



# The Kemsley Mill K4 Combined Heat and Power Generating Station Development Consent Order

PINS Ref: EN010090



## Habitat Regulations Assessment Screening Matrices

Document 8.4

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The logo for RPS, consisting of the letters "RPS" in white, bold, sans-serif font, set against a dark blue rounded rectangular background.

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## K4 CHP – Habitats Regulations Assessment Screening Matrices

### Matrix 1 – Screening of Likely Significant Effects: The Swale SPA

Name of European Site	The Swale Special Protection Area																			
EU Code	UK9012011																			
Distance to Proposal site	275 m																			
European site features	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality - dust		Air quality - emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Regularly supporting more than 1% of the GB breeding population of an Annex 1 species in summer – <b>Avocet</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	√ <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	√ <sub>j</sub>	√ <sub>j</sub>	√ <sub>k</sub>	√ <sub>k</sub>	x <sub>l</sub>	x <sub>l</sub>
Regularly used by 1% or more of the GB population of an Annex 1 species during passage – <b>Redshank</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	√ <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	√ <sub>j</sub>	√ <sub>j</sub>	√ <sub>k</sub>	√ <sub>k</sub>	x <sub>l</sub>	x <sub>l</sub>

Migratory Wintering species regularly occurring in internationally-important numbers over winter – <b>Dark bellied brent geese</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Migratory Wintering species regularly occurring in internationally-important numbers over winter – <b>Grey Plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Migratory Wintering species regularly occurring in internationally-important numbers over winter – <b>Dunlin</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Regularly supporting over 20,000 waterfowl over winter	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Diverse assemblage of breeding birds	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
<b>b.</b>	Given the distance from the SPA, the DCO application will result in no change to current management regimes of any supporting habitat of The Swale SPA during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and >200 m from The Swale SPA. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 275 m from The Swale SPA and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the Swale SPA site is over 275 metres to the north east of the Proposal site and therefore outside the area potentially most affected. However, likely significant effects cannot be excluded without further assessment and/or application of mitigation as necessary.
<b>f.</b>	No dust-generating activities are associated with the operational of the proposed K4. Therefore, no likely significant effect is predicted on any interest feature.
<b>g.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>h.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>i.</b>	The Proposal site is currently hard standing and drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the Swale SPA or area which supports an SPA species, including to the reedbed to the east of the Proposal Site, will occur as a result of the proposed development (ref HRAR para 5.43).
<b>j.</b>	In the absence of mitigation, likely significant effects on The Swale SPA due to changes in water quality cannot be excluded due to the relatively close proximity of the nearest boundary to the proposed site.
<b>k.</b>	Because of the relative complexity of these issues, and their ability to have impacts on waterbirds within several hundred metres depending on the nature of the activity and the receptors, likely significant effects due to disturbance cannot be excluded at The Swale SPA without further assessment and/or application of mitigation as necessary.

<b>I.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).
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**Matrix 2 – Screening of Likely Significant Effects: The Swale Ramsar**

<b>Name of European Site</b>	The Swale Ramsar																			
<b>EU Code</b>	N/A																			
<b>Distance to Proposal site</b>	275 m																			
<b>European site features</b>	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality - dust		Air quality - emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Ramsar Criterion 2 - <b>Nationally rare and scarce plant species</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	√ <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	√ <sub>j</sub>	√ <sub>j</sub>	√ <sub>k</sub>	√ <sub>k</sub>	x <sub>l</sub>	x <sub>l</sub>
Ramsar Criterion 2 - <b>Red Data Book invertebrates</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	√ <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	√ <sub>j</sub>	√ <sub>j</sub>	√ <sub>k</sub>	√ <sub>k</sub>	x <sub>l</sub>	x <sub>l</sub>

Ramsar Criterion 5 – <b>Overwinter assemblage of international importance</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance <b>Redshank</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Dark bellied brent geese</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Grey Plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	√ e	x f	x g	x h	x i	x i	√ j	√ j	√ k	√ k	x l	x l

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. No habitat occurs on site that could support interest feature invertebrates or plants. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
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<b>b.</b>	Given the distance from the Ramsar site, the DCO application will result in no change to current management regimes of any supporting habitat of The Swale Ramsar during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and >200 m from The Swale Ramsar. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 275 m from The Swale Ramsar and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the Swale Ramsar site is over 275 metres to the north east of the Proposal site and therefore outside the area potentially most affected. However, likely significant effects cannot be excluded without further assessment and/or application of mitigation as necessary.
<b>f.</b>	No dust-generating activities are associated with the operational of the proposed K4. Therefore, no likely significant effect is predicted on any interest feature.
<b>g.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>h.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>i.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the Swale Ramsar will occur as a result of the proposed development (ref HRAR para 5.43).
<b>j.</b>	In the absence of mitigation, likely significant effects on The Swale Ramsar due to changes in water quality cannot be excluded due to the relatively close proximity of the nearest boundary to the proposed site.
<b>k.</b>	Because of the relative complexity of these issues, and their ability to have impacts on waterbirds within several hundred metres depending on the nature of the activity and the receptors, likely significant effects due to disturbance cannot be excluded at The Swale Ramsar without further assessment and/or application of mitigation as necessary.
<b>l.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).

**Matrix 3 – Screening of Likely Significant Effects: Medway Estuary and Marshes SPA**

<b>Name of European Site</b>	Medway Estuary and Marshes SPA																			
<b>EU Code</b>	UK9012031																			
<b>Distance to Proposal site</b>	2.1 km																			
	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality - dust		Air quality – emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
<b>European site features</b>	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Regularly supporting more than 1% of the GB breeding population of an Annex 1 species in summer – <b>Avocet</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Regularly supporting more than 1% of the GB breeding population of an Annex 1 species in summer – <b>Little tern</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Annex 1 Species Regularly	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>



Wintering in Numbers of European Importance - <b>Avocet</b>																				
Annex 1 Species Regularly on Passage in Numbers of European Importance – <b>Grey Plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Annex 1 Species Regularly on Passage in Numbers of European Importance – <b>Common Redshank</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Migratory Species Regularly Wintering in Numbers of European Importance - <b>Dark-bellied Brent Goose</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Migratory Species Regularly Wintering in Numbers of European Importance - <b>Shelduck</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Migratory Species Regularly Wintering in	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

Numbers of European Importance - <b>Pintail</b>																				
Migratory Species Regularly Wintering in Numbers of European Importance - <b>Ringed plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Migratory Species Regularly Wintering in Numbers of European Importance - <b>Dunlin</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Regularly supports in winter a diverse assemblage of wintering species	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Regularly supports over 20,000 waterfowl	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Diverse assemblage of breeding migratory waterfowl	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
<b>b.</b>	Given the distance from the SPA, the DCO application will result in no change to current management regimes of any supporting habitat of the SPA during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and >2 km from the Medway Estuary & Marshes SPA. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 2.1 km from the Medway Estuary and Marshes SPA and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the SPA site is over 2 km to the north east of the Proposal Site and therefore outside the area potentially affected by any dust. Therefore, no likely significant effect is predicted on any interest feature.
<b>f.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>g.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>h.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the SPA or area which supports an SPA species will occur as a result of the proposed development (ref HRAR para 5.43).
<b>i.</b>	Given the distance between the proposal site and the SPA, no changes to water quality are anticipated (ref HRAR para 5.42).
<b>j.</b>	Given the distance between the proposal site and the SPA, no likely significant effect on any interest feature is predicted from disturbance (ref HRAR para 5.45).
<b>k.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).

**Matrix 4 – Screening of Likely Significant Effects: Medway Estuary and Marshes Ramsar**

Name of European Site		Medway Estuary and Marshes Ramsar																																						
EU Code		N/A																																						
Distance to Proposal site		2.1 km																																						
European site features	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality - dust		Air quality – emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species																					
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O																				
Ramsar Criterion 2 - Nationally rare and scarce plant species	x	a	x	a	x	b	x	b	x	c	x	c	x	d	x	d	x	e	x	e	x	f	x	g	x	h	x	h	x	i	x	i	x	j	x	j	x	k	x	k
Ramsar Criterion 2 - Red Data Book invertebrates	x	a	x	a	x	b	x	b	x	c	x	c	x	d	x	d	x	e	x	e	x	f	x	g	x	h	x	h	x	i	x	i	x	j	x	j	x	k	x	k
Ramsar Criterion 5 – Overwinter assemblage of international importance	x	a	x	a	x	b	x	b	x	c	x	c	x	d	x	d	x	e	x	e	x	f	x	g	x	h	x	h	x	i	x	i	x	j	x	j	x	k	x	k
Ramsar Criterion 6 - Regularly on Passage in Numbers of International	x	a	x	a	x	b	x	b	x	c	x	c	x	d	x	d	x	e	x	e	x	f	x	g	x	h	x	h	x	i	x	i	x	j	x	j	x	k	x	k

Importance – <b>Grey Plover</b>																				
Ramsar Criterion 6 - Species Regularly on Passage in Numbers of International Importance – <b>Common Redshank</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Dark-bellied Brent Goose</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Shelduck</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Pintail</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Regularly Wintering in Numbers of	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

International Importance - <b>Ringed plover</b>																				
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Knot</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Dunlin</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
<b>b.</b>	Given the distance from the Ramsar, the DCO application will result in no change to current management regimes of any supporting habitat of the Ramsar during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and >2 km from the Medway Estuary & Marshes Ramsar. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 2.1 km from the Medway Estuary and Marshes Ramsar and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the Ramsar site is over 2 km to the north east of the Proposal Site and therefore outside the area potentially affected by any dust. Therefore, no likely significant effect is predicted on any interest feature.

<b>f.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>g.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>h.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the Ramsar or area which supports a Ramsar species will occur as a result of the proposed development (ref HRAR para 5.43).
<b>i.</b>	Given the distance between the proposal site and the Ramsar, no changes to water quality are anticipated (ref HRAR para 5.42).
<b>j.</b>	Given the distance between the proposal site and the Ramsar, no likely significant effect on any interest feature is predicted from disturbance (ref HRAR para 5.45).
<b>k.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).

**Matrix 5 – Screening of Likely Significant Effects: Thames Estuary and Marshes SPA**

<b>Name of European Site</b>	Thames Estuary and Marshes SPA																			
<b>EU Code</b>	UK9012021																			
<b>Distance to Proposal site</b>	10 km																			
<b>European site features</b>	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality – dust		Air quality - emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Annex 1 Species Regularly Wintering in Numbers of European Importance - <b>Avocet</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Annex 1 Species Regularly Wintering in Numbers of European Importance – <b>Hen harrier</b>	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Migratory species regularly occurring on passage –	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>



<b>Ringed plover</b>																				
Migratory Species Regularly Wintering in Numbers of European Importance - <b>Ringed plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Assemblage regularly supporting over 20,000 waterfowl	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

### Evidence supporting conclusions

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
<b>b.</b>	Given the distance from the SPA, the DCO application will result in no change to current management regimes of any supporting habitat of the SPA during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and 10 km from the Thames Estuary & Marshes SPA. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 10 km from the Thames Estuary and Marshes SPA and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the SPA site is 10 km to the north east of the Proposal Site and therefore outside the area potentially affected by any dust. Therefore, no likely significant effect is predicted on any interest feature.

<b>f.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>g.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>h.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the SPA or area which supports an SPA species will occur as a result of the proposed development (ref HRAR para 5.43).
<b>i.</b>	Given the distance between the proposal site and the SPA, no changes to water quality are anticipated (ref HRAR para 5.42).
<b>j.</b>	Given the distance between the proposal site and the SPA, no likely significant effect on any interest feature is predicted from disturbance (ref HRAR para 5.45).
<b>k.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).

**Matrix 6 – Screening of Likely Significant Effects: Thames Estuary and Marshes Ramsar**

Name of European Site	Thames Estuary and Marshes Ramsar																			
EU Code	N/A																			
Distance to Proposal site	10 km																			
European site features	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality – dust		Air quality - emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Ramsar Criterion 2 - Nationally rare and scarce plant species	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Ramsar Criterion 2 - Red Data Book invertebrates	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Ramsar Criterion 5 – Overwinter assemblage of international importance	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Ramsar Criterion 6 - Species Regularly Wintering in Numbers of	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>

International Importance - <b>Ringed Plover</b>																				
Ramsar Criterion 6 - Species Regularly Wintering in Numbers of International Importance - <b>Knot</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Species Regularly Wintering in Numbers of International Importance - <b>Dunlin</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Species Regularly Wintering in Numbers of International Importance - <b>Ringed plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Species Regularly Wintering in Numbers of International Importance - <b>Dark-bellied brent goose</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

Ramsar Criterion 6 - Species Regularly Wintering in Numbers of International Importance - <b>Shelduck</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Species Regularly occurring on passage in Numbers of International Importance – <b>Grey plover</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k
Ramsar Criterion 6 - Species Regularly occurring on passage in Numbers of International Importance – <b>Redshank</b>	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
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<b>b.</b>	Given the distance from the Ramsar, the DCO application will result in no change to current management regimes of any supporting habitat of the Ramsar during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and 10 km from the Thames Estuary & Marshes Ramsar. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 10 km from the Thames Estuary and Marshes Ramsar and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the Ramsar site is 10 km to the north east of the Proposal Site and therefore outside the area potentially affected by any dust. Therefore, no likely significant effect is predicted on any interest feature.
<b>f.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>g.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>h.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the Ramsar or area which supports a Ramsar species will occur as a result of the proposed development (ref HRAR para 5.43).
<b>i.</b>	Given the distance between the proposal site and the Ramsar, no changes to water quality are anticipated (ref HRAR para 5.42).
<b>j.</b>	Given the distance between the proposal site and the Ramsar, no likely significant effect on any interest feature is predicted from disturbance (ref HRAR para 5.45).
<b>k.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).

**Matrix 7 – Screening of Likely Significant Effects: Outer Thames Estuary SPA/pSPA**

<b>Name of European Site</b>	Outer Thames Estuary SPA/ pSPA																			
<b>EU Code</b>	UK9020309																			
<b>Distance to Proposal site</b>	10 km																			
<b>European site features</b>	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality - dust		Air quality - emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
Red throated diver	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Common tern	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>
Little tern	x <sub>a</sub>	x <sub>a</sub>	x <sub>b</sub>	x <sub>b</sub>	x <sub>c</sub>	x <sub>c</sub>	x <sub>d</sub>	x <sub>d</sub>	x <sub>e</sub>	x <sub>e</sub>	x <sub>f</sub>	x <sub>g</sub>	x <sub>h</sub>	x <sub>h</sub>	x <sub>i</sub>	x <sub>i</sub>	x <sub>j</sub>	x <sub>j</sub>	x <sub>k</sub>	x <sub>k</sub>

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
<b>b.</b>	Given the distance from the SPA/pSPA, the DCO application will result in no change to current management regimes of any supporting habitat of the SPA/pSPA during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and 10 km from the Thames Estuary & Marshes SPA/pSPA. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 10 km from the Thames Estuary and Marshes SPA/pSPA and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the SPA/pSPA site is 10 km to the north east of the Proposal Site and therefore outside the area potentially affected by any dust. Therefore, no likely significant effect is predicted on any interest feature.
<b>f.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>g.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>h.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the SPA/pSPA or area which supports a SPA/pSPA species will occur as a result of the proposed development (ref HRAR para 5.43).
<b>i.</b>	Given the distance between the proposal site and the SPA/pSPA, no changes to water quality are anticipated (ref HRAR para 5.42).
<b>j.</b>	Given the distance between the proposal site and the SPA/pSPA, no likely significant effect on any interest feature is predicted from disturbance (ref HRAR para 5.45).
<b>k.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).



**Matrix 8 – Screening of Likely Significant Effects: Queendown Warren SAC**

<b>Name of European Site</b>	Queendown Warren SAC																			
<b>EU Code</b>	UK0012833																			
<b>Distance to Proposal site</b>	10 km																			
<b>European site features</b>	Direct loss or damage of habitats used by interest species		Change in Habitat Management Regime		Loss of future space to allow for managed realignment		Urbanisation		Air quality – dust		Air quality - emissions		Hydrological Changes		Water quality		Disturbance		Introduction or spread of non-native invasive species	
	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O	C	O
<b>6210</b> Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> ) (* important orchid sites)	x a	x a	x b	x b	x c	x c	x d	x d	x e	x e	x f	x g	x h	x h	x i	x i	x j	x j	x k	x k

**Evidence supporting conclusions**

<b>a.</b>	No likely significant effect from direct loss of habitat on any interest feature. The Proposal Site comprises hard standing and is an active area of the Paper Mill. Therefore, it does not support habitat suitable for any citation species (ref HRAR para 5.3 – 5.10).
<b>b.</b>	Given the distance from the SAC, the DCO application will result in no change to current management regimes of the Annex I habitat for which the SAC is designated during either the construction or operation of the CHP (ref HRAR para 5.11 – 5.15).
<b>c.</b>	The site is already developed land and 10 km from the SAC. No loss of land for managed realignment is therefore expected (ref HRAR para 5.16 – 5.18).
<b>d.</b>	The Proposal Site is 10 km from the SAC and set against a backdrop of existing industrial buildings. No likely significant effect on any interest feature from increased urbanisation is therefore predicted (ref HRAR para 5.19 – 5.23).
<b>e.</b>	Based on studies elsewhere, it is anticipated that the majority of dust generated during construction would be deposited in the area immediately surrounding the source (up to 50 metres away) and that no change in level of exposure is expected beyond 300 metres from the site. The boundary of the SAC is 10 km to the north east of the Proposal Site and therefore outside the area potentially affected by any dust. Therefore, no likely significant effect is predicted on any interest feature.
<b>f.</b>	As set out in Chapter 5 of the ES, the number of HGV movements associated with such construction is below the 100-movement threshold that would necessitate further assessment. Therefore, no likely significant effect is predicted from traffic emissions during construction (ref HRAR para 5.29-5.30).
<b>g.</b>	No likely significant effects from operational emissions are predicted on any interest feature or supporting habitat as all process contributions are <1% and/or the predicted environmental concentration is less than the Environmental Quality Standard (ref HRAR para 5.34 – 5.39).
<b>h.</b>	The Proposal site is currently drained via a series of drainage channels which are already in place and being used as part of the existing K1. K4 will use the same system. Therefore, no hydrological changes to terrestrial areas of the SAC will occur as a result of the proposed development (ref HRAR para 5.43).
<b>i.</b>	Given the distance between the proposal site and the SAC, no changes to water quality are anticipated (ref HRAR para 5.42).
<b>j.</b>	Given the distance between the proposal site and the SAC, no likely significant effect on any interest feature is predicted from disturbance (ref HRAR para 5.45).
<b>k.</b>	The only non-native invasive species currently known to be in the area, though not on the Proposal site, is Japanese Knotweed. No importation of material is required to build K4 and no final planting is proposed that could inadvertently import non-native invasive to site, as such no likely significant effect is predicted (ref HRAR para 5.46 – 5.47).

## K4 CHP – Habitats Regulations Assessment Integrity Matrices

### Matrix 9 – Integrity matrices: The Swale SPA

<b>Name of European Site</b>	The Swale SPA												
<b>EU Code</b>	UK9012011												
<b>Distance to Proposal site</b>	275 m												
<b>European site features</b>	Air Quality - dust	Water quality		Disturbance – Activity		Disturbance – Recreation		Disturbance – Noise		Disturbance - Lighting		In-combination effects	
	C	C	O	C	O	C	O	C	O	C	O	C	O
Regularly supporting more than 1% of the GB breeding population of an Annex 1 species in summer – <b>Avocet</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Regularly used by 1% or more of the GB population of an Annex 1 species during passage – <b>Redshank</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Migratory Wintering species regularly occurring in internationally-important	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h

numbers over winter – <b>Dark bellied brent geese</b>													
Migratory Wintering species regularly occurring in internationally-important numbers over winter – <b>Grey Plover</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Migratory Wintering species regularly occurring in internationally-important numbers over winter – <b>Dunlin</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h

**Evidence supporting conclusions**

<b>a.</b>	<p>Whilst studies suggest most dust from construction of the proposed project would be deposited in the area immediately surrounding the source (up to 50 m, which is outside the boundary of the Swale SPA), and that no change in level of exposure is expected beyond 300 m from the site, this does mean that some impacts are possible within the Swale SPA boundary, which is located 275 m to the north east of the Proposal site.</p> <p>To ensure compliance with relevant standards and guidelines relating to dust and airborne particulate matter, various techniques not relating to the avoidance or reduction in effect on a European site will be implemented during the construction phase. This will ensure that dust is managed in line with good practice such that a conclusion of no adverse effect on integrity, once mitigation is incorporated, can be reached (ref HRAR – para 6.2-6.4).</p>
<b>b.</b>	<p>A site-wide surface water pollution prevention system will be developed to prevent the discharge of any contaminated surface water from the site. The overall philosophy for the design of the surface water pollution prevention system for the site is to manage surface water sustainably and to ensure that discharged waters do not constitute a pollution risk.</p> <p>Process water from the Proposed Development will be neutralised in a desiccated sump and transferred to the existing waste water treatment plant within the Mill site. This is operated under an existing permit (EPR BJ7468IC-V009) which sets pH and water temperature limits (amongst others) for discharge into The Swale (ref ES Chapter 9). The volume of water discharged will not be any higher than the levels of that which currently exist.</p> <p>Therefore, a conclusion of no adverse effect on integrity can be reached, once this mitigation is included (ref HRAH – 6.5-6.10).</p>
<b>c.</b>	<p>It is considered there is a limited potential for disturbance to waterbirds to be caused by activity associated with the Proposal when account is taken of the fact that, given the distance to The Swale from the proposal site and existing, intervening buildings. On this basis, a conclusion of no adverse effect on integrity can be reached (ref HRAH – 6.13 - 6.18).</p>
<b>d.</b>	<p>The potential for disturbance to SPA Citation species from recreational activities by either construction or subsequent operational staff is considered low. Whilst there is access to the Saxon Shore Way from the wider Kemsley Paper Mill, currently very little or no use is made of this by Kemsley Mill staff. It is possible that there will be increased recreational usage made of the Saxon Shore Way during both construction of the site, as Sittingbourne is within potential travel distance over lunch break. However, it should be borne in mind that Milton Creek is outside the SPA and that dogs will not be permitted on site. It is anticipated that few if any construction and operational staff will access the Swale SPA. On this basis, no adverse effect on integrity is predicted (ref HRAH – 6.19 – 6.21).</p>
<b>e.</b>	<p>Modelling of the noise levels expected during the loudest operation during construction (percussive impact piling) has been undertaken with contours of anticipated <math>L_{Amax}</math> levels (in dB) plotted. These show that the reedbed that supports breeding Marsh Harrier (part of the breeding bird assemblage) would be subject to noise levels between 50 and 55 <math>dBL_{Amax}</math>, which is below the impact threshold. Therefore, it is highly unlikely that noise disturbance during construction would have any significant effect on the Marsh Harrier population and therefore the conservation objectives for this species listed in Section 4 are not compromised.</p> <p>The main intertidal areas of the Swale SPA used by wintering citation birds recorded by the foreshore monitoring are over 275 m from the source of significant noise events. Modelling of the noise generated by the loudest events during construction (percussive piling) has been undertaken.</p>

	<p>Such piling would only take place for a period of six weeks in total. The resulting noise contours have been plotted with the nearby designated sites shown, the highest noise that would be received by birds using the SPA is between 65 and 70 dBL<sub>Amax</sub>, covering an area of some 20 ha within the designated site, essentially at the mouth of the Milton Creek. This equates to 0.32% of the 6,514 ha site.</p> <p>When this is combined with the fact that a 'soft-start' piling method will be used, it can be concluded there will be no adverse impacts on the integrity of the SPA (ref HRAR – para 6.22-6.49).</p>
<b>f.</b>	<p>Under normal operating conditions, the Proposed Development will produce a low hum, rather than any loud, sudden noises that might elicit a disturbance response from nearby interest-feature birds using the intertidal areas of The Swale. It will furthermore not result in noise levels of greater than 55 dBL<sub>Amax</sub> within the SPA. On this basis, no adverse effect on integrity is predicted (ref HRAR – para 6.50 – 6.52).</p>
<b>g.</b>	<p>Given the distance of the proposed development to the SPA, and that there is further development between the Proposal Site and designated site, light from the proposed development does not have the potential to illuminate either the terrestrial or inter-tidal habitats above that which it is currently. All lighting will be designed as per best practice standards to ensure that no additional light spill above the current situation would occur. On this basis, no adverse effect on integrity is predicted (ref HRAR – 6.53 – 6.55).</p>
<b>h.</b>	<p>The in-combination assessment has concluded that there are no adverse effects on the integrity of designated sites, either because there are no ecological pathways via which to do this, or because the in-combination modelling (for noise, air, etc) do not exceed the maximum thresholds. Therefore, no adverse effect on integrity is predicted (ref HRAR Section 7).</p>

**Matrix 9 – Integrity matrices: The Swale Ramsar**

<b>Name of European Site</b>	The Swale Ramsar												
<b>EU Code</b>	N/A												
<b>Distance to Proposal site</b>	275 m												
<b>European site features</b>	Air Quality - dust	Water quality		Disturbance – Activity		Disturbance – Recreation		Disturbance – Noise		Disturbance - Lighting		In-combination effects	
	C	C	O	C	O	C	O	C	O	C	O	C	O
Ramsar Criterion 2 - <b>Nationally rare and scarce plant species</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Ramsar Criterion 2 - <b>Red Data Book invertebrates</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Ramsar Criterion 5 – <b>Overwinter assemblage of international importance</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Ramsar Criterion 6 - <b>Regularly Wintering in Numbers of International Importance Redshank</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h

Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Dark bellied brent geese</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h
Ramsar Criterion 6 - Regularly Wintering in Numbers of International Importance - <b>Grey Plover</b>	x a	x b	x b	x c	x c	x d	x d	x e	x f	x g	x g	x h	x h

**Evidence supporting conclusions**

<b>a.</b>	<p>Whilst studies suggest most dust from construction of the proposed project would be deposited in the area immediately surrounding the source (up to 50 m, which is outside the boundary of the Swale Ramsar), and that no change in level of exposure is expected beyond 300 m from the site, this does mean that some impacts are possible within the Swale Ramsar boundary, which is located 275 m to the north east of the Proposal site.</p> <p>To ensure compliance with relevant standards and guidelines relating to dust and airborne particulate matter, various techniques not relating to the avoidance or reduction in effect on a European site will be implemented during the construction phase. This will ensure that dust is managed in line with good practice such that a conclusion of no adverse effect on integrity, once mitigation is incorporated, can be reached (ref HRAR – para 6.2-6.4).</p>
<b>b.</b>	<p>A site-wide surface water pollution prevention system will be developed to prevent the discharge of any contaminated surface water from the site. The overall philosophy for the design of the surface water pollution prevention system for the site is to manage surface water sustainably and to ensure that discharged waters do not constitute a pollution risk.</p> <p>Process water from the Proposed Development will be neutralised in a desiccated sump and transferred to the existing waste water treatment plant within the Mill site. This is operated under an existing permit (EPR BJ7468IC-V009) which sets pH and water temperature limits (amongst others) for discharge into The Swale (ref ES Chapter 9). The volume of water discharged will not be any higher than the levels of that which currently exist.</p>



	Therefore, a conclusion of no adverse effect on integrity can be reached, once this mitigation is included (ref HRAH – 6.5-6.10).
<b>c.</b>	It is considered there is a limited potential for disturbance to waterbirds to be caused by activity associated with the Proposal when account is taken of the fact that, given the distance to The Swale from the proposal site and existing, intervening buildings. On this basis, a conclusion of no adverse effect on integrity can be reached (ref HRAH – 6.13 - 6.18).
<b>d.</b>	The potential for disturbance to Ramsar Citation species from recreational activities by either construction or subsequent operational staff is considered low. Whilst there is access to the Saxon Shore Way from the wider Kemsley Paper Mill, currently very little or no use is made of this by Kemsley Mill staff. It is possible that there will be increased recreational usage made of the Saxon Shore Way during both construction of the site, as Sittingbourne is within potential travel distance over lunch break. However, it should be borne in mind that Milton Creek is outside the Ramsar and that dogs will not be permitted on site. It is anticipated that few if any construction and operational staff will access the Swale Ramsar. On this basis, no adverse effect on integrity is predicted (ref HRAH – 6.19 – 6.21).
<b>e.</b>	The main intertidal areas of the Swale Ramsar used by wintering citation birds recorded by the foreshore monitoring are over 275 m from the source of significant noise events. Modelling of the noise generated by the loudest events during construction (percussive piling) has been undertaken. Such piling would only take place for a period of six weeks in total. The resulting noise contours have been plotted with the nearby designated sites shown, the highest noise that would be received by birds using the Ramsar is between 65 and 70 dBL <sub>Amax</sub> , covering an area of some 20 ha within the designated site, essentially at the mouth of the Milton Creek. This equates to 0.32% of the 6,514 ha site. When this is combined with the fact that a 'soft-start' piling method will be used, it can be concluded there will be no adverse impacts on the integrity of the Ramsar (ref HRAR – para 6.22-6.49).
<b>f.</b>	Under normal operating conditions, the Proposed Development will produce a low hum, rather than any loud, sudden noises that might elicit a disturbance response from nearby interest-feature birds using the intertidal areas of The Swale. It will furthermore not result in noise levels of greater than 55 dBL <sub>Amax</sub> within the Ramsar. On this basis, no adverse effect on integrity is predicted (ref HRAR – para 6.50 – 6.52).
<b>g.</b>	Given the distance of the proposed development to the Ramsar, and that there is further development between the Proposal Site and designated site, light from the proposed development does not have the potential to illuminate either the terrestrial or inter-tidal habitats above that which it is currently. All lighting will be designed as per best practice standards to ensure that no additional light spill above the current situation would occur. On this basis, no adverse effect on integrity is predicted (ref HRAR – 6.53 – 6.55).
<b>h.</b>	The in-combination assessment has concluded that there are no adverse effects on the integrity of designated sites, either because there are no ecological pathways via which to do this, or because the in-combination modelling (for noise, air, etc) do not exceed the maximum thresholds (ref HRAR Section 7).

