



Able Marine Energy Park

Material Change 2

Applicant's Comments on the RIES

NOTE ON RESPONSE TO DRAFT RIES REPORT

Table 4.2, p.14/15 of RIES “NE also advised that the applicant clarifies whether this updated information takes into account the recently proposed change in construction sequence.”

Response: issue dealt with in updated HRA

Table 4.2, p.18 of RIES

| Site | Issue | Relevant docs | Matter agreed? |
|--------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Humber Estuary SPA | Waterbird assemblage – ringed plover and sanderling | <p>NE Q5.0.1 of [REP1-036]</p> <p>Noted that a LSE has been identified for little ringed plover and sanderling, but these species are not considered in the AA.</p> | <p>Paragraph 9.4 of the LSE report [APP-067] explained there is no LSE to sanderling as they were not recorded during surveys.</p> <p>The LSE Report [APP-067] does not explicitly confirm if there is a LSE to little ringed plover.</p> <p>No</p> <p>NE (Q5.0.2 of [REP4-032]) confirmed it was satisfied no LSE with regard to sanderling, but not little ringed plover.</p> <p><i>The Applicant is requested to respond.</i></p> |

Response: This has been addressed in the HRA, with clarification as to why there would be no LSE for little ringed plover (HRA Part 1 LSE report paragraph 9.4). In short, there was a single individual of this species recorded on the site on one occasion, which demonstrated that the site was not important to the species and therefore there was no likely significant effect. This filter was agreed with Natural England in the SoCG of the original sHRA¹ (paragraphs 3.6.2 and 3.6.7).

¹ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-001606-SOCG009%20TR030001%20Able%20Humber%20Ports%20Ltd%20Statement%20of%20Common%20Ground%20with%20Natural%20England%20and%20the%20Marine%20Management%20Organisation.pdf>

Table 4.2, p.18 of RIES

| | | | | |
|---------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Humber Estuary SAC</p> | <p>Disturbanceto grey seals, river lamprey and sea lamprey</p> | <p>ExB ExQ1 Q5.0.7 [PD-003] and ExQ2 Q5.0.8[PD-007] Evidence required to support conclusion of no AEol from disturbance.</p> | <p>The Applicant (Q5.0.7 of [REP1-019]) referred to the original sHRA undertaken for the AMEP DCO:</p> <ul style="list-style-type: none"> - River and sea lampreysection 6.5 - Grey seal – paragraphs 5.4.25 et seq. <p>The original sHRA was submitted at Deadline 4 [REP4-017].</p> | <p>N/a – ExB question</p> <p>The ExB notes that paragraph 5.5.11 and Annex D of the originalsHRA [REP4-017] concludes no LSE to greyscale, however a LSE is identified by the Applicant for the AO Application.</p> |
|---------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Response: Noted. Refer to EX10.7² of the original ES which was issued during the original examination, subsequent to the sHRA. EX10.7 explains the mitigation agreed with NE. As LSE could not be excluded without mitigation, this species was considered at the Appropriate Assessment stage. This concluded no adverse effect with the implementation of the agreed mitigation measures which are already embedded in Schedule 8 of the DCO.

² https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-001613-OS-003_TR030001_Able%20UK%20Ltd_Supplementary%20Environmental%20Information_File%201%20of%202.zip

Responses to Section 6 of the REIS: ExB's Understanding of the Applicant's Assessment

| Section 6 paragraph ref. | ExB comment | Applicant's Response |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1.2 | The Humber Estuary SAC screening matrix excluded a LSE from changes in intertidal habitat for all qualifying features; this is not consistent with Appendix 5 of the LSE Report [REP3-008] which identified a LSE for changes to habitat for saltmarsh (H1330/H1310). The Applicant is invited to comment. See ?(1) (shaded in pink) in Table 6.1. | There would be LSE for habitat change to H1310 and H1330. |
| 6.1.3 | The Humber Estuary SAC screening matrix identified a LSE for river lamprey and sea lamprey from habitat loss. This conclusion does not accord with paragraph 9.14 and Appendix 5 of the LSE Report [REP3-008]. The Applicant is invited to comment. See ?(2) (shaded in pink) in Table 6.1. | There would be no LSE for river lamprey or sea lamprey from habitat loss. |
| 6.1.4 | The Applicant's Humber Estuary Ramsar matrices did not address Criterion 1 (Representative example of near-natural estuary). The Applicant is invited to comment. See ?(3) (shaded in pink) in Table 6.3 | In line with the conclusions for the estuarine habitats in Table 6.1, there would be no LSE or AEol for 'Water quality', or for 'Changes to estuary morphology, hydrodynamics & sedimentary regime', but there would be LSE and AEol for 'Habitat change' and 'Permanent habitat loss'. |
| 6.1.5 | The screening matrices identify water quality changes as a potential impact in relation to sea and river lamprey of the Humber Estuary SAC, but not for the Humber Estuary Ramsar (Ramsar Criterion 8). The Applicant is invited to comment. See ?(4) (shaded in pink) in Table 6.3. | Water quality changes would result in no LSE for either river lamprey or sea lamprey. |
| 6.1.8 | The Applicant is invited to comment on the ExB's understanding of its assessment as presented in these Tables | The Applicant agrees with the ExB's assessment as presented in these Tables, with the queries clarified as set out in this response. |

| Section 6 paragraph ref. | ExB comment | Applicant's Response |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1.9 | The Applicant's integrity matrices did not distinguish between disturbance from noise, and those from visual impacts. However, the ExB understands from paragraph 8.28 and Table 13 of the RIAA [REP3-008] that an AEol has been determined from the combination of noise and visual impacts together only; this has been reflected in Tables 6.2 and 6.3 of this RIES. The Applicant is invited to comment. | This is a correct assumption, and the Applicant agrees with the ExB. |
| 6.1.10 | LSEs were not identified for red knot in Table 14 of the LSE Report, but were identified in the screening matrices from habitat loss and disturbance. The Applicant confirmed (Q5.0.16 of [REP4-002]) that there is an error in the LSE Report and that a LSE should be identified. The Applicant is requested to confirm if the ExBs understanding of its assessment for red knot, as presented in Table 6.2 of this RIES, is correct | The ExB's understanding of its assessment for red knot, as presented in Table 6.2 of this RIES, is correct. There would be LSE for red knot. |
| 6.1.11 | Table 14 of the LSE Report identifies LSEs to SPA/Ramsar species from 'indirect changes in intertidal mudflat'. This potential impact is not described or considered further in the RIAA. The ExB requests clarification on the conclusions in regard to this potential impact (as denoted by ?(5) (shaded in pink) within Tables 6.2 and 6.3) along with signposting to relevant information to support the conclusions drawn. | Indirect effects on the intertidal mudflat would result from disturbance impacts. All species that occurred regularly in non-trivial numbers within the potential disturbance zone around the development could be affected (i.e. the species identified as being affected by disturbance). They have been assessed as disturbance impacts, but for completeness have been clarified in Tables 6.2 and 6.3 updates below. |
| 6.1.12 | 'Loss of foraging resource' was not used as an impact heading in the Applicant's Humber Estuary SPA and Ramsar integrity matrices, despite a LSE being identified for some features in the screening matrices. The ExB requests clarification on the conclusions in regard to this potential impact (as denoted by ?(6) (shaded in pink) within Tables 6.2 and 6.3) along with signposting to relevant information to support the conclusions drawn. | These have been clarified in Tables 6.2 and 6.3 updates below. Loss of foraging resources is synonymous with loss of habitat. |

| Section 6 paragraph ref. | ExB comment | Applicant's Response |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 6.1.13 | The Humber Estuary SPA integrity matrix identified an AEol to wintering avocet from 'Displacement from high tide roost site (NKHP)' but not to breeding avocet. The Applicant is requested to explain why this is the case. See ?(7) (shaded in pink) in Table 6.2. | Pied avocet do not form large roosting flocks during breeding, so this impact would be restricted to non-breeding birds. |

| TABLE 6.1: HUMBER ESTUARY SAC | | | |
|-----------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------|------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| Sandbanks which are slightly covered by sea water all the time(H1110) | Water quality changes | X | X |
| | Habitat change | X | X |
| | Permanent habitat loss | X | X |
| | Changes to estuary morphology, hydrodynamics & sedimentary regime | X | X |
| Estuaries (H1130) | Water quality changes | X | X |
| | Habitat change | X | X |
| | Permanent habitat loss | ✓ | ✓ |
| | Changes to estuary morphology, hydrodynamics & sedimentary regime | X | X |
| Mudflats and sandflats not covered by | Water quality changes | X | X |

| TABLE 6.1: HUMBER ESTUARY SAC | | | |
|----------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------|------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| seawater at low tide (H1140) | Habitat change | X | X |
| | Permanent habitat loss | ✓ | ✓ |
| | Changes to estuary morphology, hydrodynamics & sedimentary regime | X | X |
| Coastal lagoons (priority habitat)(H1150) | Water quality changes | X | X |
| | Habitat change | X | X |
| | Permanent habitat loss | X | X |
| | Changes to estuary morphology, hydrodynamics & sedimentary regime | X | X |
| Salicornia and other annuals colonising mud and sand (H1310) | Water quality changes | X | X |
| | Habitat change | ✓ 2(1) | ✓ 2(1) |
| | Permanent habitat loss | ✓ | ✓ |
| | Changes to estuary morphology, hydrodynamics & sedimentary regime | X | X |
| Atlantic salt meadows (<i>Glauco- Puccinellietalia maritima</i>) (H1330) | Water quality changes | X | X |
| | Habitat change | ✓ | ✓ |
| | Permanent habitat loss | ✓ | ✓ |
| | Changes to estuary morphology, hydrodynamics & sedimentary regime | X | X |

| TABLE 6.1: HUMBER ESTUARY SAC | | | |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| Embryonic shifting dunes (H2110) | Habitat change | X | X |
| | Permanent habitat loss | X | X |
| Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') (H2120) | Water quality changes | X | X |
| | Habitat change | X | X |
| | Permanent habitat loss | X | X |
| Fixed dunes with herbaceous vegetation ('grey dunes') (priority habitat) (H2130) | Habitat change | X | X |
| | Permanent habitat loss | X | X |
| Dunes with <i>Hippophae rhamnoides</i> (H2160) | Habitat change | X | X |
| | Permanent habitat loss | X | X |
| Sea lamprey | Disturbance/ displacement | ✓ | X |
| | Water quality changes | X | X |
| | Habitat loss | X | X |
| River lamprey | Disturbance/ displacement | ✓ | X |
| | Water quality changes | X | X |
| | Habitat loss | X | X |
| Grey seal | Disturbance/ displacement | ✓ | X |
| | Water quality changes | X | X |
| | Habitat loss | X | X |

Table 6.2

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|--------------------------------------------------------|--------------------------------------------------------|-----------------------------|------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| Great bittern <i>Botaurus stellaris</i> (non-breeding) | Loss of foraging resources | X | X |
| | Permanent loss of supporting habitat | X | X |
| | Noise disturbance | X | X |
| | Indirect functional loss of supporting habitat | X | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |
| Great bittern <i>Botaurus stellaris</i> (breeding) | Loss of foraging resources | X | X |
| | Permanent loss of supporting habitat | X | X |
| | Noise disturbance | X | X |
| | Indirect functional loss of supporting habitat | X | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |
| Common shelduck <i>Tadornatadorna</i> (non- | Loss of foraging resources | ✓✘ | ✓✘ |

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|-------------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| breeding) | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | ✓ | ✓(5) |
| Eurasian marsh harrier <i>Circus aeruginosus</i> (breeding) | Loss of foraging resources | ✓ | X |
| | Permanent loss of supporting habitat | ✓ | X (estuarine habitat) ✓ (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |
| | Loss of foraging resources | X | X |
| Hen harrier <i>Circus cyaneus</i> (non-breeding) | Permanent loss of supporting habitat | X | X |
| | Noise disturbance | X | X |

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|----------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| | Indirect functional loss of supporting habitat | X | X |
| | Displacement from high tide NKHP roost site | X | X |
| Pied avocet <i>Recurvirostra avosetta</i> (non-breeding) | Loss of foraging resources | ✓ | ✓ (S) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | Indirect changes in intertidal mudflat | X | X |
| Pied avocet <i>Recurvirostra avosetta</i> (breeding) | Loss of foraging resources | ✓ | ✓ (S) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| | Displacement from high tide NKHP roost site | ✓ | X(7) |
| | Indirect changes in intertidal mudflat | X | X |
| European golden plover <i>Pluvialis apricaria</i> (non-breeding) | Loss of foraging resources | X | X |
| | Permanent loss of supporting habitat | X | X |
| | Noise disturbance | X | X |
| | Indirect functional loss of supporting habitat | X | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |
| Red knot <i>Calidris canutus</i> (non-breeding) | Loss of foraging resources | ✓ | ✓(6) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| Dunlin <i>Calidris alpina</i> (non-breeding) | Loss of foraging resources | ✓ | ✓ (6) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| | Noise disturbance | ✓ | X |
| Ruff <i>Philomachus pugnax</i> (non-breeding) | Loss of foraging resources | X | X |
| | Permanent loss of supporting habitat | X | X |
| | Noise disturbance | X | X |
| | Indirect functional loss of supporting habitat | X | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |
| Black-tailed godwit <i>Limosa limosa</i> (non- | Loss of foraging resources | ✓ | ✓ (6) |

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|-------------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| breeding) | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| Bar-tailed godwit <i>Limosa lapponica</i> (non-breeding) | Loss of foraging resources | ✓ | ✓ (5) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| Redshank <i>Tringa totanus</i> (non-breeding) | Loss of foraging resources | ✓ | ✓ (5) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |

| TABLE 6.2: HUMBER ESTUARY SPA | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | Potential impact (construction and operational phases) | LSE alone or in combination | AEoI alone or in combination |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| | Loss of foraging resources | X | X |
| Little tern <i>Sterna albifrons</i> (breeding) | Permanent loss of supporting habitat | X | X |
| | Noise disturbance | X | X |
| | Indirect functional loss of supporting habitat | X | X |
| | Displacement from high tide NKHP roost site | X | X |
| | Indirect changes in intertidal mudflat | X | X |
| Assemblage qualification –the site qualifies under article 4.2 of the Birds Directive because it regularly supports 153,394 individuals waterbirds in the non-breeding season | Loss of foraging resources | ✓ | ✓ (6) |
| | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) ✓ (terrestrial habitat) |
| | Noise disturbance | ✓ | X |
| | Indirect functional loss of supporting habitat | ✓ | ✓ |

| TABLE 6.2: HUMBER ESTUARY SPA | | | | |
|-------------------------------|--|--------------------------------------------------------|-----------------------------|------------------------------|
| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| | | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | | Indirect changes in intertidal mudflat | ✓ | ✓(5) |

| TABLE 6.3: HUMBER ESTUARY RAMSAR | | | | |
|----------------------------------|---------------------------------------------------------|-------------------------------------------------------------------|-----------------------------|------------------------------|
| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| Ramsar criterion 1 | Representative example of near-natural estuary | Water quality changes | X(3) | X(3) |
| | | Changes to intertidal habitat | ✓(3) | ✓(3) |
| | | Habitat loss | ✓(3) | ✓(3) |
| | | Changes to estuary morphology, hydrodynamics & sedimentary regime | X(3) | X(3) |
| Ramsar criterion 3 | Breeding colony of grey seals <i>Halichoerus grypus</i> | Loss of foraging resources | ✓ | X |
| | | Permanent loss of supporting habitat | ✓ | X |
| | | Noise disturbance | ✓ | X |
| | Natterjack toad | Loss of foraging resources | X | X |

| TABLE 6.3: HUMBER ESTUARY RAMSAR | | | | |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| | <i>Bufo calamita</i> | Permanent loss of supporting habitat | X | X |
| | | Noise disturbance | X | X |
| Ramsar criterion 5 | Assemblages of non-breeding waterfowl | Loss of foraging resources | ✓ | ✓ (6) |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) ✓ (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| | | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| Ramsar criterion 6: species/ populations occurring at levels of international importance | European golden plover <i>Pluvialis apricaria</i> (non-breeding) | Loss of foraging resources | X | X |
| | | Permanent loss of supporting habitat | X | X |
| | | Noise disturbance | X | X |
| | | Indirect functional loss of supporting habitat | X | X |

TABLE 6.3: HUMBER ESTUARY RAMSAR

| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
|---------|--------------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| | | Displacement from high tide NKHP roost site | X | X |
| | | Indirect changes in intertidal mudflat | X | X |
| | Red knot <i>Calidris canutus</i> (breeding and non-breeding) | Loss of foraging resources | ✓ | ✓ (6) |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| | | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | | Displacement from high tide NKHP roost site | X | X |
| | | Indirect changes in intertidal mudflat | X | X |
| | Dunlin <i>Calidris alpina</i> (breeding and non-breeding) | Loss of foraging resources | ✓ | ✓ (6) |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| | | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | | | | |

TABLE 6.3: HUMBER ESTUARY RAMSAR

| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
|----------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| | | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| Black-tailed godwit <i>Limosa limosa</i> (breeding and non-breeding) | | Loss of foraging resources | ✓ | ?(6) |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| | | Indirect functional loss of supporting habitat | ✓ | ✓ |
| | | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| | Redshank <i>Tringa totanus</i> (non-breeding) | | Loss of foraging resources | ✓ |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| | | Indirect functional loss of supporting habitat | ✓ | ✓ |

| TABLE 6.3: HUMBER ESTUARY RAMSAR | | | | |
|------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------|-----------------------------|--------------------------------------------------|
| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| | | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| | Common shelduck <i>Tadorna tadorna</i> (non-breeding) | Loss of foraging resources | ✓ * | ✓ * |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| | | Indirect functional loss of supporting habitat | ✓ | X |
| | | Displacement from high tide NKHP roost site | X | X |
| | | Indirect changes in intertidal mudflat | ✓ | ✓ (5) |
| | Bar-tailed godwit <i>Limosa lapponica</i> (breeding) | Loss of foraging resources | ✓ | ✓ (6) |
| | | Permanent loss of supporting habitat | ✓ | ✓ (estuarine habitat) X (terrestrial habitat) |
| | | Noise disturbance | ✓ | X |
| Indirect functional loss of supporting habitat | | ✓ | ✓ | |

TABLE 6.3: HUMBER ESTUARY RAMSAR

| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
|--------------------|------------------------------------------------------------------|--------------------------------------------------------|-----------------------------|------------------------------|
| | | Displacement from high tide NKHP roost site | ✓ | ✓ |
| | | Indirect changes in intertidal mudflat | ✓ | ✓(5) |
| | Eurasian golden plover (wintering) <i>Pluvialis apricaria</i> | Loss of foraging resources | X | X |
| | | Permanent loss of supporting habitat | X | X |
| | | Noise disturbance | X | X |
| | | Indirect functional loss of supporting habitat | X | X |
| | | Displacement from high tide NKHP roost site | X | X |
| | | Indirect changes in intertidal mudflat | X | X |
| | | Noise disturbance | X | X |
| Ramsar criterion 8 | River lamprey <i>Lampetra fluviatilis</i> | Loss of foraging resources | ✓ | X(6) |
| | | Permanent loss of supporting habitat | X | X |
| | | Noise disturbance | ✓ | X |
| | | Water quality changes | X(4) | X(4) |
| | | Loss of foraging resources | ✓ | X(6) |

| TABLE 6.3: HUMBER ESTUARY RAMSAR | | | | |
|----------------------------------|------------------------------------------|--------------------------------------------------------|-----------------------------|------------------------------|
| Feature | | Potential impact (construction and operational phases) | LSE alone or in combination | AEol alone or in combination |
| | Sea lamprey <i>Petromyzon marinus</i> | Permanent loss of supporting habitat | X✓ | X |
| | | Noise disturbance | ✓ | X |
| | | Water quality changes | X 2(4) | X 2(4) |

Additional Notes:

- Common shelduck – LSE and AEol for loss of foraging resources, as Table 6.2.
- Golden Plover – no noise disturbance, as Table 6.2
- Sea and river lamprey – no habitat loss, as Table 6.1