APPENDIX 1 POTENTIAL EFFECTS (SUBMITTED FOR DEADLINE 6~~3~~)

Potential effects upon the European site(s)[1] which are considered within the submitted HRA Report are provided in the table below.

Effects considered within the screening matrices are set out below on a site by site basis.

[1] As defined in Advice Note 10.

Designation	Effects described in submission information	Presented in screening matrices as
River Derwent SAC	• Habitat degradation from water-borne pollution and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation
	• Displacement from functionally-linked habitat due to increase in noise vibration, lighting and visual disturbance	• Species displacement
	• Risk of incidental mortality of species	• Direct mortality
Lower Derwent Valley RAMSAR	• Degradation from water-borne pollution and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation
	• Displacement from functionally-linked habitat due to increase in noise vibration, lighting and visual disturbance	• Species displacement
	• Risk of incidental mortality of species	• Direct mortality
Lower Derwent Valley SAC	• Degradation from water-borne pollution and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation
	• Displacement from functionally-linked habitat due to increase in noise vibration, lighting and visual disturbance	• Species displacement
	• Risk of incidental mortality of species	• Direct mortality
Lower Derwent Valley SPA	• Degradation from water-borne pollution and contamination incidents	• Habitat degradation

Designation	Effects described in submission information	Presented in screening matrices as
	• Release of silts and sediments (from plant movement) • Increase in ambient NOx and NH_3 levels and eutrophication during operation	
	• Displacement from functionally-linked habitat due to increase in noise • vibration, lighting and visual disturbance	• Species displacement
	• Incidental mortality of species	• Direct mortality
Humber Estuary SAC	• Degradation from water-borne pollution and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation
	• Displacement from functionally-linked habitat due to increase in noise vibration, lighting and visual disturbance	• Species displacement
	• Incidental mortality of species	• Direct mortality
Humber Estuary SPA	• Degradation from water-borne pollution and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation
	• Displacement from functionally-linked habitat due to increase in noise vibration, lighting and visual disturbance	• Species displacement
	• Incidental mortality of species	• Direct mortality
Humber Estuary Ramsar Site	• Degradation from water-borne pollution	• Habitat degradation

Designation	Effects described in submission information	Presented in screening matrices as
	and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	
	• Displacement from functionally-linked habitat due to increase in noise • vibration, lighting and visual disturbance	• Species displacement
	• Incidental mortality of species	• Direct mortality
Skipwith Common SAC	• Degradation from water-borne pollution and contamination incidents • Release of silts and sediments (from plant movement) • Increase in ambient NOx and NH3 levels and eutrophication during operation	• Habitat degradation
Thorne & Hatfield Moors SPA	• Degradation from pollution and contamination incidents • Release of silts and sediments (from plant movement) • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation
	• Displacement from functionally-linked habitat due to increase in noise vibration, lighting and visual disturbance	• Species displacement
	• Incidental mortality of species	• Direct mortality
Thorne Moor SAC	• Degradation from water-borne pollution and contamination incidents • Release of silts and sediments • Increase in ambient NOx and NH_3 levels and eutrophication during operation	• Habitat degradation

STAGE 1: SCREENING MATRICES

The European sites included within the screening assessment are:

River Derwent SAC;

Lower Derwent Valley RAMSAR;

Lower Derwent Valley SAC;

Lower Derwent Valley SPA;

Humber Estuary SAC;

Humber Estuary SPA;

Humber Estuary Ramsar;

Skipwith Common SAC;

Thorne & Hatfield Moors SPA; and

Thorne Moor SAC.

Matrix Key:

✓ = Likely significant effect **cannot** be excluded

✕ = Likely significant effect **can** be excluded

C = construction

O = operation

D = decommissioning

HRA Screening Matrix 1: River Derwent SAC

Name of European site and designation: River Derwent SAC												
EU Code: UK0030253												
Distance to NSIP: 0.8km to the Power Station Site, 1.1km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	✓ (a)	✓ (b)	✓ (a)							✗ (g)	✓ (h)	✗ (g)
1099 River lamprey *Lampetra fluviatilis*	✓ **(a)**	✓ (b)	✓ (a)	✗ (c)	✗ (c)	✗ (c)	✗ (c)	✗ (d)	✗ (c)	✗ (g)	✓ (h)	✗ (g)
1095 Sea lamprey *Petromyzon marinus*	✓ **(a)**	✓ (b)	✓ (a)	✗ (c)	✗ (c)	✗ (c)	✗ (c)	✗ (d)	✗ (c)	✗ (g)	✓ (h)	✗ (g)
1163 Bullhead *Cottus gobio*	✓ **(a)**	✓ (b)	✓ (a)	✗ (c)	✗ (c)	✗ (c)	✗ (c)	✗ (d)	✗ (c)	✗ (g)	✓ (h)	✗ (g)
1355 Otter *Lutra*	✓ (a)	✓ (b)	✓ (a)	✓ (e)	✗ (f)	✓ (e)	✓ (e)	✗ (f)	✓ (e)	✓ (g)	✓ (h)	✓ (g)

Evidence supporting conclusions:

(a) The SAC is located approximately 0.8 km from the Proposed Scheme footprint, with the River Derwent upstream of the Proposed Scheme, and no suitable habitat for any of the qualifying interests except otter recorded within 50 m of the Site. During construction and decommissioning of the Proposed Scheme activities such as vegetation clearance, demolition of structures and earthworks could result in the incidental release of silt, fuels and other chemicals. Any contaminants released could potentially be transported into the River Ouse via surface water connections. The River Derwent is directly upstream of the River Ouse. As such, changes in water quality within the Ouse could potentially be transported upstream to the River Derwent. Otters and qualifying interest fish species forming part of the River Derwent SAC populations are also likely to make use of habitats within the River Ouse (and for otter, also connecting waterbodies). These could therefore be affected if the condition of habitats within the River Ouse or River Derwent were affected. It is therefore considered that there is the potential for Likely Significant Effects (LSE) in relation to water quality and this issue will be taken forwards for Appropriate Assessment.

(b) Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref APP-074). This has identified the potential for air quality impacts on the River Derwent SAC. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3. The Air Pollution Information System (APIS) is the main reference point for critical loads for habitats and designated sites in the UK. No critical loads for nitrogen deposition or acidification are identified on APIS for the River Derwent SAC. APIS identifies that no critical loads are set for river habitats, as these need considering on a site-specific basis. APIS states that '*No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site specific level…'* (Ref. 9.53). Given the uncertainty regarding the potential effects of air quality impacts on the SAC in the absence of mitigation measures, there is considered to be potential for LSE. As such, operational air quality impacts will be taken forward for Stage 2 Appropriate Assessment.

(c) No suitable habitat for SAC fish species has been recorded within 50 m of the Proposed Scheme. The closest suitable watercourse for SAC fish species is the River Ouse, which is located approximately 85 m north of the Pipeline Area (see paragraph 9.5.56 of the ES Biodiversity Chapter; Examination Library Ref APP-077). Given the absence of suitable habitat within or adjacent to the footprint of the Proposed Scheme, no displacement or mortality of SAC fish species is predicted to arise. As such, no LSE are predicted to arise in relation to displacement of SAC fish species.

(d) The existing water cooling system used within the Existing Drax Power Station Complex will continue to be used for the Proposed Scheme, with the same intake and outflow volumes and temperature of water returning to the River Ouse. As there will be no change in the cooling water

infrastructure and therefore any associated risk of fish entrainment, no LSE are predicted to arise (see Paragraph 3.2.17 of Chapter 3 of the ES; Examination Library Ref: APP-071).

(e) Installation and decommissioning of the Gas Pipeline and Above Ground Installation (AGI)~~.~~ with associated increases in noise, lighting, and human activity may lead to temporary disturbance of occasionally used otter commuting and foraging routes (see paragraph 9.6.74 of the ES Biodiversity Chapter). This would occur for up to a few months at a time (per watercourse) and as such, may temporarily limit the ability of the local otter population to commute and forage across the local landscape. There would also be a low risk of incidental mortality of otters, for example if excavations are left uncovered overnight. There is therefore the potential for LSE to arise, and this issue will be taken forward for Stage 2 Appropriate Assessment.

(f) During the fully operational phase (Stage 3), there will be no physical impacts on any areas of suitable or confirmed otter habitat (see paragraph 9.6.88 of the ES Biodiversity Chapter (Examination Library Ref: APP-077). Occasional maintenance visits could be required to the AGI where the Proposed Scheme connects to the natural gas National Transmission System. The AGI will be located to the north (a minimum of 5 m) from the Dickon Field Drain, a watercourse that could potentially be used by otters. Any maintenance visits would be infrequent, and in the case of planned maintenance would take place primarily during daylight hours, when otter activity would be relatively limited. There could however be a need for visits outside normal working hours for unplanned maintenance, requiring access by personnel and use of artificial lighting during the night. Any such visits would be infrequent, with any disturbance limited to the section of the Dickon Drain adjacent to the AGI. Given that no evidence of otters has been recorded within the Dickon Field Drain and that visits would be infrequent, no Likely Significant Effects are predicted to arise (see paragraph 9.6.89 of the ES Biodiversity Chapter).

(g) The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of Chapter 17 of the ES). As such no in-combination LSE are predicted to arise during the construction and decommissioning phases of the Proposed Scheme.

(h) Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality; Examination Library Ref: APP-074) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the River Derwent SAC as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased in-combination effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. Given that emissions from the Proposed Scheme alone could lead to LSE, there is also the potential for in-combination air quality effects to lead to LSE. This issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 2: Lower Derwent Valley SAC

Name of European site and designation: Lower Derwent Valley SAC												
EU Code: UK0012844												
Distance to NSIP: 5.1 km to the Power Station Site, 5.7 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
6510 Lowland hay meadows *Alopecurus pratensis*, *Sanguisorba officinalis*	✗ (a)	✓ (b)	✗ (a)							✗ (e)	✓ (f)	✗ (e)
91E0 Alluvial forests with Alder *Alnus glutinosa* and Ash *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)	✗ (a)	✓ (b)	✗ (a)							✗ (e)	✓ (f)	✗ (e)
1355 Otter *Lutra*	✓ (a)	✓ (b)	✓ (a)	✓ (c)	✗ (d)	✓ (c)	✓ (c)	✗ (d)	✓ (c)	✗ (e)	✓ (f)	✗ (e)

Evidence supporting conclusions:

A. The SAC is located outside of the Proposed Scheme footprint (in excess of 5 km from the Proposed Scheme). At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). The SAC is also

upstream of the River Ouse, and beyond the tidal range, meaning there is no pathway by which water-borne pollutants could be transported far enough upstream to impact SAC habitats. As such, no LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on the Lower Derwent Valley SAC. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. Installation and decommissioning of the Gas Pipeline and Above Ground Installation (AGI) with associated increases in noise, lighting, and human activity may lead to temporary disturbance of occasionally used otter commuting and foraging routes (see paragraph 9.6.74 of the ES Biodiversity Chapter; Examination Library Ref: APP-074). This would occur for up to a few months at a time (per watercourse) and as such, may temporarily limit the ability of the local otter population to commute and forage across the local landscape. There would also be a low risk of incidental mortality of otters, for example if excavations are left uncovered overnight. There is therefore the potential for LSE to arise, and this issue will be taken forward for Stage 2 Appropriate Assessment.

D. During the fully operational phase (Stage 3), there will be no physical impacts on any areas of suitable or confirmed otter habitat (see paragraph 9.6.88 of the ES Biodiversity Chapter). Occasional maintenance visits could be required to the AGI where the Proposed Scheme connects to the natural gas National Transmission System. The AGI will be located to the north (a minimum of 5 m) from the Dickon Field Drain, a watercourse that could potentially be used by otters associated with the Lower Derwent Valley SAC population. Any such visits would be infrequent, and in the case of planned maintenance would take place primarily during daylight hours, when otter activity would be relatively limited. There could however be a need for visits outside normal working hours for unplanned maintenance, requiring access by personnel and use of artificial lighting during the night. Any such visits would be infrequent, with any disturbance limited to the section of the Dickon Drain adjacent to the AGI. Given that no evidence of otters has been recorded within the Dickon Field Drain and that visits would be infrequent, no Likely Significant Effects are predicted to arise (see paragraph 9.6.89 of the ES Biodiversity Chapter).

E. The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of

Chapter 17 of the ES). As such no in-combination LSE are predicted to arise during the construction and decommissioning phases of the Proposed Scheme.

F. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the Lower Derwent Valley SAC as a result of the Proposed Scheme alone (see (b) above). There is also the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative impacts and in-combination effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 3 Lower Derwent Valley RAMSAR

Name of European site and designation: Lower Derwent Valley RAMSAR												
EU Code: UK11037												
Distance to NSIP: 5.1 km to the Power Station Site, 5.7 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
The river and flood meadows play a substantial role in the hydrological and ecological functioning of the Humber Basin)	× (a)	✓ (b)	× (a)							× (d)	✓ (e)	× (d)
Rich assemblage of wetland invertebrates including 16 species of dragonfly and damselfly, 15 British Red Data Book wetland invertebrates as well as a leafhopper, *Cicadula ornate* for which Lower Derwent Valley is the only known site in Great Britain.	× (a)	✓ (b)	× (a)							× (d)	✓ (e)	× (d)

Staging post for passage birds in spring. Of particular note are the nationally important numbers of Ruff, *Philomachus pugnax* and Whimbrel, *Numenius phaeopus*.	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)
Regularly supports 20,000 or more waterbirds	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)
Regularly supports 1% of the individuals in a population of the following species or subspecies of waterbird: Eurasian wigeon , *Anas Penelope* and Eurasian teal , *Anas crecca*	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

Evidence supporting conclusions:

A. The Ramsar site is located outside of the Proposed Scheme footprint (in excess of 5 km from the Proposed Scheme). At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). The Ramsar site is also upstream of the River Ouse and beyond the tidal range, meaning there is no pathway by which water-borne pollutants could be transported far enough upstream to impact Ramsar site habitats. The hydrological and ecological functioning of the Ramsar site would not therefore be affected and no LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES) Examination Library Ref: APP-074). This has identified the potential for air quality impacts on the Lower Derwent Valley Ramsar site. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. Monthly wintering bird surveys were carried out between November 2017 and March 2018 (see paragraph 9.4.18 of the ES Biodiversity chapter; (Examination Library Ref: APP-077)). Breeding bird surveys between March and June 2018 (Examination Library Ref: REP1-010). None of the bird species identified on the citation for the Lower Derwent Valley Ramsar site were recorded during these surveys, with the exception of a peak count of four (4) Eurasian teal, recorded at a pond at Abbey Farm, approximately 150 m north of the Proposed Scheme. This suggests that the Proposed Scheme and adjacent habitats does not include areas of important functionally-linked habitat, which support Ramsar site birds when they are outside the Ramsar site. As such, there is considered to be a negligible risk of significant disturbance or incidental mortality of Ramsar site birds during any stage of the Proposed Scheme and no LSE are predicted to arise.

D. The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of Chapter 17 of the ES). In addition, no effects on Ramsar site bird species are predicted to result from construction and decommissioning of the Proposed Scheme. As such no in-combination LSE would occur during the construction and decommissioning phases of the Proposed Scheme.

E. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the River Derwent SAC as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. Given that emissions from the Proposed Scheme alone could lead to LSE, (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 4 Lower Derwent Valley SPA

Name of European site and designation: Lower Derwent Valley SPA												
EU Code: UK9006092												
Distance to NSIP: 5.1 km to the Power Station Site, 5.7 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
Supporting populations of the following Annex I species; Breeding Season: Northern shoveler *Anas clypeata;* Over winter*: Euarasian wigeon* Anas penelope Bewick's Swan Cygnus *columbianus bewickii,* Golden Plover *Pluvialis apricaria,* Ruff *Philomachus pugnax*	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)
Supporting populations of following migratory species; Over winter: Teal *Anas crecca*	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

Waterbird Assemblage	✗ (a)	✓ (b)	✗ (a)	✗ (c)	✗ (c)	✗ (c)	✗ (c)	✗ (c)	✗ (c)	✗ (d)	✓ (e)	✗ (d)

Evidence supporting conclusions:

A. The designated feature is outside of the Proposed Scheme footprint with the SPA in excess of 5 km from the Proposed Scheme. At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). The SPA is also upstream of the River Ouse and beyond the tidal range, meaning there is no pathway by which water-borne pollutants could be transported far enough upstream to impact SPA habitats. There would therefore be no resultant degradation of habitats supporting SPA bird species and no LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on the Lower Derwent Valley SPA. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. Monthly wintering bird surveys were carried out between November 2017 and March 2018 (see paragraph 9.4.18 of the ES Biodiversity chapter (Examination Library Ref: APP-077)). Breeding bird surveys between March and June 2018 (Examination Library Ref: REP1-010). None of the bird species identified on the citation for the Lower Derwent Valley SPA were recorded during these surveys, with the exception of a peak count of four (4) Eurasian teal, recorded at a pond at Abbey Farm, approximately 150 m north of the Proposed Scheme. This suggests that the Proposed Scheme and adjacent habitats does not include areas of important functionally-linked habitat, which support SPA birds when they are outside the SPA. As such, there is considered to be a negligible risk of significant disturbance or incidental mortality of SPA birds during any stage of the Proposed Scheme and no LSE are predicted to arise.

D. The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of Chapter 17 of the ES). In addition, no effects on SPA bird species are predicted to result from construction and decommissioning of the Proposed Scheme. As such no in-combination LSE would occur during the construction and decommissioning phases of the Proposed Scheme.

E. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the Lower Derwent Valley SPA as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. The air quality assessment has identified cumulative process contributions that would exceed 1% of the critical load for nitrogen deposition (see Table 6.26 in the ES Air Quality chapter) and 1% of the critical level for annual mean ammonia concentrations (see Table 6.24 of the ES Air Quality chapter). This issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 5: Humber Estuary SPA

Name of European site and designation: Humber Estuary SPA												
EU Code: UK9006111												
Distance to NSIP: 6.5 km to the Power Station Site, 6.0 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
Used regularly by 1% or more of the Great Britain populations of the following Annex I species: Eurasian teal *Anas crecca,* Eurasian wigeon *Anas Penelope,* mallard *Anas platyrhynchos,* turnstone *Arenaria interpres,* common pochard *Aythya farina*, greater scaup *Aythya marila,* Brent goose *Branta bernicla bernicla,* common goldeneye *Bucephala clangula,* sanderling *Calidris alba, a*vocet *Recurvirostra avosetta*	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

Bittern *Botaurus stellaris*, Hen harrier *Circus cyaneus,* Golden plover *Pluvialis apricaria*, Bar-tailed godwit *Limosa lapponica*, Ruff *Philomachus pugnax*, Marsh harrier *Circus aeruginosus*, Little tern *Sterna albifrons,* common ringed plover *Charadrius hiaticula,* Eurasian curlew *Numenius arquata,* whimbrel *Numenius Phaeopus,* greenshank *Tringa nebularia,* lapwing *Vanellus vanellus.*												
Used regularly by 1% or more of the biogeographical populations of the following migratory species: Shelduck *Tadorna tadorna, red* Knot *Calidris canutus,* Dunlin *Calidris alpina*, Redshank *Tringa totanus*, Black-tailed godwit *Limosa limosa,* Eurasian oystercatcher *Haematopus ostralegus,* grey plover	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

Pluvialis squatarola												
Assemblage qualification under article 4.2 or use of over 20,000 waterbirds in any season.	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

Evidence supporting conclusions:

A. The designated feature is outside of the Proposed Scheme footprint with the SPA in excess of 6 km from the Proposed Scheme. At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). The SPA is also sufficiently far downstream such that no perceptible effects on water quality are predicted to arise during any stage of the Proposed Scheme (see paragraph 12.6.82 of Chapter 12 of the ES; Examination Library Ref: APP-080). There would therefore be no resultant degradation of designated habitats supporting SPA bird species and no LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on the Humber Estuary SPA. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. Monthly wintering bird surveys were carried out between November 2017 and March 2018 (see paragraph 9.4.18 of the ES Biodiversity chapter (Examination Library Ref: APP-077)). Breeding bird surveys between March and June 2018 (Examination Library Ref: REP1-010). None of the bird species identified on the citation for the Humber Estuary SPA were recorded during these surveys, with the exception of a peak count of four (4) Eurasian teal and three (3) mallard, recorded at a pond at Abbey Farm, approximately 150 m north of the Proposed Scheme and one (1) lapwing recorded on one occasion in Development Parcel A. This suggests that the Proposed Scheme and adjacent habitats does not include areas of important functionally-linked habitat, which support SPA birds when they are outside the ~~Ramsar site~~SPA. As such, there is considered to be a negligible risk of significant disturbance of ~~Ramsar site~~SPA birds during any stage of the Proposed Scheme and no LSE are predicted to arise.

D. The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of Chapter 17 of the ES). In addition, no effects on SPA bird species are predicted to result from construction and decommissioning of the Proposed Scheme. As such no in-combination LSE would occur during the construction and decommissioning phases of the Proposed Scheme.

E. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the Humber Estuary SPA as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative impacts. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 6: Humber Estuary Ramsar Site

Name of European site and designation: Humber Estuary Ramsar Site												
EU Code: UK11031												
Distance to NSIP: 6.5 km to the Power Station Site, 6.0 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
Stage of Development	C	O	D	C	O	D	C	O	D	C	O	D
Ramsar Criterion 1: The site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons.	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)
Ramsar criterion 3 The Humber Estuary Ramsar site supports a breeding colony of grey seals *Halichoerus grypus* at Donna Nook.	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

It is the second largest grey seal colony in England and the furthest south regular breeding site on the east coast. The dune slacks at Saltfleetby-Theddlethorpe on the southern extremity of the Ramsar site are the most north-easterly breeding site in Great Britain of the natterjack toad *Bufo calamita.*												
Ramsar criterion 5 Assemblages of international importance: 153,934 waterfowl, non-breeding season	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)
Ramsar criterion 6 – species/populations occurring at levels of international importance: Eurasian golden plover, *Pluvialis apricaria* Altifrons; Red knot, *Calidris canutus*; Dunlin, *Calidris alpina* Alpine; Black-tailed godwit, *Limosa* Islandica; Common redshank, *Tringa*	× (a)	✓ (b)	× (a)	× (c)	× (c)	× (c)	× (c)	× (c)	× (c)	× (d)	✓ (e)	× (d)

totanus Brittanica; Common shelduck, *Tadorna*; Bar-tailed godwit , *Limosa lapponica Lapponica*;												
Ramsar criterion 8 The Humber Estuary acts as an important migration route for both river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus* between coastal waters and their spawning areas.	✓ (f)	✓ (b)	✓ (f)	× (h)	× (h)	× (h)	× (h)	× (g)	× (h)	× (d)	✓ (e)	× (d)

Evidence supporting conclusions:

A. The designated feature is outside of the Proposed Scheme footprint with the Ramsar site in excess of 6 km from the Proposed Scheme. At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). The Ramsar site is also sufficiently far downstream such that no perceptible effects on water quality are predicted to arise during any stage of the Proposed Scheme (see paragraph 12.6.82 of Chapter 12 of the ES; Examination Library Ref: APP-080). There would therefore be no resultant degradation of designated habitats supporting Ramsar site species and no LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on the Humber Estuary Ramsar site. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. Monthly wintering bird surveys were carried out between November 2017 and March 2018 (see paragraph 9.4.18 of the ES Biodiversity chapter; Examination Library Ref: APP-077). Breeding bird surveys were completed between March and June 2018 (Examination Library Ref: REP1-010)~~Breeding bird surveys are ongoing, with visits completed in March and April 2018~~. None of the bird species identified on the citation for the Humber Estuary Ramsar site were recorded during these surveys. This suggests that the Proposed Scheme and adjacent habitats does not include areas of important functional habitat, which support Ramsar site birds when they are outside the Ramsar site. Habitats within the study area for the Proposed Scheme do not provide suitable conditions for natterjack toad or grey seal, both of which are associated with coastal habitats. As such, there is considered to be a negligible risk of disturbance or incidental mortality of Ramsar site species during any stage of the Proposed Scheme, and no LSE are predicted to arise.

D. The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of Chapter 17 of the ES). As such no in-combination LSE would occur during the construction and decommissioning phases of the Proposed Scheme.

E. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the Humber Estuary Ramsar site as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

F. The Ramsar Site is located approximately 6km from the Proposed Scheme. The Ramsar Site is downstream of and hydrologically connected to the Proposed Scheme via the River Ouse, which flows into the Humber Estuary. Due to the intervening distance and associated dilution of any pollution or contamination accidentally released, the Proposed Scheme would not cause any perceptible water quality impacts within the Ramsar Site (see paragraph 12.6.82 of Chapter 12 of the ES). No suitable habitat for river or sea lamprey has been recorded within 50 m of the Site. During construction and decommissioning of the Proposed Scheme activities such as vegetation clearance, demolition of structures and earthworks could result in the incidental release of silt, fuels and other chemicals. Any contaminants released could potentially be transported into the River Ouse via surface water connections, with the River Ouse approximately 85 m from the Proposed Scheme at the closest point. The River Ouse is likely to be used by lamprey migrating between the Humber Estuary and upstream breeding sites. River and sea lamprey are also qualifying interests for The River Derwent SAC, upstream of the Proposed Scheme and also hydrologically connected to the River Ouse. As such, changes in water quality within

the Ouse could potentially be transported downstream to the River Derwent. River and sea lamprey forming part of the Humber Estuary Ramsar site populations could therefore be affected if the condition of habitats within the River Ouse or River Derwent was affected. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to water quality and this issue will be taken forwards for Appropriate Assessment.

G. The existing water cooling system used within the Existing Drax Power Station Complex will continue to be used for the Proposed Scheme, with the same intake and outflow volumes and temperature of water returning to the River Ouse. As there will be no change in the cooling water infrastructure and therefore any associated risk of fish entrainment, no LSE are predicted to arise (see Paragraph 3.2.17 of Chapter 3 of the ES; Examination Library Ref: APP-071).

H. No suitable habitat for Ramsar site fish species has been recorded within 50 m of the Proposed Scheme. The closest suitable watercourse for Ramsar fish species is the River Ouse, which is located approximately 85 m north of the Pipeline Area (see paragraph 9.5.56 of the ES Biodiversity Chapter). Given the absence of suitable habitat within or adjacent to the footprint of the Proposed Scheme, no displacement or mortality of Ramsar fish species is predicted to arise as a result of site clearance or construction activities. As such, no LSE are predicted to arise in relation to displacement or mortality of Ramsar fish species.

HRA Screening Matrix 7 Humber Estuary SAC

Name of European site and designation: Humber Estuary SPA												
EU Code: UK9006111												
Distance to NSIP: 6.5 km to the Power Station Site, 6.0 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
1130 Estuaries	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
1330 Atlantic salt meadows and a range of other sand dune types (H1110 Sandbanks which are slightly covered by sea water all the time; H1140 Mudflats and sandflats not covered by seawater at low tide; H1310 Salicornia and other annuals colonising mud and sand; and 1150 coastal	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)

lagoons)												
1140 Mudflats and sandflats not covered by seawater at low tide	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
1110 Sandbanks which are slightly covered by sea water all the time	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
1150 Coastal lagoons * Priority feature	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
1310 Salicornia and other annuals colonizing mud and sand	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
1330 Atlantic salt meadows *Glauco-Puccinellietalia maritimae*	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
2110 Embryonic shifting dunes	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
2120 "Shifting dunes along the shoreline with *Ammophila arenaria* (""white dunes"")	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)

2130 "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")" * Priority feature	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
2160 Dunes with *Hippopha rhamnoides*	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
1095 Sea lamprey *Petromyzon marinus*	✓ (e)	✓ (b)	✓ (e)	✗ (h)	✗ (h)	✗ (h)	✗ (h)	✗ (f)	✗ (h)	✗ (c)	✓ (d)	✗ (c)
1099 River lamprey *Lampetra fluviatilis*	✓ (e)	✓ (b)	✓ (e)	✗ (h)	✗ (h)	✗ (h)	✗ (h)	✗ (f)	✗ (h)	✗ (c)	✓ (d)	✗ (c)
1364 Grey seal *Halichoerus grypus*	✗ (a)	✓ (b)	✗ (a)	✗ (g)	✗ (g)	✗ (g)	✗ (g)	✗ (g)	✗ (g)	✗ (c)	✓ (d)	✗ (c)

Evidence supporting conclusions:

A. The designated feature is outside of the Proposed Scheme footprint with the SAC site in excess of 6 km from the Proposed Scheme. At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). The SAC is also sufficiently far downstream such that no perceptible effects on water quality are predicted to arise during any stage of the Proposed Scheme (see paragraph 12.6.82 of Chapter 12 of the ES; Examination Library Ref: APP-080). There would therefore be no resultant degradation of designated habitats supporting SAC species and no LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on the Humber Estuary SAC. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type

or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. The potential for the effects of other Plans and Projects to combine with those of the Proposed Scheme has been considered in the Cumulative effects chapter of the ES (Chapter 17; Examination Library Ref: APP-085). No significant cumulative effects with other Plans and Projects have been identified during the construction and decommissioning phases of the Proposed Scheme (see the Biodiversity sections of Appendix 17.1 and 17.2 of Chapter 17 of the ES). As such no in-combination LSE would occur during the construction and decommissioning phases of the Proposed Scheme.

D. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on the Humber Estuary SAC as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

E. The SAC is located approximately 6km from the Proposed Scheme. The SAC is downstream of and hydrologically connected to the Proposed Scheme via the River Ouse, which flows into the Humber Estuary. Due to the intervening distance and associated dilution of any pollution or contamination accidentally released, the Proposed Scheme would not cause any perceptible water quality impacts within the SAC (see paragraph 12.6.82 of Chapter 12 of the ES). No suitable habitat for river or sea lamprey has been recorded within 50 m of the Site. During construction and decommissioning of the Proposed Scheme activities such as vegetation clearance, demolition of structures and earthworks could result in the incidental release of silt, fuels and other chemicals. Any contaminants released could however be transported into the River Ouse via surface water connections, with the River Ouse approximately 85 m from the Proposed Scheme at the closest point. The River Ouse is likely to be used by lamprey migrating between the Humber Estuary and upstream breeding sites. River and sea lamprey are also qualifying interests for The River Derwent SAC, upstream of the Proposed Scheme and also hydrologically connected to the River Ouse. As such, changes in water quality within the Ouse could potentially be transported upstream to the River Derwent. River and sea lamprey forming part of the Humber Estuary SAC populations could therefore be affected if the condition of habitats within the River Ouse or River Derwent was affected. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to water quality and this issue will be taken forwards for Appropriate Assessment.

F. The existing water cooling system used within the Existing Drax Power Station Complex will continue to be used for the Proposed Scheme, with the same intake and outflow volumes and temperature of water returning to the River Ouse. As there will be no change in the cooling water infrastructure and therefore any associated risk of fish entrainment, no LSE are predicted to arise (see Paragraph 3.2.17 of Chapter 3 of the ES; Examination Library Ref: APP-071).

G. Grey seal is a species associated primarily with coastal and marine habitats. Although subject to tidal influences, the River Ouse adjacent to the Proposed Scheme does not provide suitable habitat conditions for grey seal. The Proposed Scheme is located several kilometres upstream of the mouth of the estuary with the River Ouse in this location also observed to experience high velocity flows that would further discourage grey seals from travelling upstream from the estuary. As grey seals are highly unlikely to use habitats adjacent to the Proposed Scheme, no LSE are predicted to arise.

H. No suitable habitat for SAC fish species has been recorded within 50 m of the Proposed Scheme. The closest suitable watercourse for SAC fish species is the River Ouse, which is located approximately 85 m north of the Pipeline Area (see paragraph 9.5.56 of the ES Biodiversity Chapter). Given the absence of suitable habitat within or adjacent to the footprint of the Proposed Scheme, no displacement or mortality of SAC fish species is predicted to arise as a result of site clearance or construction activities. As such, no LSE are predicted to arise in relation to displacement or mortality of SAC fish species.

HRA Screening Matrix 8: Skipwith Common SAC

Name of European site and designation: Skipwith Common SAC												
EU Code: UK0030276												
Distance to NSIP: 8.5 km to the Power Station Site, 8.0 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
4010 Northern Atlantic wet heaths with *Erica tetralix*	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)
4030 European dry heaths	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)

Evidence supporting conclusions:

A. The SAC is located outside of the Proposed Scheme footprint (in excess of 8 km from the Proposed Scheme). At this distance construction phase air quality impacts would have no perceptible effect (see Appendix 6.2 of the ES Air Quality chapter; Examination Library Ref: APP-099). There are no surface water connections leading to the SAC from the catchment of the Proposed Scheme, or other impact pathways by which any construction and decommissioning phase impacts could affect the SAC. As such, no resultant LSE are predicted to arise.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on Skipwith Common SAC. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads

are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH_3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forwards for Appropriate Assessment.

C. The Proposed Scheme is predicted to have no effects whatsoever on the Skipwith Common SAC during the construction and decommissioning phases of the Proposed Scheme. As such, there are no pathways via which the Proposed Scheme could contribute to an in-combination effect with other plans and projects and no LSE are predicted to occur.

D. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the ES). This has identified the potential for air quality impacts on Skipwith Common SAC as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES; Examination Library Ref: APP-085. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 9: Thorne & Hatfield Moors SPA

Name of European site and designation: Thorne & Hatfield Moors SPA												
EU Code: UK9005171												
Distance to NSIP: 9.3 km to the Power Station Site, 7.6 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
Supporting populations of the following Annex I species; Breeding Season: Nightjar *Caprimulgus eurpaeus*	× (a)	✓ (b)	× (a)	× (a)	× (a)	× (a)	× (a)	× (a)	× (a)	× (c)	✓ (d)	× (c)

Evidence supporting conclusions:

A. The Proposed Scheme is located in excess of 7 km from the SPA. No suitable habitat for nightjar has been recorded at or adjacent to the Proposed Scheme, with an absence of the species' preferred heathland or forestry habitats present (see Table 9-5 of the Biodiversity chapter of the ES; Examination Library Ref: APP-077). A review of Natural England Priority Habitat mapping and publicly available online aerial photography also suggests that such habitats are absent from areas that are hydrologically connected and downstream of the Proposed Scheme. As such, nightjar are highly unlikely to use any areas of habitat that could be affected by construction or decommissioning activities and as such experience any effects during these stages of the Proposed Scheme. No LSE are therefore predicted to occur.

B. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on Thorne

and Hatfield Moors SPA. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forward for Appropriate Assessment.

C. The Proposed Scheme alone is predicted to have no effects whatsoever on Thorne and Hatfield Moors SPA during the construction and decommissioning phases. As such, there are no pathways via which the Proposed Scheme could contribute to an in-combination effect with other plans and projects and no LSE are predicted to occur.

D. Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified that there would be no significant air quality impacts on Thorne and Hatfield Moor SPA as a result of the Proposed Scheme alone. There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES; Examination Library Ref: APP-085. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.

HRA Screening Matrix 10: Thorne Moor SAC

Name of European site and designation: Thorne Moor SAC												
EU Code: UK0012915												
Distance to NSIP: 9.3 km to the Power Station Site, 7.6 km to the Pipeline Area												
European site features	**Likely effects of NSIP**											
Stage of Development	Habitat Degradation			Species Displacement			Direct Mortality			In Combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D
7120 Degraded raised bogs still capable of natural regeneration	✗ (a)	✓ (b)	✗ (a)							✗ (c)	✓ (d)	✗ (c)

Evidence supporting conclusions:

(a) The Proposed Scheme is located in excess of 7 km from the SAC. No raised bog or other habitats that could have a supporting role for habitats within the SAC are present on or adjacent to the Site (see Table 9-5 of the Biodiversity chapter of the ES; Examination Library Ref: APP-077). The SAC is located outside the drainage catchment of the Proposed Scheme, so could not be subject to any hydrological effects arising from the Proposed Scheme. No other impact pathways by which the SAC could be affected by the Proposed Scheme have been identified. No effects on SAC habitats are therefore expected to occur during construction and decommissioning. As such, no LSE predicted to occur.

(b) Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES); Examination Library Ref: APP-074). This has identified the potential for air quality impacts on Thorne Moor SAC. Air quality impacts on designated sites are usually assessed against 'critical levels' and 'critical loads'. Critical levels and critical loads are concentrations and deposition rates of pollutants, below which there is considered to be no potential for harm to a particular habitat type or qualifying feature of a designated site. In the absence of proposed mitigation measures (which cannot be taken into account at the screening stage

on the basis of recent case law (Ref 9.51)), emissions from the Proposed Scheme could potentially lead to exceedances of critical levels for NOx and NH3 and exceedances of critical loads for nitrogen deposition and acidification. There is therefore considered to be the potential for Likely Significant Effects (LSE) in relation to air quality and this issue will be taken forward for Appropriate Assessment.

(c) The Proposed Scheme alone is predicted to have no effects whatsoever on Thorne Moor SAC during the construction and decommissioning phases. As such, there are no pathways via which the Proposed Scheme could contribute to an in-combination effect with other plans and projects and no LSE are predicted to occur.

(d) Potential air quality impacts on designated sites have been assessed through dispersion modelling, including European Sites (see Chapter 6 (Air Quality) of the Environmental Statement (ES)). This has identified the potential for air quality impacts on Thorne Moor SAC as a result of the Proposed Scheme alone (see (b) above). There is the potential for emissions generated by the Proposed Scheme to combine with those from other emitting developments, leading to increased cumulative effects. Other relevant developments are identified in Appendices 17.1 and 17.2 of the Cumulative Effects chapter of the ES; Examination Library Ref: APP-085. Given that emissions from the Proposed Scheme alone could lead to LSE (and there is also the potential for in-combination air quality effects to lead to LSE), this issue will therefore be taken forwards for Stage 2 Appropriate Assessment.