

Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Environmental Statement Volume 3

Chapter 13: Onshore Conclusions and Summary of Key Issues

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Thanet Extension Offshore Wind Farm

Volume 3

Chapter 13: Onshore Conclusions and Summary of Key Issues (Document Ref: 6.3.13)

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13 Onshore Conclusions and Summary of Key Issues

13.1 Introduction

- 13.1.1 This chapter of the Environmental Statement (ES) presents a summary of the key environmental issues associated with the onshore components of Thanet Extension Offshore Wind Farm (Thanet Extension), as identified via the impact assessment work carried out. The content of this summary section is taken from the individual chapters contained in Volume 3 of the ES.
- 13.1.2 The potential impacts of the proposed development were identified and then assessed by considering both the magnitude (which may include spatial extent, duration, frequency and severity) and the sensitivity (which may consider the adaptability, tolerance, recoverability and value of the receptor) for each potential impact.
- 13.1.3 The significance of effect was judged according to a matrix such as that illustrated in Table 3.2 of Volume 1 Chapter 3: EIA Methodology (Document Ref: 6.3.1). Effects arising, both adverse and beneficial, were graded on a scale ranging from Negligible to Major. Effects rated as 'Moderate' to 'Major' are considered to be 'significant' and will usually require mitigation. Effects rated as 'Minor' or 'Negligible' are not considered to be significant in EIA terms. However, there are exceptions to this for certain topics. Where such variations to the standard approach have been adopted, this is clearly set out within the individual topic chapter.
- 13.1.4 In order to provide a full summary of the potential effects of the onshore components of Thanet Extension, all impacts have been listed in summary tables below in section 13.4, (Table 13.1 to Table 13.10). There are a range of embedded mitigation measures (built into the project design) which have been drawn from the impact assessment process. Where appropriate, additional mitigation measures to address the key issues are included and the significance of the residual effect is provided. The assessment of effects has therefore taken into account of all measures that form part of the proposed development and to which VWPL is committed.

13.2 EIA outcomes

- 13.2.1 The EIA process has been carried out with reference to accepted methods covering the approach to defining baseline conditions, methods for assessment, definitions and criteria for identifying potential effects, and ascribing significance levels to potential effects.
- 13.2.2 Consultation has also played a key role in this, with stakeholders and statutory bodies inputting to the methodologies and scope of assessments to ensure that all relevant issues have been fully considered. This ES is a full and detailed summary of the assessments carried out and the ES clearly identifies significant effects, where these are considered likely to occur, as well as any necessary mitigation measures to reduce such effects to acceptable levels.

13.3 Key conclusions of the assessment

- 13.3.1 Based on the results of the EIA undertaken against the 'maximum design scenario' and reported in this ES, the onshore components of Thanet Extension are predicted to result in a limited number of significant adverse effects. These are listed in the following tables (Table 13.1 to Table 13.10) along with proposed additional mitigation measures, where appropriate, and the residual significance once the proposed additional mitigation has been applied.

13.4 Summary of potential effects

Table 13.1 Summary of predicted effects on landscape and visual receptors

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent / reversible
Construction					
<i>Physical landscape effects</i>					
Trees and scrub	Medium	Options 1, 2, and 3 – Medium	Not Significant	Short-term	Reversible
Coastal Groundcover	Medium	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
<i>Substation landscape character effects</i>					
LCA 4 - The Sandwich Corridor	Low	Medium - Low	Not Significant	Short-term	Reversible
LCA 6 - Sandwich Bay	Medium - Low	Low	Not Significant	Short-term	Reversible
<i>Cable route and landfall landscape character effects</i>					
LCA F1 - Pegwell Bay	Medium – High	Options 1, 2, and 3 – Medium – High	Significant	Short-term	Reversible
LCA E1 – Stour Marshes	Medium – Low	Options 1, 2, and 3 – Negligible	No Effect	N/A	N/A
LCA 4 - The Sandwich Corridor	Low	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
<i>Substation visual effects</i>					
Viewpoint 1 - A256 (Richborough Port Roundabout)	Road users (A256): low; and walkers (England Coast Path and Regional Cycle Route 15): Medium	High	Significant	Short-term	Reversible

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent / reversible
Viewpoint 2 - Saxon Shore Way (South)	Walkers (Saxon Shore Way): Medium - Low	Medium	Not Significant	Short-term	Reversible
Viewpoint 4 - Sandwich Flats (England Coast Path)	Walkers (England Coast Path, Sandwich Flats): Medium	Medium - Negligible	Not Significant	Short-term	Reversible
Viewpoint 6 - Richborough Castle	Visitors: Medium	Low	Not Significant	Short-term	Reversible
Viewpoint 7 - A299, Thorne Hill	Road Users: Low	Medium - Low	Not Significant	Short-term	Reversible
Viewpoint 9 – Pegwell, promenade	Visitors, residents, walkers (Thanet Coastline Path, Viking Coastal Trail, England Coast Path and RCR15): Medium - High	Medium - Low	Not Significant	Short-term	Reversible
<i>Cable route and landfall visual effects</i>					
Viewpoint 10 - Pegwell Bay Country Park near the bird hide	walkers (Thanet Coastline Path and England Coast Path): Medium - High	Option 1 – Low	Not Significant	Short-term	Reversible
		Options 2 and 3 – Medium - High	Significant	Short-term	Reversible
Viewpoint 11 - Cycle route and path adjacent to Sandwich Road	Walkers/ Cyclists (RCR15): Medium - Low	Options 1, 2, and 3 – Medium - High	Not Significant	Short-term	Reversible
Viewpoint 12 – Cycle route and path near Sandwich Road access	Walkers/ Cyclists (RCR15): Medium - Low	Options 1, 2, and 3 – Medium - High	Not Significant	Short-term	Reversible
Viewpoint 13 – Sandwich Road	Road Users (Sandwich Road): Medium - Low	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
O&M					
<i>Physical landscape effects</i>					

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent / reversible
Trees and scrub	Medium	Options 1, 2, and 3 – Medium	Not Significant	Long-term	Permanent
Coastal Groundcover	Medium	Options 1, 2, and 3 – Low	Not Significant	Long-term	Permanent
<i>Substation landscape character effects</i>					
LCA 4 - The Sandwich Corridor	Low	Medium - Low	Not Significant	Long-term	Reversible
LCA 6 - Sandwich Bay	Medium - Low	Low	Not Significant	Long-term	Reversible
<i>Cable route and landfall landscape character effects</i>					
LCA F1 - Pegwell Bay	Medium – High	Options 1, 2, and 3 – Low	Not Significant	Long-term	Permanent
LCA E1 – Stour Marshes	Medium – Low	Options 1, 2, and 3 – No Change	No Effect	N/A	N/A
LCA 4 - The Sandwich Corridor	Low	Options 1, 2, and 3 – Negligible	Not Significant	Long-term	Permanent
<i>Substation visual effects</i>					
Viewpoint 1 - A256 (Richborough Port Roundabout)	Road users (A256): low	Medium – High (year 1) Medium (year 15) Negligible (year 25)	Not Significant (years 1, 15 & 25)	Long-term	Reversible
	Walkers (England Coast Path, Regional Cycle Route 15): Medium - Low				
Viewpoint 2 - Saxon Shore Way (South)	Walkers (Saxon Shore Way): Medium - Low	Medium	Not Significant	Long-term	Reversible
Viewpoint 4 - Sandwich Flats (England Coast Path)	Walkers (England Coast Path, Sandwich Flats): Medium	Medium to Negligible	Not Significant	Long-term	Reversible
Viewpoint 6 - Richborough Castle	Visitors: Medium	Low	Not Significant	Long-term	Reversible

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent / reversible
Viewpoint 7 - A299, Thorne Hill	Road Users: Low	Medium - Low	Not Significant	Long-term	Reversible
Viewpoint 9 – Pegwell, promenade	Visitors, residents, walkers (Thanet Coastline Path, Viking Coastal Trail, England Coast Path and RCR15): Medium - High	Low	Not Significant	Long-term	Reversible
<i>Cable route and landfall visual effects</i>					
Viewpoint 10 - Pegwell Bay Country Park near the bird hide	walkers (Thanet Coastline Path, England Coast Path): Medium - High	Options 1 and 3 – No Change	No Effect	N/A	N/A
		Option 2 – Medium	Not Significant	Long-term	Permanent
Viewpoint 11 - Cycle route and path adjacent to Sandwich Road	Walkers/ Cyclists (RCR15): Medium - Low	Options 1 and 3 – No Change	No Effect	N/A	N/A
		Option 2 – Medium - Low	Not Significant	Long-term	Permanent
Viewpoint 12 – Cycle route and path near Sandwich Road access	Walkers/ Cyclists (RCR15): Medium - Low	Options 1 and 3 – No Change	No Effect	N/A	N/A
		Option 2 – Medium - Low	Not Significant	Long-term	Permanent
Viewpoint 13 – Sandwich Road	Road Users (Sandwich Road): Medium - Low	Option 1, 2 and 3 – No change	No Effect	N/A	N/A
Decommissioning					
<i>Physical landscape effects</i>					
Trees and scrub	Medium	Options 1, 2, and 3 – No Change	No Effect	N/A	N/A

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent / reversible
Coastal Groundcover	Medium	Options 1, 2, and 3 – Low	No Effect	N/A	N/A
<i>Substation landscape character effects</i>					
LCA 4 - The Sandwich Corridor	Low	Medium - Low	Not Significant	Short-term	Reversible
LCA 6 - Sandwich Bay	Medium - Low	Low	Not Significant	Short-term	Reversible
<i>Cable route and landfall landscape character effects</i>					
LCA F1 - Pegwell Bay	Medium – High	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
LCA E1 – Stour Marshes	Medium – Low	Options 1, 2, and 3 – Negligible	No Effect	N/A	N/A
LCA 4 - The Sandwich Corridor	Low	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
<i>Substation visual effects</i>					
Viewpoint 1 - A256 (Richborough Port Roundabout)	Road users (A256): low; and walkers (England Coast Path and Regional Cycle Route 15): Medium	Medium	Not Significant	Short-term	Reversible
Viewpoint 2 - Saxon Shore Way (South)	Walkers (Saxon Shore Way): Medium - Low	Medium	Not Significant	Short-term	Reversible
Viewpoint 4 - Sandwich Flats (England Coast Path)	Walkers (England Coast Path, Sandwich Flats): Medium	Medium - Negligible	Not Significant	Short-term	Reversible
Viewpoint 6 - Richborough Castle	Visitors: Medium	Low	Not Significant	Short-term	Reversible
Viewpoint 7 - A299, Thorne Hill	Road Users: Low	Medium - Low	Not Significant	Short-term	Reversible

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent / reversible
Viewpoint 9 – Pegwell, promenade	Visitors, residents, walkers (Thanet Coastline Path, Viking Coastal Trail, England Coast Path and RCR15): Medium - High	Medium - Low	Not Significant	Short-term	Reversible
<i>Cable route and landfall visual effects</i>					
Viewpoint 10 - Pegwell Bay Country Park near the bird hide	walkers (Thanet Coastline Path and England Coast Path): Medium - High	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible
Viewpoint 11 - Cycle route and path adjacent to Sandwich Road	Walkers/ Cyclists (RCR15): Medium - Low	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible
Viewpoint 12 – Cycle route and path near Sandwich Road access	Walkers/ Cyclists (RCR15): Medium - Low	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible
Viewpoint 13 – Sandwich Road	Road Users (Sandwich Road): Medium - Low	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible

Table 13.2 Summary of predicted effects on socio-economics

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Impact of construction activity on direct and indirect employment creation in the construction supply chain.	<i>UK study area</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance
Impact of construction activity on direct and indirect GVA creation in the construction supply chain.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance
Impact on access to construction-related employment for local residents.	<i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>Kent study area:</i> Minor beneficial significance
Impact on the potential for employment to result in displacement of workers in other industries.	<i>Kent study area:</i> Minor adverse significance	No mitigation measures are required.	<i>Kent study area:</i> Minor adverse significance
Impact on the demand for housing accommodation and local services.	<i>Kent study area:</i> Minor adverse significance	No mitigation measures are required.	<i>Kent study area:</i> Minor adverse significance
O&M			
Impact of O&M activity on direct and indirect employment creation in the O&M supply chain.	<i>UK study area</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance
Impact of O&M activity on direct and indirect GVA creation in the O&M supply chain.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance
Impact on access to O&M-related employment for local residents.	<i>Kent study area:</i>	No mitigation measures are required.	<i>Kent study area:</i>

Description of impact	Effect	Additional mitigation measures	Residual effect
	Minor beneficial significance		Minor beneficial significance
Impact on the potential for employment to result in displacement of workers in other industries.	<i>Kent study area:</i> Minor adverse significance	No mitigation measures are required.	<i>Kent study area:</i> Minor adverse significance
Impact on the demand for housing accommodation and local services.	<i>Kent study area:</i> Minor adverse significance	No mitigation measures are required.	<i>Kent study area:</i> Minor adverse significance
Decommissioning			
Impact of decommissioning activity on direct and indirect employment creation in the supply chain.	<i>UK study area</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance
Impact of decommissioning activity on direct and indirect GVA creation in the supply chain.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>UK study area:</i> Minor beneficial significance <i>Kent study area:</i> Minor beneficial significance
Impact on access to decommissioning -related employment for local residents.	<i>Kent study area:</i> Minor beneficial significance	No mitigation measures are required.	<i>Kent study area:</i> Minor beneficial significance
Impact on the potential for employment to result in displacement of workers in other industries.	<i>Kent study area:</i> Minor adverse significance	No mitigation measures are required.	<i>Kent study area:</i> Minor adverse significance
Impact on the demand for housing accommodation and local services.	<i>Kent study area:</i> Minor adverse significance	No mitigation measures are required.	<i>Kent study area:</i> Minor adverse significance
Cumulative effects			
Cumulative impact across all receptors at Kent study area.	The projects identified for cumulative impacts at all levels are not expected to overlap at construction stage, and any employment effects at O&M phase are expected to be minimal. The cumulative impacts of these projects on displacement of workers alongside Thanet Extension are therefore expected to be negligible.	No mitigation measures required.	Negligible cumulative impact across all receptors.

Table 13.3 Summary of predicted effects on tourism and recreation

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Direct effects on onshore recreation and utility users	<ul style="list-style-type: none"> - Sensitivity varies from Low to High - Magnitude is Negligible to Low - Significance of the receptor is Minor adverse The construction of Thanet Extension is not expected to have a significant effect on the receptor.	Additional mitigation activity will be set out in the PRow Strategy (Document Review: 8.4) which will seek to further reduce the magnitude of the effects during construction activity (including effective diversions and use of manned crossings to ensure safety).	Additional mitigation measures will reduce the effects on the receptor to Negligible.
Direct effect on offshore and inshore recreational users	<ul style="list-style-type: none"> - Sensitivity varies from Low to Medium - Magnitude is Low across all receptors - Significance of the receptor is Minor adverse. The construction of Thanet Extension is not expected to have a significant effect on the receptor.	No mitigation measures are required.	<ul style="list-style-type: none"> - Sensitivity varies from Low to Medium - Magnitude is Low across all receptors - Significance of the receptor is Minor adverse. The construction of Thanet Extension is not expected to have a significant effect on the receptor.
Indirect effect on onshore and offshore recreational users	<ul style="list-style-type: none"> - Sensitivity varies from Low to Medium - Magnitude is Low across all receptors - Significance of the receptor is Minor adverse. The construction of Thanet Extension is not expected to have a significant effect on the receptor.	No mitigation measures are required.	<ul style="list-style-type: none"> - Sensitivity varies from Low to Medium - Magnitude is Low across all receptors - Significance of the receptor is Minor adverse. The construction of Thanet Extension is not expected to have a significant effect on the receptor.
Effects on tourism economy	<ul style="list-style-type: none"> - High sensitivity - Negligible magnitude Construction of Thanet Extension will be of Minor adverse significance on receptor.	No mitigation measures are required.	<ul style="list-style-type: none"> - High sensitivity - Negligible magnitude Construction of Thanet Extension will be of Minor adverse significance on receptor.
O&M			
Direct effects on onshore recreation and utility users	<ul style="list-style-type: none"> - Sensitivity varies from Low to High - Negligible magnitude 	Additional mitigation activity will be set out in the Landscape and Ecological Management Plan which will seek to reduce the magnitude of the effects and ensure that long-term access is maintained	<ul style="list-style-type: none"> - Sensitivity varies from Low to High - Negligible magnitude

Description of impact	Effect	Additional mitigation measures	Residual effect
	- Significance varies from Minor adverse to Negligible	and improved when compared to the current situation.	- Significance varies from Minor adverse to Negligible
Direct effect on offshore and inshore recreational users	- Sensitivity varies from Low to Medium - Negligible magnitude - Significance varies from Minor adverse to Negligible The O&M of Thanet Extension is not expected to have a significant effect on the receptor.	No mitigation measures are required.	- Sensitivity varies from Low to Medium - Negligible magnitude - Significance varies from Minor adverse to Negligible The O&M of Thanet Extension is not expected to have a significant effect on the receptor.
Indirect effect on onshore and offshore recreational users	- Sensitivity varies from Low to Medium - Negligible magnitude - Significance varies from Minor adverse to Negligible . The O&M of Thanet Extension is not expected to have significant effect on the receptor.	No mitigation measures are required.	- Sensitivity varies from Low to Medium - Negligible magnitude - Significance varies from Minor adverse to Negligible . The O&M of Thanet Extension is not expected to have a significant effect on the receptor.
Effects on tourism economy	- High sensitivity - Negligible magnitude The O&M of Thanet Extension will be of Minor adverse significance on receptor.	No mitigation measures are required.	- High sensitivity - Negligible magnitude The O&M of Thanet Extension will be of Minor adverse significance on receptor.
Decommissioning			
Direct effects on onshore recreation and utility users	- Sensitivity varies from Low to High - Magnitude varies from Low to Negligible The decommissioning of Thanet Extension is not expected to have a significant effect on the receptor.	No mitigation measures are required	- Sensitivity varies from Low to High - Magnitude varies from Low to Negligible - Significance varies from Minor adverse to Negligible . The decommissioning of Thanet Extension is not expected to have a significant effect on the receptor.
Direct effect on offshore and inshore recreational users	- Sensitivity varies from Low to Medium - Magnitude varies from Negligible to Low - Significance varies from Minor adverse to Negligible	No mitigation measures are required.	- Sensitivity varies from Low to Medium - Magnitude varies from Negligible to Low - Significance varies from Minor adverse to Negligible

Description of impact	Effect	Additional mitigation measures	Residual effect
	The decommissioning of Thanet Extension is not expected to have a significant effect on the receptor.		The decommissioning of Thanet Extension is not expected to have a significant effect on the receptor.
Indirect effect on onshore and offshore recreational users	<ul style="list-style-type: none"> - Sensitivity varies from Low to Medium - Magnitude varies from Negligible to Low - Significance varies from Minor adverse to Negligible. The decommissioning of Thanet Extension is not expected to have significant effect on the receptor.	No mitigation measures are required.	<ul style="list-style-type: none"> - Sensitivity varies from Low to Medium - Magnitude varies from Negligible to Low - Significance varies from Minor adverse to Negligible. The decommissioning of Thanet Extension is not expected to have significant effect on the receptor.
Effects on tourism economy	<ul style="list-style-type: none"> - High sensitivity - Negligible magnitude Decommissioning of Thanet Extension will be of Minor adverse significance on receptor.	No mitigation measures are required.	<ul style="list-style-type: none"> - High sensitivity - Negligible magnitude Decommissioning of Thanet Extension will be of Minor adverse significance on receptor.
Cumulative effects			
Cumulative impact across all receptors	The projects identified for cumulative impacts at all levels are not expected to overlap at construction stage, and any effects at O&M phase are not expected to be significant.	No mitigation measures required.	Negligible cumulative impact across all receptors.

Table 13.4 Summary of predicted effects on terrestrial ecology

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
Construction			
Thanet Coast and Sandwich Bay SPA – Non-breeding European golden plover and ruddy turnstone: <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Disturbance due to possible displacement of recreational users from Pegwell Bay Country Park	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Thanet Coast and Sandwich Bay Ramsar – non-breeding ruddy turnstone: <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Disturbance due to possible displacement of recreational users from Pegwell Bay Country Park	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Thanet Coast and Sandwich Bay Ramsar – wetland invertebrate assemblage: Temporary habitat loss/ disturbance	Not significant following implementation of embedded mitigation measures	n/a	Not significant

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
<p>Sandwich Bay and Hacklinge Marshes SSSI – aggregations of non-breeding birds:</p> <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) <p>Disturbance due to possible displacement of recreational users from Pegwell Bay Country Park</p>	<p>Passage ringed plover: Possible significant effect if works take place in favoured areas when peak numbers of birds are present (mid-April to May and August to September inclusive).</p> <p>Other species: Not significant following implementation of embedded mitigation measures</p>	<p>Passage ringed plover mitigation plan to be produced and agreed if works take place in favoured areas at times when peak numbers of birds are present (mid-April to May and August to September inclusive).</p> <p>n/a</p>	<p>Not significant</p>
<p>Sandwich Bay and Hacklinge Marshes SSSI – assemblage of breeding birds:</p> <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance <p>Disturbance (noise & vibration, visual, lighting)</p>	<p>Not significant following implementation of embedded mitigation measures</p>	<p>n/a</p>	<p>Not significant</p>
<p>Sandwich Bay and Hacklinge Marshes SSSI – invertebrate assemblage:</p> <ul style="list-style-type: none"> • Permanent habitat loss <p>Temporary habitat loss/ disturbance</p>	<p>Not significant following implementation of embedded mitigation measures</p>	<p>n/a</p>	<p>Not significant</p>
<p>Sandwich and Pegwell Bay NNR (receptors not covered elsewhere in assessment):</p> <p>Temporary habitat loss/ disturbance</p>	<p>Not significant following implementation of embedded mitigation measures</p>	<p>n/a</p>	<p>Not significant</p>
<p>A256 (Sandwich Road) Roadside Nature Reserve</p> <p>Temporary habitat loss/ disturbance</p>	<p>Not significant following implementation of embedded mitigation measures</p>	<p>n/a</p>	<p>Not significant</p>
<p>Ephemeral pools in Stonelees Nature Reserve</p> <ul style="list-style-type: none"> • Permanent habitat loss <p>Temporary habitat loss/ disturbance</p>	<p>Not significant following implementation of embedded mitigation measures</p>	<p>n/a</p>	<p>Not significant</p>

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
Ephemeral/ short perennial habitats within the proposed substation site and tenant relocation area: <ul style="list-style-type: none"> Permanent habitat loss Temporary habitat loss/ disturbance	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Terrestrial invertebrates – outside designated sites: <ul style="list-style-type: none"> Permanent habitat loss Temporary habitat loss/ disturbance	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Reptiles – slow-worm and viviparous lizard: <ul style="list-style-type: none"> Permanent habitat loss Temporary habitat loss/ disturbance Accidental killing/ injury	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Breeding birds – Schedule 1 species: <ul style="list-style-type: none"> Permanent habitat loss Temporary habitat loss/ disturbance Disturbance (noise & vibration, visual, lighting) Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Breeding birds – other species of conservation concern: <ul style="list-style-type: none"> Temporary habitat loss/ disturbance Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
Breeding birds – all other species: Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Non-breeding birds – lapwing: <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Disturbance due to possible displacement of recreational users from Pegwell Bay Country Park	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Non-breeding birds – other waterbird species: <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Disturbance due to possible displacement of recreational users from Pegwell Bay Country Park	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Bats: <ul style="list-style-type: none"> • Permanent habitat loss • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
O&M			

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
<p>Thanet Coast and Sandwich Bay SPA – Non-breeding European golden plover and ruddy turnstone:</p> <ul style="list-style-type: none"> Temporary habitat loss/ disturbance <p>Disturbance (noise & vibration, visual, lighting)</p>	Not significant following implementation of embedded mitigation measures	n/a	Not significant
<p>Thanet Coast and Sandwich Bay Ramsar – non-breeding ruddy turnstone:</p> <ul style="list-style-type: none"> Temporary habitat loss/ disturbance <p>Disturbance (noise & vibration, visual, lighting)</p>	Not significant following implementation of embedded mitigation measures	n/a	Not significant
<p>Thanet Coast and Sandwich Bay Ramsar – wetland invertebrate assemblage:</p> <p>Temporary habitat loss/ disturbance</p>	Not significant following implementation of embedded mitigation measures	n/a	Not significant
<p>Sandwich Bay and Hacklinge Marshes SSSI – aggregations of non-breeding birds:</p> <ul style="list-style-type: none"> Temporary habitat loss/ disturbance <p>Disturbance (noise & vibration, visual, lighting)</p>	<p>Passage ringed plover: Possible significant effect if planned maintenance works take place in favoured areas when peak numbers of birds are present (mid-April to May and August to September inclusive).</p> <p>Other species: Not significant following implementation of embedded mitigation measures</p>	<p>Passage ringed plover mitigation plan to be produced and agreed if planned maintenance works take place in favoured areas at times when peak numbers of birds are present (mid-April to May and August to September inclusive).</p> <p>n/a</p>	Not significant
<p>Sandwich Bay and Hacklinge Marshes SSSI – assemblage of breeding birds:</p> <ul style="list-style-type: none"> Temporary habitat loss/ disturbance <p>Disturbance (noise & vibration, visual, lighting)</p>	Not significant following implementation of embedded mitigation measures	n/a	Not significant
<p>Sandwich Bay and Hacklinge Marshes SSSI – invertebrate assemblage:</p> <p>Temporary habitat loss/ disturbance</p>	Not significant following implementation of embedded mitigation measures	n/a	Not significant
<p>Sandwich and Pegwell Bay NNR (receptors not covered elsewhere in assessment):</p> <p>Temporary habitat loss/ disturbance</p>	Not significant following implementation of embedded mitigation measures	n/a	Not significant

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
Ephemeral pools in Stonelees Nature Reserve Temporary habitat loss/ disturbance	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Ephemeral/ short perennial habitats within the proposed substation site and tenant relocation area: Temporary habitat loss/ disturbance	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Terrestrial invertebrates – outside designated sites: Temporary habitat loss/ disturbance	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Reptiles – slow-worm and viviparous lizard: • Temporary habitat loss/ disturbance Accidental killing/ injury	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Breeding birds – Schedule 1 species: • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Breeding birds – other species of conservation concern: • Temporary habitat loss/ disturbance Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Breeding birds – all other species: Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
Non-breeding birds – lapwing: <ul style="list-style-type: none"> • Temporary habitat loss/ disturbance Disturbance (noise & vibration, visual, lighting)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Non-breeding birds – other waterbird species: <ul style="list-style-type: none"> • Temporary habitat loss/ disturbance Disturbance (noise & vibration, visual, lighting)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Bats: <ul style="list-style-type: none"> • Temporary habitat loss/ disturbance • Disturbance (noise & vibration, visual, lighting) Accidental killing/ injury (in respect of active nests)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Decommissioning			
The predicted effects of decommissioning are considered to be the same or less than those predicted for the construction phase. Following the implementation of embedded mitigation measures (and additional mitigation for passage ringed plover, if required) no significant residual effects are predicted.			
Cumulative effects			
Loss or change (permanent and/ or temporary) to qualifying or notified habitats within designated sites.	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Loss or change (permanent and/ or temporary) to habitats used by qualifying or notified faunal species for designated sites.	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Loss or change (permanent and/ or temporary) to important habitats (where not included as qualifying or notified features for designated sites)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Disturbance to qualifying or notified faunal species for designated sites	Not significant following implementation of embedded mitigation measures	n/a	Not significant

Description of Impact	Effect	Additional Mitigation Measure	Residual effect:
Disturbance to important faunal species populations (where not included as qualifying or notified features for designated sites)	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Displacement of recreational users into areas where they could cause disturbance to non-breeding waterbirds, including qualifying or notified faunal species for designated sites	Not significant following implementation of embedded mitigation measures	n/a	Not significant
Accidental killing or injury to important faunal species populations	Not significant following implementation of embedded mitigation measures	n/a	Not significant

Table 13.5 Summary of predicted effects on ground conditions, flood risk and land use

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Effects on human health during construction works through disturbance and mobilisation of existing, contaminated soil and/or groundwater, generation of dust and fibres, and the potential need to remove existing underground tanks and pipeline.	Subject to the incorporation of good working practices and confirmation of the detailed design, embedded mitigation measures are sufficient to reduce the potential effect to Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor Significance (not significant).
Effects on human health from construction activities, particularly at the substation, through spillages of oils and chemicals.	With embedded mitigation in place the potential effect is of Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor Significance (not significant).
Effects on human health and property during construction works through discovery and potential explosion of UXO, ingress of ground and landfill gas, and inflows of groundwater.	Subject to incorporation of good working practices and confirmation of the detailed design, embedded mitigation measures are sufficient to manage the potential effect to Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor Significance (not significant).
Effects on human health and property during construction works due to existing sea wall amendment/ breakthrough and escape of landfill gases.	Subject to successful installation of a temporary cofferdam and incorporation of good working practices, and confirmation of the detailed design, embedded mitigation measures are sufficient to manage the potential effect to Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor Significance (not significant).
Pollution of controlled waters, WFD water bodies, designated conservation sites and off-site Grade 2 and Grade 3a soils from construction work through creation of pathways for the migration of potential contamination, soil disturbance and mobilisation of existing potential contamination, sediment laden-runoff and the construction of the Minster Stream crossing.	Subject to incorporation of good working practices and confirmation of the detailed design, embedded mitigation measures are sufficient to manage the potential effect to Minor to Negligible significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor to Negligible significance (not significant).
Pollution of controlled waters, WFD water bodies, designated conservation sites and off-site Grade 2 and Grade 3a soils during construction works through concrete batching and use of cement products, release of contaminants from backfilling and building materials, spillages of oils and chemicals, and removal of potential existing tanks at the National Grid connection point.	With embedded mitigation measures in place, the significance of the potential effects is Minor to Negligible .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor to Negligible significance (not significant).

Description of impact	Effect	Additional mitigation measures	Residual effect
Pollution of controlled waters and designated conservation sites during construction works through existing sea wall amendment/ breakthrough and subsequent escape of landfill contaminants.	Subject to incorporation of good working practices and confirmation of the detailed design, embedded mitigation measures are sufficient to manage the potential effect to Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor Significance (not significant).
Changes in the quantity of surface and groundwater abstractions, and flows to watercourses, WFD water bodies and designated conservation sites during construction works through changes in runoff/ infiltration rates and patterns/ new flow pathways associated with ground disturbance, and development of working areas during construction and changes in river baseflow from the dewatering of excavations.	With embedded mitigation measures in place, the significance of the potential effect is Minor to Negligible .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor to Negligible significance (not significant).
Effects on surface waters during construction works through the proposed watercourse crossing and changes in flow volumes associated with the discharge of dewatered groundwater.	With embedded mitigation measures in place, the significance of the potential effect is Minor .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Increased risk of coastal flooding towards historic landfill due to temporary sea wall works.	With embedded mitigation measures in place, the significance of the potential effect is Minor .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Volumetric displacement of flood water during construction works through the placement of temporary spoil mounds, construction compounds and hardstanding in flood plain areas.	Given the absence of flood risk, the significance of the potential effect is Minor .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms	Minor significance (not significant).
O&M			
Effects on human health during maintenance works through disturbance of any residual contamination, spillages of oils and chemicals, and previous inappropriate reuse/ use of contaminated fills and soils.	With embedded measures in place the magnitude of impact is Minor .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Effects on human health during maintenance works through ingress and accumulation of ground and landfill gas in buildings and facilities.	Subject to incorporation of good working practices and confirmation of the detailed design, embedded mitigation measures are sufficient to manage the potential effect to Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).

Description of impact	Effect	Additional mitigation measures	Residual effect
Effects on property from location of infrastructure and maintenance works through ground and landfill gas ingress and accumulation in buildings.	Subject to incorporation of good working practices and confirmation of the detailed design, embedded mitigation measures are sufficient to manage the potential effect to Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Effect on property from location of infrastructure and maintenance works through previous inappropriate reuse/ use of contaminated fills and soils, aggressive ground conditions and settlement of infrastructure.	With embedded mitigation measures in place the potential effect is of Minor significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Pollution of controlled waters, WFD water bodies, designated conservation sites and off-site Grade 2 and Grade 3a soils during maintenance works through spillages of oils and chemicals, landfill leakage and previous inappropriate reuse/ use of contaminated fills and soils.	With embedded mitigation measures in place the potential effect is of Minor to Negligible significance.	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor to Negligible significance (not significant).
Effects on surface waters associated with the proposed watercourse crossing.	With embedded mitigation measures in place the significance of potential effects is Minor	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Changes in patterns and rates of infiltration and run-off arising from development of a below ground earth grid, substation support structures and working areas.	With embedded mitigation measures in place the significance of potential effects is Minor .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Volumetric displacement of flood water associated with the increase in impermeable footprint in the vicinity of the substation.	With embedded mitigation measures in place the significance of potential effects is Minor .	No additional mitigation measures are required given that the potential (post-embedded mitigation) effect is not significant in EIA terms.	Minor significance (not significant).
Decommissioning			
It is expected that decommissioning phase effects would, at worst, be similar to construction phase effects.			

Table 13.6 Summary of predicted effects on the historic environment

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Disturbance of elements of the anti-invasion defences at Pegwell Bay.	No effect predicted	No further mitigation is proposed as archaeological works have been considered as embedded measures	No effect predicted
Disturbance of elements of the Boarded Groin and associated floodbanks.	No effect predicted	No further mitigation is proposed as archaeological works have been considered as embedded measures	No effect predicted
Disturbance of Richborough Port and related heritage assets	No effect predicted	No further mitigation is proposed as archaeological works have been considered as embedded measures	No effect predicted
O&M			
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Abbot's Wall.	No effect predicted	No mitigation is proposed	No effect predicted.
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Boarded Groin.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Broadstairs Conservation Area.	No effect predicted	No mitigation is proposed.	No effect predicted.
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Bleak House (NHLE 1239493) and other listed buildings at Broadstairs identified at Table 7.9.	No effect predicted	No mitigation is proposed.	No effect predicted

Description of impact	Effect	Additional mitigation measures	Residual effect
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: St Peter's Church, Sandwich.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Clifftop Conservation Area and Walpole Bay Tidal Pool.	Potential Minor effect: not significant effect.	No mitigation is proposed.	Potential Minor effect: Not significant.
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Clifftop Conservation Area as identified at Table 7.9.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: scheduled double ring ditch and two enclosures north-west of Danes Court (NHLE 1004230).	No effect predicted	No mitigation is proposed	No effect predicted.
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: scheduled Anglo-Saxon cemetery, Dane Valley Road (NHLE 1003601).	No effect predicted	No mitigation is proposed	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Deal Middle Street Conservation Area, the Scheduled Artillery Castle and Selected Grade II Listed Buildings.	No effect predicted	No mitigation is proposed.	No effect predicted

Description of impact	Effect	Additional mitigation measures	Residual effect
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Dover Castle.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Dover Patrol Monument.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: non-designated enclosure at Ebbsfleet Hill.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Kentlands and The Lodge at Sandwich Bay Estate.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Kingsgate Conservation Area, Holland End, Holland House and Kingsgate Castle	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: other listed buildings in Kingsgate Conservation Area as identified in Table 7.9..	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Grade II listed Port Regis School, Kings Gate and Hackemdown Tower	No effect predicted	No mitigation is proposed.	No effect predicted

Description of impact	Effect	Additional mitigation measures	Residual effect
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Margate Conservation Area.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Paragon Court (NHLE 1088960).	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: other listed buildings within the Margate Conservation Area as identified at Table 7.9.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Margate Seafront Conservation Area.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: North Foreland Lighthouse including attached Lighthouse Keepers' Houses (Grade II Listed, NHLE 1222802).	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Pegwell Bay WWII Anti-Invasion defences (Grade II Listed, NHLE 1413803).	No effect predicted	No further mitigation is proposed as exclusion zones and planting are considered as embedded mitigation.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such	No effect predicted	No mitigation is proposed.	No effect predicted

Description of impact	Effect	Additional mitigation measures	Residual effect
that the asset loses significance: Ramsgate Conservation Area and selected listed buildings.			
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Reculver Saxon Shore Fort, Anglo-Saxon Monastery and Associated Remains.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Richborough Castle, Saxon Shore Fort, Roman Port and Associated Remains.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Royal Sea Bathing Hospital, Margate.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Sandown Castle.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Seven Stones House.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: South Foreland Lighthouse.	No effect predicted	No mitigation is proposed.	No effect predicted

Description of impact	Effect	Additional mitigation measures	Residual effect
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Walmer Artillery Castle.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Walmer Seafront Conservation Area	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: setting and historic landscape character of the Wantsum Channel.	No effect predicted	No mitigation is proposed.	No effect predicted
Change in the Setting causing a reduction in the contribution of that setting to the asset, such that the asset loses significance: Westgate-on-Sea Conservation Area and Grade II Listed Westgate-on-Sea British Legion War Memorial.	No effect predicted	No mitigation is proposed.	No effect predicted

Table 13.7 Summary of predicted effects on traffic and access

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Driver delay	Minor (not significant)	None required.	Minor (not significant)
Public transport delay	Minor (not significant)	None required.	Minor (not significant)
Pedestrian amenity	Minor (not significant)	None required.	Minor (not significant)
Pedestrian severance	Minor (not significant)	None required.	Minor (not significant)
PRoW	Minor (not significant)	None required.	Minor (not significant)
Accidents and safety	Minor (not significant)	None required.	Minor (not significant)
O&M			
Due to the low number of vehicle trips the assessment of O&M has been scoped out.			
Decommissioning			
Due to uncertainty in final vehicle numbers associated with this activity, any assessment has been scoped out and would be assessed when required.			

Table 13.8 Summary of predicted effects on air quality

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Increase in road traffic generated air quality pollutant concentrations from construction traffic – human receptor locations	Negligible (not significant)	None required	Negligible (not significant)
Increase in road traffic generated air quality pollutant concentrations – ecological habitats	Negligible (not significant)	None required	Negligible (not significant)
Construction dust impacts – human receptors	Negligible (not significant)	None required	Negligible (not significant)
Construction dust impacts – ecological habitats	Negligible (not significant)	None required	Negligible (not significant)
Construction odour impacts	Negligible (not significant)	None required	Negligible (not significant)
O&M			
Increase in road traffic generated air quality pollutant concentrations – human receptor locations	Negligible (not significant)	None required	Negligible (not significant)
Increase in road traffic generated air quality pollutant concentrations – ecological receptor locations	Negligible (not significant)	None required	Negligible (not significant)
Decommissioning			
Demolition dust impacts – human receptors	Negligible (not significant)	None required	Negligible (not significant)
Demolition dust impacts – ecological habitats	Negligible (not significant)	None required	Negligible (not significant)
Cumulative effects			
Cumulative impacts of construction dust effects for all committed developments in the area	Negligible (not significant)	None Required	Negligible (not significant)
Cumulative impacts of demolition dust effects during decommissioning for all cumulative developments in the area	Negligible (not significant)	None Required	Negligible (not significant)

Description of impact	Effect	Additional mitigation measures	Residual effect
Cumulative impacts of increase in construction road traffic generated air quality pollutant concentrations – human receptor locations	Negligible (not significant)	None required	Negligible (not significant)
Cumulative impacts of increase in construction road traffic generated air quality pollutant concentrations – ecological receptor locations	Negligible (not significant)	None required	Negligible (not significant)

Table 13.9 Summary of predicted effects on noise and vibration

Description of impact	Effect	Additional mitigation measures	Residual effect
Construction			
Construction noise	Minor (not significant)	None required	Minor (not significant)
Construction traffic noise	Minor (not significant)	None required	Minor (not significant)
Construction vibration	Minor (not significant)	None required	Minor (not significant)
Offshore piling noise	Minor (not significant)	None required	Minor (not significant)
O&M			
Operational noise from fixed plant	Minor (not significant)	None required	Minor (not significant)
Decommissioning			
Construction noise	Minor (not significant)	None required	Minor (not significant)
Construction traffic noise	Minor (not significant)	None required	Minor (not significant)
Cumulative effects			
None	N/A	N/A	N/A

Table 13.10 Summary of predicted effects on aviation and radar

Description of impact	Effect	Impact Significance	Additional mitigation measures	Residual effect
WTG and the infrastructure required in the construction of the Site may present a physical obstruction and effect helicopter SAR and NPAS operations	Obstructions can be difficult to see from the air, particularly in poor meteorological conditions leading to potential increased collision risk	Minor adverse	Not Required	Minor adverse
Operation				
The presence of WTGs has the potential to interfere with the LSA PSR system.	WTG clutter appearing on a radar display can affect the safe provision of ATS by LSA as it can mask unidentified aircraft from the air traffic controller and/ or prevent accurate identification of aircraft under control or the identification/ tracking of conflicting aircraft.	Moderate adverse	The implementation of a NAIZ software function to the LSA PSR system is considered an appropriate mitigation strategy by LSA and is agreed by VWPL. Consultation with LSA has been undertaken, details are at Table 11.2.	Negligible
WTG considered as physical obstructions to flight operations.	WTG can be difficult to see from the air, particularly in poor meteorological conditions leading to potential increased collision risk for NPAS and SAR flight operations.	Minor adverse	Not Required.	Minor adverse
Decommissioning				
WTG and the infrastructure required in the decommissioning of the Site may present a physical obstruction and effect helicopter SAR and NPAS operations	Obstructions can be difficult to see from the air, particularly in poor meteorological conditions leading to potential increased collision risk	Minor adverse	Not Required	Negligible
The presence of WTGs has the potential to interfere with the LSA PSR system.	WTG clutter appearing on a radar display can affect the safe provision of ATS by LSA as it can mask unidentified aircraft from the air traffic controller and/ or prevent accurate identification of aircraft under control or the identification/ tracking of conflicting aircraft.	Moderate adverse	Technical mitigation for the impacts of WTG detectability by the LSA PSR system will remain operational until the last WTG is decommissioned and incapable of rotation.	Negligible
Cumulative effects				
All other WTG developments (offshore and onshore) that are unmitigated and within operational range and within radar line of sight to the LSA PSR may lead to a cumulative effect on the system.	All WTG that do not benefit from any operational or technical mitigation to resolve effects would combine to cumulatively affect the LSA PSR system.	Moderate adverse	The implementation of a NAIZ software function to the LSA PSR system is considered an appropriate mitigation strategy. The residual impact of the cumulative impact is reduced to negligible once mitigation has been put in place.	Negligible