

Appendix 3: Habitat Regulations Assessment Screening

Town Centre AAP: European Sites within buffer zone

Habitat Regulations Assessment Screening Table: Town Centre AAP	
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, 75019 waterfowl.</p> <p>Criterion 6: Species/populations occurring at levels of international importance.</p> <ul style="list-style-type: none"> - Ringer plover (<i>Charadrius hiaticula</i>) 2.6% of the GB population - Black tailed Godwit (<i>Limosa limosa islandica</i>) 2.6% of the GB population - Grey plover (<i>Pluvialis squatarola</i>) 1.7% of the GB population - Red knot (<i>Calidris canutus</i>) 1.4% of the population - Common redshank (<i>Tringa tetanus</i>) 2.2% of the GB population - Avocet (<i>Recurvirostra avosetta</i>) 28.3% of the GB population - Hen Harrier (<i>Circus cyaneus</i>) 1.0% 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

	<ul style="list-style-type: none"> - <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 alpine alpine</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. Erosion of the salt marsh a contributory factor in coastal squeeze at this site.</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 lead to a net loss of grazing marsh habitat as it is an important habitat for SPA species.</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>

Appendix 3

There is a further possible threat from an increase in the level of effluent due to development.				
The grazing marsh habitat is an important habitat for SPA species.				
Potential Impacts from the AAP	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
<p>Development of new homes in Dartford may result in increased recreational pressure. The Town Center AAP policies provide for extensive new recreational and leisure facilities within the Town. A variety of accessible recreational facilities will act to mitigate potential for increased recreation pressures at distant SAC/SPA sites.</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, high levels of development.</p>	No – mitigation measures in place	<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 	Other plans and programmes outwith the Town Centre AAP are more likely to have an impact on site integrity.	No

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

Appendix 3

<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. The Town Centre AAP includes policies to mitigate impacts on air quality, including increased provision of public transport, improved pedestrian routes and a requirement for all new developments to make a contribution towards measures to offset adverse air quality impacts that may result from development</p>				
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<p style="text-align: center;">Habitat Regulations Assessment Screening Table: Town Centre AAP</p>	
<p>Site</p>	<p>NORTH DOWNS WOODLAND Unitary Authorities: Kent, Medway Area (ha): 287.58</p>
<p>Qualifying Interests</p>	<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>)
<p>Site Vulnerabilities</p>	<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>

	It is also not possible to rule out adverse effects to the site due to urbanisation from ongoing development.			
Potential Impacts from AAP	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
<p>Development of new homes and business floorspace in Dartford and the consequent increase in car use may cause air pollution. This site has some vulnerability to reduced air quality. However, there are no direct road 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 Town Centre AAP alone are not considered significant. The Town Centre AAP includes policies to manage traffic movements and improve accessibility to public transport.</p> <p>The focus of development is away from this site (north of the A2 road) and the AAP policies include aims to develop access to local recreational spaces e.g. the River Darent Valley Path which will provide mitigation.</p>	<p>No. Risk of direct impacts from the APP are unlikely due to the distance from the designated site and policies proposed which will act as mitigation.</p>	<p>None</p>	<p>Other plans and programmes outwith the Town Centre AAP are more likely to have an impact on site integrity.</p>	<p>No</p>

Habitat Regulations Assessment Screening Table: Town Centre AAP	
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>Possible disturbance to site from water borne recreation and this pressure may increase due to development.</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>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> <p>The grazing marsh habitat is an important habitat for SPA species.</p>

Potential Impacts from AAP	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
<p>Development of new homes in Dartford may result in, increased pollution (atmospheric and water based) as well as greater recreational pressures. Additional recreational pressures including water-based recreation are unlikely to result from the AAP, which includes key policies focused on maintaining and developing Town Centre based leisure and recreation opportunities for the resident and expanding population.</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. ²</p>	<p>No – mitigation measures are in place</p>	<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. 	<p>Other plans and programmes outwith the Town Centre AAP are more likely to have an impact on site integrity.</p>	<p>No</p>

² Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*

Habitat Regulations Assessment Screening Table: Town Centre AAP	
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.

Appendix 3

	<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 AAP	Risk of Significant Effect?	Potential Impacts – other Plans and Programmes	Risk from ‘In Combination’ Effects?	AA Required
Development of new homes in Dartford may result in increased recreational pressure. However, given the relative distance of this site from the new developments in Dartford any contribution is not	Risk of direct impacts from the AAP is unlikely due to the distance	<ul style="list-style-type: none"> ■ Thames Estuary 2100 Project ■ The Draft Regional Spatial Strategy for the South East 2006-2026 	Other plans and programmes outwith the Town Centre	No

Appendix 3

<p>likely to be significant.</p> <p>Development of new homes and business floorspace in Dartford may result in increased volumes of effluent disposal into the estuary. Some of which if poorly managed, has the potential to reach the Benfleet and Southend Marshes. 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. ³</p> <p>There are potential impacts on air quality (from building and transport activity increases associated with development) however, it is unlikely that assessment would be able to link changes to air quality at sites with this development work – would require a regional approach. The Town Centre AAP includes policies to manage potential adverse impacts on air quality from development.</p>	<p>from the designated site.</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. 	<p>AAP are more likely to have an impact on site integrity.</p>	
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³ Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*