Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

HRA Matrices

June 2018, Revision A

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Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

HRA Matrices

June 2018

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Report to Inform the Appropriate Assessment: Annex 2-2

Screening Matrix - Potential Impacts

Potential impacts upon the European site(s)[1] which are considered within the submitted RIAA Screening Report (included in Appendix 1 to the RIAA, Doc. Ref. 5.2) and/or included within the RIAA following consultation (Doc. Ref. 5.2) are provided in the table below. Impacts have been grouped where appropriate for ease of presentation.

Impacts considered within the screening matrices

Designation	Impacts in submission information	Presented in screening matrices as
Thanet Coast SAC	Alone: Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Spread of non-native invasive species (INNS) Introduction of hard substrate Change in physical processes EMF	Alone: Temporary habitat loss & disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Accidental pollution Spread of INNS Hard substrate Physical processes EMF
	In-combination: None identified	No LSE in combination

[1] As defined in Advice Note 10.

Designation	Impacts in submission information	Presented in screening matrices as
Sandwich Bay SAC	Alone: Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Spread of INNS Introduction of hard substrate Change in physical processes EMF	Alone: Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Spread of INNS Hard substrate Change in physical processes EMF
	In-combination: None identified	No LSE in combination
Margate and Long Sands SAC	Alone: Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Introduction of hard substrate Change in physical processes	Alone: Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Accidental pollution Hard substrate Physical processes
	In-combination: None identified	No LSE in combination

Designation	Impacts in submission information	Presented in screening matrices as
Thanet Coast & Sandwich Bay SPA	Alone Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Noise disturbance (onshore) Spread of INNS Visual disturbance (onshore) Change to physical processes Possible displacement of recreational users at Pegwell Bay Country Park EMF Change in prey availability and behaviour (offshore) Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone Temporary habitat loss & disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Accidental pollution Onshore noise disturbance Spread of INNS Onshore visual disturbance Physical processes Displacement of recreational users EMF Prey Disturbance & displacement Collision risk Barrier effect
	In combination Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination OC disturbance & displacement OWF disturbance & displacement Collision risk
Thanet Coast & Sandwich Bay Ramsar	Alone: Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Noise disturbance (onshore) Spread of INNS Visual disturbance (onshore) Change in physical processes Possible displacement of recreational users at Pegwell Bay Country Park EMF	Alone: Temporary habitat loss & disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Accidental pollution Onshore noise disturbance Spread of INNS Onshore visual disturbance Physical processes Displacement of recreational users EMF
	In-combination: None identified	No LSE in combination

Designation	Impacts in submission information	Presented in screening matrices as
Stodmarsh SPA	Alone: Noise disturbance (onshore) (Construction, Operation & Maintenance) Visual disturbance (onshore) (Construction, Operation & Maintenance)	Alone: Onshore noise disturbance Onshore visual disturbance
	In-combination: None identified	No LSE in combination
Stodmarsh Ramsar	Alone: Noise disturbance (onshore) (Construction, Operation & Maintenance) Visual disturbance (onshore) (Construction, Operation & Maintenance)	Alone: Onshore noise disturbance Onshore visual disturbance
	In-combination: None identified	No LSE in combination
Stodmarsh SAC	Alone: Noise disturbance (onshore) (Construction, Operation & Maintenance) Visual disturbance (onshore) (Construction, Operation & Maintenance)	Alone: Onshore noise disturbance Onshore visual disturbance
	In-combination: None identified	No LSE in combination
Transboundary site for diadromous fish Vlaamse Banken	Alone: Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Accidental pollution Increase in underwater noise Introduction of hard substrate Change in physical processes	Alone: Temporary habitat loss & disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Accidental pollution Underwater noise Hard substrate Physical processes
	In-combination: None identified	No LSE in combination
Southern North Sea cSAC	Alone Permanent habitat loss Increased suspended sediment and subsequent deposition Accidental pollution Increase in underwater noise Collision risk Change in prey availability and behaviour	Alone Permanent habitat loss Increased suspended sediment & deposition Accidental pollution Underwater noise Collision Risk Prey

Designation	Impacts in submission information	Presented in screening matrices as
	Increase in underwater noise	In combination Underwater noise
Transboundary Harbour Porpoise sites Bancs des Flandres Ridens et dunes hydrauliques Récifs et Caps Gris Nez Blanc Nez	Alone Increased suspended sediment and subsequent deposition Accidental pollution Increase in underwater noise Collision risk Change in prey availability and behaviour	Alone Increased suspended sediment & deposition Accidental pollution Underwater noise Collision Risk Prey
Transboundary Harbour Porpoise sites No sites screened in	In-combination: None identified	No LSE in combination
Transboundary Harbour seal sites Bancs des Flandres SCI Baie de Canche et couloir des trois estuaires Vlakte van de Raan Voordelta Estuaires et littoral picards (baies de Somme et d'Authie) Recifs Gris-Nez Blanc-Nez Vlaamse Banken Ridens et dunes hydrauliques	Alone Increased suspended sediment and subsequent deposition Accidental pollution Increase in underwater noise Collision risk Change in prey availability and behaviour	Alone Increased suspended sediment & deposition Accidental pollution Underwater noise Collision Risk Prey
Transboundary Harbour seal sites Bancs de Flandres SCI Vlakte van de Raan Voordelta Vlaamse Banken	In combination Increase in underwater noise	In combination Underwater noise

Designation	Impacts in submission information	Presented in screening matrices as
Transboundary grey seal sites Bancs de Flandres SCI Baie de Canche et couloir des trois estuaires Vlakte van de Raan Voordelta Estuaires et littoral picards (baies de Somme et d'Authie) Recifs Gris-Nez Blanc-Nez Vlaamse Banken Ridens et dunes hydrauliques SBZ1 SBZ2 SBZ3	Alone Increased suspended sediment and subsequent deposition Accidental pollution Increase in underwater noise Collision risk Change in prey availability and behaviour	Alone Increased suspended sediment & deposition Accidental pollution Underwater noise Collision Risk Prey
Transboundary grey seal sites Bancs de Flandres SCI Vlakte van de Raan Voordelta Recifs Gris-Nez Blanc-Nez Vlaamse Banken Ridens et dunes hydrauliques SBZ1 SBZ2 SBZ3	In combination Increase in underwater noise	In combination Underwater noise
Sites identified for offshore birds during the transboundary consultation Cap Gris Nez SPA Bancs des Flandres SPA	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Direct disturbance & displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement (Construction, Operation & Maintenance) Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk

Designation	Impacts in submission information	Presented in screening matrices as
Outer Thames Estuary SPA [extended site, now classified]	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Direct disturbance & displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement (Construction, Operation & Maintenance) Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Foulness (Mid-Essex Coast Phase 5) SPA	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Direct disturbance & displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Alde-Ore Estuary SPA	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Direct disturbance & displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Alde-Ore Estuary Ramsar	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Disturbance & Displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect

Designation	Impacts in submission information	Presented in screening matrices as
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Flamborough & Filey Coast pSPA	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Direct disturbance & displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Disturbance & Displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
Flamborough Head & Bempton Cliffs SPA	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Direct disturbance & displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Northumberland Marine SPA	Alone: Change in marine prey availability and behaviour Disturbance & Displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk

Designation	Impacts in submission information	Presented in screening matrices as
Farne Islands SPA	Alone: Change in marine prey availability and behaviour Disturbance & Displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
St Abb's Head to Fast Castle SPA	Alone: Change in prey availability and behaviour (Construction, Operation & Maintenance) Disturbance & Displacement (offshore) (Construction, Operation & Maintenance) Collision risk (Operation & Maintenance) Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk

Screening Matrix

The European Sites included within the screening assessment are:

- Thanet Coast SAC
- Sandwich Bay SAC
- Margate and Long Sands SAC
- Thanet Coast & Sandwich Bay SPA
- Thanet Coast & Sandwich Bay Ramsar
- Stodmarsh SPA
- Stodmarsh Ramsar
- Stodmarsh SAC
- Transboundary site for diadromous fish (Vlaamse Banken)
- Southern North Sea cSAC
- Transboundary sites for harbour porpoise (Bancs des Flandres, Ridens et dunes hydrauliques and Récifs et Caps Gris Nez Blanc Nez)
- Transboundary sites for harbour seal (Bancs des Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques)
- Transboundary sites for grey seal (Bancs de Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)
- Transboundary sites for offshore birds (Cap Gris Nez SPA and Bancs des Flandres SPA)
- Outer Thames Estuary SPA
- Foulness (Mid-Essex Coast Phase 5) SPA
- Alde-Ore Estuary SPA
- Alde-Ore Estuary Ramsar
- Flamborough & Filey Coast pSPA
- Flamborough Head & Bempton Cliffs SPA
- Northumberland Marine SPA
- Farne Islands SPA
- St Abb's Head to Fast Castle SPA

Evidence for likely significant effects on their qualifying features is detailed within the footnotes to the screening matrices below.

Matrix Key

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

X: Likely significant effect **can** be excluded

C = construction
O = operation
D = decommissioning

Where effects are not applicable to a particular feature they are greyed out.

Matrix 1: Thanet Coast SAC

Name of European site: Thanet Coast SAC																												
Distance to TEOW: 0 km																												
European Site Feature	**Likely Effects of TEOW (alone)**																											
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Spread of INNS**			**Hard substrate**			**Physical processes**			**EMF**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Reefs	✓a		✓a		✓b			✓c		✓d	✓d	✓d	Xe	Xe	Xe	Xf		Xf		Xg			✓h			✓i	

Note – as identified within the RIAA (document Ref 5.2) reefs are the only feature of the Thanet Coast SAC screened in for potential LSE. Submerged or partially submerged sea caves have been screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) The cable corridor for Thanet Extension passes partially through the edge of the Thanet Coast SAC. There is therefore potential LSE resulting from temporary habitat loss and disturbance during the construction and decommissioning phase, should the cable route pass through the SAC boundary.

b) The cable corridor for Thanet Extension passes partially through the edge of the Thanet Coast SAC. There is therefore potential LSE resulting from permanent habitat loss during the operational phase of Thanet Extension, should cable protection be installed within the SAC boundary.

c) The cable corridor for Thanet Extension passes partially through the edge of the Thanet Coast SAC. There is therefore potential LSE resulting from temporary habitat disturbance during the operational phase of Thanet Extension, should cable maintenance be required within the SAC boundary.

d) The cable corridor for Thanet Extension passes partially through the edge of the Thanet Coast SAC, with the SAC being within the maximum range for screening (based on the maximum potential extent of a suspended sediment plume at Thanet Extension). There is, therefore, potential LSE resulting from an increase in suspended sediment, together with any associated deposition, during the construction, operation and decommissioning phase.

e) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

f) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk from the spread of INNS during construction and decommissioning is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for INNS.

g) It is likely that the manmade structures placed on the seabed will be colonised by a range of marine species. These structures have the potential to act as artificial reefs however given the presence of TOWF and other local OWFs, the potential for non-native species to occur is already present and therefore Thanet Extension does not provide a new area for non-native species, acting only as an extension of TOWF. Therefore no LSE applies for INNS in relation to the introduction of hard substrate.

h) The presence of manmade structures such as scour protection and foundations may result in localised changes in hydrodynamics and wave regimes. As a secondary affect the sediment transport pathways may be altered. Potential for overlap between Annex I habitats and relevant range of effect. Any potential change in physical processes is likely to be localised and small scale. The potential for LSE exists.

i) There is potential for EMF to affect benthic habitats. There is therefore potential LSE resulting from EMF during the operational phase, should the cable route pass through the SAC boundary.

Name of European site: Thanet Coast SAC																											
Distance to TEOW: 0 km																											
European Site Feature	**Likely Effects of TEOW (in combination)**																										
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Spread of INNS**			**Hard substrate**			**Physical processes**			**EMF**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Reefs																											

Note – as identified within the RIAA (document Ref 5.2) reefs are the only feature of the Thanet Coast SAC screened in for potential LSE. Submerged or partially submerged sea caves have been screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in combination with Thanet Extension as regards subtidal benthic habitats and therefore no LSE applies in combination.

Matrix 2: Sandwich Bay SAC

Name of European site: Sandwich Bay SAC																											
Distance to TEOW: 0 km																											
European Site Feature	**Likely Effects of TEOW (alone)**																										
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Spread of INNS**			**Hard substrate**			**Physical processes**			**EMF**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Embryonic shifting dunes	Xa		Xa		Xb			Xc			Xd		Xe	Xe	Xe	Xf		Xf		Xg			Xh			Xi	
Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	Xa		Xa		Xb			Xc			Xd		Xe	Xe	Xe	Xf		Xf		Xg			Xh			Xi	
Fixed coastal dunes with herbaceous vegetation ("grey dunes")	Xa		Xa		Xb			Xc			Xd		Xe	Xe	Xe	Xf		Xf		Xg			Xh			Xi	
Dunes with Salix repens ssp. argentea (Salicion arenariae)	Xa		Xa		Xb			Xc			Xd		Xe	Xe	Xe	Xf		Xf		Xg			Xh			Xi	
Humid dune slacks	Xa		Xa		Xb			Xc			Xd		Xe	Xe	Xe	Xf		Xf		Xg			Xh			Xi	

Evidence supporting conclusions:

a) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

b) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

c) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

d) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

e) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

f) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk from the spread of INNS during construction and decommissioning is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for INNS.

g) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

h) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

i) All designated features of the Sandwich Bay SAC are terrestrial, with consultation during screening confirming that works below MHW will not affect the site. Amendment to the onshore RLB ensure avoidance of the Sandwich Bay SAC onshore boundary and therefore remove any potential LSE associated with the onshore designated habitats.

Name of European site: Sandwich Bay SAC																													
Distance to TEOW: 0 km																													
European Site Feature	**Likely Effects of TEOW (in combination)**																												
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Spread of INNS**			**Hard substrate**			**Physical processes**			**EMF**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Embryonic shifting dunes																													
Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")																													
Fixed coastal dunes with herbaceous vegetation ("grey dunes")																													
Dunes with Salix repens ssp. argentea (Salicion arenariae)																													
Humid dune slacks																													

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in relation to the designated features of the Sandwich Bay SAC in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 3: Margate and Long Sands SAC

Name of European site: Margate and Long Sands SAC																		
Distance to TEOW: 3 km																		
European Site Feature	**Likely Effects of TEOW (alone)**																	
	Permanent habitat loss			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Hard substrate**			**Physical processes**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Sandbanks which are slightly covered by sea water all the time		Xa			Xb		✓c	✓c	✓c	Xd	Xd	Xd		Xe			✓f	

Evidence supporting conclusions:

a) The Thanet Extension boundary is located at least 3km from the Margate and Long Sands SAC and therefore there is no potential for a permanent habitat loss within the SAC and therefore no potential LSE.

b) The Thanet Extension boundary is located at least 3km from the Margate and Long Sands SAC and therefore there is no potential for a temporary habitat disturbance within the SAC and therefore no potential LSE

c) The Thanet Extension boundary is located at least 3km from the Margate and Long Sands SAC, however this is within the maximum range for screening (based on the maximum potential extent of a suspended sediment plume at Thanet Extension). There is, therefore, potential LSE resulting from an increase in suspended sediment, together with any associated deposition, during the construction, operation and decommissioning phase.

d) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

e) It is likely that the manmade structures placed on the seabed will be colonised by a range of marine species. These structures have the potential to act as artificial reefs however given the presence of TOWF and other local OWFs, the potential for non-native species to occur is already present and therefore Thanet Extension does not provide a new area for non-native species, acting only as an extension of TOWF. Therefore no LSE applies for INNS in relation to the introduction of hard substrate.

f) The presence of manmade structures such as scour protection and foundations may result in localised changes in hydrodynamics and wave regimes. As a secondary affect the sediment transport pathways may be altered. Potential for overlap between Annex I habitats and relevant range of effect. Any potential change in physical processes is likely to be localised and small scale. The potential for LSE exists.

Name of European site: Margate and Long Sands SAC																		
Distance to TEOW: 3 km																		
European Site Feature	**Likely Effects of TEOW (in combination)**																	
	Permanent habitat loss			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Hard substrate**			**Physical processes**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Sandbanks which are slightly covered by sea water all the time																		

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE with respect to subtidal benthic habitats in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 4: Thanet Coast & Sandwich Bay SPA

Name of European site: Thanet Coast & Sandwich Bay SPA																																													
Distance to TEOW: 0 km																																													
European Site Feature	Likely Effects of TEOW (alone)																																												
	Temporary habitat loss & disturbance			Permanent habitat loss			Temporary habitat loss & disturbance			Increased suspended sediment & deposition			Accidental pollution			Onshore noise disturbance			Spread of INNS			Onshore visual disturbance			Physical processes			Displacement of recreational users			EMF			Prey			Disturbance & displacement			Collision risk			Barrier effect		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
European golden plover	✓a		✓a		Xb			✓c		✓d	✓d	✓d	Xe	Xe	Xe	✓f	✓f	✓f	Xg		Xg	✓h	✓h	✓h		✓i		✓j		✓j		Xk		Xl	Xl	Xl	Xm	Xm	Xm		Xn			Xo	
Little tern																																		Xl	Xl	Xl	Xm	Xm	Xm		Xn			Xo	
Ruddy turnstone	✓a		✓a		Xb			✓c		✓d	✓d	✓d	Xe	Xe	Xe	✓f	✓f	✓f	Xg		Xg	✓h	✓h	✓h		✓i		✓j		✓j		Xk		Xl	Xl	Xl	Xm	Xm	Xm		Xn			Xo	

Evidence supporting conclusions:

Little tern no longer breeds within the SPA and therefore there is no potential for LSE for little tern.

a) The cable corridor for Thanet Extension passes through the Thanet Coast and Sandwich Bay SPA. There is therefore potential LSE resulting from temporary loss and disturbance of habitat during the construction and decommissioning phase.

b) The area of saltmarsh habitat that would be permanently lost under one of the three options for construction comprises an area of upper saltmarsh, characterised by relatively tall (>30 cm), dense vegetation dominated by *Spartina* which is unlikely to change without physical intervention to the height of the land. This does not provide suitable habitat for European golden plover or ruddy turnstone. The area which could be lost is also situated adjacent to a well-used footpath which further reduces its potential value to either qualifying species. Saltmarsh is not defined as a sub-feature of the SPA. There will therefore be no permanent loss of designated intertidal habitat used by non-breeding European golden plover and ruddy turnstone.

c) The cable corridor for Thanet Extension passes through the Thanet Coast and Sandwich Bay SPA. There is therefore potential LSE resulting from temporary disturbance of intertidal habitat during the operational phase of Thanet Extension, should cable maintenance be required within the SPA boundary.

d) The cable corridor for Thanet Extension passes through the Thanet Coast and Sandwich Bay SPA. There is, therefore, potential LSE resulting from an increase in suspended sediment, together with any associated deposition on intertidal habitats, during the construction, operation and decommissioning phases.

e) The production, agreement and implementation of relevant plans will address any concerns around accidental pollution during construction, operation and decommissioning. The trigger for the pollution control measures set out in the relevant plans is separate to the RIAA process, with the project as a whole requiring such measures in order to achieve consent. As such, it is considered that such measures form part of the project, and are separate to the RIAA process. Following implementation of the relevant plans there is sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and therefore no LSE applies for accidental pollution.

f) In the absence of mitigation measures there is potential for noise disturbance to European golden plover and ruddy turnstone during construction works in intertidal habitats and at the landfall. Noise disturbance is also possible due to driven/ percussive piling within Pegwell Bay Country Park (if required). In the absence of mitigation measures there is also potential for noise disturbance during planned maintenance work at the landfall and within intertidal habitats. The potential for LSE therefore exists.

g) The production, agreement and implementation of relevant plans will address any concerns around the risk of spreading INNS during construction, operation and decommissioning. The trigger for the measures set out in the relevant plans is separate to the RIAA process, with the project as a whole requiring such measures in order to achieve consent. As such, it is considered that such measures form part of the project and are therefore separate to the RIAA process. Following implementation of the relevant plans there is sufficient certainty that the risk from the spread of INNS during construction and decommissioning is negligible and therefore no LSE applies for INNS.

h) In the absence of mitigation measures there is potential for visual disturbance to European golden plover and ruddy turnstone during construction works in intertidal habitats and at the landfall. Visual disturbance is also possible for works within 250 m of intertidal habitats and in direct line of sight. In the absence of mitigation measures there is also potential for visual disturbance during planned maintenance work at the landfall and within intertidal habitats. The potential for LSE therefore exists.

i) The presence of manmade structures such as scour protection and foundations may result in localised changes in hydrodynamics and wave regimes. As a secondary effect the sediment transport pathways may be altered. Potential for overlap between intertidal habitats and relevant range of effect. Any potential change in physical processes is likely to be localised and small scale. The potential for LSE exists.

j) Construction and decommissioning works in Pegwell Bay Country Park could lead to the displacement of recreational visitors to more sensitive areas of the coast, which could in turn cause disturbance to European golden plover and ruddy turnstone. The potential for LSE exists.

k) Given the proposed construction methods for the relevant section of the cable route, there is no potential for LSE for the habitat of designated species.

l) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

m) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

n) Collision risk as a result of the offshore works does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

o) Barrier effect as a result of the offshore works does not have the potential to affect birds as a consequence of the location of their foraging habitat (intertidal or close to shore), their migratory pathways that are not affected by the short deviation required to fly around the WTGs and their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

Name of European site: Thanet Coast & Sandwich Bay SPA																																								
Distance to TEOW: 0 km																																									
European Site Feature	**Likely Effects of TEOW (in combination)**																																								
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Onshore noise disturbance**			**Spread of INNS**			**Onshore visual disturbance**			**Physical processes**			**Displacement of recreational users**			**EMF**			**OC disturbance & displacement**			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
European Golden plover	Xa		Xa		Xb			✓c		Xd	Xd	Xd	Xe	Xe	Xe	✓f	✓f	✓f	Xg		Xg	✓h	Xh	Xh		Xi		✓j		✓j		Xk		Xl		Xl	Xm	Xm	Xm		Xn	
Little tern																																		Xl		Xl	Xm	Xm	Xm		Xn	
Ruddy turnstone	Xa		Xa		Xb			Xc		Xd	Xd	Xd	Xe	Xe	Xe	✓f	✓f	✓f	Xg		Xg	Xh	Xh	Xh		Xi		✓j		✓j		Xk		Xl		Xl	Xm	Xm	Xm		Xn	

Evidence supporting conclusions:

Little tern no longer breeds within the SPA and therefore there is no potential for LSE for little tern in combination with other plans or projects.

a) No other plans or projects have been identified that could contribute to LSE in terms of temporary loss or disturbance to the habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension during construction and decommissioning.

b) No other plans or projects have been identified that could contribute to LSE in terms of permanent loss of habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension.

c) Temporary loss of intertidal habitat during O&M could contribute to LSE in combination with potential displacement of European golden plover once the Richborough Connection project is operational. Ruddy turnstone would not be affected by Richborough Connection.

d) No other plans or projects have been identified that could contribute to LSE in terms of increased suspended sediment and deposition on the habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension.

e) No other plans or projects have been identified that could contribute to LSE in terms of accidental pollution of the habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension.

f) Noise disturbance could contribute to LSE in combination with the Richborough Connection project and the Discovery Park biomass CHP plant.

g) No other plans or projects have been identified that could contribute to LSE in terms of the spread of INNS into the habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension.

h) Visual disturbance to European golden plover could contribute to LSE in combination with the Richborough Connection project.

i) No other plans or projects have been identified that could contribute to LSE in terms of changes to physical processes affecting the habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension.

j) Possible displacement of visitors from Pegwell Bay Country Park during construction and decommissioning could contribute to LSE in combination with the Residential development at Discovery Park, Sandwich, which may increase the number of visitors to Pegwell Bay Country Park.

k) No other plans or projects have been identified that could contribute to LSE in terms of EMF affecting the habitats of the Thanet Coast and Sandwich Bay SPA in combination with Thanet Extension.

l) Disturbance and consequent displacement from the offshore works and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity or they do not occur at that offshore site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

m) Disturbance and consequent displacement from the offshore works and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity or they do not occur at that offshore site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

n) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

Name of European site: Thanet Coast & Sandwich Bay Ramsar																																		
Distance to TEOW: 0 km																																		
European Site Feature	**Likely Effects of TEOW (alone)**																																	
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat loss & disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Onshore noise disturbance**			**Spread of INNS**			**Onshore visual disturbance**			**Physical processes**			**Displacement of recreational users**			**EMF**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Wetland invertebrate assemblage	✓a		✓a	✓b				✓c		Xd	Xd	Xd	Xe	Xe	Xe	Xf	Xf	Xf		Xg		Xh	Xh	Xh		Xi						Xk	
Ruddy turnstone	✓a		✓a		Xb			✓c		✓d	✓d	✓d	Xe	Xe	Xe	✓f	✓f	✓f		Xg		✓h	✓h	✓h		✓i		✓j		**✓j**		Xk	

Evidence supporting conclusions:

a) The cable corridor for Thanet Extension passes through the Thanet Coast and Sandwich Bay Ramsar. There is therefore potential LSE resulting from temporary loss and disturbance of intertidal habitat for ruddy turnstone during the construction and decommissioning phase. The cable corridor also passes through terrestrial habitats forming part of the Ramsar, at Stonelees Nature Reserve, some of which could potentially support three species included in the wetland invertebrate assemblage and LSE are therefore possible.

b) No ruddy turnstone were recorded using the area of habitat that would be permanently lost under one of the three options for construction of the landfall during surveys in winter 2016-17 and this area, which comprises an area of upper saltmarsh characterised by relatively tall (>30 cm), dense vegetation dominated by Spartina which is unlikely to change without physical intervention to the height of the land, does not provide suitable habitat for ruddy turnstone. The area which could be lost is also situated adjacent to a well-used footpath which further reduces its potential value to ruddy turnstone. There will therefore be no permanent loss of intertidal habitat used by non-breeding ruddy turnstone and no LSE. Although habitats within Stonelees Nature Reserve will be reinstated following construction permanent loss of habitat for three species included in the wetland invertebrate assemblage can't be ruled out and LSE are therefore possible.

c) The cable corridor for Thanet Extension passes through the Thanet Coast and Sandwich Bay Ramsar. There is therefore potential LSE resulting from temporary disturbance of intertidal habitat during the operational phase of Thanet Extension, should cable maintenance be required within the Ramsar boundary. In the absence of mitigation measures disturbance or temporary loss of habitat to three wetland invertebrate assemblage species (if present) is possible during planned maintenance works within Stonelees Nature Reserve and therefore the potential exists for LSE.

d) The cable corridor for Thanet Extension passes through the Thanet Coast and Sandwich Bay Ramsar. There is, therefore, potential LSE in the intertidal habitats resulting from an increase in suspended sediment, together with any associated deposition, during the construction, operation and decommissioning phase. Species included in the wetland invertebrate assemblage are not likely to be present in intertidal habitats and therefore there is no potential for LSE.

e) The production, agreement and implementation of relevant plans will address any concerns around accidental pollution during construction, operation and decommissioning. The trigger for the pollution control measures set out in the relevant plans is separate to the RIAA process, with the project as a whole requiring such measures in order to achieve consent. As such, it is considered that such measures form part of the project and are therefore separate to the RIAA process. Following implementation of the relevant plans there is sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and therefore no LSE applies for accidental pollution.

f) In the absence of mitigation measures there is potential for noise disturbance to ruddy turnstone during construction works in intertidal habitats and at the landfall. Noise disturbance is also possible due to driven/ percussive piling within Pegwell Bay Country Park (if required). In the absence of mitigation measures there is also potential for noise disturbance during planned maintenance work at the landfall and within intertidal habitats. The potential for LSE therefore exists.

g) The production, agreement and implementation of relevant plans will address any concerns around the risk of spreading INNS during construction, operation and decommissioning. The trigger for the measures set out in the relevant plans is separate to the RIAA process, with the project as a whole requiring such measures in order to achieve consent. As such, it is considered that such measures form part of the project and are therefore separate to the RIAA process. Following implementation of the relevant plans there is sufficient certainty that the risk from the spread of INNS during construction and decommissioning is negligible and therefore no LSE applies for INNS.

h) In the absence of mitigation measures there is potential for visual disturbance to ruddy turnstone during construction works in intertidal habitats and at the landfall. Visual disturbance is also possible for works within 250 m of intertidal habitats and in direct line of sight. In the absence of mitigation measures there is also potential for visual disturbance during planned maintenance work at the landfall and within intertidal habitats. The potential for LSE therefore exists.

i) The presence of manmade structures such as scour protection and foundations may result in localised changes in hydrodynamics and wave regimes. As a secondary affect the sediment transport pathways may be altered. Potential for overlap between intertidal habitats and relevant range of effect. Any potential change in physical processes is likely to be localised and small scale. The potential for LSE exists in relation to the habitats of turnstone only. Species included in the wetland invertebrate assemblage are not likely to be present in intertidal habitats and therefore there is no potential for LSE.

j) Construction and decommissioning works in Pegwell Bay Country Park could lead to the displacement of recreational visitors to more sensitive areas of the coast, which could in turn cause disturbance to ruddy turnstone. The effect is not relevant to the wetland invertebrate assemblage. The potential for LSE exists for ruddy turnstone.

k) Given the proposed construction methods for the relevant section of the cable route, no potential for LSE for the habitat of designated species.

Name of European site: Thanet Coast & Sandwich Bay Ramsar																																		
Distance to TEOW: 0 km																																		
European Site Feature	**Likely Effects of TEOW (in combination)**																																	
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Onshore noise disturbance**			**Spread of INNS**			**Onshore visual disturbance**			**Physical processes**			**Displacement of recreational users**			**EMF**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Wetland invertebrate assemblage																																		
Ruddy turnstone	Xa		**Xa**		Xb			Xc		Xd	Xd	Xd	Xe	Xe	Xe	✓f	✓f	✓f	X g		Xg	Xh	Xh	Xh		Xi		✓j		✓j		X k	

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE on the wetland invertebrate assemblage in combination with Thanet Extension.

a) No other plans or projects have been identified that could contribute to LSE in terms of temporary loss or disturbance to the habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension during construction and decommissioning.

b) No other plans or projects have been identified that could contribute to LSE in terms of permanent loss of habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

c) No other plans or projects have been identified that could contribute to LSE in terms of temporary habitat loss or disturbance during O&M to habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

d) No other plans or projects have been identified that could contribute to LSE in terms of increased suspended sediment and deposition on the habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

e) No other plans or projects have been identified that could contribute to LSE in terms of accidental pollution of the habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

f) Noise disturbance could contribute to LSE in combination with the Discovery Park biomass CHP plant.

g) No other plans or projects have been identified that could contribute to LSE in terms of the spread of INNS into the habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

h) No other plans or projects have been identified that could contribute to LSE in terms of visual disturbance to ruddy turnstone in combination with Thanet Extension.

i) No other plans or projects have been identified that could contribute to LSE in terms of changes to physical processes affecting the habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

j) Possible displacement of visitors from Pegwell Bay Country Park during construction and decommissioning could contribute to LSE in combination with the Residential development at Discovery Park, Sandwich, which may increase the number of visitors to Pegwell Bay Country Park.

No other plans or projects have been identified that could contribute to LSE in terms of EMF affecting the habitats of the Thanet Coast and Sandwich Bay Ramsar in combination with Thanet Extension.

Matrix 5: Stodmarsh SPA

Name of European site: Stodmarsh SPA						
Distance to TEOW: 9 km						
European Site Feature	**Likely Effects of TEOW (alone)**					
	Onshore noise disturbance			**Onshore visual disturbance**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**
Great bittern (Non-breeding)	Xa	Xa	Xa	Xb	Xb	Xb
Hen harrier (Non-breeding)	Xa	Xa	Xa	Xb	Xb	Xb
Gadwall (Breeding)	Xa	Xa	Xa	Xb	Xb	Xb
Gadwall (Non-breeding)	Xa	Xa	Xa	Xb	Xb	Xb
Northern shoveler (Non-breeding)	Xa	Xa	Xa	Xb	Xb	Xb
Waterbird assemblage	Xa	Xa	Xa	Xb	Xb	Xb
Breeding bird assemblage	Xa	Xa	Xa	Xb	Xb	Xb

Evidence supporting conclusions:

a) The SPA lies approximately 9 km from the onshore extent of the Thanet Extension. Given the distance between this site and the proposed development, the lack of connectivity i.e. no functionally connected preferred foraging or breeding habitats within the Order limits or within any Zone of Influence (ZoI), none of the qualifying features would be susceptible to direct or indirect effects resulting from disturbance.

b) The SPA lies approximately 9 km from the onshore extent of the Thanet Extension. Given the distance between this site and the proposed development, the lack of connectivity i.e. no functionally connected preferred foraging or breeding habitats within the Order limits or within any ZoI, none of the qualifying features would be susceptible to direct or indirect effects resulting from disturbance.

Name of European site: Stodmarsh SPA						
Distance to TEOW: 9 km						
European Site Feature	**Likely Effects of TEOW (in combination)**					
	Onshore noise disturbance			**Onshore visual disturbance**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**
Great bittern (Non-breeding)						
Hen harrier (Non-breeding)						
Gadwall (Breeding)						
Gadwall (Non-breeding)						
Northern shoveler (Non-breeding)						
Waterbird assemblage						
Breeding bird assemblage						

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 6: Stodmarsh Ramsar

Name of European site: Stodmarsh Ramsar						
Distance to TEOW: 9 km						
European Site Feature	**Likely Effects of TEOW (alone)**					
	Onshore noise disturbance			**Onshore visual disturbance**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**
Six British Red Data Book wetland invertebrates	**Xa**	**Xa**	**Xa**	**Xa**	**Xa**	**Xa**
Two nationally rare plants	**Xa**	**Xa**	**Xa**	**Xa**	**Xa**	**Xa**
Five nationally scarce species	**Xa**	**Xa**	**Xa**	**Xa**	**Xa**	**Xa**
A diverse assemblage of rare wetland birds (gadwall – breeding; gadwall – non-breeding; Great Bittern – non-breeding; Northern Shoveler- non-breeding and hen harrier – non-breeding)	Xa	Xa	Xa	Xa	Xa	Xa

Evidence supporting conclusions:

a) The Ramsar lies approximately 9 km from the onshore extent of the Thanet Extension. Given the distance between this site and the proposed development, the lack of connectivity i.e. no functionally connected preferred foraging or breeding habitats within the Order limits or within any Zone of Influence (ZoI), none of the qualifying features would be susceptible to direct or indirect effects resulting from disturbance.

Name of European site: Stodmarsh Ramsar						
Distance to TEOW: 9 km						
European Site Feature	**Likely Effects of TEOW (in combination)**					
	Onshore noise disturbance			**Onshore visual disturbance**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**
Six British Red Data Book wetland invertebrates						
Two nationally rare plants						
Five nationally scarce species						
A diverse assemblage of rare wetland birds (gadwall – breeding; gadwall – non-breeding; Great Bittern – non-breeding; Northern Shoveler- non-breeding and hen harrier – non-breeding)						

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 7: Stodmarsh SAC

Name of European site: Stodmarsh SAC						
Distance to TEOW: 9 km						
European Site Feature	**Likely Effects of TEOW (alone)**					
	Onshore noise disturbance			**Onshore visual disturbance**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**
Desmoulin`s whorl snail	Xa	Xa	Xa	Xb	Xb	Xb

Evidence supporting conclusions:

a) Designated species not considered sensitive to noise disturbance.

b) Designated species not considered sensitive to visual disturbance.

Name of European site: Stodmarsh SAC						
Distance to TEOW: 9 km						
European Site Feature	**Likely Effects of TEOW (in combination)**					
	Onshore noise disturbance			**Onshore visual disturbance**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**
Desmoulin`s whorl snail						

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 8: Transboundary site for diadromous fish: Vlaamse Banken

Name of European site: Transboundary site for diadromous fish - Vlaamse Banken																								
Distance to TEOW: 39 km																								
European Site Feature	**Likely Effects of TEOW (alone)**																							
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Underwater noise**			**Hard substrate**			**Physical processes**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Twait shad	Xa		Xa		Xb			Xc		Xd	Xd	Xd	Xe	Xe	Xe	Xf	Xf	Xf		Xg			Xh	
River lamprey	Xa		Xa		Xb			Xc		Xd	Xd	Xd	Xe	Xe	Xe	Xf	Xf	Xf		Xg			Xh	
Sea lamprey	Xa		Xa		Xb			Xc		Xd	Xd	Xd	Xe	Xe	Xe	Xf	Xf	Xf		Xg			Xh	

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the Vlaamse Banken site are screened in for potential LSE (note that harbour seals and grey seals are considered separately below). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) Thanet Extension lies some 39km from the Vlaamse Banken. None of the cited species have occurred in site specific surveys. Given the extent of physical effects associated with the construction and decommissioning of the project it is considered that the potential for a significant effect to the habitats of the migratory fish is negligible. There is therefore no LSE resulting from temporary loss and disturbance of habitat within the site during the construction and decommissioning phase.

b) Thanet Extension lies some 39km from the Vlaamse Banken. None of the cited species have occurred in site specific surveys. Given the extent of long term physical loss of habitat (i.e. within the project boundary) associated with the operation of the project it is considered that the potential for a significant effect to the habitats of the migratory fish is negligible. There is therefore no LSE resulting from permanent loss of habitat within the site during the operation phase.

c) Thanet Extension lies some 39km from the Vlaamse Banken. None of the cited species have occurred in site specific surveys. Given the extent of physical effects associated with the operation of the project it is considered that the potential for a significant effect to the habitats of the migratory fish is negligible. There is therefore no LSE resulting from temporary loss and disturbance of habitat within the site during the operation phase.

d) Thanet Extension lies some 39km from the Vlaamse Banken. None of the cited species have occurred in site specific surveys. Given the extent of a potential increase in suspended sediment (up to 14 km) it is considered that the potential for a significant effect to migratory fish is negligible.

e) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

f) Thanet Extension lies some 39km from the Vlaamse Banken. None of the cited species have occurred in site specific surveys. Given the distance between the designated site and potential source of underwater noise, it is considered that the potential for a significant effect to migratory fish is negligible.

g) Thanet Extension lies some 39km from the Vlaamse Banken. None of the cited species have occurred in site specific surveys. Given the localised nature the additional hard structures, it is considered that the potential for a significant effect to the SAC is negligible.

h) The presence of manmade structures such as scour protection and foundations may result in localised changes in hydrodynamics and wave regimes. As a secondary affect the sediment transport pathways may be altered. Any potential change in physical processes is likely to be localised and small scale and it is considered that the potential for a significant effect to the SAC is negligible.

Name of European site: Transboundary site for diadromous fish - Vlaamse Banken																								
Distance to TEOW: 39 km																								
European Site Feature	**Likely Effects of TEOW (in combination)**																							
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Underwater noise**			**Hard substrate**			**Physical processes**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Twait shad																								
River lamprey																								
Sea lamprey																								

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the Vlaamse Banken site are screened in for potential LSE (note that harbour seals and grey seals are considered separately below). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 9: Southern North Sea cSAC

Name of European site: Southern North Sea cSAC																		
Distance to TEOW: 0 km																		
European Site Feature	**Likely Effects of TEOW (alone)**																	
	Permanent habitat loss			**Increased suspended sediment & deposition**			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise		Xa			Xb		Xc	Xc	Xc	✓d	Xe	✓d	Xf	Xf	Xf	Xg	Xg	Xg

Evidence supporting conclusions:

a) The cSAC extends for some 36,951km^2, with the combined habitat loss of seabed habitat (including WTG foundations, all cable protection, all cable crossings) totals approximately 0.68km^2, not all of which will fall within the cSAC. This equates to approximately 0.001% of the cSAC. The potential for a significant effect is considered to be negligible and therefore no LSE.

b) Harbour porpoise occur naturally in turbid environments, with the potential level, extent and duration of any increase in suspended sediment (and subsequent deposition) being negligible as regards the ecology of the species and the extent of the cSAC. Therefore no LSE.

c) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

d) Thanet Extension is located within 0 km of the cSAC. There is potential for a LSE.

e) Regarding operational and maintenance vessel traffic noise, Thanet Extension is located in an extremely busy shipping area, with the increase in shipping for the project being negligible in comparison. No adverse effect has been identified and no LSE concluded.

f) Given the high vessel density surrounding the project boundary the increase in vessel movements during operation and maintenance is not considered significant. No adverse effect has been identified and no LSE concluded.

g) Given large foraging ranges of harbour porpoise and conclusions of the ES regarding fish and benthic ecology (ie not significant) it is not likely to cause long term detrimental effects and no LSE concluded.

Name of European site: Southern North Sea cSAC																		
Distance to TEOW: 0 km																		
European Site Feature	**Likely Effects of TEOW (in combination)**																	
	Permanent habitat loss			**Increased suspended sediment & deposition**			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise										✓a		✓a						

Evidence supporting conclusions:

a) Potential exists for an in combination effect resulting from underwater noise

Matrix 10: Transboundary sites for harbour porpoise (Bancs des Flandres, Ridens et dunes hydrauliques and Récifs et Caps Gris Nez Blanc Nez)

Name of European site: Transboundary sites for harbour porpoise (Bancs des Flandres, Ridens et dunes hydrauliques and Récifs et Caps Gris Nez Blanc Nez)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (alone)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise		Xa		Xb	Xb	Xb	✓c	Xd	✓c	Xe	Xe	Xe	Xf	Xf	Xf

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the transboundary sites are screened in for potential LSE for harbour porpoise (note that harbour seals and grey seals are considered separately below). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) Harbour porpoise occur naturally in turbid environments, with the potential level, extent and duration of any increase in suspended sediment (and subsequent deposition) being negligible as regards the ecology of the species and the extent of the available habitat. Therefore no LSE.

b) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

c) Thanet Extension is located within 23 km of the Bancs des Flandres SCI. There is potential for a LSE in relation to that designated site only.

d) Regarding operational and maintenance vessel traffic noise, Thanet Extension is located in an extremely busy shipping area, with the increase in shipping for the project being negligible in comparison. No adverse effect has been identified and no LSE concluded.

e) Given the high vessel density surrounding the project boundary the increase in vessel movements during operation and maintenance is not considered significant. No adverse effect has been identified and no LSE concluded.

f) Given large foraging ranges of harbour porpoise and conclusions of the ES regarding fish and benthic ecology (ie not significant) it is not likely to cause long term detrimental effects and no LSE concluded.

Name of European site: Transboundary sites for harbour porpoise (Bancs des Flandres, Ridens et dunes hydrauliques and Récifs et Caps Gris Nez Blanc Nez)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (in combination)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise															

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the transboundary sites are screened in for potential LSE for harbour porpoise (note that harbour seals and grey seals are considered separately below). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to LSE in combination with Thanet Extension and therefore no LSE applies in combination.

Matrix 11: Transboundary sites for harbour seal (Bancs des Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques)

Name of European site: Transboundary sites for harbour seal (Bancs des Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (alone)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour seal	Xa		Xa	Xb	Xb	Xb	✓c	Xd	✓c	Xe	Xe	Xe	Xf	Xf	Xf

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the transboundary sites are screened in for potential LSE for harbour seal (note that harbour porpoise and diadromous fish are considered separately above, with grey seals considered separately below). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) Marine mammals occur naturally in turbid environments, with the potential level, extent and duration of any increase in suspended sediment (and subsequent deposition) being negligible as regards the ecology of the species and the proximity of the designated sites.

b) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

c) Thanet Extension is located within 23 km of the closest SCI. There is potential for a LSE.

d) Regarding operational and maintenance vessel traffic noise, Thanet Extension is located in an extremely busy shipping area, with the increase in shipping for the project being negligible in comparison. No adverse effect has been identified and no LSE concluded.

e) Given the high vessel density surrounding the project boundary the increase in vessel movements during operation and maintenance is not considered significant. No adverse effect has been identified and no LSE concluded.

f) Given large foraging ranges of harbour seal and conclusions of the ES regarding fish and benthic ecology (ie not significant) it is not likely to cause long term detrimental effects and no LSE concluded.

Name of European site: Transboundary sites for harbour seal (Bancs des Flandres SCI, Vlakte van de Raan, Voordelta, Vlaamse Banken)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (in combination)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour seal							✓a		✓a						

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the transboundary sites are screened in for potential LSE for harbour seal (note that harbour porpoise and diadromous fish are considered separately above, with grey seals considered separately below). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) Potential exists for an in combination effect resulting from underwater noise

Matrix 12: Transboundary sites for grey seal (Bancs de Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)

Name of European site: Transboundary sites for grey seal (Bancs de Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (alone)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Grey seal	Xa		Xa	Xb	Xb	Xb	✓c	Xd	✓c	Xe	Xe	Xe	Xf	Xf	Xf

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the transboundary sites are screened in for potential LSE for grey seal (note that harbour porpoise, diadromous fish and harbour seal are considered separately above). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) Marine mammals occur naturally in turbid environments, with the potential level, extent and duration of any increase in suspended sediment (and subsequent deposition) being negligible as regards the ecology of the species and the proximity of the designated sites.

b) The project includes plans, prepared in consultation with Natural England (among others) and provided for within the DCO, which provide sufficient certainty that the risk of accidental pollution at all stages of the project is negligible and that measures will be in place to control and minimise such risk. Therefore no LSE applies for accidental pollution.

c) Thanet Extension is located within 23 km of the closest SCI. There is potential for a LSE.

d) Regarding operational and maintenance vessel traffic noise, Thanet Extension is located in an extremely busy shipping area, with the increase in shipping for the project being negligible in comparison. No adverse effect has been identified and no LSE concluded.

e) Given the high vessel density surrounding the project boundary the increase in vessel movements during operation and maintenance is not considered significant. No adverse effect has been identified and no LSE concluded.

f) Given large foraging ranges of grey seal and conclusions of the ES regarding fish and benthic ecology (ie not significant) it is not likely to cause long term detrimental effects and no LSE concluded.

Name of European site: Transboundary sites for grey seal (Bancs de Flandres SCI, Vlakte van de Raan, Voordelta, Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (in combination)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Grey seal							Xa		Xa						

Note – as identified within the RIAA (document Ref 5.2) not all features listed as part of the transboundary sites are screened in for potential LSE for grey seal (note that harbour porpoise, diadromous fish and harbour seal are considered separately above). All other features remain screened out of LSE and are therefore not included here.

Evidence supporting conclusions:

a) Potential exists for an in combination effect resulting from underwater noise

Matrix 13: Transboundary sites for offshore birds: Cap Gris Nez SPA

Name of European site: Cap Gris Nez SPA (transboundary sites for offshore birds)												
Distance to TEOW: 43 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Non-breeding assemblage of seabirds	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of seaducks	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of divers	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of grebes	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of terns	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of geese	**Xb**	**Xb**	**Xb**	**Xb**	**Xb**	**Xb**		**Xb**			**Xb**	
Non-breeding assemblage of waders	**Xb**	**Xb**	**Xb**	**Xb**	**Xb**	**Xb**		**Xb**			**Xb**	

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) An assemblage dependent on terrestrial and intertidal habitats that occur at too far a distance from the development to be affected (RIAA Section 7 and Table 7.3). Therefore no LSE applies to the assemblage with regards to change in prey, disturbance and displacement, collision risk and barrier effect.

c) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (RIAA Section 7 and Table 7.3). Therefore no LSE applies to disturbance and displacement.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their the migratory pathways that take them along the French and Belgian coasts (flying through rather than across the Channel) and not across the proposed Thanet Extension and/or their occurrence in very low numbers at the site (RIAA Section 7 and Table 7.3). Therefore no LSE applies to collision risk.

e) Barrier effect as a result of the presence of the WTGs does not have the potential to affect birds as a consequence of their the migratory pathways that take them along the French and Belgian coasts (flying through rather than across the Channel) and not across the proposed Thanet Extension and/or their occurrence in very low numbers at the site (RIAA Section 7 and Table 7.3). Therefore no LSE applies to barrier effect.

Name of European site: Cap Gris Nez SPA (transboundary sites for offshore birds)									
Distance to TEOW: 43 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Non-breeding assemblage of seabirds	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of seaducks	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of divers	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of grebes	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of terns	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of geese	**Xb**		**Xb**	**Xb**	**Xb**	**Xb**		**Xb**	
Non-breeding assemblage of waders	**Xb**		**Xb**	**Xb**	**Xb**	**Xb**		**Xb**	

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) An assemblage dependent on terrestrial and intertidal habitats that occur at too far a distance from the development to be affected (RIAA Section 7 and Table 7.3). Therefore no LSE applies to the assemblage with regards to OC disturbance and displacement, OWF disturbance and displacement and collision risk.

c) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their the migratory pathways that take them along the French and Belgian coasts (flying through rather than across the Channel) and not across the proposed Thanet Extension and/or their occurrence in very low numbers at the site (RIAA Section 7 and Table 7.3). Therefore LSE does not apply to collision risk in-combination.

Matrix 14: Transboundary sites for offshore birds: Bancs des Flandres SPA

Name of European site: Bancs des Flandres SPA (transboundary sites for offshore birds)												
Distance to TEOW: 23 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Breeding little tern	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of seabirds	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of seaducks	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of divers	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of grebes	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of terns	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xe**	
Non-breeding assemblage of geese	**Xb**	**Xb**	**Xb**	**Xb**	**Xb**	**Xb**		**Xb**			**Xb**	

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) An assemblage dependent on terrestrial and intertidal habitats that occur at too far a distance from the development to be affected (RIAA Section 7 and Table 7.3). Therefore no LSE applies to the assemblage with regards to OC disturbance and displacement, OWF disturbance and displacement and collision risk.

c) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (RIAA Section 7 and Table 7.3). Therefore no LSE applies to disturbance and displacement.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their the migratory pathways that take them along the French and Belgian coasts (flying through rather than across the Channel) and not across the proposed Thanet Extension and/or their occurrence in very low numbers at the site (RIAA Section 7 and Table 7.3). Therefore no LSE applies to collision risk.

e) Barrier effect as a result of the presence of the WTGs does not have the potential to affect birds as a consequence of their the migratory pathways that take them along the French and Belgian coasts (flying through rather than across the Channel) and not across the proposed Thanet Extension and/or their occurrence in very low numbers at the site (RIAA Section 7 and Table 7.3). Therefore no LSE applies to barrier effect.

Name of European site: Bancs des Flandres SPA (transboundary sites for offshore birds)									
Distance to TEOW: 23 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Breeding little tern	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of seabirds	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of seaducks	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of divers	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of grebes	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of terns	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xd**	
Non-breeding assemblage of geese	**Xb**		**Xb**	**Xb**	**Xb**	**Xb**		**Xb**	

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) An assemblage dependent on terrestrial and intertidal habitats that occur at too far a distance from the development to be affected (RIAA Section 7 and Table 7.3). Therefore no LSE applies to the assemblage with regards to OC disturbance and displacement, OWF disturbance and displacement and collision risk.

c) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their the migratory pathways that take them along the French and Belgian coasts (flying through rather than across the Channel) and not across the proposed Thanet Extension and/or their occurrence in very low numbers at the site (RIAA Section 7 and Table 7.3). Therefore LSE does not apply to collision risk in-combination.

Matrix 15: Outer Thames Estuary SPA

Name of European site: Outer Thames Estuary SPA												
Distance to TEOW: 4 km												
European Site Feature	Likely Effects of TEOW (alone)											
	Prey			Disturbance & displacement			Collision risk			Barrier effect		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D	C	O	D
Red-throated diver	Xa	Xa	Xa	✓b	✓b	✓b		Xd			Xf	
Common tern	Xa	Xa	Xa	Xc	Xc	Xc		✓e			✓g	
Little tern	Xa	Xa	Xa	Xc	Xc	Xc		✓e			✓g	

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance and consequent displacement from the site and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to disturbance and displacement.

c) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour and avoidance of the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

e) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

f) Barrier effect as a result of the offshore works does not have the potential to affect birds as a consequence of the WTGs being located all to the south and east of the SPA and their migratory pathways that are not affected by the short deviation required to fly around the WTGs (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

g) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

Name of European site: Outer Thames Estuary SPA									
Distance to TEOW: 4 km									
European Site Feature	Likely Effects of TEOW (in combination)								
	OC disturbance & displacement			OWF disturbance & displacement			OWF Collision risk		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D
Red-throated diver	✓a		✓a	✓c	✓c	✓c		Xe	
Common tern	Xb		Xb	Xd	Xd	Xd		Xe	
Little tern	Xb		Xb	Xd	Xd	Xd		Xe	

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

c) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

d) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

e) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

Matrix 16: Foulness (Mid-Essex Coast Phase 5) SPA

Name of European site: Foulness (Mid-Essex Coast Phase 5) SPA												
Distance to TEOW: 37 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Bar-tailed godwit	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Common tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Dark-bellied brent goose	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Grey plover	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Hen harrier	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Knot	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Little tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Oystercatcher	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Redshank	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Ringed plover	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Sandwich tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓d**			**✓f**	
Wintering waterbird assemblage	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	

The wintering waterbird assemblage has the following species named on the Natura 2000 data form (http://jncc.defra.gov.uk/pdf/SPA/UK9009246.pdf): Avocet, bar-tailed godwit, dark-bellied brent goose, dunlin, grey plover, oystercatcher and redshank.

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

d) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

e) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs and their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

f) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

Name of European site: Foulness (Mid-Essex Coast Phase 5) SPA									
Distance to TEOW: 37 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Bar-tailed godwit	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Common tern	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Dark-bellied brent goose	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Grey plover	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Hen harrier	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Knot	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Little tern	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Oystercatcher	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Redshank	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Ringed plover	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Sandwich tern	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Wintering waterbird assemblage	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	

The wintering waterbird assemblage has the following species named on the Natura 2000 data form (http://jncc.defra.gov.uk/pdf/SPA/UK9009246.pdf): Avocet, bar-tailed godwit, dark-bellied brent goose, dunlin, grey plover, oystercatcher and redshank.

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

c) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

Matrix 17: Alde-Ore Estuary SPA

Name of European site: Alde-Ore Estuary SPA												
Distance to TEOW: 69 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Lesser black-backed gull	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓d**			**✓f**	
Little tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Marsh harrier	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Redshank	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Ruff	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Sandwich tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

d) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

e) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs and their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

f) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

Name of European site: Alde-Ore Estuary SPA									
Distance to TEOW: 69 km									
European Site Feature	Likely Effects of TEOW (in combination)								
	OC disturbance & displacement			OWF disturbance & displacement			OWF Collision risk		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D
Avocet	Xa		Xa	Xb	Xb	Xb		Xc	
Lesser black-backed gull	Xa		Xa	Xb	Xb	Xb		✓d	
Little tern	Xa		Xa	Xb	Xb	Xb		Xc	
Marsh harrier	Xa		Xa	Xb	Xb	Xb		Xc	
Redshank	Xa		Xa	Xb	Xb	Xb		Xc	
Ruff	Xa		Xa	Xb	Xb	Xb		Xc	
Sandwich tern	Xa		Xa	Xb	Xb	Xb		Xc	

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

c) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

d) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE applies to collision risk in-combination.

Matrix 18: Alde-Ore Estuary Ramsar

Name of European site: Alde-Ore Estuary Ramsar												
Distance to TEOW: 69 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Lesser black-backed gull	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓d**			**✓f**	
Redshank	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	
Breeding wetland bird assemblage	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓d**			**✓f**	
Wintering wetland bird assemblage	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xc**			**Xe**	

The breeding waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Lesser black-backed gull, little tern, marsh harrier, Mediterranean gull and Sandwich tern.

The wintering waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Avocet, white-fronted goose, pintail, shelduck, shoveler, teal, redshank and wigeon.

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

d) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

e) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs and their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

f) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

Name of European site: Alde-Ore Estuary Ramsar									
Distance to TEOW: 69 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Lesser black-backed gull	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**✓d**	
Redshank	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	
Breeding wetland bird assemblage	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**✓d**	
Wintering wetland bird assemblage	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**Xc**	

The breeding waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Lesser black-backed gull, little tern, marsh harrier, Mediterranean gull and Sandwich tern.

The wintering waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Avocet, white-fronted goose, pintail, shelduck, shoveler, teal, redshank and wigeon.

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

c) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

d) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE applies to collision risk in-combination.

Matrix 19: Flamborough & Filey Coast pSPA

Name of European site: Flamborough & Filey Coast pSPA												
Distance to TEOW: 312 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Gannet	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓d**			**✓f**	
Kittiwake	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓d**			**✓f**	
Guillemot	**Xa**	**Xa**	**Xa**	**✓c**	**✓c**	**✓c**		**Xe**			**Xg**	
Razorbill	**Xa**	**Xa**	**Xa**	**✓c**	**✓c**	**✓c**		**Xe**			**Xg**	
Breeding seabird assemblage	Xa	Xa	Xa	**✓c**	**✓c**	**✓c**		**✓d**			**✓f**	

The breeding seabird assemblage consists of the species individually named above plus fulmar.

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Disturbance and consequent displacement from the site and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to disturbance and displacement.

d) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

e) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

f) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

g) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

Name of European site: Flamborough & Filey Coast pSPA									
Distance to TEOW: 312 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Gannet	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**✓e**	
Guillemot	**✓b**		**✓b**	**✓d**	**✓d**	**✓d**		**Xf**	
Kittiwake	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**✓e**	
Razorbill	**✓b**		**✓b**	**✓d**	**✓d**	**✓d**		**Xf**	
Breeding seabird assemblage	**✓b**		**✓b**	**✓d**	**✓d**	**✓d**		**✓e**	

The breeding seabird assemblage consists of the species individually named above plus fulmar.

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the project and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

c) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

d) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

e) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE applies to collision risk in-combination.

f) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

Matrix 20: Flamborough Head & Bempton Cliffs SPA

Name of European site: Flamborough Head & Bempton Cliffs SPA												
Distance to TEOW: 322 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Kittiwake	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**✓c**			**✓d**	

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

d) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

Name of European site: Flamborough Head & Bempton Cliffs SPA									
Distance to TEOW: 322 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Kittiwake	**Xa**		**Xa**	**Xb**	**Xb**	**Xb**		**✓c**	

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

c) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE applies to collision risk in-combination.

Matrix 21: Northumberland Marine SPA

Name of European site: Northumberland Marine SPA												
Distance to TEOW: 458 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xf**			**Xg**	
Common tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xf**			**Xg**	
Guillemot	**Xa**	**Xa**	**Xa**	**✓c**	**✓c**	**✓c**		**Xf**			**Xg**	
Little tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xf**			**Xg**	
Puffin	**Xa**	**Xa**	**Xa**	**Xd**	**Xd**	**Xd**		**Xf**			**Xg**	
Roseate tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xf**			**Xg**	
Sandwich tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xf**			**Xg**	
Breeding seabird assemblage	**Xa**	**Xa**	**Xa**	**✓e**	**✓e**	**✓e**		**Xf**			**Xg**	

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake and black-headed gull.

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Disturbance and consequent displacement from the site and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to disturbance and displacement.

d) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

e) Disturbance and consequent displacement from the site and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to disturbance and displacement.

f) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

g) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs and, for some species, their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

Name of European site: Northumberland Marine SPA									
Distance to TEOW: 458 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xe**	
Common tern	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xe**	
Guillemot	**✓b**		**✓b**	**✓d**	**✓d**	**✓d**		**Xe**	
Little tern	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xe**	
Puffin	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xe**	
Roseate tern	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xe**	
Sandwich tern	**Xa**		**Xa**	**Xc**	**Xc**	**Xc**		**Xe**	
Breeding seabird assemblage	**✓b**		**✓b**	**✓d**	**✓d**	**✓d**		**Xe**	

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake and black-headed gull.

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the project and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

c) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

d) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

e) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

Matrix 22: Farne Islands SPA

Name of European site: Farne Islands SPA												
Distance to TEOW: 512 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xd**			**Xe**	
Common tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xd**			**Xe**	
Guillemot	**Xa**	**Xa**	**Xa**	**✓c**	**✓c**	**✓c**		**Xd**			**Xe**	
Sandwich tern	**Xa**	**Xa**	**Xa**	**Xb**	**Xb**	**Xb**		**Xd**			**Xe**	
Breeding seabird assemblage	**Xa**	**Xa**	**Xa**	**✓c**	**✓c**	**✓c**		**Xd**			**Xe**	

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake, puffin and roseate tern.

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

c) Disturbance and consequent displacement from the site and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to disturbance and displacement.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

e) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs and, for some species, their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

Name of European site: Farne Islands SPA									
Distance to TEOW: 512 km									
European Site Feature	Likely Effects of TEOW (in combination)								
	OC disturbance & displacement			OWF disturbance & displacement			OWF Collision risk		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D
Arctic tern	Xa		Xa	Xc	Xc	Xc		Xe	
Common tern	Xa		Xa	Xc	Xc	Xc		Xe	
Guillemot	✓b		✓b	✓d	✓d	✓d		Xe	
Sandwich tern	Xa		Xa	Xc	Xc	Xc		Xe	
Breeding seabird assemblage	✓b		✓b	✓d	✓d	✓d		Xe	

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake, puffin and roseate tern.

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the project and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

c) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

d) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

e) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

Matrix 23: St Abb's Head to Fast Castle SPA

Name of European site: St Abb's Head to Fast Castle SPA												
Distance to TEOW: 557 km												
European Site Feature	**Likely Effects of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Guillemot	**Xa**	**Xa**	**Xa**	**✓b**	**✓b**	**✓b**		**Xd**			**Xf**	
Herring gull	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xf**	
Kittiwake	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**✓e**			**✓g**	
Razorbill	**Xa**	**Xa**	**Xa**	**✓b**	**✓b**	**✓b**		**Xd**			**Xf**	
Shag	**Xa**	**Xa**	**Xa**	**Xc**	**Xc**	**Xc**		**Xd**			**Xf**	
Breeding seabird assemblage	Xa	Xa	Xa	**✓b**	**✓b**	**✓b**		**✓e**			**✓g**	

The breeding seabird assemblage consists of the species individually named above.

Evidence supporting conclusions:

a) Change in prey availability and behaviour as a result of the offshore works has not been identified as likely to occur at a scale or manner as to affect these interest features. Given the short term and temporary nature of any effect and the assessment of fish and benthic ecology, the potential for an effect is considered negligible (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to change in prey.

b) Disturbance and consequent displacement from the site and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to disturbance and displacement.

c) Disturbance & displacement as a result of the offshore works does not have the potential to disturb, and as a consequence, displace birds from the site or possibly from a buffer around it and result in indirect habitat loss (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to disturbance & displacement.

d) Collision risk as a result of the operation of the WTGs does not have the potential to affect birds as a consequence of their flight behaviour or avoidance of the site or occurrence in very low numbers at the site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to collision risk.

e) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of collision risk assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to collision risk.

f) Barrier effect as a result of the offshore works does not have the potential to affect birds as their migratory pathways are not affected by the short deviation required to fly around the WTGs and, for some species, their occurrence in no or very low numbers at the offshore site (HRA Screening Report Section 7.4 and Table 8.1). Therefore no LSE applies to barrier effect.

g) Barrier effect as a result of the offshore works does have the potential to affect birds based on the experience of assessments carried out for other OWF developments (HRA Screening Report Section 7.4 and Table 8.1). Therefore LSE applies to barrier effect.

Name of European site: St Abb's Head to Fast Castle SPA									
Distance to TEOW: 557 km									
European Site Feature	**Likely Effects of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Guillemot	**✓a**		**✓a**	**✓c**	**✓c**	**✓c**		**Xe**	
Herring gull	**Xb**		**Xb**	**Xd**	**Xd**	**Xd**		**Xe**	
Kittiwake	**Xb**		**Xb**	**Xd**	**Xd**	**Xd**		**✓f**	
Razorbill	**✓a**		**✓a**	**✓c**	**✓c**	**✓c**		**Xe**	
Shag	**Xb**		**Xb**	**Xd**	**Xd**	**Xd**		**Xe**	
Breeding seabird assemblage	**✓a**		**✓a**	**✓c**	**✓c**	**✓c**		**✓f**	

The breeding seabird assemblage consists of the species individually named above.

Evidence supporting conclusions:

a) Disturbance and consequent displacement from the project and possibly a buffer around it has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

b) Disturbance and consequent displacement from the project and possibly a buffer around it does not have the potential to affect these birds as they are tolerant of, or attracted to, human activity (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

c) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them has the potential to result in indirect habitat loss through a reduction in the area available to birds for feeding, resting and moulting (RIAA Section 12 and Table 12.2). Therefore LSE applies to disturbance and displacement in-combination.

d) Disturbance and consequent displacement from the OWF sites and possibly a buffer around them does not have the potential to affect these birds as they are either tolerant of, or attracted to, human activity or do not occur at the site (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to disturbance and displacement in-combination.

e) Collision risk as a result of the operation of the WTGs in-combination with other OWFs does not have the potential to affect these birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE does not apply to collision risk in-combination.

f) Collision risk as a result of the operation of the WTGs does have the potential to affect birds based on the experience of in-combination collision risk assessments carried out for other OWF developments (RIAA Section 12 and Table 12.2). Therefore LSE applies to collision risk in-combination.

Report to Inform the Appropriate Assessment: Appendix 2

Integrity Matrix – Potential Impacts

Potential impacts upon the European site(s)[1] which are considered within the submitted RIAA report (Doc. Ref. 5.2) are provided in the table below. Impacts have been grouped where appropriate for ease of presentation.

Impacts considered within the integrity matrices

Designation	Impacts in submission information	Presented in screening matrices as
Thanet Coast SAC	Alone (in relation to the designated feature 'reefs' only): Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Change in physical processes EMF	Alone: Temporary habitat loss & disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Physical processes EMF
	In-combination: None identified	No LSE in combination
Margate and Long Sands SAC	Alone: Increased suspended sediment and subsequent deposition Change in physical processes	Alone: Increased suspended sediment & deposition Physical processes
	In-combination: None identified	No LSE in combination
Thanet Coast & Sandwich Bay SPA	Alone (non-breeding ruddy turnstone and European golden plover only) Temporary direct habitat loss and disturbance Temporary habitat disturbance Increased suspended sediment and subsequent deposition Change to physical processes Possible displacement of recreational users at Pegwell Bay Country Park	Alone Temporary habitat loss & disturbance Temporary habitat disturbance Increased suspended sediment & deposition Physical processes Displacement of recreational users

[1] As defined in Advice Note 10.

Designation	Impacts in submission information	Presented in screening matrices as
	In-combination: None identified	No LSE in combination
Thanet Coast & Sandwich Bay Ramsar	Alone: Temporary direct habitat loss and disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment and subsequent deposition Change in physical processes Possible displacement of recreational users at Pegwell Bay Country Park	Alone: Temporary habitat loss & disturbance Permanent habitat loss Temporary habitat disturbance Increased suspended sediment & deposition Physical processes Displacement of recreational users
	In-combination: None identified	No LSE in combination
Southern North Sea cSAC	Alone Increase in underwater noise	Alone Underwater noise
	In-combination: Increase in underwater noise	In combination Underwater noise
Transboundary Harbour Porpoise sites Bancs des Flandres	Alone Increase in underwater noise	Alone Underwater noise
Transboundary Harbour Porpoise sites No sites screened in	In-combination: None identified	No LSE in combination
Transboundary Harbour seal sites Bancs des Flandres SCI Baie de Canche et couloir des trois estuaires Vlakte van de Raan Voordelta Estuaires et littoral picards (baies de Somme et d'Authie) Recifs Gris-Nez Blanc-Nez Vlaamse Banken Ridens et dunes hydrauliques	Alone Increase in underwater noise	Alone Underwater noise
Transboundary Harbour seal sites Bancs de Flandres SCI Vlakte van de Raan Voordelta Vlaamse Banken	In combination Increase in underwater noise	In combination Underwater noise

Designation	Impacts in submission information	Presented in screening matrices as
Transboundary grey seal sites Bancs de Flandres SCI Baie de Canche et couloir des trois estuaires Vlakte van de Raan Voordelta Estuaires et littoral picards (baies de Somme et d'Authie) Recifs Gris-Nez Blanc-Nez Vlaamse Banken Ridens et dunes hydrauliques SBZ1 SBZ2 SBZ3	Alone Increase in underwater noise	Alone Underwater noise
Transboundary grey seal sites Bancs de Flandres SCI Vlakte van de Raan Voordelta Recifs Gris-Nez Blanc-Nez Vlaamse Banken Ridens et dunes hydrauliques SBZ1 SBZ2 SBZ3	In combination Increase in underwater noise	In combination Underwater noise
Sites identified for offshore birds during the transboundary consultation Cap Gris Nez SPA Bancs des Flandres SPA	Alone: Change in prey availability and behaviour Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk

Designation	Impacts in submission information	Presented in screening matrices as
Outer Thames Estuary SPA	Alone: Change in prey availability and behaviour Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Foulness (Mid-Essex Coast Phase 5) SPA	Alone: Change in prey availability and behaviour Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Alde-Ore Estuary SPA	Alone: Change in prey availability and behaviour Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Alde-Ore Estuary Ramsar	Alone: Change in prey availability and behaviour Disturbance & Displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect

Designation	Impacts in submission information	Presented in screening matrices as
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Flamborough & Filey Coast pSPA	Alone: Change in prey availability and behaviour Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Flamborough Head & Bempton Cliffs SPA	Alone: Change in prey availability and behaviour Direct disturbance & displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
Northumberland Marine SPA	Alone: Change in marine prey availability and behaviour Disturbance & Displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk

Designation	Impacts in submission information	Presented in screening matrices as
Farne Islands SPA	Alone: Change in marine prey availability and behaviour Disturbance & Displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk
St Abb's Head to Fast Castle SPA	Alone: Change in prey availability and behaviour Disturbance & Displacement (offshore) Collision risk Barrier effect	Alone: Prey Disturbance & displacement Collision risk Barrier effect
	In combination: Offshore cables direct disturbance and displacement Offshore wind farms direct disturbance and displacement Offshore wind farms collision risk	In combination: OC disturbance & displacement OWF disturbance & displacement OWF Collision risk

Integrity Matrix

The European Sites for which a likely significant effect has been identified are as follows:

- Thanet Coast SAC
- Margate and Long Sands SAC
- Thanet Coast & Sandwich Bay SPA
- Thanet Coast & Sandwich Bay Ramsar
- Southern North Sea cSAC
- Transboundary sites for harbour porpoise (Bancs des Flandres)
- Transboundary sites for harbour seal (Bancs des Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques)
- Transboundary sites for grey seal (Bancs de Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)
- Outer Thames Estuary SPA
- Foulness (Mid-Essex Coast Phase 5) SPA
- Alde-Ore Estuary SPA
- Alde-Ore Estuary Ramsar
- Flamborough & Filey Coast pSPA
- Flamborough Head & Bempton Cliffs SPA
- Northumberland Marine SPA
- Farne Islands SPA
- St Abb's Head to Fast Castle SPA

Evidence for the conclusions reached in integrity is detailed within the footnotes to the matrices below.

Matrix Key

✓: Adverse effect on integrity cannot be excluded

X: Adverse effect on integrity can be excluded

Lower case letters in the table relate to the evidence supporting the conclusions below.

C = construction
O = operation
D = decommissioning

Where effects are not applicable to a particular feature they are greyed out.

Matrix 24: Thanet Coast SAC

Name of European site: Thanet Coast SAC																												
Distance to TEOW: 0 km																												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**																											
	Temporary habitat loss & disturbance			**Permanent habitat loss**			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Spread of INNS**			**Hard substrate**			**Physical processes**			**EMF**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Reefs	Xa		Xa		Xb			Xb		Xc	Xc	Xc											Xd			Xe	

Evidence supporting conclusions:

a) The construction (and subsequent decommissioning) of Thanet Extension would, at most, result in disturbance of some 0.15km^2 of the Thanet Coast SAC. No chalk reef feature has been identified in any of the site specific surveys, however further pre-construction surveys are planned as part of an Annex I mitigation plan, aimed at avoiding impact to reef. Should any chalk reef be identified during these surveys, then these would be included within the Annex I mitigation plan. There will, therefore, be no direct temporary loss or disturbance of the designated reef feature during construction or decommissioning and there is therefore no adverse effect.

b) A short section of the OECC falls partially within the SAC, resulting in a maximum area of temporary disturbance during construction/decommissioning of up to 0.15km^2. No chalk reef feature has been identified during site specific surveys. Permanent habitat loss could occur during the operation and maintenance phase should cable protection be installed along some or all of this area, with temporary disturbance should maintenance be required within this area. The combination of the absence of the reef feature during site specific surveys, combined with project mitigation, results in a conclusion of no direct permanent loss or temporary disturbance to that feature during the operation and maintenance phase and therefore no adverse effect.

c) The Thanet Extension ES has found that the magnitude of a change in total suspended sediment would be low, with potential receptors assessed as medium, with the magnitude of impact during construction being greater than any during operation and maintenance. The conclusion was found to be minor and not significant. Although the impacts are predicted to be low, there is potential for such sediment to reach the designated reef feature. Literature produced specifically for the SAC found that the reefs have a low sensitivity to physical damage through siltation which, combined with the short term and temporary nature of any change and the existing background levels, results in a conclusion of no adverse effect.

d) The presence of foundations, scour protection and cable protection material may introduce changes to the local hydrodynamic and wave regime, resulting in changes to the sediment transport pathways and associated effects on benthic ecology. Scour and increases in flow rates can change the characteristics of the sediment potentially making the habitat less suitable for some species. The ES determined that the potential for impacts on physical processes will be negligible to minor, with any such impacts being localised and of short to medium term duration. Any such localised and minor change in physical processes will have a negligible risk for intertidal and subtidal habitats, including the chalk reef feature of the SAC. There is, therefore, no adverse effect.

e) Although a short section of the OECC falls partially within the SAC (potentially directly affecting up to 0.15km^2 of the total SAC extent), the site specific surveys have not identified the presence of the designated reef feature. Further, project mitigation will ensure that Inter-array and export cables will be buried to a maximum target depth of 3 m, subject to a cable burial risk assessment, and where such burial cannot be achieved cable protection will be used. Given the lack of the sublittoral chalk reef feature during site specific surveys within the footprint of the project, combined with the EMF mitigation referred to above, the OECC will not result in EMF effects in proximity to the designated chalk reef feature of the Thanet Coast SAC. There is, therefore, no adverse effect resulting from EMF on the chalk reef feature.

Name of European site: Thanet Coast SAC																												
Distance to TEOW: 0 km																												
European Site Feature	Likely Effects of TEOW (in combination)																											
	Temporary habitat loss & disturbance			Permanent habitat loss			Temporary habitat disturbance			Increased suspended sediment & deposition			Accidental pollution			Spread of INNS			Hard substrate			Physical processes			EMF		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Reefs																												

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to a LSE in combination with Thanet Extension and therefore no adverse effect applies in combination.

Matrix 25: Margate and Long Sands SAC

Name of European site: Margate and Long Sands SAC																		
Distance to TEOW: 3 km																		
European Site Feature	**Likely Effects of TEOW (alone)**																	
	Permanent habitat loss			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Hard substrate**			**Physical processes**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Sandbanks which are slightly covered by sea water all the time							Xa	Xa	Xa								Xb	

Evidence supporting conclusions:

a) The Thanet Extension ES has found that the magnitude of a change in total suspended sediment would be low, with potential receptors assessed as medium, with the magnitude of impact during construction being greater than any during operation and maintenance. The conclusion was found to be minor and not significant. Although the impacts are predicted to be low, there is potential for such sediment to reach the designated subtidal sand bank feature. However it should be noted that there is at least 3km between the SAC and the Thanet Extension array boundary, with the subtidal sandbanks therefore beyond the 560m range of the nearfield maximum level of deposition (0.05m). Any deposition within the SAC would therefore be less than that level. Literature produced specifically for the SAC found a low vulnerability to an increase in turbidity which, combined with the short term and temporary nature of any change and the existing background levels, results in a conclusion of no adverse effect.

b) The presence of foundations, scour protection and cable protection material may introduce changes to the local hydrodynamic and wave regime, resulting in changes to the sediment transport pathways and associated effects on benthic ecology. Scour and increases in flow rates can change the characteristics of the sediment potentially making the habitat less suitable for some species. The ES determined that the potential for impacts on physical processes will be negligible to minor, with any such impacts being localised and of short to medium term duration. Any such localised and minor change in physical processes will have a negligible risk for intertidal and subtidal habitats, including the subtidal sandbank feature of the SAC. There is, therefore, no adverse effect.

Name of European site: Margate and Long Sands SAC																		
Distance to TEOW: 3 km																		
European Site Feature	**Likely Effects of TEOW (in combination)**																	
	Permanent habitat loss			**Temporary habitat disturbance**			**Increased suspended sediment & deposition**			**Accidental pollution**			**Hard substrate**			**Physical processes**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Sandbanks which are slightly covered by sea water all the time																		

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to a LSE in combination with Thanet Extension and therefore no adverse effect applies in combination.

Matrix 26: Thanet Coast & Sandwich Bay SPA

Name of European site: Thanet Coast & Sandwich Bay SPA

Distance to TEOW: 0 km

European Site Feature	Likely Effects of TEOW (alone)																																												
	Temporary habitat loss & disturbance			Permanent habitat loss			Temporary habitat loss & disturbance			Increased suspended sediment & deposition			Accidental pollution			Onshore noise disturbance			Spread of INNS			Onshore visual disturbance			Physical processes			Displacement of recreational users			EMF			Prey			Disturbance & displacement			Collision risk			Barrier effect		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
European golden plover	Xa		Xa					Xb		Xc	Xc	Xc				Xd	Xd	Xd				Xe	Xe	Xe		Xf		Xg		Xg															
Little tern																																													
Ruddy turnstone	Xa		Xa					Xb		Xc	Xc	Xc				Xd	Xd	Xd				Xe	Xe	Xe		Xf		Xg		Xg															

Evidence supporting conclusions:

a) Temporary habitat loss and disturbance will occur during the construction and decommissioning of Thanet Extension within the intertidal habitats, including the saltmarsh and mudflat foreshore. These are habitats for roosting and feeding of the designated bird species (European golden plover and ruddy turnstone). The temporary disturbance would amount to at most 0.71% of the foreshore and 0.34% of the saltmarsh habitat within the SPA. Project mitigation includes a Saltmarsh Mitigation and Reinstatement Plan. The proposed mitigation, combined with previous monitoring of the rapid rate of recovery of similar habitats in the area and the small proportion of the overall habitat temporarily affected, means that there will be no adverse effect on the designated bird species or their habitat.

b) Temporary disturbance may occur during operation and maintenance within the intertidal habitats, specifically saltmarsh and the mudflat foreshore. These are habitats for roosting and feeding designated bird species within the SPA. Should corrective maintenance be required, the potential for habitat disturbance would be similar to that during construction (see (a) above), albeit likely on a reduced scale and duration and the Saltmarsh Mitigation and Reinstatement Plan would apply. The proposed mitigation, combined with previous monitoring of the rapid rate of recovery of similar habitats in the area and the small proportion of the overall habitat temporarily affected, means that there will be no adverse effect on the designated bird species or their habitat.

c) The Thanet Extension ES has found that the magnitude of a change in total suspended sediment would be low, with potential receptors assessed as medium sensitivity at most, with the magnitude of impact during construction being greater than any during operation and maintenance. The conclusion was found to be minor and not significant. The species and habitats found within the intertidal section of the SPA have a high recoverability to changes in suspended sediment and a high (light deposition up to 5cm) to high-

medium (deposition >5cm) recoverability following deposition. Further, the habitats are considered to be naturally accreting, with the short term and temporary nature of any change resulting in a conclusion of no adverse effect.

d) Seasonal restrictions will be implemented to restrict construction and decommissioning works with potential to cause significant noise disturbance to the non-breeding waterbirds, including European golden plover and ruddy turnstone, in Pegwell Bay. These restrictions will apply to all works within inter-tidal habitats and at the shoreline, including all works on or within any cofferdam at the proposed landfall location. This will prevent any works taking place in these areas during the period October to March inclusive. Any driven/ percussive piling elsewhere within Pegwell Bay Country Park, e.g. if additional cofferdams are required to prevent the migration of contaminants if a buried solution is feasible (landfall options 1 and 3), would also be subject to a timing restriction and would not take place during the period October to March. HDD works (landfall option 1), if feasible, would also be subject to the same timing restriction. Planned O&M works at the shoreline or within intertidal habitats will also avoid the period October to March inclusive. Unplanned O&M works are by their nature unpredictable, however any such works will be undertaken in consultation with SNCBs at the time such works are required, to determine the need for mitigation in relation to the works required, including the nature and timing of those works. The proposed timing restrictions will avoid noise disturbance to European golden plover and ruddy turnstone and there is therefore no adverse effect.

e) Seasonal restrictions will be implemented to restrict construction and decommissioning works with potential to cause significant visual disturbance to the non-breeding waterbirds, including European golden plover and ruddy turnstone, as described above. In addition, any works within 250m of inter-tidal habitats, which are undertaken between October and March but are not covered by seasonal restrictions and are in direct line of sight from inter-tidal habitats, e.g. works on the TJBs, will only take place following the erection of screening fencing to avoid visual disturbance to non-breeding waterbirds, including European golden plover and ruddy turnstone, using intertidal habitats. Planned O&M works will also be subject to the same timing restrictions whilst unplanned O&M works will only undertaken following consultation with SNCBs at the time such works are required, to determine the need for mitigation, including the nature and timing of those works. The proposed mitigation will avoid visual disturbance to European golden plover and ruddy turnstone and there is therefore no adverse effect.

f) The presence of foundations, scour protection and cable protection material may introduce changes to the local hydrodynamic and wave regime, resulting in changes to the sediment transport pathways and associated effects on benthic ecology. Scour and increases in flow rates can change the characteristics of the sediment potentially making the habitat less suitable for some species. The ES determined that the potential for impacts on physical processes will be negligible to minor, with any such impacts being localised and of short to medium term duration. Any such localised and minor change in physical processes will have a negligible risk for intertidal and subtidal habitats, including the habitats of the SPA qualifying species. There is, therefore, no adverse effect.

g) Although construction works at the shoreline will be subject to a timing restriction and will not take place during the period October to March, other works could take place within the country park during the more sensitive winter months. Disturbance to non-breeding European golden plover and ruddy turnstone is therefore possible if visitors are displaced from the country park to other more sensitive areas elsewhere within Pegwell Bay. Car parking data for the period during which construction works for the Nemo Link were taking place strongly suggests that visitor numbers at the country park are not likely to be significantly affected by the proposed construction works. If some displacement were to occur, the results of a visitor survey carried out in 2012 suggest that any displacement is most likely to involve regular dog walkers, travelling by car from the north and is therefore most likely to affect sites to the north of the country park with easy vehicular access, namely the ‘pirate ship’ picnic site at Cliffsend or the Western Undercliff at Ramsgate. It is considered very unlikely that displaced visitors would utilise the saltmarsh habitats adjacent to Pegwell Bay Country Park which contain deep, wet creeks and are very difficult to walk across. It is also considered unlikely that significant numbers of visitors would utilise the mudflats and sandflats, although some usage of these areas, particularly in the northern half of Pegwell Bay, close to the alternative car parks at Cliffsend and the Western Undercliff, is possible. As a precaution, embedded mitigation has been proposed to discourage any displaced visitors from accessing intertidal habitats during the sensitive October to March period. This would include the provision of additional signage and the employment of an Ecological Clerk of Works (or temporary warden / natural ambassador) to monitor potential disturbance and discourage people from entering the intertidal habitats, if required. There will therefore be no adverse effect.

Matrix 27: Thanet Coast & Sandwich Bay SPA

Name of European site: Thanet Coast & Sandwich Bay SPA																																									
Distance to TEOW: 0 km																																										
European Site Feature	Likely Effects of TEOW (in combination)																																									
	Temporary habitat loss & disturbance			Permanent habitat loss			Temporary habitat disturbance			Increased suspended sediment & deposition			Accidental pollution			Onshore noise disturbance			Spread of INNS			Onshore visual disturbance			Physical processes			Displacement of recreational users			EMF			OC disturbance & displacement			OWF disturbance & displacement			OWF Collision risk		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
European Golden plover								Xa								Xb	Xb	Xb				Xc						Xd		Xd												
Little tern																																										
Ruddy turnstone																Xb	Xb	Xb										Xd		Xd												

Evidence supporting conclusions:

a) The potential for displacement of European golden plover from planned maintenance in intertidal habitats for Thanet Extension and due to the new 400kV lines of the Richborough Connection, once operational, is very small and any effects from each project will affect very different habitat types. There will therefore be no adverse effect.

b) Construction of the Richborough Connection has the potential to cause disturbance to European golden plover forming part of the Thanet Coast and Sandwich Bay SPA population. If undertaken at the same time as construction of Thanet Extension there is potential for in-combination effects. However, there is no potential for significant effects during the sensitive winter period for Thanet Extension due to the proposed timing restrictions. Significant effects outside this period are not likely and there will therefore be no adverse effects in-combination with the Richborough Connection project. Operational noise from the biomass CHP plant at Discovery Park and Thanet Extension substation is not likely to have a significant effect alone and the intervening distance between the two projects (>1.5 km) means that cumulative noise will not be significant. There will therefore be no adverse effect.

c) Construction of the Richborough Connection has the potential to cause disturbance to European golden plover forming part of the Thanet Coast and Sandwich Bay SPA population. If undertaken at the same time as construction of Thanet Extension there is potential for in-combination effects. However, there is no potential for significant effects during the sensitive winter period for Thanet Extension due to the proposed timing restrictions. Significant effects outside this period are not likely and there will therefore be no adverse effects in-combination with the Richborough Connection project.

d) The residential development at Discovery Park, once constructed and occupied, has the potential to increase the number of visitors to Pegwell Bay Country Park. If these additional visitors are using the country park during the construction and decommissioning of Thanet Extension there is potential for them to be displaced to other, more sensitive parts of the Thanet Coast and Sandwich Bay SPA. Both the Discovery Park development and Thanet Extension include proposals for a range of mitigation measures to

reduce the potential for disturbance. Following the implementation of the mitigation measures a significant increase in disturbance is not likely and there will be no adverse effect.

Name of European site: Thanet Coast & Sandwich Bay Ramsar																																		
Distance to TEOW: 0 km																																		
European Site Feature	Likely Effects of TEOW (alone)																																	
	Temporary habitat loss & disturbance			Permanent habitat loss			Temporary habitat loss & disturbance			Increased suspended sediment & deposition			Accidental pollution			Onshore noise disturbance			Spread of INNS			Onshore visual disturbance			Physical processes			Displacement of recreational users			EMF		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Wetland invertebrate assemblage	Xa		Xa	Xb				Xc																									
Ruddy Turnstone	Xa		Xa					Xc		Xd	Xd	Xd				Xe	Xe	Xe				Xf	Xf	Xf		Xg		Xh		Xh			

Evidence supporting conclusions:

a) Temporary habitat loss will occur during the construction and decommissioning of Thanet Extension within the intertidal habitats, including the saltmarsh and mudflat foreshore. These are habitats for roosting and feeding of the designated bird species (ruddy turnstone). The temporary disturbance would amount to at most 0.71% of the foreshore and 0.34% of the saltmarsh habitat within the Ramsar. Project mitigation includes a Saltmarsh Mitigation and Reinstatement Plan. The proposed mitigation, combined with previous monitoring of the rapid rate of recovery of similar habitats in the area and the small proportion of the overall habitat temporarily affected, means that there will be no adverse effect on the designated bird species or its habitat. Three species forming part of the wetland invertebrate assemblage have some potential to be present within the RLB but are only likely to be present in the Stonelees Nature Reserve section of the RLB. Approximately 350 m of cabling would be trenched through Stonelees Nature Reserve, resulting in temporary loss of habitats including disturbed ground, scrub, semi-improved grassland and at least one small ephemeral water bodies over a width of up to 30 m. All habitat types are also present within the nature reserve in areas outside the RLB. Terrestrial habitats would be reinstated as soon as possible following completion of the works and the ephemeral water body will be replaced. Embedded mitigation includes the development of a terrestrial invertebrate mitigation strategy as part of a detailed Landscape and Ecological Management Plan (LEMP), which would be informed by a detailed invertebrate survey of affected areas, prior to construction commencing. Specific measures will be included in the plan to reduce effects on the three assemblage species, if present, e.g. micro-siting, where possible. Measures will also be included to ensure that suitable habitat for these species is maintained and enhanced following construction works. There will therefore be no adverse effect.

b) Some permanent loss of habitats for wetland invertebrate assemblage species, if present within Stonelees Nature Reserve, is possible although habitat reinstatement would take place as soon as possible following completion of the works and a terrestrial invertebrate mitigation strategy would be put in place, as set out above. There will therefore be no adverse effect.

c) Temporary disturbance may occur during operation and maintenance within the intertidal habitats, specifically saltmarsh and the mudflat foreshore. These are habitats for roosting and feeding ruddy turnstone within the SPA. Should corrective maintenance be required, the potential for habitat disturbance would be similar to that during construction (see (a) above), albeit likely on a reduced scale and duration and the Saltmarsh Mitigation and Reinstatement Plan would apply. The proposed mitigation, combined with previous monitoring of the rapid rate of recovery of similar habitats in the area and the small proportion of the overall habitat temporarily affected, means that there will be no adverse effect on the designated bird species or their habitat. During the O&M phase joint pits within Stonelees Nature Reserve may be subject to up to eight visits per year,

either on foot or using a light vehicle. Embedded mitigation includes the development of a terrestrial invertebrate mitigation strategy, which will be informed by a detailed invertebrate survey of affected areas, prior to construction commencing. Specific measures will be included in the mitigation strategy to avoid effects on the three assemblage species, if present, during planned maintenance visits. Given the very small area which would be affected by planned maintenance, the very limited nature of planned maintenance works and the embedded mitigation there will be no adverse effect on the wetland invertebrate assemblage.

d) The Thanet Extension ES has found that the magnitude of a change in total suspended sediment would be low, with potential receptors assessed as medium sensitivity at most, with the magnitude of impact during construction being greater than any during operation and maintenance. The conclusion was found to be minor and not significant. The species and habitats found within the intertidal section of the Ramsar have a high recoverability to changes in suspended sediment and a high (light deposition up to 5cm) to high-medium (deposition >5cm) recoverability following deposition. Further, the habitats are considered to be natural accreting, with the short term and temporary nature of any change resulting in a conclusion of no adverse effect.

e) Seasonal restrictions will be implemented to restrict construction and decommissioning works with potential to cause significant noise disturbance to the non-breeding waterbirds, including ruddy turnstone, in Pegwell Bay. These restrictions will apply to all works within inter-tidal habitats and at the shoreline, including all works on or within any cofferdam at the proposed landfall location. This will prevent any works taking place in these areas during the period October to March inclusive. Any driven/ percussive piling elsewhere within Pegwell Bay Country Park, e.g. if additional cofferdams are required to prevent the migration of contaminants if a buried solution is feasible (landfall options 1 and 3), would also be subject to a timing restriction and would not take place during the period October to March. HDD works (landfall option 1), if feasible, would also be subject to the same timing restriction. Planned O&M works at the shoreline or within intertidal habitats will also avoid the period October to March inclusive. Unplanned O&M works are by their nature unpredictable, however any such works will be undertaken in consultation with SNCBs at the time such works are required, to determine the need for mitigation in relation to the works required, including the nature and timing of those works. The proposed timing restrictions will avoid noise disturbance to ruddy turnstone and there is therefore no adverse effect.

f) Seasonal restrictions will be implemented to restrict construction and decommissioning works with potential to cause significant visual disturbance to the non-breeding waterbirds, including ruddy turnstone, as described above. In addition, any works within 250m of inter-tidal habitats, which are undertaken between October and March but are not covered by seasonal restrictions and are in direct line of sight from inter-tidal habitats, e.g. works on the TJBs, will only take place following the erection of screening fencing to avoid visual disturbance to non-breeding waterbirds, including ruddy turnstone, using intertidal habitats. Planned O&M works will also be subject to the same timing restrictions whilst unplanned O&M works will only undertaken following consultation with SNCBs at the time such works are required, to determine the need for mitigation, including the nature and timing of those works. The proposed mitigation will avoid visual disturbance to ruddy turnstone and there is therefore no adverse effect.

g) The presence of foundations, scour protection and cable protection material may introduce changes to the local hydrodynamic and wave regime, resulting in changes to the sediment transport pathways and associated effects on benthic ecology. Scour and increases in flow rates can change the characteristics of the sediment potentially making the habitat less suitable for some species. The ES determined that the potential for impacts on physical processes will be negligible to minor, with any such impacts being localised and of short to medium term duration. Any such localised and minor change in physical processes will have a negligible risk for intertidal and subtidal habitats, including the habitats for ruddy turnstone. There is, therefore, no adverse effect.

h) Although construction works at the shoreline will be subject to a timing restriction and will not take place during the period October to March, other works could take place within the country park during the more sensitive winter months. Disturbance to non-breeding ruddy turnstone is therefore possible if visitors are displaced from the country park to other more sensitive areas elsewhere within Pegwell Bay. Car parking data for the period during which construction works for the Nemo Link were taking place strongly suggests that visitor numbers at the country park are not likely to be significantly affected by the proposed construction works. If some displacement were to occur, the results of a visitor survey carried out in 2012 suggest that any displacement is most likely to involve regular dog walkers, travelling by car from the north and is therefore most likely to affect sites to the north of the country park with easy vehicular access, namely the ‘pirate ship’ picnic site at Cliffsend or the Western Undercliff at Ramsgate. It is considered very unlikely that displaced visitors would utilise the saltmarsh habitats adjacent to Pegwell Bay Country Park which contain deep, wet creeks and are very difficult to walk across. It is also considered unlikely that significant numbers of visitors would utilise the mudflats and sandflats, although some usage of these areas, particularly in the northern half of

Pegwell Bay, close to the alternative car parks at Cliffsend and the Western Undercliff, is possible. As a precaution, embedded mitigation has been proposed to discourage any displaced visitors from accessing intertidal habitats during the sensitive October to March period. This would include the provision of additional signage and the employment of an Ecological Clerk of Works (or temporary warden / natural ambassador) to monitor potential disturbance and discourage people from entering the intertidal habitats, if required. There will therefore be no adverse effect.

Name of European site: Thanet Coast & Sandwich Bay Ramsar																																		
Distance to TEOW: 0 km																																		
European Site Feature	Likely Effects of TEOW (in combination)																																	
	Temporary habitat loss & disturbance			Permanent habitat loss			Temporary habitat disturbance			Increased suspended sediment & deposition			Accidental pollution			Onshore noise disturbance			Spread of INNS			Onshore visual disturbance			Physical processes			Displacement of recreational users			EMF		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Wetland invertebrate assemblage																																		
Ruddy turnstone																Xa	Xa	Xa										Xb		Xb				

Evidence supporting conclusions:

a) Operational noise from the biomass CHP plant at Discovery Park and Thanet Extension substation is not likely to have a significant effect alone and the intervening distance between the two projects (>1.5 km) means that cumulative noise will not be significant. There will therefore be no adverse effect.

b) The residential development at Discovery Park, once constructed and occupied, has the potential to increase the number of visitors to Pegwell Bay Country Park. If these additional visitors are using the country park during the construction and decommissioning of Thanet Extension there is potential for them to be displaced to other, more sensitive parts of the Thanet Coast and Sandwich Bay Ramsar site. Both the Discovery Park development and Thanet Extension include proposals for a range of mitigation measures to reduce the potential for disturbance. Following the implementation of the mitigation measures a significant increase in disturbance is not likely and there will be no adverse effect.

Matrix 28: Southern North Sea cSAC

Name of European site: Southern North Sea cSAC																		
Distance to TEOW: 0 km																		
European Site Feature	**Likely Effects of TEOW (alone)**																	
	Permanent habitat loss			**Increased suspended sediment & deposition**			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise										Xa		Xa						

Evidence supporting conclusions:

a) A number of sources of underwater noise have been considered, including clearance of unexploded ordnance (UXO), pile driving, vessel activity and seabed preparation. The potential for these to result in an adverse effect has been considered against the three conservation objectives associated with the cSAC, together with the temporal nature of both the cSAC and the works. Project specific mitigation for underwater noise includes a MMMP (to address the viability aspects considered within the first conservation objective), together with management of activity to ensure the daily and seasonal thresholds would not be exceeded (and therefore address the second conservation objective). The third conservation objective relates to the availability and density of suitable prey and the prey habitat, with all potential impacts being not significant. These measures combine to ensure that the requirements of all three conservation objectives will be met and that, therefore, there will be no adverse effect.

Name of European site: Southern North Sea cSAC																		
Distance to TEOW: 0 km																		
European Site Feature	**Likely Effects of TEOW (in combination)**																	
	Permanent habitat loss			**Increased suspended sediment & deposition**			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise										Xa		Xa						

Evidence supporting conclusions:

a) The potential for an in-combination effect was determined based on a combination of timing (when the noise is planned or anticipated to occur) and location (proximity to the cSAC). The combination of the standard requirement for project specific mitigation in the form of a MMMP, the potential for a temporal overlap in terms of the activity, combined with the seasonal nature of the cSAC, the staggered nature of construction, combined with management of works at Thanet Extension combined to ensure that the requirements of the conservation objectives would not be exceeded and therefore no adverse effect would result.

Matrix 29: Transboundary site for harbour porpoise (Bancs des Flandres)

Name of European site: Transboundary sites for harbour porpoise (Bancs des Flandres)																
Distance to TEOW: at least 23 km																
European Site Feature	**Likely Effects of TEOW (alone)**															
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**			
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	
Harbour porpoise							Xa		Xa							

Evidence supporting conclusions:

a) A number of sources of underwater noise have been considered, including clearance of unexploded ordnance (UXO), pile driving, vessel activity and seabed preparation. In the absence of conservation objectives for the Bancs de Flandres SCI, in consultation with Natural England the potential for these to result in an adverse effect has been considered against the three conservation objectives associated with the Southern North Sea cSAC. Project specific mitigation for underwater noise includes a MMMP (to address the viability aspects considered within the first conservation objective), together with management of activity to ensure the daily and seasonal thresholds would not be exceeded (and therefore address the second conservation objective). The third conservation objective relates to the availability and density of suitable prey and the prey habitat, with all potential impacts being not significant. These measures, together with the 23km range as a minimum between works and the SCI boundary, combine to ensure that the requirements of all three conservation objectives will be met and that, therefore, there will be no adverse effect.

Name of European site: Transboundary sites for harbour porpoise (Bancs des Flandres)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (in combination)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour porpoise															

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to a LSE in combination with Thanet Extension and therefore no adverse effect applies in combination.

Matrix 30: Transboundary sites for harbour seal (Bancs des Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques)

Name of European site: Transboundary sites for harbour seal (Bancs des Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (alone)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour seal							Xa		Xa						

Evidence supporting conclusions:

a) Up to 36 foundations will be installed at Thanet Extension, spread across an overall piling window of six months. Up to 30 UXO will be detonated, each being an individual incident and therefore being short term and temporary in nature. It is pertinent to note that the designated sites under consideration are all at least 23km distant from Thanet Extension, the furthest site being more than 100km distant. Project mitigation includes the implementation of a MMMP, the overall aim being to minimise the risk of PTS. The combination of the project mitigation, the range between Thanet Extension and the designated sites and the low density of harbour seals occurring in the vicinity of Thanet Extension result in a conclusion of no adverse effect.

Name of European site: Transboundary sites for harbour seal (Bancs des Flandres SCI, Vlakte van de Raan, Voordelta, Vlaamse Banken)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (in combination)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Harbour seal							Xa		Xa						

Evidence supporting conclusions:

a) The potential for an in-combination effect was determined based on a combination of timing (when the noise is planned or anticipated to occur) and location (proximity to the designated sites). The timeframe of planned works, the distances involved, the very small proportion of the seal population that could be affected on a temporary and intermittent basis, the natural range of the species and the project specific mitigation required all combined to result in a conclusion of no adverse effect.

Matrix 31: Transboundary sites for grey seal (Bancs de Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)

Name of European site: Transboundary sites for grey seal (Bancs de Flandres SCI, Baie de Canche et couloir des trois estuaires, Vlakte van de Raan, Voordelta, Estuaires et littoral picards (baies de Somme et d'Authie), Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (alone)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Grey seal							Xa		Xa						

Evidence supporting conclusions:

a) Up to 36 foundations will be installed at Thanet Extension, spread across an overall piling window of six months. Up to 30 UXO will be detonated, each being an individual incident and therefore being short term and temporary in nature. It is pertinent to note that the designated sites under consideration are all at least 23km distant from Thanet Extension, the furthest site being more than 100km distant. Project mitigation includes the implementation of a MMMP, the overall aim being to minimise the risk of PTS. The combination of the project mitigation, the range between Thanet Extension and the designated sites and the low density of grey seals occurring in the vicinity of Thanet Extension result in a conclusion of no adverse effect.

Name of European site: Transboundary sites for grey seal (Bancs de Flandres SCI, Vlakte van de Raan, Voordelta, Recifs Gris-Nez Blanc-Nez, Vlaamse Banken, Ridens et dunes hydrauliques, SBZ1, SBZ2 and SBZ3)															
Distance to TEOW: at least 23 km															
European Site Feature	**Likely Effects of TEOW (in combination)**														
	Increased suspended sediment & deposition			**Accidental pollution**			**Underwater noise**			**Collision risk**			**Prey**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Grey seal							Xa		Xa						

Evidence supporting conclusions:

a) The potential for an in-combination effect was determined based on a combination of timing (when the noise is planned or anticipated to occur) and location (proximity to the designated sites). The timeframe of planned works, the distances, the very small proportion of the seal population that could be affected on a temporary and intermittent basis, the natural range of the species and the project specific mitigation required all combined to result in a conclusion of no adverse effect.

Matrix 32: Outer Thames Estuary SPA

Name of European site: Outer Thames Estuary SPA												
Distance to TEOW: 4 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Red-throated diver				**Xa**	**Xa**	**Xa**						
Common tern								**Xb**			**Xc**	
Little tern								**Xb**			**Xc**	

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of displacement resultant mortality to a small number of individuals that makes no material difference to the long-term maintenance of the red-throated diver population of the Outer Thames Estuary SPA (Section 11.4 of the RIAA).

b) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to less than a single individual that makes no material difference to the long-term maintenance of the tern species population of the Outer Thames Estuary SPA (Section 11.4 of the RIAA).

c) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on based on the extremely low number of the tern interest features using the site and the minimal effect of deviating around the site on migration that makes no material difference to the long-term maintenance of the tern species population of the Outer Thames Estuary SPA (Section 11.4 of the RIAA).

Name of European site: Outer Thames Estuary SPA									
Distance to TEOW: 4 km									
European Site Feature	Adverse Effect on Integrity of TEOW (in combination)								
	OC disturbance & displacement			OWF disturbance & displacement			OWF Collision risk		
Construction: C Operation: O Decommissioning: D	C	O	D	C	O	D	C	O	D
Red-throated diver	Xa		Xa	Xb	Xb	Xb			
Common tern									
Little tern									

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on cable laying for Nemo Link not occurring in the same year as Thanet Extension construction and that any successive cable laying is each of short duration and takes place in waters that do not support significant populations of red-throated diver (both cable laying operations avoid the Outer Thames Estuary SPA) and for these reasons makes no difference to the long-term maintenance of the red-throated diver population of the Outer Thames Estuary SPA (Section 12.4 of the RIAA).

b) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on Thanet Extension making no material contribution to the in-combination total predicted to be displaced and suffer resultant mortality and for this reason it makes no difference to the long-term maintenance of the red-throated diver population of the Outer Thames Estuary SPA (Section 12.4 of the RIAA).

Matrix 33: Foulness (Mid-Essex Coast Phase 5) SPA

Name of European site: Foulness (Mid-Essex Coast Phase 5) SPA												
Distance to TEOW: 37 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet												
Bar-tailed godwit												
Common tern												
Dark-bellied brent goose												
Grey plover												
Hen harrier												
Knot												
Little tern												
Oystercatcher												
Redshank												
Ringed plover												
Sandwich tern								Xa			Xb	
Wintering waterbird assemblage												

The wintering waterbird assemblage has the following species named on the Natura 2000 data form (http://jncc.defra.gov.uk/pdf/SPA/UK9009246.pdf): Avocet, bar-tailed godwit, dark-bellied brent goose, dunlin, grey plover, oystercatcher and redshank.

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to less than a single individual that makes no material difference to the long-term maintenance of the tern species population of the Foulness (Mid-Essex Coast Phase 5) SPA (Section 11.4 of the RIAA).

b) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on based on the extremely low number of the tern interest features using the site and the minimal effect of deviating around the site on migration that makes no material difference to the long-term maintenance of the tern species population of the Foulness (Mid-Essex Coast Phase 5) SPA (Section 11.4 of the RIAA).

Name of European site: Foulness (Mid-Essex Coast Phase 5) SPA									
Distance to TEOW: 37 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet									
Bar-tailed godwit									
Common tern									
Dark-bellied brent goose									
Grey plover									
Hen harrier									
Knot									
Little tern									
Oystercatcher									
Redshank									
Ringed plover									
Sandwich tern									
Wintering waterbird assemblage									

The wintering waterbird assemblage has the following species named on the Natura 2000 data form (http://jncc.defra.gov.uk/pdf/SPA/UK9009246.pdf): Avocet, bar-tailed godwit, dark-bellied brent goose, dunlin, grey plover, oystercatcher and redshank.

Evidence supporting conclusions:

No plans or projects have been identified that could contribute to a LSE in combination with Thanet Extension and therefore no adverse effect applies in combination.

Matrix 34: Alde-Ore Estuary SPA

Name of European site: Alde-Ore Estuary SPA												
Distance to TEOW: 69 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet												
Lesser black-backed gull								Xa			Xb	
Little tern												
Marsh harrier												
Redshank												
Ruff												
Sandwich tern												

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to less than two birds per annum that makes no material difference to the long-term maintenance of the lesser black-backed gull population of the Alde-Ore Estuary SPA (Section 11.4 of the RIAA).

b) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on based on the minimal effect of deviating around the site on migration that makes no material difference to the long-term maintenance of the lesser black-backed gull population of the Alde-Ore Estuary SPA (Section 11.4 of the RIAA).

Name of European site: Alde-Ore Estuary SPA									
Distance to TEOW: 69 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet									
Lesser black-backed gull								Xa	
Little tern									
Marsh harrier									
Redshank									
Ruff									
Sandwich tern									

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to less than two birds per annum that makes no material contribution to an in-combination collision risk assessment of the lesser black-backed gull population of the Alde-Ore Estuary SPA (Section 12.4 of the RIAA).

Matrix 35: Alde-Ore Estuary Ramsar

Name of European site: Alde-Ore Estuary Ramsar												
Distance to TEOW: 69 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet												
Lesser black-backed gull								Xa			Xb	
Redshank												
Breeding wetland bird assemblage								Xa			Xb	
Wintering wetland bird assemblage												

The breeding waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Lesser black-backed gull, little tern, marsh harrier, Mediterranean gull and Sandwich tern.

The wintering waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Avocet, white-fronted goose, pintail, shelduck, shoveler, teal, redshank and wigeon.

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to less than two lesser black-backed gull per annum (considered as an individual feature and as the relevant component of the breeding bird assemblage) that makes no material difference to the long-term maintenance of the lesser black-backed gull population of the Alde-Ore Estuary Ramsar site (Section 11.4 of the RIAA).

b) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on based on the minimal effect of deviating around the site on migration that makes no material difference to the long-term maintenance of the lesser black-backed gull population of the Alde-Ore Estuary Ramsar site (Section 11.4 of the RIAA).

Name of European site: Alde-Ore Estuary Ramsar									
Distance to TEOW: 69 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Avocet									
Lesser black-backed gull								Xa	
Redshank									
Breeding wetland bird assemblage								Xa	
Wintering wetland bird assemblage									

The breeding waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Lesser black-backed gull, little tern, marsh harrier, Mediterranean gull and Sandwich tern.

The wintering waterbird assemblage has the following species named on the Ramsar Information Sheet (http://jncc.defra.gov.uk/pdf/RIS/UK11002.pdf): Avocet, white-fronted goose, pintail, shelduck, shoveler, teal, redshank and wigeon.

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to less than two birds per annum that makes no material contribution to an in-combination collision risk assessment of the lesser black-backed gull population (as an interest feature and component of the breeding assemblage) of the Alde-Ore Estuary Ramsar site (Section 12.4 of the RIAA).

Matrix 36: Flamborough & Filey Coast pSPA

Name of European site: Flamborough & Filey Coast pSPA												
Distance to TEOW: 312 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Gannet								Xb			Xc	
Kittiwake								Xb			Xc	
Guillemot				Xa	Xa	Xa						
Razorbill				Xa	Xa	Xa						
Breeding seabird assemblage				Xa	Xa	Xa		**Xb**			Xc	

The breeding seabird assemblage consists of the species individually named above plus fulmar.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of displacement resultant mortality to a small number of guillemot and razorbill that makes no material difference to the long-term maintenance of the guillemot and razorbill populations of the Flamborough & Filey Coast pSPA (Section 11.4 of the RIAA).

b) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to gannet and kittiwake that was attributed to this pSPA of a very small number of individuals that makes no material difference to the long-term maintenance of the gannet and kittiwake populations of the Flamborough & Filey Coast pSPA (Section 11.4 of the RIAA).

c) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on the minimal effect of deviating around the site on migration that makes no material difference to the long-term maintenance of the gannet and kittiwake populations of the Flamborough & Filey Coast pSPA (Section 11.4 of the RIAA).

Name of European site: Flamborough & Filey Coast pSPA									
Distance to TEOW: 312 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Gannet								Xc	
Guillemot	Xa		Xa	Xb	Xb	Xb			
Kittiwake								Xc	
Razorbill	Xa		Xa	Xb	Xb	Xb			
Breeding seabird assemblage	Xa		Xa	Xb	Xb	Xb		Xc	

The breeding seabird assemblage consists of the species individually named above plus fulmar.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on cable laying for Nemo Link not occurring in the same year as Thanet Extension construction and that any successive cable laying is each of short duration and takes place in waters that do not support significant populations of guillemot and razorbill and for these reasons makes no difference to the long-term maintenance of the guillemot and razorbill populations (as interest features and components of the breeding assemblage) of the Flamborough & Filey Coast pSPA (Section 12.4 of the RIAA).

b) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on Thanet Extension making no material contribution to the in-combination total predicted to be displaced and suffer resultant mortality and for this reason it makes no difference to the long-term maintenance of the guillemot and razorbill populations (as interest features and components of the breeding assemblage) of the Flamborough & Filey Coast pSPA (Section 12.4 of the RIAA).

c) Collision risk as a result of the operation of the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to

gannet and kittiwake (as interest features and components of the breeding assemblage) that was attributed to this pSPA of a very small number of individuals that makes no material contribution to an in-combination collision risk assessment of the gannet and kittiwake populations of the Flamborough & Filey Coast pSPA (Section 12.4 of the RIAA).

Matrix 37: Flamborough Head & Bempton Cliffs SPA

Name of European site: Flamborough Head & Bempton Cliffs SPA												
Distance to TEOW: 322 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Kittiwake								Xa			Xb	

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to kittiwake that was attributed to this SPA of a very small number of individuals that makes no material difference to the long-term maintenance of the kittiwake population of the Flamborough Head & Bempton Cliffs SPA (Section 11.4 of the RIAA).

b) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on the minimal effect of deviating around the site on migration that makes no material difference to the long-term maintenance of the kittiwake population of the Flamborough Head & Bempton Cliffs SPA (Section 11.4 of the RIAA).

Name of European site: Flamborough Head & Bempton Cliffs SPA									
Distance to TEOW: 322 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Kittiwake								Xa	

Evidence supporting conclusions:

a) Collision risk as a result of the operation of the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to kittiwake that was attributed to this SPA of a very small number of individuals that makes no material contribution to an in-combination collision risk assessment of the kittiwake population of the Flamborough Head & Bempton Cliffs SPA (Section 12.4 of the RIAA).

Matrix 38: Northumberland Marine SPA

Name of European site: Northumberland Marine SPA												
Distance to TEOW: 458 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern												
Common tern												
Guillemot				Xa	Xa	Xa						
Little tern												
Puffin												
Roseate tern												
Sandwich tern												
Breeding seabird assemblage				Xb	Xb	Xb						

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake and black-headed gull.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of displacement resultant mortality to a small number of guillemot that makes no material difference to the long-term maintenance of the guillemot population of the Northumberland Marine SPA (Section 11.4 of the RIAA).

b) Disturbance and consequent displacement by the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction

of displacement resultant mortality to a small number of guillemot (the relevant component of the breeding assemblage) that makes no material difference to the long-term maintenance of the guillemot population as part of the breeding assemblage of the Northumberland Marine SPA (Section 11.4 of the RIAA).

Name of European site: Northumberland Marine SPA									
Distance to TEOW: 458 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern									
Common tern									
Guillemot	Xa		Xa	Xb	Xb	Xb			
Little tern									
Puffin									
Roseate tern									
Sandwich tern									
Breeding seabird assemblage	Xa		Xa	Xb	Xb	Xb			

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake and black-headed gull.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on cable laying for Nemo Link not occurring in the same year as Thanet Extension construction and that any successive cable laying is each of short duration and takes place in waters that do not support significant populations of guillemot and for these reasons makes no difference to the long-term maintenance of the guillemot population (as an interest feature and components of the breeding assemblage) of the Northumberland Marine SPA (Section 12.4 of the RIAA).

b) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on Thanet Extension making no material contribution to the in-combination total predicted to be displaced and suffer resultant mortality and for this reason it makes no difference

to the long-term maintenance of the guillemot population (as an interest feature and components of the breeding assemblage) of the Northumberland Marine SPA (Section 12.4 of the RIAA).

Matrix 39: Farne Islands SPA

Name of European site: Farne Islands SPA												
Distance to TEOW: 512 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern												
Common tern												
Guillemot				Xa	Xa	Xa						
Sandwich tern												
Breeding seabird assemblage				Xa	Xa	Xa						

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake, puffin and roseate tern.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of displacement resultant mortality to a small number of guillemot (both as an interest feature alone and as the relevant component of the breeding assemblage) that makes no material difference to the long-term maintenance of the guillemot population as part of the of the Farne Islands SPA (Section 11.4 of the RIAA).

Name of European site: Farne Islands SPA									
Distance to TEOW: 512 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Arctic tern									
Common tern									
Guillemot	Xa		Xa	Xb	Xb	Xb			
Sandwich tern									
Breeding seabird assemblage	Xa		Xa	Xb	Xb	Xb			

The breeding seabird assemblage consists of the species individually named above plus cormorant, shag, kittiwake, puffin and roseate tern.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on cable laying for Nemo Link not occurring in the same year as Thanet Extension construction and that any successive cable laying is each of short duration and takes place in waters that do not support significant populations of guillemot and for these reasons makes no difference to the long-term maintenance of the guillemot population (as an interest feature and components of the breeding assemblage) of the Farne Islands SPA (Section 12.4 of the RIAA).

b) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on Thanet Extension making no material contribution to the in-combination total predicted to be displaced and suffer resultant mortality and for this reason it makes no difference to the long-term maintenance of the guillemot population (as an interest feature and components of the breeding assemblage) of the Farne Islands SPA (Section 12.4 of the RIAA).

Matrix 40: St Abb's Head to Fast Castle SPA

Name of European site: St Abb's Head to Fast Castle SPA												
Distance to TEOW: 557 km												
European Site Feature	**Adverse Effect on Integrity of TEOW (alone)**											
	Prey			**Disturbance & displacement**			**Collision risk**			**Barrier effect**		
Construction: C Operation: O Decommissioning: D	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Guillemot				Xa	Xa	Xa						
Herring gull												
Kittiwake								Xb			Xc	
Razorbill				Xa	Xa	Xa						
Shag												
Breeding seabird assemblage				Xa	Xa	Xa		Xb			Xc	

The breeding seabird assemblage consists of the species individually named above.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of displacement resultant mortality to a small number of guillemot and razorbill (as interest features alone and as part of the breeding assemblage) that makes no material difference to the long-term maintenance of the guillemot and razorbill populations of the St Abb's Head to Fast Castle SPA (Section 11.4 of the RIAA).

b) Collision risk as a result of the operation of the project alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk by the project alone was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to kittiwake (as interest features alone and as part of the breeding assemblage) that was attributed to this SPA of a very small number of individuals that makes no material difference to the long-term maintenance of the kittiwake population of the St Abb's Head to Fast Castle SPA (Section 11.4 of the RIAA).

c) Barrier effect as a result of the offshore works alone was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Barrier effect as a result of the offshore works alone was considered in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on the minimal effect on kittiwake (as interest

features alone and as part of the breeding assemblage) of deviating around the site on migration that makes no material difference to the long-term maintenance of the kittiwake population of the St Abb's Head to Fast Castle SPA (Section 11.4 of the RIAA).

Name of European site: St Abb's Head to Fast Castle SPA									
Distance to TEOW: 557 km									
European Site Feature	**Adverse Effect on Integrity of TEOW (in combination)**								
	OC disturbance & displacement			**OWF disturbance & displacement**			**OWF Collision risk**		
Construction: C **Operation: O** **Decommissioning: D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Guillemot	Xa		Xa	Xb	Xb	Xb			
Herring gull									
Kittiwake								Xc	
Razorbill	Xa		Xa	Xb	Xb	Xb			
Shag									
Breeding seabird assemblage	Xa		Xa	Xb	Xb	Xb		Xc	

The breeding seabird assemblage consists of the species individually named above.

Evidence supporting conclusions:

a) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on cable laying for Nemo Link not occurring in the same year as Thanet Extension construction and that any successive cable laying is each of short duration and takes place in waters that do not support significant populations of guillemot and razorbill and for these reasons makes no difference to the long-term maintenance of the guillemot and razorbill populations (as interest features and components of the breeding assemblage) of the St Abb's Head to Fast Castle SPA (Section 12.4 of the RIAA).

b) Disturbance and consequent displacement by the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Disturbance and consequent displacement by the project in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on Thanet Extension making no material contribution to the in-combination total predicted to be displaced and suffer resultant mortality and for this reason it makes no difference to the long-term maintenance of the guillemot and razorbill populations (as interest features and components of the breeding assemblage) of the St Abb's Head to Fast Castle SPA (Section 12.4 of the RIAA).

c) Collision risk as a result of the operation of the project in-combination was screened in for LSE (contained within this Appendix 2 to the RIAA, Doc. Ref. 5.2.2). Collision risk in-combination was considered in detail in the RIAA (Doc. Ref. 5.2). It concluded no adverse effect on the integrity of the site based on a prediction of collision resultant mortality to kittiwake (as an interest feature and a component of the breeding assemblage) that was attributed to this SPA of a very small number of individuals that makes no material contribution to an in-combination collision risk assessment of the kittiwake population of the St Abb's Head to Fast Castle SPA (Section 12.4 of the RIAA).