Great Yarmouth Third River Crossing Order 202[*]

Document NCC/GY3RC/EX/031: Habitat Regulation Assessment Screening and Integrity Matrices

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7 Screening Assessment

7.1 Introduction

7.1.1 The Scheme is not being undertaken as part of the management of any of the European sites concerned.

7.2 Potential Effects

7.2.1 The assessment of potential effects is presented in the form of assessment matrices in accordance with AN10.

7.2.2 Potential effects upon the European sites which are considered within the assessment matrices are listed in Table 7.1, overleaf. All potential identified impact mechanisms on ecological features are included in this coarse screening exercise.

Table 7.1: Effects Considered within the Screening Matrices for Each European Site

Designation	Effects Described in Submission Information	Presented in Screening Matrices as
Southern North Sea cSAC / SCI: UK0030395	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition.	• Pollution
Outer Thames Estuary SPA: UK9020309	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; • Disturbance from lighting; and	• Displacement

Designation	Effects Described in Submission Information	Presented in Screening Matrices as
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition.	• Pollution
Breydon Water SPA: UK9009181	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition; and	• Pollution

Designation	Effects Described in Submission Information	Presented in Screening Matrices as
Breydon Water Ramsar: UK11008	• habitat loss and fragmentation.	• habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition.	• Pollution
Great Yarmouth and North Denes SPA: UK9009271	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement

Designation	Effects Described in Submission Information	Presented in Screening Matrices as
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality.	• Pollution
The Broads SAC: UK0013577	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition.	• Pollution

Designation	Effects Described in Submission Information	Presented in Screening Matrices as
Broadland SPA: UK9009253	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition.	• Pollution
Broadland Ramsar: UK11010	• Habitat loss and fragmentation.	• Habitat loss
	• Disturbance from noise; • Disturbance from vibration; and • Disturbance from lighting.	• Displacement

Designation	Effects Described in Submission Information	Presented in Screening Matrices as
	• Water quality resulting from sediment deposition.	• Sediment deposition
	• Watercourse contamination through pollution and/or run-off; and • Watercourse and habitat contamination through reduction in air quality and/or nitrogen deposition.	• Pollution

7.3 Screening Matrices

7.3.1 The European sites included within the screening assessment are:

- Southern North Sea cSAC / SCI: UK0030395;
- Outer Thames Estuary SPA: UK9020309;
- Breydon Water SPA: UK9009181;
- Breydon Water Ramsar: UK11008;
- Great Yarmouth and North Denes SPA: UK9009271;
- The Broads SAC: UK0013577;
- Broadland SPA: UK9009253;
- Broadland Ramsar: UK11010.

7.3.2 The screening process has been undertaken applying matrices following PINS format. Full evidence supporting conclusions in each matrix are provided in a series of footnotes.

7.3.3 Matrix Key:

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

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

C = construction

O = operation

D = decommissioning

7.3.4 The screening matrices have attempted to address the recent Holohan case in that it was concluded that the Appropriate Assessment must catalogue the entirety of habitats and species for which a site is protected.

7.4 HRA Screening Matrix: Southern North Sea cSAC

Table 7.2: HRA Screening Matrix: Southern North Sea cSAC / SCI

Name of European Site and Designation: Southern North Sea cSAC															
EU Code: UK0030395															
Distance to NSIP: **460m**															
European Site Features	**Likely Effects of NSIP**														
Effect	**Habitat Loss**			**Displacement**			**Sediment Deposition**			**Pollution**			**In combination effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
Harbour porpoise *Phocoena phocoena*	✗[a]	✗[b]	✗[c]	✗[d]	✗[e]	✗[e]	✓[f]	✓[f]	✗[g]	✓[h]	✓[h]	✗[g]	✗[i]	✗[i]	✗[i]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site. No habitats within the European site would be lost as a result of construction activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[b] Operation of the Scheme does not require land take from the European site. No habitat loss or fragmentation from within the European site would occur as a result of operational activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[c] Given that the Applicant has no plans to decommission the Scheme, and as the environmental constraints in the mid-22nd

Century cannot be reasonably predicted, further consideration of decommissioning is not considered appropriate. Decommissioning would not in any case give rise to any loss of habitats from the European site.

[d] Vibration and underwater noise generated by construction activities has the potential to disturb harbour porpoise. Such works would be of temporary duration during construction only. Current studies have shown that the number of sightings of porpoises decline by 90% when piling noise occurs at above 170dB but at only 25% when between 145dB and 150dB. It is, however, considered that there is a remote likelihood that the Scheme would interact with any marine mammal species due to its urban location, inland of true marine habitat. Chapter 7 Table 7.26 presents noise levels for seven phases of construction with peak levels reaching 104 dB for the East Abutment Combi-Wall while the works at the East Bascule Pit Combi-Wall are predicted to reach 103 db. These areas are immediately adjacent to the River Yare and therefore within 240 m of the SAC. The pathway for noise to travel through water is however much greater at 2.5 km and no likely significant effects are predicted on the European site.

[e] Operation would not require piling and consequently there is no risk of vibration and underwater noise affecting harbour porpoise within the European site. Chapter 7: Noise and Vibration of the ES details then basis that operational noise and vibration is not considered significant on European Sites in much closer proximity than the Southern North Sea cSAC / SCI (paragraphs 7.8.18, 7.8.80 – 7.8.81). Although the Southern North Sea cSAC / SCI is designated for different features from these sites, it is expected that noise and vibration from the operational Scheme would dissipate before reaching the site.

[f] Chapter 11: Water Environment details an assessment of sediment modelling undertaken for the Scheme. Sediment entering the River Yare could migrate downstream to impact on the North Sea. However, the magnitude of change to the cSAC / SCI is considered to be very small once the sediment is washed out to sea and dispersed through tidal flows (paragraph 11.8.4). Appendix 6G of the ES (document reference 6.2) presents at an assessment of NO_x concentrations for transect points modelled across the Breydon Water SPA/Ramsar. It was concluded there is no change in N-deposition (paragraph 1.1.4). As such, it was considered further assessment of the impacts of the Scheme upon ecology at Breydon Water SPA/Ramsar due to changes in air quality was not required. Considering that equivalent distances are involved from the Scheme to European site, the same conclusion is reached for the Southern North Sea cSAC / SCI.

[g] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate

[h] Air, water and lighting pollution would affect only the immediate vicinity of construction works and would not have effects extending to the European site, which is 460 m distant. However, there is a pathway length approximately 2.5 km by which water pollution arising from construction, in the absence of control measures, might reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[i] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

7.5 HRA Screening Matrix: Outer Thames Estuary SPA

Table 7.3: HRA Screening Matrix: Outer Thames Estuary SPA

Name of European Site and Designation: Outer Thames Estuary SPA															
EU Code: UK9020309															
Distance to NSIP: **0.0 km**															
European Site Features	**Likely Effects of NSIP**														
Effect	**Habitat Loss**			**Displacement**			**Sediment Deposition**			**Pollution**			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
Wintering birds:															
Red-throated diver *Gavia stellata*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✓[e]	✓[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Little tern *Sternula albifrons*	✗[n]	✗[n]	✗[n]	✗[j]	✗[j]	✗[j]	✓[e]	✓[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Common tern *Sterna hirundo*	✗[n]	✗[n]	✗[n]	✗[j]	✗[j]	✗[j]	✓[e]	✓[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would require temporary land take within an area of less than 3.7ha of the European site. This land take would occur within the River Yare at the point of the bridge crossing. With regard to the individual features of the SPA, red-throated diver is a species that feeds at distance offshore. It is not ordinarily present in the vicinity of the Application site (or indeed the River Yare) and would not be subject to adverse effects (Ref 11). Little tern do not breed in the immediate area of the Scheme and have a limited (and coastal) foraging range (Ref 12). Common tern breed in the adjacent Breydon Water SPA and is the primary reason for the Outer Thames Estuary SPA to be extended to include the River Yare overlapping with the Scheme. As detailed in Table 8.8 of Chapter 8: Nature Conservation of the ES (document reference 6.1) and paragraph 4.17 of Appendix 8D (document reference 6.2), specific surveys were undertaken to determine the usage of the River Yare adjacent to the Principal Application site. No common tern were recorded. No likely significant effects are therefore anticipated.

[b] Following construction, operation of the Scheme would require land take of approximately 3.7 ha from the European site in the location of the bridge piers. This land take would occur within the River Yare at the point of the bridge crossing. Red-throated diver is a species that feeds at distance offshore. It is not present in the vicinity of the Scheme and would not be subject to adverse effects.

[c] Given that the Applicant has no plans to decommission the Scheme, and as the environmental constraints in the mid-22nd Century cannot be reasonably predicted, further consideration of decommissioning is not considered appropriate

[d] Noise and visual disturbance arising from construction works or operation have the potential to disturb red-throated diver should they be present in proximity to Scheme works. However, as this species use the SPA for offshore foraging only, red-throated diver within the European site would not be subject to disturbance from construction works, or operation works and would not be displaced from the site as a result of any of these activities. The River Yare extension to the SPA was designated for common tern only not Red-throated diver. By way of comparison, displacement of red-throated divers is considered relevant to 4km distance from permanent operational structures such as offshore wind turbines (Ref 14) and noise and visual disturbance from the Scheme is not expected extend to offshore areas of the SPA.

[e] Sediment deposition has the potential to affect the immediate environs to the Application Site of the of the River Yare extension to the Outer Thames Estuary SPA (Chapter 11: Water Environment of the ES paragraphs 11.8.86 – 11.8.88) and would therefore have the potential to affect the foraging of features of the SPA. Red-throated diver uses offshore areas only for foraging and are unlikely to be present in the River Yare (Ref 11). Little tern do not breed in the immediate area of the Scheme and have a limited (and coastal) foraging range (Ref 12). Common tern breed in the adjacent Breydon Water SPA and is the primary reason for the Outer Thames Estuary SPA to be extended to include the River Yare overlapping with the Scheme. As detailed in Chapter 8: Nature Conservation (document reference 6.1) Table 8.8 and Appendix 8D (document reference 6.2) paragraph 4.17, specific surveys were undertaken to determine the usage of the River Yare adjacent to the Principal Application site. No common tern were recorded. Although it is considered unlikely that foraging of the common tern feature of the SPA would be affected by sediment loads, in accordance with the People Over Wind decision the potential for adverse effects on the integrity of the European site cannot be ruled out. This conclusion is reached without detailed consideration of the likely effects in addition to the measures taken and secured in the Outline CoCP to reduce exposure to this effect. This matter is further considered within Stage 2: Appropriate Assessment (for common tern only). Appendix 6G of the ES (document reference 6.2) paragraph 1.1.4 presents at an assessment of NO_x concentrations for transect points modelled across the Breydon Water SPA/Ramsar. It was concluded there is no change in N-deposition. As such, it was considered further assessment of the impacts of the Scheme upon ecology at Breydon Water SPA/Ramsar due to changes in air quality was not required. Considering that similar distances are involved from the Scheme to European site, the same conclusion is reached for the Outer Thames Estuary SPA.

[f] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate.

[g] Air, noise and lighting pollution could affect the immediate vicinity of construction works. There is therefore a pathway by which pollution arising from construction would reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[h] Noise and lighting pollution would affect the immediate vicinity of the Scheme during operation. In addition, there is a pathway by which water pollution arising from the Scheme might reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[i] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

[j] Common tern and little tern breed on sand, shingle or gravel banks and beaches, which to be suitable for nesting must be exposed above water during the breeding season. There are no habitats that fit this requirement within the boundary of the proposed scheme. No features suitable for use by breeding common tern or little tern would be affected by the Scheme, and therefore no adverse effects on these species when breeding would take place during construction, operation or decommissioning. Ornithological surveys undertaken to inform the Scheme (paragraph 4.17Appendix 8D of the ES (document reference 6.2)) have confirmed the above and that common tern and little tern do not use the River Yare in the vicinity of the Scheme and are therefore not at risk from the proposals.

7.6 HRA Screening Matrix: Breydon Water SPA

Table 7.4: HRA Screening Matrix: Breydon Water SPA

Name of European Site and Designation: Breydon Water SPA **EU Code: UK9009181**															
Distance to NSIP: **1.8 km**															
European Site Features Effect	**Likely Effects of NSIP**														
	Habitat Loss			**Displacement**			**Sediment Deposition**			**Pollution**			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
Breeding birds:															
Common tern *Sterna hirundo*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Wintering birds:															
Avocet *Recurvirostra avosetta*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Bewick's swan *Cygnus columbianus bewickii*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Golden plover *Pluvialis apricaria*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Lapwing *Vanellus vanellus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]

Name of European Site and Designation: Breydon Water SPA **EU Code: UK9009181**															
Distance to NSIP: **1.8 km**															
European Site Features / **Effect**	**Likely Effects of NSIP**														
	Habitat Loss			**Displacement**			**Sediment Deposition**			**Pollution**			**In Combination Effects**		
Passage birds:															
Ruff *Philomachus pugnax*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Wetland bird assemblage:															
Regularly supporting 43,225 waterfowl	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[f]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site. No habitats within the European site would be lost as a result of construction activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[b] Operation of the Scheme does not require land take from the European site. No habitat loss from within the European site would occur as a result of operational activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] Because of the intervening distance (1.8 km), noise and visual disturbance arising from construction, operation or decommissioning would have no effect on resources within the SPA. Although Chapter 7: Noise and Vibration of the ES predicts maximum levels of noise at 104 db which is within the range at which disturbance of birds would be expected, the distance between the scheme and the SPA is outside of that which behavioural responses would occur (Ref 18). Ornithological surveys undertaken to inform the Scheme have confirmed that the qualifying species of the SPA do not use habitats within the River Yare in the vicinity of the Scheme and would therefore not be at risk of being affected by the proposals. Common tern breed on sand, shingle or gravel banks and beaches, which to be suitable for nesting must be exposed above water during the breeding season. There are no habitats that fit this requirement within the boundary of the proposed Scheme. No features suitable for use by breeding common tern would be affected by the Scheme, and therefore no adverse effects on this species when breeding would take place during construction, operation or decommissioning. Ornithological surveys undertaken to inform the Scheme (paragraph 4.17 of Appendix 8D of the ES) have confirmed the above and that common tern did not use the River Yare in the vicinity of the Scheme and are therefore not at risk from the proposals.

[e] The movement of sediments is considered in Chapter 11: Water Environment and the Sediment Transport Assessment paragraphs 11.8.86 – 11.8.88 (Appendix 11C). Appendix 11C summarises that the modelling assessment has shown that the presence of the Scheme will increase the scour and deposition close to the Scheme (paragraph 7.1.7). The modelling has shown there will be small impacts in the engineered channel up to Haven Bridge (north of the Application Site, immediately south of Breydon Water), however the additional scoured material remains in the channel. Appendix 11C further details that there would be no additional material transported into the engineered channel due to the presence of the Scheme's Bridge and no likely significant effects are predicted to occur (paragraph 7.1.8). Appendix 6G presents at an assessment of NO_x concentrations for transect points modelled across the Breydon Water SPA/Ramsar. It was concluded there is no change in N-deposition (paragraph 1.1.4). As such, it was considered further assessment of the impacts of the Scheme upon ecology at Breydon Water SPA/Ramsar due to changes in air quality was not required.

[f] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate.

[g] Air, noise and lighting pollution would affect only the immediate vicinity of construction works and would not have effects extending

to the European site, which is 1.8km distant. However, there is a pathway by which water pollution arising from construction, in the absence of control measures, might reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the water pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[h] Air, noise and lighting pollution would affect only the immediate vicinity of the Scheme during operation and would not have effects extending to the European site, which is 1.8km distant. However, there is a potential pathway by which water pollution arising from the Scheme, in the absence of control measures, might reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the water pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[i] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

7.7 HRA Screening Matrix: Breydon Water Ramsar

Table 7.5: HRA Screening Matrix: Breydon Water Ramsar

Name of European Site and Designation: Breydon Water Ramsar **EU Code: UK11008**															
Distance to NSIP: **1.8 km**															
European Site Features / **Effect**	**Likely Effects of NSIP**														
	Habitat Loss	**Displacement**				**Sediment Deposition**		**Pollution**				**In Combination Effects**			
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
Ramsar criterion 5: assemblage of international importance:															
68,175 waterfowl	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[f]	✓[g]	✓[h]	✗[i]	✗[i]	✗[i]
Ramsar criterion 6: internationally important numbers of species:															
Bewick's swan *Cygnus columbianus bewickii*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[f]	✓[g]	✓[h]	✗[i]	✗[i]	✗[i]
Lapwing *Vanellus vanellus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[f]	✓[g]	✓[h]	✗[i]	✗[i]	✗[i]
Species for possible future consideration under criterion 6:															
Pink-footed goose *Anser brachyrhynchus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Wigeon *Anas penelope*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]

Name of European Site and Designation: Breydon Water Ramsar **EU Code: UK11008**															
Distance to NSIP: **1.8 km**															
European Site Features	**Likely Effects of NSIP**														
Effect	**Habitat Loss**	**Displacement**				**Sediment Deposition**		**Pollution**				**In Combination Effects**			
Shoveler *Anas clypeata*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Golden plover *Pluvialis apricaria*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]
Black-tailed godwit *Limosa limosa islandica*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✓[g]	✓[h]	✗[f]	✗[i]	✗[i]	✗[i]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site. No habitats within the European site would be lost as a result of construction activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[b] Operation of the Scheme does not require land take from the European site. No habitat loss from within the European site would occur as a result of operational activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme would not, in any case, give rise to any loss of habitats from the European site.

[d] Because of the intervening distance (1.8 km), noise and visual disturbance arising from construction, operation or decommissioning would have no effect on resources within the Ramsar site. Although Chapter 7: Noise and Vibration of the ES predicts maximum levels of noise at 104 db which is within the range at which disturbance of birds would be expected (Table 7.26), the distance between the scheme and the Ramsar site is outside of that which behavioural responses would occur (Ref 18).

[e] The movement of sediments is considered in Chapter 11: Water Environment and the Sediment Transport Assessment paragraphs 11.8.86 – 11.8.88 ((Appendix 11C). Appendix 11C summarises that the modelling assessment analysis has shown that the presence of the Scheme will increase the scour and deposition close to the Scheme (paragraph 7.1.7). The modelling has shown there will be small impacts in the engineered channel up to Haven Bridge (north of the Application Site, immediately south of Breydon Water), however the additional scoured material remains in the channel. Appendix 11C further details that there would be no additional material transported into the engineered channel due to the presence of the Scheme's Bridge and no likely significant effects are predicted to occur. Appendix 6G presents at an assessment of NO_x concentrations for transect points modelled across the Breydon Water SPA/Ramsar. It was concluded there is no change in N-deposition (paragraph 7.1.8). As such, it was considered further assessment of the impacts of the Scheme upon ecology at Breydon Water SPA/Ramsar due to changes in air quality was not required.

[f] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate.

[g] Air, noise and lighting pollution would affect only the immediate vicinity of construction works and would not have effects extending to the European site, which is 1.8km distant. However, there is a pathway by which water pollution arising from construction, in the absence of control measures, might reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the water pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[h] Noise and lighting pollution would affect only the immediate vicinity of the Scheme during operation and would not have effects extending to the European site, which is 1.8km distant (Ref 18). However, there is a pathway by which water pollution arising from

the Scheme, in the absence of control measures, might reach the European site. In accordance with the People Over Wind decision, as the potential for adverse effects on the integrity of the European site cannot be ruled out without consideration of the water pollution protection measures that are included as part of the drainage proposals for the Scheme, this matter is further considered within Stage 2: Appropriate Assessment.

[i] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

7.8 HRA Screening Matrix: Great Yarmouth and North Denes SPA

Table 7.6: HRA Screening Matrix: Great Yarmouth and North Denes SPA

Name of European Site and Designation: Great Yarmouth and North Denes SPA															
EU Code: UK9009271															
Distance to NSIP: **2.7 km**															
European Site Features	**Likely Effects of NSIP**														
Effect	**Habitat Loss**	**Displacement**				**Sediment Deposition**			**Pollution**			**In Combination Effects**			
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
Breeding birds:															
Little tern *Sternula albifrons*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7). No habitats within the European site would be lost as a result of construction activities.

[b] Operation of the Scheme does not require land take from the European site. No habitat loss from within the European site would occur as a result of operational activities (Chapter 2: Description of the Scheme) paragraphs 2.6.4, 2.6.6 – 2.6.7.

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] Because of the intervening distance (2.7 km), noise and visual disturbance arising from construction, operation or decommissioning would have no effect on resources within the SPA. Ornithological surveys undertaken to inform the Scheme have confirmed that little tern do not use the River Yare in the vicinity of the Scheme for feeding and would therefore not be at risk of being affected by the proposals (Table 3.3 of Appendix 8D of the ES).

[e] It is not expected that there would be any additional sediment material from the Scheme that would flow to this European site (paragraph 11.8.4, Appendix 11C: Sediment Transport Assessment of the ES). The SPA lies 3km north of the outflow of the River Yare and is therefore outside of what is modelled in Appendix 11C of the ES (document reference 6.2) as shown in Plate 4-1. The SPA is designated for nesting little tern only, where there is no evident pathway of effect through any changes in sediment transport.

[f] Air, noise and lighting pollution would affect only the immediate vicinity of the Scheme and would not have effects extending to the European site, which is 2.7km distant with urban areas of Great Yarmouth in between. No pathway of effect is therefore evident between the Scheme and the SPA.

[g] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

7.9 HRA Screening Matrix: The Broads SAC

Table 7.7: HRA Screening Matrix: The Broads SAC

Name of European Site and Designation: The Broads SAC **EU Code: UK0013577**																
Distance to NSIP: **6.7 km**																
European Site Features **Effect**	**Likely Effects of NSIP**															
	Habitat Loss	**Displacement**					**Sediment Deposition**			**Pollution**			**In Combination Effects**			
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***	
3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	
3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	
7140 Transition mires and quaking bogs	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	

Name of European Site and Designation: The Broads SAC **EU Code: UK0013577**															
Distance to NSIP: **6.7 km**															
European Site Features	**Likely Effects of NSIP**														
Effect	**Habitat Loss**	**Displacement**				**Sediment Deposition**			**Pollution**			**In Combination Effects**			
7210 Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]
7230 Alkaline fens	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]
91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*)	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]
6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	✗[a]	✗[b]	✗[c]				✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]
1016 Desmoulin's whorl snail *Vertigo moulinsiana*	✗[a]	✗[b]	✗[c]	✗[g]	✗[g]	✗[g]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]

Name of European Site and Designation: The Broads SAC EU Code: UK0013577															
Distance to NSIP: **6.7 km**															
European Site Features	**Likely Effects of NSIP**														
Effect	**Habitat Loss**	**Displacement**				**Sediment Deposition**			**Pollution**			**In Combination Effects**			
1903 Fen orchid *Liparis loeselii*	✗[a]	✗[b]	✗[c]	✗[g]	✗[g]	✗[g]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]
4056 Ramshorn snail *Anisus vorticulus*	✗[a]	✗[b]	✗[c]	✗[g]	✗[g]	✗[g]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]
1355 Otter *Lutra lutra*	✗[a]	✗[b]	✗[c]	✗[h]	✗[h]	✗[h]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site (see paragraphs 2.6.4, 2.6.6 – 2.6.7 Chapter 2 of the ES (document reference 6.1): Description of the Proposed Scheme). No habitats within the European site would be lost as a result of construction activities.

[b] Operation of the Scheme does not require land take from the European site. No habitat loss from within the European site would occur as a result of operational activities (see paragraphs 2.6.4, 2.6.6 – 2.6.7 Chapter 2 of the ES (document reference 6.1): Description of the Proposed Scheme).

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] There is no pathway by which sediment within the River Yare will enter the European site (which lies upstream) and on this basis there will be no adverse effects on the site or its qualifying features.

[e] There is no pathway from the Scheme to the European site, which is 6.7km distant, by which noise, lighting, air, or water pollution arising from the Scheme may travel; all these potential effects would be significantly diluted or dispersed before reaching the European site. The European site would therefore not be affected by pollution from construction, operation or decommissioning as confirmed in the relevant ES chapters, 6: Air Quality (paragraph 6.10.17) and 7: Noise and Vibration (paragraphs 7.8.18, 7.8.80 – 7.8.81).

[f] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

[g] No habitats in the immediate vicinity of construction works are suitable to support this species. Suitable habitats within the European site would not be lost as a result of construction, operation or decommissioning.

[h] It is possible that otters from the European site may move along the corridor of the River Yare. Construction or operation of the Scheme would not prevent the movement of otters within the area of the Scheme. Otters are not at risk of becoming trapped within open excavations or fenced areas. The Scheme would not impede otters that may use the river for foraging or passage and therefore no disturbance likely to give rise to displacement of otters from within the European site would occur during construction, operation or decommissioning.

7.10 HRA Screening Matrix: Broadland SPA

Table 7.8: HRA Screening Matrix: Broadland SPA

Name of European Site and Designation: Broadland SPA **EU Code: UK9009253**																
Distance to NSIP: **6.7 km**																
European Site Features / **Effect**	**Likely Effects of NSIP**															
	Habitat Loss	**Displacement**				**Sediment Deposition**			**Pollution**			**In Combination Effects**				
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
The site is used regularly by 1% or more of the GB population of the following species in any season:																
Bittern *Botaurus stellaris* (10-15%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Bewick's swan *Cygnus columbianus bewickii* (8.6%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Whooper swan *Cygnus cygnus cygnus* (1.8%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Marsh Harrier *Circus aeruginosus* (16%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Hen harrier *Circus cyaneus* (3%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]

Name of European Site and Designation: Broadland SPA **EU Code: UK9009253**															
Distance to NSIP: **6.7 km**															
European Site Features / **Effect**	**Likely Effects of NSIP**														
	Habitat Loss	**Displacement**				**Sediment Deposition**			**Pollution**			**In Combination Effects**			
Ruff *Philomachus pugnax* (6.4%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
The site is used regularly by around 1% of the biogeographic population of the following regularly occurring migratory species in any season (% of north-west European population):															
Wigeon *Anas penelope* (1.3%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Gadwall *Anas strepera* (1.0%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Shoveler *Anas clypeata* (<1%)	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site. No habitats within the European site would be lost as a result of construction activities (paragraphs 2.6.4, 2.6.6 – 2.6.7 of Chapter 2: Description of the Scheme).

[b] Operation of the Scheme does not require land take from the European site. No habitat loss from within the European site would occur as a result of operational activities (paragraphs 2.6.4, 2.6.6 – 2.6.7 of Chapter 2: Description of the Scheme).

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] Because of the intervening distance (6.7 km), noise and visual disturbance arising from construction, operation or decommissioning would have no effect on resources within the SPA as confirmed in the ES (document reference 6.1) Chapter 7: Noise and Vibration paragraphs 7.8.18, 7.8.80 – 7.8.81.

[e] There is no pathway by which sediment within the River Yare will enter the European site (which lies upstream) and on this basis, there will be no adverse effects on the site or its qualifying features.

[f] There is no pathway from the Scheme to the European site, which is 6.7km distant, by which lighting, air, or water pollution arising from the Scheme may travel. The European site would therefore not be affected by pollution from construction, operation or decommissioning as confirmed in the relevant ES (document reference 6.1) chapters, 6: Air Quality (paragraph 6.10.17) and 11: Water Environment (paragraph 11.8.99).

[g] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

7.11 HRA Screening Matrix: Broadland Ramsar

Table 7.9: HRA Screening Matrix: Broadland Ramsar

Name of European Site and Designation: Broadland Ramsar **EU Code: UK11010**															
Distance to NSIP: **6.7 km**															
European Site Features **Effect**	**Likely Effects of NSIP**														
	Habitat Loss			**Displacement**			**Sediment Deposition**			**Pollution**			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	***D***
Ramsar Criterion 2:															
H7210 Calcareous fens with *Cladium marsiscus* and *Caricion davallinae*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
H7230 Alkaline fens	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
H91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
S1016 Desmoulin's whorl snail *Vertigo moulinsiana*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
S1355 Otter *Lutra lutra*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
S1903 Fen orchid *Liparis loeselii*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]

Name of European Site and Designation: Broadland Ramsar EU Code: UK11010																
Distance to NSIP: **6.7 km**																
European Site Features / **Effect**	**Likely Effects of NSIP**															
	Habitat Loss			**Displacement**			**Sediment Deposition**			**Pollution**			**In Combination Effects**			
Ramsar Criterion 6: Wintering birds:																
Bewick's swan *Cygnus columbianus bewickii*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Wigeon *Anas penelope*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Gadwall *Anas strepera*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Shoveler *Anas clypeata*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
For possible future consideration under Ramsar Criterion 6:																
Pink-footed goose *Anser brachyrhynchus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]
Greylag goose *Anser anser anser*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]	✗[e]	✗[e]	✗[e]	✗[f]	✗[f]	✗[f]	✗[g]	✗[g]	✗[g]

Evidence

[a] Construction activities, including routes for movement of construction vehicles, would not occur within the European site. No habitats within or functionally linked with the European site would be lost as a result of construction activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[b] Operation of the Scheme does not require land take from the European site. No habitat loss from within or functionally linked with the European site would occur as a result of operational activities (Chapter 2: Description of the Scheme paragraphs 2.6.4, 2.6.6 – 2.6.7).

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] Because of the intervening distance (6.7 km), noise and visual disturbance arising from construction, operation or decommissioning would have no effect on resources within the European site as confirmed in the ES (document reference 6.1) Chapter 7: Noise and Vibration paragraphs 7.8.18, 7.8.80 – 7.8.81.

[e] There is no pathway by which sediment within the River Yare will enter the European site and on this basis, there will be no adverse effects on the site or its qualifying features.

[f] There is no pathway from the Scheme to the European site, which is 6.7km distant, by which lighting, air, or water pollution arising from the Scheme may travel. The European site would therefore not be affected by pollution from construction, operation or decommissioning as confirmed in the relevant ES (document reference 6.1) chapters, 6: Air Quality (paragraph 6.10.17) and 11: Water Environment (paragraph 11.8.99).

[g] Consideration of in-combination effects of the Scheme on this site is set out at section 7.12 of this document.

7.12 In-Combination Effects

7.12.1 The assessment of in-combination effects has been informed by Advice Note Ten (Ref 4). Natural England were consulted at a scoping stage with regard to the proposed schemes that have the potential to produce cumulative effects with the Scheme.

7.12.2 The following other planned and proposed schemes exist within the immediate region of the Scheme (as identified in the Scoping Report for the Scheme (Ref 15) and updated in Chapter 19: Cumulative Effects): Of these developments, the enterprise zones are currently developed and not considered to have potential for a contribution to any in combination effect on European sites. Epoch 2 of the Great Yarmouth Flood Defence Improvements is in a pre-application stage. The A47 junction improvements underwent public consultation in 2017 but however has no construction programme. Beacon Park was approved in December 2017. No ecological concerns on European sites have been raised to date by consultees on any of these schemes.

7.12.3 Further distant from the Scheme are planned and proposed developments that could have potential to act in combination on a European Site (notably Outer Thames Estuary SPA).

- East Anglia Array Windfarms (East Anglia ONE and East Anglia THREE);
- Norfolk Vanguard Offshore Wind Farm;
- Norfolk Boreas Offshore Wind Farm
- Lake Lothing Third Crossing, Lowestoft; and
- Sizewell C Nuclear Power Station.

7.12.4 Of these developments, the first two phases of the East Anglia Array (East Anglia ONE and THREE) have development consent. The HRA Reports for both wind farms concluded that there would be no significant impact upon the integrity of any European site. Norfolk Vanguard Offshore Wind Farm is currently in examination and its HRA Report concludes no adverse effects on site integrity for any European Site. Norfolk Boreas Offshore Wind Farm is in a pre-application stage where a Preliminary Environmental Information Report (PEIR) has been completed (Ref 19). This concludes no adverse effects on species that features of regional European sites.

7.12.5 Sizewell C is still in the pre-application stage while Lake Lothing Crossing is currently undergoing examination. The HRA for Lake Lothing (Ref 16) which has been subject to agreement with Natural England, states that '*the Great*

Yarmouth Third River Crossing and the remaining phases of the East Anglia Array would not have a significant in-combination effect due to their distance from the Scheme'. The assessment here for the Scheme concurs with this view.

7.12.6 In combination with other developments, the Scheme proposals are not likely to give rise to significant effects on European Sites, their qualifying resources or conservation objectives. The assessment that has been undertaken has considered the construction and operation phases. There are therefore no effects that would be such that, in combination with those from other developments, would cause such effects to arise during any phase of the Scheme.

8 Conclusions of Stage 1: Screening

8.1.1 In the absence of consideration of water pollution control measures, the Scheme has the potential to affect the following European sites during construction or operation:

- Southern North Sea cSAC;
- Outer Thames Estuary SPA;
- Breydon Water SPA; and
- Breydon Water Ramsar.

8.1.2 The Scheme does not have the potential to give rise to other adverse effects on any European site, alone or in combination with other schemes.

8.1.3 On the basis that the possibility of occurrence of significant effects cannot be ruled out at the Screening stage, because measures that mitigate the effects of the Scheme cannot be considered at this stage of the HRA process, the assessment has continued to Stage 2: Appropriate Assessment where a judgement is made on effects on site integrity.

9 Stage 2: Appropriate Assessment

9.1 Potential Effects

9.1.1 Further to the People Over Wind decision, consideration of measures included within a scheme which have the effect of reducing or mitigating the effects of that scheme on a European site cannot be considered within Stage 1: Screening but must instead be assessed with respect to the integrity of the site concerned at Stage 2: Appropriate Assessment.

9.1.2 In the absence of consideration of water pollution control measures, the Scheme has the potential to affect the following European sites during construction, operation or decommissioning.

9.1.3 Likely significant effects are considered further for the following sites:

- Southern North Sea cSAC;
- Outer Thames Estuary SPA;
- Breydon Water SPA; and
- Breydon Water Ramsar.

9.1.4 These sites have been subject to further assessment in order to establish if the Scheme could have an adverse effect on their integrity. Evidence for the conclusions reached on integrity is detailed within the footnotes to the matrices below.

Pollution

9.1.5 Measures incorporated into the Scheme design for construction and operational phases are detailed below with respect to pollution. These measures refer to standard pollution control that would be incorporated in to the Scheme regardless of the connectivity with any European site, with the principal function of ensuring that there is no contamination of local environments. By virtue of these protocols, they would also minimise the risk of adverse effects on any relevant European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme.

Construction

9.1.6 Measures during construction will be incorporated in the construction programme and Scheme design. These measures have been informed by various topic specific assessments undertaken within the ES (document

reference 6.1) and are included in the Outline Code of Construction Practice (document reference 6.16) which supplies the framework by which a full CoCP will be prepared by a Contractor).

9.1.7 With regards to air quality, the Outline CoCP includes the following measures (as informed by ES (document reference 6.1) Chapter 6: Air Quality):

- Dust-generating activities (e.g. cutting, grinding and sawing) to be minimised and weather conditions considered prior to conducting potentially dust-emitting activities;
- Fine material to not be stockpiled to an excessive height in order to prevent exposure to wind or dust nuisance;
- Roads and accesses to be kept clean;
- Where possible, plant to be located away from site boundaries that are close to residential areas;
- Water to be used as a dust suppressant, where applicable;
- Drop heights from excavators to crushing plant to be kept to a minimum;
- Distances from crushing plant to stockpiles to be kept to the minimum practicable to control dust generation associated with the fall of materials;
- Skips to be securely covered;
- Soiling, seeding, planting or sealing of completed earthworks to be completed as soon as reasonably practicable, following completion of earthworks;
- Dust suppression and the maintenance of the surface of access routes to be appropriate to avoid dust as far as practicable, taking into account the intended level of trafficking;
- Wheel wash facilities to minimise trackout of dust;
- Material to not be burnt on site; and
- Engines to be switched off when not in operation.

9.1.8 The full CoCP should stipulate that the Contractor should ensure that the Highways Agency's Design Manual for Roads and Bridges (DMRB) (Ref 17) is followed and that all sub-contractors are aware of control measures.

9.1.9 A surface water drainage strategy will be prepared as part of any full CoCP for the construction phase in order to ensure that site drainage is controlled and that no contaminated run-off is allowed to enter watercourses.

9.1.10 The Contractor must include within the full CoCP and implement standard good practice pollution prevention measures in construction. This must include, unless not relevant to the Contractor's construction methodology (as informed by ES (document reference 6.1) Chapter 11: Water Environment):

- A temporary surface water drainage strategy to be prepared for the construction stage to ensure that surface run-off would not directly enter existing watercourses;
- The use of soft start piling techniques to minimise the disturbance and subsequently mobilisation of contaminated sediment within the River Yare during construction of the bridge substructures;
- Temporary cut-off drains would be used uphill and downhill of the working areas to prevent clean runoff entering and dirty water leaving the working area without appropriate treatment;
- All drains within the Scheme Extent would be identified and labelled and measures implemented to prevent polluting substances from entering them;
- Areas with a greater risk of spillage (e.g. vehicle maintenance and storage areas for hazardous materials) would be carefully sited (e.g. away from drains or areas where surface waters may pond);
- Emergency response plans would be developed and spill kits made available on site;
- Measures to be put in place to prevent pollution from construction plant, vehicles and machinery including refuelling in designated areas, on an impermeable surface, with appropriate cut-off drainage located away from watercourses; plant to be maintained in a good condition with wheel washing in place, all refuelling would be supervised and carried out in a designated area. In the event of plant breakdown drip trays would be used during any emergency maintenance and spill kits would be available on site;
- All fuel, oil and chemicals would be stored in a designated secure area, with secondary containment provided;
- Fuels and potentially hazardous construction materials would be stored in bunds that have areas with external cut-off drainage; fuel would be stored in double skinned tanks with 110% capacity;

- Construction plant would be checked regularly for oil and fuel leaks, particularly when construction works are undertaken in or near the existing site waterbodies;
- Waste fuels and other fluid contaminants would be collected in leak-proof containers prior to removal from construction site to an approved recycling processing facility;
- Oil absorbent booms would be made available on site and deployed in the event of a significant spillage;
- Procedures to control dust and contain debris associated with demolition works;
- Control and treatment measures will be regularly inspected to ensure they are working effectively;
- Concrete wash out would only take place at designated concrete washout areas;
- Surface water run-off and excavation dewatering would be captured and settled out prior to disposal to sewer as appropriate. Any contaminants to be removed prior to disposal; and
- Sewage generated from site welfare facilities would be disposed of appropriately. This may be by discharge to the foul sewer or by collection in septic tank for disposal off site.

Operation

9.1.11 Pollution control measures within the Scheme design would be active throughout its operation as part of the Drainage Strategy (Appendix 12C document reference 6.2). The measures follow those within the DMRB (Ref 17). The measures would protect all sensitive receptors, including watercourses, from the effects of pollution from road run off.

9.1.12 These measures would also provide appropriate protection against the unlikely event of pollution arising from spillage of materials onto the road carriageway.

Sediment Deposition

9.1.13 Further measures specifically regarding sediments are included in the Outline CoCP (document reference 6.16). These are detailed below:

Construction

- The use of cofferdams to exclude work areas from the main River Yare waterbody, thus reducing the risk of increased sediment loads or hazardous substances entering the main water flow; and
- The use of silt fences, silt traps, filter bunds, settlement ponds and/or proprietary units such as a 'siltbuster' to treat sediment laden water generated on site before discharge.

Operation

9.1.14 ES (Document 6.1) Chapter 11: Water Environment details that engineering scour protection should be incorporated into the design and operation of the Scheme in order to reduce local flow turbulence and associated scour.

9.2 European Sites

Southern North Sea cSAC / SCI

9.2.1 Possible adverse effects on site integrity of this European site, which could not be fully evaluated in Stage 1: Screening, are as follows:

- Pollution (arising from the Scheme) of habitats and watercourses that could give rise to adverse effects; and
- Increase in sediment deposition that has the potential to affect flora and fauna and consequently give rise to adverse effects.

Outer Thames Estuary SPA

9.2.2 Possible adverse effects on site integrity of this European site, which could not be fully evaluated in Stage 1: Screening are as follows:

- Pollution (arising from the Scheme) of habitats and watercourses that could give rise to adverse effects; and
- Increase in sediment deposition that has the potential to effect flora and fauna and consequently give rise to adverse effects.

Breydon Water SPA

9.2.3 Possible adverse effects on site integrity of this European site, which could not be fully evaluated in Stage 1: Screening are as follows:

- Pollution (arising from the Scheme) of habitats and watercourses that could give rise to adverse effects.

Breydon Water Ramsar

9.2.4 Possible adverse effects on site integrity of this European site, which could not be fully evaluated in Stage 1: Screening are as follows:

- Pollution (arising from the Scheme) of habitats and watercourses that could give rise to adverse effects.

9.3 HRA Integrity Matrix: Southern North Sea cSAC

Table 9.1: HRA Integrity Matrix: Southern North Sea cSAC

Name of European Site and Designation: Southern North Sea cSAC									
EU Code: UK0030395									
Distance to NSIP: 460 m									
European Site Features	**Likely Effects of NSIP**								
Effect	**Pollution**			**Sediment Deposition**			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*
Harbour porpoise *Phocoena phocoena*	×[a]	×[b]	×[c]	×[d]	×[e]	×[c]	×[f]	×[f]	×[f]

Evidence

[a] Although the site is 460m distant from the Application Site, the pathway by which water pollution from the Scheme would enter the River Yare and travel to the European site is approximately 2.5km in length. Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. These measures have been informed by the assessment within the ES (document reference 6.1) at for example paragraph 11.7.1 of Chapter 11: Water Environment and are included in the OCoCP (document reference 6.16 paragraph 6.2.1) which forms the framework for the full CoCP that will be prepared by the Contractor. A surface water drainage strategy will be prepared as part of the full CoCP for the construction phase to ensure that site

drainage is controlled and that no contaminated runoff is allowed to enter the water. A full breakdown of measures is included in Section 9.1 above.

[b] Although the site is 460m distant from the Application Site, the pathway by which water pollution from the Scheme would enter the River Yare and travel to the European site is approximately 2.5km in length. Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. Pollution control measures within the Scheme design would be active throughout the Scheme's operational life as part of the Drainage Strategy. These measures follow those within the DMRB (Ref 17). The measures would protect all potential receptors, in particular the River Yare itself, from the effects of pollution from road runoff, which would be reduced to acceptable levels. These measures would also provide appropriate protection against the unlikely event of pollution arising from spillage of materials onto the road carriageway, as for example might happen as a result of road traffic incidents. The level of protection provided is that recommended by the DMRB. These measures would minimise pollution risk during operation to a level that would not be notably greater than the current baseline environment. Water pollution from the Scheme would not give rise to effects of sufficient magnitude to affect the integrity of the European site.

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] Although the site is 460m distant from the Application Site, the pathway by which sediment deposition from the Scheme would enter the River Yare and travel to the European site is approximately 2.5km in length. Specific control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. These measures have been informed by the assessment within the ES (document reference 6.1) at for example paragraph 11.7.1 of Chapter 11: Water Environment and are included in the OCoCP (document reference 6.16 paragraph 6.2.1) which forms the framework for the full CoCP that will be prepared by the Contractor. With respect to sediments, measures will include the use of cofferdams to exclude work areas from the main

River Yare waterbody, thus reducing the risk of increased sediment loads or hazardous substances entering the main water flow. Additionally, the use of silt fences, silt traps, filter bunds, settlement ponds and/or proprietary units such as a 'siltbuster' to treat sediment laden water generated on site before discharge will be included in the full CoCP. It is therefore considered that would there would not be any adverse effects on the European site.

[e] Although the site is 460m distant from the Application Site, the pathway by which water pollution from the Scheme would enter the River Yare and travel to the European site is approximately 2.5km in length. ES (document reference 6.1) Appendix 11C: Sediment Transport Assessment details that he modelling and tidal analysis has shown that the presence of the Scheme does increases the scour and deposition within the Principal Application Site. The modelling has shown there is small impacts in the engineered channel up to Haven Bridge, however the additional scoured material remains in the engineered channel (paragraph 7.1.7). It is therefore considered that would there would not be any adverse effects on the European site.

[f] In-combination with other developments, the Scheme proposals are not likely to give rise to significant effects on European Sites, their qualifying resources or conservation objectives. There are therefore no effects that would be such that, in combination with those from other developments, would cause such effects to arise.

9.4 HRA Integrity Matrix: Outer Thames Estuary SPA

Table 9.2: HRA Integrity Matrix: Outer Thames Estuary SPA

Name of European Site and Designation: Outer Thames Estuary SPA									
EU Code: UK9020309									
Distance to NSIP: 0.0 km									
European Site Features	**Likely Effects of NSIP**								
Effect	**Pollution**			**Sediment Deposition**			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*	*C*	*O*	*D*
Red-throated diver *Gavia stellata*	✗[a]	✗[b]	✗[c]	✗[d]	✗[e]	✗[c]	✗[f]	✗[f]	✗[f]
Little tern *Sternula albifrons*	✗[a]	✗[b]	✗[c]	✗[d]	✗[e]	✗[c]	✗[f]	✗[f]	✗[f]

Common tern *Sterna hirundo*	✗[a]	✗[b]	✗[c]	✗[d]	✗[e]	✗[c]	✗[f]	✗[f]	✗[f]

Evidence

[a] Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. These measures have been informed by the assessment within the ES (document reference 6.1) at for example paragraph 11.7.1 of Chapter 11: Water Environment and are included in the OCoCP (document reference 6.16 paragraph 6.2.1) which forms the framework for the full CoCP that will be prepared by the Contractor. A surface water drainage strategy will be prepared as part of the full CoCP for the construction phase to ensure that site drainage is controlled and that no contaminated runoff is allowed to enter the water. A full breakdown of measures is included in Section 9.1 above. It is therefore considered that would there would not be any adverse effects on the European site.

[b] Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. Pollution control measures within the Scheme design would be active throughout the Scheme's operational life as part of the Drainage Strategy currently planned to be secured through DCO (document reference 3.1) Requirement 10. These measures follow those within the DMRB (Ref 17). The measures would protect all potential receptors, in particular the River Yare itself, from the effects of pollution from road runoff, which would be reduced to acceptable levels. These measures would also provide appropriate protection against the unlikely event of pollution arising from spillage of materials onto the road carriageway, as for example might happen as a result of road traffic incidents. The level of protection provided is that recommended by the DMRB. These measures would reduce pollution risk during operation to an acceptable level. Water pollution from the Scheme would not give rise to effects of sufficient magnitude to affect the integrity of the European site.

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] Specific control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. These measures have been informed by the assessment within the ES (document reference 6.1) at for example paragraph 11.7.1 of Chapter 11: Water Environment and are included in the OCoCP (document reference 6.16 paragraph 6.2.1) which forms the framework for the full CoCP that will be prepared by the Contractor. With respect to sediments, measures will include the use of cofferdams to exclude work areas from the main River Yare waterbody, thus reducing the risk of increased sediment loads or hazardous substances entering the main water flow. Additionally, the use of silt fences, silt traps, filter bunds, settlement ponds and/or proprietary units such as a ‘siltbuster’ to treat sediment laden water generated on site before discharge will be included in the full CoCP. It is therefore considered that would there would not be any adverse effects on the European site.

[e] ES (document reference 6.1) Appendix 11C: Sediment Transport Assessment details that he modelling and tidal analysis has shown that the presence of the Scheme does increases the scour and deposition within the Principal Application Site. The modelling has shown there is small impacts in the engineered channel up to Haven Bridge, however the additional scoured material remains in the engineered channel (paragraph 7.1.7)It is therefore considered that would there would not be any adverse effects on the European site.

[f] In-combination with other developments, the Scheme proposals are not likely to give rise to significant effects on European Sites, their qualifying resources or conservation objectives. There are therefore no effects that would be such that, in combination with those from other developments, would cause such effects to arise.

9.5 HRA Integrity Matrix: Breydon Water SPA

Table 9.3: HRA Integrity Matrix: Breydon Water SPA

Name of European Site and Designation: Breydon Water SPA **EU Code: UK9009181**						
Distance to NSIP: 1.8 km						
European Site Features **Effect**	**Likely Effects of NSIP**					
	Pollution			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*
Breeding birds:						
Common tern *Sterna hirundo*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Wintering birds:						
Avocet *Recurvirostra avosetta*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Bewick's swan *Cygnus columbianus bewickii*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Golden plover *Pluvialis apricaria*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Lapwing *Vanellus vanellus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Passage birds:						
Ruff *Philomachus pugnax*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Wetland bird assemblage:						
Regularly supporting 43,225 waterfowl	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]

Evidence

[a] Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. These measures have been informed by the assessment within the ES (document reference 6.1) at for example paragraph 11.7.1 of Chapter

11: Water Environment and are included in the OCoCP (document reference 6.16 paragraph 6.2.1) which forms the framework for the full CoCP that will be prepared by the Contractor. A surface water drainage strategy will be prepared as part of the full CoCP for the construction phase to ensure that site drainage is controlled and that no contaminated runoff is allowed to enter the water. A full breakdown of measures is included in Section 9.1 above. It is therefore considered that would there would not be any adverse effects on the European site.

[b] Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. Pollution control measures within the Scheme design would be active throughout the Scheme's operational life as part of the Drainage Strategy. These measures follow those within the DMRB (Ref 17). The measures would protect all potential receptors, in particular, the River Yare itself, from the effects of pollution from road runoff, which would be reduced to acceptable levels. These measures would also provide appropriate protection against the unlikely event of pollution arising from spillage of materials onto the road carriageway, as for example might happen as a result of road traffic incidents. The level of protection provided is that recommended by the DMRB. These measures would reduce pollution risk during operation to an acceptable level. Water pollution from the Scheme would not give rise to effects of sufficient magnitude to affect the integrity of the European site.

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] In-combination with other developments, the Scheme proposals are not likely to give rise to significant effects on European Sites, their qualifying resources or conservation objectives. There are therefore no effects that would be such that, in combination with those from other developments would cause such effects to arise.

9.6 HRA Integrity Matrix: Breydon Water Ramsar

Table 9.4: HRA Integrity Matrix: Breydon Water Ramsar

Name of European Site and Designation: Breydon Water Ramsar **EU Code: UK9009181**						
Distance to NSIP: 1.8 km						
European Site Features **Effect**	**Likely Effects of NSIP**					
	Pollution			**In Combination Effects**		
Stage of Development	*C*	*O*	*D*	*C*	*O*	*D*
Ramsar criterion 5: assemblage of international importance:						
68175 waterfowl	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Ramsar criterion 6: internationally important numbers of species:						
Bewick's swan *Cygnus columbianus bewickii*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Lapwing *Vanellus vanellus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Species for possible future consideration under criterion 6:						
Ruff *Philomachus pugnax*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Pink-footed goose *Anser brachyrhynchus*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Wigeon *Anas penelope*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Shoveler *Anas clypeata*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Golden plover *Pluvialis apricaria apricaria*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]
Black-tailed godwit *Limosa limosa islandica*	✗[a]	✗[b]	✗[c]	✗[d]	✗[d]	✗[d]

Evidence

[a] Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water

pollution are proposed. These measures have been informed by the assessment within the ES (document reference 6.1) at for example paragraph 11.7.1 of Chapter 11: Water Environment and are included in the OCoCP (document reference 6.16 paragraph 6.2.1) which forms the framework for the full CoCP that will be prepared by the Contractor A surface water drainage strategy will be prepared as part of the full CoCP for the construction phase to ensure that site drainage is controlled and that no contaminated runoff is allowed to enter the water. A full breakdown of measures is included in Section 9.1 above. It is therefore considered that would there would not be any adverse effects on the European site.

[b] Specific standard pollution control measures would be incorporated within the Scheme in accordance with good practice regardless of the presence of any European site, with the principal function of seeking to avoid the contamination of the River Yare. By virtue of this effect, they would also minimise the risk of adverse effects of pollution upon any European sites to which pathways for movement of polluting materials might exist, or effects on qualifying resources of such sites that may be present in the vicinity of the Scheme. No exceptional measures intended specifically to provide protection of any European site from the effects of water pollution are proposed. Pollution control measures within the Scheme design would be active throughout the Scheme's operational life as part of the Drainage Strategy. These measures follow those within the DMRB (Ref 17). The measures would protect all potential receptors, in particular, the River Yare itself, from the effects of pollution from road runoff, which would be reduced to acceptable levels. These measures would also provide appropriate protection against the unlikely event of pollution arising from spillage of materials onto the road carriageway, as for example might happen as a result of road traffic incidents. The level of protection provided is that recommended by the DMRB. These measures would reduce pollution risk during operation to an acceptable level. Water pollution from the Scheme would not give rise to effects of sufficient magnitude to affect the integrity of the European site.

[c] Given that the Applicant has no plans to decommission the Scheme, further consideration of decommissioning is not considered appropriate. Decommissioning of the Scheme in any case would not give rise to any loss of habitats from the European site.

[d] In-combination with other developments, the Scheme proposals are not likely to give rise to significant effects on European Sites, their qualifying resources or conservation objectives. There are therefore no effects that would be such that, in combination with those from other developments would cause such effects to arise.