

Appendix 3: Habitat Regulations Assessment Screening

Core Strategies: European Sites entirely or partly within Dartford and Gravesham

Habitat Regulations Assessment Screening Table: Core Strategies	
Site	THAMES ESTUARY & MARSHES Unitary Authorities: Kent, Essex Area Ramsar (ha): 5588.59 Area SPA (ha): 4838.94
Qualifying Interests	<p>Ramsar Site Criterion</p> <p>Criterion 2: Site supports one endangered plant species (<i>Lactuca saligna</i>) and at least 14 nationally scarce plants of wetland habitats. Site also supports 20 British Red Data Book invertebrates.</p> <p>Criterion 5: Assemblages of international importance – species with peak counts in winter, 45118 waterfowl.</p> <p>Criterion 6: Species/populations occurring at levels of international importance.</p> <ul style="list-style-type: none"> - Ringer plover 1.8% of the GB population - Black tailed godwit 4.6% of the GB population - Grey plover 3.1% of the GB population - Red knot 1.6% of the population - Dunlin 1.1% of the population - Common redshank 1% of the GB population <p>SPA</p> <p>Over winter the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> - <i>Circus cyaneus</i> 1% of the population in GB - <i>Recurvirostra avosetta</i> 28.3% of the population in GB

	<p>Over winter the area regularly supports (Article 4.2):</p> <ul style="list-style-type: none"> - <i>Calidris alpina alpina</i> 2.1% of the population - <i>Calidris canutus</i> 1.4% of the population - <i>Limosa limosa islandica</i> 2.4% of the population - <i>Pluvialis squatarola</i> 1.7% of the population - <i>Tringa tetanus</i> 2.2% of the population <p>On passage the area regularly supports:</p> <ul style="list-style-type: none"> - <i>Charadrius hiaticula</i> 2.6% of the population <p>Article 4.2 Qualification: An internationally important assemblage of birds: Over winter the area regularly supports 75019 waterfowl including <i>Recurvirostra avosetta</i> , <i>Pluvialis squatarola</i> , <i>Calidris canutus</i> , <i>Calidris alpina alpina</i> , <i>Limosa limosa islandica</i></p>
<p>Site Vulnerabilities</p>	<p>There is evidence of coastal squeeze (<i>rising sea levels causing intertidal habitats to migrate landwards, however in built up areas landward retreat is not possible due to presence of a sea wall or flood defences. In addition development usually takes place immediately behind such defences so the wall cannot be moved landwards to accommodate the managed retreat of vulnerable sites</i>) and erosion of intertidal habitats within the site. Possible disturbance to site from dredging and water borne recreation, this pressure may increase due to development.</p> <p>Terrestrial part of site is dependant on grazing and water management, which may be affected by the agricultural market and development pressures.</p> <p>Development pressures may lead to indirect hydrological effects and direct land take from the site. However, development cannot be permitted to lead to a net loss of grazing marsh habitat as it is an important feeding ground for the Brent Goose and Wigeon.</p> <p>Studies indicate the waters in the Thames are hyper-nitrified for nitrogen and phosphorus and further studies are necessary to identify if this is having an adverse effect on the integrity of the site.</p> <p>The site is at risk from incidental pollution due to probable increase in shipping as a result of investment and port development.</p>

There is a further possible threat from an increase in the level of effluent due to development.				
Potential Impacts from Core Strategies	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
<p>Development of new homes in Gravesham and Dartford may also result in increased recreational pressure. The development may also result in direct loss of valuable off-site foraging habitat for designated species.</p> <p>The aforementioned development, coupled with flood defence works may also contribute to coastal squeeze and thus the loss of habitat.</p> <p>Potential increase in abstraction, however EA indicated that alternative abstraction points are available ensuring that damaging levels of abstraction within the Thames Estuary and Marshes catchment is unlikely to be permitted. (Reservoir infrastructure planned to meet development needs in Dartford).</p> <p>On Environment Agency advice it is not considered that the development of new homes and increased volumes of effluent disposal will exacerbate high nutrient levels leading to adverse effects on sites. ¹</p> <p>Potential surface and groundwater contamination during the construction process and as a result of new,</p>	Yes	<ul style="list-style-type: none"> ■ Thames Estuary 2100 Project ■ The Draft Regional Spatial Strategy for the South East 2006-2026 ■ Housing development under the South East Plan and associated increased car use may lead to increased atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats on which the species of European Importance depend. ■ Waterfronts and Waterway in Kent Thameside - A Strategic Agenda 2005 ■ Any port development and subsequent dredging within the Plan area may in turn affect sediment supply to the site resulting in erosion. Higher risk of 	Yes	Yes

¹ Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*

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<p>high levels of development.</p> <p>Unknown impact on grazing levels due to new development.</p> <p>Potential impacts on air quality (from building and transport activity increases associated with development) however, unlikely that assessment would be able to link changes to air quality at sites with this development work – would require a regional approach.</p>		<p>incidental pollution from potentially higher volumes of ships.</p>		
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Core Strategies: European Sites within buffer zone

Habitat Regulations Assessment Screening Table: Core Strategies				
Site	NORTH DOWNS WOODLAND Unitary Authorities: Kent, Medway Area (ha): 287.58			
Qualifying Interests	<p>SAC Annex 1 Habitats primary reason for selection:</p> <ul style="list-style-type: none"> - <i>Asperulo-Fagetum</i> beech forests - <i>Taxus baccata</i> woods of the British Isles <p>Annex II habitats qualifying feature for selection:</p> <ul style="list-style-type: none"> - Semi-dry natural grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) 			
Site Vulnerabilities	<p>The chalk grassland requires continuous grazing, which is not achieved over parts of this site. This may be affected by the agricultural market and development pressures.</p> <p>There are increased recreational pressures due to development.</p> <p>It is also not possible to rule out adverse effects to the site due to urbanisation from ongoing development.</p>			
Potential Impacts from Core Strategies	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
Development of new homes and business floorspace in Dartford and Gravesham and consequent increase in car use may cause air pollution. This site has some vulnerability to reduced air quality. However, there are no direct road	No Risk of direct impacts from the Core	None	No	No

<p>links (other than existing) planned between the development sites and this site. Changes to air quality would need to be considered at a regional level and the impacts of the core strategy alone are not considered significant.</p> <p>The woodlands themselves are not considered likely to be affected by recreational activity due to their steep and inaccessible nature. However, development of new homes in Gravesham could lead to increased recreational pressure on the grassland component of this site. This site is also already subject to considerable pressure due to use of off-road vehicles and fly tipping.²</p> <p>Given the focus of development away from this site (north of the A2 road) and the Core Strategies intent to develop the Green Grid network (providing green space within and near new developments) the potential impact of Core Strategy development on this site is not considered significant.</p> <p>Unknown impact on grazing levels due to new development.</p>	<p>Strategies are unlikely due to the distance from the designated site and policies proposed which will act as mitigation.</p>			
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² Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*

Habitat Regulations Assessment Screening Table: Core Strategies	
Site	MEDWAY ESTUARY & MARSHES Unitary Authorities: Kent Area Ramsar (ha): 4969.74 Area SPA (ha): 4684.36
Qualifying Interests	<p>Ramsar Site Criterion</p> <p>Criterion 2: Site supports number of rare plant and animal species</p> <ul style="list-style-type: none"> - <i>Hordeum marinum</i> sea barley - <i>Parapholis incurve</i> curved hard-grass - <i>Polypogon monspeliensis</i> annual beard-grass - <i>Puccinellia fasciculata</i> Borrer's saltmarsh-grass - <i>Bupleurum tenuissimum</i> slender hare's-ear - <i>Trifolium squamosum</i> sea clover - <i>Chenopodium chenopodioides</i> saltmarsh goose-foot - <i>Inula crithmoides</i> golden samphire - <i>Sarcocornia perennis</i> perennial glasswort - <i>Salicornia pusilla</i> one-flowered glasswort - <p>Total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site.</p> <p>Criterion 5: Assemblages of international importance – species with peak count in winter 47637 waterfowl</p> <p>Criterion 6: Species/populations occurring at levels of international importance</p> <ul style="list-style-type: none"> - Grey plover 1.2% of the population - Common redshank 1.4% of the population - Dark-bellied brent goose 1.1% of the population - Common shelduck 3.3% of the GB population

- Northern pintail 1.8% of the population
- Ringed plover 1.6% of the GB population
- Red knot 1% of the population
- Dunlin 1.4% of the GB population

SPA

During the breeding season the area regularly supports (Article 4.1):

- *Recurvirostra avosetta* 6.2% of the GB breeding population
- *Sterna albifrons* 1.2% of the GB breeding population
- *Sterna hirundo* 0.6% of the GB breeding population

Over winter the area regularly supports:

- *Cygnus columbianus bewickii* 0.2% of the GB population
- *Recurvirostra avosetta* 24.7% of the GB population

Over winter the area regularly supports (Article 4.1):

- *Anas acuta* 1.2% of the population
- *Anas clypeata* 0.8% of the population in GB
- *Anas crecca* 1.3% of the population in GB
- *Anas Penelope* 1.6% of the population in GB
- *Arenaria interpres* 0.9% of the population in GB
- *Branta bernicla bernicla* 1.1% of the population
- *Calidris alpine alpine* 1.9% of the population
- *Calidric canutus* 0.2% of the population
- *Charadrius hiaticula* 1.6% of the population
- *Haematopus ostralegus* 1% of the population in GB
- *Limosa limosa islandica* 12.9% of the population in GB
- *Numenius arquata* 1.7% of the population in GB
- *Pluvialis squatarola* 2% of the population
- *Tadorna tadorna* 1.5% of the population
- *Tringa nebularia* 2.6% of the population in GB
- *Tringa tetanus* 2.1% of the population

Article 4.2 Qualification: An internationally important assemblage of birds:

During the breeding season the area regularly supports *Alcedo atthis*, *Anas platyrhynchos*, *Asio*

	<p><i>flammeus, Aythya ferina , Circus cyaneus, Falco columbarius, Gavia stellata , Phalacrocorax carbo , Vanellus vanellus.</i></p> <p>Over winter the area regularly supports 65496 waterfowl including: <i>Gavia stellata , Podiceps cristatus , Phalacrocorax carbo , Cygnus columbianus bewickii , Branta bernicla bernicla , Tadorna tadorna , Anas penelope , Anas crecca , Anas platyrhynchos , Anas acuta , Anas clypeata , Aythya ferina , Haematopus ostralegus , Recurvirostra avosetta , Charadrius hiaticula , Pluvialis squatarola , Vanellus vanellus , Calidris canutus , Calidris alpina alpina , Limosa limosa islandica , Numenius arquata , Tringa totanus , Tringa nebularia , Arenaria interpres</i></p>
<p>Site Vulnerabilities</p>	<p>Continued maintenance dredging for port may be contributing to the removal of sediment from the estuary and other adverse effects.</p> <p>There is evidence of coastal squeeze and erosion of intertidal habitats within the site. Possible disturbance to site from water borne recreation and this pressure may increase due to development.</p> <p>The Medway also shows signs of Eutrophication, particularly the large growths of green algae that cover areas of the intertidal mudflats in late summer.</p> <p>Studies indicate the waters in the Thames are hyper-nitrified for nitrogen and phosphorus and further studies are necessary to identify if this is having an adverse effect on the integrity of the site.</p> <p>Construction of new road bridge resulted in the loss of some designated habitat and caused disturbance to the site during construction.</p> <p>Evidence of rapid erosion of intertidal habitat within the site due to natural processes and the effects of sea defences and clay extraction. Intertidal area vulnerable to increased recreational pressures.</p> <p>Review necessary to address the effects of abstraction on the availability of water for drainage for arable cultivation and other land uses.</p> <p>Terrestrial part of site is dependant on grazing and water management, which may be affected by the agricultural market and development pressures.</p>

	<p>Development, transport and industrial, pressures may lead to indirect hydrological effects and direct land take from the site.</p> <p>The site is at risk from incidental pollution due to probable increase in shipping as a result of investment and port development.</p> <p>There is a further possible threat from an increase in the level of effluent due to development.</p>			
Potential Impacts from Core Strategies	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
<p>Development of new homes in Gravesham and Dartford may result in, increased pollution (atmospheric and water based) as well as greater recreational pressures. Additional recreational pressure is potentially significant given that this site is already under extensive recreational pressures (from waterborne users in addition to walkers, microlight aircraft etc) that are currently difficult to manage.</p> <p>On Environment Agency advice it is not considered that the development of new homes and increased volumes of effluent disposal will exacerbate high nutrient levels leading to adverse effects on sites. ³</p> <p>Potential surface and groundwater contamination during the construction process and as a result of new, high levels of development.</p>	Yes	<ul style="list-style-type: none"> ■ Thames Estuary 2100 Project ■ The Draft Regional Spatial Strategy for the South East 2006-2026 ■ Housing development under the South East Plan and associated increased car use may lead to increased atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats on which the species of European Importance depend. ■ Any port development and subsequent dredging within the Plan area may in turn affect sediment supply to the site resulting in erosion. Higher risk of incidental pollution from potentially higher volumes of ships 	Yes	Yes

³ Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*

Habitat Regulations Assessment Screening Table: Core Strategies	
Site	BENFLEET & SOUTHEND MARSHES Unitary Authorities: Essex Area Ramsar (ha): 2251.31 Area SPA (ha): 2251.31
Qualifying Interests	<p>Ramsar Site Criterion</p> <p>Criterion5: Assemblages of international importance – species with peak counts in winter 32867 waterfowl</p> <p>Criterion6: Species populations occurring at levels of international importance.</p> <ul style="list-style-type: none"> - Dark-bellied brent goose 2.1% of the population - Grey plover 3.2% of the GB population - Red knot 1.4% of the population <p>SPA</p> <p>Over winter the area regularly supports (Article 4.2):</p> <ul style="list-style-type: none"> - <i>Branta bernicla bernicla</i> 1.3% of the population - <i>Calidris alpina alpina</i> 2.1% of the population in GB - <i>Calidris canutus</i> 2.6% of the population - <i>Charadrius hiaticula</i> 1.3% of the population in GB - <i>Pluvialis squatarola</i> 2.3% of the population <p>Article 4.2 Qualification: An internationally important assemblage of birds Over winter the area regularly supports 34789 waterfowl including: <i>Branta bernicla bernicla</i> , <i>Charadrius hiaticula</i> , <i>Pluvialis squatarola</i> , <i>Calidris canutus</i> , <i>Calidris alpina alpina</i></p>
Site Vulnerabilities	Vulnerability linked to changes in the physical environment especially coastal squeeze.

	<p>Indirect recreational pressures to facilitate visitor attractions are leading to piecemeal development and disturbance is caused to the site through construction. Area vulnerable to increased recreational pressures.</p> <p>Wildfowling and cockle fishing are threats but are well regulated by agreement.</p> <p>Studies indicate the waters in the Thames are hyper-nitrified for nitrogen and phosphorus and further studies are necessary to identify if this is having an adverse effect on the integrity of the site. Construction of new road bridge resulted in the loss of some designated habitat and caused disturbance to the site during construction.</p> <p>Continued maintenance dredging for port may be contributing to the removal of sediment from the estuary and other adverse effects.</p> <p>Rising sea levels and sinking land levels are compounded by coastal flood defences preventing dynamic coastal change and increasing the risk of severe erosion.</p> <p>Inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitats and viability of the eelgrass <i>Zostera</i> beds.</p> <p>The marsh suffers from lack of freshwater inputs due to low rainfall and would be highly vulnerable to the effects of over abstraction.</p> <p>There is a further possible threat from an increase in the level of effluent due to development.</p>			
Potential Impacts from Core Strategies	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
Development of new homes in Gravesham and Dartford may also result in increased recreational	Risk of direct impacts from the Core	<ul style="list-style-type: none"> ■ Thames Estuary 2100 Project ■ The Draft Regional Spatial 	Other plans and programmes	No

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<p>pressure. However, given the relative distance of this site from the new developments in Dartford and Gravesham any contribution is likely to be minor.</p> <p>Development of new homes and business floorspace in Dartford and Gravesham may result in increased volumes of effluent disposal into the estuary. Some of has the potential, if poorly managed, to reach the Benfleet and Southend Marshes.</p> <p>This could lead to a decline in water quality, principally due to increased nutrient inputs. However, given the distance of the site from the points of discharge within the South East, any contribution is likely to be minor. ⁴</p> <p>Potential impacts on air quality (from building and transport activity increases associated with development) however, unlikely that assessment would be able to link changes to air quality at sites with this development work – would require a regional approach.</p>	<p>Strategies are unlikely due to the distance from the designated site.</p>	<p>Strategy for the South East 2006-2026</p> <ul style="list-style-type: none"> ■ Housing development under the South East Plan and associated increased car use may lead to increased atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats on which the species of European Importance depend. ■ Any port development and subsequent dredging within the Plan area may in turn affect sediment supply to the site resulting in erosion. Higher risk of incidental pollution from potentially higher volumes of ships. ■ 	<p>outwith the Core Strategies areas are more likely to have an impact on site integrity.</p>	
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⁴ Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*