



Appendix 5.3 Habitats Regulations Assessment Screening Matrices (Tracked Changes)

Applicant: Norfolk Boreas Limited Document Reference: 5.3.5.3 Pursuant to: APFP Regulation: 5(2)(g)

Author: Royal HaskoningDHV and MacArthur Green Revision: Version <u>4</u>3 Date: March 2020November 2019

Photo: Ormonde Offshore Wind Farm





| Date | lssue No. | Remarks / Reason for Issue | Author | Checked | Approved |
|-------------------|--------------|--|--------------|--------------|-----------|
| 25/03/2019 | 01D | First draft for Norfolk Boreas Limited review | GS/JL/MT | DT | JL |
| 15/05/2019 | 02D | Second draft for Norfolk Boreas Limited Review | GS/JL/MT | DT | JL |
| 22/05/2019 | 01F | Final for DCO submission | GS/JL/MT | KC/DT | JL |
| 02/08/2019 | 02F | Updated following PINS section 51 advice | GS/GC/MT/DT | CD/VR | EV |
| 21/11/2019 | 03F | Updated for Examination Deadline 1 | GC/MT | VR | JL |
| <u>05/03/2020</u> | <u>04F</u> | Updated for Deadline 6 following comments provided at Deadline 3 and Rule 17 letter | <u>MT/ES</u> | <u>EV/DT</u> | <u>IL</u> |





Table of Contents

| 1 | Introduction | .1 |
|-----|---------------------------------|----|
| 2 | Screening Matrices | .3 |
| 2.1 | Effects considered | .3 |
| 2.2 | Sites considered | .4 |
| 2.3 | Assessment of potential effects | 11 |





Glossary of Acronyms

| BDMPS | Biologically Defined Minimum Population Scale |
|--------|---|
| CRM | Collision Risk Modelling |
| EIA | Environmental Impact Assessment |
| EMF | Electromagnetic Fields |
| ES | Environmental Statement |
| HRA | Habitats Regulations Assessment |
| LSE | Likely Significant Effect |
| NE | Natural England |
| PVA | Population Viability Analysis |
| Ramsar | Wetland site designated to be of international importance under the Ramsar Convention |
| SAC | Special Area of Conservation |
| SCI | Site of Community Importance |
| SPA | Special Protection Area |





1 INTRODUCTION

- 1. This document provides the Habitats Regulations Assessment (HRA) screening matrices for Norfolk Boreas Offshore Wind Farm.
- 2. Following submission of the Norfolk Boreas Offshore Wind Farm Development Consent Order application the Planning Inspectorate provided advice under Section 51 of The Planning Act regarding the details provided in the original screening matrices (APP-204) and how these related to the impact assessment presented in the Information to Support the Habitat Regulations Assessment (document reference 5.3). Following review of this advice, updated screening matrices were submitted (AS-002) which provided the additional information requested by The Planning Inspectorate.
- 3. In summary, the key changes in AS-002 included:
 - a. For sites which are designated as both a Special Protection Area (SPA) feature and Ramsar site (criterion), separate rows have been provided under each designation with supporting footnotes for each feature and criterion;
 - b. References to the screening information have been added to the footnotes;
 - c. Updated the effects headings of the Norfolk Valley Fens Special Area of Conservation (SAC) River Wensum SAC and Paston Great Barn SAC; assessment to be consistent effect headings presented within the integrity matrices (document reference 5.3.6.1); and
 - d. Updated screening matrix for Haisborough, Hammond and Winterton SAC.
- 4. <u>The updated version of this The current</u> document <u>submitted at deadline 1 [REP1-013]</u> provide<u>sd</u> additional updates to the screening matrices following a review of the advice provided by Natural England in their Relevant Representation (REP-099), comments received from Natural England during discussions regarding the offshore ornithology Statement of Common Ground [AS-029] and an update to the offshore ornithology assessment undertaken by the Applicant which addresses the points raised by Natural England (to be submitted at Deadline 2). In summary the updates to the screening matrices include:
 - a. Consideration of the seabird assemblage feature at Flamborough and Filey Coast SPA;
 - b. Consideration of common scoter at the Greater Wash SPA; and





- c. Updates to the Broadland SPA and Ramsar (onshore) to add Marsh harrier and screen in Bewick's Swan, Whooper Swan, Pink-footed Goose, Tundra Swan and Greylag goose.
- 5. At Deadline 5 the Examining Authority (ExA) issued a Rule 17 request for further information with regard to clarification of species listed as features of the SPA and/or Ramsar citations for those sites which are designated as both an SPA and Ramsar. The Applicant has reviewed the relevant tables in this document and updated the tables as appropriate. It should be noted that this update is not restricted to the SPA/Ramsar sites identified by the ExA and has included a review and update of all SPA/Ramsar sites.





2 SCREENING MATRICES

2.1 Effects considered

6. Potential effects upon the European sites and Ramsar sites which are considered within the submitted Information to Support HRA report are provided in Table 2.1.

| Site Type | Feature(s) | Potential Effects |
|---|---------------------|--|
| Special Protection Area (SPA) | All birds | Offshore effects Collision mortality Displacement/Disturbance Barrier effect Cumulative/ In-combination Onshore effects Direct effects within SPA boundary Direct effects on ex-situ habitats Indirect effects within SPA boundary |
| Ramsars | All birds | Indirect effects within 51A boundary Indirect effects on ex-situ habitats Offshore effects Collision mortality Displacement/Disturbance Barrier effect Cumulative/ In-combination |
| | | Onshore effects Direct effects within Ramsar boundary Direct effects on ex-situ habitats Indirect effects within Ramsar boundary Indirect effects on ex-situ habitats |
| Special Area of Conservation/Site of Community Importance (SAC/SCI) | Benthic habitats | Permanent loss (and introduction of new sediment where applicable) Temporary physical disturbance Smothering due to increased suspended sediment Re- mobilisation of contaminated sediments Underwater noise and vibration Cumulative/ In-combination |
| | Marine mammals | Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality Cumulative/ In-combination |
| | Fish | Permanent loss (and introduction of new sediment where applicable) Temporary physical disturbance Smothering due to increased suspended sediment Re- mobilisation of contaminated sediments Underwater noise and vibration Electromagnetic fields (EMF) Cumulative/ In-combination |

| Table 2.1 | Potential | Fffects | consider | in | Screening |
|-----------|------------|----------------|----------|----|-----------|
| | 1 Ottiliai | LIICUS | consider | | Jucung |



| Site Type | Feature(s) | Potential Effects |
|-----------|-------------|--|
| | Terrestrial | Direct effects (e.g. habitat loss) Impacts on ex-situ habitats functionally connected to the SAC Impacts from alterations to geology and land contamination Disturbance due to groundwater / hydrology changes Impacts from noise disturbance Impacts from changing air quality |
| | | Impacts from light disturbance Impacts from visual disturbance |

2.2 Sites considered

- 7. The methodology for screening of sites and effects is discussed in Appendix 5.1 of the Information to Support HRA report (document reference 5.3.5.1).
- 8. The following sites displayed in Table 2.2 were included in the Screening stage.

| Norfolk Boreas Reference Number | Designated site | Ornithology | Marine Mammals | Benthic Habitats | Fish | Terrestrial |
|--|---|--------------|-------------------|---------------------|------|-------------|
| 1 | Abberton Reservoir SPA & Ramsar | ✓ | | | | |
| 2 | Abers - Côtes des légendes SAC | | ✓ | | | |
| 3 | Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø SAC | | ✓ | | | |
| 4 | Ålborg Bugt, Randers Fjord Og Mariager Fjord SAC | | √ | | | |
| 5 | Alde, Ore and Butley Estuaries SAC | | | ✓ | | |
| 6 | Alde-Ore Estuary SPA & Ramsar | ✓ | | | | |
| 7 | Anholt og havet nord for SAC | | \checkmark | | | |
| 8 | Archipel des Glénan SAC | | ✓ | | | |
| 9 | Baie De Canche Et Couloir Des Trois Estuaires SAC | | ✓ | | ✓ | |
| 10 | Baie de Morlaix SAC | | \checkmark | | | |
| 11 | Baie de Seine Occidentale SAC | | ✓ | | | |
| 12 | Baie de Seine Occidentale SPA | ~ | | | | |
| 13 | Baie de Seine Orientale SAC | ✓ | \checkmark | | | |
| 14 | Baie du Mont Saint-Michel SAC | | √ | | | |
| 15 | Balgö SAC | | ✓ | | | |
| 16 | Bancs Des Flandres SAC | | ✓ | ✓ | | |
| 17 | Bancs Des Flandres SPA | \checkmark | | | | |
| 18 | Bassurelle Sandbank SAC | | | ✓ | | |

Table 2.2 Sites included in Screening

VATTENFALL





| Norfolk Boreas Reference Number | Designated site | Ornithology | Marine Mammals | Benthic Habitats | Fish | Terrestrial |
|--|---|-------------|-------------------|---------------------|------|-------------|
| 19 | Benfleet and Southend Marshes SPA & Ramsar | ✓ | | | | |
| 20 | Berwickshire and North Northumberland Coast SAC | | ✓ | √ | | |
| 21 | Blackwater Estuary (Mid- Essex Coast Phase 4) SPA & Ramsar | ✓ | | | | |
| 22 | Borkum-Riffgrund SCI | | ✓ | | ✓ | |
| 23 | Borkum-Riffgrund SPA | ✓ | | | | |
| 24 | Braemar Pockmarks SAC | | | \checkmark | | |
| 25 | Breydon Water SPA & Ramsar | ~ | | | | |
| 26 | Broadland SPA & Ramsar | ✓ | | | | |
| 27 | Bruine Bank pSPA | ✓ | | | | |
| 28 | Buchan Ness to Collieston Coast SPA | √ | | | | |
| 29 | Calf of Eday SPA | ✓ | | | | |
| 30 | Cap Gris Nez SPA | ✓ | | | | |
| 31 | Cap Sizun SAC | | ✓ | | | |
| 32 | Chausey SAC | ✓ | ✓ | | | |
| 33 | Chaussée de Sein SAC | | ✓ | | | |
| 34 | Chesil Beach and The Fleet SPA & Ramsar | ✓ | | | | |
| 35 | Chichester and Langstone Harbours SPA & Ramsar | ✓ | | | | |
| 36 | Colne Estuary (Mid-Essex Coast Phase 2) SPA & Ramsar | ✓ | | | | |
| 37 | Copinsay SPA | ✓ | | | | |
| 38 | Coquet Island SPA | ✓ | | | | |
| 39 | Côte de Granit Rose-Sept lles SAC | ✓ | ✓ | | | |
| 40 | Côtes de Crozon SAC | | ✓ | | | |
| 41 | Cromarty Firth SPA & Ramsar | ✓ | | | | |
| 42 | Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA & Ramsar | ✓ | | | | |
| 43 | Deben Estuary SPA & Ramsar | ✓ | | | | |
| 44 | Dengie (Mid-Essex Coast Phase 1) SPA & Ramsar | ✓ | | | | |
| 45 | Doggerbank SCI | | ✓ | | | |
| 46 | Doggersbank SCI | | ✓ | | | |
| 47 | Dornoch Firth and Loch Fleet SPA & Ramsar | ✓ | | | | |
| 48 | Dornoch Firth and Morrich More SAC | | ✓ | | | |
| 49 | Dråby Vig SAC | | ✓ | | | |
| 50 | Duinen Ameland SAC | | ✓ | | | |
| 51 | Duinen en Lage Land Texel SAC | | ✓ | | | |



| | Designated site | Ornithology | warine | Benthic | Fish | Terrestrial |
|-----------|--|-----------------------|----------|--------------|------|-------------|
| Reference | | | Mammals | Habitats | | |
| Number | | | | | | |
| 52 | Duinen Goeree & Kwade Hoek SAC | | ✓ | | | |
| 53 | Duinen Terschelling SAC | | √ | | | |
| 54 | Duinen Vlieland SAC | | √ | | | |
| 55 | Dünenlandschaft Süd-Sylt SAC | | ✓ | | | |
| 56 | Dunes De La Plaine Maritime Flamande SAC | | ✓ | ~ | | |
| 57 | Dunes de l'Authie et Mollières de Berck SAC | | ✓ | | | |
| 58 | East Caithness Cliffs SPA | ✓ | | | | |
| 59 | Essex Estuaries SAC | | | ✓ | | |
| 60 | Estuaire de la Canche, dunes picardes plaquées sur l'ancienne falaise, forêt d'Hardelot et falaise d'Equihen SAC | | ~ | | | |
| 61 | Estuaire de la Seine SCI | | ✓ | | | |
| 62 | Estuaires et Littoral Picards (baies de Somme et d'Authie) SAC | | ✓ | | ~ | |
| 63 | Exe Estuary SPA & Ramsar | \checkmark | | | | |
| 64 | Fair Isle SPA | ✓ | | | | |
| 65 | Falaise du Bessin Occidental SPA | ~ | | | | |
| 66 | Falaises du Cran Aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant SAC | | ~ | ~ | | |
| 67 | Falaises et Pelouses du Cap Blanc Nez, du Mont d'Hubert, des Noires Mottes, du Fond de la Forge et du Mont de couple SCI | | | ¥ | | |
| 68 | Faray and Holm of Faray SAC | | ✓ | | | |
| 69 | Farne Islands SPA | \checkmark | | | | |
| 70 | Fetlar SPA | ✓ | | | | |
| 71 | Firth of Forth SPA & Ramsar | ✓ | | | | |
| 72 | Firth of Tay & Eden Estuary SPA & Ramsar | ✓ | | | | |
| 73 | Firth of Tay & Eden Estuary SAC | | ✓ | | | |
| 74 | Flamborough and Filey Coast SPA | ✓ | | | | |
| 75 | Flamborough Head SAC | | | \checkmark | | |
| 76 | Forth Islands SPA | ✓ | | | | |
| 77 | Foula SPA | ✓ | | | | |
| 78 | Foulness (Mid-Essex Coast Phase 5) SPA & Ramsar | ✓ | | | | |





| Boreas Reference Number | Designated site | Ornithology | Marine Mammals | Benthic Habitats | Fish | Terrestrial |
|-------------------------------|---|-------------|-------------------|---------------------|------|-------------|
| 79 | Fowlsheugh SPA | √ | | | | |
| 80 | Frisian Front pSPA | ✓ | | | | |
| 81 | Gibraltar Point SPA & Ramsar | ✓ | | | | |
| 82 | Great Yarmouth North Denes SPA | ~ | | | | |
| 83 | Greater Wash SPA | ✓ | | | | |
| 84 | Grevelingen SAC | | ✓ | | | |
| 85 | Gule Rev SCI | | ✓ | | | |
| 86 | Gullmarsfjorden SAC | | \checkmark | | | |
| 87 | Haisborough, Hammond and Winterton SAC | | | ✓ | | |
| 88 | Hallands Väderö SAC | | ✓ | | | |
| 89 | Hamburgisches Wattenmeer SCI | | ✓ | | | |
| 90 | Hamford Water SPA & Ramsar | ✓ | | | | |
| 91 | Havet og kysten mellem Præstø Fjord og Grønsund SAC | | ✓ | | | |
| 92 | Havet omkring Nordre Rønner SAC | | ✓ | | | |
| 93 | Helgoland mit Helgoländer Felssockel SAC | | ✓ | | | |
| 94 | Hermaness, Saxa Vord and Valla Field SPA | ~ | | | | |
| 95 | Hesselø med omliggende stenrev SAC | | ✓ | | | |
| 96 | Hirsholmene, havet vest herfor og Ellinge Å's udløb SAC | | ✓ | | | |
| 97 | Hornsea Mere SPA | ✓ | | | | |
| 98 | Hoy SPA | ✓ | | | | |
| 99 | Humber Estuary SAC | | ✓ | ✓ | ✓ | |
| 100 | Humber Estuary SPA & Ramsar | ✓ | | | | |
| 101 | Hund und Paapsand SCI | | ✓ | | | |
| 102 | Imperial Dock Lock, Leith SPA | ✓ | | | | |
| 103 | Inner Dowsing, Race Bank and North Ridge SCI | | | ✓ | | |
| 104 | Inner Moray Firth SPA & Ramsar | ~ | | | | |
| 105 | Isle of May SAC | | ✓ | | | |
| 106 | Klaverbank SAC | | ✓ | | | |
| 107 | Kosterfjorden-Väderöfjorden SAC | | ✓ | | | |
| 108 | Kungsbackafjorden SAC | | ✓ | | | |





| Boreas Reference | Designated site | Ornithology | Mammals | Benthic | Fish | Terrestrial |
|---------------------|--|-------------|--|------------|------|-----------------------|
| Number | | | in an in a la l | ind bitats | | |
| | Küsten- und | | | | | |
| 109 | Dünenlandschaften Amrums | | ✓ | | | |
| | SAC | | | | | |
| 110 | Lindisfarne SPA & Ramsar | ✓ | | | | |
| 111 | Littoral Seino-Marin SPA | ✓ | | | | |
| 112 | Loch of Strathbeg SPA & | ✓ | | | | |
| | Løgstør Bredning Veilerne og | | | | | |
| 113 | Bulbjerg SAC | | ✓ | | | |
| | Lovns Bredning, Hjarbæk | | | | | |
| 114 | Fjord og Skals, Simested og | | ✓ | | | |
| | Nørre Adal, Skravad Bæk SAC | | | | | |
| 115 | Malmöfjord SAC | | ✓ | | | |
| 116 | Marais du Cotentin et du Bessin - Baie des Veys SAC | | ✓ | | | |
| 117 | Margate and Long Sands SCI | | | ✓ | | |
| 118 | Marwick Head SPA | ✓ | | | | |
| 119 | Måseskär SAC | | ✓ | | | |
| | Medway Estuary and | | | | | |
| 120 | Marshes SPA & Ramsar | ~ | | | | |
| 101 | Minsmere-Walberswick SPA | .(| | | | |
| 121 | & Ramsar | v | | | | |
| 122 | Montrose Basin SPA & | ✓ | | | | |
| | Ramsar | | | | | |
| 123 | Moray and Nairn Coast SPA & | ✓ | | | | |
| 124 | Ramsar | | | | | |
| 124 | Mousa SPA | v | | | | |
| 125 | Mousa SAC | | v | | | |
| 126 | Nationalpark Niedersächsisches | | 1 | | | |
| 120 | Wattenmeer SAC | | · | | | |
| | Nibe Bredning, Halkær Ådal | | | | | |
| 127 | og Sønderup Ådal SAC | | ✓ | | | |
| 128 | Nidingen SAC | | ✓ | | | |
| 129 | Noordzeekustzone SAC | | ✓ | ✓ | ✓ | |
| 130 | Nordre älvs estuarium SAC | | ✓ | | | |
| 131 | Nordvästra Skånes | | ✓ | | | |
| 132 | Norfolk Valley Fens SAC | | | | | ✓ |
| 132 | North Caithness Cliffs SPA | ✓ | | | | |
| 100 | North Norfolk Coast SPA & | | | | | |
| 134 | Ramsar | ✓ | | | | |
| 135 | North Norfolk Sandbanks and Saturn Reef SAC | | | ✓ | | |
| | Northumbria Coast SPA & | | | | | |
| 136 | Ramsar | ✓ | | | | |
| 137 | Noss SPA | ✓ | | | | |





| Boreas Reference | Designated site | Ornithology | Marine Mammals | Benthic Habitats | Fish | Terrestrial |
|---------------------|--|-------------|-------------------|---------------------|------|-------------|
| Number | | | | | | |
| 138 | NTP S-H Wattenmeer und angrenzende Küstengebiete SAC | | \checkmark | | | |
| 139 | Oosterschelde SAC | | ✓ | | | |
| 140 | Orfordness - Shingle Street SAC | | | ✓ | | |
| 141 | Östliche Deutsche Bucht SPA | ✓ | ✓ | | | |
| 142 | Ouessant-Molène SAC | | ✓ | | | |
| 143 | Outer Thames Estuary SPA | ✓ | | | | |
| 144 | Papa Stour SPA | ✓ | | | | |
| 145 | Papa Westray (North Hill and Holm) SPA | ~ | | | | |
| 146 | Paston Great Barn SAC | | | | | ✓ |
| 147 | Pater Noster-skärgården SAC | | ✓ | | | |
| 148 | Pentland Firth Islands SPA | ✓ | | | | |
| 149 | Portsmouth Harbour SPA & Ramsar | ~ | | | | |
| 150 | Presqu'ile de Crozon SAC | | ✓ | | | |
| 151 | Ramsar-Gebiet S-H Wattenmeer und angrenzende Küstengebiete SPA | ~ | | | | |
| 152 | Récifs et marais arrière- littoraux du Cap Lévi à la Pointe de Saire SAC | | ✓ | | | |
| 153 | Récifs Gris-Nez Blanc-Nez SAC | | ✓ | ✓ | | |
| 154 | Ridens et dunes hydrauliques du détroit du Pas-de-Calais SAC | | ✓ | ✓ | | |
| 155 | River Derwent SAC | | | | ✓ | |
| 156 | River Wensum SAC | | | | | ✓ |
| 157 | Roches de Penmarch SAC | | ✓ | | | |
| 158 | Ronas Hill - North Roe and Tingon SPA | ~ | | | | |
| 159 | Rousay SPA | ✓ | | | | |
| 160 | Sälöfjorden SAC | | ✓ | | | |
| 161 | Sanday SAC | | ✓ | | | |
| 162 | SBZ 1 / ZPS 1 SAC | | ✓ | | | |
| 163 | SBZ 2 / ZPS 2 SAC | ✓ | | | | |
| 164 | SBZ 3 / ZPS 3 SAC | ~ | | | | |
| 165 | Scanner Pockmark SAC | | | ✓ | | |
| 166 | Seevogelschutzgebiet Helgoland SPA | ✓ | | | | |
| 167 | Skagens Gren og Skagerrak SAC | | ✓ | | | |
| 168 | Solent and Southampton Water SPA & Ramsar | ✓ | | | | |
| 169 | Soteskär SAC | | ✓ | | | |





| Norfolk | | | | | | |
|---------------------|--|--------------|-------------------|---------------------|------|-------------|
| Boreas Reference | Designated site | Ornithology | Marine Mammals | Benthic Habitats | Fish | Terrestrial |
| 170 | Southern North Sea SAC | | ✓ | | | |
| 171 | St Abb`s Head to Fast Castle SPA | ✓ | | | | |
| 172 | Steingrund SAC | | ✓ | | | |
| 173 | Store Rev SCI | | ✓ | | | |
| 174 | Stour and Orwell Estuaries SPA & Ramsar | ✓ | | | | |
| 175 | Strandenge på Læsø og havet syd herfor SAC | | ✓ | | | |
| 176 | Sumburgh Head SPA | ✓ | | | | |
| 177 | Sydlige Nordsø SAC | | ✓ | | | |
| 178 | Sylter Außenriff SCI | ✓ | ✓ | | | |
| 179 | Teesmouth and Cleveland Coast SPA & Ramsar | \checkmark | | | | |
| 180 | Thames Estuary and Marshes SPA & Ramsar | \checkmark | | | | |
| 181 | Thanet Coast and Sandwich Bay SPA & Ramsar | ~ | | | | |
| 182 | Thanet Coast SAC | | | ✓ | | |
| 183 | The Broads SAC | | | | | ✓ |
| 184 | The Swale SPA & Ramsar | ✓ | | | | |
| 185 | The Wash and North Norfolk Coast SAC | | ✓ | ✓ | | |
| 186 | The Wash SPA & Ramsar | ✓ | | | | |
| 187 | Tregor Goëlo SAC | | ✓ | | | |
| 188 | Troup, Pennan and Lion`s Heads SPA | √ | | | | |
| 189 | Unterems und Außenems SCI | | ✓ | | | |
| 190 | Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC | | ✓ | | | |
| 191 | Venø, Venø Sund SAC | | ✓ | | | |
| 192 | Vlaamse Banken SAC | | ✓ | ✓ | ✓ | |
| 193 | Vlakte van de Raan SCI/SAC | | ✓ | | ✓ | |
| 194 | Voordelta SAC and SPA | ✓ | ✓ | ✓ | ✓ | |
| 195 | Vrångöskärgården SAC | | ✓ | | | |
| 196 | Waddenzee SPA | ✓ | | | | |
| 197 | Waddenzee SAC | | ✓ | ✓ | | |
| 198 | West Westray SPA | ✓ | | | | |
| 199 | Westerschelde & Saeftinghe SAC | | | | ✓ | |
| 200 | Winterton – Horsey Dunes SAC | | ✓ | | | |
| 201 | Yell Sound Coast SAC | | ✓ | | | |
| 202 | Ythan Estuary, Sands of Forvie and Meikle Loch SPA | ✓ | | | | |





2.3 Assessment of potential effects

- 9. A summary of the evidence presented in the determination of the risk of likely significant effects (LSE) on the relevant qualifying features of a site is detailed within the footnotes to the screening matrices below.
- 10. Features are presented either at the level of individual species (where these have been identified as qualifying features in their own right) or as an assemblage of species if that is the qualifying feature. For some non-UK sites it was unclear from the level of detail available whether the species listed are part of an assemblage feature or qualify separately. In these cases, where the potential for impacts is the same for all listed species, these have been assigned as an assemblage within a single row of the matrix.
- 11. Ornithological features of Ramsar sites are classified under Criterion 5 (assemblage) or Criterion 6 (named species) and each has been referenced accordingly in the footnotes.
- 12. The following abbreviations are used within the screening matrices:
 - Y = LSE cannot be excluded
 - N = LSE **can** be excluded
 - C = construction
 - O = operation
 - D = decommissioning
- 13. Where effects are not applicable to a particular feature they are greyed out.





| Site | 1 | | | | | | | | | | | |
|--|------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Abberto | n Reservoi | ir SPA and | Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 171 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ive/In-com | bination |
| | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D |
| SPA features | | | | | | | | | | | | |
| <u>Wigeon</u> Golden Plover <u>Anas</u> <u>penelope</u> Pluvialis apricaria | | N (a) | | N (a) |
| <u>Coot Fulica atra</u> | | <u>N (a)</u> | | <u>N (a)</u> |
| Goldeneye Bucephala clangula | | <u>N (a)</u> | | <u>N (a)</u> |
| Great crested grebe Podiceps cristatus | | <u>N (a)</u> | | <u>N (a)</u> |
| Mute swan Cygnus olor | | <u>N (a)</u> | | <u>N (a)</u> |
| Pochard Aythya ferina | | <u>N (a)</u> | | <u>N (a)</u> |
| Tufted duck Aythya fuligula | | <u>N (a)</u> | | <u>N (a)</u> |
| Teal Anas crecca | | N (a) | | N (a) |
| Shoveler Anas clypeata | | N (a) | | N (a) |
| Gadwall <u>Mareca Anas</u> strepera | | N (a) | | N (a) |
| Cormorant Phalacrocorax carbo | | N (b) | | N (b) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Shoveler Anas clypeata | | N (c) | | N (c) |

Norfolk Boreas Screening Matrices November 2019JanuaryMarchFebruary 2020 Norfolk Boreas Offshore Wind Farm

5.3.5.3 Page 12





| Site | 1 | | | | | | | | | | |
|--|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Abberton Re | eservoir SPA | A and Ramsar | | | | | | | | |
| Wigeon Mareca <u>Anas</u> penelope | N | N (C) |
| Teal Anas crecca | N | <u>V (c)</u> | <u>N (c)</u> |
| Coot Fulica atra | N | <u>V (c)</u> | <u>N (c)</u> |
| Pochard Aythya ferina | N | <u>V (c)</u> | <u>N (c)</u> |
| Tufted duck Aythya fuligula | N | <u>V (c)</u> | <u>N (c)</u> |
| Cormorant Phalacrocorax carbo | N | <u>1 (b)</u> | <u>N (b)</u> |
| Gadwall <u><i>M<u>Anas</u>areca strepera</i></u> | N | N (C) |
| Pochard Mareca strepera | N | N (C) |
| Mute swan Cygnus <u>o</u> O lor | N | N (C) |
| Assemblage | N | N (C) |

(a) Survey data show no evidence of the SPA features found at that site occurring in the Norfolk Boreas site and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1) and , in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Abberton Reservoir SPA.

(b) Maximum foraging range of breeding cormorants from their colonies is 35km (Thaxter et al. 2012); the Norfolk Boreas site is therefore located far beyond the maximum range and so has no breeding season connectivity. It is extremely unlikely that cormorants from Abberton Reservoir SPA would visit the Norfolk Boreas site in the nonbreeding season as they mostly overwinter in freshwater habitat in southern England.

(c) Ramsar criterion: predicted effects attributable to Norfolk Boreas are very small and not significant and also would not significantly contribute to or alter the overall in-combination assessment of these features at Abberton Reservior SPA and Ramsar.





| Site | 2 | | | | | | | | | | | | | | |
|--|-----------------------------|-------------------|--------------------|-----------|----------|------------|-----------------|------------|----------|-------------------|-----------|------------|-----------|-----------|-------|
| Name of European Site: | Abers - C | ôtes De | s Legend | les SAC | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 684 | | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of | Norfolk | Boreas | | | | | | | | | | | |
| | Underwa | ater nois | se | Vessel | Interact | ions | Indired prey | ct effects | on | Change quality | es to wat | ter | In-com | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal Halichoerus grypus | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docur | l impact rar ment refere | nge of Nence 5.3. | orfolk Bo 5.1). | oreas and | the exte | ent of any | effect o | n individu | als from | this site v | vould res | sult in no | potential | for LSE (| see |





| Site | 3 | | | | | | | | | | | | | | | |
|--|-----------------------------|--|--------------------|-----------|------------|------------|-----------|------------|----------|-------------|-----------|-----------|-----------|-----------|-------|--|
| Name of European Site: | Agger Tai | nge, Nis | sum Bre | dning, Sl | kibsted F | jord og A | gerø SAC | : | | | | | | | | |
| Distance to Norfolk Boreas (km) | 509 | | | | | | | | | | | | | | | |
| Site Features | Likely effe | effect(s) of Norfolk Boreas | | | | | | | | | | | | | | |
| | Underwa | water noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Harbour seal Phoca vitulina | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) | |
| a) The distance between the potential Table 3.2 of offshore screening, docur | l impact rar nent refere | nge of Nence 5.3. | orfolk Bo 5.1). | oreas and | d the exte | ent of any | effect or | n individu | als from | this site v | would res | ult in no | potential | for LSE (| see | |

| Site | 4 | | | | | | | | | | | | | | |
|--|---------------------------|---|--------------------|-----------|------------|------------|-----------|------------|-----------|-------------|-----------|------------|-----------|-----------|-------|
| Name of European Site: | Ålborg B | ugt, Ran | ders Fjo | rd og Ma | iriager Fj | ord SAC | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 755 | | | | | | | | | | | | | | |
| Site Features | Likely eff | fect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underwa | rwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docur | impact rai nent refere | nge of Ne ence 5.3. | orfolk Bo 5.1). | oreas and | the exte | ent of any | effect or | n individu | ials from | this site v | vould res | sult in no | potential | for LSE (| see |





| Site Name of European Site: Distance to Norfolk Boreas (km) | 5 Alde, C 113 |)re and | Butley I | Estuarie | s SAC | | | | | | | | | | | | | |
|--|---------------------|-----------|---|----------|----------|----------|-----------|---------|----------|--------|-----------|---------|----------|-----------|----------|---------|--------|-------|
| Site Features | Likely e | effect(s) | of Norf | olk Bore | eas | | | | | | | | | | | | | |
| | Permar | nent los | oss Temporary physical disturbance Smothering due to increased suspended sediment Re-mobilisation of contaminated sediments Underwater noise and vibration In-combination of contaminated and vibration D C Q D C <td>'n</td> | | | | | | | | | | | | | | 'n | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Offshore habitats | | | | | | | | | | | | | | | | | | |
| Mudflats and sandflats not covered by seawater at low tide | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Estuaries | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| (a) The distance between t reference 5.3.5.1). | the offsh | ore proj | ect area | and the | e desigr | ated sit | e is beyo | ond the | range of | any po | tential L | SE (see | Table 4. | 1 of offs | hore scr | eening, | docume | ent |





| Site | ; | | | | | | | | | | | |
|--|-------------|--------------|-------------|----------|-----------|---------|---------|--------|-------|---------|------------|----------|
| Name of European Site: | Alde-Ore Es | tuary SPA | and Rams | ar | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | 17 | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of N | lorfolk Bor | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Dist | urbance | Barrier | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Breeding lesser black-backed gulls Larus fuscus | | Y (a) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (h) | Y (a) | N (h) |
| Breeding marsh harrier Circus aeruginosus | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (h) | N (h) | N (h) |
| Breeding avocet Recurvirostra avosetta | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (h) | N (h) | N (h) |
| Breeding little tern Sternula albifrons | | N (e) | | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) |
| Breeding Sandwich tern Sterna sandvicensis | | N (f) | | N (f) | N (f) | N (f) | N (f) | N (f) | N (f) | N (h) | N (h) | N (h) |
| Nonbreeding ruff Philomachus pugnax | | N (g) | | N (g) | N (g) | N (g) | N (g) | N (g) | N (g) | N (h) | N (h) | N (h) |
| Nonbreeding avocet <i>Recurvirostra</i> avosetta | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (h) | N (h) | N (h) |
| Nonbreeding redshank Tringa totanus | | N (g) | | N (g) | N (g) | N (g) | N (g) | N (g) | N (g) | N (h) | N (h) | N (h) |
| Ramsar features | | | | | | | | | | | | |
| Breeding lesser black-backed gulls Larus fuscus | | Y (i) | | N (j) | N (j) | N (j) | N (j) | N (j) | N (j) | N (j) | Y (i) | N (j) |
| Breeding avocet Recurvirostra avosetta | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (j) | N (j) | N (j) |
| Nonbreeding avocet <i>Recurvirostra</i> avosetta | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (j) | N (j) | N (j) |
| Nonbreeding redshank Tringa totanus | | N (j) | | N (j) | N (j) | N (j) | N (j) | N (j) | N (j) | N (j) | N (j) | N (j) |





| Site | 6 | | | | | | | | | | | |
|--|-------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Alde-Ore Es | tuary SPA | and Rams | ar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 117 | _ | | | | | | | | | | |
| Breeding little tern Sterna albifrons | | <u>N (j)</u> | | <u>N (j)</u> |
| Breeding marsh harrier Circus aerugionsus | | <u>N (j)</u> | | <u>N (j)</u> |
| Breeding Sandwich tern Sterna sandvicensis | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding black-tailed godwit Limosa limosa islandica | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding shelduck Tadorna tadorna | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding shoveler Anas clyptea | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding Spotted redshank Tringa eythropus | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding teal Anas crecca | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding white-fronted goose Anser | | <u>N (j)</u> | | <u>N (j)</u> |
| Nonbreeding wigeon Anas penelope | | <u>N (j)</u> | | <u>N (j)</u> |

(a) Model predictions of collision mortality indicate that LSE cannot be ruled out at screening and so requires further consideration (Norfolk Boreas Appendix 13. Annex 4).

(b) Evidence indicates that lesser black-backed gulls are not affected by displacement, disturbance or barrier effects at offshore wind farms.

(c) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea (Wright et. al. 2012*).

(d) Avocet has not been observed in the Norfolk Boreas site during bird surveys. It is highly unlikely that avocets from this SPA and Ramsar will migrate through the Norfolk Boreas site, and if they did, their flight height is likely not to be at collision risk height (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(e) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with the Norfolk Boreas site. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the Norfolk Boreas site.





| Site | 6 |
|---|--|
| Name of European Site: | Alde-Ore Estuary SPA and Ramsar |
| Distance to Norfolk Boreas (km) | 117 |
| (f) Breeding Sandwich tern has a maximum numbers of terns of any species were fraction of the very small total numbers. | mum foraging range of 54km from colonies, so would have no connectivity with the Norfolk Boreas site. Only very small re observed in the Norfolk Boreas site in surveys. Migrating Sandwich terns from this SPA population will form a very small bers of terns passing the site on passage. |
| (g) Ruff, avocet and redshank have not Norfolk Boreas site as their migratio Norfolk Boreas site their flight heigh | been observed during bird surveys at the Norfolk Boreas site. It is highly unlikely that these birds would migrate through the on is likely to take a coastal route and cross sea at narrow points such as The English Channel. If they did migrate through the ht is likely not to be at collision risk height (Wright et al. 2012*). |
| (h) The predicted effect attributable to these features at Alde-Ore Estuary S | Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1). |
| Model predictions of collision morta (Norfolk Boreas Appendix 13. Annex) | ality for lesser black-backed gull indicate that LSE cannot be ruled out at screening and so requires further consideration x 4). |
| (j) These species <u>are</u> either not at risk f | forom the potential impact (e.g. construction) or are not present on the wind farm and therefore are not at risk of an LSE. |
| * Wright, L.J., Ross-Smith, V.H., Massimi birds designated as features of UK Speci- Report No. 592. | ino, D., Dadam, D., Cook, A.S.C.P. & Burton, N.H.K. 2012. Assessing the risk of offshore wind farm development to migratory ial Protection Areas (and other Annex I species). Strategic Ornithological Support Services. Project SOSS-05. BTO Research |





| Site | 7 | | | | | | | | | | | | | | | |
|---|----------------------|----------------------------|---|-------------------|-----------|------------|------------|-----------|-----------|-------------|---------|-------------|-----------|-------------|------|--|
| Name of European Site: | Anholt | og have | t nord f | or SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 812 | | | | | | | | | | | | | | | |
| Site Features | Likely e | ifect(s) of Norfolk Boreas | | | | | | | | | | | | | | |
| | Underv | vater no | er noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | ll impact documen | range of t referei | Norfolk | Boreas a 5.1). | and the e | xtent of a | iny effect | on indivi | duals fro | om this sit | e would | result in i | no potent | tial for LS | E | |

| Site | 8 | | | | | | | | | | | | | | | |
|---|----------------------|-----------------------|--|---------------------|-----------|------------|------------|-------------|------------|-------------|---------|-----------|----------|-------------|------|--|
| Name of European Site: | Archip | el des Gl | énan SA | AC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 838 | | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | ect(s) of Norfolk Boreas Ter noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | vater no | ter noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | Ο | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | il impact documen | range of t referei | Norfolk | k Boreas a 5.1). | and the e | xtent of a | any effect | : on indivi | iduals fro | om this sit | e would | result in | no poten | tial for LS | E | |





| Site | | | | 9 | | | | | | | | | | | | | | | | | |
|---------------------------------|---------------|----------|----------|--|-----------------------|----------|------------------------------------|-------------------------------|----------|-------------------------|------------------------------|--------------|----------------|---------------------|----------------|------------------|----------------|----------|----------|----------|-------|
| Name of Euro | opean S | ite: | | Baie | de Canc | he et co | ouloir d | es trois | estuair | es SAC | | | | | | | | | | | |
| Distance to N | lorfolk | Boreas | (km) | 240 | | | | | | | | | | | | | | | | | |
| Marine Mam | mals | | | | | | | | | | | | | | | | | | | | |
| Site Features | | | Li | kely eff | ect(s) of | f Norfol | k Borea | s | | | | | | | | | | | | | |
| | | | U | nderwa | ter nois | e | Vesse | l Intera | ctions | 1 | ndirect | effects o | on prey | Chan quali | ges to v ty | vater | I | n-comb | ination | | |
| | | | С | (| 2 | D | С | 0 | D | (| : | 0 | D | С | 0 | D | (| 2 | 0 | D | |
| Harbour porp <i>phocoena</i> | ooise Ph | nocoend | ז N | N (a) N (a) <th< td=""><td>N (a)</td><td></td></th<> | | | | | | | | | | N (a) | | | | | | | |
| Grey seal | | | N | (a) 1 | N (a) | N (a) | N (a) | N (a |) N (| a) N | I (a) | N (a) | N (a) | N (a) | | N | (a) [| N (a) | N (a) | N (a) | |
| Harbour seal | | | N | (a) 1 | N (a) | N (a) | N (a) | N (a |) N (| a) N | I (a) | N (a) | N (a) | N (a) | | N | (a) [| N (a) | N (a) | N (a) | |
| Fish | | | | | I | | | | | | I | | | 1 | | | | I | | | |
| Site | Likely | effect(| s) of No | rfolk Bo | oreas | | | | | | | | | | | | | | | | |
| Features | Perma loss | anent h | abitat | Temp physic distur | orary cal bance | | Smoth increa suspen sedim | ering c sed nded ent | lue to | Re- n conta sedin | nobilisa Iminate Nents | tion of d | Under and v | water i ibration | noise | Electr fields | omagn (EMF) | etic | In-cor | nbinatio | ึ่งท |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Salmon Salmo salar | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |





| Site | | | | 9 | | | | | | | | | | | | | | | | | |
|---|---------------------|----------------------|----------------------|--------------------------|-----------------------|---------------------|-----------------------------------|---------------------------------|-----------------|-------------------------|------------------------------|-------------|----------------|---------------------|------------|------------------|-----------------|----------|----------|----------|-------|
| Name of Euro | opean S | ite: | | Baie | de Canc | he et co | ouloir d | es trois | estuair | es SAC | | | | | | | | | | | |
| Distance to N | lorfolk | Boreas | (km) | 240 | | | | | | | | | | | | | | | | | |
| Site Features | Likely | effect(s | s) of No | rfolk Bo | oreas | | | | | | | | | | | | | | | | |
| | Perma loss | anent h | abitat | Temp physic distur | orary cal bance | | Smoth increa suspe sedim | nering o Ised nded ent | lue to | Re- m conta sedim | obilisat minateo ients | ion of d | Under and v | water i ibration | noise I | Electr fields | omagne (EMF) | etic | In-cor | nbinatio | on |
| | С | 0 | D | С | 0 | С | 0 | С | 0 | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sea lamprey Petromyzon marinus | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| River lamprey Lampetra fluviatilis | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Allis shad Alosa alosa | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| a) The distand (see Table 3.2 | ce betw 2 and 5. | een the 1 of offs | e potent shore so | ial impacreening | act rang g, docui | ge of No ment re | rfolk Bo ference | oreas ar 5.3.5.1 | nd the e .). | xtent o | f any ef | fect on | individu | als fror | n this si | te woul | d result | in no p | otentia | for LSE | |





| Site | 10 | | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|-------------------|-----------|------------|-----------|------------|------------|-------------|---------|-----------|----------|-------------|------|
| Name of European Site: | Baie De | e Morlai | ix SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 637 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | lerwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o It refere | f Norfolk nce 5.3. | Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in | no poten | tial for LS | E |

| Site | 11 | | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|------------|-----------|------------|------------|------------|----------|-----------|----------|-------------|------|
| Name of European Site: | Baie de | e Seine (| Occident | ale SAC | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 422 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | rwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | rwater hoise vessel interactions indirect effects on prey Changes to water in-combination quality | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | l impact documer | range o t refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E |





| Site | 12 | | | | | | | | | | | | | |
|--|------------------------------------|---------|--------|-----------|----------|---------|---------|--------|------|------|------------------|-----------|--|--|
| Name of European Site: | Baie d | e Seine | Occide | ntale SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 422 | | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collisio | on mort | ality | Displacem | ent/Dist | urbance | Barrier | Effect | | C | umulative/In-cor | nbination | | |
| | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | | |
| Breeding, wintering and passage waterbirds | | N(a) | | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(b) | N(b) | N(b) | | |

(a) Survey data show little or no evidence of Baie de Seine Occidentale SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site, as most migrant waterfowl moving between northern breeding areas and southern wintering areas and using staging areas such as Baie de Seine Occidentale in France pass along the west European flyway along the continental coast rather than crossing the North Sea to the UK. At a distance of 422km, the chances of birds from this SPA moving through the Norfolk Boreas site are extremely small (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Baie de Seine Occidentale SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 13 | | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|-------------|-----------|------------|-------------|-------------|---------|-----------|----------|-------------|------|
| Name of European Site: | Baie de | e Seine (| Oriental | e SAC | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 398 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Under | nderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | derwater hoise vessel interactions indirect effects on prey Changes to water in-combination quality | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | extent of a | any effec | t on indiv | viduals fro | om this sit | e would | result in | no poten | tial for LS | Ε |





| Site | 14 | | | | | | | | | | | | | | |
|--|----------------------|--|-----------------------|---------------------|-----------|-----------|-----------|------------|-------------|------------|----------|-----------|----------|-------------|------|
| Name of European Site: | Baie d | u Mont | Saint-Mi | ichel SAC | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 569 | | | | | | | | | | | | | | |
| Site Features | Likely | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Under | derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | erwater noise vessel interactions indirect effects on prey changes to water in-combination quality | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | al impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | extent of | any effec | t on indiv | viduals fro | om this si | te would | result in | no poten | tial for LS | Έ |

| Site | 15 | | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|--------------------|-----------|------------|-----------|-------------|------------|-------------|-----------|-----------|-----------------------|-------------|------|
| Name of European Site: | Balgö S | AC | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 814 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) of Norfolk Boreas water noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | vater no | oise | Vessel I | nteractio | ons | Indirect | t effects o | on prey | Change | s to wate | r | In-com | pination | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact locumen | range of t refere | f Norfolk nce 5.3. | (Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in | no poten [.] | tial for LS | E |





| Site | | | 16 | | | | | | | | | | | | | | | |
|--|--|---------------------|-------------------|---------------------|------------------------|---------------------|-----------------------------|----------------------------|---------------|----------------------------|--------------------------------|----------|-------------------|--------------------|-----------|--------|------------|-------|
| Name of European Site | : | | Bancs d | es Flanc | lres SAC | | | | | | | | | | | | | |
| Distance to Norfolk Bor | eas (km |) : | 152 | | | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | of Norf | olk Bore | as | | | | | | | | | | | | | |
| | Underw | vater no | oise | V | 'essel Int | eraction | S | Indire | ect effeo | ts on pr | rey | Changes | to wate | r quality | / In-c | combir | nation | |
| | С | 0 | D | С | ; | 0 | D | С | 0 | D | | С | 0 | D | С | | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a | a) N | l(a) | N(a) | N(a) | N(a) | N(a |) N | (a) | N(a) | | N(a) | N(a |) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a | i) N | l(a) | N(a) | N(a) | N(a) | N(a |) N | (a) | N(a) | | N(a) | N(a |) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a | i) N | l(a) | N(a) | N(a) | N(a) | N(a |) N | (a) | N(a) | | N(a) | N(a |) | N(a) | N(a) |
| Benthic Habitats | | | | | I | | | | | | I | | | | | | | |
| Site Features | Permar | ient loss | 5 | Tempo distur | orary phy bance | ysical | Smothe increas sedime | ering du ed susp ent | e to ended | Re- mo contar sedimo | obilisatio ninate d ents | on of | Underv and vib | vater no ration | ise | In-co | ombinatio | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) |) N (b) | N (b) |
| a) The distance betwe (see Table 3.2 of off | en the person of the second se | otential reening | impact , docum | range o ent refe | f Norfolk erence 5. | Boreas : 3.5.1). | and the | extent o | f any ef | fect on i | ndividua | als from | this site v | would re | sult in n | o pote | ential for | LSE |

b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see Table 4.1 of offshore screening, document reference 5.3.5.1).





| Site | 17 | | | | | | | | | | | |
|---|-------------|--------------|--------------|-----------|-------------|-------|------------|-------|-------|-----------|------------|---------|
| Name of European Site: | Banc Des | Flandres S | PA | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 162 | | | | | | | | | | | |
| Site Features | Likely effe | ect(s) of No | orfolk Borea | IS | | | | | | | | |
| | Collision r | mortality | | Displacen | nent/Distur | bance | Barrier Ef | fect | | Cumulativ | /e/In-comb | ination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Wintering and passage species: razorbill, brent goose, great skua, black tern, fulmar, red-throated diver, black-throated diver, Mediterranean gull, little gull, velvet scoter, common scoter, red-breasted merganser, gannet, Leach's storm petrel, great crested grebe, red- necked grebe, kittiwake, common eider, Arctic skua, pomarine skua, common tern, little tern, Sandwich tern, Arctic tern, guillemot | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Breeding little tern | | N(c) | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(b) | N(b) | N(b) |

a) Many of the named species have not been recorded on the Norfolk Boreas site and are not ones associated with offshore locations. With respect to species named as nonbreeding features of the SPA, these consist of many of the seabird species which pass through the southern North Sea and English Channel on migration. As such the potential impacts on those species recorded at Norfolk Boreas has been assessed in terms of the wider Biologically Defined Minimum Population Scales (BDMPS) populations (see Furness 2015). The Applicant considers this to be the appropriate population scale for nonbreeding impacts on the species named at this SPA, since the majority of individuals will not be resident at the SPA but will instead pass through. Furthermore, given the relative size of the SPA population estimates for the migratory species compared with the total passage populations, the risks to the SPA populations due to Norfolk Boreas are very small (see Table 6.1 of offshore screening, document reference 5.3.5.1).

b) The predicted effect attributable to the proposed Norfolk Boreas project is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Bancs des Flandres SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

c) Breeding little tern has a maximum foraging range of 11km from colonies, so would have no connectivity with Norfolk Boreas. Migrating little terns are considered to be 'extremely coastal on passage with very few sightings in open ocean or inland' (Forrester et al. 2007), so are unlikely to pass through the Norfolk Boreas site.





| Site Name of Eur | opean S | ite: | | 18 Bassure | elle Sandl | bank SAC | | | | | | | | | | | | |
|---|-----------|-------------|------------|------------------|--------------------|----------|----------------------------|-----------------------------|---------------|----------------------------|--------------------------------|----------|-----------------|---------------------|-------|--------|-----------|-------|
| Distance to I | Norfolk I | Boreas (k | m) | 269 | | | | | | | | | | | | | | |
| Site | Likely e | effect(s) c | of Norfolk | Boreas | | | | | | | | | | | | | | |
| Features | Perma | nent los | 5 | Tempo disturb | orary phy oance | rsical | Smoth increas sedime | ering du sed susp ent | e to ended | Re- mo contar sedime | obilisation ninated ents | n of | Under and vi | water no bration | ise | In-com | ibination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The dist | tance be | tween th | e offshor | e project | area anc | the desi | gnated si | te is beyo | ond the ra | ange of a | ny poten | tial LSE | 1 | | | I | | 1 |





| Site19Name of European Site:Ben | nfleet & So | uthend Ma | arshes SPA | and Rams | ar | | | | | | | |
|--|-------------|--------------|-------------|----------|-----------|---------|-----------|--------|-------|---------|------------|----------|
| Distance to Norfolk Boreas (km) 202 | 2 | | | | | | | | | | | |
| Site Features | Likely eff | fect(s) of N | orfolk Bore | as | | | | | | | | |
| | Collision | mortality | | Displace | ment/Dist | urbance | Barrier E | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Wintering and passage waterbird assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Dark-bellied brent goose Branta bernicla | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Knot Calidris canutus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Dunlin Calidris alpina | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Wintering and passage waterbird assemblage | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Ringed plover Charadrius hiaticula | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dark-bellied brent goose Branta bernicla | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Knot Calidris canutus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dunlin Calidris alpina | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





| Site Name of European Site: | 19 Benfleet & Southend Marshes SPA and Ramsar 202 |
|---|---|
| Distance to Norfolk Boreas (km) | |
| (a) Survey data show little or no evaluate are likely to result in negligible 13. Annex 7) and, in addition, t | idence of Benfleet & Southend Marshes SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA numbers passing through the Norfolk Boreas site during migration therefore these is no risk of an LSE (Norfolk Boreas Appendix ne predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in- |

combination assessment for these features at Benfleet & Southend Marshes SPA.

⁽b) Ramsar criterion: predicted effects attributable to Norfolk Boreas are very small and not significant and also would not significantly contribute to or alter the overall in-combination assessment (Norfolk Boreas Appendix 13. Annex 7).

| Site | | | 20 | | | | | | | | | | | | | | | | |
|-------------------------------------|------------------------------------|----------|---|--|-----------|----------|--|--------|-----------|---|------|--------------------------------|---------|-----------|----------------|-----------|-------|-------|--|
| Name of European Site: | | | Berwickshire and North Northumberland Coast SAC | | | | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 346 | | | | | | | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | | | | | | |
| | Underw | vater no | oise | V | essel Int | eraction | S | Indire | ect effe | cts on p | orey | Changes | to wate | r quality | , In-co | mbination | | | |
| | С | 0 | D | С | (| 0 | D | С | 0 | | D | С | 0 | D | С | 0 | D |) | |
| Grey seal | N(a) | N(a) | N(a) |) N | (a) I | N(a) | N(a) | N(a) | N(a) N(a) | | N(a) | N(a) | | N(a) | N(a |) N | (a) N | (a) | |
| Benthic Habitats | | | | | | | | | | | | | | | | | | | |
| Site Features | ient loss | 5 | Tempo disturb | nporary physical Smo surbance incr sed | | | Smothering due to increased suspended sediment | | | Re- mobilisation of contaminate d sediments | | Underwater noise and vibration | | ise | In-combination | | 1 | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Coastal lagoons | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) | |





| Site | | 20 | | | | | | | | | | | | | | | | | |
|------------------------|---|----------|----------|---|----------|---------|---------|------------|----------|---------|----------|----------|----------|---------|------------|-----------|----------|--------|-------|
| Name of European Site: | | | | Berwickshire and North Northumberland Coast SAC | | | | | | | | | | | | | | | |
| Dis | Distance to Norfolk Boreas (km) 346 | | | | | | | | | | | | | | | | | | |
| Sub par sea | omerged or tially submerged caves | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| a) | a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | | | | |
| b) | The distance betwe reference 5.3.5.1). | en the c | offshore | project | area and | the des | ignated | site is be | eyond th | e range | of any p | otential | LSE (see | Table 4 | .1 of offs | shore sci | reening, | docume | nt |

| Site Name of European Site: | 21 Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar | | | | | | | | | | | | |
|--|---|----------|---------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------|------------------|------------------|
| Distance to Norfolk Boreas (km) | 185 | | | | | | | | | | | | |
| Site Features | | Likely e | effect(s) c | of Norfolk I | Boreas | | | | | | | | |
| | | | Collision mortality | | | ment/Distu | urbance | Barrier E | ffect | | Cumulative/In-combination | | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | SPA features | | | | | | | | | | | | |
| Little tern Sterna albifrons | | | N (a) | | N (a) | N (b) | N (b) | N (b) |
| Pochard Aythya farina | | | N (b) | | N (b) | N (b) | N (b) |
| Avocet Recurvirostra avosetta | | | N (b) | | N (b) | N (b) | N (b) |
| Golden Plover <i>Pluvialis apricaria</i> | | | N (b) | | N (b) | N (b) | N (b) |
| Hen harrier Circus cyaneus | | | N (b) | | N (b) | N (b) | N (b) |
| Ruff Philomachus pugnax | | | N (b) | | N (b) | N (b) | N (b) |
| Ringed plover Charadrius hiaticula | | | N (b) | | N (b) | N (b) | N (b) |





| Site 21 | | (| | | | _ | | | | | | | | |
|--|------------------------------------|---------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------|------------------|------------------|--|--|
| Name of European Site: Blacky | vater Estu | ary (Mid | -Essex Coa | ist Phase 4 |) SPA and | Kamsar | | | | | | | | |
| Distance to Norfolk Boreas (km) 185 | | | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collisio | Collision mortality | | | ment/Distu | irbance | Barrier E | ffect | | Cumulative/In-combination | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | с | 0 | D | | |
| Dunlin <i>Calidris alpina alpina</i> | | N (b) | | N (b) | N (b) | N (b) | | |
| Black-tailed Godwit Limosa limosa islandica | | N (b) | | N (b) | N (b) | N (b) | | |
| Grey Plover Pluvialis squatarola | | N (b) | | N (b) | N (b) | N (b) | | |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) | | |
| Ringed Plover Charadrius hiaticula | | N (b) | | N (b) | N (b) | N (b) | | |
| Shelduck Tadorna tadorna | | N (b) | | N (b) | N (b) | N (b) | | |
| Great Crested Grebe Podiceps cristatus | | N (b) | | N (b) | N (b) | N (b) | | |
| Dark-bellied Brent Goose Branta bernicla bernicla | | N (b) | | N (b) | N (b) | N (b) | | |
| Shelduck Tadorna tadorna | | N (b) | | N (b) | N (b) | N (b) | | |
| Dunlin Calidris alpina alpina | | N (b) | | N (b) | N (b) | N (b) | | |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) | | |
| Curlew Numenius arquata | | N (b) | | N (b) | N (b) | N (b) | | |
| Cormorant Phalacrocorax carbo | | N (b) | | N (b) | N (b) | N (b) | | |
| Wigeon Anas penelope | | N (b) | | N (b) | N (b) | N (b) | | |
| Teal Anas crecca | | N (b) | | N (b) | N (b) | N (b) | | |
| Pintail Anas acuta | | N (b) | | N (b) | N (b) | N (b) | | |




| Site 21 | ator Estu | ary (Mid | | st Phace / | 1) SDA and | Pamcar | | | | | | |
|---|-----------|------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: | | | | 151 FildSC - | +j SFA anu | Namsai | | | | | | |
| Distance to Norfolk Boreas (km) 185 | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) c | of Norfolk I | Boreas | | | | | | | | |
| | Collisio | n mortal | ity | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | с | 0 | D | С | 0 | D | с | 0 | D |
| Shoveler <i>Anas clypeata</i> | | N (b) | | N (b) |
| Goldeneye Bucephala clangula | | N (b) | | N (b) |
| Red-breasted Merganser Mergus serrator | | N (b) | | N (b) |
| Lapwing Vanellus vanellus | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |
| Ramsar features | | | | | | | | | | | | |
| Pochard Aythya ferina | | <u>N (c)</u> | | <u>N (c)</u> |
| Little tern Sterna albifrons | | <u>N (c)</u> | | <u>N (c)</u> |
| Ringed plover Charadrius hiaticuala | | <u>N (c)</u> | | <u>N (c)</u> |
| Cormorant Phalacrocorax carbo | | <u>N (c)</u> | | <u>N (c)</u> |
| Gadwall Anas Strepera | | <u>N (c)</u> | | <u>N (c)</u> |
| Teal Anas crecca | | <u>N (c)</u> | | <u>N (c)</u> |
| Goldeneye Bucephala clangula | | <u>N (c)</u> | | <u>N (c)</u> |
| <u>Curlew Numenius arquato</u> | | <u>N (c)</u> | | <u>N (c)</u> |
| Golden Plover Pluvialis apricaria | | N (c) | | N (с) | N (c) |
| Dunlin <i>Calidris alpina alpina</i> | | N (с) | | N (с) | N (c) |





| Site Name of European Site: | 21 Blackwa | ater Estu | ary (Mid | -Essex Coa | ast Phase 4 | I) SPA and | Ramsar | | | | | | |
|--|--|---|--|---|---|--|---|------------------------------|---|--|--|--|------------------------------|
| Distance to Norfolk Boreas (km) | 185 | | | | | | | | | | | | |
| Site Features | | Likely e | ffect(s) o | f Norfolk I | Boreas | | | | | | | | |
| | | Collisio | n mortali | ity | Displace | ment/Dist | urbance | Barrier E | ffect | | Cumulat | ive/In-com | bination |
| | C O D C O D C O D dicg N(c) N(| | | | | | | | | | | | |
| Black-tailed Godwit Limosa limosa islai | ndica | | N (с) | | N (с) | N (c) | N (c) | N (c) | N (c) | N (с) | N (c) | N (c) | N (c) |
| Grey Plover <i>Pluvialis squatarola</i> | | | N (с) | | N (с) | N (c) | N (c) | N (c) | N (c) | N (с) | N (c) | N (c) | N (c) |
| Dark-bellied Brent Goose Branta berni bernicla | cla | | N (с) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Shelduck Tadorna tadorna | | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Winter assemblage | | | N (с) | | N (c) | N (c) | N (с) | N (c) | N (с) | N (c) | N (c) | N (с) | N (c) |
| (a) Breeding little tern has a maximu considered to be 'extremely coas' Norfolk Boreas site (see Table 6.1 (b) Survey data show little or no evid | m foragir tal on pas of offsho ence of B | ng range ssage wit ore scree Blackwate | of 11km h very fe ning, doo er Estuar | from color w sighting cument re y SPA occu | nies, so wo s in open ference 5.3 Irring in th | ould have r ocean or ir 3.5.1). e Norfolk | no connect nland' (Fori Boreas site | ivity with t rester et al | he Norfolk . 2007), so ations of bi | Boreas site are very u rds from tl | e. Migratir nlikely to p his SPA are | ng little ter bass throug e likely to re | ns are (h the esult in |

negligible numbers passing through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) Ramsar criterion: predicted effects attributable to Norfolk Boreas are very small and not significant and also would not significantly contribute to or alter the overall in-combination assessment (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | | 22 | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---------------|-----------|---------|--------------------------|-----------------------|--------|---|--------|-------|---------|-----------------------------|-------------|---------------|-----------------------|----------|-------------------|-----------------|--------|----------|---------|------|
| Name of Europ Site: | pean | Borkun | n-Riffg | rund (B | orkum | Reef G | round) S | CI | | | | | | | | | | | | | |
| Distance to No Boreas (km) | orfolk | 219 | | | | | | | | | | | | | | | | | | | |
| Marine mamn | nals | | | | | | | | | | | | | | | | | | | | |
| Site Features | | Likely e | ffect(s |) of No | rfolk Bo | reas | | | | | | | | | | | | | | | |
| | | Underw | vater r | oise | | Vesse | l Intera | ctions | | Indired | ct effec | ts on p | rey | Change | es to wa | iter qua | lity | In-com | bination | | |
| | | С | 0 | | D | С | 0 | | D | С | 0 | | D | с | 0 | D | | С | 0 | D | |
| Harbour porpo | oise | N (a) | N | (a) | N (a) | N (a |) N | (a) | N (a) | N (a) | N | (a) | N (a) | N (a) | | N | (a) | N (a) | N (a) | N | (a) |
| Grey seal | | N (a) | N | (a) | N (a) | N (a |) N | (a) | N (a) | N (a) | N | (a) | N (a) | N (a) | | N | (a) | N (a) | N (a) | N | (a) |
| Harbour seal | | N (a) | N | (a) | N (a) | N (a |) N | (a) | N (a) | N (a) | N | (a) | N (a) | N (a) | | N | (a) | N (a) | N (a) | N | (a) |
| Fish | | | | | | | | | | | | | | | | | | | | | |
| Site Features | Perma loss | anent hab | itat | Temp physio distur | orary cal bance | | N (a) N (a) N (a) Smothering due to increased suspended sediment | | | | obilisat ninateo ents | ion of d | Unde and v | rwater r vibration | noise | Electro fields | omagne (EMF) | etic | In-com | binatio | in |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Twaite shad <i>Alosa fallax</i> | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) |

a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1).

b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see Table 5.1 of offshore screening, document reference 5.3.5.1).





| Site | 23 | | | | | | | | | | | |
|---|---------------|-------------|--------------|-----------|------------|------------|------------|--------------|------------|-------------|-------------|-----------|
| Name of European Site: | Borkum-Ri | ffgrund SF | ΡΑ | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 218 | | | | | | | | | | | |
| Site Features | Likely effec | t(s) of No | rfolk Borea | as | | | | | | | | |
| | Collision m | ortality | | Displace | ment/Dist | urbance | Barrier I | Effect | | Cumulat | ive/In-con | nbination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Nonbreeding seabird assemblage including as named features black- throated diver <i>Gavia arctica</i> , red- throated diver <i>Gavia stellata</i> , common gull <i>Larus canus</i> , lesser black-backed gull, great black-backed gull <i>Larus marinus</i> , little gull <i>Larus minutus</i> , kittiwake <i>Rissa tridactyla</i> , common tern <i>Sterna hirundo</i> , Arctic tern <i>Sterna</i> <i>paradisaea</i> , Sandwich tern, gannet <i>Morus bassanus</i> , guillemot <i>Uria aalge</i> | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| a) Migrations of birds from this SPA | are likely to | result in r | negligible r | numbers p | assing thr | ough the I | Norfolk Bo | oreas site o | during mig | ration rela | tive to the | e size of |

a) Migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration relative to the size of Biologically Defined Minimum Population Scale (BDMPS) regional populations. Not only are the sites 234km apart, but much of the seasonal movement of birds avoids crossing of the North Sea so that birds on the continental side of the North Sea are more likely to move along the continental coast rather than crossing to the UK.

b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Borkum-Riffgrund SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site Name of Eur | ropean S | ite: | | 24 Braema | ır Pockm | arks SAC | | | | | | | | | | | | |
|--|---|------------|------------|--------------|-----------|-----------|----------------------------|-----------------------------|---------------|----------------------------|--------------------------------|------------|-----------------|---------------------|-----------|-----------|-----------|-------|
| Distance to | Norfolk I | Boreas (k | (m) | 645 | | | | | | | | | | | | | | |
| Site | Likely e | ffect(s) o | f Norfolk | Boreas | | | | | | | | | | | | | | |
| Features | Permanent loss Temporary physica disturbance | | | | | vsical | Smoth increas susper | ering du sed 1ded sed | e to iment | Re- mo contar sedime | obilisation ninated ents | n of | Under and vi | water no bration | oise | In-com | ibination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Submarine structures made by leaking gases | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| a) The distar reference 5. | nce betwo 3.5.1). | een the c | offshore p | project ar | ea and th | ne design | ated site | is beyor | d the rar | ige of any | y potenti | al LSE (se | e Table 4 | 1.1 of off | shore scr | eening, d | ocumen | t |





| Site | 25 | | | | | | | | | | | |
|--|------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: | ها Breydon | Nater SPA and | Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 6 | | | | | | | | | | | |
| Site Features (SPA) / Criterion (Ramsar) | Like | ely effect(s) of | Norfolk Bor | eas | | | | | | | | |
| | Col | lision mortality | 1 | Displace | ement/Dist | urbance | Barrier | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | · | | | | | | | | | |
| Bewick's swan Cygnus columbianus bewickii | | Y (a) | | N (b) | Y (a) | N (b) |
| Avocet Recurvirostra avosetta | | Y (a) | | N (b) | Y (a) | N (b) |
| Golden Plover Pluvialis apricaria | | Y (a) | | N (b) | Y (a) | N (b) |
| Ruff Philomachus pugnax | | Y (a) | | N (b) | Y (a) | N (b) |
| Lapwing Vanellus vanellus | | Y (a) | | N (b) | Y (a) | N (b) |
| Common tern Sterna hirundo | | N (c) | | N (b) | N (c) | N (b) |
| Black tailed godwit <i>Limosa limosa</i> islandica | | ¥ (a) | | N (b) | Y (a) | N (b) |
| Dunlin <i>Calidris alpina alpina</i> | | ¥ (a) | | N (b) | Y (a) | N (b) |
| Shoveler Anas clypeata | | ¥ (a) | | N (b) | Y (a) | N (b) |
| Wigeon Anas penelope | | ¥ (a) | | N (b) | Y (a) | N (b) |
| White-fronted goose -Anser albifrons albifrons | | ¥ (a) | | N (b) | Y (a) | N (b) |
| Cormorant Phalacrocorax carbo | | ¥ (a) | | N (b) | Y (a) | N (b) |
| Waterbird assemblage | | Y (a) | | N (b) | Y (a) | N (b) |





| Ramsar features | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Bewick's swan Cygnus columbianus bewickii | Y (a) | N (d) | Y (a) | N (d) |
| Avocet Recurvirostra avosetta | Y (a) | N (d) | Y (a) | N (d) |
| Golden Plover Pluvialis apricaria | Y (a) | N (d) | Y (a) | N (d) |
| Ruff Philomachus pugnax | Y (a) | N (d) | Y (a) | N (d) |
| Lapwing Vanellus vanellus | Y (a) | N (d) | Y (a) | N (d) |
| Common tern Sterna hirundo | N (c) | N (d) | N (c) | N (d) |
| Black-tailed godwit Limosa limosa islandica | Y (a) | N (d) | Y (a) | N (d) |
| Shoveler Anas clypeata | Y (a) | N (d) | Y (a) | N (d) |
| Wigeon Anas penelope | Y (a) | N (d) | Y (a) | N (d) |
| White-fronted goose Anser albifrons albifrons | Y (a) | N (d) | Y (a) | N (d) |
| Cormorant Phalacrocorax carbo | Y (a) | N (d) | Y (a) | N (d) |
| Waterbird assemblage | Y (a) | N (d) | Y (a) | N (d) |

(a) Natural England considers that there is potential for connectivity during migration and therefore LSE cannot be screened out.

(b) Survey data show no evidence of <u>birds from</u> Breydon Water SPA occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) SPA is far beyond the maximum foraging range of common tern (30km) so has no breeding season connectivity. Numbers of SPA common tern migrating through the Norfolk Boreas site are likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(d) Ramsar criterion: The predicted effects attributable to Norfolk Boreas are so small that they would not significantly contribute to or alter the overall incombination assessment for these features at Breydon Water SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 26 | | | | | | | | | | | |
|--|-----------------------|-----------------------------|----------------|----------------------|-------------|--------|------------------------|----------------------------|-----------------|------------------------|--------------|---------|
| Name of European Site: | Broadlar | nd SPA and | Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 4.5 (onsł | nore projec | t area) | | | | | | | | | |
| Site Features/ Criterion | Likely eff | fect(s) of N | orfolk Bore | eas onshor | e project a | rea | | | | | | |
| | Direct ef Ramsar s | fects within site bounda | n SPA / ary | Direct e habitats | ffects on e | x-situ | Indirect e / Ramsar | effects witl site bound | nin SPA dary | Indirect e habitats | effects on e | ex-situ |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Bewick's Swan (<i>Cygnus columbianus bewickii</i>) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |
| Bittern (Botaurus stellaris) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Hen Harrier (Circus cyaneus) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Marsh harrier (Circus aeruginosus) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Ruff (Philomachus pugnax) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Whooper Swan (Cygnus cygnus) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |





| Site | 26 | | | | | | | | | | | |
|--|----------------------------|----------------------------|----------------|---------------------|--------------|------------|---------------------|----------------------------|-----------------|----------------------|--------------|---------|
| Name of European Site: | Broadla | nd SPA and | l Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 4.5 (ons | hore proje | ct area) | | | | | | | | | |
| Site Features/ Criterion | Likely ef | fect(s) of N | Iorfolk Bore | eas onshor | e project a | irea | | | | | | |
| | Direct e Ramsar | ffects withi site bound | n SPA / ary | Direct e habitat | effects on e | x-situ | Indirect / Ramsa | effects wit r site bour | hin SPA dary | Indirect habitats | effects on e | ex-situ |
| | С | 0 | D | С | 0 | D | С | 0 | D | с | 0 | D |
| Gadwall (Anas strepera) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Shoveler (Anas clypeata) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Widgeon (Anas penelope) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Pink-footed Goose (<i>Anser</i> brachyrhynchus) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |
| Wildfowl assemblage | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |
| Ramsar features | | | | | | | | | | | | 1 |
| Tundra Swan (Cygnus columbianus) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |
| Eurasian wigeon (Anas penelope) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Gadwall (Anas strepera) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Northern shoveler (Anas clypeata) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Pink-footed goose (Anser brachyrhynchus) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |
| Greylag goose (Anser anser) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) | N (a) | N (a) | N (a) | Y (c) | N (a) | Y (c) |
| a) The Broadland SPA and Ramsar is onshore screening, document refe | located 4.5 erence 5.3. | ikm from tl 5.2). | he onshore | e project ar | ea, and so | the SPA is | beyond th | ne range of | potential i | mpact (see | e Table 2.1 | of |





| Site | | 26 | | | | | | | | | | | |
|----------|---|--|---|--|--|--|--|---|---|--|--|---|--|
| Name o | f European Site: | Broadlan | d SPA and | Ramsar | | | | | | | | | |
| Distance | e to Norfolk Boreas (km) | 4.5 (onsh | ore projec | t area) | | | | | | | | | |
| Site Fea | tures/ Criterion | Likely effe | ect(s) of N | orfolk Bore | eas onshore | e project a | rea | | | | | | |
| | | Direct eff Ramsar si | ects withir te bounda | n SPA / ary | Direct ef habitats | fects on ex | k-situ | Indirect e / Ramsar | effects with site bound | nin SPA dary | Indirect e habitats | effects on e | ex-situ |
| | | с | 0 | D | с | 0 | D | с | 0 | D | с | 0 | D |
| b) c) | Surveys recorded waterbird counts Broadland SPA and Ramsar (see Sec considered to be important habitat The Applicant's position is that the / Ramsar site. This position is set ou further within the Information to se geese qualifying features of the site consultation with Natural England of consent to confirm the conclusions habitats, and undertake mitigation should be using arable land within working on one section of the onsh chopped sugar beet residue (tops)) Management Strategy (document to | that are co ctions 3.3.5 is for the qu re are no lii ut with App Support HR e, due to the during the the derived fi has been p the onshor ore project in the sect reference 8 | onsidered f and 4.6.1 ualifying fe kely signifi pendix 5.2 A report (e tempora Norfolk Va roposed sl e project a t located v ion which .7), which | to not be o of onshore eatures of t cant effect of the Info document ary loss of o nguard exa y data colle hould these area, then o vithin the E is not subj | of a scale of e screening the Broadla s which and rmation to reference s crop stubble amination ected to da e surveys re effects upo Broadland S ect to worl ull details of | anational c g, documer and SPA an e anticipate support H 5.3). Natur le which pr process, ar te) that the eturn evide on these fea SPA study a ks This appont this agree | or greater in the reference d Ramsar. ed to arise RA report ral England rovide <u>s</u> over n agreement e qualifying ence that the atures is re- area at any proach is seed mitigat | mportance ie 5.3.5.2). in relation (document 's position erwintering nt has been g species a hese speci educed as for one time, secured wir | e, or to be Conseque to the qua t reference is that LSE g habitat fo n reached re absent for es are pres far as possi and provin thin the Ou | a significan ntly, these alifying fea 5.3), and cannot be or these spe to <u>underta</u> to <u>underta</u> from the pr cent <u>to ensu</u> ble. This m ding an alte | t compone ex-situ hal tures of th this site is r ruled out ecies. Follo ke further otentially a ure that, if itigation ir ernative fo scape and | ent of the bitats are r e Broadlan not assesse for swan a wing surveys po ffected ex these spec ncludes onl od source Ecological | not d SPA ed nd st- situ <u>iies</u> ¥ (e.g. |

| Site | 27 | | | | | | | | | | | | |
|---------------------------------|----------------------------------|----------------------------|----------------|---------------------------|--|--|--|--|--|--|--|--|--|
| Name of European Site: | Bruine Bank (Brown Ridge) pSPA | ne Bank (Brown Ridge) pSPA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | ca.20km (a) | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Bore | eas | | | | | | | | | | | |
| | Collision mortality | Displacement/Disturbance | Barrier Effect | Cumulative/In-combination | | | | | | | | | |





| Site | 27 | | | | | | | | | | | |
|--|-----------------------------|----------------------------|----------------------------|--------------------------|---------------------------|---------------------------|-----------------------------|---------------------------|-----------------------------|------------------------------|----------------------------|-------------|
| Name of European Site: | Bruine Bank | (Brown Ri | idge) pSPA | | | | | | | | | |
| Distance to Norfolk Boreas (km) | c a.20km (a) | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Common guillemot Uria aalge | | N (b) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (d) | N (d) | N (d) |
| Razorbill Alca torda | | N (b) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (d) | N (d) | N (d) |
| (a) It should be noted that the d | istance fron | n the Norfo | olk Boreas s | site to the | pSPA is un | certain as t | he bounda | ries of the | pSPA are | under cons | ultation at | : present. |
| (b) The designated features of B collision with offshore wind t | ruine Bank J urbines. Fu | oSPA are lil rthermore, | kely to be o birds wint | common gu ering on Bi | uillemot an ruine Bank | d razorbill are likely | , species fo to remain a | r which lo at the pSPA | w flight hei A because i | ight results t is a high- | in low risk quality fee | cof ding |

habitat (i.e. the reason why this concentration of birds is being proposed for SPA status), and so these birds are unlikely to be at risk of collision at the Norfolk Boreas site

(c) Bruine Bank is high quality feeding habitat for nonbreeding piscivorous seabirds from breeding areas further north, so the birds in that pSPA are unlikely to pass through the Norfolk Boreas site on migration as it lies west rather than north of the pSPA. Therefore, displacement, disturbance and barrier effect at the Norfolk Boreas site will not be likely to affect birds on Bruine Bank pSPA.

(d) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Bruine Bank pSPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 2 | 8 | | | | | | | | | | | | | |
|--|------------|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Name of European Site: E | uchan Nes | s to Collies | ton Coast S | SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 5 | 53 | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | |
| | Collision | sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage, including as named features kittiwake, shag <i>Phalacrocorax aristotelis</i> , fulmar, guillemot, herring gull <i>Larus argentatus</i> | | N (a) | | N (a) | N (b) | N (b) | N (b) | | |





| Site | 28 |
|--|--|
| Name of European Site: | Buchan Ness to Collieston Coast SPA |
| Distance to Norfolk Boreas (km) | 553 |
| (a) Buchan Ness to Collieston (of these populations migra reference 5.3.5.1). | Coast SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions ting through the Norfolk Boreas site are likely to be very small relative to BDMPS (see Table 6.1 of offshore screening, document |
| (b) The predicted effect attribution these features at Buchan N | utable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for less to Collieston Coast SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1). |

| Site | 29 | | | | | | | | | | | | |
|--|----------------------------------|---|---|---|---|--|--|---|---|--|-------------------------------------|--|---------------------------------------|
| Name of European Site: | Cal | f of Eday Sl | PA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 753 | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | | Collision | mortality | | Displacer | ment/Distu | urbance | Barrier E | ffect | | Cumulat | ive/In-com | bination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including named features cormorant, fulmar <i>Fulmarus glacialis</i> , guillemot, kittiwake and great black-backed gull | as | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) Calf of Eday SPA is beyond migrating through the No (b) The predicted effect attrik these features at Calf of E | d max rfolk outak day S | ximum fora Boreas site ole to Norf SPA (see Ta | aging rang e are likely olk Boreas able 6.1 of | e of design to be very is so small offshore so | ated seabi small rela that it wo creening, d | rd species tive to BDI uld not sig locument r | so has no l MPS (see T nificantly c reference 5 | breeding so able 6.1 of contribute 5.3.5.1). | eason conr offshore s to or alter | nectivity. P creening, o the overall | roportions document in-combir | of these p reference ! nation asse | opulations 5.3.5.1). ssment for |





| Site | 30 | | | | | | | | | | | |
|--|-------------|--------------|-------------|-----------|-------------|-------|------------|-------|-------|-----------|------------|---------|
| Name of European Site: | Caps Gris | Nez SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 210 | | | | | | | | | | | |
| Site Features | Likely effe | ect(s) of No | rfolk Borea | IS | | | | | | | | |
| | Collision r | mortality | | Displacen | nent/Distur | bance | Barrier Ef | fect | | Cumulativ | /e/In-comb | ination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Wintering and passage species: razorbill, kingfisher, pintail, white- fronted goose, greylag goose, short- eared owl, greater scaup, bittern, brent goose, sanderling, dunlin, purple sandpiper, Scopoli's shearwater, great skua, Kentish plover, little ringed plover, ringed plover, whiskered tern, black tern, white stork, marsh harrier, hen harrier, little egret, merlin, peregrine, puffin, fulmar, black- throated diver, great northern diver, red-throated diver, common crane, oystercatcher, black-winged stilt, storm petrel, red-backed shrike, Mediterranean gull, bar-tailed godwit, woodlark, velvet scoter, common scoter, smew, red-breasted merganser, black kite, red kite, gannet, curlew, whimbrel, osprey, honey buzzard, shag, cormorant, ruff, spoonbill, golden plover, grey plover, Slavonian grebe, great crested grebe, red-necked grebe, | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |





| Site | 30 | | | | | | | | | | | |
|--|--|---|---|---|---|--|--|--|---|--|--|--|
| Name of European Site: | Caps Gris | Nez SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 210 | | | | | | | | | | | |
| black-necked grebe, Manx shearwater, avocet, kittiwake, eider, long-tailed skua, Arctic skua, pomarine skua, little tern, roseate tern, common tern, Arctic tern, Sandwich tern, wood sandpiper, guillemot, lapwing | | | | | | | | | | | | |
| a) Many of the named species have no named as nonbreeding features of the such the potential impacts on those sp populations (see Furness 2015). The Ag majority of individuals will not be resid species compared with the total passag document reference 5.3.5.1). b) The predicted effect attributable to assessment for these features at Caps | t been reco SPA, these ecies record oplicant con ent at the S ge populatio the propose Griz Nez SPA | rded on th consist of ded at Nor siders this PA but wil ons, the ris ed Norfolk A (see Tab | e Norfolk B many of the folk Boreas to be the a l instead pa ks to the SP Boreas pro le 6.1 of off | oreas site e seabird s has been a ppropriate ass through PA populat ject is so so | and are not pecies whic assessed in population . Furtherm ions due to mall that it ening, docu | t ones asso th pass thro terms of th n scale for ore, given to Norfolk Bo would not ument refer | ciated with bugh the so ne wider Bi nonbreedir the relative breas are ve significantl rence 5.3.5 | offshore le outhern Nor ologically E ng impacts e size of the ery small (s y contribut .1). | ocations. W of th Sea and pefined Mir on the spece SPA populate ee Table 6. Se to or alte | /ith respect I English Ch himum Pop cies named lation estin 1 of offsho er the overa | to seabird annel on m ulation Scal at this SPA nates for th re screenin all in-combi | species iigration. As es , since the e migratory g, nation |

| Site | 31 | | | | | | | | | | | | | | |
|---------------------------------|----------|----------|----------|----------|-----------|------|----------|-------------|---------|---------|-----------|------|---------|----------|------|
| Name of European Site: | Cap Siz | un SAC | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 764 | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | of Norfo | lk Borea | 5 | | | | | | | | | | |
| | Underv | vater no | ise | Vessel I | nteractio | ns | Indirect | t effects o | on prey | Change | s to wate | r | In-comb | pination | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





| Site | 31 |
|---|--|
| Name of European Site: | Cap Sizun SAC |
| Distance to Norfolk Boreas (km) | 764 |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see ment reference 5.3.5.1). |

| Site Name of European Site: | 32 Chause | ey SAC | | | | | | | | | | | | | |
|---|----------------------|---------------------|------------------------|------------|------------|------------|-----------|------------|------------|-------------------|-----------|-----------|-----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 544 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | s | | | | | | | | | | |
| | Underv | water no | oise | Vessel | Interactio | ons | Indirec | t effects | on prey | Change quality | s to wate | er | In-com | oination | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact ment ref | range o erence 5 | f Norfoll 5.3.5.1). | k Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in | no poteni | tial for LS | E (see |

| Site Name of European Site: | 33 Chaussée de Sein SAC |
|---------------------------------|----------------------------|
| Distance to Norfolk Boreas (km) | 762 |
| | |





| Site Features | Likely e | ikely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
|--------------------------------------|----------------------|---|------|----------|-----------|------|----------|-------------|---------|---------|-----------|------|--------|----------|------|
| | Underv | vater no | ise | Vessel I | nteractio | ns | Indirect | t effects o | on prey | Change | s to wate | er | In-com | oination | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact ment ref | pact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see treference 5 3 5 1) | | | | | | | | | | | | | |

| Site | 34 | | | | | | | | | | | | | | |
|--|-----------------|-------------|---|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|--|
| Name of European Site: | Ches | il Beach an | d The Flee | t SPA & Ra | imsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 441 | | | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | |
| | | Collision | Ilision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| SPA features | | | | | | | | | | | | | | | |
| Dark-bellied-brent goose Branta bern berniclaWigeon Anas penelope | icla | | N (a) | | N (a) | | |
| Little tern <u>Sterna albifrons</u> | | | N (a) | | N (a) | | |
| Ramsar features | | | | | | | | | | | | | | | |
| Dark-bellied brent goose Branta berni bernicla | icla | | N (b) | | N (b) | | |
| Mute swan Cygnus olor | | | N (b) | | N (b) | | |
| Wigeon Anas penelope | | | <u>N (b)</u> | | <u>N (b)</u> | | |
| Red-breasted merganser Mergus serre | ator | | <u>N (b)</u> | | <u>N (b)</u> | | |
| Little tern Sterna alibfrons | | | <u>N (b)</u> | | <u>N (b)</u> | | |





- (a) Survey data show little or no evidence of features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Chesil Beach & The Fleet SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Chesil Beach and the Fleet SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 35 | | | | | | | | | | | | | | |
|--|-------|---|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|--|
| Name of European Site: | Chich | ester and | Langstone | Harbours | SPA & Ran | nsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 340 | | | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | |
| | | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| SPA features | | | | | | | | | | | | | | | |
| Little tern Sterna albifrons | | | N (a) | | N (a) | | |
| Sandwich tern Sterna sandvicensis | | | N (a) | | N (a) | | |
| Little egret <i>Egretta garzetta</i> | | | N (a) | | N (a) | | |
| Bar-tailed godwit Limosa lapponica | | | N (a) | | N (a) | | |
| Common tern Sterna hirundo | | | <u>N (a)</u> | | <u>N (a)</u> | | |
| Curlew Numenius arquata | | | <u>N (a)</u> | | <u>N (a)</u> | | |
| Ringed plover Charadrius hiaticula | | | N (a) | | N (a) | | |
| Black-tailed Godwit <i>Limosa limosa</i> <i>islandica</i> | | | N (a) | | N (a) | | |





| Site 35 | | | | | | | | | | | | |
|--|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: Chi | chester and | Langston | e Harbours | SPA & Ra | msar | | | | | | | |
| Distance to Norfolk Boreas (km) 340 |) | | | | | | | | | | | |
| Site Features | Likely et | fect(s) of N | Iorfolk Bor | eas | | | | | | | | |
| | Collisior | n mortality | | Displace | ement/Dist | urbance | Barrier I | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | с | 0 | D |
| Dark-bellied Brent Goose <i>Branta bernicla bernicla</i> | | N (a) | | N (a) |
| Dunlin Calidris alpina alpina | | N (a) | | N (a) |
| Grey Plover Pluvialis squatarola | | N (a) | | N (a) |
| Sanderling Calidris alba | | <u>N (a)</u> | | <u>N (a)</u> |
| Shoveler Anas clyptea | | <u>N (a)</u> | | <u>N (a)</u> |
| Turnstone Arenaria interpres | | <u>N (a)</u> | | <u>N (a)</u> |
| <u>Teal Anas crecca</u> | | <u>N (a)</u> | | <u>N (a)</u> |
| Shelduck Tadorna tadorna | | <u>N (a)</u> | | <u>N (a)</u> |
| Pintail Anas acuta | | <u>N (a)</u> | | <u>N (a)</u> |
| Red-breasted merganser Mergus serrator | | <u>N (a)</u> | | <u>N (a)</u> |
| Redshank Tringa totanus | | N (a) | | N (a) |
| Wigeon Anas penelope | | <u>N (a)</u> | | <u>N (a)</u> |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (b) | | N (b) |
| Common tern Sterna hirundo | | <u>N (b)</u> | | <u>N (b)</u> |





| Site | 85 | | | | | | | | | | | | |
|--|-------|------------|--------------|-------------|-----------|------------|---------|------------|-------|-------|----------|------------|----------|
| Name of European Site: C | Chich | ester and | Langstone | Harbours | SPA & Ram | nsar | | | | | | | |
| Distance to Norfolk Boreas (km) 3 | 840 | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of No | orfolk Bore | eas | | | | | | | | |
| | | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier Ef | fect | | Cumulati | ve/In-coml | bination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Ringed plover Charadrius hiaticula | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Black-tailed Godwit <i>Limosa limosa</i> <i>islandica</i> | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dark-bellied Brent Goose Branta bernic bernicla | la | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dunlin <i>Calidris alpina alpina</i> | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Grey Plover Pluvialis squatarola | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Redshank Tringa totanus | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Common shelduck Tadorna tadorna | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |

(a) Survey data show little or no evidence of Chichester & Langstone Harbour SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Chichester & Langstone Harbour SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 36 | | | | | | | | | | | | |
|--|-----------------------|------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Colne Es | tuary (Mid | -Essex Coa | st Phase 2) | SPA and I | Ramsar | | | | | | | |
| Distance to Norfolk Boreas (km) | 164 | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | | Collision | mortality | | Displace | ment/Dist | urbance | Barrier I | Effect | | Cumulat | ive/In-com | nbination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | _ | | | | |
| Dark-bellied brent goose Branta b bernicla | pernicla | | N (a) | | N (a) |
| Redshank Tringa totanus | | | N (a) | | N (a) |
| Hen harrier Circus cyaneus | | | N (a) | | N (a) |
| Avocet Recurvirostra avosettaPoc Aythya ferina | <u>hard</u> | | N (a) | | N (a) |
| Ringed plover Charadrius hiaticule plover Pluvialis apricaria | <mark>2</mark> Golden | | N (a) | | N (a) |
| Little tern Sterna albifrons | | | N (a) | | N (a) |
| Assemblage | | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | | |
| Dark-bellied brent goose Branta b bernicla | ernicla | | N (b) | | N (b) |
| Redshank Tringa totanus | | | N (b) | | N (b) |
| Black-tailed godwit <i>Limosa limosa islandica</i> | | | N (b) | | N (b) |
| Pochard Aythya ferina | | | <u>N (b)</u> | | <u>N (b)</u> |





| Site | 36 | | | | | | | | | | | | |
|-------------------------------------|----------|------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Colne Es | tuary (Mid | -Essex Coa | st Phase 2) | SPA and R | amsar | | | | | | | |
| Distance to Norfolk Boreas (km) | 164 | | | | | | | | | | | | |
| Ringed plover Charadrius hiaticul | 2 | | <u>N (b)</u> | | <u>N (b)</u> |
| Little tern Sterna albifrons | | | <u>N (b)</u> | | <u>N (b)</u> |
| Cormorant Phalacrocorax carbo | | | <u>N (b)</u> | | <u>N (b)</u> |
| Mute swan Cygnus olor | | | <u>N (b)</u> | | <u>N (b)</u> |
| <u>Shelduck Tadorna tadorna</u> | | | <u>N (b)</u> | | <u>N (b)</u> |
| <u>Goldeneye Bucephala clangula</u> | | | <u>N (b)</u> | | <u>N (b)</u> |
| Grey plover Pluvialis squatarola | | | <u>N (b)</u> | | <u>N (b)</u> |
| Sanderling Calidris alba | | | <u>N (b)</u> | | <u>N (b)</u> |
| Dunlin Calidris alpina | | | <u>N (b)</u> | | <u>N (b)</u> |
| Curlew Numenius arquata | | | <u>N (b)</u> | | <u>N (b)</u> |
| Assemblage | | | N (b) | | N (b) |

(a) Survey data show no evidence of these Colne Estuary SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Colne Estuary SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 37 | | | | | | | | | | | | | |
|--|--|---|--|---|--|---|--|--|--|---------------------------------------|--|---------------------------------|--|--|
| Name of European Site: | Copinsay SP | Α | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 718 | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of No | orfolk Bore | eas | | | | | | | | | | |
| | Collision | n mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage including as named features fulmar, guillemot, kittiwake and great black-backed gull | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | |
| (a) Copinsay SPA is beyond maximigrating through the Norfol (b) The predicted effect attribut | mum foragi k Boreas site able to Norfe | ng range o e are likely olk Boreas | f designate to be very is so small | ed seabird small relation that it wo | species so tive to BDN uld not sig | has no bre MPS (see Ta nificantly c | eding seas able 6.1 of ontribute t | on connec offshore s to or alter t | tivity. Prop creening, c the overall | ortions of locument r in-combin | these populer of the se populer of the se populer of the second s | ulations 5.3.5.1). ssment | | |

for these features at Copinsay SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 3 | 8 | | | | | | | | | | | | | | |
|-----------------------------------|--------------|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| Name of European Site: C | oquet Island | SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 3 | 73 | | | | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | ision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Roseate tern Sterna dougallii | | N (a) | | N (a) | N (b) | N (b) | N (b) | | | |
| Sandwich tern Sterna sandvicensis | | N (a) | | N (a) | N (b) | N (b) | N (b) | | | |
| Common tern Sterna hirundo | | N (a) | | N (a) | N (b) | N (b) | N (b) | | | |





| Site | 38 | | | | | | | | | | | |
|--|--------------------------------|----------------------------|----------------------------|---------------------------|------------------------------|--------------------------------|---------------------------|----------------------------|-------------------------|---------------------------|---------------------------|-------|
| Name of European Site: | Coquet Island | I SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 373 | | | | | | | | | | | |
| Arctic tern Sterna paradisaea | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Puffin Fratercula arctica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) Coquet Island SPA is beyo Proportions of these popu | nd maximum f lations migrat | oraging rar ing through | nge of design the Norfo | gnated sea Ik Boreas s | bird specie site are like | es (all less t ely to be ve | han 55km) ery small re |) so has no lative to B | breeding s DMPS (see | season con e Table 6.1 | nectivity. of offshore | 2 |

screening, document reference 5.3.5.1).(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Coquet Island SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 39 | | | | | | | | | | | | | | |
|---|----------------------|---------------------|------------------------|-------------|-----------|------------|------------|-----------|------------|-------------------|-----------|-----------|-----------|------------|--------|
| Name of European Site: | Côte D | e Granit | Rose-Se | ept-Iles S/ | AC | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 596 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | 5 | | | | | | | | | | |
| | Underv | water no | vise | Vessel I | nteractio | ons | Indirect | effects o | on prey | Change quality | s to wate | er | In-com | pination | |
| | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact ment ref | range o erence 5 | f Norfolk 5.3.5.1). | k Boreas a | ind the e | xtent of a | any effect | on indiv | iduals fro | m this sit | e would | result in | no potent | ial for LS | E (see |





| Site Name of European Site: | 40 Côtes c | le Crozo | n SAC | | | | | | | | | | | | |
|---|---------------------|---------------------|-----------------------|-------------------|-----------|------------|-----------|-------------|------------|-------------------|-----------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 744 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | 5 | | | | | | | | | | |
| | Underv | vater no | oise | Vessel I | nteractic | ons | Indirec | t effects (| on prey | Change quality | s to wate | er | In-com | pination | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o t refere | f Norfolk nce 5.3. | Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | te would | result in I | no poteni | tial for LS | E |

| Site | 41 | | | | | | | | | | | | | |
|------------------------------------|------|-------------|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Name of European Site: | Cror | marty Firtl | h SPA & Ra | msar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 664 | | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | | Collision | mortality Displacement/Disturbance Barrier Effect Cumulative/In-combinatio | | | | | | | | | | | |
| | | С | O mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination O D C O D C O D | | | | | | | | | | | |
| SPA features | | | | | | | | | | | | | | |
| Osprey Pandion haliaetus | | | N (a) | | N (a) | |
| Common tern Sterna hirundo | | | N (b) | | N (b) | |
| Bar-tailed godwit Limosa lapponica | | | N (b) | | N (b) | |
| Whooper swan Cygnus cygnus | | | N (b) | | N (b) | |





| Site | 41 | | | | | | | | | | | |
|------------------------------------|---------------|-------------|------------|-----------|--------------|-------------|-----------|-------------|--------------|-------------|--------------|-----------|
| Name of European Site: | Cromarty Firt | h SPA & Ra | imsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 664 | | | | | | | | | | | |
| Greylag goose Anser anser | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Ramsar features | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Greylag goose Anser anser | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Assemblage | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| (a) This species has not been | bserved in th | e Norfolk E | oreas site | and no mi | gration is p | oredicted t | hrough No | rfolk Borea | s site there | efore these | e is no risk | of an LSE |

(a) This species has not been observed in the Norrow Boreas site and no higher to hold by predicted through Norrow Boreas site and migrations of birds from this SPA are likely to the Norfolk Boreas site and migrations of birds from this SPA are likely to the second by the Norfolk Boreas site and migrations of birds from this SPA are likely to the second by the seco

(b) There is no indication from survey data that features from this SPA will occur in the Norfolk Boreas site and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Cromarty Firth SPA and Ramsar





| Site | 42 | | | | | | | | | | | | |
|---|---|---|---|--|---|---|--|--|---|--|---|---|--|
| Name of European Site: | Cro | uch and R | oach Estua | ries (Mid-I | Essex Coast | t Phase 3) S | SPA & Ram | Isar | | | | | |
| Distance to Norfolk Boreas (km) | 187 | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | | Collision | mortality | | Displace | ment/Dist | urbance | Barrier E | ffect | | Cumulati | ive/In-com | bination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | | |
| Dark-bellied brent goose Branta bernic bernicla | la | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | | | | | | |
| Dark-bellied brent goose Branta bernic bernicla | la | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| (a) Survey data show little or from this SPA are likely to Norfolk Boreas is so small document reference 5.3.5 (b) Ramsar criterion: the precision significant effect or alter to significant effect or significant effect or | no e resu that 5.1). dicteo | vidence of It in neglig it would n d effects a verall in-co | Crouch & sible numb ot significa ttributable ombinatior | Roach Estu ers passing antly contr to Norfolk assessme | uary SPA fe g through t ibute to or s Boreas ar nt for thes | eature (bre he Norfolk alter the e so small se features | ent goose) < Boreas sit overall in-c that they v at Crouch | occurring i e and , in a ombinatio would not l & Roach E | n the Norfo addition, th n assessme nave a sign stuaries SP | olk Boreas : ne predicte ent (see Tal ificant effe A and Ram | site, and m d effect at ble 6.1 of c ct alone or usar (see Ta | higrations of tributable f offshore scr contribut able 6.1 of | of birds to reening, e to a offshore |

screening, document reference 5.3.5.1).





| Site | 43 | | | | | | | | | | | | | |
|--|-----|------------|---|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Name of European Site: | Dek | oen Estuar | y SPA & Ra | amsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 128 | 3 | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ive/In-com | bination | |
| | | С | 0 | D | с | 0 | D | С | 0 | D | с | 0 | D | |
| SPA features | | | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | | N (a) | | N (a) | |
| Dark-bellied brent goose Branta berniclo bernicla | 7 | | N (a) N (a) <th< td=""></th<> | | | | | | | | | | | |
| Ramsar features | | | | | | | | | | | | | | |
| Dark-bellied brent goose Branta berniclo bernicla | 7 | | N (b) | | N (b) | |
| Shelduck Tadorna tadorna | | | <u>N (b)</u> | | <u>N (b)</u> | |
| Avocet Recurvirostra avosetta | | | <u>N (b)</u> | | <u>N (b)</u> | |
| Grep plover Pluvialis squatarola | | | <u>N (b)</u> | | <u>N (b)</u> | |
| Black-tailed godwit Limosa limosa | | | <u>N (b)</u> | | <u>N (b)</u> | |
| Redshank Tringa totanus | | | <u>N (b)</u> | | <u>N (b)</u> | |
| <u>Assemblage</u> | | | <u>N (b)</u> | | <u>N (b)</u> | |

(a) Survey data show little or no evidence of SPA features occurring in the Norfolk Boreas site, and migrations of birds from the SPA are likely to result in negligible numbers passing through the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Deben Estuary SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site 44 | | | | | | | | | | | | |
|---|------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: De | engie (Mid | Essex Coas | t Phase 1) | SPA & Rai | nsar | | | | | | | |
| Distance to Norfolk Boreas (km) 17 | 5 | | | | | | | | | | | |
| Site Features | Likely e | fect(s) of N | lorfolk Bor | eas | | | | | | | | |
| | Collision | mortality | | Displace | ement/Dist | urbance | Barrier | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | _ | | _ | | | | | | _ |
| Hen harrier Circus cyaneus | | N (a) | | N (a) |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) |
| Knot Calidris canutus islandica | | N (a) | | N (a) |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) |
| Dark-bellied brent goose Branta bernicla bernicla | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Bar-tailed godwit <i>Limosa lapponica</i> | | N (b) | | N (b) |
| Knot Calidris canutus islandica | | N (b) | | N (b) |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) |
| Dark-bellied brent goose Branta bernicla bernicla | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |
| (a) Survey data show little or no evider | ice of Den | gie SPA feat | tures occur | ring in the | Norfolk B | oreas site, | and migra | tions of bi | rds from th | is SPA are l | likely to res | sult in |

(a) Survey data show little or no evidence of Dengie SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment (see Table 6.1 of offshore screening, document reference 5.3.5.1)..





(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Dengie SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site: | 45 Dogger | bank SC | 1 | | | | | | | | | | | | |
|---|----------------------|---|------------------------|------------|-----------|------------|------------|----------|------------|------------|---------|-------------|-----------|-------------|--------|
| Distance to Norfolk Boreeas (km) | 249 | | | | | | | | | | | | | | |
| Site Features | Likely e Underv | kely effect(s) of Norfolk Boreas nderwater noise Vessel Interactions Indirect effects on prey Changes to water quality | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact ment ref | range of erence 5 | f Norfolk 5.3.5.1). | k Boreas a | ind the e | xtent of a | iny effect | on indiv | iduals fro | m this sit | e would | result in r | no potent | ial for LSI | E (see |





| Site Name of European Site: | 46 Dogger | rsbank S | CI | | | | | | | | | | | | |
|---|---------------------|--|-----------------------|---------------------|-----------|------------|------------|------------|------------|------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 128 | | | | | | | | | | | | | | |
| Site Features | Likely e | ly effect(s) of Norfolk Boreas erwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | derwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact documen | range of it refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | iny effect | t on indiv | iduals fro | om this si | e would | result in I | no potent | tial for LS | E |





| Site | 47 | | | | | | | | | | | | | | |
|------------------------------------|---------|---|---|-------------|-------------|------------|-------------|------------|------------|------------|-------------|--------------|---------------------|--|--|
| Name of European Site: | Dorn | och Firth a | nd Loch Fl | eet SPA & I | Ramsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 668 | | | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | |
| | | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ive/In-com | bination | | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| SPA features | | N(a) $N(a)$ $N(a)$ $N(a)$ $N(a)$ $N(a)$ $N(a)$ $N(a)$ $N(a)$ $N(a)$ | | | | | | | | | | | | | |
| Osprey Pandion haliaetus | | | N (a) | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Greylag goose Anser anser | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Wigeon Anas penelope | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Assemblage | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Ramsar features | | | | | | | | | | | | | | | |
| Greylag goose Anser anser | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | |
| Assemblage | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | |
| (a) Survey data show little of | or no e | vidence of | Dornoch I | Firth & Loc | h Fleet SPA | A features | occurring i | n the Norf | olk Boreas | site and m | igrations o | f birds fror | n this Poroas is | | |

SPA are likely to result in negligible numbers passing through the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Dornoch Firth & Loch Fleet SPA & Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 48 | | | | | | | | | | | | | | |
|---|---------------------|--|-----------------------|-------------------|-----------|------------|------------|------------|------------|------------|---------|-------------|----------|-------------|------|
| Name of European Site: | Dornoo | ch Firth a | and Mor | rich Mor | e SAC | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 696 | | | | | | | | | | | | | | |
| Site Features | Likely e | ely effect(s) of Norfolk Boreas Inderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | Cerve effect(s) of Norroik Boreas iderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documer | range of t refere | f Norfolk nce 5.3. | Boreas a 5.1). | and the e | xtent of a | any effect | t on indiv | iduals fro | m this sit | e would | result in r | no poten | tial for LS | E |

| Site Name of European Site: | 49 Dråby ^v | Vig SAC | | | | | | | | | | | | | | |
|---|--------------------------|--|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------|----------|-----------|----------|-------------|------|--|
| Distance to Norfolk Boreas (km) | 572 | | | | | | | | | | | | | | | |
| Site Features | Likely e | ely effect(s) of Norfolk Boreas Inderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | С | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | te would | result in | no poten | tial for LS | E | |





| Site Name of European Site: | 50 Duinen | Amela | nd SAC | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|-------------------|-----------|------------|------------|------------|------------|-------------|---------|-------------|----------|-------------|------|--|
| Distance to Norfolk Boreas (km) | 174 | | | | | | | | | | | | | | | |
| Site Features | Likely e | ly effect(s) of Norfolk Boreas lerwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | nderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o t refere | f Norfolk nce 5.3. | Boreas a 5.1). | ind the e | xtent of a | iny effect | t on indiv | iduals fro | om this sit | e would | result in I | no poten | tial for LS | E | |

| Site Name of European Site: | 51 Duinen | en Lage | e Land To | exel SAC | | | | | | | | | | | |
|--|----------------------|---|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 102 | | | | | | | | | | | | | | |
| Site Features | Likely e | ly effect(s) of Norfolk Boreas lerwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | iderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | ll impact documen | range o t refere | f Norfolk nce 5.3. | k Boreas a 5.1). | ind the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in r | no potent | tial for LS | E |





| Site Name of European Site: | 52 Duinen | Goeree | e & Kwa | de Hoek S | SAC | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|----------|------------|-----------|------------|------------|-------------|---------|-------------|-----------|------------|------|
| Distance to Norfolk Boreas (km) | 132 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Boreas | 5 | | | | | | | | | | |
| | Underv | derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | quality | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact documen | range o it refere | f Norfolk nce 5.3. | k Boreas a 5.1). | nd the e | xtent of a | iny effec | t on indiv | iduals fro | om this sit | e would | result in ı | no potent | ial for LS | E |





| Site Name of European Site: | 53 Duinen | Tersch | elling SA | ſĊ | | | | | | | | | | | | |
|---|---------------------|--|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------|---------|-------------|-----------|------------|------|--|
| Distance to Norfolk Boreas (km) | 144 | | | | | | | | | | | | | | | |
| Site Features | Likely e | Iy effect(s) of Norfolk Boreas lerwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | nderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o It refere | f Norfolk nce 5.3. | k Boreas a 5.1). | ind the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in r | no potent | ial for LS | E | |

| Site Name of European Site: | 54 Duinen | Vlielan | d SAC | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|------------|-----------|------------|------------|------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 125 | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | of Norfo | olk Borea | 5 | | | | | | | | | | |
| | Underv | Indervater noise Vessel Interactions Indirect effects on prey quality Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o t refere | f Norfolk nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | m this sit | e would | result in ı | no potent | tial for LS | E |





| Site Name of European Site: | 55 Dünenlandschaft Süd-Sylt SAC | | | | | | | | | | | | | | |
|---|------------------------------------|----------|------|---------------------|------|------|--------------------------|------|------|---------|-----------|------|----------------|------|------|
| Distance to Norfolk Boreas (km) | 382 | | | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | | |
| | Underv | vater no | oise | Vessel Interactions | | | Indirect effects on prey | | | Change | s to wate | er | In-combination | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | |

| Site | 5 | 56 | | | | | | | | | | | | | | |
|-------------------------|--|------|--|---------------------|------|------|-----------------------------|------|------|--------------------------|---|------|----------------|------|------|--|
| Name of European Site: | | 0 | Dunes De La Plaine Maritime Flamande SAC | | | | | | | | | | | | | |
| Distance to Norfolk Bor |) 1 | 182 | | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | |
| Site Features | tures Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | | | |
| | Underwater noise | | | Vessel Interactions | | | Indirect effects on prey | | | Changes to water quality | | | In-combination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Benthic Habitats | <u>.</u> | | | | | | | | | | | | | | | |




| Site | | 5 | 56 | | | | | | | | | | | | | | | |
|--|-----------------------------------|----------------------|-------------------------------|----------------------|--------------------|----------------------------|-----------------------------|------------------------|----------------------------|-------------------------------|------------|-----------------------|---------------------|----------|----------------------|----------------------|---------------------|-------------|
| Name of European Site | : | I | Dunes D | e La Plai | ne Mari | time Fla | mande S | AC | | | | | | | | | | |
| Distance to Norfolk Bor | eas (km | i) : | 182 | | | | | | | | | | | | | | | |
| Site Features | nent los | S | Tempo disturb | orary phy bance | vsical | Smoth increas sedime | ering du sed susp ent | e to ended | Re- mo contar sedime | bilisatio ninate d ents | n of | Underv and vib | vater no oration | vise | In-com | binatior | 1 | |
| | С | 0 | D | С | 0 | D | С | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Mudflats and sandflats not covered by seawater at low tide | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| a) The distance betwe screening, documerb) The distance betwe | en the p nt refere en the o | otential nce 5.3. | impact .5.1). project a | range of area and | Norfolk the des | Boreas | and the site is be | site is be eyond th | yond th e range | at of pot of any p | tential fo | or direct LSE (see | or indir Table 4 | ect effe | cts (see shore sc | Table 3. reening, | 2 of offs docume | hore ent |

reference 5.3.5.1).





| Site Name of European Site: | 57 Dunes | de l'Aut | hie et N | Iollières d | de Berck | SAC | | | | | | | | | |
|---|--|----------------------|-----------------------|---------------------|-----------|------------|-----------|------------|------------|------------|----------|-----------|----------|-------------|------|
| Distance to Norfolk Boreas (km) | 261 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | s | | | | | | | | | | |
| | Likely enect(s) of Norrol Docas Underwater noise Vessel Interactions Indirect effects on prey quality Changes to water quality In-comb | | | | | | | | | | | | bination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | ıl impact documen | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E |

| Site 58 | | | | | | | | | | | | |
|---|-------------|--------------|-------------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: Ea | st Caithnes | s Cliffs SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 68 | 2 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including as named features cormorant, guillemot, herring gull, puffin <i>Fratercula arctica</i> , razorbill, shag, fulmar and great black- backed gull | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) |
| Breeding peregrine Falco peregrinus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





| Site | 58 |
|---|--|
| Name of European Site: | East Caithness Cliffs SPA |
| Distance to Norfolk Boreas (km) | 682 |
| (a) East Caithness Cliffs SPA is beyond | d maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these |
| populations migrating through the | e Norfolk Boreas site are small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1). |
| (b) Peregrines breeding in the UK nor | rmally remain close to their breeding areas throughout the year and are therefore very unlikely to migrate offshore. |
| (c) The predicted effect attributable | to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for |

these features at East Caithness Cliffs SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site | : | | | 59 Essex | Estuar | ies SAC | | | | | | | | | | | | |
|---|-------------------------|----------|----------|-------------|----------|----------|------------------------------------|-----------------|--------------|----------------------------|--------------------------|--------------|-------------|--------------------|---------------|------------|----------|----------|
| Distance to Norfolk Bo | reas (l | (m) | | 164 | | | | | | | | | | | | | | |
| Site Features | Likel | y effe | ct(s) o | f Norfo | lk Borea | as | | | | | | | | | | | | |
| | Permaner loss C O | | | | | | Smotherin increased sediment | g due susper | to nded | Re- mo contam sedime | bilisat inateo nts | ion of d | Uno vibr | derwater ration | noise and | In- com | nbinati | on |
| | C 0 | | | | | D | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Estuaries | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Mudflats and | N | Ν | N | N | N | N | N (a) | N | N (a) | N (a) | | N (a) | N | | N (a) | N | N | N |
| sandflats not covered by seawater at low tide | (a) | (a) | (a) | (a) | (a) | (a) | | (a) | | | | | (a) | | | (a) | (a) | (a) |
| (a) The distance bet reference 5.3.5. | tween 1). | the o | ffshore | e projeo | t area a | and the | designated s | ite is b | eyond the ra | nge of any | poter | ntial LSE (s | ee Tal | ole 4.1 of | offshore scre | ening, | docum | nent |





| Site Name of European Site: | 60 Estuair | e De La | Canche, | Dunes Pi | icardes P | laquees | Sur L'anc | ienne Fal | aise, Fore | et D'hard | elot Et Fa | llaise D'e | quihen S | AC | |
|---|---------------------|--|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------|------------|-------------|----------|-------------|------|
| Distance to Norfolk Boreas (km) | 215 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | Iderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o it refere | f Norfolk nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in I | no poten | tial for LS | E |





| Site Name of European Site: | 61 Estuair | e de la S | Seine SC | CI | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 393 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o it refere | f Norfolk nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in ı | no potent | tial for LS | E |

| Site | | 62 | ! | | | | | | | | | | | | |
|-----------------------|-----------|------------|-------------|---|------------|-----------|-----------|-----------|-------|-------|---|-------|-------|-------|-------|
| Name of European Si | te: | Es | tuaires et | littoral pi | cards (bai | es de Som | me et d'A | uthie) SA | с | | | | | | |
| Distance to Norfolk B | oreas (kn | n) 26 | 51 | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) o | f Norfolk E | Boreas | | | | | | | | | | | |
| | Underw | ater nois | e | Vessel Interactions Indirect effects on prey Changes to water quality In-combinat | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Harbour seal | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Fish | | | | | | • | • | • | | • | | - | • | | |





| Site | | | | 62 | 2 | | | | | | | | | | | | | | | | |
|------------------|---------------------|-------------------|---------------------|----------------------|-----------------------|-----------------------|-----------------------------------|---------------------------------|----------------------|----------------------------|------------------------------|----------|-----------------|--------------------|----------|-------------------|-----------------|----------|-----------|----------|-------|
| Name of E | Europea | n Site: | | Es | tuaires | et litto | ral pica | rds (baie | es de So | mme et | d'Auth | ie) SAC | | | | | | | | | |
| Distance t | o Norfo | olk Bore | eas (km) |) 26 | 51 | | | | | | | | | | | | | | | | |
| Site | Likely | effect(s |) of Nor | folk Boi | reas | | | | | | | | | | | | | | | | |
| Features | Perma loss | nent ha | abitat | Tempo disturi | orary pl oance | hysical | Smoth increa suspe sedim | nering d Ised nded ent | ue to | Re- mo contar sedimo | obilisati ninated ents | on of | Under and vi | water r bration | oise | Electro fields | omagne (EMF) | tic | In-com | nbinatio | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| River lamprey | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| a) T L | he dista SE (see | nce be Table 3 | tween t .2 and 1 | he pote Table 5.1 | ntial im 1 of offs | ipact rai shore sc | nge of N reening | Norfolk E g, docum | Boreas a nent ref | and the erence | extent (5.3.5.1) | of any e | ffect on | individ | uals fro | m this s | ite wou | ld resul | t in no p | otentia | l for |

| Site | 63 | | | | | | | | | | | | |
|--|-------------|-------------------------------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Name of European Site: | Exe Estuary | SPA & Ram | sar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 491 | | | | | | | | | | | | |
| Site Features | Likely e | y effect(s) of Norfolk Boreas | | | | | | | | | | | |
| | Collisio | n mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| SPA features | | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) | |
| Dark-bellied goose Branta bernicla bernicla | | <u>N (a)</u> | | <u>N (a)</u> | |





| Site | 63 | | | | | | | | | | | |
|---|---------------|--------------|-----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Exe Estuary S | PA & Ram | sar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 491 | | | | | | | | | | | |
| Black-tailed godwit <i>Limosa limosa</i> islandica | | <u>N (a)</u> | | <u>N (a)</u> |
| Dunlin Calidris alpina alpina | | <u>N (a)</u> | | <u>N (a)</u> |
| Grey plover Pluvialis squatarola | | <u>N (a)</u> | | <u>N (a)</u> |
| Oystercatcher Haematopus ostralegus | | <u>N (a)</u> | | <u>N (a)</u> |
| Slavonian grebe Podiceps auritus | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Dark-bellied goose Branta bernicla bernicla | | N (b) | | N (b) |
| Avocet Recurvirostra avosetta | | <u>N (b)</u> | | <u>N (b)</u> |
| Dunlin Calidris alpina alpina | | <u>N (b)</u> | | <u>N (b)</u> |
| Grey plover Pluvialis squatarola | | <u>N (b)</u> | | <u>N (b)</u> |
| Oystercatcher Haematopus ostralegus | | <u>N (b)</u> | | <u>N (b)</u> |
| Slavonian grebe Podiceps auritus | | <u>N (b)</u> | | <u>N (b)</u> |
| Ringed plover Charadrius hiaticula | | <u>N (b)</u> | | <u>N (b)</u> |
| Greenshank Tringa nebularia | | <u>N (b)</u> | | <u>N (b)</u> |
| Black-tailed godwit <i>Limosa limosa islandica</i> | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |





| Site | | 63 |
|--------|---|--|
| Name | of European Site: | Exe Estuary SPA & Ramsar |
| Distar | ce to Norfolk Boreas (km) | 491 |
| (a) | Survey data show little or no evi in negligible numbers passing the significantly contribute to or alter screening, document reference | idence of Exe Estuary SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result arough the Norfolk Boreas site and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not er the overall in-combination assessment for these features at Exe Estuary SPA and Ramsar (see Table 6.1 of offshore 5.3.5.1). |
| (b) | Ramsar criterion: the predicted significant effect, or alter the ov document reference 5.3.5.1). | effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone, or contribute to a rerall in-combination assessment for these features at Exe Estuary SPA and Ramsar (see Table 6.1 of offshore screening, |

| Site 6 | L . | | | | | | | | | | | | | | |
|---|-------------|----------------------------------|---|-----------|------------|--------|------------|-------|-------|----------|------------|----------|--|--|--|
| Name of European Site: Fa | ir Isle SPA | | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 7 | 50 | | | | | | | | | | | | | | |
| Site Features | Likely eff | kely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | mortality | | Displacer | nent/Distu | rbance | Barrier Ef | fect | | Cumulati | ve/In-coml | oination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Breeding seabird assemblage including as named features Arctic skua <i>Stercorarius</i> <i>parasiticus</i> , fulmar, gannet, great skua <i>Stercorarius skua</i> , puffin, razorbill, Arctic tern, guillemot, kittiwake, shag | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | | | |
| Fair Isle wren | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | | |





| Site | 64 |
|---|--|
| Name of European Site: | Fair Isle SPA |
| Distance to Norfolk Boreas (km) | 750 |
| (a) Fair Isle SPA is beyond maximur migrating through the Norfolk E | n foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations Boreas site are likely to be very small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1) |

- (b) Fair Isle wren is a resident Shetland subspecies that is thought never to leave the island.
- (c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Fair Isle SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 6 | 5 | | | | | | | | | | | | | | |
|--|-------------------------|---|-----------------------------|---------------------------|-----------|-----------------------------|-------------------------|--------------------------|------------|----------------------------|------------|--------------|--|--|--|
| Name of European Site: F | alaise du B | essin Occic | lental SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 4 | 63 | | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | | |
| | Collision | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | O D C O D C O D C O D | | | | | | | | | | | | | |
| Breeding kittiwake, herring gull, lesser black-backed gull, fulmar | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (g) | N (g) | N (g) | | | |
| Nonbreeding red-throated diver | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (g) | N (g) | N (g) | | | |
| Nonbreeding cormorant, shag, red- breasted merganser | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (g) | N (g) | N (g) | | | |
| Nonbreeding guillemot, razorbill | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (g) | N (g) | N (g) | | | |
| Nonbreeding peregrine, short-eared owl Asio flammeus | | N (e) | | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (g) | N (g) | N (g) | | | |
| Breeding Dartford warbler Sylvia undata | | N (f) | | N (f) | N (f) | N (f) | N (f) | N (f) | N (f) | N (f) | N (f) | N (f) | | | |
| (a) Falaise du Bessin Occidental SPA is far these populations migrating through | beyond m the Norfolk | aximum fo Boreas site | raging rang e are likely | ge of desig to be extr | nated sea | bird specie all relative | s so has no to BDMPS | breeding , as these s | season cor | nnectivity. likely to m | Proportion | is of the | | | |





| Site | 65 | | | | | | | | | | | | | | |
|---|--------------|------------------------------------|------------|-----------|------------|--------|------------|-------|--------------|------------|-----------|----------|--|--|--|
| Name of European Site: | Falaise du B | essin Occid | lental SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 463 | 3 | | | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | mortality | | Displacer | nent/Distu | rbance | Barrier El | ffect | | Cumulati | ve/In-com | pination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| والاستفاد والمستعاد والمتعالية والمتعاد والمتعاد والملا | | | | | | | | | - T-I-I- C 4 | - 6 - 66-1 | | _ | | | |

Atlantic rather than northwards into the North Sea in autumn, and are unlikely to pass through the North Sea in spring (see Table 6.1 of offshore screening, document reference 5.3.5.1).

- (b) Nonbreeding red-throated divers at this SPA are likely to include birds from Scandinavia and the UK, especially juveniles which winter further south than adults. Their migrations between breeding grounds and the SPA probably take most individuals along the continental coast of Europe rather than across the North Sea. Small numbers may cross the North Sea towards the UK or Icelandic breeding grounds. However, red-throated divers tend to fly low over the sea so will be at very low risk of collision. Red-throated divers strongly avoid disturbance and offshore wind farms and so may have to fly further by flying around the Norfolk Boreas site rather than through the wind farm. However, in the context of a migration of over 1000km, the extra distance flown to pass an offshore wind farm represents a negligible increase in energy expenditure for the very few individuals that might be affected (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (c) Cormorants, shags and red-breasted mergansers do not normally occur at the Norfolk Boreas site based on bird survey data. Furthermore, these species tend to fly low over the sea and so would be at negligible risk of collision, and do not show displacement or barrier effects. Indeed, cormorants seem to benefit from offshore wind farm structures permitting them to extend foraging range offshore, and the same may be true for shag and red-breasted merganser which may also benefit from foraging opportunities around turbine bases (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (d) Nonbreeding guillemots and razorbills fly low over the sea and so are at very low risk of collision. However, they are partially displaced from offshore wind farms and may fly around rather than through offshore wind farms. A very small proportion of the guillemots and razorbills from this SPA might migrate through the Norfolk Boreas site towards breeding areas further north, but the area of foraging habitat lost to these birds if they avoid the Norfolk Boreas site would be negligible in relation to the wider area of the North Sea and Channel over which they forage, and the increase in migration distance to fly around rather than through the wind farm would be negligible in relation to a migration distance of hundreds of kilometres (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (e) Peregrines in western Europe do not normally migrate, so would be extremely unlikely to move between this SPA and the Norfolk Boreas site. Short-eared owls are more migratory, and sometimes cross the North Sea, but since this SPA is 445km from the Norfolk Boreas site, the chances of a short-eared owl from the SPA passing through the Norfolk Boreas site are extremely small.
- (f) Dartford warbler is a resident species that is unlikely to move from this SPA.
- (g) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Falaise du Bessin Occidental SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 66 | | | | | | | | | | | | | | | | | |
|--|----------|-----------|----------|------------------|--------------------|-----------|----------------------------|-----------------------------|---------------|----------------------------|--------------------------------|------------|-------------------|---------------------|-------|--------|----------|-------|
| Name of European Site: | Falaise | s du Cra | n aux O | eufs et d | lu Cap G | iris-Nez, | Dunes c | lu Chate | let, Mar | rais de T | ardingh | ien et Du | nes de V | Vissant | SAC | | | |
| Distance to Norfolk Boreas (km) | 199 | | | | | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | lk Borea | as | | | | | | | | | | | | | |
| | Underv | vater no | oise | V | essel Int | eraction | S | Indire | ect effec | ts on pr | ey | Changes | to wate | r quality | In-co | mbinat | ion | |
| | С | 0 | D | C | (| 0 | D | С | 0 | D | | С | 0 | D | С | C |) C |) |
| Harbour porpoise | N(a) | N(a) | N(a |) N | (a) | N(a) | N(a) | N(a) | N(a |) N | (a) | N(a) | | N(a) | N(a) |) N | (a) N | l(a) |
| Grey seal | N(a) | N(a) | N(a) |) N | (a) I | N(a) | N(a) | N(a) | N(a |) N | (a) | N(a) | | N(a) | N(a) | N | (a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) |) N | (a) I | N(a) | N(a) | N(a) | N(a |) N | (a) | N(a) | | N(a) | N(a) | N | (a) | N(a) |
| Benthic Habitats | <u> </u> | | | | I | | | | | | | | | | | | I | |
| Site Features | Permai | nent loss | 5 | Tempo disturb | orary phy bance | /sical | Smoth increas sedime | ering du sed susp ent | e to ended | Re- mo contar sedimo | obilisatio minate c ents | on of 1 | Underv and vib | water no pration | ise | In-cor | nbinatio | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Mudflats and sandflats not covered by seawater at low tide | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Reefs | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |





| Site | | 66 |
|--------------|--|---|
| Nam Site: | e of European | Falaises du Cran aux Oeufs et du Cap Gris-Nez, Dunes du Chatelet, Marais de Tardinghen et Dunes de Wissant SAC |
| Dist | ance to Norfolk | 199 |
| Bore | as (km) | |
| a) | The distance betwee Table 3.2 of offshore | en the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see escreening, document reference 5.3.5.1). |

b) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see Table 4.1 of offshore screening, document reference 5.3.5.1).





| Site Name of Europea Distance to Norfo | n Site: olk Borea | as (km) | | 67 Falaises SAC 225 | et Pelo | uses du C | Cap Blan | c Nez, dı | J Mont c | l'Hubert | , des Noi | ires Mot | tes, du F | ond de l | a Forge | et du Mo | ont de co | ouple |
|--|----------------------|-----------|----------|------------------------------|-------------------|-----------|-----------------------------------|---------------------------------|-----------|-------------------------|-------------------------------|-----------|-----------------|--------------------|-----------|----------|-----------|-------|
| Site Features | Likely e | effect(s) | of Norfo | lk Boreas | 5 | | | | | | | | | | | | | |
| Permanent loss | | | S | Tempo disturi | orary ph oance | ysical | Smoth increa suspe sedim | nering du sed nded ent | ue to | Re- m conta sedim | obilisatic minated ents | on of | Under and vi | water n bration | oise | In-con | nbinatio | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Mudflats and sandflats not covered by seawater at low tide | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Reefs | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The distance reference 5. | e betwee 3.5.1). | en the of | fshore p | roject ar | ea and t | he desigi | nated sit | e is beyc | ond the r | ange of a | any pote | ntial LSE | (see Tab | ble 4.1 of | f offshor | e screen | ing, docı | ument |





| Site | 68 | | | | | | | | | | | | | | |
|---|---------------------|----------------------------------|-----------------------|---------------------|-----------|------------|-----------|-------------|------------|-------------------|-----------|-------------|-----------|------------|------|
| Name of European Site: | Faray a | nd Holr | n of Fara | ay SAC | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 757 | | | | | | | | | | | | | | |
| Site Features | Likely e | kely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | nteractic | ons | Indirec | t effects (| on prey | Change quality | s to wate | er | In-com | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact locumer | range o it refere | f Norfoll nce 5.3. | k Boreas a 5.1). | ind the e | xtent of a | any effec | t on indiv | iduals fro | m this sit | e would | result in ı | no potent | ial for LS | E |

| Site | 69 | | | | | | | | | | | | | | |
|-----------------------------------|---|----------------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| Name of European Site: | Farne Isla | ands SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 397 | | | | | | | | | | | | | | |
| Site Features | Likely eff | xely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Arctic tern Sterna paradisea | | N (a) | | N (a) | N (b) | N (b) | N (b) | | | |
| Common tern Sterna hirundo | N (a) N (b) N (b) N (b) | | | | | | | | | | N (b) | | | | |
| Sandwich tern Sterna sandvicensis | | N (a) | | N (a) | N (b) | N (b) | N (b) | | | |





- (a) Farne Islands SPA is beyond maximum foraging range of these designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are likely to be very small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Farne Islands SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 70 | | | | | | | | | | | | |
|---|----------|------------|-------------|-------------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: | Fetl | ar SPA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 844 | | | | | | | | | | | | |
| Site Features | | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | | Collision | mortality | | Displacer | nent/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including named features Arctic skua, fulmar, gre skua, Arctic tern | as at | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) |
| Whimbrel Numenius phaeopus, | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dunlin <i>Calidris alpina alpina</i> | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Red-necked phalarope <i>Phalaropus</i> <i>lobatus</i> | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |

(a) Fetlar SPA is beyond the maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Dunlin, whimbrel and red-necked phalarope have not been observed migrating through the Norfolk Boreas site. Red-necked phalaropes from Fetlar SPA have been tracked by geolocator and migrate from Shetland to the Pacific Ocean via Iceland, Greenland and Canada, and so would not pass near to Norfolk Boreas. Dunlin and whimbrel from Fetlar SPA migrate south, but are unlikely to pass through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Fetlar SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site 7 | 1 | | | | | | | | | | | |
|---|-------------|--------------|--------------|----------|------------|---------|---------|--------|-------|---------|------------|----------|
| Name of European Site: F | irth of For | th SPA & R | amsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) 4 | 68 | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of N | lorfolk Bore | eas | | | | | | | | |
| | Collisior | mortality | | Displace | ement/Dist | urbance | Barrier | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Sandwich tern Sterna sandvicensis | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Bar-tailed godwit <i>Limosa lapponica</i> <i>lapponica</i> | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Golden plover Pluvialis apricaria | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Red-throated diver Gavia stellata | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Slavonian grebe Podiceps auratus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Knot Calidris canutus islandica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Pink-footed goose Anser brachyrhynchus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Shelduck Tadorna tadorna | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Redshank Tringa tetanus tetanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Turnstone Arenaria interpres | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Bar-tailed godwit <i>Limosa lapponica</i> <i>lapponica</i> | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Slavonian grebe Podiceps auratus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





| Knot Calidris canutus islandica | N (b) |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Pink-footed goose Anser brachyrhynchus | N (b) |
| Shelduck Tadorna tadorna | N (b) |
| Redshank Tringa tetanus tetanus | N (b) |
| Turnstone Arenaria interpres | N (b) |
| Goldeneye Bucephala clangula | N (b) |
| Goosander Mergus merganser merganser | N (b) |
| Common tern Sterna hirundo | N (b) |

(a) Migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration. Therefore, proportions of these populations migrating through the Norfolk Boreas site are likely to be extremely small relative to BDMPS and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Firth of Forth SPA & Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Firth of Forth SPA & Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site 72 | 2 | | | | | | | | | | | |
|--|---|--------------------------------|------------------------------|--------------------------|---------------------------|-----------------------------|------------|------------------------------|----------------------------|-----------------------------|---------------------|----------|
| Name of European Site: Fi | rth of ⁻ | ay & Eden E | tuary SPA & | Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) 50 | 6 | | | | | | | | | | | |
| Site Features | Like | ly effect(s) o | Norfolk Bor | eas | | | | | | | | |
| | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-com | | | | | | | | | | | bination |
| | C O D C O D C O D C O I | | | | | | | | | | | |
| SPA features | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Marsh harrier Circus aeruginosus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Greylag goose Anser anser | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Pink-footed goose Anser brachyrhnchus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Redshank Tringa totanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Greylag goose Anser anser | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Pink-footed goose Anser brachyrhnchus | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Redshank Tringa totanus | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Goosander Mergus merganser merganser | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Assemblage | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| (a) Survey data show little or no evider likely to result in negligible number | nce of s passi | Firth of Tay & ng through t | Eden Estuar ne Norfolk Bo | y SPA feat preas site | tures occur (see Table | ring in the 6.1 of offsl | Norfolk Be | oreas site, a ning, docur | and migrati ment refere | ions of birc ence 5.3.5. | ls from this 1). | SPA are |





- (b) Marsh harrier is a migrant species. Satellite tracking suggests that marsh harriers from Scotland migrate overland to the south coast of England and over the Channel to France, rather than across the North Sea, and so are unlikely to pass through the Norfolk Boreas site (Wright et al. 2012).
- (c) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Firth of Tay and Eden SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site: | 73 Firt | h of Tay a | & Eden E | stuary SA | ۱C | | | | | | | | | | |
|--|-------------------------|----------------------------------|------------------------|---------------------|-----------|-----------|-----------------|------------|------------|------------------|----------------|-----------|------------|-------------|----------|
| Distance to Norfolk Boreas (km) | 487 | | | | | | | | | | | | | | |
| Site Features | Likely e | kely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Under | water noi | se | Vessel | interacti | ons | Indired prey | ct effects | on | Chang quality | es to wat / | er | In-com | bination | |
| | С | 0 | D | С | 0 | D | с | 0 | D | с | о | D | с | 0 | D |
| Harbour seal | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The distance between the pot Table 3.2 of offshore screenin | tential im Ig, docum | ipact rang | ge of Nor rence 5.3 | folk Bore .5.1). | as and th | ne extent | of any ef | fect on ir | ndividuals | s from th | is site wo | uld resul | t in no po | tential for | LSE (see |





| Site 7 | 1 | | | | | | | | | | | | | | |
|--|------------|---|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|--|--|
| Name of European Site: F | amborough | and Filey (| Coast SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 2 | 216 | | | | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | ollision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combinatio | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Breeding kittiwake | | Y (a) | | N (b) | N (c) | Y (a) | N (c) | | | |
| Breeding gannet | | Y (a) | | N (d) | Y (d) | N (d) | N (e) | N (e) | N (e) | N (c) | Y (a) | N (c) | | | |
| Breeding common guillemot | | N (f) | | N (g) | Y (h) | N (g) | N (g) | N (i) | N (g) | N (c) | Y (h) | N (c) | | | |
| Breeding razorbill | | N (f) | | N (g) | Y (h) | N (g) | N (g) | N (i) | N (g) | N (c) | Y (h) | N (c) | | | |
| Breeding puffin | | N (f) | | N (g) | Y (h) | N (g) | N (g) | N (i) | N (g) | N (c) | Y (h) | N (c) | | | |
| Seabird assemblage, including the above species which are also individual features plus herring gull, fulmar, puffin, shag and cormorant. | | <u>¥ (j)</u> | | <u>N (k)</u> | <u>Y (j)</u> | <u>N (k)</u> | <u>Y (I)</u> | <u>N (k)</u> | | | |

(a) Band model estimates of collision mortality indicate that LSE cannot be ruled out at the Screening stage consideration (Norfolk Boreas Appendix 13. Annex 4).

(b) Kittiwakes are not considered to be at risk of disturbance and displacement or barrier effects at offshore wind farms therefore LSE can be ruled out out (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) The predicted effect attributable to the proposed Norfolk Boreas project is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Flamborough and Filey Coast SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(d) Flamborough and Filey Coast SPA is 216km from Norfolk Boreas. Thaxter et al. (2012) report a mean foraging range of breeding gannets as 92.5km, and a maximum recorded distance of 590km. Norfolk Boreas is therefore considerably beyond the mean foraging range of breeding gannets, but within their maximum range. Breeding gannets from Flamborough & Filey Coast SPA may therefore be affected by displacement. Searle et al. (2014) found that even for offshore wind farms considerably closer to a gannet breeding colony than under consideration here, impacts of displacement were negligible for this species because of its very long foraging range and large area used for foraging. Similarly, impacts of displacement during migration are considered likely to be negligible. Nonetheless, Natural England consider that an LSE cannot be ruled out at the Screening stage.

(e) Gannets are not considered at risk of barrier effects due to their wide ranging habits (see (d)), and migrating gannets cover very large distances, extending from the North Sea to West Africa, so that slight local effects would be negligible in the context of their large migrations and area use, therefore LSE can be ruled out (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 74 |
|--|---|
| Name of European Site: | Flamborough and Filey Coast SPA |
| Distance to Norfolk Boreas (km) | 216 |
| (f) Common guillemots, razorbills ar of offshore screening, document (g) Construction and docummissioni | Ind puffins tend to fly low over the sea so have a very low risk of collision mortality, therefore LSE can be ruled out (see Table 6.1 reference 5.3.5.1). |
| (g) Construction and decommission 5.3.5.1). | ng impacts are temporary and localised therefore LSE can be ruled out (see Table 6.1 of offshore screening, document reference |
| (h) Flamborough and Filey Coast SPA and a maximum recorded distance distance of 95km. Thaxter et al. (therefore considerably beyond th from Flamborough and Filey Coast Filey Coast SPA are likely to be m mortality generates a negligible in Screening stage. | is 216km from Norfolk Boreas. Thaxter et al. (2012) report a mean foraging range of breeding common guillemots as 37.8km, ce of 135km. Thaxter et al. (2012) report a mean foraging range of breeding razorbills as 23.7km, and a maximum recorded 2012) report a mean foraging range of breeding puffin as 4km, and a maximum recorded distance of 200km. Norfolk Boreas is ne normal foraging range of these species from Flamborough and Filey Coast SPA. It is therefore unlikely that any breeding adults st SPA will be present at Norfolk Boreas during the breeding season. During the nonbreeding season, birds from Flamborough and ixed with the large BDMPS populations of these species so that apportioning of the impact of the low level of displacement mpact to Flamborough and Filey Coast SPA. Nonetheless, Natural England consider that an LSE cannot be ruled out at the |
| (i) Since Norfolk Boreas is beyond th | ne normal foraging range of breeding common guillemots <u>and</u> , razorbills and puffins from Flamborough and Filey Coast SPA, there |
| will be no breeding season barrie | r impact for those populations. During the nonbreeding period birds from Flamborough and Filey Coast SPA are likely to be mixed to of these species so that apportioning of the impact of the low level of barrier effect to this very large BDMPS population |
| apportions a negligible impact to | Flamborough and Filey Coast SPA. |
| (j) Natural England advised that an I | SE for the seabird assemblage feature of the Flamborough and Filey Coast SPA cannot be ruled out for the project alone. |
| However, it should be noted that | the individual features of the assemblage for which LSE could not be ruled out (gannet, kittiwake, guillemot and razorbill) have |
| already been screened in for asse | essment individually, and the remaining species (fulmar, herring gull, puffin, shag and cormorant) were screened out on the basis |
| that there is either virtually no lik | celihood of connectivity (e.g. shag and cormorant are coastal and herring gull foraging range does not extend as far as Norfolk |
| Boreas, Thaxter et al. 2012), on | r site abundance was extremely low (e.g. puttin, with an apportioned SPA population of <0.1 individuals) or species are not |
| <u>considered at risk of wind farm in</u> | npacts (e.g. tulmar). |
| (i)(I) Natural England advised that an I | SE for the seabird assemblage feature of the Elamborough and Eiley Coast SPA cannot be ruled out for the project in- |
| combination with other wind far | ns. However, it should be noted that the individual features of the assemblage for which LSE could not be ruled out (gannet |
| kittiwake, guillemot and razorbill |) have already been screened in for assessment individually, and the remaining species (fulmar, herring gull, puffin, shag and |
| cormorant) were screened out or | the basis that there is either virtually no likelihood of connectivity (e.g. shag and cormorant are coastal and herring gull foraging |
| range does not extend as far as N | lorfolk Boreas, Thaxter et al. 2012), on site abundance was extremely low (e.g. puffin, with an apportioned SPA population of |
| <0.1 individuals) or species are no | ot considered at risk of wind farm impacts (e.g. fulmar). |





| Site Name of Eur | opean Si | te: | | 75 Flambo | orough He | ead SAC | | | | | | | | | | | | |
|---|-------------------------|-----------------|-----------|------------------|--------------------|-----------|--|-----------------------------|---------------|----------------------------|-------------------------------|------------|-----------------|---------------------|----------|----------|-----------|-------|
| Distance to I | Norfolk B | oreas (ki | m) | 213 | | | | | | | | | | | | | | |
| Site | Likely e | ffect(s) o | f Norfolk | Boreas | | | | | | | | | | | | | | |
| Features | Permanent loss | | | Tempo disturb | orary phy bance | vsical | Smoth increas susper | ering du sed nded sed | e to iment | Re- mo contar sedime | obilisatio ninated ents | n of | Under and vi | water no bration | vise | In-com | nbination | |
| | С | 0 | D | С | 0 | D | increased suspended sediment C O D | | | С | 0 | D | С | 0 | D | С | 0 | D |
| Submerged or partially submerged sea caves | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The dis referen | tance bei ice 5.3.5. | tween th 1). | e offshor | e project | area and | d the des | ignated s | ite is bey | ond the | range of | any pote | ential LSE | (see Tab | le 4.1 of | offshore | screenin | g, docum | ient |

| Site 70 | | | | | | | | | | | | | | |
|-----------------------------------|--------------|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Name of European Site: Fo | orth Islands | SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 4 | 6 | | | | | | | | | | | | | |
| Site Features | Likely ef | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Arctic tern sterna paradisea | | N (a) | | N (a) | N (b) | N (b) | N (b) | | |
| Common tern Sterna hirundo | | N (a) | | N (a) | N (b) | N (b) | N (b) | | |





| Site | 76 | | | | | | | | | | | |
|---|------------------------|--|---------------------------|--------------------------|-----------------------------|---------------------------|--------------------------|---------------------------|----------------------------|-------------------------|------------|--------|
| Name of European Site: | Forth Is | lands SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 476 | | | | | | | | | | | |
| Sandwich tern Sterna sandvicensis | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Roseate tern Sterna dougallii | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Gannet Morus bassanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Lesser black-backed gull Larus fuscus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Puffin Fratercula arctica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Shag Phalacrocorax aristotelis | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) Forth Islands SPA is beyond may migrating through the Norfolk B | imum foi oreas site | raging range of d e are small relativ | esignated s /e to BDMF | seabird sp PS (see Ta | ecies so ha ble 6.1 of o | as no bree offshore so | ding seaso reening, d | n connectiv ocument re | vity. Propo eference 5. | rtions of th 3.5.1). | ese popula | ations |

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Forth Islands SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 77 | | | | | | | | | | | | | |
|--|--|---|--|--|---|---|--|--|--|-----------|------------|-------------------|--|--|
| Name of European Site: | Foula SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | Distance to Norfolk Boreas (km) 822 | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of No | orfolk Bore | eas | | | | | | | | | | |
| | Collision | ision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage including as named features Arctic tern, fulmar, guillemot, razorbill, red-throated diver, Arctic skua, kittiwake, shag, Leach's storm-petrel Oceanodroma leucorhoa, great skua, puffin | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | |
| (a) Foula SPA is beyond maximum fora through the Norfolk Boreas site are (b) The predicted effect attributable to these features at Foula SPA (see Ta | ging range c small relati Norfolk Boi ble 6.1 of of | of designation ve to BDM reas is so si fshore scre | ed seabird PS (see Tal mall that it eening, doo | species so ble 6.1 of o would not cument refe | has no bre ffshore scr t significan erence 5.3 | eeding seas eening, do tly contribu .5.1). | on connect ocument re ute to or al | tivity. Prop ference 5.3 ter the ove | oortions of 3.5.1). erall in-con | these pop | ulations m | igrating : for | | |

| Site | 78 | | | | | | | | | | | | | | |
|---------------------------------|--|------------------------------------|------------|------------|--------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| Name of European Site: | Foulness (N | 1id-Essex Co | bast Phase | 5) SPA and | Ramsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 186 | | | | | | | | | | | | | | |
| Site Features | Likely ef | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-co | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| SPA features | | | | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | | |





| Site 7 | '8 | | | | | | | | | | | | |
|--|---|--------------|-------------|------------|----------|-------|-------|-------|-------|-------|-------|-------|--|
| Name of European Site: F | oulness (N | lid-Essex C | oast Phase | 5) SPA and | l Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | .86 | | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combinati | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Common tern Sterno hirundo | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Little tern Sterno albifrons | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Sandwich tern Sterno sandvicensis | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Golden- <u>Ringed</u> plover Pluvialis apricariaCharadrius hiaticula | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Hen harrier Circus cyaneus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Redshank Tringa tetanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Dark-bellied brent goose Branta bernicla bernicla | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Knot Calidris canutus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Oystercatcher Haematopus ostralegus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Ramsar features | | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Redshank Tringa tetanus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |





| Site 7 | '8 | | | | | | | | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--|
| Name of European Site: F | oulness (M | id-Essex Co | oast Phase ! | 5) SPA and | Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | .86 | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | as | | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | |
| | C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C D C D C D C D C D C D C D C D C D C D C D C D C D C D C D C D C D | | | | | | | | | | | | |
| Dark-bellied brent goose Branta bernicla bernicla | | N (b) | | N (b) | |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) | |
| Knot Calidris canutus | | N (b) | | N (b) | |
| Oystercatcher Haematopus ostralegus | | N (b) | | N (b) | |
| Avocet Recurvirostra avosetta | | <u>N (b)</u> | | <u>N (b)</u> | |
| Black-tailed godwit Limosa limosa | | <u>N (b)</u> | | <u>N (b)</u> | |
| <u>Curlew Numenius arquata</u> | | <u>N (b)</u> | | <u>N (b)</u> | |
| <u>Dunlin Calidris alpina</u> | | <u>N (b)</u> | | <u>N (b)</u> | |
| <u>Golden plover Pluvialis apricaria</u> | | <u>N (b)</u> | | <u>N (b)</u> | |
| Greenshank Tringa nebularia | | <u>N (b)</u> | | <u>N (b)</u> | |
| Hen harrier Circus cyaneus | | <u>N (b)</u> | | <u>N (b)</u> | |
| Little grebe Tachybaptus ruficollis | | <u>N (b)</u> | | <u>N (b)</u> | |
| Shelduck Tadorna tadorna | | <u>N (b)</u> | | <u>N (b)</u> | |
| Spotted redshank Tringa erythropus | | <u>N (b)</u> | | <u>N (b)</u> | |
| Assemblage | | N (b) | | N (b) | |





| Site | 78 | | | | | | | | | | | | |
|---|--|--|---|---|--|---|--|---|--|---|---|--|--|
| Name of European Site: | Foulness (M | id-Essex Co | ast Phase ! | 5) SPA and | Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 186 | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | lision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | |
| | С | O D C O D C O D C O | | | | | | | | | | | |
| (a) Survey data show little or no evide negligible numbers passing throug it would not significantly contribut screening, document reference 5.3 (b) Ramsar criterion: the predicted eff significant effect or alter the overa reference 5.3.5.1). | nce of Fouln n the Norfoll e to or alter .5.1). ects attribut Il in-combina | ess SPA fea K Boreas sit the overall able to Nor ation asses | atures occu e during m in-combin folk Borea sment for t | nring in the nigration ar ation asses s are so sm chese featu | e Norfolk E nd, in addir ssment for nall that th ires at Fou | Boreas site, tion, the pi these feat ey would r Iness SPA a | , and migra redicted ef ures at Fou not have a and Ramsa | itions of bi fect attribu ulness SPA significant r (see Table | rds from th utable to N and Ramsa effect alon e 6.1 of off | iis SPA are orfolk Bore ar (see Tab ie or contri shore scre | likely to re eas is so sn le 6.1 of of bute to a ening, doc | esult in nall that fshore ument | |





| Site | 79 | | | | | | | | | | | | | | |
|--|--|--|--|--|---|--|--|--|--|---|--|---------------------|--|--|--|
| Name of European Site: | Fowlsheugh | SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 524 | | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | | |
| | Collision | sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Breeding seabird assemblage including as named features fulmar, guillemot, kittiwake, razorbill, herring gull | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | | |
| (a) Fowlsheugh SPA is beyond maximum migrating through the Norfolk Bore (b) The predicted effect attributable to these features at Fowlsheugh SPA (| m foraging i as site are li Norfolk Bo see Table 6. | range of de kely to be reas is so s 1 of offsho | esignated s very small mall that it pre screeni | eabird spe relative to would not ng, docume | cies so has BDMPS (so t significan ent referer | no breedi ee Table 6. tly contrib nce 5.3.5.1 | ng season o 1 of offsho ute to or al). | connectivit ore screeni lter the ove | cy. Proport ng, docum erall in-cor | ions of the ent referen nbination a | se populat ice 5.3.5.1) issessment | ions). t for | | | |

| Site | 0 | | | | | | | | | | | | | |
|---|--------------|--|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Name of European Site: | risian Front | oSPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | a. 100km* | m* | | | | | | | | | | | | |
| Site Features | Likely eff | ely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Nonbreeding common guillemot, great skua, great black-backed gull, lesser black backed gull | - | N (a) | | N (a) | N (b) | N (b) | N (b) | | |





| Site | 80 |
|--|--|
| Name of European Site: | Frisian Front pSPA |
| Distance to Norfolk Boreas (km) | ca. 100km* |
| *Distance from the Norfolk Boreas site | is uncertain as the boundaries of the pSPA are under consultation at present. |
| (a) Migrations of birds from this pS | PA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration relative to the size of |
| BDMPS regional populations (se | e Table 6.1 of offshore screening, document reference 5.3.5.1) . |

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Frisian Front pSPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 8 | 1 | | | | | | | | | | | | | | |
|---|-------------|---|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|--|--|
| Name of European Site: 0 | ibraltar Po | int SPA an | d Ramsar | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | 61 | | | | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | 0 D C 0 D C 0 D C 0 D C | | | | | | | | | | | | | |
| SPA features | | | | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (a) | | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) | | | |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) | | | |
| Knot <i>Calidris canutus</i> | | N (a) | | N (a) | | | |
| Sanderling Calidris alba | | N (a) | | N (a) | | | |
| Assemblage | | N (a) | | N (a) | | | |
| Ramsar features | | | | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (b) | | N (b) | | | |





| Site | 81 | | | | | | | | | | | |
|--|--|---|--|---|--|---|--------------------------------------|--|--|--|--|------------------------------|
| Name of European Site: | Gibraltar Po | oint SPA an | d Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 161 | | | | | | | | | | | |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Sanderling Knot-Calidris alba canutus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dark-bellied brent goose Branta bernicla bernicla | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Little tern Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| (a) Survey data show no evidence of negligible numbers passing throug it would not significantly contribu offshore screening, document ref | Gibraltar Poir gh the Norfol te to or alter erence 5.3.5. | nt SPA feat k Boreas si the overal 1). | ures occur te during t l in-combir | ring in the his period ation asse | Norfolk Bo and, in ad essment fo | oreas site, dition, the r these fea | and migra predicted tures at G | tions of bir effect attri ibraltar Poi | ds from th butable to nt SPA anc | is SPA are li Norfolk Bc I Ramsar (s | ikely to res preas is so s ee Table 6. | ult in small that 1 of |

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Gibraltar Point SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 2 | | | | | | | | | | | | | | |
|---------------------------------|------------|------------------------------------|------------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|--|--|--|
| Name of European Site: | Great Yarm | outh and N | lorth Dene | s SPA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | '3 | | | | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | mortality | | Displacer | nent/Distu | ırbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | | | |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Breeding little tern | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | | |





(a) Great Yarmouth & North Denes SPA is beyond the maximum foraging range of little tern (11km) and foraging tends to be coastal so has no breeding season connectivity. Proportions of this population migrating through the Norfolk Boreas site are likely to be small as the species is thought to remain close to shore during much of its migration through UK waters (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Great Yarmouth & North Denes SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 33 | | | | | | | | | | | | | | |
|----------------------------------|------------|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| Name of European Site: | Greater Wa | sh SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | a. 59km* | km* | | | | | | | | | | | | | |
| Site Features | Likely eff | ely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | O D C O D C O D C O D | | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (a) | | N (a) | | | |
| Common tern Sterna hirundo | | N (a) | | N (a) | | | |
| Sandwich tern Stena sandvicensis | | N (a) | | N (a) | | | |
| Nonbreeding red-throated diver | | N (b) | | Y (c) | Y (i) | N (d) | N (b) | N (b) | N (b) | Y (c) | Y (i) | N (h) | | | |
| Nonbreeding little gull | | Y (e) | | N (f) | N (h) | Y (e) | N (h) | | | |
| Nonbreeding common scoter | | N (g) | | Y (i) | N (g) | Y (j) | N (h) | N (h) | | | |

*Note that this distance refers to the Norfolk Boreas site. The export cable will pass through the SPA.

(a) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively, which suggests potential connectivity between the SPA and the Norfolk Boreas site. However, the tern colonies are at locations along the Norfolk coast which are beyond these foraging distances from the Norfolk Boreas site. Therefore, connectivity between the SPA and Norfolk Boreas site is ruled out on the basis of distance. Furthermore, these species tend to forage in coastal waters rather than offshore. Hence, collision risk, displacement and barrier effects can be excluded (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Red-throated divers fly close to the sea surface and are therefore at extremely low risk of collisions or barrier effects (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 83 |
|--|---|
| Name of European Site: | Greater Wash SPA |
| Distance to Norfolk Boreas (km) | ca. 59km* |
| (c) LSE cannot be ruled out at screening | ng for impacts of Displacement/Disturbance to nonbreeding red-throated divers as a result of construction work (specifically for |
| export cable laying operations thro | bugh part of the Greater Wash SPA). |
| (d) Displacement/Disturbance of red-t to Norfolk Boreas will be negligible | chroated diver during operation and decommissioning is considered negligible as the increase in vessel traffic within the SPA due compared to the current baseline (see Table 6.1 of offshore screening, document reference 5.3.5.1). |
| (e) There is potential for little gull con | nectivity between the SPA and the Norfolk Boreas site, therefore LSE cannot be ruled out at screening for collision risk impacts |
| to nonbreeding little gull considera | ation (Norfolk Boreas Appendix 13. Annex 4). |
| (f) Displacement of little gulls by offsh | nore wind farms appears to be negligible**, indicating no LSE for this SPA feature as a consequence of displacement or barrier |
| effects. | |
| (g) Surveys found no common scoters | in the Norfolk Boreas site since this species favours waters <20m in depth. Common scoter was also only present at very low |
| densities along the export cable ro | ute, therefore no LSE for this SPA feature is predicted (see Table 6.1 of offshore screening, document reference 5.3.5.1). |
| (h) The predicted effect attributable to | o Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these |
| features at Greater Wash SPA (see | Table 6.1 of offshore screening, document reference 5.3.5.1). |
| (i) Following advice from Natural Engl | land it is considered that Operations and Maintenance vessels may disturb red-throated divers whilst transiting through the SPA |
| therefore an LSE cannot be screene | ed out. |
| (j) Natural England advised that LSE c | ould not be ruled out for displacement of common scoter due to cable installation through the SPA. |
| ** Dierschke, V., Furness, R.W. and Gar | the, S. 2016. Seabirds and offshore wind farms in European waters: Avoidance and attraction. Biological Conservation 202, 59- |
| 68. | |
| | |





| Site Name of European Site: | 84 Grevel | ingen S <i>I</i> | AC | | | | | | | | | | | | |
|---------------------------------------|--------------|--|-----------|------------|-----------|------------|-----------|------------|-------------|------------|----------|-----------|----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 132 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | nderwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | quality | | | | | | | | | | | | | |
| | С | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | ıl impact | range o | f Norfoll | k Boreas a | and the e | xtent of a | any effec | t on indiv | viduals fro | om this si | te would | result in | no poten | tial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence ! | 5.3.5.1). | | | | | | | | | | | | |

| Site Name of European Site: | 85 Gule Re | ev SCI | | | | | | | | | | | | | |
|---------------------------------|--------------------|----------------------------------|------|------|------|------|------|------|------|------|---|------|------|------|------|
| Distance to Norfolk Boreas (km) | 541 | | | | | | | | | | | | | | |
| Site Features | Likely e Underv | kely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





| Site | 85 |
|--|---|
| Name of European Site: | Gule Rev SCI |
| Distance to Norfolk Boreas (km) | 541 |
| a) The distance between the potentia | I impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see |
| Table 3.2 of offshore screening, docur | nent reference 5.3.5.1). |

| Site Name of European Site: | 86 Gullma | nsfjorde | en SAC | | | | | | | | | | | | |
|---|-----------------------|--|------------------------|------------|-----------|------------|-----------|------------|------------|------------|----------|-------------|----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 769 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | Inderwater noise Vessel Interactions Indirect effects on prey quality Indirect effects on prey quality | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | al impact ment ref | range o erence S | f Norfoll 5.3.5.1). | k Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in I | no poten | tial for LS | E (see |





| Site Name of European Site: Distance to Norfolk Boreas (km) | | | | 87 Haisborough, Hammond and Winterton SAC 0 | | | | | | | | | | | | |
|---|------------------------------------|------------|-------------|---|------------|-----------|-------------------------------|-------------|----------|--|---------|----------|----------------|-------|-------|--|
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | | | |
| | Temporary physical disturbance | | | Permanent Habitat loss | | | Introduction of new substrate | | | Increased suspended sediment and smothering | | | In-combination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Sandbanks which are slightly covered by sea water all the time | Y (a) | Y (a) | Y (a) | N (b) | Y (a) | N (b) | N (b) | Y (a) | N (b) | | | | Y (a) | Y (a) | Y (a) | |
| Reefs | Y (a) | Y (a) | Y (a) | N (b) | Y (c) | N (b) | N (b) | Y (a) | N (b) | Y (a) | | Y (a) | Y (a) | Y (a) | Y (a) | |
| (a) Site overlaps with the Norfolk | Boreas of | fshore cab | le corridor | and the | refore LSE | cannot be | ruled out | t at the so | creening | stage (s | ee Tabl | e 4.1 of | Offshore | e HRA | | |

(a) Site overlaps with the Norfolk Boreas offshore cable corridor and therefore LSE cannot be ruled out at the screening stage (see Table 4.1 of Offshore HRA Screening (document reference 5.3.5.1) and potential effects have been assessed in sections 7.4.1 (sandbanks) and section 7.4.2 (reefs) of the Information to Support HRA Report, document reference 5.3.

(b) Any permanent habits loss is considered as part of the operational phase of the development and therefore have been screened out for the construction or decommissioning phases (section 7.3.3 Worst case scenario of the Information to Support HRA Report, document reference 5.3).

(c) The Applicant's position is that permanent habitat loss for Sabellaria spinulosa reef should be screened out because if cable protection is required there is evidence to suggest that it could be colonised by Sabellaria spinulosa reef therefore the installation of cable protection would not represent a loss of habitat. Furthermore, it Annex I reef will be avoided by micro siting any permanent seabed infrastructure such as cable protection and cable crossings to avoid reef features. Therefore, the Information to support HRA report (document reference 5.3) does not assess impacts of habitat loss on Sabellaria Spinulosa reef. Natural England disputes this position and therefore impacts of habitat loss have been screened in here (see Table 3.1 of the Haisborough Hammond and Winterton SAC site integrity plancontrol document, document reference 8.20).




| Site Name of European Site: | 88 Halland | ls Vädeı | rö SAC | | | | | | | | | | | | | |
|---------------------------------------|---------------|---|-----------|----------|-----------|------------|----------|------------|------------|------------|---------|-------------|----------|-------------|--------|--|
| Distance to Norfolk Boreas (km) | 885 | | | | | | | | | | | | | | | |
| Site Features | Likely e | y effect(s) of Norfolk Boreas erwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | rwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | C | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia | l impact | range of | f Norfolk | Boreas a | ind the e | xtent of a | ny effec | t on indiv | iduals fro | m this sit | e would | result in i | no poten | tial for LS | E (see | |
| Table 3.2 of offshore screening, docu | ment refe | erence 5 | 5.3.5.1). | | | | | | | | | | | | | |

| Site Name of European Site: | 89 Hambu | irgisches | s Watter | nmeer SC | I | | | | | | | | | | | |
|---------------------------------|-------------|--|----------|----------|------|------|------|------|------|------|---|------|------|------|------|--|
| Distance to Norfolk Boreas (km) | 350 | | | | | | | | | | | | | | | |
| Site Features | Likely e | ely effect(s) of Norfolk Boreas derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality | | | | | | | | | | | | | | |
| | C | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |





| Site | 89 |
|---------------------------------------|---|
| Name of European Site: | Hamburgisches Wattenmeer SCI |
| Distance to Norfolk Boreas (km) | 350 |
| a) The distance between the potentia | l impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see |
| Table 3.2 of offshore screening, docu | ment reference 5.3.5.1). |

| Site | 0 | | | | | | | | | | | |
|---|------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: | lamford W | ater SPA a | nd Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | .46 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (a) | | N (a) |
| Avocet Curvirostra avosetta | | N (a) | | N (a) |
| Golden plover<u>S</u>helduck <i>Tadorna tadorna</i> <i>Pluvialis apricaria</i> | | N (a) | | N (a) |
| Ruff Philomachus pugnax | | N (a) | | N (a) |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (a) | | N (a) |
| Dark-bellied brent goose Brenta bernicla bernicla | | N (a) | | N (a) |





| Site 9 | 0 | | | | | | | | | | | |
|--|------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | lamford W | ater SPA a | nd Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | 46 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) |
| Teal Anas crecca | | N (a) | | N (a) |
| Redshank Tringa totanus | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Ringed plover Charadrius hiaticula | | N (b) | | N (b) |
| Little tern Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> |
| Avocet Curvirostra avosetta | | <u>N (b)</u> | | <u>N (b)</u> |
| Redshank Tringa totanus | | <u>N (b)</u> | | <u>N (b)</u> |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (b) | | N (b) |
| Dark-bellied brent goose Brenta bernicla bernicla | | N (b) | | N (b) |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) |





| Site | €0 | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|---|---|---|--|--|--|--|
| Name of European Site: | Hamford Wa | ater SPA ar | nd Ramsar | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 146 | | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | as | | | | | | | | | | | |
| | Collision | sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | Sion mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination O D C O D C O D | | | | | | | | | | | | | |
| (a) Survey data show little or no evidence result in negligible numbers passing small that it would not significantly coffshore screening, document refere (b) Ramsar criterion: the predicted effect or alter the overall in-combination | e of Hamfor hrough the ontribute to nce 5.3.5.1) ts attributal tion assessn | d Water Si Norfolk Bo or alter th ole to Norfo nent for th | PA feature preas site d ne overall in olk Boreas ese feature | s occurring uring migra n-combinat are so sma es at Hamf | in the Nor ation and, tion assess Il that they ord Water | folk Borea in additior ment for t y would nc SPA and R | s site, and h, the predi hese featu ht have a sig amsar (see | migrations cted effect res at Foul gnificant e Table 6.1 | of birds fr attributat ness SPA a ffect alone of offshore | om this SP ble to Norf nd Ramsar or contrib screening | A are likely olk Boreas (see Table ute to a sig documer | y to is so e 6.1 of gnificant nt | | | |

reference 5.3.5.1).

| Site Name of European Site: | 91 Havet o | og kyste | n mellei | m Præstø | Fjord og | ; Grønsur | nd SAC | | | | | | | | | |
|---------------------------------------|---------------|--|-----------|------------|----------|------------|------------|------------|------------|------------|---------|-----------|----------|-------------|--------|--|
| Distance to Norfolk Boreas (km) | 1,036 | | | | | | | | | | | | | | | |
| Site Features | Likely e | ely effect(s) of Norfolk Boreas derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | erwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia | l impact | range o | f Norfolk | k Boreas a | nd the e | xtent of a | any effect | t on indiv | iduals fro | m this sit | e would | result in | no poten | tial for LS | E (see | |
| Table 3.2 of offshore screening, docu | ment ref | erence | 5.3.5.1). | | | | | | | | | | | | | |





| Site Name of European Site: | 92 Havet o | omkring | Nordre | Rønner S | AC | | | | | | | | | | |
|---------------------------------------|---------------|---|----------|----------|----------|------------|------------|----------|------------|------------|---------|-------------|-----------|------------|--------|
| Distance to Norfolk Boreas (km) | 739 | | | | | | | | | | | | | | |
| Site Features | Likely e | ly effect(s) of Norfolk Boreas derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | erwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | erwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination quality | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range of | Norfolk | Boreas a | nd the e | xtent of a | iny effect | on indiv | iduals fro | m this sit | e would | result in r | no potent | ial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | .3.5.1). | | | | | | | | | | | | |

| Site | 93 | | | | | | | | | | | | | | |
|---------------------------------|----------|--------------------------------------|----------|-----------|-----------|-----|----------|-----------|---------|-------------------|-----------|---|---------|----------|---|
| Name of European Site: | Helgola | and mit I | Helgolaı | nder Fels | sockel SA | С | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 330 | 0 elv effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| Site Features | Likely e | ikely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | vater no | ise | Vessel I | nteractio | ons | Indirect | effects o | on prey | Change quality | s to wate | r | In-coml | pination | |
| | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |





| Site Name of European Site: | 93 Helgol | and mit | Helgolar | nder Fels | sockel SA | ۱C | | | | | | | | | | |
|---|-----------------------|--|------------------------|------------|-----------|------------|-----------|------------|------------|------------|----------|-------------|----------|-------------|--------|--|
| Distance to Norfolk Boreas (km) | 330 | 330 N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) | | | | | | | | | | | | | | |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | al impact ment ref | range o erence ! | f Norfolk 5.3.5.1). | k Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in I | no poten | tial for LS | E (see | |

| Site |)4 | | | | | | | | | | | | | | |
|--|------------|--|-----------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| Name of European Site: | lermaness, | Saxa Vord | and Valla | Field SPA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 86 | | | | | | | | | | | | | | |
| Site Features | Likely eff | ely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | lision mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Breeding seabird assemblage including as named features gannet, guillemot, red- throated diver, puffin, fulmar, kittiwake, great skua, shag | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | | |





(a) Hermaness, Saxa Vord & Valla Field SPA is beyond the maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are likely to be very small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hermaness, Saxa Vord & Valla Field SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 95 | | | | | | | | | | | | | | |
|---------------------------------------|----------|--|-----------|------------|----------|------------|-----------|------------|------------|-------------|---------|-----------|-----------|-------------|--------|
| Name of European Site: | Hessel | ø med o | mliggen | de stenre | ev SAC | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 878 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Boreas | 5 | | | | | | | | | | |
| | Underv | water noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | water noise Vessel Interactions Indirect effects on prey Changes to water In-combination quality | | | | | | | | | | | | | |
| | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfolk | k Boreas a | nd the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in | no potent | tial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | |

| Site | 96 |
|---------------------------------|---|
| Name of European Site: | Hirsholmene, havet vest herfor og Ellinge Å's udløb SAC |
| Distance to Norfolk Boreas (km) | 719 |
| Site Features | Likely effect(s) of Norfolk Boreas |





| Site Name of European Site: | 96 Hirshol | lmene, l | navet ve | st herfor | og Elling | e Å's udlø | øb SAC | | | | | | | | |
|---|----------------------|---------------------|------------------------|------------|-----------|------------|----------|-------------|------------|-------------------|-----------|-----------|-----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 719 | | | | | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | nteractio | ons | Indirec | t effects o | on prey | Change quality | s to wate | er | In-com | pination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact ment ref | range o erence 5 | f Norfoll 5.3.5.1). | k Boreas a | ind the e | xtent of a | ny effec | t on indiv | iduals fro | om this sit | e would | result in | no potent | tial for LS | E (see |

| Site | 7 | | | | | | | | | | | | | |
|-----------------------------------|------------|------------------------------------|---|----------|------------|---------|-----------|-------|-------|----------|-----------|----------|--|--|
| Name of European Site: | lornsea Me | ere SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 2 | 15 | | | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Gadwall Anas strepera | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | |





| Nonbreeding gadwall, Mute swan Cygnus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | |
|--|----------------|--------------|--------------|------------|--------------|--------------|-------------|--------------|--------------|-------------|-----------|-------|--|
| olor | | | | | | | | | | | | | |
| (a) Survey data show no evidence of Hornsea Mere SPA features (gadwall, mute swan) occurring in the Norfolk Boreas site, and migrations of birds from this SPA | | | | | | | | | | | | | |
| are likely to result in negligible num | pers passing t | through t | the Norfolk | Boreas sit | te (see Tab | le 6.1 of of | ffshore scr | eening, do | cument ref | erence 5.3 | .5.1). | | |
| (b) The predicted effect attributable to | Norfolk Bore | eas is so si | mall that it | would not | t significan | tly contrib | ute to or a | lter the ove | erall in-con | nbination a | ssessment | t for | |
| these features at Hornsea Mere SPA | (see Table 6 | 5.1 of offs | hore scree | ning, docu | ment refei | rence 5.3.5 | .1). | | | | | | |

| Site 9 | 8 | | | | | | | | | | | |
|---|------------|-------------|-------------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: | loy SPA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 7 | 28 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including as named features Arctic skua, great black- backed gull, guillemot, kittiwake, red- throated diver, fulmar, puffin, great skua | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) |
| Breeding peregrine | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |

(a) Hoy SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year, and are very unlikely to migrate offshore in the UK.

(c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Hoy SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | | | 99 | | | | | | | | | | | | | |
|---------------------|------------|------------|-------------------|-------------------------------|---------------------------|-------------------|----------|------------|--------|---------|----------|---------|-----------|-------|-------|--|
| Name of European S | ite: | | Humb | er Estuar | y SAC | | | | | | | | | | | |
| Distance to Norfolk | Boreas (ki | m) | 112 | | | | | | | | | | | | | |
| Marine Mammals | | | | k Boreas | | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of | of Norfolk Boreas | | | | | | | | | | | | | |
| | Underwa | ater noise | 2 | Vessel Ir disturba outs | nteractior ince at sea | ns and al haul | Indirect | effects or | n prey | Changes | to water | quality | In-combin | ation | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Grey seal | Y (a) | Y (a) | Y (a) | Y (c) | Y (c) | Y (c) | Y (a) | Y (a) | Y (a) | Y (a) | | Y (a) | Y (a) | Y (a) | Y (a) | |





| Site | | | | | 99 | | | | | | | | | | | | | | | | |
|-------------------------------|--------------------|------------------------|------------|--------------------------|-----------------------|--------|-----------------------------------|---------------------------------|----------|-----------------------------------|---------------------------------|-------------|--------------------------|----------------------------|-------------|-------------------|---------------------|----------|--------|----------|-------|
| Name of E | uropea | an Site: | | | Hu | mber E | stuary | SAC | | | | | | | | | | | | | |
| Distance t | o Norf | olk Bor | eas (kn | ר) | 11 | 2 | | | | | | | | | | | | | | | |
| Fish | | | | | | | | | | | | | | | | | | | | | |
| Site | Likely | effect(| s) of No | orfolk Bo | oreas | | | | | | | | | | | | | | | | |
| Features | Perma habita | anent at loss | | Temp physic distur | orary cal bance | | Smoth increa suspe sedim | nering c ised nded ent | lue to | Re- m conta sedim | obilisat minateo ents | ion of d | Under and v | water i ibration | noise | Electro fields | omagne (EMF) | etic | In-com | bination | |
| | С | 0 | D | с | 0 | D | с | 0 | D | С | 0 | D | с | 0 | D | с | 0 | D | С | 0 | D |
| Sea Lamprey | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) |
| River lamprey | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) |
| Benthic h | abitats | | | | | | | | | | | | | | | | | | | | |
| Site Featu | res | | | Perma | anent lo | DSS | Temp physic distur | orary cal bance | | Smoth increa suspe sedim | nering d ised nded ent | lue to | Re- m contai sedim | obilisat minate ents | ion of d | Under and vi | water i ibration | noise | In-com | bination | |
| | | | | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Estuaries | | | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) |
| Mudflats covered b tide | and san y seawa | ndflats r ater at l | not Iow | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) |



5.3).



| Site | | 99 | | | | | | | | | | | | | | | | |
|--|-------------------|-------------------|----------------------|---------------------|----------------------|----------------------|----------------------|---------------------|----------------------|--------------------|---------------------|--------------------|----------------------|-------------------|--------------------|---------------------|------------|-----------|
| Name of European Site: | | Hu | ımber E | stuary | SAC | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (kn | n) | 11 | 2 | | | | | | | | | | | | | | | |
| Sandbanks which are slightly covered by sea water all the time | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) |
| Coastal lagoons | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) |
| a) Potential effects from cannot be ruled out ar | underw nd have | ater no been a | oise; ves ssessed | sel inte in sect | eractior tion 8.3 | ns; chan .3 of th | ges to v e Inforn | water q nation t | uality; (to Supp | changes ort Hab | to prey itats Re | resour gulatior | ces; and ns Asses | d distur sment | bance a Report. | t seal ha docume | ul-out sit | es nce |

b) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 5.1 of offshore screening, document reference 5.3.5.1).

c) Potential for vessel interactions and disturbance at seal haul-out sites if a port to the north of the offshore project area is selected and therefore LSE cannot be ruled out at the screening stage and have been assessed in section 8.3.3 of the Information to Support Habitats Regulations Assessment Report, document reference 5.3.

d) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see Table 4.1 of offshore screening, document reference 5.3.5.1).





| Site | 100 | | | | | | | | | | | | | |
|--|----------|---|-------------|----------|-----------|----------|---------|--------|-------|--------|------------|------------|--|--|
| Name of European Site: | Humber E | stuary SP | A and Ran | nsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 190 | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) o | f Norfolk E | Boreas | | | | | | | | | | |
| | Collisio | n mortali | :y | Displace | ement/Dis | turbance | Barrier | Effect | | Cumula | tive/In-co | ombination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| SPA features | | | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Bittern Botaurus stellaris | | N (a) N (a) <th< td=""></th<> | | | | | | | | | | | | |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Dunlin Calidris alpine alpine | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Golden plover Pluvialis apricaria | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Hen harrier Circus cyaneus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Knot Calidris canutus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Little tern Sterna albifrons | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Marsh harrier Circus aeruginosus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Redshank Tringa totanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Ruff Calidris pugnax | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Shelduck Tadorna tadorna | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Ramsar features | | | | | | | | | | | | | | |





| Site | 100 | | | | | | | | | | | |
|--|-------------|-----------|-----------|------------|------------|-----------|-----------|------------|----------|------------|------------|---------------------|
| Name of European Site: | Humber Es | tuary SPA | and Ran | nsar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 190 | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dunlin Calidris alpine alpine | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Golden plover Pluvialis apricaria | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Knot Calidris canutus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Shelduck Tadorna tadorna | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| (a) Survey data show little or no evide | ence of Hum | ber Estua | ry SPA fe | atures oco | curring in | the Norfo | lk Boreas | sites, and | migratio | ns of bird | s from thi | s SPA are likely to |

(a) Survey data show little or no evidence of Humber Estuary SPA features occurring in the Norfolk Boreas sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Humber Estuary SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Humber Estuary SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site Name of European Site: | 101 Hund ւ | und Paa | psand s | SCI | | | | | | | | | | | |
|--------------------------------------|---------------|--|----------|----------|---------|----------|-----------|------------|-----------|-----------|-----------|----------|------------|----------|---------------------|
| Distance to Norfolk Boreas (km) | 255 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s |) of Nor | folk Bor | eas | | | | | | | | | | |
| | Underv | Underwater noise Vessel Interactions Indirect effects on Changes to water In-combination | | | | | | | | | | | | | |
| | | nderwater noise Vessel Interactions Indirect effects on prey quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potent | ial impa | ct range | e of Noi | folk Bor | eas and | the exte | ent of an | y effect o | on indivi | duals fro | m this si | te would | d result i | n no pot | ential for LSE (see |
| Table 3.2 of offshore screening, doo | ument r | eferend | ce 5.3.5 | .1). | | | | | | | | | | | |

| Site | 102 | | | | | | | | | | | | |
|--------------------------------------|------------------------------------|-------------|------------|----------|-----------|-----------|----------|-----------|-----------|------------|------------|---------------------|--|
| Name of European Site: | mperial Do | ock Lock, L | eith SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 198 | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collisic | n mortalit | у | Displace | ement/Dis | turbance | Barrier | Effect | | Cumula | tive/In-co | mbination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Breeding common tern | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | |
| (a) Imperial Dock Lock SPA is beyond | the maxim | um foragir | ig range o | f common | tern (30k | m) so has | no breed | ing seaso | n connect | ivity. The | proportio | n of the population | |

migrating through the Norfolk Boreas site is likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).
(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Imperial Dock Lock SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site Name of Eur Distance to I | opean S Norfolk | ite: Boreas (| (km) | 103 Inner I 44 | Dowsing | g, Race B | ank and | North F | Ridge SC | I | | | | | | | | |
|--|--|---------------------|------------------------|----------------------|----------------------|-----------------------|-----------------------------------|-----------------------------------|-----------|-------------------------|-------------------------------|------------|---------------|-----------------------|---------|----------|----------|-------|
| Site | Likely e | effect(s) | of Norfo | olk Bore | as | | | | | | | | | | | | | |
| Features | Permanent lossTemporary physical disturbanceCODC | | | | | | Smoth to inc suspe sedim | nering d reased nded ent | ue | Re- m conta sedim | obilisati minated ients | on of I | Unde and v | rwater r vibration | noise | In-coi | mbinatic | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | с | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Reefs | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The d of | listance f offshor | betweer e screer | n the off ning, doo | shore pr cument i | oject ar referenc | ea and t e 5.3.5.1 | he desig .). | nated si | te is bey | ond the | range o | f any po | tential L | SE (see | paragra | oh see p | aragrapl | n 135 |

| Site | 104 | 4 | | | |
|---------------------------------|-----|-------------------------------|--------------------------|----------------|---------------------------|
| Name of European Site: | Inn | er Moray Firth SPA & Ramsa | ır | | |
| Distance to Norfolk Boreas (km) | 652 | 2 | | | |
| Site Features | | Likely effect(s) of Norfolk B | oreas | | |
| | | Collision mortality | Displacement/Disturbance | Barrier Effect | Cumulative/In-combination |





| Site | 104 | | | | | | | | | | | |
|--|----------|--------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Name of European Site: | Inner Mo | ray Firth SP | A & Rams | ar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 652 | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Common tern Sterna hirundo | | N (a) | | N (a) |
| Osprey Pandion haliaetus | | N (a) | | N (a) |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) |
| Greylag goose Anser anser | | N (a) | | N (a) |
| Red-breasted merganser Mergus serrator | | N (a) | | N (a) |
| Redshank Tringa totanus | | N (a) | | N (a) |
| Scaup Aytha marila | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | N (b) | | N (b) |
| Greylag goose Anser anser | | N (b) | | N (b) |
| Red-breasted merganser Mergus serrator | | N (b) | | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |





| Site | 104 |
|---|--|
| Name of European Site: | Inner Moray Firth SPA & Ramsar |
| Distance to Norfolk Boreas (km | 652 |
| (a) Survey data show little o result in negligible numb small that it would not si Table 6.1 of offshore screet | no evidence of Inner Moray Firth SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to ers passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk Boreas is so inificantly contribute to or alter the overall in-combination assessment for these features at Inner Moray Firth SPA and Ramsar (see ening, document reference 5.3.5.1). |
| (b) Ramsar criterion: the pre significant effect or alter document reference 5.3. | dicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a the overall in-combination assessment for these features at Inner Moray Firth SPA and Ramsar (see Table 6.1 of offshore screening, 5.1). |





| Site Name of European Site: | 105 Isle of I | May SA | с | | | | | | | | | | | | |
|---------------------------------------|------------------|---|-----------|------------|-----------|------------|-----------|------------|------------|------------|---------|-------------|----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 460 | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | Privater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfolk | k Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | m this sit | e would | result in i | no poten | tial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence S | 5.3.5.1). | | | | | | | | | | | | |

| Site Name of European Site: | 106 Klavert | oank SA(| C | | | | | | | | | | | | |
|---------------------------------|----------------|-----------------------------|------|----------|-----------|------|----------|-------------|---------|-------------------|-----------|------|--------|----------|------|
| Distance to Norfolk Boreas (km) | 67 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | vater no | ise | Vessel I | nteractic | ons | Indirect | t effects o | on prey | Change quality | s to wate | er | In-com | pination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





| Site Name of European Site: | 106 Klaver | bank SA | с | | | | | | | | | | | | |
|--|---------------|---------|-----------|-----------|-----------|------------|-----------|------------|-----------|-----------|-------------|-----------|------------|-----------|------|
| Distance to Norfolk Boreas (km) | 67 | | | | | | | | | | | | | | |
| Grey seal | Y(b) | Y(b) | Y(b) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | Y(b) | Y(b) | Y(b) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the po LSE. | otential i | mpact r | ange of I | Norfolk B | oreas and | d the exte | ent of an | y effect o | n individ | uals from | this site v | would res | sult in no | potential | for |

b) Screened in for grey and harbour seal as the site is within the identified foraging range for both species. The potential for disturbance to foraging seals as a result of underwater noise cannot be ruled out and has been assessed in section 8.3.5 of the Information to Support HRA Report, document reference 5.3).

| Site Name of European Site: | 107 Koster | fjorden- | Väderöf | jorden SA | ٨C | | | | | | | | | | |
|---------------------------------------|---------------|--|-----------|------------|----------|------------|-----------|------------|------------|------------|----------|-----------|----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 781 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | vater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | quality | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfoll | k Boreas a | nd the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | |





| Site Name of European Site: | 108 Kungsb | ackafjo | rden SA | С | | | | | | | | | | | |
|---------------------------------------|---------------|--|-----------|------------|-----------|------------|-----------|------------|------------|-------------|---------|-------------|-----------|------------|--------|
| Distance to Norfolk Boreas (km) | 831 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfc | olk Boreas | 5 | | | | | | | | | | |
| | Underv | erwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfolk | . Boreas a | ind the e | xtent of a | ny effect | t on indiv | iduals fro | om this sit | e would | result in r | no potent | ial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | |

| Site Name of European Site: | 109 Küsten- un | d Düneı | nlandsch | aften An | nrums SA | ٩C | | | | | | | | | |
|---------------------------------------|-------------------|---|-----------|----------|----------|-----------|----------|------------|-----------|-----------|---------|------------|----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 380 | | | | | | | | | | | | | | |
| Site Features | Likely effec | ifect(s) of Norfolk Boreas vater noise Vessel Interactions Indirect effects on Changes to water In-combination | | | | | | | | | | | | | |
| | Underwate | vater noise Vessel Interactions Indirect effects on Changes to water In-combination | | | | | | | | | | | | | |
| | | ater noise Vessel Interactions Indirect effects on Quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | ၊l impact ranန | ge of No | rfolk Bor | eas and | the exte | nt of any | effect o | n individu | uals from | this site | would r | esult in r | o potent | ial for LS: | E (see |
| Table 3.2 of offshore screening, docu | ment referer | ice 5.3.5 | 5.1). | | | | | | | | | | | | |





| Site | 110 |) | | | | | | | | | | | |
|---|------|------------------|----------|-----------|---------|----------|-------------|---------|--------|-------|------------------|---------------------|-------|
| Name of European Site: | Line | disfarne SPA and | d Ramsa | r | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 403 | } | | | | | | | | | | | |
| Site Features | | Likely effect(s) | of Norfo | olk Borea | S | | | | | | | | |
| | | Collision morta | lity | | Displac | cement/I | Disturbance | Barrier | Effect | | Cumula combir | ative/In- nation | |
| | | С | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Golden plover Pluvialis apricaria | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ringed plover Chardrius hiaticula | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Grey plover Pluvialis squatarola | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Whooper swan Cygnus cygnus | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Knot Calidris canutus | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Greylag goose Anser anser | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Light-bellied brent goose Branta bernicla hrota | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Wigeon Anas penelope | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | | | | | | |
| Bar-tailed godwit Limosa lapponica | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Ringed plover Chardrius hiaticula | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





| Site | 11 | 0 | | | | | | | | | | | |
|---|--------------|--------------------------------------|-----------------------|-----------------------|----------------------|----------------------|------------------------------------|--------------------------|------------------------|-------------------------|------------------------|------------------------|-------------------------------|
| Name of European Site: | Lin | disfarne SPA and | d Ramsa | r | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 40 | 3 | | | | | | | | | | | |
| Greylag goose Anser anser | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Light-bellied brent goose Branta bernicla hrota | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Wigeon Anas penelope | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Redshank Tringa totanus totanus | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Pink-footed goose Anser brachyrhnychus | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| (a) Survey data show little or no evidence negligible numbers passing through t | e of he N | Lindisfarne SPA Iorfolk Boreas si | features te during | occurrir g migrati | ng in the on and, | Norfolk in additi | Boreas site, and on, the predicted | migratior I effect at | ns of bird tributab | ls from tl le to Nor | nis SPA a folk Bore | re likely eas is so | to result in small that it |

negligible numbers passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Lindisfarne SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Lindisfarne SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 111 | | | | | | | | | | | | | |
|---------------------------------|------------------------------------|------------|-----------|---|-----------|------------|--------|------------|-------|-------|----------|------------|----------|--|
| Name of European Site: | Littoral | al Seino- | Marin SPA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 329 | | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Со | ollision r | mortality | | Displacer | nent/Distu | rbance | Barrier Ef | fect | | Cumulati | ve/In-coml | bination | |
| | С | | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Fulmar Fulmarus glacialis | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (f) | N (f) | N (f) | |





| Site 1 | 11 | | | | | | | | | | |
|---|---------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Name of European Site: | ttoral Seino- | Marin SPA | | | | | | | | | |
| Distance to Norfolk Boreas (km) 3 | 29 | | | | | | | | | | |
| Shag Phalacrocorax aristotelis | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (f) | N (f) | N (f) |
| Gannet Morus bassanus | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (f) | N (f) | N (f) |
| Herring gull Larus argentatus | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (f) | N (f) | N (f) |
| Great black-backed gull Larus marinus | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (f) | N (f) | N (f) |
| Kittiwake Rissa tridactyla | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (f) | N (f) | N (f) |
| Nonbreeding winter and passage seabird assemblage including as named features red-throated diver, black-throated diver, great crested grebe, fulmar, gannet, cormorant, shag, pomarine skua <i>Stercorarius pomarinus</i> , great skua, Mediterranean gull <i>Larus</i> <i>melanocephalus</i> , little gull, lesser black- backed gull, herring gull, great black- backed gull, kittiwake, Sandwich tern, common tern, guillemot, razorbill | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (f) | N (f) | N (f) |
| Little egret Egretta garzetta | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Spoonbill Platalea leucorodia | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| honey buzzard Pernis apivorus | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Hen harrier Circus cyaneus | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| merlin Falco columbarius | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Avocet Recurvirostra avosetta | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) |
| Peregrine Falco peregrinus | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) |





| Site | 111 | | | | | | | | | | | |
|---|--|--|---|---|--|--|--|--|--|--|--|---|
| Name of European Site: | Littoral Seino- | Marin SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 329 | | | | | | | | | | | |
| Woodlark <i>Lullula arborea</i> | | N (e) | | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) | N (e) |
| (a) The Norfolk Boreas site is within the breeding gannets from the SPA do breeding season connectivity. Propertable 6.1 of offshore screening, do (b) Proportions of these populations in from the Norfolk Boreas site, but a rather than crossing the North Sea (c) None of these species has been reconstructed boreas site, as these species are generated boreas site, document reference 5.3 | e theoretical m not reach the N portions of thes cument referen nigrating throug lso because bin to the UK (see corded during b merally scarce n .5.1). | aximum fo lorfolk Bor e populatio ace 5.3.5.1) gh the Norf ds on the c Table 6.1 o ird surveys migrants in | praging rar eas site. T ons migrat). folk Boreas continenta of offshore s at the No the UK, an | nge of bree he SPA is fa ing throug s site are li I side of the screening, orfolk Bore nd their mi | ding ganne ar beyond i h the Norfo kely to be e e Channel a , document as site. It is grations te | ets from the maximum f olk Boreas s extremely s and North s t reference unlikely the end to be co | e Littoral S foraging ra site are like small relati Sea are like 5.3.5.1). nat birds fr oastal rath | eino-Marin nge of oth ely to be ex ve to BDM ely to tend om the SP/ er than ov | n SPA, but er designa xtremely si IPS, not on to migrate A will migra er open se | tracking da ted seabiro mall relativ ly because e up the co ate throug a (see Tabl | ata show the d species s ve to BDMI the SPA is pontinental of h the Norfe le 6.1 of of | nat o has no PS (see 315km coast olk fshore |
| (d) Breeding peregrines in western Europered in the second sec | rope tend to re | main close | to their b | reeding site | e througho | out the year | r so it is ex | tremely un | likely that | any from t | the SPA wo | ould |
| (e) Woodlark is a very scarce migrant f (f) The predicted effect attributable to features at Littoral Seino-Marin SPA | to the UK, so it o Norfolk Borea A (see Table 6.1 | is very unli s is so sma . of offshor | kely that i Il that it w re screenir | ndividuals ould not si ng, docume | from the S gnificantly ent referen | PA would r contribute ce 5.3.5.1). | each the N to or alter | lorfolk Bor the overa | eas site. Ill in-combi | ination ass | essment fo | or these |

| Site | 112 | | | | | | | | | | | | | | |
|-----------------------------------|------|------------------------------------|------------|--------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|--|--|
| Name of European Site: | Loch | of Strathb | eg SPA & F | Ramsar | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 576 | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| Site Features | | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| SPA features | | | | | | | | | | | | | | | |
| Sandwich tern Sterna sandvicensis | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |





| Site 11 | 2 | | | | | | | | | | | |
|--|---------------|------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Name of European Site: Lo | ch of Strathb | eg SPA & F | Ramsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) 57 | 5 | | | | | | | | | | | |
| Barnacle goose Branta leucopsis | | N (a) | | N (a) |
| Whooper swan Cygnus Cygnus | | N (a) | | N (a) |
| Greylag goose Anser anser | | N (a) | | N (a) |
| Pink-footed goose Anser brachyrhynchus | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Barnacle goose Branta leucopsis | | N (b) | | N (b) |
| Whooper swan Cygnus Cygnus | | N (b) | | N (b) |
| Greylag goose Anser anser | | N (b) | | N (b) |
| Pink-footed goose Anser brachyrhynchus | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |

(a) Survey data show little or no evidence of Loch of Strathbeg SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Loch of Strathbeg SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Loch of Strathbeg SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site Name of European Site: | 113 Løgstøi | r Bredni | ng, Vejle | erne og B | ulbjerg S | AC | | | | | | | | | | |
|---------------------------------------|----------------|-----------|---|------------|-----------|------------|----------|------------|------------|------------|---------|-------------|-----------|-------------|--------|--|
| Distance to Norfolk Boreas (km) | 582 | | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfc | olk Boreas | 5 | | | | | | | | | | | |
| | Underv | vater no | fect(s) of Norfolk Boreas ater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia | l impact | range o | f Norfolk | k Boreas a | ind the e | xtent of a | ny effec | t on indiv | iduals fro | m this sit | e would | result in r | no potent | tial for LS | E (see | |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | | |





| Site Name of European Site: | 114 Lovns E | Brednin | g, Hjarba | ek Fjord (| og Skals, | Simested | l og Nørr | e Ådal, S | kravad B | æk SAC | | | | | |
|---------------------------------------|----------------|--|-----------|------------|-----------|------------|-----------|------------|------------|------------|---------|-------------|-----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 610 | | | | | | | | | | | | | | |
| Site Features | Likely e | iffect(s) of Norfolk Boreas vater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | rwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfolk | k Boreas a | ind the e | xtent of a | ny effec | t on indiv | iduals fro | m this sit | e would | result in r | no potent | tial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | |

| Site Name of European Site: | 115 Malmö | fjord SA | ١C | | | | | | | | | | | | | |
|---------------------------------------|--------------|-----------|---|------------|----------|------------|-----------|------------|------------|-------------|---------|-------------|----------|-------------|--------|--|
| Distance to Norfolk Boreas (km) | 764 | | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Boreas | 5 | | | | | | | | | | | |
| | Underv | vater no | fect(s) of Norfolk Boreas ater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia | l impact | range o | f Norfoll | k Boreas a | nd the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in ı | no poten | tial for LS | E (see | |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | | |





| Site Name of European Site: | 116 Marais | du Cote | entin et | du Bessin | - Baie de | es Veys S | AC | | | | | | | | | |
|---|----------------------|--|---|---------------------|-----------|------------|------------|------------|------------|-------------|---------|-----------|----------|-------------|------|--|
| Distance to Norfolk Boreas (km) | 442 | | | | | | | | | | | | | | | |
| Site Features | Likely e | iffect(s) of Norfolk Boreas vater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | | |
| | Underv | vater no | ater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | water noiseVessel InteractionsIndirect effects on prey qualityChanges to water qualityIn-combination | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | ll impact documen | range of it refere | f Norfoll nce 5.3. | k Boreas a 5.1). | ind the e | xtent of a | any effect | t on indiv | iduals fro | om this sit | e would | result in | no poten | tial for LS | E | |

| Site Name of Eu | ropean S | ite: | | 117 Margat | e and Lo | ng Sands | SAC | | | | | | | | | | | |
|------------------------------------|-----------|------------|-----------|------------------|--------------------|----------|----------------------------|-----------------------------|---------------|----------------------------|--------------------------------|-------|-----------------|---------------------|-------|--------|-----------|-------|
| Distance to | Norfolk I | Boreas (k | (m) | 136 | | | | | | | | | | | | | | |
| Site | Likely e | ffect(s) o | f Norfolk | Boreas | | | | | | | | | | | | | | |
| Features | Perma | nent loss | ; | Tempo disturb | orary phy oance | vsical | Smoth increas susper | ering du sed 1ded sed | e to iment | Re- mo contar sedime | obilisation ninated ents | n of | Under and vi | water no bration | vise | In-com | ibination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |





| Site Name of Eu | ropean S | ite: | | 117 Margat | te and Lo | ng Sands | SAC | | | | | | | | | | | |
|--|-------------------------|-------------------|-----------|---------------|-----------|-----------|-----------|-------------|-----------|----------|-----------|------------|-----------|----------|-----------|-----------|-----------|-------|
| Distance to | Norfolk | Boreas (l | (m) | 136 | | | | | | | | | | | | | | |
| covered by sea water all the time | | | | | | | | | | | | | | | | | | |
| (a) The or (a) The or (a) (a) The or (a) | distance l rence 5.3 | between .5.1). | the offsh | ore proj | ect area | and the c | lesignate | d site is k | beyond tl | ne range | of any po | otential L | SE (see T | able 4.1 | of offsho | re screen | ing, docı | iment |

| Site 1 | 18 | | | | | | | | | | | | | |
|---|------------|---------------------------------|-----------|-------------|-------------|------------|------------|------------|-------------|--------------|------------|----------|--|--|
| Name of European Site: M | Aarwick He | ad SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 7 | 61 | | | | | | | | | | | | | |
| Site Features | Likely eff | ely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Dist | urbance | Barrier E | ffect | | Cumulati | ive/In-com | bination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage including as named features guillemot and kittiwake | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | |
| (a) Marwick Head SPA is beyond maxim | um foragir | a rango of | docignato | d cophird c | nocios so l | has no bro | oding cooc | an connoct | tivity Drop | ortions of t | hoso popu | lations | | |

(a) Marwick Head SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Marwick Head SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site Name of European Site: | 119 Måsesl | kär SAC | | | | | | | | | | | | | |
|---|---|--|------|---------------------|---|---|--------------------------|---|---|---------|------------------|---|---|----------|---|
| Distance to Norfolk Boreas (km) | 752 | | | | | | | | | | | | | | |
| Site Features | Likely e | <ely boreas<="" effect(s)="" norfolk="" of="" td=""></ely> | | | | | | | | | | | | | |
| | Underv | vater no | oise | Vessel Interactions | | | Indirect effects on prey | | | Change | Changes to water | | | bination | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| | | | | | | | | | | | | | | | |
| Harbour seal | N(a) N(a) N(a) N(a) N(a) N(a) N(a) N(a) | | | | | | | | | N(a) | N(a) | | | | |
| a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | |

| Site | 20 | | | | | | | | | | | | |
|---|---------------------|--|---|--------------------------|-------|-------|----------------|-------|-------|----------|-----------|----------|--|
| Name of European Site: | Medway Es | edway Estuary & Marshes SPA and Ramsar | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 210 | | | | | | | | | | | | |
| Site Features | Likely eff | ikely effect(s) of Norfolk Boreas | | | | | | | | | | | |
| | Collision mortality | | | Displacement/Disturbance | | | Barrier Effect | | | Cumulati | ve/In-com | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| SPA features | | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Dark-bellied brent goose Branta bernicla bernicla | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |





| Site 1 | 20 | | | | | | | | | | | | |
|---|------------|---------------------|-------------|----------|--------------------------|-------|-------|----------------|-------|-------|---------------------------|-------|--|
| Name of European Site: N | ledway Est | tuary & Ma | arshes SPA | and Rams | ar | | | | | | | | |
| Distance to Norfolk Boreas (km) 2 | 10 | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | Collision | Collision mortality | | | Displacement/Disturbance | | | Barrier Effect | | | Cumulative/In-combination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Dunlin Calidris alpine alpine | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Knot Calidris canutus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Little tern Sterna albifrons | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Pintail Anas acuta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Redshank Tringa totanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Shelduck Tadorna tadorna | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Ramsar features | | | | | | | | | | | | | |
| Dark-bellied brent goose Branta bernicla bernicla | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Dunlin Calidris alpine alpine | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Knot Calidris canutus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Pintail Anas acuta | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |





| Site | 120 | | | | | | | | | | | | |
|--|------------|--------------|-------------|--------------------------|--------------|--------------|--------------|--------------|--------------|---------------------------|--------------|--------------|--|
| Name of European Site: | Medway Es | tuary & Ma | arshes SPA | and Rams | ar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 210 | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | Collision | mortality | | Displacement/Disturbance | | | Barrier E | ffect | | Cumulative/In-combination | | | |
| | с | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D | |
| Ringed plover Charadrius hiaticula | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Shelduck Tadorna tadorna | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |
| Avocet Recurvirostra avosetta | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Common tern Sterna hirundo | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Little tern s Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Cormorant Phlacrocorax carbo | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Curlew Numenius arguata | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| <u>Greenshank Tringa nebularia</u> | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Little grebe Tachybaptus ruficollis | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Oystercatcher Haematopus ostralegus | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Spotted redshank Tringa erythropus | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Teal Anas crecca | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Wigeon Anas penelope | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | |
| Assemblage | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |





| Site | 120 | | | | | | | | | | | | |
|---|------------|---|-----------|----------|----|--|--|--|--|---------------------------|--|---|--|
| Name of European Site: | Medway Est | uary & Ma | rshes SPA | and Rams | ar | | | | | | | | |
| Distance to Norfolk Boreas (km) 210 | | | | | | | | | | | | | |
| Site Features | Likely eff | ly effect(s) of Norfolk Boreas | | | | | | | | | | | |
| | Collision | Collision mortality Displacement/Disturbance Barrier Effect | | | | | | | | Cumulative/In-combination | | | |
| | С | O D C O D C O D C O D | | | | | | | | | | | |
| (a) Survey data show little or no evidence of Medway Estuary and Marshes SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Medway Estuary and Marshes SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1). (b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these SPA and Ramsar (see Table 6.1 of offshore | | | | | | | | | | | | his SPA Iorfolk Marshes fshore | |

| Site | 21 | | | | | | | | | | | |
|---------------------------------|----------------------|--------------------------------------|--|--------------|--------------------------|--------------|--------------|----------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Ainsmere - | insmere - Walberswick SPA and Ramsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | rfolk Boreas (km) 96 | | | | | | | | | | | |
| Site Features | Likely eff | Likely effect(s) of Norfolk Boreas | | | | | | | | | | |
| | Collision | mortality | | Displace | Displacement/Disturbance | | | Barrier Effect | | | ive/In-com | bination |
| | С | C 0 D C 0 D C 0 D C 0 | | | | | | | | | 0 | D |
| SPA features | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Bittern Botaurus stellaris | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Gadwall Anas strepera | | <u>N (a)</u> | | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> |

screening, document reference 5.3.5.1).





| Site | 121 | | | | | | | | | | | |
|--|------------|--------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Minsmere - | Walberswi | ick SPA an | d Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 96 | | | | | | | | | | | |
| <u>Greater white-fronted goose Anser</u> <u>albifrons albifrons</u> | | <u>N (a)</u> | | <u>N (a)</u> |
| Little tern Sterna albifrons | | N (a) | | N (a) |
| Marseh harrier Circus aeruginosus | | N (a) | | N (a) |
| Nightjar Caprimulgus europaeus | | N (a) | | N (a) |
| Woodlark-Shoveler Anas clypeata arborea | | N (a) | | N (a) |
| Teal Anas crecca | | <u>N (a)</u> | | <u>N (a)</u> |
| Hen harrier Circus cyaneus | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| <u>Bittern Bottarus stellaris</u> | | <u>N (b)</u> | | <u>N (b)</u> |
| Marsh harrier Circus aeruginosus | | <u>N (b)</u> | | <u>N (b)</u> |
| Avocet Recurvirostra avosetta | | <u>N (b)</u> | | <u>N (b)</u> |
| Little tern Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> |
| Nightjar Caprimulgus europeaeus | | <u>N (b)</u> | | <u>N (b)</u> |
| Bearded tit Panurus biarmicus | | <u>N (b)</u> | | <u>N (b)</u> |
| Assemblage | | N (b) | | N (b) |





| Site | 121 | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|
| Name of European Site: | Minsmere - Walberswick SPA and Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 96 | | | | | | | | |
| (a) Survey data show little or no evided likely to result in negligible number Boreas is so small that it would not and Ramsar (see Table 6.1 of offshort) (b) Ramsar criterion: the predicted efforts significant effect or alter the overa screening, document reference 5.3 | nce of Minsmere - Walberswick SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are rs passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk significantly contribute to or alter the overall in-combination assessment for these features at Minsmere - Walberswick SPA ore screening, document reference 5.3.5.1). ects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a Il in-combination assessment for these features at Minsmere - Walberswick SPA and Ramsar (see Table 6.1 of offshore 5.5.1). | | | | | | | | |

| Site 1 | 22 | | | | | | | | | | | | |
|--|-------------|----------------------------|---|----------|------------|---------|-----------|----------------|-------|-------|---------------------------|-------|--|
| Name of European Site: N | /lontrose B | ontrose Basin SPA & Ramsar | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 520 | | | | | | | | | | | | | |
| Site Features Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | Barrier Effect | | | Cumulative/In-combination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| SPA features | | | | | | | | | | | | | |
| Greylag goose Anser anser | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Knot Calidris canutus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Pink-footed goose Anser brachyrhynchus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Redshank Tringa totanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |
| Ramsar features | | | | | | | | | | | | | |
| Greylag goose Anser anser | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |




| Site | 122 | | | | | | | | | | | |
|--|--------------|-------------|-------------|-------------|-------------|--------------|------------|-------------|-------------|--------------|--------------|-------|
| Pink-footed goose Anser brachyrhynchus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| (a) Survey data show little or no eviden | ce of Montro | ose Basin S | PA occurrir | ng in the N | orfolk Bore | eas site, an | d migratio | ns of birds | from this S | SPA are like | ely to resul | t in |

negligible numbers passing through the Norfolk Boreas site during migration and, in addition, the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Montrose Basin SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Montrose Basin SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 12 | 3 | | | | | | | | | | | | | |
|--|-------------|---------------------------------|-------------|----------|------------|---------|-----------|-------|-------|----------|-----------|----------|--|--|
| Name of European Site: M | oray and Na | airn Coast | SPA & Ram | isar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 62 | 2 | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | | |
| | С | 0 D C O D C O D C O D D C O D D | | | | | | | | | | | | |
| SPA features | | | | | | | | | | | | | | |
| Osprey Pandion haliaetus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Greylag goose Anser anser | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Pink-footed goose Anser brachyrhynchus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Redshank Tringa totanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | |





| Site 1 | 23 | | | | | | | | | | | |
|--|--|--|--|--|--|--|---|---|--|--|---|----------------------|
| Ramsar features | | | | | | | | | | | | |
| Greylag goose Anser anser | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Pink-footed goose Anser brachyrhynchus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Long-tailed duck Clangula hyemalis | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Assemblage | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| (a) Survey data show little or no evide likely to result in negligible numbe Boreas is so small that it would no | ence of Mora ers passing th t significantl | ay and Nair Trough the Y contribut | n Coast SP Norfolk Bo e to or alte | A features preas site o er the ove | s occurring during mig rall in-com | in the Nor ration and bination a | folk Borea , in additio ssessment | s site, and n, the prec for these f | migrations licted effeo eatures at | of birds fro t attributa Moray and | om this SPA ble to Norf I Nairn Coa | are olk st SPA |

and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).
(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Moray and Nairn Coast SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 124 | | | | | | | | | | | | |
|--|---------|---------------------|--------------|-------------|-------|------------|---------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: | Mousa S | PA | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 793 | | | | | | | | | | | | |
| Site Features | Like | ely effe | ect(s) of No | orfolk Bore | eas | | | | | | | | |
| | Coll | Collision mortality | | | | nent/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding Arctic tern | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) |
| Breeding European storm-petrel Hydrobates pelagicus | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





- (a) Mousa SPA is beyond maximum foraging range of Arctic tern (30km, Thaxter et al. 2012) so has no breeding season connectivity. The proportion of the population migrating through the Norfolk Boreas site is likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (b) European storm-petrels were not observed in the Norfolk Boreas site, and are rarely seen anywhere in the southern North Sea, so evidence suggests that this species migrates from its breeding site on Mousa into the North Atlantic and not normally through the North Sea (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Mousa SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site: | 125 Mousa | SAC | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------|---------|-------------|----------|-------------|------|
| Distance to Norfolk Boreas (km) | 794 | | | | | | | | | | | | | | |
| Site Features | Likely e Underv | ely effect(s) of Norfolk Boreas derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination quality | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in I | no poten | tial for LS | E |





| Site Name of European Site: | 126 Nation | alpark N | liedersä | chsischec | l Watten | meer SA(| 0 | | | | | | | | | | |
|---|---------------------|---|-----------------------|-------------------|-----------|------------|----------|------------|------------|------------|---------|-----------|-----------|-------------|------|--|--|
| Distance to Norfolk Boreas (km) | 240 | | | | | | | | | | | | | | | | |
| Site Features | Likely e Underv | Provide Boreas Versel Interactions Indirect effects on prey quality Changes to water quality In-combination C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C O <th col<="" th=""></th> | | | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | | |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | | |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documer | range o nt refere | f Norfolk nce 5.3. | Boreas a 5.1). | and the e | xtent of a | ny effec | t on indiv | iduals fro | om this si | e would | result in | no potent | tial for LS | E | | |

| Site Name of European Site: | 127 Nibe B | redning, | , Halkær | Ådal og S | Sønderuj | o Ådal SA | ſĊ | | | | | | | | |
|---|---------------------|--|-----------------------|--------------------|-----------|------------|------------|------------|------------|-------------|---------|-----------|-----------------------|-------------|------|
| Distance to Norfolk Boreas (km) | 608 | | | | | | | | | | | | | | |
| Site Features | Likely e | y effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | ely effect(s) of Norfolk Boreas derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact documen | range o it refere | f Norfolk nce 5.3. | (Boreas a 5.1). | and the e | xtent of a | any effect | t on indiv | iduals fro | om this sit | e would | result in | no poten [.] | tial for LS | E |





| Site Name of European Site: | 128 Nidinge | en SAC | | | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|------------|------------|------------|------------|------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 790 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) of Norfolk Boreas water noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | Underv | ely effect(s) of Norfolk Boreas derwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination guality | | | | | | | | | | | | | |
| | | | | | | | | | | quanty | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact locumen | range of it refere | f Norfolk nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | iny effect | : on indiv | iduals fro | m this sit | e would | result in r | no potent | tial for LS | E |

| Site | | 12 | Ð | | | | | | | | | | | | |
|---|-----------|------------|-----------|-------------------------------|--------------------------|------------------|----------|------------|-------|---------|----------|---------|---------|---------|-------|
| Name of European Site | : | No | ordzeekus | tzone SA | 2 | | | | | | | | | | |
| Distance to Norfolk Bor | eas (km) | 94 | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of | Norfolk B | oreas | | | | | | | | | | | |
| ite Features Likely effect(Underwater | | | 2 | Vessel Ir disturba outs | nteraction nce at sea | s and al haul | Indirect | effects on | prey | Changes | to water | quality | In-comb | ination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Grey seal | Y (b) | Y (b) | Y (b) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |





| Site | | | | 12 | 29 | | | | | | | | | | | | | | | | |
|----------------|---------------|---------|----------|----------------------------|----------------------|---------|-----------------------------------|--------------------------------|--------|-----------------------------------|--------------------------------|--------|---------------------------|-----------------------------|------------|-------------------|---------------------|-------|--------|----------|-------|
| Name of Eu | ropean | Site: | | N | oordzee | ekustzo | ne SAC | | | | | | | | | | | | | | |
| Distance to | Norfoll | < Borea | as (km) | 94 | l I | | | | | | | | | | | | | | | | |
| Harbour sea | 1 | 1 | N (a) | N (a) | N (a) | N | (a) | N (a) | N (a) | N (a | a) (e | l (a) | N (a) | N (a |) | | N (a) | N (a) | N (| a) I | N (a) |
| Fish | | | | | | | | | 1 | | | | | | | | | | | | |
| Site | Likely | effect(| s) of No | rfolk Bo | reas | | | | | | | | | | | | | | | | |
| Features | Perma loss | inent h | nabitat | Tempo physic disturt | orary al oance | | Smoth increa suspe sedim | nering d sed nded ent | lue to | Re- m contai sedim | obilisat minateo ents | ion of | Under and vi | water r bration | noise | Electro fields | omagne (EMF) | tic | In-con | nbinatio | on |
| | С | 0 | D | С | 0 | D | с | 0 | D | С | 0 | D | с | 0 | D | с | 0 | D | С | 0 | D |
| Sea Lamprey | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) |
| Allis Shad | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) |
| Twaite Shad | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) |
| Benthic hab | oitats | | | | | | | | | | | | | | | | | | | | |
| Site Feature | S | | | Perma | inent lo | OSS | Tempo physic distur | orary cal bance | | Smoth increa suspe sedim | nering o sed nded ent | lue to | Re- mo contar sedim | obilisati ninate ents | on of d | Under and v | water r ibration | noise | In-con | nbinatio | on |
| | | | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |





| Site | 12 | 29 | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|--|---|---|------------------|-----------------------------------|---|--------------------|--|---|----------------------------------|--------------------------------|---------------------|-------------|
| Name of European Site: | N | oordzee | ekustzo | ne SAC | | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 94 | 1 | | | | | | | | | | | | | | | | |
| Sandbanks which are slightly covered by sea water all the time | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| Mudflats and sandflats not covered by seawater at low tide | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| a) The distance between the LSE (see Table 3.2 paragrable) b) Screened in for grey seal noise has been assessed in the distance between th | e potent aph 145 as the s in section offsho | tial imp of offsl site is w on 8.3.5 | act rang hore scr ithin the of the | e of No eening, e identi Informa | folk Bc docum fied for tion to | oreas an ent refe aging ra Suppor ated sit | d the exerce 5 rence 5 nge of 1 t Habita e is bey | tent of .3.5.1). 100km. ats Regu | any efformations | ect on in tential f Assessr | ndividua or distu nent Re otential | rbance port, do | this site to forag ocumente Table | e would ging sea t refere 4.1 of c | result i Is as a r nce 5.3 | n no po esult of screeni | tential f underv | or vater |

document reference 5.3.5.1).





| Site Name of European Site: | 130 Nordre | älvs est | tuarium | SAC | | | | | | | | | | | |
|---------------------------------------|---------------|---|-----------|----------|-----------|------------|------------|----------|------------|------------|---------|-------------|-----------|------------|--------|
| Distance to Norfolk Boreas (km) | 761 | | | | | | | | | | | | | | |
| Site Features | Likely e | reffect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | Inderwater noiseVessel InteractionsIndirect effects on preyChanges to waterIn-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range of | f Norfolk | Boreas a | ind the e | xtent of a | iny effect | on indiv | iduals fro | m this sit | e would | result in r | no potent | ial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | |

| Site Name of European Site: | 131 Nordvä | istra Ska | ånes hav | vsområde | SAC | | | | | | | | | | |
|--|----------------------|---------------------|------------------------|------------|-----------|------------|-----------|------------|------------|-------------|-----------|-----------|----------|-------------|--------|
| Distance to Norfolk Boreas (km) | 860 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | nteractic | ons | Indirec | t effects | on prey | Change | s to wate | er | In-com | oination | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potential Table 3.2 of offshore screening, docur | l impact ment ref | range o erence 5 | f Norfoll 5.3.5.1). | k Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in | no poten | tial for LS | E (see |





| Site | | | | 132 | | | | | | | | | | | |
|--|---------------------------------|-----------------------------------|----------------------|---|---|--------------|-------------------------|----------------------------|------------|--------------------------------------|--|--------------------|--|--------|--|
| Name of European | Site: | | | Norfolk Va | alley Fens | SAC | | | | | | | | | |
| Distance to Norfolk | Boreas | (km) | | 0.6+ (17 si | ites, with S | 5 sites with | nin 5km of | the onsho | re project | area) | | | | | |
| | Likely et | ffect(s) o | f Norfolk | Boreas | | | | | | | | | | | |
| | Direct e habitat within S | ffects (e loss) on SAC bour | .g. land ndary | Direct effe habitats fu connected | ects on ex- unctionally I to the SA | situ C | Indirect e within SA | effects on la C boundar | and 'Y | Indirect e habitats f connecte | effects on e functionall d to the SA | ex-situ y AC | In-combir | iation | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Alkaline fens | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | Y(c) | Y(c) | Y(c) | Y(e) | | Y(e) |
| Northern Atlantic wet heaths with <i>Erica tetralix</i> | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | Y(c) | Y(c) | Y(c) | Y(e) | | Y(e) |
| European dry heaths | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | Y(c) | Y(c) | Y(c) | Y(e) | | Y(e) |
| Semi-natural dry grassland and scrubland facies on calcareous substrates (<i>Festuco-</i> <i>Brometalia</i>) | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | N(d) | N(d) | N(d) | <u>N(a, b,</u> <u>d)</u> ¥ (e) | | <u>N(a, b,</u> <u>d)</u> ¥ (e) |
| Molinia meadows on calcareous, peaty or clayey-silt- laden soils (<i>Molinion</i> caeruleae) | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | Y(c) | Y(c) | Y(c) | Y(e) | | Y(e) |





| Site | | | | 132 | | | | | | | | | | | |
|--|---------------------------------|----------------------------------|----------------------|---|--|------------|-------------------------|---------------------------|------------|--------------------------------|---|--------------------|---------------------------------------|--------|---------------------------------|
| Name of European | Site: | | | Norfolk Va | alley Fens | SAC | | | | | | | | | |
| Distance to Norfolk | Boreas (| (km) | | 0.6+ (17 si | tes, with 5 | sites with | nin 5km of | the onsho | re project | area) | | | | | |
| | Likely ef | fect(s) o | f Norfolk | Boreas | | | | | | | | | | | |
| | Direct e habitat within S | ffects (e loss) on AC bour | .g. land ndary | Direct effe habitats fu connected | ects on ex-s inctionally I to the SA | situ C | Indirect e within SA | ffects on la C boundar | and Ƴ | Indirect of habitats connected | effects on e functionall ed to the SA | ex-situ y AC | In-combir | nation | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Calcareous fens with Cladium mariscus and species of the Caricion davallianae | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | Y(c) | Y(c) | Y(c) | Y(e) | | Y(e) |
| Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | Y(c) | Y(c) | Y(c) | Y(e) | | Y(e) |
| Narrow-mouthed whorl snail | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | <u>N(d)</u> ¥(c) | <u>N(d)</u> ¥(c) | <u>N(d)</u> ¥(c) | <u>N(a,</u> b,d) <mark>¥(e)</mark> | | <u>N(a,</u> <u>b,d)</u> ¥(e) |
| Desmoulin's whorl snail Vertigo moulinsiana | N(a) | | N(a) | N(b) | | N(b) | N(a) | N(a) | N(a) | N(d) | N(d) | N(d) | N(a, b,d) | | N(a, b,d) |

a) Direct impacts on features within the SAC boundary and within 5km of the onshore project area have been screened out as they are beyond the range of potential direct impact (see Table 2.1 of onshore screening, document reference 5.3.5.2).





| Site | | | | | 132 | | | | | | | | | | | |
|----------|--|--|---|--|---|---|--|--|---|--|---|--|--|--|--|-------------------|
| Name o | of European | Site: | | | Norfolk Va | alley Fens | SAC | | | | | | | | | |
| Distanc | e to Norfolk | Boreas (| km) | | 0.6+ (17 si | tes, with 5 | 5 sites with | nin 5km of | the onsho | re project | area) | | | | | |
| | | Likely ef | fect(s) o | f Norfolk | Boreas | | | | | | | | | | | |
| | | Direct e habitat within S | ffects (e. loss) on l AC boun | g. and dary | Direct effe habitats fu connected | ects on ex-s inctionally I to the SA | situ C | Indirect e within SA | effects on la C boundar | and Ƴ | Indirect e habitats f connecte | ffects on e unctionall d to the SA | ex-situ Y AC | In-combin | ation | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| b) c) | Effects of th assessment Potential ind upon qualify assessment) SAC are not | e project as qualif direct eff ving habi (see sec sensitive | on ex-si ying feat ects of N tats of th tion 9.3. | tu habita ures of t orfolk B ae SAC pl 3 of the e, visual o | ats function he SAC are oreas on th resent with Informatio or light dist | hally conne all habitat Norfolk Nin 5km of n to Suppo Surbance a | ected to th ts or non-r Valley Fen the onsho ort the HRA nd these h | he SAC and nobile spec s SAC inclu re project a A Report, d nave been s | within 5kn cies (see Se ide alterati area (5 con locument r screened o | n of the SA ection 4.4.2 ons to the nponent SS eference 5 ut (see Tat | C boundar 2 of onshor groundwa SSIs have th 5.3). The qu ble 4.4 and | y have been re screenin ter/hydrol nerefore be ralifying fea 4.5 of ons | en screene g, docume ogy regime een screen atures of t hore scree | d out from ent referen e and air q led in to fu he Norfolk ning, docu | further ice 5.3.5. uality effo irther Valley Fe iment | 2). ect ens |
| d) | reference 5. Feature is no Table 4.4 of | 3.5.2). ot locate onshore | d within screenir | the 5 sit Ig, docur | es within 5 ment refere | km of the ence 5.3.5. | onshore p 2). | roject area | , therefore | is not scre | eened in fo | r further a | ssessment | (see footr | note (b)) | (see |

e) As LSE cannot be ruled out, an in-combination assessment will be undertaken with respect to this site (see section 9.3.3 of the Information to Support the HRA Report, document reference 5.3).





| Site | 133 | | | | | | | | | | | | | | |
|---|------------|-------------------------------|------------|-------------|------------|-------------|-------------|-------------|------------|---------------|------------|----------|--|--|--|
| Name of European Site: | North Cait | hness Cliffs | s SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 703 | | | | | | | | | | | | | | |
| Site Features | Likely eff | v effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-coml | bination | | | |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Breeding seabird assemblage including as named features fulmar, guillemot, kittiwake, razorbill, puffin | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | | | |
| Breeding peregrine | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | | |
| (a) North Caithness Cliffs SPA is far beyo | ond the ma | ximum for | aging rang | e of design | ated seabi | ird species | so has no l | breeding se | eason conr | nectivity. Pr | roportions | of these | | | |

populations migrating through the Norfolk Boreas site are small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Peregrines breeding in the UK normally remain close to their breeding areas throughout the year and are very unlikely to migrate offshore from the UK.

(c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at North Caithness Cliffs SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 1 | 34 | | | | | | | | | | | | | |
|-----------------------------------|------------|--------------------------------|------------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|--|--|
| Name of European Site: N | orth Norfo | olk Coast SI | PA and Ran | nsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | 42 | | | | | | | | | | | | | |
| Site Features | Likely ef | ly effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | | |
| | С | Ollision mortality [O D 0 | | | 0 | D | С | 0 | D | С | 0 | D | | |
| SPA features | | | | | | | | | | | | | | |
| Avocet Recurvirostra avosetta | | Y (a) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | Y (a) | N (b) | | |
| Bittern Botaurus stellaris | | Y (a) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | Y (a) | N (b) | | |

Royal HaskoningDHV Enhancing Society Together



| Golden Plover Pluvialis apricaria | Y (a) | N (b) | Y (a) | N (b) |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Ruff Philomachus pugnax | Y (a) | N (b) | Y (a) | N (b) |
| Common tern Sterna hirundo | Y (a) | N (b) | Y (a) | N (b) |
| Little tern Sterna hirundo | Y (a) | N (b) | Y (a) | N (b) |
| Marsh harrier Circus aeruginosus | Y (a) | N (b) | Y (a) | N (b) |
| Montagu's harrier Circus pygargus | <u>N (b)</u> |
| Mediterranean gull Larus melanocephalus | Y (a) | N (b) | Y (a) | N (b) |
| Roseate tern <i>Sterna dougallii</i> | Y (a) | N (b) | Y (a) | N (b) |
| Sandwich tern Sterna sandvicensis | Y (a) | N (b) | Y (a) | N (b) |
| Bar-tailed godwit Limosa lapponica | Y (a) | N (b) | Y (a) | N (b) |
| Hen harrier <i>Circus cyaneus</i> | Y (a) | N (b) | Y (a) | N (b) |
| Redshank Tringa totanus | Y (a) | N (b) | Y (a) | N (b) |
| Ringed plover Charidrius hiaticula | Y (a) | N (b) | Y (a) | N (b) |
| Dark-bellied brent goose Branta bernicla bernicla | Y (a) | N (b) | Y (a) | N (b) |
| Knot Calidris canutus | Y (a) | N (b) | Y (a) | N (b) |
| Pink-footed goose Anser brachyrhynchus | Y (a) | N (b) | Y (a) | N (b) |
| Wigeon Anas penelope | Y (a) | N (b) | Y (a) | N (b) |
| Pintail Anas acuta | Y (a) | N (b) | Y (a) | N (b) |
| Assemblage | Y (a) | N (b) | Y (a) | N (b) |
| Ramsar features | | | | | | | | | | |
| Common tern Sterna hirundo | Y (a) | N (с) | N (c) | N (с) | N (c) | N (c) | N (c) | N (c) | Y (a) | N (c) |
| Little tern <i>Sterna <mark>hirundo</mark>albifrons</i> | Y (a) | N (c) | Y (a) | N (c) |





| Sandwich tern Sterna sandvicensis | Y (a) | N (c) | Y (a) | N (c) |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Bar-tailed godwit Limosa lapponica | Y (a) | N (c) | Y (a) | N (c) |
| Ringed plover Charidrius hiaticula | Y (a) | N (с) | N (c) | N (с) | Y (a) | N (с) |
| Dark-bellied brent goose Branta bernicla bernicla | Y (a) | N (c) | Y (a) | N (c) |
| Knot Calidris canutus | Y (a) | N (c) | Y (a) | N (c) |
| Pink-footed goose Anser brachyrhynchus | Y (a) | N (c) | Y (a) | N (c) |
| Wigeon Anas penelope | Y (a) | N (c) | Y (a) | N (c) |
| Pintail Anas acuta | Y (a) | N (c) | Y (a) | N (c) |
| Sanderling Calidris alba | Y (a) | N (с) | N (c) | N (с) | Y (a) | N (c) |
| Assemblage | Y (a) | N (c) | Y (a) | N (c) |

(a) Following advice from Natural England there is potential for connectivity during migration therefore LSE cannot be ruled out.

(b) Survey data show little or no evidence of North Norfolk Coast SPA features being at risk of these effect whilst on migration (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) Ramsar criterion: survey data show little or no evidence of North Norfolk Coast SPA and Ramsar features being at risk of these effect whilst on migration (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of Eu Distance to | ropean Site: Norfolk Boreas (km) | 135 North Norfolk Sandbanks 23 | and Saturn Reef SAC | | | |
|-----------------------------------|-------------------------------------|--------------------------------------|--|--|--------------------------------|----------------|
| Site | Likely effect(s) of Norfolk | Boreas | | | | |
| Features | Permanent loss | Temporary physical disturbance | Smothering due to increased suspended sediment | Re- mobilisation of contaminated sediments | Underwater noise and vibration | In-combination |





| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
|--|-----------------------|------------------------|---------------------|-----------------------|------------|-------------|-----------|---------|------------|-----------|-------------|------------|-----------|--------|-------|-------|--------|-------|
| Sandbanks which are slightly covered by sea water all the time | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Reefs | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The ma screen | agnitude ing, docu | of any in Iment ref | pact on erence 5 | the featu .3.5.1). | res of thi | s site is n | egligible | and wou | ıld result | in no pot | tential for | r LSE (see | e paragra | ph 135 | | of of | fshore | |





| Site | .36 | | | | | | | | | | | |
|------------------------------------|------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Northumbri | ia Coast SP | A and Ram | isar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 19 | | | | | | | | | | | |
| Site Features | Likely eff | fect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Dist | urbance | Barrier I | Effect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (a) | | N (a) |
| Arctic tern Sterna paradisaea | | <u>N (a)</u> | | <u>N (a)</u> |
| Purple sandpiper Calidris maritima | | N (a) | | N (a) |
| Turnstone Arenaria interpres | | N (a) | | N (a) |
| Ramsar features | | | · | | | · | | | | | | |
| Little tern Sterna albifrons | | N (b) | | N (b) |
| Purple sandpiper Calidris maritima | | N (b) | | N (b) |
| Turnstone Arenaria interpres | | N (b) | | N (b) |

(a) Survey data show little or no evidence of Northumbria Coast SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Northumbria Coast SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Northumbria Coast SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 137 | | | | | | | | | | | | |
|---|--|--|--|---|--|---|---|--|--|---------------------------------------|--------------------------------------|---------------------|--|
| Name of European Site: | Noss SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 302 | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | Collision | n mortality Displacement/Disturbance Barrier Effect Cumulative/In-combinatio | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Breeding seabird assemblage including as named features gannet, fulmar, guillemot, kittiwake, puffin, great skua | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | |
| (a) Noss SPA is beyond maximum fora through the Norfolk Boreas site are (b) The predicted effect attributable to | ging range c likely to be Norfolk Bo | of designation extremely reas is so s | ed seabird / small rela small that i | species so itive to BD t would no | has no br MPS (see ⁻ ot significa | eeding sea Fable 6.1 o ntly contril | son conne f offshore oute to or a | ctivity. Pro screening, alter the ov | portions o document verall in-cc | f these pop reference mbination | oulations n 5.3.5.1). assessme | nigrating nt for | |

these features at Noss SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site: | 138 NTP S-I | H Watte | nmeer u | ınd angre | nzende I | Kustenge | biete SA(| 2 | | | | | | | |
|---------------------------------|----------------|---|--------------------------|-----------|----------|----------|-----------|------|------|------|---|------|------|------|------|
| Distance to Norfolk Boreas (km) | 360 | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | ect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Underv | derwater noiseVessel InteractionsIndirect effects on preyChanges to waterIn-combination | | | | | | | | | | | | | |
| | | | | | | | quality | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





| Site | 138 | | | | | | |
|---|--|--|--|--|--|--|--|
| Name of European Site: | NTP S-H Wattenmeer und angrenzende Kustengebiete SAC | | | | | | |
| Distance to Norfolk Boreas (km) | 360 | | | | | | |
| a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see | | | | | | | |
| Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | |

| Site Name of European Site: | 139 Ooster | schelde | SAC | | | | | | | | | | | | |
|---|---------------------|----------------------|-----------------------|---------------------|-----------|------------|-----------|------------|------------|------------|-----------|-----------|----------------|-------------|------|
| Distance to Norfolk Boreas (km) | 141 | | | | | | | | | | | | | | |
| Site Features | Likely | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Under | water no | oise | Vessel I | nteractio | ons | Indirec | t effects | on prey | Change | s to wate | er | In-combination | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E |





| Site Name of E | uropean | Site: | | 140 Orfordr | 1ess - Shi | ngle Stre | et SAC | | | | | | | | | | | |
|---|-------------------------|------------------|-----------|------------------|-----------------------------------|-----------|----------------------------|--|-----------|-----------|-------------------------------|------------|-----------------|---------------------|----------|----------------|----------|-------|
| Distance t | o Norfoll | < Boreas | (km) | 114 | | | | | | | | | | | | | | |
| Site | Likely e | ffect(s) o | f Norfolk | Boreas | | | | | | | | | | | | | | |
| Features | Permai | nent loss | | Tempo disturb | Temporary physical listurbance | | Smoth increas sedime | Smothering due to increased suspended sediment | | | obilisatio ninated ents | n of | Under and vi | water no bration | ise | In-combination | | |
| | С | 0 | D | С | O D C O | | | | | С | 0 | D | С | 0 | D | С | 0 | D |
| Coastal lagoons | N (a) | N (a) | N (a) | N (a) | (a) N (a) N (a) N (a) N (a) N (a) | | | | | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The or (a) The of (a) | distance k ence 5.3. | between 5.1). | the offsh | ore proje | ect area a | nd the de | esignated | l site is be | eyond the | e range o | f any pot | ential LSI | E (see Tab | ole 4.1 of | offshore | screenin | g, docum | ent |

| Site | 141 | | | | | | | | | | | |
|---|-------------|-------------------------------|---------|-------|-----------|---------|-----------|-------|-------|---------|------------|-----------|
| Name of European Site: | Östliche De | utsche Bu | cht SPA | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 329 | | | | | | | | | | | |
| Ornithology | | | | | | | | | | | | |
| Site Features | Likely ef | y effect(s) of Norfolk Boreas | | | | | | | | | | |
| | Collision | ollision mortality | | | ment/Dist | urbance | Barrier E | ffect | | Cumulat | ive/In-cor | nbination |
| | с | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D |
| Nonbreeding seabirds (razorbill, fulmar, black-throated diver, red-throated diver, herring gull, common gull, lesser black-backed gull, great black-backed | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |





| Site | 141 | | | | | | | | | | | | | | |
|--|---|--|--|---|--|---|---|--|--|---|---|--|--------------------------------|--|---------------|
| Name of European Site: | Östliche D | eutsche | Bucht S | ΡΑ | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 329 | | | | | | | | | | | | | | |
| gull, little gull, black-headed gull Chroicocephalus | | | | | | | | | | | | | | | |
| <i>ridibundus</i> , common scoter, great crested grebe, kittiwake, common tern, Arctic tern, sandwich tern, gannet, | | | | | | | | | | | | | | | |
| (a) Migrations of birds from this SPA a populations, not only because the continental coast of the North Sea document reference 5.3.5.1). (b) The predicted effect attributable to these features at östliche Deutsche Marine Mammals | re likely to sites are 3 towards n o Norfolk B e Bucht SP | o result i 45km ap orthern Boreas is A (see Ta | n negligi bart, but breedin s so smal able 6.1 | ble nu also b g grou l that i of offs | mbers pa ecause se nds rathe t would n hore scre | ssing thro abirds an r than acr ot signific ening, do | ugh the d waterb coss the s cantly col | Norfolk birds fro southern ntribute | Boreas m this S n North e to or a ce 5.3.5 | site rela SPA are Sea (se Iter the .1). | ative to th likely to m e Table 6.1 overall in | e size of I nigrate pro 1 of offsh -combina | 3DMPS r edomina ore scre | egional ntly alor ening, ssment | ng the for |
| | | | | | | | | | | | | | | | |
| Site Features | Likely e | Likely effect(s) of Norfolk Boreas Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | с | 0 | С | 0 | D | С | 0 | C | 0 | D | С | 0 |
| Harbour porpoise | N(c) | N(c) | N(c) | | | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| Grey seal | N(c) | N(c) | N(c) | | | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| Harbour seal | N(c) | N(c) | N(c) | | | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| a) Migrations of birds from this SI populations, not only because the continental coast of the No | PA are like the sites a orth Sea to | ly to res re 345kı wards n | ult in ne m apart, orthern | gligible but als breedi | e numbers so becaus ng ground | s passing t e seabirds Is rather t | through s and wa than acro | the Nor terbirds oss the s | folk Bo from t souther | eas site his SPA n North | relative t are likely t Sea. | o the size to migrate | e of BDM e predor | PS regio ninantly | nal along |





| Site | 141 |
|--|---|
| Name of European Site: | Östliche Deutsche Bucht SPA |
| Distance to Norfolk Boreas (km) | 329 |
| b) The predicted effect attributa these features at Östliche Deu | ble to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for itsche Bucht SPA. |

c) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site: | 142 Ouessa | nt-Mole | ene SAC | | | | | | | | | | | | |
|---|---------------------|--|-----------------------|---------------------|---|------------|------------|------------|------------|-------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 712 | | | | | | | | | | | | | | |
| Site Features | Likely e Underv | ely effect(s) of Norfolk derwater noise | | | oreas ssel Interactions Indirect effects on prey Changes to water In-com | | | | | | | pination | | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) |) N(a) N(a) N(a) N(a) N(a) | | | | | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact documen | range o It refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effect | t on indiv | iduals fro | om this sit | e would | result in ı | no potent | tial for LS | E |





| Site 14 | 3 | | | | | | | | | | | |
|--------------------------------------|-------------|--|------------|-------------|-------|--------|---------------------------------------|-------|-------|-------|-------|-------|
| Name of European Site: O | iter Thames | s Estuary S | PA and pSF | PA extensio | on | | | | | | | |
| Distance to Norfolk Boreas (km) 40 | | | | | | | | | | | | |
| Site Features | Likely eff | y effect(s) of Norfolk Boreas | | | | | | | | | | |
| | Collision | llision mortality Displacement/Disturbance | | | | rbance | Barrier Effect Cumulative/In-combinat | | | | | |
| | С | 0 | D D | | 0 | D | С | 0 | D | С | 0 | D |
| Nonbreeding red-throated divers | | N (a) | | N (b) | Y (f) | N (c) | N (a) | N (a) | N (a) | N (e) | Y (f) | N (e) |
| Breeding little tern and common tern | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) |

(a) Red-throated divers fly close to the sea surface and are therefore at extremely low risk of collisions or barrier effects. Survey data indicate a negligible risk of collision mortality or of a barrier effect (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Great Yarmouth may be used as a port for construction vessels for the Norfolk Boreas site; this port is located very close to the northern extent of the SPA however is outside the main concentrations of red-throated divers. This, together with the extent of existing vessel movements in the area means the addition of construction traffic as a result of Norolk Boreas will make little difference to the existing baseline and therefore the potential for LSE is considered to be negligible (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) Displacement/Disturbance during operation and decommissioning is considered negligible as the increase in vessel traffic within the SPA due to Norfolk Boreas will be negligible compared to the existing baseline (see Table 6.1 of offshore screening, document reference 5.3.5.1).

- (d) Little tern and common tern have maximum foraging ranges from colonies of 11km and 30km respectively (Thaxter et al. 2012), which suggests there could be connectivity between the SPA and Norfolk Boreas site, however this is the distance to the seaward edge of the SPA, and the coastal colonies are beyond foraging range of the Norfolk Boreas OWF sites. Furthermore, these species tend to forage in coastal waters rather than offshore and since the breeding colonies are beyond foraging range connectivity can be ruled out. Therefore, collision risk, displacement and barrier effects can be excluded (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (e) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Outer Thames Estuary SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (f) Following advice from Natural England it is considered that Operations and Maintenance vessels may disturb red-throated divers whilst transiting through the SPA therefore an LSE cannot be screened out (see section 6.3.4 of the Information to Support the HRA Report, document reference 5.3).





| Site 1 | 44 | | | | | | | | | | | |
|-----------------------------------|-----------|-----------------------------|--|-------|------------|---------|------------|-------|-------|---------------------------|-------|-------|
| Name of European Site: P | apa Stour | SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 8 | 39 | | | | | | | | | | | |
| Site Features | Likely ef | effect(s) of Norfolk Boreas | | | | | | | | | | |
| | Collision | llision mortality | | | nent/Distu | ırbance | Barrier Ef | fect | | Cumulative/In-combination | | |
| | С | O D | | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding Arctic tern | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) |
| Breeding ringed plover | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |

(a) Papa Stour SPA is beyond maximum foraging range of Arctic tern so has no breeding season connectivity. The proportion of the population migrating through the Norfolk Boreas site is very small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ringed plovers breeding in Scotland 'tend to winter locally or move only short distances' (Forrester *et al.* 2007) so birds from Papa Stour are extremely unlikely to reach the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Papa Stour SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 1 | .45 | | | | | | | | | | | |
|---------------------------------|------------|-------------------------------|-------------|-----------|------------|---------|-----------|-------|-------|---------------------------|-------|-------|
| Name of European Site: | apa Westr | ay (North I | lill and Ho | lm) SPA | | | | | | | | |
| Distance to Norfolk Boreas (km) | 70 | | | | | | | | | | | |
| Site Features | Likely eff | y effect(s) of Norfolk Boreas | | | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulative/In-combination | | |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding Arctic tern | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Breeding Arctic skua | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |





| Site | 145 |
|---|--|
| Name of European Site: | Papa Westray (North Hill and Holm) SPA |
| Distance to Norfolk Boreas (km) | 770 |
| (a) Papa Westray SPA is beyond the n migrating through the Norfolk Bor (b) The predicted effect attributable t | naximum foraging range of Arctic tern or Arctic skua so has no breeding season connectivity. Proportions of these populations reas site are likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1). to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for |

| Site | | | 146 | | | | | | | | | | | | |
|-------------------|------------|------------|-----------|-----------|------------|---------|------------|-------------|----------|-------------|-------------|---------|-------------|------|------|
| Name of Europea | n Site: | | Paston | Great Ba | rn SAC | | | | | | | | | | |
| Distance to Norfo | lk Boreas | ; (km) | 3 | | | | | | | | | | | | |
| | Likely ef | fect(s) of | Norfolk | Boreas | | | | | | | | | | | |
| | Direct ef | fects (e.g | . habitat | Direct ef | fects on (| ex-situ | Indirect e | effects on | | Indirect ef | fects on ex | -situ | In-combinat | ion | |
| | loss) on t | barbastel | le | habitats | function | ally | barbaste | lle present | t within | habitats fu | nctionally | | | | |
| | present i | n habitat | s within | connecte | ed to the | SAC | SAC boui | ndary | | connected | to the SAG | C which | | | |
| | the SAC b | boundary | , | which su | pport | | | | | support ba | irbastelle | | | | |
| | | | | barbaste | lle | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Barbastelle bats | N(a) | N(a) | N(a) | Y(b) | Y(b) | Y(b) | N(a) | N(a) | N(a) | Y(c,d) | Y(c,d) | Y(c,d) | Y(e) | Y(e) | Y(e) |

a) Paston Barn SAC is located 3km from the onshore project area; the SAC is therefore beyond the range of direct or indirect impact (see Table 2.1 of onshore screening, document reference 5.3.5.2).

b) Areas within the onshore infrastructure are known to be foraging areas for the barbastelle colony at Paston Great Barn. As these habitats will be directly affected by the project construction and operation phases, potential impacts on ex situ habitats have been screened in for further assessment (see section 9.3.2 of the Information to Support the HRA report, document reference 5.3).





| Site | | 146 |
|---------|---|--|
| Name o | f European Site: | Paston Great Barn SAC |
| Distanc | e to Norfolk Boreas (km) | 3 |
| c) | Watercourses identified as c works during the project cor have been screened in for fu of Paston Great Barn SAC are features will not occur and the Barbastelle bats are associat contamination regime (see T | core foraging areas for the Paston Great Barn barbastelle colony (i.e. drains at Ridlington Street) may be subject to trenching instruction phase, and as such there may be effects upon this ex-situ habitat. Therefore LSE cannot be ruled out and these effects urther assessment (see section 9.3.2 of the Information to Support the HRA report, document reference 5.3). Qualifying features is not sensitive to potential effects from noise, visual disturbance or air quality and so indirect effects upon these qualifying hese effects have been screened out of further assessment (see Table 4.3 of onshore screening, document reference 5.3.5.2). ted with hedgerow, scrub, woodland and watercourse habitats which will not be affected by changes to the geology or land Table 4.3 of onshore screening, document reference 5.3.5.2). |
| d) | Barbastelle commuting and t cannot be ruled out at the so | foraging habitat is located within the potential zone of influence of lighting from the onshore infrastructure and therefore LSE creening stage (see section 9.3.2 of the Information to Support the HRA report, document reference 5.3). |

e) As LSE cannot be ruled out, an in-combination assessment will be undertaken with respect to this site (see section 9.3.2 of the Information to Support the HRA report, document reference 5.3).

| Site Name of European Site: | 147 Pater N | loster-s | kärgårde | en SAC | | | | | | | | | | | |
|---|---------------------|---|-----------------------|---------------------|-----------|------------|------------|------------|------------|------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 751 | | | | | | | | | | | | | | |
| Site Features | Likely e | ely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | Rely effect(s) of Norfolk BoreasInderwater noiseVessel InteractionsIndirect effects on preyChanges to waterIn-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | l impact locumen | range o t refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effect | t on indiv | iduals fro | m this sit | e would | result in ı | no potent | tial for LS | E |

148





| Name of European Site: | Pentl | and Firth Is | slands SPA | | | | | | | | | | |
|--|-------|--------------|--------------|-------------|-------------|------------|------------|------------|-------------|-----------|-------------|------------|----------|
| Distance to Norfolk Boreas (km) | 710 | | | | | | | | | | | | |
| Site Features | | Likely effe | ect(s) of No | orfolk Bore | eas | | | | | | | | |
| | | Collision | mortality | | Displacer | nent/Distu | irbance | Barrier Ef | fect | | Cumulativ | ve/In-comb | pination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding Arctic tern | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) Pentland Firth Islands SPA is beyo | ond m | aximum fo | raging ran | ge of Arcti | c tern so h | as no bree | ding seaso | n connecti | vity. The p | roportion | of the popu | lation mig | rating |

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these

features at Pentland Firth Islands SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site 14 | 9 | | | | | | | | | | | |
|---|------------------------------|----------------------|-----------------------------|----------------------------|----------------------------|-------------------------|----------------------------|-------------|----------------------------|---------------------------|------------|------------|
| Name of European Site: P | ortsmouth H | larbour SP | A | | | | | | | | | |
| Distance to Norfolk Boreas (km) 34 | 7 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Dist | urbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Dark-bellied brent goose Branta bernicla bernicla | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Dunlin Calidris alpina | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| Red-breasted merganser Mergus serrator | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) Survey data show little or no evide to result in negligible numbers pas | nce of Ports sing through | mouth Hain the Norfc | rbour SPA i olk Boreas : | features o site (see Ta | ccurring in able 6.1 of | the Norfo offshore s | lk Boreas s creening, c | ite, and mi | igrations o reference ! | f birds fror 5.3.5.1). | n this SPA | are likely |





(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Portsmouth Harbour SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 150 | | | | | | | | | | | | | | |
|---------------------------------------|----------|--|-----------|------------|-----------|------------|-----------|------------|------------|------------|----------|-----------|----------|-------------|--------|
| Name of European Site: | Presqu | 'ile De C | rozon S | AC | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 749 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | Underwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combined | | | | | | | | | | | | | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range of | f Norfoll | k Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E (see |
| Table 3.2 of offshore screening, docu | ment ref | erence 5 | 5.3.5.1). | | | | | | | | | | | | |

| Site | 51 | | | | | | | | | | | |
|---|------------|-------------|-------------|-----------|------------|------------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: | Ramsar-Geb | oiet S-H Wa | attenmeer | und angre | enzende Kü | istengebie | te SPA | | | | | |
| Distance to Norfolk Boreas (km) | 55 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabirds including common gull, lesser black-backed gull, great black- backed gull, Mediterranean gull, black- headed gull, little tern, common tern, | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (e) | N (e) | N (e) |





| Site 1 | 51 | | | | | | | | | | | |
|---|------------|-------------|-------------|-----------|------------|------------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: R | amsar-Gel | oiet S-H Wa | attenmeer | und angre | enzende Kü | istengebie | te SPA | | | | | |
| Distance to Norfolk Boreas (km) 3 | 55 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Arctic tern, Sandwich tern, black tern, gull-billed tern <i>Gelochelidon nilotica</i> | | | | | | | | | | | | |
| Nonbreeding seabirds including razorbill, black-throated diver, red-throated diver, common gull, lesser black-backed gull, great black-backed gull, Mediterranean gull, black-headed gull, little gull, kittiwake, little tern, common tern, Arctic tern, Sandwich tern, cormorant, guillemot | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (e) | N (e) | N (e) |
| Waterbirds including pintail, shoveler, teal, wigeon, mallard, garganey Anas querquedula, grey heron Ardea cinerea, turnstone, bittern, brent goose, barnacle goose, sanderling, dunlin, curlew sandpiper, ringed plover, Kentish plover Charadrius alexandrinus, Bewick's swan, whooper swan, snipe Gallinago gallinago, oystercatcher, black-winged stilt Himantopus himantopus, bar-tailed godwit, black-tailed godwit, common scoter, red-breasted merganser, curlew, whimbrel, ruff, spoonbill, golden plover, grey plover, red-necked grebe Podiceps | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (e) | N (e) | N (e) |





| Site | 151 | | | | | | | | | | | | |
|--|------------|--|-------------|------------|------------|-------------|-----------|------------|------------|------------|-----------|-------|--|
| Name of European Site: | Ramsar-Geb | oiet S-H Wa | attenmeer | und angre | nzende Kü | istengebie | te SPA | | | | | | |
| Distance to Norfolk Boreas (km) | 355 | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | | |
| | Collision | Collision mortality Displacement/Disturbance Barrier Effect Cumulative/In-co | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | с | 0 | D | С | 0 | D | |
| grisegena, black-necked grebe Podiceps nigricollis, avocet, eider, shelduck, greenshank, redshank, lapwing | | | | | | | | | | | | | |
| Terrestrial birds (various species) | | N (d) | | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | N (d) | |
| (a) The Norfolk Boreas site is beyond i | maximum fo | raging ran | ge of desig | nated bree | eding seab | ird species | from this | SPA, so ha | s no breed | ing season | connectiv | /itv. | |

(a) The Norfolk Boreas site is beyond maximum foraging range of designated breeding seabird species from this SPA, so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

- (b) Migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site relative to the size of BDMPS regional populations, not only because of the distance, but also because seabirds and waterbirds from this SPA are likely to migrate predominantly along the continental coast of the North Sea towards northern breeding grounds rather than across the southern North Sea (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (c) Survey data show little or no evidence of these waterbird features occurring in the Norfolk Boreas OWF sites, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site, as most of these birds are likely to remain on the continental side of the North Sea (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (d) Terrestrial birds from this SPA are very unlikely to migrate to the UK; those that do migrate are more likely to follow the west European flyway along the continental coast (see Table 6.1 of offshore screening, document reference 5.3.5.1).
- (e) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at this SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | 152 | | | | | | | | | | | | | | |
|---|----------------------|--|------------------------|------------|-----------|------------|------------|------------|------------|-------------|---------|-------------|-----------|-------------|--------|
| Name of European Site: | Récifs e | et marai | is arrière | e-littorau | x du Cap | Lévi à la | Pointe d | e Saire S/ | AC | | | | | | |
| Distance to Norfolk Boreas (km) | 425 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | 5 | | | | | | | | | | |
| | Underv | erwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact ment ref | range o erence 5 | f Norfoll 5.3.5.1). | k Boreas a | and the e | xtent of a | any effect | t on indiv | iduals fro | om this sit | e would | result in i | no potent | tial for LS | E (see |

| Site | | 153 | | | | | | | | | | | | | |
|-------------------------|------------|-------------|------------|-----------|------------|------|----------|------------|--------|---------|----------|---------|----------|--------|------|
| Name of European Site | | Reci | fs Gris-Ne | z Blanc-N | ez SAC | | | | | | | | | | |
| Distance to Norfolk Bor | eas (km) | 192 | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of I | Norfolk Bo | oreas | | | | | | | | | | | |
| | Underwa | ater noise | | Vessel Ir | nteraction | S | Indirect | effects or | n prey | Changes | to water | quality | In-combi | nation | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





| Site | | : | 153 | | | | | | | | | | | | | | | | |
|---|----------------------------------|--------------------------------|-------------------------------|----------------------------|--------------------------------------|-----------------------------|--------------------------|------------------------------|----------------|---------------------|--------------------------|------------------|--------------------------|-----------------------|---------------------|------------|--------|-------------|---------|
| Name of European Site | : | I | Recifs G | ris-Nez | Blanc-N | ez SAC | | | | | | | | | | | | | |
| Distance to Norfolk Bor | eas (km |) : | 192 | | | | | | | | | | | | | | | | |
| Grey seal | N(a) | N(a) | N(| a) | N(a) | N(a) | N(a) | N(a) | 1 | l(a) | N(a) | | N(a) | | N(a) | N(a |) (| N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(| a) | N(a) | N(a) | N(a) | N(a) | 1 | l(a) | N(a) | | N(a) | | N(a) | N(a |) (| N(a) | N(a) |
| Benthic Habitats | 1 | | | | | | 1 | | | | | | | | | | | 1 | |
| Site Features | Permai | nent los | S | Tem distu | porary pł irbance | nysical | Smoth increa sedim | iering du sed susp ent | ue to pende | Re- d con sed | mobil tamin iments | lisatic ate d | on of I | Underv and vit | water no pration | oise | In-coi | mbinatio | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 |) | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b |) N (t |) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Reefs | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b |) N (k |) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| a) The distance betwee Table 3.2 of offshor b) The distance betwee reference 5.3.5.1). | en the p e screen en the o | otentia ing, doo ffshore | l impact cument project | range referer area a | of Norfol nce 5.3.5. nd the de | k Boreas 1). signated | and the | extent o | of any | effect o | n indi y pote | vidua ential | als from t I LSE (see | his site v Table 4 | would re | esult in n | o pote | ntial for I | SE (see |





| Site | | 1 | 154 | | | | | | | | | | | | | | | | |
|---|-----------------------------------|---------------------------------|------------------------------|---------------------------------|-------------------------------------|--------------------------------------|-------------------|--|----------|----------------------|-------------------|-----------------|------------------------|------------------------|-------------------|-------------|---------|------------------------|-------|
| Name of European Site | : | F | Ridens | et dun | es hydrai | ıliques du | detroit | du Pas- | de-Ca | ais SAC | | | | | | | | | |
| Distance to Norfolk Bo | eas (km | ı) 1 | L 92 | | | | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Nor | rfolk Bo | reas | | | | | | | | | | | | | | |
| | Underv | water n | oise | | Vessel I | nteractior | Indir | ect ef | fects on | prey | | Changes | to wate | er qualit | y In-c | combination | | | |
| | С | 0 | D | | С | 0 | D | С | (|) | D | | С | 0 | D | С | 0 | | D |
| Harbour porpoise | N(a) | N(a) | N | (a) | N(a) | N(a) | N(a) | N(a) | I | N(a) | N(a) | | N(a) | | N(a) | N(a | a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N | (a) | N(a) | N(a) | N(a) | N(a) | 1 | N(a) | N(a) | | N(a) | | N(a) | N(a | i) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N | (a) | N(a) | N(a) | N(a) | N(a) | ١ | l(a) | N(a) | | N(a) | | N(a) | N(a | ı) | N(a) | N(a) |
| Benthic Habitats | Benthic Habitats | | | | | | | | | | | | | | | | | | |
| Site Features | Permai | nent los | S | Tem distu | nporary physical Sm curbance inc | | | Smothering due to increased suspended sediment Sediment | | | isatio ate d | on of | Underv and vit | vater no oration | se In-combination | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (b) | N (b) | N (b) | N (b |) N (b) | N (b) | N (b) | N (b) | N (b |) N (b |) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Reefs | N (b) | N (b) | N (b) | N (b | N (b) | N (b) | N (b) | N (b) | N (b |) N (b |) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| a) The distance betwee (see Table 3.2 of of b) The distance betwee | en the p fshore so en the o | otentia creening offshore | l impac g, docu projec | ct range ment re t area a | of Norfe eference nd the d | olk Boreas 5.3.5.1). esignated | and the site is b | extent of | of any | effect o ge of an | n indiv y pote | vidua ential | als from I LSE (see | this site e Table 4 | would re | esult in i | no pote | ential for g, docum | LSE |

reference 5.3.5.1).





| Site | | | 1 | 54 | | | | | | | | | | | | | | | | | |
|--|--|---------|--------|--------|---------|-----------|---------------------------|--------------------|--------|------------------|----------|-------|--------|---------|-------|-----------|--------|-------|--------|---------|-------|
| Site | 155 | | | | | | | | | | | | | | | | | | | | |
| Name of European Site: River Derwent SAC | | | | | | | | | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 257 | | | | | | | | | | | | | | | | | | | | | |
| | Perma | inent h | ahitat | Temr | orary r | hysical | Smoth | ering c | lue to | Re- mo | hilisati | on | Under | water r | noise | Flectro | magnet | ic | In-con | hinatio | n . |
| | loss | | | distur | bance | Jirysical | increa susper sedim | sed nded ent | | of con sedime | taminat | ted | and vi | bration | 10130 | fields (I | EMF) | | | | ,,,, |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| River lamprey | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| a) The distance l of offshore sc | a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect from this site would result in no potential for LSE (see Table 5.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | | | | | | |





| Site | | | | 156 | | | | | | | | | | | |
|--|--|-------------|----------------------|---|---------------------|---|------|------|----------------|------|------|------|-----------------------|---|----------------------|
| Name of European Site: | | | Rive | River Wensum SAC | | | | | | | | | | | |
| Distance to Norfolk Boreas (k | m) | | 0 | 0 | | | | | | | | | | | |
| | Likely effec | t(s) of Nor | folk Borea | s | | | | | | | | | | | |
| | Direct effects (e.g. habitat l on land within the SAC boundary | | | Direct effe habitats fu connectec | Indirect SAC bou | Indirect effects within ex-situ habitats functionally connected to the SAC | | | In-combination | | | | | | |
| | С | 0 | D | С | О | D | С | 0 | D | с | 0 | D | С | 0 | D |
| Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation | <u>₩⊻(</u> a) | | ⊻ <mark>₩</mark> (a) | Y(b) | | Y(b) | Y(b) | Y(b) | Y(b) | Y(b) | Y(b) | Y(b) | Y(d) | | Y(d) |
| Desmoulin's whorl snail | <mark>₩</mark> (a) | | ⊻ <mark>N</mark> (a) | Y(b) | | Y(b) | Y(b) | Y(b) | Y(b) | Y(b) | Y(b) | Y(b) | Y(d) | | Y(d) |
| White-clawed (or Atlantic stream) crayfish Austropotamobius pallipes | <u>N(c)</u> N(a) | | <u>N(c)</u> N(a) | N(c) | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | | N(c) |
| Brook lamprey <i>Lampetra</i> planeri | <u>N(c)</u> N(a) | | <u>N(c)</u> N(a) | N(c) | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(a,_ c) | | N(a,_ c) |
| Bullhead Cottus gobio | <u>N(c)</u> N(a) | | N(c)N(a) | N(c) | | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(a, c,) | | N(a,_ c) |

a) The use of trenchless crossing techniques will ensure no direct effects upon any of the qualifying features of the SAC (see Section 4.2.1 of onshore screening, document reference 5.3.5.2). The Applicant's position is that there are no direct likely significant effects which are anticipated to arise in relation to the qualifying features of the River Wensum SAC within the SAC boundary, due to the use of trenchless crossing techniques to install cables at this location. This position is set out with Appendix 5.2 of the Information to support HRA report (document reference 5.3), and direct effects are not assessed further within the Information to Support HRA report (document reference 5.3). Natural England's position is that LSE from direct effects upon qualifying features of the site cannot be ruled out, due to the potential effects which could arise during a drilling fluid breakout.





| Site | 156 |
|---|---|
| Name of European Site: | River Wensum SAC |
| Distance to Norfolk Boreas (km) | 0 |
| Following consultation with Natural England during drilling fluid breakout were provided by the Applic supported the Applicant's view that no LSE is likely are content with the detail currently provided in the water crossing plans post consent as specified with contingency plan once the specific design of the tree Construction Practice (CoCP), developed in consult Code of Construction Practice (OCoCP) (document a)b) There may be potential effects on these qualifying upstream or downstream of the onshore project ar River Wensum SAC, including floodplain and grazing the Information to Support the HRA report, document effects arising from these noise, air quality, light or b)c) White-clawed crayfish was identified as absent at a construction in this area. Ex-situ hHabitats, including the onshore project area (see Sections 3.2.3 and 4, effects arising from these noise, air quality, light or the section of the section section section section sections and sections are sections and sections and sections area and the sections area from these noise, air quality, light or the sections area (see Sections 3.2.3 and 4). | g the Norfolk Boreas examination process, details of the likelihood and nature of possible effects from a sant to Natural England within a Clarification Note (document reference: ExA.AS-3.D1.V1; REP1-039) which to arise from drilling fluid breakout. Following review of this note, Natural England confirmed that " <i>[we]</i> te Clarification Note and Method Statement [and] look forward to being consulted on the site specific and ocCP.". Appropriate site specific measures to contain the breakout will be detailed in the drilling fluid enchless crossing is known and a contractor engaged, which will be included in the final Code of tation with Natural England and the Environment Agency. This commitment is secured within the outline reference: 8.1; REP1-018). features which as the may behave the potential to be located within the SAC boundary but located rea, or outside of the SAC boundary but are within areas of land which are functionally connected to the g marsh habitat and <u>- As such therefore</u> , LSE cannot be ruled out at the screening stage (see section 9.3.1 of nent reference 5.3). The remaining qualifying features of the River Wensum SAC are not sensitive to r visual disturbance sources (see Table 4.1 of onshore screening, document reference 5.3.5.2). These qualifying features are also not sensitive to r visual disturbance sources (see Table 4.1 of onshore screening, document reference 5.3.5.2). |
| c)d) As LSE cannot be ruled out for these qualyfing feat Information to Support the HRA report, document | tures, an in-combination assessment will be undertaken with respect to this site (see section 9.3.1 of the reference 5.3). |

| Site | 157 |
|---------------------------------|------------------------|
| Name of European Site: | Roches de Penmarch SAC |
| Distance to Norfolk Boreas (km) | 805 |
| | |





| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | | |
|---|---|----------|------|----------|-----------|------|---------|-------------|---------|------------------|---|------|----------------|------|------|
| | Under | water no | oise | Vessel I | nteractio | ons | Indirec | t effects o | on prey | Changes to water | | | In-combination | | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | |

| Site | 158 | | | | | | | | | | | | |
|---------------------------------|---------------------------------------|-----------|---|----------|------------|---------|-----------|-------|-------|---------------------------|-------|-------|--|
| Name of European Site: | Ronas Hill - North Roe and Tingon SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 852 | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulative/In-combination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Breeding great skua | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (d) | N (d) | N (d) | |
| Breeding red-throated diver | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (d) | N (d) | N (d) | |
| Breeding merlin | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (d) | N (d) | N (d) | |

(a) Ronas Hill, North Roe & Tingon SPA is beyond maximum foraging range of great skua so has no breeding season connectivity. The proportion of the population migrating through the Norfolk Boreas site is likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ronas Hill, North Roe & Tingon SPA is beyond maximum foraging range of red-throated diver so has no breeding season connectivity. The proportion of the population migrating through the Norfolk Boreas site is likely to be extremely small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) Merlins from this population are likely to migrate to wintering areas that are predominantly within the UK. A few, mostly young birds, may winter on the European continent so could possibly pass through the Norfolk Boreas site. However, no merlins have been seen during site specific surveys, and the chances of any from this SPA passing through the site are likely to be extremely low (see Table 6.1 of offshore screening, document reference 5.3.5.1).




| Site | 158 | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|
| Name of European Site: | Ronas Hill - North Roe and Tingon SPA | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 852 | | | | | | | | | |
| (d) The predicted effect attribu | table to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment | | | | | | | | | |
| for these features at Ronas Hill, North Roe & Tingon SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | |

| Site | 159 | | | | | | | | | | | | | | |
|---|-----|------------------------------------|-----------|---|-----------|------------|---------|-----------|-------|-------|---------------------------|-------|-------|--|--|
| Name of European Site: | Rou | isay SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 756 | | | | | | | | | | | | | | | |
| Site Features | | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulative/In-combination | | | | |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage including named features guillemot, Arctic skua, Arctic tern, kittiwake, fulmar | as | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | |
| (a) Rousay SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1). (b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Rousay SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | |

| Site | 160 |
|---------------------------------|------------------------------------|
| Name of European Site: | Sälöfjorden SAC |
| Distance to Norfolk Boreas (km) | 755 |
| Site Features | Likely effect(s) of Norfolk Boreas |





| | Underv | water no | oise | Vessel I | nteractio | ons | Indirec | t effects o | on prey | Change quality | s to wate | er | In-combination | | | |
|---|--------|----------|------|----------|-----------|------|---------|-------------|---------|-------------------|-----------|------|----------------|------|--------|--|
| | C | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see | | | | | | | | | | | | | | | E (see | |
| Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | | |

| Site Name of European Site: | 161 Sanday | / SAC | | | | | | | | | | | | | |
|---------------------------------------|--|------------------------------------|------|----------|-----------|------|---------|-------------|---------|---------|-----------|------|--------|----------|------|
| Distance to Norfolk Boreas (km) | 745 | | | | | | | | | | | | | | |
| Site Features | Likely e | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | vater no | oise | Vessel I | nteractio | ons | Indirec | t effects o | on prey | Change | s to wate | er | In-com | oination | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE | | | | | | | | | | | | | | |
| (see Table 3.2 of offshore screening, | (see Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | |

| Site | 162 |
|---------------------------------|------------------------------------|
| Name of European Site: | SBZ 1 / ZPS 1 SAC (off Nieuwpoort) |
| Distance to Norfolk Boreas (km) | 171 |
| Site Features | Likely effect(s) of Norfolk Boreas |





| | Underv | vater no | oise | Vessel I | nteractio | ons | Indirec | t effects o | on prey | Change | s to wate | er | In-combination | | | |
|---|--|----------|-----------|----------|-----------|------|---------|-------------|---------|---------|-----------|------|----------------|------|------|--|
| | | | | | | | | | | quality | | | | | | |
| | С | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D | |
| | | | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) | |
| a) The distance between the potentia | a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE | | | | | | | | | | | | | | | |
| (see Table 3.2 of offshore screening, o | documen | t refere | nce 5.3.5 | 5.1). | | | | | | | | | | | | |

| Site | 163 | | | | | | | | | | | | | | |
|---|------------|-----------------------------------|------|----------|-----------|---------|-----------|--------|------|----------|-----------|----------|--|--|--|
| Name of European Site: | SBZ 2 / Z | PS 2 SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 168 | | | | | | | | | | | | | | |
| Site Features | Likely eff | ikely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/dist | urbance | Barrier e | effect | | Cumulati | ve/In-com | bination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Wintering and passage species: red-throated diver, lesser black- backed gull, great black-backed gull, little gull, common scoter, great crested grebe, little tern, common tern, Sandwich tern | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(b) | N(b) | N(b) | | | |
| a) Many of the named species have not been recorded on the Norfolk Boreas site and are not ones associated with offshore locations. With respect to species named as nonbreeding features of the SPA, these consist of many of the seabird species which pass through the southern North Sea and English Channel on | | | | | | | | | | | | | | | |





| Site | 163 | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|
| Name of European Site: | SBZ 2 / ZPS 2 SPA | | | | | | | | |
| Distance to Norfolk Boreas (km) | 168 | | | | | | | | |
| migration. As such the potential impacts on those species recorded at Norfolk Boreas has been assessed in terms of the wider Biologically Defined Minimum Population Scales (BDMPS) populations (see Furness 2015). The Applicant considers this to be the appropriate population scale for nonbreeding impacts on the species named at this SPA, since the majority of individuals will not be resident at the SPA but will instead pass through. Furthermore, given the relative size of the SPA population estimates for the migratory species compared with the total passage populations, the risks to the SPA populations due to Norfolk Boreas are very | | | | | | | | | |
| b) The predicted effect attributable to combination assessment for these fe | to the proposed Norfolk Boreas project is so small that it would not significantly contribute to or alter the overall in- catures (see Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | |

| Site | 164 |
|---------------------------------|------------------------------------|
| Name of European Site: | SBZ 3 / ZPS 3 SPA |
| Distance to Norfolk Boreas (km) | 166 |
| Site Features | Likely effect(s) of Norfolk Boreas |





| Site | 164 | | | | | | | | | | | | | | |
|---|-------------|------------------|-------------|--------------|-------------|-------------|------------|-------------|------------|---------------------------|--------------|------|--|--|--|
| Name of European Site: | SBZ 3 / ZF | BZ 3 / ZPS 3 SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 166 | | | | | | | | | | | | | | |
| | Collision | mortality | | Displace | nent/distu | rbance | Barrier e | ffect | | Cumulative/In-combination | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | | |
| Wintering and passage species: red-throated diver, lesser black- 4backed gull, great black-backed gull, little gull, common scoter, great crested grebe, little tern, common tern, Sandwich tern | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(b) | N(b) | N(b) | | | |
| a) Many of the named species have | not been re | corded on | the Norfoll | k Boreas sit | e and are n | ot ones ass | ociated wi | th offshore | locations. | With respe | ct to specie | es | | | |

named as nonbreeding features of the SPA, these consist of many of the seabird species which pass through the southern North Sea and English Channel on migration. As such the potential impacts on those species recorded at Norfolk Boreas has been assessed in terms of the wider Biologically Defined Minimum Population Scales (BDMPS) populations (see Furness 2015). The Applicant considers this to be the appropriate population scale for nonbreeding impacts on the species named at this SPA, since the majority of individuals will not be resident at the SPA but will instead pass through. Furthermore, given the relative size of the SPA population estimates for the migratory species compared with the total passage populations, the risks to the SPA populations due to Norfolk Boreas are very small (see Table 6.1 of offshore screening, document reference 5.3.5.1).

b) The predicted effect attributable to the proposed Norfolk Boreas project is so small that it would not significantly contribute to or alter the overall incombination assessment for these features (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site Name of Eu | | | | | | | | | | | | | | | | | | |
|--|------------------------------------|---------------------|------------|------------------|--------------------|---------|----------------------------|--|--------|-----------|-------------------------------|----------|-----------------|---------------------|----------|----------------|-----------|--------|
| Distance to | Norfolk E | Boreas (k | m) | 576 | | | | | | | | | | | | | | |
| Site | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | | | | | |
| Features | eatures Permanent loss | | | Tempo disturb | orary phy bance | vsical | Smoth increa: susper | Smothering due to increased suspended sediment | | | obilisatio ninated ents | n of | Under and vi | water no bration | oise | In-combination | | |
| | С | 0 | D | С | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Submarine structures made by leaking gases | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The ref | e distance erence 5. | e betwee 3.5.1). | n the offs | shore pro | oject area | and the | designat | ed site is | beyond | the range | e of any p | otential | LSE (see | Table 4.1 | of offsh | ore scree | ning, doo | cument |

| Site 16 | 6 | | | | | | | | | | | | | |
|--|------------|-------------------------------|------------|----------|------------|---------|-----------|-------|-------|----------|-----------|----------|--|--|
| Name of European Site: Se | evogelschu | tzgebiet H | elgoland S | PA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 32 | 9 | | | | | | | | | | | | | |
| Site Features | Likely eff | y effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-com | bination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage including as named features razorbill, fulmar, herring gull, lesser black-backed gull, kittiwake, gannet, guillemot | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | | |





| Site | 166 | | | | | | | | | | |
|--|--|--|---|---|--|--|---|---|--|---|--|
| Name of European Site: | Seevogelschut | tzgebiet Helgolan | d SPA | | | | | | | | |
| Distance to Norfolk Boreas (km) | 329 | | | | | | | | | | |
| Nonbreeding seabird assemblage including razorbill, black-throated dive red-throated diver, common gull, lesse black-backed gull, little gull, kittiwake, common scoter, red-necked grebe, eid common tern, Arctic tern, Sandwich te gannet, guillemot | r, r er, rn, | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (c) | N (c) | N (c) |
| (a) Tracking data from gannets breedi within theoretical maximum forag Helgoland SPA. Proportions of the 6.1 of offshore screening, docume (b) Migrations of birds from this SPA a regional populations, not only bec the continental coast of the North document reference 5.3.5.1). | ng on Helgoland ing range of gar se populations r nt reference 5.3 are likely to resu ause the sites an Sea towards no | d show these bird nnet. Norfolk Bord migrating through 3.5.1). Ilt in negligible nu re 343km apart, l orthern breeding | ls do not trav eas is beyond n Norfolk Bor umbers passi put also beca grounds rath | vel in the di I the maxin eas are like ng through use nonbre er than acr | rection of num foragi ely to be ve the Norfol eeding seat oss the sou | or as far as ng range c ry small re lk Boreas s birds from uthern Nor | s the Norfc of other sea elative to B ite during this SPA ar th Sea (sea | Ik Boreas abird speci DMPS regi migration re likely to e Table 6.1 | site despite es at Seeve onal popul relative to migrate pr of offshor | e this site k ogelschutz ations (see the size of edominan e screenin | eeing gebeit E Table BDMPS tly along g, |

(c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Seevogelschutzgebeit Helgoland SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

167





| Name of European Site: | Skagen | s Gren o | og Skage | errak SAC | | | | | | | | | | | |
|---|----------|--|-----------|------------|-----------|------------|-----------|------------|------------|------------|---------|-------------|-----------|-------------|------|
| Distance to Norfolk Boreas (km) | 650 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | 5 | | | | | | | | | | |
| | Underv | rwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination quality | | | | | | | | | | | | | |
| | | rwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination quality | | | | | | | | | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfolk | k Boreas a | and the e | xtent of a | ny effect | t on indiv | iduals fro | m this sit | e would | result in i | no potent | tial for LS | E |
| (see Table 3.2 of offshore screening, c | locumen | it refere | nce 5.3. | 5.1). | | | | | | | | | | | |

| Site 1 | .68 | | | | | | | | | | | |
|---|------------|-------------|-------------|-----------|------------|---------|-----------|-------|-------|----------|-----------|----------|
| Name of European Site: S | olent & So | uthamptor | n Water SP | A & Ramsa | ır | | | | | | | |
| Distance to Norfolk Boreas (km) 3 | 51 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Common tern Sterna hirundo | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Little tern Strna albifrons | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Mediterranean gull Larus melanochephalus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Roseate tern Sterna dougallii | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Sandwich tern Sterna sandvicensis | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Black-tailed godwit Limsa limosa islandica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |





| Site | 168 | | | | | | | | | | | |
|---|-------------|------------------|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: | Solent & So | uthampton | Water SP | A & Ramsa | ar | | | | | | | |
| Distance to Norfolk Boreas (km) | 351 | | | | | | | | | | | |
| Dark-bellied brent goose Branta bernicla bernicla | | N (a) | | N (a) |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) |
| Teal Anas crecca | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Black-tailed godwit Limsa limosa islandica | | N (b) | | N (b) |
| Dark-bellied brent goose Branta bernicla bernicla | | N (b) | | N (b) |
| Ringed plover Charadrius hiaticula | | N (b) | | N (b) |
| Teal Anas crecca | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |

(a) Survey data show little or no evidence of Solent & Southampton Water SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Solent & Southampton Water SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Solent & Southampton Water SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

169





| Name of European Site: | Sotesk | är SAC | | | | | | | | | | | | | |
|--|---------------------|--|----------------------|---------------------|---------|----------|------------|------------|-----------|-----------|----------|-----------|-----------|------------|------|
| Distance to Norfolk Boreas (km) | 768 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | nderwater noise Vessel Interactions Indirect effects on prey Changes to water quality In-combination | | | | | | | | | | | | | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potenti (see Table 3.2 of offshore screening, o | al impac documer | t range it refere | of Norfo nce 5.3. | olk Boreas 5.1). | and the | extent o | f any effe | ect on inc | lividuals | from this | site wou | ld result | n no pote | ential for | LSE |

| Site Name of European Site: | 170 Southe | ern Nort | h Sea SA | ۱C | | | | | | | | | | | |
|---|---------------------|------------------|----------------------|------------------------|-------------------------|--------------------------|------------------------|-------------------------|-----------------------------|----------------------|------------------------|-------------------------|---------------------------|---------------------|------|
| Distance to Norfolk Boreas (km) | 0 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | nteractic | ons | Indirec | t effects o | on prey | Change | s to wate | er | In-com | pination | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D | С | 0 | D |
| Harbour porpoise | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | | Y(a) | Y(a) | Y(a) | Y(a) |
| a) The offshore project area is within associated with this SAC (see paragra | the SAC ph 64 of | and the offshore | refore L e screen | SE cannot ing, docu | : be rulec ment refe | l out at th erence 5. | ne screen 3.5.1). P | ing stage otential e | . It is assu effects fro | umed tha om under | t all harb water no | our porpo ise; vesso | oise in thi el interac | s area ar tions; | e |

changes to water quality; changes to prey resources; and disturbance at seal haul-out sites cannot be ruled out, and have therefore been assessed in section 8.3.1 of the Information to Support Habitats Regulations Assessment Report, document reference 5.3).

Site171Name of European Site:St Abb's Head to Fast Castle SPA





| Distance to Norfolk Boreas (km) 441 | | | | | | | | | | | | |
|---|---|---|---|---|---|--|--|--|---|---|--|------------------------|
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displacer | nent/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-coml | oination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including as named features herring gull, kittiwake, razorbill, guillemot, shag | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) St Abbs Head to Fast Castle SPA is beyo populations migrating through the Nort 5.3.5.1). (b) The predicted effect attributable to Nort features at St Abbs Head to Fast Castle | nd maximu folk Boreas rfolk Borea SPA (see T | um foragin s site are lil is is so sma able 6 1 of | g range of kely to be v all that it w | designated very small i ould not si | d seabird s relative to gnificantly | pecies so h BDMPS (se contribute | as no bree e Table 6. e to or alte | ding seaso 1 of offsho r the overa | n connecti re screenir Il in-comb | ivity. Propo ng, docume ination ass | ortions of the second s | nese ce or these |

| Site | 172 | | | | | | | | | | | | | | |
|---|----------------------|----------------------|-----------------------|---------------------|------------|------------|-----------|-------------|------------|-------------------|-----------|-----------|----------|-------------|------|
| Name of European Site: | Steing | rund SA | с | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 345 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | Interactio | ons | Indirec | t effects (| on prey | Change quality | s to wate | er | In-com | bination | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, e | ll impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | te would | result in | no poten | tial for LS | E |





| Site | 173 | | | | | | | | | | | | | | |
|---|----------------------|----------------------|-----------------------|---------------------|-----------|------------|-----------|------------|------------|-------------------|-----------|-----------|----------|-------------|------|
| Name of European Site: | Store F | Rev SCI | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 625 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | nteractio | ons | Indirec | t effects | on prey | Change quality | s to wate | er | In-coml | oination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, o | ıl impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this sit | e would | result in | no poten | tial for LS | E |

| Site | 174 | | | | | | | | | | | | |
|---|---------|------------|---|-------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Name of European Site: | Stour 8 | & Orwel | l Estuaries | SPA and F | Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) | 140 | | | | | | | | | | | | |
| Site Features | Lił | ikely effe | ect(s) of No | orfolk Bore | as | | | | | | | | |
| | Co | ollision r | n mortality Displacement/Disturbance Barrier Effect Cumulative/In-combination | | | | | | | | | | |
| | С | , | O D C O D C O D C O | | | | | | | | | | |
| SPA features | | | | | | | | | | | | | |
| Hen harrier <i>Circus cyaneus</i> Avocet <u>Recurvirostra avosetta</u> | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Black-tailed godwit <i>Limosa imosa</i> <i>islandica</i> | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |





| Site1 | 174 | | | | | | | | | |
|---|----------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: S | Stour & Orwell Estua | ries SPA and Ramsa | | | | | | | | |
| Distance to Norfolk Boreas (km) | 140 | | | | | | | | | |
| Dunlin Calidris alpine alpina | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Grey plover Pluvialis squatarola | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Pintail Anas acuta | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Redshank Tringa totanus | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ringed plover Charadrius hiaticulaDark bellied brent goose Branta bernicla bernicla | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| <u>Knot Calidris canuta</u> Shelduck Tadorna tadorna | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Turnstone Arenaria interpres | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | | | |
| Black-tailed godwit <i>Limosa <u>l</u>imosa</i> <i>islandica</i> | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dunlin <i>Calidris alpin<mark>a</mark>e</i> alpina | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Grey plover Pluvialis squatarola | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Pintail Anas acuta | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Redshank Tringa totanus | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dark-bellied brent goose Branta bernicla bernicla | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Knot Calidris canutus | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





| Site | | 174 |
|--------|---|--|
| Name | of European Site: | Stour & Orwell Estuaries SPA and Ramsar |
| Distan | ce to Norfolk Boreas (km) | 140 |
| (a) | Survey data show little or no evilate likely to result in negligible num that it would not significantly contrable 6.1 of offshore screening, | idence of Stour and Orwell Estuaries SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are bers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so small ontribute to or alter the overall in-combination assessment for these features at Stour and Orwell Estuaries SPA and Ramsar (see document reference 5.3.5.1). |
| (b) | Ramsar criterion: the predicted significant effect or alter the over screening, document reference | effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a erall in-combination assessment for these features at Stour and Orwell Estuaries SPA and Ramsar (see Table 6.1 of offshore 5.3.5.1). |

| Site | 175 | | | | | | | | | | | | | | |
|---|----------------------|----------------------------|-----------------------|---------------------|------------|------------|-----------|------------|------------|-------------------|------------|-----------|----------|-------------|------|
| Name of European Site: | Strand | enge på | Læsø og | g havet sy | yd herfor | SAC | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 749 | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | water no | oise | Vessel | Interactio | ons | Indirec | t effects | on prey | Change quality | es to wate | er | In-com | bination | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | al impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E |





| Site | 176 | | | | | | | | | | | |
|---|------------------------------|---------------------------|----------------------------|---------------------------|--------------------------|----------------------------|-------------|---------------------------|-------------------------|-----------------------------|-------------------------|----------|
| Name of European Site: | Sumburgh H | lead SPA | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 78 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of No | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-coml | pination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including as named features kittiwake, fulmar, guillemot, Arctic tern | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| (a) Sumburgh Head SPA is beyond maxim migrating through the Norfolk Boreas | um foraging site are like | range of o ly to be ve | lesignated ry small rel | seabird sp ative to BI | ecies so ha DMPS (see | as no breed Table 6.1 d | ding seasor | n connectiv screening, | vity. Propo document | rtions of th t reference | ese popula 5.3.5.1). | ations |

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Sumburgh Head SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of European Site: | 177 Sydlige | Nordsø | SAC | | | | | | | | | | | | |
|---------------------------------|----------------|----------|----------|-----------|-----------|------|----------|-----------|---------|---------|-----------|------|---------|----------|------|
| Distance to Norfolk Boreas (km) | 342 | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | of Norfc | olk Borea | 5 | | | | | | | | | | |
| | Underv | vater no | ise | Vessel I | nteractio | ns | Indirect | effects o | on prey | Change | s to wate | r | In-comb | pination | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1).

| Site | | 178 | | | | | | | | | | |
|---|-----------|--------------|----------------|--------------|-------------|---------------------------|----------------|------------|----------------|--------------|---------------|-----------|
| Name of European Site: | | Sylter Auß | enriff SCI | | | | | | | | | |
| Distance to Norfolk Boreas (km) | | 286 | | | | | | | | | | |
| Ornithology | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) of | Norfolk Bo | reas | | | | | | | | |
| | Collisic | on mortalit | y | Displacer | nent/Distu | rbance | Barrier Eff | ect | - | Cumulati | ve/In-combi | nation |
| C O D C O D C O D C O D C O D C O D C O D C O D C O D C O D C D C D C D D C D | | | | | | | | | | D | | |
| Nonbreeding seabird assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| including black-throated diver, red- | | | | | | | | | | | | |
| throated diver, common gull, lesser | | | | | | | | | | | | |
| black-backed gull, great black-backed | | | | | | | | | | | | |
| gull, little gull, gannet, kittiwake, | | | | | | | | | | | | |
| common tern, Arctic tern, Sandwich | | | | | | | | | | | | |
| tern, guillemot | | | | | | | | | | | | |
| a) Migrations of birds from this SF | A are lik | ely to resu | lt in negligil | ble numbe | rs passing | hrough th: | e Norfolk Bo | oreas site | relative to t | he size of l | BDMPS regio | onal |
| populations, not only because t | he sites | are 311km | apart, but | also becau | ise nonbree | eding seab | irds from th | is SPA are | e likely to mi | grate pred | ominantly a | long the |
| continental coast of the North | sea towa | irds northe | rn breeding | g grounds i | rather thar | across the | e southern N | North Sea | (see Table 6 | 5.1 of offsh | ore screenir | ng, |
| accument reference 5.3.5.1). | le to Nor | folk Boroc | s is so small | l that it wo | uld not sig | nificantly | ontributo to | or alter | the overall i | n-combina | tion accord | aent for |
| these features at Sylter Außenr | iff SPA (| ee Table 6 | 1 of offsho | re screeni | ng docum | nncantry C ent referer | .on 11 Dute tt | | | | 1011 03355511 | |
| c) The distance between the pote | ntial imp | act range | of Norfolk E | Boreas and | the extent | of any eff | ect on indivi | iduals fro | m this site w | vould resul | t in no potei | ntial for |
| LSE. | · · · · | 3- | | | | . , | | | | | - 1 | |





| Site | | | | | | 178 | | | | | | | | | | | | | | | |
|--|---------|---------|-----------|------------------|----------|---------------------------------|---|-----------|-------------------------|-------------------------------|-------|---------------|-------------------------|--------|----------------------|------------------|-------|-------|--------|--------|-------|
| Name of E | uropea | n Site: | | | | Sylter | Außen | riff SCI | | | | | | | | | | | | | |
| Distance to | o Norfo | lk Bore | eas (km) | | | 286 | | | | | | | | | | | | | | | |
| Marine ma | ammals | | | | | | | | | | | | | | | | | | | | |
| Site Featur | es | | | Like | ely effe | ct(s) of I | Norfolk | Boreas | | | | | | | | | | | | | |
| | | | | Und | derwat | er noise | | Vessel II | nteractic | ons | Indi | ect eff | fects or | n prey | Chang quality | es to wa / | iter | In- | combii | nation | |
| | | | | С | 0 | D | | С | 0 | D | С | 0 | | D | С | 0 | D | С | C |) |) |
| Harbour p | orpoise | | | N (0 | c) N | (c) N | N (c) N (c) <th< td=""><td>(c) N</td><td>l (c) </td><td>N (c)</td></th<> | | | | | | | | | (c) N | l (c) | N (c) | | | |
| Grey seal | | | | N (0 | c) N | (c) N | (c) | N (c) | N (c) | N (c) | N (c |) N | l (c) | N (c) | N (c) | | N (c |) N (| (c) N | l (c) | N (c) |
| Harbour se | eal | | | N (0 | :) N | (c) N | (c) | N (c) | N (c) | N (c) | N (c |) N | l (c) | N (c) | N (c) | | N (c |) N (| (c) N | l (c) | N (c) |
| Fish | | | | | | | | | <u> </u> | 1 | | | | | <u> </u> | | | | | | |
| Site | Likely | effect(| s) of Nor | folk Bo | reas | | | | | | | | | | | | | | | | |
| Site Likely effect(s) of Norfolk Boreas Features Permanent habitat Temporary loss disturbanc | | | | orary p bance | ohysical | Smot incre suspe sedin | hering d ased ended nent | lue to | Re- m conta sedim | obilisati minated ients | on of | Unde and v | erwater no vibration | oise | Electro fields (I | magnetio EMF) | 2 | In-co | mbinat | ion | |
| | С | 0 | D | С | 0 | D | С | 0 | D | C | 0 | D | С | 0 | D | C | 0 | D | C | 0 | D |
| River lamprey | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |





| Site | | | | | | 178 | | | | | | | | | | | | | | | |
|---------------------------------|--------|---------|------|------|------|----------|--------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Name of E | uropea | n Site: | | | | Sylter / | Außenr | iff SCI | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | | | | | | 286 | | | | | | | | | | | | | | | |
| Twaite shad | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |

| Site 1 | 79 | | | | | | | | | | | |
|------------------------------------|------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: T | esmouth a | nd Clevela | nd Coast SF | PA and Rar | nsar | | | | | | | |
| Distance to Norfolk Boreas (km) 3 |)1 | | | | | | | | | | | |
| Site Features | Likely eff | fect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA Features | | | | | | | | | | | | |
| Little tern Sterna albifrons | | N (a) | | N (a) |
| Sandwich tern Sterna sandvicensis | | N (a) | | N (a) |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) |
| Knot Calidris canutus | | N (a) | | N (a) |
| Redshank Tringa totanus | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar Features | | _ | | | | | | _ | | | _ | |
| Sandwich tern Sterna sandvicensis | | <u>N (b)</u> | | <u>N (b)</u> |
| Ringed plover Charadrius hiaticula | | <u>N (b)</u> | | <u>N (b)</u> |





| Site | 179 | | | | | | | | | | | |
|---------------------------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Teesmouth a | nd Clevela | nd Coast SF | PA and Ran | nsar | | | | | | | |
| Distance to Norfolk Boreas (km) | 301 | | | | | | | | | | | |
| Sanderling Calidris alba | | <u>N (b)</u> | | <u>N (b)</u> |
| Shelduck Tadorna tadorna | | <u>N (b)</u> | | <u>N (b)</u> |
| Teal Anas crecca | | <u>N (b)</u> | | <u>N (b)</u> |
| Little tern Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> |
| Knot Calidris canutus | | N (b) | | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |

(a) Survey data show little or no evidence of Teesmouth & Cleveland Coast features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Teesmouth & Cleveland Coast SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Teesmouth & Cleveland Coast SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site | 180 | | | | | | | | | | | |
|---------------------------------|------------|----------------------------------|-------------|------------|------------|---------|-----------|-------|---|----------|-----------|----------|
| Name of European Site: | Thames I | stuary and | Marshes SP. | A and Rams | ar | | | | | | | |
| Distance to Norfolk Boreas (km) | 210 | | | | | | | | | | | |
| Site Features | Likely eff | xely effect(s) of Norfolk Boreas | | | | | | | | | | |
| | Colli | sion mortal | ty | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |





| Site 1 | 30 | | | | | | | | | | | |
|--|----------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: T | names Estuar | y and Mai | rshes SPA a | and Ramsa | ar | | | | | | | |
| Distance to Norfolk Boreas (km) 2 | 10 | | | | | | | | | | | |
| Site Features Li | kely effect(s) | of Norfoll | k Boreas | | | | | | | | | |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) |
| Black-tailed godwit <i>Limosa limosa</i> islandica | | <u>N (a)</u> | | <u>N (a)</u> |
| Dunlin Calidris alpina alpina | | <u>N (a)</u> | | <u>N (a)</u> |
| Grey plover Pluvialis squatarola | | <u>N (a)</u> | | <u>N (a)</u> |
| Hen harrier Circus cyaneus | | N (a) | | N (a) |
| Knot Calidris canutus | | <u>N (a)</u> | | <u>N (a)</u> |
| Redshank Tringa totanus | | <u>N (a)</u> | | <u>N (a)</u> |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) |
| Assemblage | | N (a) | | N (a) |
| Ramsar features | | | | | | | | | | | | |
| Ringed plover Charadrius hiaticula | | N (b) | | N (b) |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (b) | | N (b) |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) |
| Knot Calidris canutus | | N (b) | | N (b) |
| Dunlin Calidris alpina alpina | | N (b) | | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) |
| Assemblage | | N (b) | | N (b) |





| Site | 180 | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| Name of European Site: | Thames Estuary and Marshes SPA and Ramsar | | | | | | | | |
| Distance to Norfolk Boreas (km) 210 | | | | | | | | | |
| Site Features Likely effect(s) of Norfolk Boreas | | | | | | | | | |
| (a) Survey data show little or no evaluate are likely to result in negligible resmall that it would not significate Ramsar (see Table 6.1 of offshot) (b) Ramsar criterion: the predicted significant effect or alter the ovaluate screening, document reference | idence of Thames Estuary and Marshes SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA numbers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so ntly contribute to or alter the overall in-combination assessment for these features at Thames Estuary and Marshes SPA and re screening, document reference 5.3.5.1). effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a erall in-combination assessment for these features at Thames Estuary and Ramsar (see Table 6.1 of offshore 5.3.5.1). | | | | | | | | |

| Site | 181 | | | | | | | | | | | |
|--|------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Thanet Coa | st and Sand | wich Bay SI | PA and Ra | msar | | | | | | | |
| Distance to Norfolk Boreas (km) | 187 | | | | | | | | | | | |
| Site Features | Likely e | effect(s) of N | Iorfolk Bore | eas | | | | | | | | |
| | Collisio | n mortality | | Displace | ment/Dist | urbance | Barrier E | ffect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | | | | | | | | |
| Turnstone Arenaria interpres | | N (a) | | N (a) |
| <u>Golden plover Pluvialis apricaria</u> | | <u>N (a)</u> | | <u>N (a)</u> |
| Little tern Sterna albifrons | | <u>N (a)</u> | | <u>N (a)</u> |
| Ramsar features | | | | | | _ | | | | | | |
| Turnstone Arenaria interpres | | N (b) | | N (b) |





| Site | 181 | | | | | | | | | | | |
|--------------------------------------|----------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | Thanet Coast | and Sandw | vich Bay SP | A and Ran | nsar | | | | | | | |
| Distance to Norfolk Boreas (km) | 187 | | | | | | | | | | | |
| Little tern Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> |
| Ringed plover Charadrius hiaticula | | <u>N (b)</u> | | <u>N (b)</u> |
| Grey plover Pluvialis squatarola | | <u>N (b)</u> | | <u>N (b)</u> |
| Sanderling Calidris alba | | <u>N (b)</u> | | <u>N (b)</u> |
| (a) Survey data show little or no ev | idence of Thar | net Coast an | d Sandwic | h Bay SPA | features o | ccurring in | the Norfol | k Boreas si | ite, and mi | grations of | f birds from | n this SPA |

(a) Survey data show little or no evidence of Thanet Coast and Sandwich Bay SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Thanet Coast and Sandwich Bay SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at Thanet Coast and Sandwich Bay SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

| Site Name of Europea | in Site: | | 1 T | .82 'hanet Co | oast SAC | | | | | | | | | | | | | |
|---|----------|-----------|-----------|------------------|-------------------|--------|-----------------------------------|---------------------------------|-------|---------------------------|-------------------------------|-------|----------------|---------------------|------|--------|----------|---|
| Distance to Norfolk Boreas (km) Site Features Likely effect(s) of No | | | | .86 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfol | k Boreas | ; | | | | | | | | | | | | | |
| | Perma | nent los | S | Tempo disturl | orary ph bance | ysical | Smoth increa suspe sedim | nering du sed nded ent | ie to | Re- mo contar sedim | obilisatic minated ents | on of | Under and v | water n ibration | oise | In-con | nbinatio | ı |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |





| Site Name of Europea | n Site: | | 1 F | 182 Thanet C | oast SAC | 1 | | | | | | | | | | | | |
|--|---------------------|----------|-----------|-----------------|-----------|----------|-----------|----------|-----------|-----------|----------|------------|----------|------------|----------|----------|----------|-------|
| Distance to Norfo | olk Borea | as (km) | 1 | 186 | | | | | | | | | | | | | | |
| Sandbanks which are slightly covered by sea water all the time | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Mudflats and sandflats not covered by seawater at low tide | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| Reefs | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | | N (a) | N (a) | | N (a) | N (a) | N (a) | N (a) |
| (a) The distance reference 5. | e betwee 3.5.1). | n the of | fshore pi | roject are | ea and th | e design | ated site | is beyor | nd the ra | nge of ar | ny poten | tial LSE (| see Tabl | e 4.1 of c | offshore | screenin | g, docum | nent |

| Site | 183 | | | | | | | | | | | | | | |
|---------------------------------|---------------------|---------------------|------------|-------------------|---------------------|-------|------------------------|--------------|---------|----------------------|---------------------|--------|-------|--------|-----|
| Name of European Site: | The | Broads S | SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 4.5 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) c | of Norfolk | Boreas | | | | | | | | | | | |
| | Direct of SAC bo | effects w undary | ithin | Direct situ ha | effects o bitats | n ex- | Indirect e boundary | effects with | nin SAC | Indirect situ hat | effects o oitats | on ex- | In-co | mbinat | ion |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |





| Site | 183 | | | | | | | | | | | | | | |
|---|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| Name of European Site: | The | Broads S | SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 4.5 | | | | | | | | | | | | | | |
| Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp</i> . | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Y(f) |
| Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Y(f) |
| Transition mires and quaking bogs | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Y(f) |
| Calcareous fens with <i>Cladium</i> <i>mariscus</i> and species of the <i>Caricion davallianae</i> [Priority feature] | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Yf() |
| Alkaline fens | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Y(f) |
| Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [Priority feature] | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Y(f) |
| <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | Y (e) | Y (e) | Y (e) | N (b) | N (b) | N (b) | Y(f) | Y(f) | Y(f) |
| Desmoulin's whorl snail | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | Y (e) | Y (e) | Y (e) | N (c) | N (c) | N (c) | Y(f) | Y(f) | Y(f) |
| Fen orchid | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | Y (e) | Y (e) | Y (e) | N (c) | N (c) | N (c) | Y(f) | Y(f) | Y(f) |
| Ramshorn snail | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | Y (e) | Y (e) | Y (e) | N (c) | N (c) | N (c) | Y(f) | Y(f) | Y(f) |
| Otter | N (a) | N (a) | N (a) | Y (d) | Y (d) | Y (d) | Y (e) | Y (e) | Y (e) | Y (d) | Y (d) | Y (d) | Y(f) | Y(f) | Y(f) |





| Site | | 183 |
|---------|--|--|
| Name o | f European Site: | The Broads SAC |
| Distanc | e to Norfolk Boreas (km) | 4.5 |
| a) | The Broads SAC is located 4.5k screening, document reference | xm from the onshore project area; the SAC is therefore beyond the range of potential impact (see Table 2.1 of onshore e 5.3.5.2). |
| b) | The Annex I qualifying feature these are beyond the range of | s of The Broads SAC are habitats and not mobile species, and as such are restricted primarily to the SAC boundary. As such, potential impact (see Section 4.5.4 of onshore screening, document reference 5.3.5.2). |
| c) | Habitats within the onshore proceeding, document reference | roject area and within 5km of The Broads SAC are not suitable for supporting these species (see Section 4.5.4 of onshore e 5.3.5.2). |
| d) | Suitable habitats for supportin commute from The Broads SA onshore screening, document | ng otter were recorded within the project area and within 5km of The Broads SAC. Otters have large ranges and may C into the onshore project area and therefore LSE cannot be ruled out at the screening stage (see Sections 3.3.6 and 4.5.4 of reference 5.3.5.2). |
| e) | The potential zone of influence Broads SAC (see Section 4.5.3 within the onshore project are | e for effects arising from local changes in surface and groundwater encompasses watercourses located within 5km of the of onshore screening, document reference 5.3.5.2). Therefore, indirect effects upon qualifying features of The Broads SAC a arising from local changes in surface and groundwater hydrology are screened in for further assessment. |
| f) | As LSE cannot be ruled out, an HRA report, document referer | in-combination assessment will be undertaken with respect to this site (see section 9.3.4 of the Information to Support the nce 5.3). |





| Site | 184 | | | | | | | | | | | | |
|--|-------|---------|-------------|---------|------------|-----------|---------|-------------|-------|-------|---------|------------|----------|
| Name of European Site: | The S | Swale S | SPA & Ram | nsar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 205 | | | | | | | | | | | | |
| Site Features | | Likely | / effect(s) | of Norf | olk Boreas | | | | | | | | |
| | | Collis | ion morta | lity | Displace | ment/Dist | urbance | Barrier Eff | ect | | Cumulat | ive/In-com | bination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| SPA features | | | | | _ | | | | _ | | _ | | |
| Avocet Recurvirostra avosetta | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Marsh harrier Circus aeruginosus | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Mediterranean gull Larus melanocephalu | S | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Bar-tailed godwit Limosa lapponica | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Golden plover Pluvialis apricaria | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Hen harrier Circus cyaneus | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ringed plover Charadrius hiaticula | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Black-tailed godwit Limosa limosa islandia | ca | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Grey plover Pluvialis squatarola | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Knot Calidris canutus | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Pintail Anas acuta | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Redshank Tringa totanus | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Shoveler Anas clypeata | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | · | | | | | | · | |





| Site | 184 | | | | | | | | | | | | |
|---|----------|--------|---------------|---------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | The S | wale S | SPA & Ram | sar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 205 | | | | | | | | | | | | |
| Site Features | | Likely | / effect(s) o | of Norf | olk Boreas | | | | | | | | |
| | | Collis | ion mortal | ity | Displacer | nent/Distu | irbance | Barrier Eff | ect | | Cumulati | ve/In-com | bination |
| | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Black-headed gull Larus ridibundus | | | <u>N (b)</u> | | <u>N (b)</u> |
| Little tern Sterna albifrons | | | <u>N (b)</u> | | <u>N (b)</u> |
| Mediterranean gull Larus melanocephalus | <u>5</u> | | <u>N (b)</u> | | <u>N (b)</u> |
| Ringed plover Charadrius hiaticula | | | <u>N (b)</u> | | <u>N (b)</u> |
| Greenshank Tringa nebularia | | | <u>N (b)</u> | | <u>N (b)</u> |
| Curlew Numenius arquata | | | <u>N (b)</u> | | <u>N (b)</u> |
| Little egret Egretta garzetta | | | <u>N (b)</u> | | <u>N (b)</u> |
| Spotted redshank Tringa erythropus | | | <u>N (b)</u> | | <u>N (b)</u> |
| Whimbrel Numenius phaeopus | | | <u>N (b)</u> | | <u>N (b)</u> |
| Shelduck Tadorna tadorna | | | <u>N (b)</u> | | <u>N (b)</u> |
| Dunlin Calidris alpina | | | <u>N (b)</u> | | <u>N (b)</u> |
| Oystercatcher Haematopus ostralegus | | | <u>N (b)</u> | | <u>N (b)</u> |
| Teal Anas crecca | | | <u>N (b)</u> | | <u>N (b)</u> |
| Golden plover Pluvialis apricaria | | | <u>N (b)</u> | | <u>N (b)</u> |
| Greater white-fronted goose Anser albifro | ons | | <u>N (b)</u> | | <u>N (b)</u> |
| Little grebe Tachybaptus ruficollis | | | <u>N (b)</u> | | <u>N (b)</u> |





| Site | 184 | | | | | | | | | | | | |
|--|--------|--------|------------|----------|------------|------------|---------|--------------|-------|-------|----------|-----------|----------|
| Name of European Site: | The Sw | ale S | PA & Ram | sar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 205 | | | | | | | | | | | | |
| Site Features | L | ikely | effect(s) | of Norfe | olk Boreas | | | | | | | | |
| | С | Collis | ion mortal | ity | Displacer | ment/Distu | irbance | Barrier Effe | ect | | Cumulati | ve/In-com | bination |
| | С | | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Ringed plover Charadrius hiaticulaLapwing Vanellus vanellus | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Black-tailed godwit <i>Limosa limosa</i> islandicaAvocet Recurvirostra avosetta | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| <u>Knot Calidris canuta</u> Grey plover Pluvialis squatarola | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Pintail Anas acuta | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Black-tailed godwit Limosa limosa islandicaRedshank Tringa totanus | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Shoveler Anas clypeata | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Wigeon Anas penelope | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Dark-bellied bent goose Branta bernicla berniclaRuff Philomachus pugnax | | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |

(a) Survey data show little or no evidence of The Swale SPA and Ramsar features occurring in the Norfolk Boreas site, and migrations of birds from this SPA and Ramsar are likely to result in negligible numbers passing through the Norfolk Boreas site during migration and the predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at The Swale SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Ramsar criterion: the predicted effects attributable to Norfolk Boreas are so small that they would not have a significant effect alone or contribute to a significant effect or alter the overall in-combination assessment for these features at The Swale SPA and Ramsar (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | | | | | 185 | | | | | | | | | | | | | |
|---|------------------|--|-----------|---------------|-------------------------------------|-------------------------|------------------------------|-----------------------------|-----------------|-------------------------|-------------------------------|------------------|--------------------|------------------|-----------------|---------|----------------|------------------|
| Name of European | Site: | | | | The | Wash and | d North N | orfolk C | oast SA | С | | | | | | | | |
| Distance to Norfolk | Boreas | (km) | | | 110 | 33km fro | om offsho | re cable | corrido | or) | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfol | k Bore | as | | | | | | | | | | | | | |
| | Underv | vater no | vise | | Vessel In disturbar out sites | teractior nce at sea | ıs/ Il haul | Indire | ect effec | ts on p | rey | Changes | to wate | r quality | In-co | ombinat | ion | |
| | С | 0 | D | | с | 0 | D | С | 0 | | D | С | 0 | D | С | C |) | ם |
| Harbour seal | Y (a) | Y (a) | Y (a) |)) | ((a) | Y (b) | Y (b) | Y (a) | Y (a |) Y | ' (a) | Y (a) | | Y (a) | Y (a |) Y | (a) | Y (a) |
| Grey seal | Y (a) | Y (a) Y (a) Y (a) Y (a) | | | ' (b) | Y (b) | Y (b) | Y (a) | ¥ (a |) ¥ | ' (a) | Y (a) | | Y (a) | Y (a |) ¥ | (a) | Y (a) |
| Benthic Habitats | 1 | | | I | | | | | | I | | | | | | | | |
| Site Features | Permai | nent loss | ; | Temp distu | oorary ph rbance | iysical | Smothe increase sedime | ering due ed suspe nt | e to ended | Re- m conta sedin | nobilisat aminate nents | ion of d | Underv vibratio | water no on | ise and | In-con | nbinatio | ı |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | | N (c) | N (c) | | N (c) | N (c) | N (c) | N (c) |
| Mudflats and sandflats not | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | | N (c) | N (c) | | N (c) | N (c) | N (c) | N (c) |





| Site | | | | | 185 | | | | | | | | | | | | | |
|---|----------------------|-----------------------|---------------------|-------------------------|----------------------|-----------------------|-----------------------|-----------------------|-------------------------|-----------------------|-------------------------|----------------------|-----------------------|---------------------|----------------------|-----------------------|------------------|-------|
| Name of European | Site: | | | | The V | /ash anc | North M | Norfolk C | oast SA | C | | | | | | | | |
| Distance to Norfolk | Boreas | (km) | | | 110 (3 | 3km fro | m offsh | ore cable | e corrido | r) | | | | | | | | |
| covered by seawater at low tide | | | | | | | | | | | | | | | | | | |
| Large shallow inlets and bays | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | | N (c) | N (c) | | N (c) | N (c) | N (c) | N (c) |
| a) Potential effect foraging grey ar | s from u nd harbo | nderwat our seal o | er noise annot b | ; vessel i e ruled o | interaction out, and | ons; chai have the | nges to v refore b | vater qui een asse | ality; cha ssed in s | inges to section 8 | prey resc .3.2 of th | urces; a e Inforn | nd distu nation to | rbance a Support | t seal ha Habitat | ul-out si s Regula | tes for tions | |

Assessment Report, document reference 5.3).

b) Potential for vessel interactions and disturbance at seal haul-out sites if a port to the north of the offshore project area is selected and therefore LSE cannot be ruled out, and has been assessed in sections 8.3.2.2 and 8.3.2.3 of the Information to Support Habitats Regulations Assessment Report, document reference 5.3.

c) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see Table 4.1 of offshore screening, document reference 5.3.5.1).

| Site | 186 | | | | | | | | | | | | |
|---------------------------------|------------------------|------------------------------------|---|--------------------------|-------|-------|-----------|-------|-------|---------------------------|-------|-------|--|
| Name of European Site: | ne Wash SPA and Ramsar | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | .50 | | | | | | | | | | | | |
| Site Features | Likely ef | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | |
| | Collision mortality | | | Displacement/Disturbance | | | Barrier E | ffect | | Cumulative/In-combination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| SPA features | | | | | | | | | | | | | |
| Common tern Sterna hirundo | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | |





| Site 1 | .86 | | | | | | | | | | | |
|--|------------|------------------|-------------|------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Name of European Site: T | 'he Wash S | PA and Rai | msar | | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 | .50 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | isplacement/Disturbance | | | ffect | | Cumulati | ve/In-com | bination |
| | С | 0 | D | с | 0 | D | С | 0 | D | с | 0 | D |
| Little tern Sterno albifrons | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Marsh harrier Circus aeruginosus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Avocet Recurvirostra avosetta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Bar-tailed godwit Limosa lapponica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| <u>Bewick's swan Cygnus colombianus</u> <u>bewickii</u> | | <u>N (a)</u> | | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> |
| Common scoter Melanitta nigra | | <u>N (a)</u> | | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> |
| Wigeon Anas penelope | | <u>N (a)</u> | | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> |
| Golden plover Pluvialis apricaria | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Whooper swan Cygnus cygnus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ringed plover Charadrius hiaticula | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Sanderling Calidris alba | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Black-tailed godwit <i>Limosa limosa</i> islandica | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Curlew Numenius arquata | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Dark-bellied brent goose Branta bernicla bernicla | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |





| Site 1 | .86 | | | | | | | | | | | |
|--|------------|--------------|-------------|--------------|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Name of European Site: | he Wash S | PA and Rai | msar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | .50 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | splacement/Disturbance | | | ffect | | Cumulat | ive/In-com | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Dunlin Calidris alpina alpina | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Gadwall Anas strepera | | <u>N (a)</u> | | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> |
| Goldeneye Bucephala clangula | | <u>N (a)</u> | | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> | <u>N (a)</u> |
| Grey plover Pluvialis squatarola | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Knot Calidris canutus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Oystercatcher Haematopus ostralegus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Pink-footed goose Anser brachyrhynchus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Pintail Anas acuta | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Redshank Tringa totanus | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Shelduck Tadorna tadorna | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Turnstone Arenaria interpres | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Assemblage | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Ramsar features | | | | | | | | · | | | | |
| Bar-tailed godwit Limosa lapponica | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |
| Black-headed gull Larus ridibundus | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Golden plover Pluvialis apricaria | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) |





| Site | 186 | | | | | | | | | | | |
|--|------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------------|--------------|--------------|
| Name of European Site: | The Wash S | PA and Ra | msar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 150 | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulative/In-combinatio | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Eider Somateria mollissima | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Ringed plover Charadrius hiaticula | | N (b) | | N (b) | N (b) | N (b) |
| Sanderling Calidris alba | | N (b) | | N (b) | N (b) | N (b) |
| Black-tailed godwit <i>Limosa limosa</i> <i>islandica</i> | | N (b) | | N (b) | N (b) | N (b) |
| Curlew Numenius arquata | | N (b) | | N (b) | N (b) | N (b) |
| Dark-bellied brent goose Branta bernicla bernicla | | N (b) | | N (b) | N (b) | N (b) |
| Dunlin Calidris alpina alpina | | N (b) | | N (b) | N (b) | N (b) |
| Grey plover Pluvialis squatarola | | N (b) | | N (b) | N (b) | N (b) |
| Knot Calidris canutus | | N (b) | | N (b) | N (b) | N (b) |
| Common tern Sterna hirundo | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| <u>Lesser black-backed gull Larus fuscus</u> graellsii | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Little tern Sterna albifrons | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Greenshank Tringa nebularia | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Cormorant Phalacrocorax carbo | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |





| Site | 186 | | | | | | | | | | | |
|--|------------|------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------|------------------|------------------|
| Name of European Site: | The Wash S | PA and Ra | msar | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 150 | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | urbance | Barrier E | ffect | | Cumulative/In-combination | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Avocet Recurvirostra avosetta | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Ruff Philomachus pugnax | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Whimbrel Numenius phaeopus | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Bean goose Anser fabalis fabalis | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Common scoter Melanitta nigra | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Oystercatcher Haematopus ostralegus | | N (b) | | N (b) | N (b) | N (b) |
| Pink-footed goose Anser brachyrhynchus | | N (b) | | N (b) | N (b) | N (b) |
| <u>Greater white-fronted goose Anser</u> <u>albifrons albifrons</u> | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Red-throated diver Gavia stellata | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Spotted redshank Tringa erythropus | | <u>N (b)</u> | | <u>N (b)</u> | <u>N (b)</u> | <u>N (b)</u> |
| Pintail Anas acuta | | N (b) | | N (b) | N (b) | N (b) |
| Redshank Tringa totanus | | N (b) | | N (b) | N (b) | N (b) |
| Shelduck Tadorna tadorna | | N (b) | | N (b) | N (b) | N (b) |
| Turnstone Arenaria interpres | | N (b) | | N (b) | N (b) | N (b) |
| Lapwing Vanellus vanellus | | N (b) | | N (b) | N (b) | N (b) |





| Site | 186 | | | | | | | | | | | | |
|---|---|--|---|--|---|--|--|--|---|--|---|-------------------------------------|--|
| Name of European Site: | The Wash S | PA and Rar | nsar | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 150 | | | | | | | | | | | | | |
| Site Features | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | Displacement/Disturbance Barrier Effect Cumulative/In-co | | | | | | | | | | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| (a) Survey data show little or no evid in negligible numbers passing the that it would not significantly confishore screening, document reference (b) Ramsar criterion: the predicted exignificant effect or alter the over document reference 5.3.5.1). | lence of The ough the No ntribute to o ference 5.3. iffects attrib rall in-combi | Wash SPA orfolk Bore r alter the 5.1). utable to N ination asso | features c as site duri overall in-c lorfolk Bor essment fo | occurring ir ing migratio combinatic eas are so or these fea | n the Norfo on and, in on assessm small that atures at Tl | olk Boreas s addition, t ent for the they would he Wash SI | site, and m he predicte ese features d not have PA and Rar | igrations o ed effect at s at The W a significau nsar (see T | f birds fror tributable ash SPA an nt effect al able 6.1 of | n this SPA to Norfolk d Ramsar (one or con offshore s | are likely t Boreas is s see Table tribute to creening, | o result so small 6.1 of a | |

| Site Name of European Site: | 187 Tregor Goëlo SAC | |
|--------------------------------|-------------------------|------|
| | | 5050 |





| Distance to Norfolk Boreas (km) | 594 | | | | | | | | | | | | | | |
|---|----------|--|------|----------|--|------|------|------|-------------------|-----------|----|----------------|------|------|------|
| Site Features | Likely e | <ely boreas<="" effect(s)="" norfolk="" of="" td=""></ely> | | | | | | | | | | | | | |
| | Underv | vater no | ise | Vessel I | Vessel Interactions Indirect effects on prey | | | | Change quality | s to wate | er | In-combination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potential impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE (see Table 3.2 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | | |

| Site | 188 | 8 | | | | | | | | | | | | |
|---|-------------|----------------------------------|---|----------|------------|------------------------|-------|-------|-------|----------|-------------------|-------|--|--|
| Name of European Site: | Troup, Penr | bup, Pennan and Lion`s Heads SPA | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) 593 | | | | | | | | | | | | | | |
| Site Features | Likely eff | kely effect(s) of Norfolk Boreas | | | | | | | | | | | | |
| | Collision | mortality | | Displace | ment/Distu | nt/Disturbance Barrier | | | | Cumulati | ve/In-combination | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | | |
| Breeding seabird assemblage including as named features razorbill, fulmar, guillemot, kittiwake, herring gull | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) | | |
| (a) Troup, Pennan & Lion's Heads SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are likely to be very small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | | |

(b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Troup, Pennan & Lion's Heads SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).




| Site | 189 | | | | | | | | | | | | | | |
|---|---------------------|----------------------|------------------------|-------------------|-----------|------------|------------|-------------|------------|--------------------|-----------|-------------|-----------|-------------|------|
| Name of European Site: | Untere | ms und | Außene | ms SCI | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 259 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Boreas | 5 | | | | | | | | | | |
| | Underv | vater no | oise | Vessel I | nteractio | ons | Indirect | t effects o | on prey | Change: quality | s to wate | er | In-com | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, c | l impact locumen | range o it refere | f Norfolk nce 5.3.! | Boreas a 5.1). | ind the e | xtent of a | any effect | t on indiv | iduals fro | om this sit | e would | result in ı | no potent | tial for LS | E |

| Site | 190 | | | | | | | | | | | | | | |
|---------------------------------|----------|-----------|----------|-----------|-----------|-----------|------------|-----------|---------|---------|-----------|------|---------|----------|------|
| Name of European Site: | Vadeha | avet me | d Ribe Å | , Tved Å | og Varde | Å vest fo | or Varde S | SAC | | | | | | | |
| Distance to Norfolk Boreas (km) | 397 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | lk Boreas | 5 | | | | | | | | | | |
| | Underv | vater no | ise | Vessel I | nteractio | ons | Indirect | effects o | on prey | Change | s to wate | r | In-comb | pination | |
| | | | | | | | | | | quality | | | | | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |





| Site | 190 |
|---|--|
| Name of European Site: | Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde SAC |
| Distance to Norfolk Boreas (km) | 397 |
| a) The distance between the potentia | l impact range of Norfolk Boreas and the extent of any effect on individuals from this site would result in no potential for LSE |
| (see Table 3.2 of offshore screening, c | locument reference 5.3.5.1). |

| Site | 191 | | | | | | | | | | | | | | |
|---|---------------------|----------------------|-----------------------|---------------------|-----------|------------|-----------|-------------|------------|-------------------|-----------|-----------|----------|-------------|------|
| Name of European Site: | Venø, ' | Venø Su | nd SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 531 | | | | | | | | | | | | | | |
| Site Features | Likely e | effect(s) | of Norfo | olk Borea | S | | | | | | | | | | |
| | Underv | water no | oise | Vessel I | nteractio | ons | Indirec | t effects (| on prey | Change quality | s to wate | er | In-coml | oination | |
| | С | 0 | D | C | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia (see Table 3.2 of offshore screening, | l impact documer | range o nt refere | f Norfoll nce 5.3. | k Boreas a 5.1). | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | e would | result in | no poten | tial for LS | E |

| Site | 192 |
|--------------------------------|------------------------------------|
| Name of European Site: | Vlaamse Banken SAC |
| Distance to Norfolk Boreas (km |) 136 |
| Marine Mammals | |
| Site Features | Likely effect(s) of Norfolk Boreas |





| Site | | | | | 192 | | | | | | | | | | | | | | | | |
|------------------|---------------|------------------|----------|------------------------|-------------------------|-----------------|---------------------------------|---------------------------------|---------------------------|-------------------------|------------------------------|-------------------------|--------------------------------|-------------------|------------|------------------|----------------------|----------|--------|------------|-------|
| Name of E | uropea | n Site: | | | Vlaam | se Ban | ken SAC | 2 | | | | | | | | | | | | | |
| Distance to | o Norfo | olk Bore | eas (k | m) | 136 | | | | | | | | | | | | | | | | |
| | | | | Unde | rwater i | noise | Vessel and di seal ha | Intera sturba aul out | ctions nce at s | Inc on | lirect eff prey | fects | Chang | ges to v | vater | quality | | | | In-combina | ation |
| | | | | С | 0 | D | | С | 0 | D | C | | 0 | D | C | | 0 | D | C | 0 | D |
| Harbour po | orpoise | | | N (a) | N (a |) N | (a) | N (a) | N (a |) N (| a) N | (a) | N (a) | N (a) | N | (a) | | N (a) | N (a) | N (a) | N (a) |
| Grey seal | | | | N (a) | N (a |) N | (a) | N (a) | N (a |) N (| a) N | (a) | N (a) | N (a) | N | (a) | | N (a) | N (a) | N (a) | N (a) |
| Harbour se | al | | | N (a) | N (a) N (a) N (a) | | | N (a) | N (a |) N (| a) N | (a) | N (a) | N (a) | N | (a) | | N (a) | N (a) | N (a) | N (a) |
| Fish | | | | | | oreas | | | | | | | | | | | | | | ÷ | |
| Site | Likely | effect | (s) of I | Norfolk I | Boreas | | | | | | | | | | | | | | | | |
| reatures | Perm habit | anent at loss | | Temp physi distu | oorary cal rbance | | Smot incre suspe sedin | hering ased ended nent | due to | o Re- of c sed | mobilisa ontamir ments | ation ated | Under and v | rwater ibratio | noise n | e Ele fiel | ctromagi ds (EMF) | netic | In-cor | nbination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sea Lamprey | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a |) N(a) | N(a) | N(a) | N(a) | N(á | a) N(a |) N(a) | N(a) | N(a) | N(a) | N(a) |
| Twaite Shad | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a |) N(a) | N(a) | N(a) | N(a) | N(a | a) N(a |) N(a) | N(a) | N(a) | N(a) | N(a) |
| Benthic ha | bitats | | | | | | | | | | | | | | | | | | - | · | |
| Site Features | Perr | nanent | loss | | Tempo disturb | rary pł ance | nysical | Sr in se | nothei crease dimen | ing due d suspe t | to nded | Re- n conta sedin | nobilisat aminateo nents | ion of d | | Under vibrati | water no on | oise and | In-co | ombination | |
| | С | 0 | | D | С | 0 | D | С | | 0 | D | С | 0 | D | | С | 0 | D | С | 0 | D |





| Site | | | | 192 | | | | | | | | | | | | | | |
|--|--|--|--|---------------------------------------|--------------------------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|---------------------------------|------------------------|----------------------|-------------------------------------|---------------------------|-------------------------|------------------------|--------------------|------|
| Name of Eu | iropean S | Site: | | Vlaam | ise Banko | en SAC | | | | | | | | | | | | |
| Distance to | Norfolk | Boreas (| km) | 136 | | | | | | | | | | | | | | |
| Reefs | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) |
| Sandbanks which are slightly covered by sea water all the time | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) | N(b) |
| a) Th LS b) Th do | e distanc E (see Tal e distanc cument r | e betwee ble 3.2 ar e betwee eference | en the po nd Table en the of e 5.3.5.1) | otential ir 5.1 of of fshore pr | npact rai fshore sc roject are | nge of No reening, ea and th | orfolk Boi documer e designa | reas and ht referen hted site | the exter nce 5.3.5 is beyond | nt of any .1). d the rang | effect on ge of any | individu potentia | als from ⁻ I LSE (see | this site v e Table 4. | vould res 1 of offsl | ult in no nore scre | potentia ening, | for |

| Site | 193 | | | | |
|-----------------------|-------------------------------|---------------------|--------------------------|--------------------------|----------------|
| Name of European Sit | te: Vlakte va | n de Raan SCI/SAC | | | |
| Distance to Norfolk B | oreas (km) 153 | | | | |
| Marine Mammals | | | | | |
| Site Features | Likely effect(s) of Norfolk B | oreas | | | |
| | Underwater noise | Vessel Interactions | Indirect effects on prey | Changes to water quality | In-combination |





| Site | | | | | 193 | | | | | | | | | | | | | | | | |
|------------------|---------------------|--|-------------------|----------------------|------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|-------------------|----------|-----------|---------|----------|------------------|-----------------|-----------|-----------|----------|--------|
| Name of I | Europea | an Site: | | | Vlakte | e van d | e Raan S | SCI/SAC | | | | | | | | | | | | | |
| Distance t | to Norf | olk Bor | eas (km |) | 153 | | | | | | | | | | | | | | | | |
| | | C | 2 | 0 | D | C | | 0 | D | С | | 0 | D | С | 0 | | D | С | 0 | I | D |
| Harbour p | orpoise | e ſ | N (a) | N (a) | N (a) |) N | (a) | N (a) | N (a) | N (| a) | N (a) | N (a) | N (a |) | | N (a) | N (a) | N (| a) I | N (a) |
| Grey seal | | ٦ | N (a) | N (a) | N (a) |) N | (a) | N (a) | N (a) | N (| a) | N (a) | N (a) | N (a |) | | N (a) | N (a) | N (| a) I | N (a) |
| Harbour s | eal | ٦ | N (a) | N (a) | N (a) |) N | (a) | N (a) | N (a) | N (| a) | N (a) | N (a) | N (a |) | | N (a) | N (a) | N (| a) I | N (a) |
| Fish | | | | | · | | · | | | | | | | | | | | | · | | |
| Site | Likely | effect(| s) of No | rfolk Bo | reas | | | | | | | | | | | | | | | | |
| Features | Perma loss | y effect(s) of Norfolk Boreas anent habitat Temporary physical disturbance Smothering due to disturbance suspended sediments sediment | | | | | | | | | | | | | noise | Electr fields | omagne (EMF) | etic | In-con | nbinatic | n |
| | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | с | 0 | D |
| Sea Lamprey | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| River lamprey | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Twaite Shad | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| a) T L | he dista SE (see | ance be Table 3 | etween 3.2 and | the pote Table 5. | ential in 1 of off: | npact r shore s | ange of creenin | Norfolk g, docur | Boreas nent ref | and the ference | extent 5.3.5.1 | of any e | effect or | individ | uals fro | m this s | site wou | ild resul | t in no p | ootentia | al for |





| Site | | 194 | 1 | | | | | | | | | | | | |
|--|--|---|--|-----------|------------|-------|----------|------------|----------|-----------|------------|-------|--------------------|-----------------|-------|
| Name of European Sit | e: | Vo | ordelta SP | A and SAC | 2 | | | | | | | | | | |
| Distance to Norfolk B | oreas (km | n) 118 | 8 | | | | | | | | | | | | |
| Ornithology | | | | | | | | | | | | | | | |
| Site Features | Likely ef | fect(s) of | Norfolk Bo | oreas | | | | | | | | | | | |
| | | | | Collision | mortality | , | Displace | ment/Dist | turbance | Barrier E | Effect | | Cumulat combina | ive/In- tion | |
| | | | | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Wintering and passag cormorant, shelduck, goldeneye, sanderling crested grebe, greylag avocet, gadwall, Slavo breasted merganser, j bar-tailed godwit, oys wigeon, turnstone, sca tern, teal, curlew, gree | e waterbii ringed plc , little gul g goose, Sa nian greb pintail, rec tercatche aup, redsh y plover, c | rds includ over, dunl I, eider, gr andwich t e, spoont d-throated r, shovele nank, com common s | ing in, reat ern, bill, red- d diver, d diver, r, imon scoter | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N(a) | N (b) | N (b) | N (b) |
| Site Features | Likely ef | fect(s) of | Norfolk Bo | oreas | | | | | | | | | | | |
| | Underwa | ater noise | 2 | Underw | ater noise | | Underwa | ater noise | | Underw | ater noise | | Underwa | ater noise | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Harbour porpoise | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | | N (c) | N (c) | N (c) | N (c) |





| Site | | | | 19 | 94 | | | | | | | | | | | | | | | | |
|------------------|---|----------|-----------|-----------|----------|--------|--------|-------|-------|------|-------|-------|----------|-------|-------|------------------|-----------------|-------|--------|----------|-------|
| Name of I | Europea | n Site | | Vo | oordelta | SPA ar | nd SAC | | | | | | | | | | | | | | |
| Distance t | to Norfo | olk Bore | eas (km) |) 11 | 8 | | | | | | | | | | | | | | | | |
| Grey seal | | N | l (c) | N (c) | N (c) | N | (c) I | N (c) | N (c) | N (0 | :) [| l (c) | N (c) | N (c) | | | N (c) | N (c) | N (| c) N | l (c) |
| Harbour s | eal | N | I (c) | N (c) | N (c) | N | (c) I | N (c) | N (c) | N (0 | :) (: | l (c) | N (c) | N (c) | | | N (c) | N (c) | N (| c) N | l (c) |
| Fish | | | | | | | | | 1 | | | | <u> </u> | | | | | 1 | | | |
| Site | Likely | effect(s | s) of Nor | rfolk Boı | reas | | | | | | | | | | | | | | | | |
| Features | S Permanent habitat loss Temporary physical disturbance Smothering due to increased suspended sediment Re- mobilisation of contaminated sediments Underwand and vibritation C O D C C C C C D | | | | | | | | | | | | | | noise | Electr fields | omagne (EMF) | tic | In-cor | nbinatio | n |
| | с | 0 | D | с | 0 | D | с | 0 | D | с | 0 | D | с | 0 | D | С | 0 | D | с | 0 | D |
| Sea lamprey | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| River lamprey | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| Allis shad | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| Twaite shad | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) | N(c) |
| Benthic H | abitats | | | | | | | | | | | | | | | | | | | | |
| | Likely | effect(s | s) of Nor | rfolk Boi | reas | | | | | | | | | | | | | | | | |





| Site | | 19 | 94 | | | | | | | | | | | | | | | | |
|-------------------------------|---|--|---|---|--|--|---|--|--|---|---|-----------------------------|----------------------------------|--------------------------------|------------------------------------|--------------------|----------------------|--------------------|-----------------|
| Name of | European Site | V | oordelt | a SPA an | d SAC | | | | | | | | | | | | | | |
| Distance | to Norfolk Boreas (km) |) 11 | 18 | | | | | | | | | | | | | | | | |
| Site Features | | Perma | anent lo | SS | Tempo distur | orary pł bance | nysical | Smoth increa suspe sedim | nering d sed nded ent | ue to | Re- m contai sedim | obilisati minate ents | on of d | Under and vi | water r bration | noise | In-con | nbinatio | on |
| | | С | 0 | D | С | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbank covered b time | s which are slightly y sea water all the | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) | N(d) |
| a) S i b) T t | Survey data show little n negligible numbers p The predicted effect att hese features at Voord | or no ev assing t tributab lelta SP | vidence hrough le to No A (see T | of Voor the Nor orfolk Bo able 6.1 | delta Sl folk Bo preas is of offs | PA featu reas site so smal hore scu | ures occ e (see Ta I that it reening | urring i able 6.1 would , docum | n the No of offsl not sign ent refe | orfolk B nore scr ificantly erence S | oreas si eening, y contrik 5.3.5.1). | te, and docum oute to | migratic ent refe or alter | ons of b rence 5 the ove | irds froi .3.5.1). rall in-c | m this S ombina | PA are l tion ass | ikely to essmen | result t for |

LSE (see Table 3.2 and 5.1 of offshore screening, document reference 5.3.5.1).d) The distance between the offshore project area and the designated site is beyond the range of any potential LSE (see Table 4.1 of offshore screening,

document reference 5.3.5.1).

| Site | 195 | | | | | | | | | | | | | | |
|---------------------------------|----------|------------------------------------|---------|----------|-----------|-----|----------|-----------|---------|-------------------|-----------|---|---------|----------|---|
| Name of European Site: | Vrångö | skärgåro | den SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 768 | | | | | | | | | | | | | | |
| Site Features | Likely e | Likely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underw | /ater no | ise | Vessel I | nteractic | ons | Indirect | effects o | on prey | Change quality | s to wate | r | In-comb | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |





| Site | 195 | | | | | | | | | | | | | | |
|---|----------------------|---------------------|------------------------|----------|-----------|------------|-----------|------------|------------|------------|----------|-------------|-----------|------------|--------|
| Name of European Site: | Vrångö | öskärgår | den SAC | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 768 | | | | | | | | | | | | | | |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia Table 3.2 of offshore screening, docu | l impact ment ref | range o erence s | f Norfolk 5.3.5.1). | Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in ı | no potent | ial for LS | E (see |

| Site 1 | 96 | | | | | | | | | | | |
|--|--------------|-------------|-------------|-----------|------------|---------|-----------|-------|-------|----------|------------|----------|
| Name of European Site: M | /addenzee (\ | Wadden Se | a) SPA | | | | | | | | | |
| Distance to Norfolk Boreas (km) 1 |)5 | | | | | | | | | | | |
| Site Features | Likely eff | ect(s) of N | orfolk Bore | eas | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | irbance | Barrier E | ffect | | Cumulati | ve/In-coml | bination |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including as named features lesser black-backed gull, little tern, common tern, Arctic tern, Sandwich tern | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (d) | N (d) | N (d) |
| Breeding waterbirds including Kentish plover, ringed plover, marsh harrier, spoonbill, avocet | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (d) | N (d) | N (d) |
| Wintering and passage waterbirds including pintail, shoveler, teal, wigeon, mallard, gadwall, greylag goose, bean goose Anser fabalis, turnstone, scaup, brent goose, barnacle goose, goldeneye, | | N (c) | | N (c) | N (c) | N (c) | N (c) | N (c) | N (c) | N (d) | N (d) | N (d) |





| Site | 196 | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Name of European Site: | Waddenzee (Wadden Sea) SPA | | | | | | | | | | | | | |
| Distance to Norfolk Boreas (km) | 105 | | | | | | | | | | | | | |
| sanderling, dunlin, knot, curlew | | | | | | | | | | | | | | |
| sandpiper, ringed plover, black tern | | | | | | | | | | | | | | |
| Chlidonias niger, hen harrier, Bewick's | | | | | | | | | | | | | | |
| swan, oystercatcher, bar-tailed godwit, | , | | | | | | | | | | | | | |
| black-tailed godwit, red-breasted | | | | | | | | | | | | | | |
| merganser, goosander, curlew, | | | | | | | | | | | | | | |
| cormorant, spoonbill, golden plover, gr | zw, n plover, grey | | | | | | | | | | | | | |
| plover, great crested grebe, avocet, eid | ler, | | | | | | | | | | | | | |
| shelduck, greenshank, redshank, lapwi | ng | | | | | | | | | | | | | |
| (a) The Norfolk Boreas site is far bevo | ond the mean maximum foraging range of designated breeding seabird species from this SPA so has no breeding season | | | | | | | | | | | | | |
| connectivity. Proportions of these | e populations migrating through the Norfolk Boreas site are likely to be extremely small relative to BDMPS, not only because of | | | | | | | | | | | | | |
| the distance, but also because bir | ds from this SPA are likely to use the west European flyway along the continental coast rather than crossing the southern North | | | | | | | | | | | | | |
| Sea. Lesser black-backed gull trac | king has shown breeding birds do not cross the North Sea therefore no connectivity is expected for this species (see Table 6.1 of | | | | | | | | | | | | | |
| offshore screening, document ref | erence 5.3.5.1). | | | | | | | | | | | | | |
| (b) Survey data show little or no evid | ence of Waddenzee SPA breeding waterbird features occurring in the Norfolk Boreas site, and migrations of birds from this SPA | | | | | | | | | | | | | |
| are likely to result in negligible nu | are likely to result in negligible numbers passing through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | |
| (c) Survey data show little or no evide | ence of Waddenzee SPA nonbreeding waterbird features occurring in the Norfolk Boreas site, and migrations of birds from this | | | | | | | | | | | | | |
| SPA are likely to result in negligibl | le numbers passing through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | |
| (d) The predicted effect attributable | to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these | | | | | | | | | | | | | |
| features at Waddenzee SPA (see T | Table 6.1 of offshore screening, document reference 5.3.5.1). | | | | | | | | | | | | | |





| Site | | 1 | .97 | | | | | | | | | | | | | | | |
|--|----------------------|---------------------|---------------------------|---------------------|-----------------------|----------------|-------------------------|--------------------------------|-----------------|----------------------------|-----------------------------|-------------|------------------|----------------------|-----------|---------|------------|-------|
| Name of European Site: | | ١ | Vaddenzee | SAC | | | | | | | | | | | | | | |
| Distance to Norfolk Bor | eas (km |) 1 | .06 | | | | | | | | | | | | | | | |
| Marine Mammals | | | | | | | | | | | | | | | | | | |
| Site Features | Likely e | ffect(s) | of Norfolk E | Boreas | | | | | | | | | | | | | | |
| | Underv | vater no | oise | Vesse | l Intera | ctions | | Indirect | effects | on prey | · (| Changes t | o water | quality | In-co | mbinati | on | |
| | С | 0 | D | С | 0 | [|) | С | 0 | D | (| 2 | 0 | D | С | 0 | C |) |
| Harbour porpoise | N(a) | N(a) | N(a) | N(a) | N(a | 1 (| N(a) | N(a) | N(a) | N(a) | 1 (| N(a) | | N(a) | N(a) | N | a) N | l(a) |
| Grey seal | N(a) | N(a) | N(a) | N(a) | N(a | 1 (| N(a) | N(a) | N(a) | N(a) | ר (| N(a) | | N(a) | N(a) | N | (a) N | l(a) |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a |) (| N(a) | N(a) | N(a) | N(a) | ٩ | N(a) | | N(a) | N(a) | N | a) | N(a) |
| Benthic Habitats | . <u></u> | | | | | I | | <u> </u> | | | | | | | | | | |
| Site Features | Permar | nent los | 5 | Tempo disturb | orary ph oance | ysical | Smot increa sedim | hering du ased susp aent | ie to bended | Re- mo contan sedime | obilisat ninateo ents | ion of d | Under and vil | water noi pration | se | In-cor | nbinatio | n |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Sandbanks which are slightly covered by sea water all the time | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Estuaries | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| Mudflats and sandflats not covered by seawater at low tide | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | | N (b) | N (b) | | N (b) | N (b) | N (b) | N (b) |
| a) The distance betwee (see Table 3.2 of off | en the p shore sc | otential reening | impact rang , document | ge of No referen | rfolk Bo ce 5.3.5. | reas ar 1). | nd the e | xtent of a | iny effec | ct on ind | lividua | ls from th | nis site w | ould resu | ult in no | o poten | tial for I | SE |





| Site | 197 |
|--|---|
| Name of European Site: | Waddenzee SAC |
| Distance to Norfolk Boreas (km) | 106 |
| b) The distance between the offshor reference 5.3.5.1). | re project area and the designated site is beyond the range of any potential LSE (see Table 4.1 of offshore screening, document |

| Site | .98 | | | | | | | | | | | |
|---|-------------|-----------|--------|--------------|----------|-------|--------|----------|-------|----------------|--------------------|-------|
| Name of European Site: | Vest Wes | tray SP/ | 4 | | | | | | | | | |
| Distance to Norfolk Boreas (km) | ' 66 | | | | | | | | | | | |
| Site Features | Likely | effect(s) | of Nor | folk Boreas | | | | | | | | |
| | Collisi | on mort | ality | Displacement | /Disturk | bance | Barrie | r Effect | | Cumul combi | ative/In nation | - |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| Breeding seabird assemblage including as named features kittiwake, Arctic tern, fulmar razorbill, Arctic skua, guillemot | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (b) | N (b) | N (b) |
| a) West Westray SPA is beyond maximum foraging range of designated seabird species so has no breeding season connectivity. Proportions of these populations migrating through the Norfolk Boreas site are likely to be very small relative to BDMPS (see Table 6.1 of offshore screening, document reference 5.3.5.1). b) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for | | | | | | | | | | | | |

these features at West Westray SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).





| Site | | | 199 | | | | | | | | | | | | | | | | | | |
|-----------------------|--|-------------------|---------------------|---------------------|--|-----------------------------------|---------------------|----------------------------|------------------------------|----------------|-----------------|--------------------|----------|-------------------|-----------------|----------|---------|----------|-----------|---------|-------|
| Name of Site: | Europea | n | Weste | rscheld | e & Sae | ftinghe | SAC | | | | | | | | | | | | | | |
| Distance Boreas (k | to Norfc m) | olk | 190 | | | | | | | | | | | | | | | | | | |
| Fish | | | | | | | | | | | | | | | | | | | | | |
| Site | Likely | effect(s | s) of Nor | folk Bor | reas | | | | | | | | | | | | | | | | |
| Features | Permanent habitat I Temporary physic disturbance | | | hysical | Smot increa suspe sedim | hering d ased ended ient | ue to | Re- mo contar sedimo | obilisati ninated ents | on of | Under and vi | water r bration | oise | Electro fields | omagne (EMF) | tic | In-com | nbinatio | n | | |
| | С | 0 | D | с | 0 | D | с | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D |
| River lamprey | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) |
| Twaite Shad | N (a) | N (a) | N (a) | N (a) | N (a)N (a)N (a)N (a)N (a)N (a)N | | | | | | | | | | | | | | | | |
| a) - | The dista _SE (see | nce be Table 5 | tween t .1 of of | he pote fshore s | ntial in creenin | npact raing, docu | nge of I ment re | Norfolk E eference | Boreas a 5.3.5.1 | and the .). | extent | of any e | ffect on | individ | uals fro | m this s | ite wou | ld resul | t in no p | otentia | l for |





| Site Name of European Site: | 200 Winter | rton – H | orsey Du | unes SAC | | | | | | | | | | | |
|---|--------------------------|---|----------------------|------------------------|-----------------------|------------------------|----------------------|-----------------------|-----------------|---------------------|------------------------|----------------------|-----------------------|----------------------|-----------------|
| Distance to Norfolk Boreas (km) | 74 (3.2 | ! from ca | ble cor i | ridor) | | | | | | | | | | | |
| Site Features | Likely (| kely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Under | Underwater noise Vessel Interactions Indirect effects on prey Changes to water In-combination quality | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | e | θ | ₽ | e | Ð | Ð | e | θ | Ð | e | θ | Ð | e | θ | Ð |
| Grey seal | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | Y(a) | | Y(a) | Y(a) | Y(a) | Y(a) |
| a) The grey seal haul-out site less tha | n 5km fr e | om cable | e landfal | l site. Pot | ential eff | fects fron | า underw | ater nois | e in cable | corridor | ; vessel ir | nteractio | ns in cabl | e corrido | r; |
| changes to water quality in cable corr | ridor; cha | anges to | prey res | sources ir | i cable cc | rridor; a ı | nd distur | bance at : | seal haul- | out sites | cannot b | e ruled o | ut and ha | we been | |
| assessed in section 8.3.4 of the Inform | nation to |) Suppor | 't Habita | its Regula | tion Asse | essment F | Report (d | ocument | referenc | e 5.3). | | | | | |

| Site Name of European Site: | 201 Yell So | und Coa | st SAC | | | | | | | | | | | | |
|---------------------------------------|----------------|---|-----------|----------|-----------|------------|-----------|------------|------------|------------|----------|-----------|----------|-------------|------|
| Distance to Norfolk Boreas (km) | 832 | | | | | | | | | | | | | | |
| Site Features | Likely e | ikely effect(s) of Norfolk Boreas | | | | | | | | | | | | | |
| | Underv | Indervater noise Vessel Interactions Indirect effects on prey Changes to water In-combination | | | | | | | | | | | | | |
| | | | | | | | | | | quality | | | | | |
| | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D | C | 0 | D |
| Harbour seal | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | N(a) | | N(a) | N(a) | N(a) | N(a) |
| a) The distance between the potentia | l impact | range o | f Norfoll | Boreas a | and the e | xtent of a | any effec | t on indiv | iduals fro | om this si | te would | result in | no poten | tial for LS | E |
| (see Table 3.2 of offshore screening, | documen | it refere | nce 5.3. | 5.1). | | | | | | | | | | | |

| Site | 202 |
|------------------------|--|
| Name of European Site: | Ythan Estuary, Sands of Forvie and Meikle Loch SPA |





| Distance to Norfolk Boreas (km) 553 | | | | | | | | | | | | | |
|---|------------|--------------|-------------|-----------|------------|---------|-----------|-------|-------|----------|------------|----------|--|
| Site Features | Likely eff | ect(s) of No | orfolk Bore | eas | | | | | | | | | |
| | Collision | mortality | | Displacer | ment/Distu | urbance | Barrier E | ffect | | Cumulati | ve/In-coml | bination | |
| | С | 0 | D | С | 0 | D | С | 0 | D | С | 0 | D | |
| Wintering and passage waterbird assemblage including as named features lapwing, eider, pink-footed goose, redshank | | N (a) | | N (a) | N (a) | N (a) | N (a) | N (a) | N (a) | N (c) | N (c) | N (c) | |
| Breeding little tern, common tern, Sandwich tern | | N (b) | | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | N (b) | |

(a) Survey data show little or no evidence of Ythan Estuary, Sands of Forvie & Meikle Loch SPA features occurring in the Norfolk Boreas site, and migrations of birds from this SPA are likely to result in negligible numbers passing through the Norfolk Boreas site (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(b) Little tern, common tern and Sandwich tern have maximum foraging ranges from colonies of 11km, 30km and 54km respectively, so there is no connectivity between the SPA and Norfolk Boreas site which are 556km apart. Furthermore, these species tend to forage in coastal waters rather than offshore. Therefore, collision risk, displacement and barrier effects can be excluded (see Table 6.1 of offshore screening, document reference 5.3.5.1).

(c) The predicted effect attributable to Norfolk Boreas is so small that it would not significantly contribute to or alter the overall in-combination assessment for these features at Ythan Estuary, Sands of Forvie & Meikle Loch SPA (see Table 6.1 of offshore screening, document reference 5.3.5.1).