Larus marinus*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Peregrine (*Falco peregrinus*), breeding

- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

8. Fair Isle SPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Arctic tern (*Sterna paradisaea*), breeding
- Fair Isle wren (*Troglodytes troglodytes fridariensis*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Gannet (*Morus bassanus*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

9. Faray and Holm of Faray SAC

- Grey seal (*Halichoerus grypus*)

10. Fetlar SPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Arctic tern (*Sterna paradisaea*), breeding
- Dunlin (*Calidris alpina schinzii*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Great skua (*Stercorarius skua*), breeding
- Red-necked phalarope (*Phalaropus lobatus*), breeding
- Seabird assemblage, breeding
- Whimbrel (*Numenius phaeopus*), breeding

11. Firth of Forth SPA

- Bar-tailed godwit (*Limosa lapponica*), non-breeding
- Common scoter (*Melanitta nigra*), non-breeding
- Cormorant (*Phalacrocorax carbo*), non-breeding
- Curlew (*Numenius arquata*), non-breeding
- Dunlin (*Calidris alpina alpina*), non-breeding
- Eider (*Somateria mollissima*), non-breeding
- Golden plover (*Pluvialis apricaria*), non-breeding
- Goldeneye (*Bucephala clangula*), non-breeding
- Great crested grebe (*Podiceps cristatus*), non-breeding
- Grey plover (*Pluvialis squatarola*), non-breeding
- Knot (*Calidris canutus*), non-breeding
- Lapwing (*Vanellus vanellus*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Mallard (*Anas platyrhynchos*), non-breeding
- Oystercatcher (*Haematopus ostralegus*), non-breeding

- Pink-footed goose (*Anser brachyrhynchus*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Red-throated diver (*Gavia stellata*), non-breeding
- Redshank (*Tringa totanus*), non-breeding
- Ringed plover (*Charadrius hiaticula*), non-breeding
- Sandwich tern (*Sterna sandvicensis*), passage
- Scaup (*Aythya marila*), non-breeding
- Shelduck (*Tadorna tadorna*), non-breeding
- Slavonian grebe (*Podiceps auritus*), non-breeding
- Turnstone (*Arenaria interpres*), non-breeding
- Velvet scoter (*Melanitta fusca*), non-breeding
- Waterfowl assemblage, non-breeding
- Wigeon (*Anas penelope*), non-breeding

12. Flamborough Head and Bempton Cliffs SPA

- Gannet (*Morus bassanus*)
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding

13. Flannan Isles SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Leach's petrel (*Oceanodroma leucorhoa*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

14. Forth Islands SPA

- Arctic tern (*Sterna paradisaea*), breeding
- Common tern (*Sterna hirundo*), breeding
- Cormorant (*Phalacrocorax carbo*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Gannet (*Morus bassanus*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Lesser black-backed gull (*Larus fuscus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Roseate tern (*Sterna dougallii*), breeding
- Sandwich tern (*Sterna sandvicensis*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

15. Foula SPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Arctic tern (*Sterna paradisaea*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Leach's petrel (*Oceanodroma leucorhoa*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Red-throated diver (*Gavia stellata*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

16. Fowlsheugh SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

17. Handa SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

18. Hermaness, Saxa Vord and Valla Field SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Gannet (*Morus bassanus*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Red-throated diver (*Gavia stellata*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

19. Hoy SPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Great black-backed gull (*Larus marinus*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding

- Peregrine (*Falco peregrinus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Red-throated diver (*Gavia stellata*), breeding
- Seabird assemblage, breeding

20. Marwick Head SPA

- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Seabird assemblage, breeding

21. Mingulay and Berneray SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

22. North Caithness Cliffs SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Peregrine (*Falco peregrinus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

23. North Orkney pSPA

- Red-throated diver (*Gavia stellata*), breeding
- Eider (*Somateria mollissima*), non-breeding
- Great northern diver (*Gavia immer*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Shag (*Phalacrocorax aristotelis*), non-breeding
- Slavonian grebe (*Podiceps auritus*), non-breeding
- Velvet scoter (*Melanitta fusca*), non-breeding

24. North Rona SAC

- Grey seal (*Halichoerus grypus*)
- Reefs
- Sea caves
- Vegetated sea cliffs

25. North Rona and Sula Sgeir SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Gannet (*Morus bassanus*), breeding
- Great black-backed gull (*Larus marinus*), breeding

- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Leach's petrel (*Oceanodroma leucorhoa*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding
- Storm petrel (*Hydrobates pelagicus*), breeding

26. Noss SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Gannet (*Morus bassanus*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Seabird assemblage, breeding

27. Outer Firth of Forth and St Andrews Bay Complex pSPA

- Arctic tern (*Sterna paradisaea*), breeding
- Common tern (*Sterna hirundo*), breeding
- Gannet (*Morus bassanus*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Manx shearwater (*Puffinus puffinus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding
- Black-headed gull (*Chroicocephalus ridibundus*), non-breeding
- Common gull (*Larus canus*), non-breeding
- Common scoter (*Melanitta nigra*), non-breeding
- Eider (*Somateria mollissima*), non-breeding
- Goldeneye (*Bucephala clangula*), non-breeding
- Guillemot (*Uria aalge*), non-breeding
- Herring gull (*Larus argentatus*), non-breeding
- Kittiwake (*Rissa tridactyla*), non-breeding
- Little gull (*Hydrocoloeus minutus*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Razorbill (*Alca torda*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Red-throated diver (*Gavia stellata*), non-breeding
- Seabird assemblage, non-breeding
- Shag (*Phalacrocorax aristotelis*), non-breeding
- Slavonian grebe (*Podiceps auritus*), non-breeding
- Velvet scoter (*Melanitta fusca*), non-breeding
- Waterfowl assemblage, non-breeding

28. Pentland Firth pSPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Arctic tern (*Sterna paradisaea*), breeding
- Guillemot (*Uria aalge*), breeding
- Seabird assemblage, breeding

29. River Borgie SAC

- Atlantic salmon (*Salmo salar*)
- Freshwater pearl mussel (*Margaritifera margaritifera*)
- Otter (*Lutra lutra*)

30. River Naver SAC

- Atlantic salmon (*Salmo salar*)
- Freshwater pearl mussel (*Margaritifera margaritifera*)

31. River Thurso SAC

- Atlantic salmon (*Salmo salar*)

32. Rousay SPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Arctic tern (*Sterna paradisaea*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Seabird assemblage, breeding

33. Rum SPA

- Golden eagle (*Aquila chrysaetos*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Manx shearwater (*Puffinus puffinus*), breeding
- Red-throated diver (*Gavia stellata*), breeding
- Seabird assemblage, breeding

34. Sanday SAC

- Harbour seal (*Phoca vitulina*)
- Intertidal mudflats and sandflats
- Reefs
- Subtidal sandbanks

35. Scapa Flow pSPA

- Red-throated diver (*Gavia stellata*), breeding
- Black-throated diver (*Gavia arctica*), non-breeding
- Eider (*Somateria mollissima*), non-breeding
- Goldeneye (*Bucephala clangula*), non-breeding
- Great northern diver (*Gavia immer*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Shag (*Phalacrocorax aristotelis*), non-breeding

- Slavonian grebe (*Podiceps auritus*), non-breeding

36. St Kilda SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Gannet (*Morus bassanus*), breeding
- Great skua (*Stercorarius skua*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Leach's petrel (*Oceanodroma leucorhoa*), breeding
- Manx shearwater (*Puffinus puffinus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding
- Storm petrel (*Hydrobates pelagicus*), breeding

37. Sule Skerry and Sule Stack SPA

- Gannet (*Morus bassanus*), breeding
- Guillemot (*Uria aalge*), breeding
- Leach's petrel (*Oceanodroma leucorhoa*), breeding
- Puffin (*Fratercula arctica*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding
- Storm petrel (*Hydrobates pelagicus*), breeding

38. Sumburgh Head SPA

- Arctic tern (*Sterna paradisaea*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Seabird assemblage, breeding

39. Shiant Isles SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Greenland Barnacle goose (*Branta leucopsis*), non-breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

40. Troup, Pennan and Lion's Heads SPA

- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

41. West Westray SPA

- Arctic skua (*Stercorarius parasiticus*), breeding
- Arctic tern (*Sterna paradisaea*), breeding
- Fulmar (*Fulmarus glacialis*), breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Razorbill (*Alca torda*), breeding
- Seabird assemblage, breeding

8.4 The HRA report also considered two Ramsar sites (Caithness Lochs, and Caithness and Sutherland Peatlands). The species designated at these sites are also designated at the SPA sites with one exception. Greylag goose is listed as a Ramsar species at the Caithness and Sutherland Peatlands site for the breeding season but not as an SPA species for this site. However, the HRA report includes an assessment of this species.

8.5 Conservation objectives for qualifying interests

Table 2 Conservation objectives for grey seals and harbour seals

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Table 3 Conservation objectives for Atlantic salmon, freshwater pearl mussel and otter

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site

- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species
- Distribution and viability of freshwater pearl mussel host species
- Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

Table 4 Conservation objectives for SPA species

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Table 5 Draft conservation objectives for pSPAs

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long-term and it continues to make an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species.

This contribution will be achieved through delivering the following objectives for each of the site's qualifying features:

- a) Avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species and ability to use the site are maintained in the long-term;
- b) To maintain the habitats and food resources of the qualifying features in favourable condition.

SECTION 3: ASSESSMENT IN RELATION TO REGULATION 48 OF THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994 AND REGULATION 61 OF THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010

9 Habitats Regulations Appraisal

- 9.1 Is the operation directly connected with or necessary to conservation management of the site?

The operation is not connected with or necessary to conservation management of the site.

9.2 Is the operation likely to have a significant effect on the qualifying interest?

SNH provided advice on 16 December 2016 regarding whether there was likely to be a LSE on the qualifying interests of the SPAs and SACs identified in Table 1 above. A LSE was identified for the following qualifying interests/sites. The reason for this was that the Project area is within foraging range, the species were recorded during site surveys and are sensitive to potential impacts, notably collision risk or displacement.

In assessing whether the Development is likely to have a significant effect on the qualifying features, SNH considered the following:

- Whether the project area overlaps with the species foraging range during the breeding season or wintering period
- Whether the project lies within an identified migratory path
- Whether a species was observed in the project area during the site characterisation and other relevant surveys
- Whether a species is sensitive to any of the potential impacts identified
- Whether or not there is potential for any of the conservation objectives to be undermined

Common guillemot (breeding)

North Caithness Cliffs SPA
Hoy SPA
East Caithness Cliffs SPA
Sule Skerry and Sule Stack SPA
Cape Wrath SPA
Marwick Head SPA
Rousay SPA
Copinsay SPA
Handa SPA
West Westray SPA
Calf of Eday SPA
North Rona and Sula Sgeir SPA
Troup, Pennan and Lion`s Heads SPA

Razorbill (breeding)

North Caithness Cliffs SPA
East Caithness Cliffs SPA
West Westray SPA
Cape Wrath SPA
Handa SPA

Puffin (breeding)

North Caithness Cliffs SPA
Hoy SPA
East Caithness Cliffs SPA
Sule Skerry and Sule Stack SPA
Cape Wrath SPA
West Westray SPA
North Rona and Sula Sgeir SPA

Northern fulmar (breeding)

North Caithness Cliffs SPA
Hoy SPA
East Caithness Cliffs SPA
Cape Wrath SPA
Rousay SPA
Copinsay SPA
Handa SPA
West Westray SPA
Calf of Eday SPA
North Rona and Sula Sgeir SPA
Troup, Pennan and Lion`s Heads SPA
Fair Isle SPA
Shiant Isles SPA
Buchan Ness to Collieston Coast SPA
Foula SPA
Sumburgh Head SPA
Fowlsheugh SPA
Flannan Isles SPA
Noss SPA
Fetlar SPA
Firth of Forth SPA
St Kilda SPA
Forth Islands SPA
Hermaness, Saxa Vord and Valla Field SPA
Mingulay and Berneray SPA
Flamborough Head and Bempton Cliffs SPA

Northern gannet (breeding)

Sule Skerry and Sule Stack SPA
North Rona and Sula Sgeir SPA
Fair Isle SPA
Noss SPA
St Kilda SPA
Forth Islands SPA
Hermaness, Saxa Vord and Valla Field SPA

Great skua (breeding)

Hoy SPA
Handa SPA

Kittiwake (breeding)

North Caithness Cliffs SPA
Hoy SPA
East Caithness Cliffs SPA
Marwick Head SPA
Copinsay SPA
Handa SPA
West Westray SPA
Calf of Eday SPA

Great black-backed gull (breeding)

Hoy SPA
East Caithness Cliffs SPA

Herring gull (breeding)

East Caithness Cliffs SPA

- 9.3 As the Development is likely to have a significant effect on the above seabird qualifying interests Marine Scotland is required to carry out an AA in view of the conservation objectives for the qualifying features. For all the other SPA qualifying interests listed in Table 1 SNH advised there was no LSE due to low numbers recorded or low proportion recorded flying at collision risk height or collision risk mortality is not significant; displacement is not a significant impact or project area is not considered important for these species.
- 9.4 For the one Ramsar species that is not also designated as a SPA qualifying interest (greylag goose) the HRA report concluded there was no LSE.
- 9.5 MS-LOT agree with the SNH advice provided in relation to the SPAs and Ramsar sites and have carried out an AA for the relevant qualifying interests where a LSE was identified (See section 10).
- 9.6 SNH advised no LSE on the Atlantic salmon qualifying interest for the River Thurso, River Naver and River Borgie SACs. SNH also advise that there is no LSE on the freshwater pearl mussel qualifying interest of the River Naver SAC and River Borgie SAC.
- 9.7 MS-LOT agree with the SNH advice provided in relation to Atlantic salmon and freshwater pearl mussel, therefore none of the SACs detailed in Table 1 are considered further in this assessment.

9.8 MSS note that consideration had not been given to the proximity of the development site to the Inner Hebrides and the Minches cSAC for harbour porpoise and this should have been included in the HRA report. However, SNH confirmed to MS-LOT (email dated 28 February 2017) that they did not consider there was any connectivity between this site and the Development.

10 Appropriate Assessment of the implications for the site in view of the site's conservation objectives.

10.1 The following assessment is based upon the information in the HRA report provided by the developer and the advice received from SNH. This assessment includes the seabird qualifying features that are listed above where a LSE of the Development has been identified.

10.2 Of the conservation objectives ("COs") relevant to the SPAs in Table 4, MS-LOT consider that the CO relating to the population of the species as a viable component of the site is the key objective. As the potential effects of the Development occur outside of the SPAs being considered any disturbance to the qualifying interests is only considered to be significant if it could undermine the conservation objectives relating to population viability. The Development will not affect the distribution of species within the SPAs, the distribution and extent of habitats supporting the species or the structure, function and supporting processes of habitats supporting the species.

10.3 The HRA report listed the following developments that were considered for in-combination effects. Since the report was submitted some of the projects are no longer going ahead and this is noted below:

- The Orkney-Caithness interconnector cable – did not go ahead as planned, ongoing discussions regarding route
- Dounreay Floating Wind Deployment Centre – not going ahead
- Brims Tidal Array – consultation responses received on ES in 2016
- MeyGen – marine licence and s36 consent authorised, AA carried out for MeyGen taken into consideration in the HRA report for Dounreay Tri
- Lashy Sound Tidal Array – still in pre application phase
- EMEC Fall of Warness tidal test site – a s36 consent is in place and the site is used for ongoing testing of tidal devices, AA carried out for Fall of Warness taken into consideration in the HRA report for Dounreay Tri

SNH's advice on in-combination effects was provided in relation to all the projects listed above.

10.4 The HRA report listed other plans or projects with Crown Estate Agreements for Lease in the Pentland Firth and Orkney Waters that have a theoretical risk of causing an in-combination effect. Since the report was written all but one of these sites, Westray South Tidal Energy project, have relinquished their Agreement for Lease. The HRA report noted that, based on the available information at the time, none of these projects were likely to cause an in-combination effect. MS-LOT agree that the one remaining

project with a lease (Westray South Tidal Energy) is unlikely to have an in-combination effect and this has not been considered as part of this AA.

- 10.5 For some species (Common guillemot, razorbill, puffin and kittiwake) the HRA report considered the potential for in-combination effects with the Beatrice Offshore Windfarm (BOWL), and three Moray Offshore Wind farms (MORL -Telford, Stevenson and McColl), all in the outer Moray Firth.
- 10.6 BOWL have consent for up to 140 wind turbine generators (“WTGs”), although the design statement recently approved is for 84 WTGs. MORL have consent for a total of 186 WTGs.
- 10.7 The AAs for these projects ([BOWL AA](#) and [MORL AA](#)), considered the following European sites and interests:

East Caithness Cliffs SPA

Greater black-backed gull
Herring gull
Atlantic puffin
Common guillemot
Razorbill
Kittiwake
Northern fulmar

North Caithness Cliffs SPA

Atlantic puffin
Common guillemot
Razorbill
Kittiwake
Northern fulmar

Hoy SPA

Atlantic puffin
Great skua

The AAs completed concluded no adverse effect on the integrity of the SPAs. Information on the potential for an in-combination impact of the Development with BOWL and MORL is included below for common guillemot, razorbill, puffin and kittiwake.

- 10.8 For each of the 9 seabird species for which a LSE was identified for the Dounreay Tri Floating Wind Demonstration Project SNH provided the following information:

10.8.1 **Common guillemot (breeding)**

- North Caithness Cliffs SPA
- Hoy SPA
- East Caithness Cliffs SPA
- Sule Skerry and Sule Stack SPA
- Cape Wrath SPA

- Marwick Head SPA
 - Rousay SPA
 - Copinsay SPA
 - Handa SPA
 - West Westray SPA
 - Calf of Eday SPA
 - North Rona and Sula Sgeir SPA
 - Troup, Pennan and Lion`s Heads SPA
- 10.8.2 During construction, any potential disturbance caused by installation operations or vessels movements will be localised and temporary.
- 10.8.3 The majority of common guillemots fly below the rotor height. Therefore, it is considered to be at very low risk of any collisions.
- 10.8.4 Displacement during operation of the wind farm is the key impact for common guillemot. With a 60% displacement level and 100% mortality, it is predicted that 26 common guillemot will be lost from within the development footprint and a 1km radius. All 26 are apportioned to the North Caithness Cliffs SPA. With a population count of 47,000 individuals (Seabird 2000¹), 0.05% of the population might be affected. Considering the small numbers potentially affected, and the current ‘favourable maintained’ condition of common guillemot at North Caithness Cliffs SPA, SNH concluded that the conservation objectives of all SPAs with common guillemot will be maintained and there is no adverse impact on site integrity for individual SPAs.

Cumulative / in combination impacts

- 10.8.5 The HRA report noted the potential for an in-combination impact with BOWL and MORL. The AAs for these projects provided the results of population modelling that indicated that North Caithness Cliffs guillemot population could sustain the additional loss of between 248 and 745 breeding adults and that the in-combination impact of the two wind farms would result in a displacement of 322 birds. MS-LOT concluded no adverse effect on site integrity.
- 10.8.6 Although these results are from modelling carried out for larger offshore wind farms and may not be directly comparable for this Development the results provide an indication of the level of impact displacement effects may have on guillemots from the North Caithness Cliffs. The potential displacement of 26 birds from the Development is a relatively small proportion of potential in-combination effects.
- 10.8.7 Overall although there are potential cumulative / in-combination impacts with other marine developments, SNH agree with the HRA report, that there will be no adverse effect on site integrity.

¹ Seabird 2000 in Mitchell, P.I., Ratcliffe, N., Newton, S. and Dunn, T.E. (Eds) (2004) Seabird Populations of Britain and Ireland: Results of the “Seabird 2000” Census 1999-2002. T&AD Poyser (A&C Black). ISBN 0-7136-6901-2

Conclusion

10.8.8 **MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to common guillemot alone or in combination with other projects.**

10.8.9 **Razorbill (breeding)**

- North Caithness Cliffs SPA
- East Caithness Cliffs SPA
- West Westray SPA
- Cape Wrath SPA
- Handa SPA

10.8.10 During construction, any potential disturbance caused by installation operations or vessels movements will be localised and temporary.

10.8.11 The majority of razorbills fly below the rotor height. Therefore, it is considered to be at very low risk of any collisions.

10.8.12 Displacement during operation of the wind farm is the key impact for razorbill. With a 60% displacement level and 100% mortality, it is predicted that only 2 razorbills will be lost from within the development footprint and a 1km radius. Considering the small numbers potentially affected, SNH concluded that the conservation objectives of all SPAs with razorbill will be maintained and there is no adverse impact on site integrity for individual SPAs.

Cumulative / in combination impacts

10.8.13 The HRA report noted the potential for an in-combination impact with BOWL and MORL. The population modelling undertaken for MORL and BOWL indicated that the North Caithness Cliffs razorbill population could sustain the additional loss of between 15 to 46 breeding adults per year. The in-combination impact of the two wind farms indicated a displacement of 22 birds and MS-LOT concluded no adverse effect on site integrity.

10.8.14 If all two razorbills predicted to be displaced by the Development are breeding adults originating from the North Caithness Cliffs SPA then the number of birds displaced will be very small compared to the breeding population of 1,700 breeding pairs and within the range of the population modelling and therefore not predicted to cause and adverse effect on site integrity.

10.8.15 Overall although there are potential cumulative / in-combination impacts with other marine developments, SNH agree with the HRA report, that there will be no adverse effect on site integrity.

Conclusion

10.8.16 **MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to razorbill alone or in combination with other projects.**

10.8.17 **Puffin (breeding)**

- North Caithness Cliffs SPA
- Hoy SPA
- East Caithness Cliffs SPA
- Sule Skerry and Sule Stack SPA
- Cape Wrath SPA
- West Westray SPA
- North Rona and Sula Sgeir SPA

10.8.18 During construction, any potential disturbance caused by installation operations or vessels movements will be localised and temporary.

10.8.19 The majority of puffins fly below the rotor height. Therefore, it is considered to be at very low risk of any collisions.

10.8.20 Displacement during operation of the wind farm is the key impact for puffin. The assessment is based on the peak density of 60.14 birds/km² in June. With a 60% displacement level and 100% mortality, it is predicted that 113 will be lost from within the development footprint and a 1km radius. From the 113, 107 are apportioned to the North Caithness Cliffs SPA and 6 apportioned to Sule Skerry and Sule Stack SPA. In the HRA report, it is estimated that from these 107 the number of breeding adults is 64. With a population count of 7,045 breeding pairs (Seabird 2000) for North Caithness Cliffs SPA, this means that 0.45% of the population might be affected. Considering the small numbers that might be affected (even when using the peak June count), the assumed 100% mortality of displaced birds, and the current favourable maintained condition of puffin at North Caithness Cliffs SPA and Sule Skerry and Sule Stack SPA, SNH concluded that the conservation objectives of all SPAs with puffin will be maintained and there is no adverse impact on site integrity for individual SPAs.

Cumulative / in combination impacts

10.8.21 The HRA report noted the potential for an in-combination impact with BOWL and MORL.

10.8.22 Population modelling undertaken for these wind farms indicated that the North Caithness Cliffs SPA adult puffin population could sustain an increase in adult mortality of between 205 and 341 individuals per year and the in-combination impact on adult puffins was estimated to be 137 individuals.

10.8.23 Should all 64 adult puffins predicted to be displaced by the Development not survive then an in-combination effect of 201 adult breeding puffins could occur. This is marginally below the lower level identified as causing a population level effect. However, this is also highly precautionary, as not all

displaced puffins will cause an increase in adult mortality. The modelling undertaken for MORL and BOWL indicates that the displacement of 64 puffins could cause an additional 18 breeding adult mortalities per year. For this Development this is approximately equivalent to a mortality of 17% from displacement effects. The potential mortality of 18 puffins in-combination with MORL and BOWL will be below a level predicted to cause a population level effect.

- 10.8.24 The HRA report notes that the modelling for BOWL and MORL predicts a significantly greater displacement effect than from the Development but that the results provide an indication of the potential impact displacement of puffins from the Development. However, it is recognised that the level of displacement is based on a single peak density, considerably higher than all other counts undertaken at the site during the breeding period. Consequently, this level of displacement is not predicted to occur throughout the breeding period and possible impacts will be significantly lower. Even based on the results from a very high peak density, modelling suggests that the in-combination impact will be below that at which a population level effect will occur.
- 10.8.25 SNH advised that although there are potential cumulative / in-combination impacts with other marine developments, even with the peak June count used in the assessment, the HRA report indicates that any impacts will be below that at which a population level effect will occur for the North Caithness Cliffs SPA.

Conclusion

- 10.8.26 **MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to puffin alone or in combination with other projects.**

- 10.8.27 **Northern fulmar (breeding)**

- North Caithness Cliffs SPA
- Hoy SPA
- East Caithness Cliffs SPA
- Cape Wrath SPA
- Rousay SPA
- Copinsay SPA
- Handa SPA
- West Westray SPA
- Calf of Eday SPA
- North Rona and Sula Sgeir SPA
- Troup, Pennan and Lion`s Heads SPA
- Fair Isle SPA
- Shiant Isles SPA
- Buchan Ness to Collieston Coast SPA
- Foula SPA
- Sumburgh Head SPA

- Fowlsheugh SPA
- Flannan Isles SPA
- Noss SPA
- Fetlar SPA
- Firth of Forth SPA
- St Kilda SPA
- Forth Islands SPA
- Hermaness, Saxa Vord and Valla Field SPA
- Mingulay and Berneray SPA
- Flamborough Head and Bempton Cliffs SPA

10.8.28 During construction, any potential disturbance caused by installation operations or vessels movements will be localised and temporary.

10.8.29 The majority of northern fulmar fly below the rotor height. Therefore, it is considered to be at low risk of any collisions.

10.8.30 Considering the very extensive foraging range of fulmars, it is unlikely that the loss of such a small area will have a population level effect. SNH concluded that the conservation objectives of all SPAs with fulmar will be maintained and there is no adverse impact on site integrity for individual SPAs.

Cumulative / in combination impacts

Although there are potential cumulative / in-combination impacts with other marine developments, due to the extensive foraging range, any impacts are unlikely to have a population level effect. SNH agree with the HRA report, that there will be no adverse effect on site integrity.

Conclusion

MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to northern fulmar alone or in combination with other projects.

10.8.31 **Northern gannet (breeding)**

- Sule Skerry and Sule Stack SPA
- North Rona and Sula Sgeir SPA
- Fair Isle SPA
- Noss SPA
- St Kilda SPA
- Forth Islands SPA
- Hermaness, Saxa Vord and Valla Field SPA

10.8.32 Key impacts considered for this qualifying interest are collision risk and displacement. Collision risk modelling predicts no collisions during the breeding or non-breeding seasons.

- 10.8.33 Northern gannet foraging ranges are extensive and any displacement impacts for this species are considered to be insignificant.

Cumulative / in combination impacts

- 10.8.34 SNH advised that for northern gannet qualifying interests of relevant SPAs that there will be no adverse effects on integrity as a result of the proposal's effects in combination with other developments.

Conclusion

- 10.8.35 **MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to northern gannet alone or in combination with other projects.**

10.8.36 **Great skua (breeding)**

- Hoy SPA
- Handa SPA

- 10.8.37 Key impacts considered for this qualifying interest are collision risk and displacement. Collision risk modelling predicts no collisions during the breeding or non-breeding seasons.

- 10.8.38 Great skua foraging ranges are extensive and any displacement impacts for this species are considered to be insignificant.

Cumulative / in combination impacts

SNH advised that for great skua qualifying interests of relevant SPAs that there will be no adverse effects on integrity as a result of the proposal's effects in combination with other developments.

Conclusion

MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to great skua alone or in combination with other projects.

10.8.39 **Kittiwake (breeding)**

- North Caithness Cliffs SPA
- Hoy SPA
- East Caithness Cliffs SPA
- Marwick Head SPA
- Copinsay SPA
- Handa SPA

- West Westray SPA
- Calf of Eday SPA

10.8.40 Collision risk modelling predicts that 9 kittiwakes will collide with the proposed development during the breeding season. If all 9 mortalities are apportioned to the closest SPA – North Caithness SPA – this is 0.04% of a population of 10,150 breeding pairs (Seabird 2000). Although the condition of kittiwakes at North Caithness Cliffs SPA is unfavourable, it is considered unlikely that the removal of 9 individuals will have a population level effect. This is a worst case scenario, and it is likely that kittiwakes foraging in the proposed development area are not just from North Caithness Cliffs SPA. During the non-breeding season, 6 collisions are predicted. Again, it is considered unlikely that the removal of 6 individuals will have a population level effect even in a worst case scenario that all of these birds were from the North Caithness Cliffs SPA.

10.8.41 For displacement of 40% of kittiwakes, then it is estimated that between zero and ten birds could be at risk should displacement cause mortality. Given the extensive foraging range of kittiwakes, and the loss of such a small area, it is considered unlikely that the mortality level will be high and birds will be able to forage in other suitable areas.

Cumulative / in combination impacts

10.8.42 The HRA report noted the potential for an in-combination impact with BOWL and MORL. The population modelling undertaken for MORL and BOWL indicated that the North Caithness Cliffs kittiwake population could sustain the additional loss of between 117 and 352 breeding adult kittiwakes per year. The in-combination effect of the two wind farms indicated an impact of approximately two birds per year from the North Caithness Cliffs SPA and MS-LOT concluded no adverse effect on site integrity. If all 12 kittiwakes predicted to collide each year with the Development are breeding adults originating from the North Caithness Cliffs SPA, then the number of birds predicted to collide will be significantly below the range the population modelling predict will cause a population level effect.

10.8.43 The HRA report notes that the modelling undertaken for the much larger MORL and BOWL projects may not be directly comparable but the results do provide an indication of the level of impact collision risk impacts may have on the kittiwakes from the North Caithness Cliffs SPA. The predicted number of collisions is significantly below that predicted could cause an effect by the population model. If the kittiwakes are from other SPAs or from non-SPA colonies then the impacts on the North Caithness Cliffs SPA will be lower.

10.8.44 The breeding population of kittiwakes at the North Caithness Cliffs is 10,150 pairs (20,300 individuals). The loss of 14 kittiwakes in-combination with other developments is not predicted to cause an adverse effect on site integrity.

- 10.8.45 SNH advised that although there are potential cumulative / in-combination impacts with other marine developments, namely the Beatrice and Moray Firth offshore wind farms, the assessment shows that any impacts are unlikely to have a population level effect. SNH agree with the HRA report, that there will be no adverse effect on site integrity.

Conclusion

- 10.8.46 **MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to kittiwake alone or in combination with other projects.**

- 10.8.47 **Great black-backed gull (breeding)**

- Hoy SPA
- East Caithness Cliffs SPA

- 10.8.48 The key impact for this qualifying interest is collision with the rotors. Collision risk modelling predicts that no great black-backed gulls will collide with the turbines during the breeding season and that one bird will collide during the non-breeding season. Although this species is considered at risk of collision, the low numbers recorded during the surveys result in very low predicted collisions.

Cumulative / in combination impacts

SNH advised that there will be no adverse effects on integrity as a result of the proposal's effects in combination with other developments.

Conclusion

MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to great black-backed gull alone or in combination with other projects.

- 10.8.49 **Herring gull (breeding)**

- East Caithness Cliffs SPA

- 10.8.50 The site-specific surveys recorded only 3 herring gulls during the non-breeding season. Collision risk modelling predicts no collisions during the non-breeding season.

Cumulative / in combination impacts

SNH advised that there will be no adverse effects on integrity as a result of the proposal's effects in combination with other developments.

Conclusion

- 10.8.51 **MS-LOT concludes that the proposal will not adversely affect the site integrity of the above SPAs with respect to herring gull alone or in combination with other projects.**

11 Proposed SPAs

- 11.1 SNH also provided advice on the proposed suite of marine SPAs. Although these sites have policy protection as pSPAs there is not yet a final defined set of conservation objectives for these sites. The draft conservation objectives are provided in Table 5. SNH provided advice as to whether any species or sites needed to be considered further or whether at this stage likely significant effect can be ruled out.

- 11.2 The advice from SNH was that for the following seabird qualifying interests within the pSPAs there would be no likely significant effect:

Arctic skua (breeding)

- Pentland Firth pSPA

Black-throated diver (breeding and non-breeding)

- Scapa Flow pSPA

Common eider (non-breeding)

- Scapa Flow pSPA
- North Orkney pSPA

Common guillemot (breeding)

- Pentland Firth pSPA

Goldeneye (non-breeding)

- Scapa Flow pSPA

Great northern diver (non-breeding)

- Scapa Flow pSPA
- North Orkney pSPA

Long-tailed duck (non-breeding)

- Scapa Flow pSPA
- North Orkney pSPA

Manx shearwater (breeding)

- Outer Firth of Forth and St Andrews Bay Complex pSPA

Northern gannet (breeding)

- Outer Firth of Forth and St Andrews Bay Complex pSPA

Red-breasted merganser (non-breeding)

- Scapa Flow pSPA
- North Orkney pSPA

Shag (non-breeding)

- Scapa Flow pSPA
- North Orkney pSPA

Slavonian grebe (non-breeding)

- Scapa Flow pSPA
- North Orkney pSPA

Velvet scoter (non-breeding)

- North Orkney pSPA

11.3 SNH concluded no LSE owing to the following:

- The rationale for site selection, and/or
- Low numbers recorded during site specific surveys, or
- Low proportion recorded flying at collision risk height, or
- Collision risk mortality is not significant, and
- Displacement is not a significant impact.

11.3.1 No LSE was identified on these pSPAs (North Orkney pSPA, Scapa Flow pSPA, Pentland Firth pSPA and Outer Firth of Forth and St Andrews Bay Complex pSPA). However, as detailed at paragraph 3.3, as the sites are not yet designated, they also fall within the regime governed by the first sentence of Article 4(4) of the Birds Directive as follows:

“In respect of the protection areas referred to in paragraphs 1 and 2, Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats.”

Conclusion

MS-LOT consider that all the pSPAs listed above are sufficiently far from the area of proposed works that there will be no risk of pollution,

deterioration of habitats or disturbance of the qualifying interests from the Development.

12 MS-LOT conclusion

In the assessment above MS-LOT have considered the conservation objective of “maintaining the population of the species as a viable component of the site” on the individual qualifying features of the SPAs. As the effects of the Dounreay Tri Floating Wind Demonstration Project, alone and in combination with other developments, on the populations were found to be acceptable for all the species being considered in this assessment MS-LOT conclude that the Development will not adversely affect the integrity of the SPAs with respect to the individual qualifying features.

SECTION 4: CONDITIONS PROPOSED

No conditions are relied upon in reaching this conclusion of no adverse effect on site integrity. Conditions will be included in any section 36 consent / marine licence, if granted, which serve to mitigate further any impacts.