



DARTFORD BOROUGH COUNCIL & GRAVESHAM BOROUGH COUNCIL

HABITATS REGULATIONS ASSESSMENT



APPROPRIATE ASSESSMENT INTERIM REPORT

JANUARY 2008



enfusion



DARTFORD BOROUGH COUNCIL &
GRAVESHAM BOROUGH COUNCIL

APPROPRIATE ASSESSMENT
INTERIM REPORT

<i>date:</i>	January 2008	
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**Dartford Borough Council and Gravesham Borough Council
Habitats Regulations Assessment: Appropriate Assessment Interim Report**

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1.0 INTRODUCTION

- 1.1 Dartford and Gravesham Borough Councils are currently preparing their Local Development Frameworks to guide future development in the Boroughs. The Core Strategies for both Boroughs are under preparation. Dartford Borough Council is consulting on revised Preferred Options for their Core Strategy in February 2008, and Gravesham will be consulting on their Preferred Options in Spring 2008.
- 1.2 Enfusion is carrying out the Sustainability Appraisal of both Local Development Frameworks, and in 2007, was commissioned to undertake a combined Habitats Regulations Assessment (HRA) of the Dartford and Gravesham Local Development Framework (LDF) Core Strategies.
- 1.3 Habitats Regulations Assessment is also commonly referred to as Appropriate Assessment (AA), and is a requirement of the European Habitats Directive. The requirement for HRA is first determined by an initial 'screening' stage undertaken as part of the HRA. This report details the findings of this first, screening stage and the early findings of the second Appropriate Assessment stage.
- 1.4 In early 2007, the first stage was undertaken, with a draft HRA Screening report prepared in May 2007. The aim of this report was to provide information, which in consultation with Natural England, would allow the competent authorities to come to a decision as to whether an AA was required to consider the impacts on sites of European nature conservation importance (or Natura 2000 sites) from the Dartford and Gravesham LDF Core Strategies.
- 1.5 The screening stage determined that adverse effects of the two Core Strategies on two Natura 2000 sites could not be ruled out, and in line with the precautionary nature of Habitats Regulation Assessment, that further Appropriate Assessment would be required. Accordingly, an Appropriate Assessment is currently underway and this Interim Report documents the backgrounds and methods and provides a record of progress to date. The publishing of this interim report with the Dartford Core Strategy Revised Preferred Options document provides opportunities for stakeholders and the public to provide comment on the work undertaken to date. The report will be finalised once the Gravesham Core Strategy Preferred Options are available and can be assessed (envisaged Spring 2007).

Requirement for Habitats Regulations Assessment

- 1.6 The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as

Natura 2000 sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

- 1.7 Articles 6 (3) and 6 (4) of the Habitats Directive require AA to be undertaken on proposed plans or projects which are not necessary for the management of the site but which are likely to have a significant effect on one or more Natura 2000 sites either individually, or in combination with other plans and projects.¹ In 2007, this requirement was transposed into UK law in Part IVA of the Habitats Regulations (The Conservation (Natural Habitats, & c.)(Amendment) (England and Wales) Regulations 2007). These regulations require the application of AA to all land use plans. Government guidance also requires that Ramsar sites (which support internally important wetland habitats) and are listed under the Convention on Wetlands of International Importance (Ramsar Convention 1971) are included within HRA/AA.
- 1.8 The purpose of AA is to assess the impacts of a land-use plan, in combination with the effects of other plans and projects, against the conservation objectives of a European Site and to ascertain whether it would adversely affect the integrity² of that site. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects. The scope of the AA is dependent on the location, size and significance of the proposed plan or project.
- 1.9 The requirement to address HRA has also been noted in the parallel Sustainability Appraisal/ Strategic Environmental Assessment report produced alongside the Dartford Borough Council Core Strategy Revised Preferred Options.

Guidance for Habitats Regulations Assessment [Appropriate Assessment (AA)]

- 1.10 Draft guidance for AA 'Planning for the Protection of European Sites: Appropriate Assessment', has been produced by the Department for Communities and Local Government (DCLG, August 2006), but is yet to be finalised. A partnership of consultants³ has also prepared guidance (Appropriate Assessment of Plans, August 2007) to assist planning bodies in complying with the Habitats Directive and most recently the

¹ Determining whether an effect is 'significant' is undertaken in relation to the designated interest features and conservation objectives of the Natura 2000 sites. If an impact on any conservation objective is assessed as being adverse then it should be treated as significant. Where information is limited the precautionary principle applies and significant effects should be assumed until evidence exists to the contrary.

² Integrity is described as the sites' coherence, ecological structure and function across the whole area that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified, (ODPM, 2005).

³ Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants. The Appropriate Assessment of Plans, August 2006,

Royal Society for the Protection of Birds (RSPB) produced guidance on HRA to support the planning community.⁴

- 1.11 Based on the available guidance and emergent practice, HRA is approached in three main stages, as shown in the table below. This report outlines the method and interim findings for stages 1 and 2 of the HRA process Screening and Appropriate Assessment.

Habitats Regulations Assessment: Key Stages	
Stage 1	
Screening	<ul style="list-style-type: none"> ▪ Identify international sites in and around the plan/ strategy area ▪ Examine conservation objectives ▪ Identify potential effects on Natura 2000 sites ▪ Examine other plans and programmes that could contribute to 'in combination' effects
	<ul style="list-style-type: none"> ▪ <i>If no effects are likely – report that there is no significant effect.</i> ▪ <i>If effects are judged likely or uncertainty exists – the precautionary principle applies, proceed to stage 2</i>
Stage 2	
Appropriate Assessment	<ul style="list-style-type: none"> ▪ Collate information on sites and evaluate impact in light of conservation objectives ▪ Consider how plan 'in combination' with other plans and programmes will interact when implemented (the Appropriate Assessment) ▪ Consider how the effect on integrity of sites could be avoided by changes to the plan and the consideration of alternatives ▪ Develop mitigation measures (including timescale and mechanisms)
	<ul style="list-style-type: none"> ▪ <i>Report outcomes of AA and develop monitoring strategies</i> ▪ <i>If effects remain, following the consideration of alternatives and development of mitigation measures, proceed to stage 3</i>
Stage 3	
Assessment where no alternatives and adverse impacts remain	<ul style="list-style-type: none"> ▪ Identify 'imperative reasons of overriding public interest' (IROPI) ▪ Identify/ develop potential compensatory measures
	<ul style="list-style-type: none"> ▪ <i>Difficult test to pass, requirements are onerous and untested to date</i>

⁴ Dodd AM, Cleary BE, Dawkins JS, Byron HJ, Palfrman LJ & Williams GM (2007) The Appropriate Assessment of Spatial plans: a guide to why, when and how to do it. RSPB, Sandy.

Consultation

- 1.13 The Habitats Regulations require the plan making/competent authority to consult the appropriate nature conservation statutory body [Natural England (NE)]. Consultation, via phone and email on both the method and proposed content of the screening stage of the work was undertaken with Natural England in Spring/Summer 2007.
- 1.14 The findings of the screening stage were reported in the Habitats Regulations Assessment Screening Report: DBC & GBC LDF Core Strategies in May 2007, and this was forwarded to Natural England (NE) for review and comment. NE was supportive of the approach taken and the conclusions of the Screening process. Additional information and points of clarification were provided, which have been taken into consideration and incorporated into this report.
- 1.15 During the Appropriate Assessment stage, further informal consultation and advice has been sought and provided by Natural England, including further information relating to the conservation objectives for the European sites.
- 1.16 The Habitats Regulations leave consultation with other bodies and the public to the discretion of the plan making authority. Where possible, guidance recommends this consultation be undertaken alongside the consultation for the plan. This interim report is being published for consultation alongside the Dartford Core Strategy Preferred Options report. It will then be revised to account for responses received during the consultation period, and will include an assessment of the Gravesham Core Strategy Preferred Options Report (to occur in Spring 2007). This will provide opportunities for further refinement to this report prior to the submission of the two Core Strategies.

Purpose & Structure of Report

- 1.17 This report documents the process and the [interim](#) findings from the Screening and Appropriate Assessment stages of the HRA for the Dartford Borough Council and Gravesham Borough Council Local Development Frameworks Core Strategies. The report builds on and incorporates the reported findings from the Screening stage (May 2007). Following this introductory section the document is organised into a further five sections:

Section 2- outlines the methods employed for the HRA. It covers the approach to Screening and Appropriate Assessment and includes reference to the key information sources used.

Section 3 – details the Appropriate Assessment Screening Process and summarises the findings of the screening stage.

Section 4 – details the Appropriate Assessment process and provides the key findings from the AA (At this stage, interim findings are provided, however the final report will require assessment of the Gravesham Borough Core Strategy Preferred Policy Options, currently under preparation).

Section 5 – summarises the conclusions, recommendations and links to future HRA work in relation to the Local Development Frameworks (LDFs) for Dartford and Gravesham Boroughs.

2.0 SUMMARY OF HRA PROCESS

Stage 1: HRA Screening

2.1 The HRA Screening stage for the Dartford and Gravesham Core Strategies was undertaken in Spring-Summer 2007. In accordance with guidance and current/emerging good practice, the HRA Screening involved the following tasks.

STAGE 1: HRA Screening Stage: Key Tasks	
<p>Task 1</p> <p>Identification of Natura 2000 sites & characterisation</p>	<ul style="list-style-type: none"> ▪ Identification of European sites both within Dartford and Gravesham and surrounding authorities that may be affected by the two Core Strategies. ▪ Information was obtained for each European site, based on publicly available information⁵ and consultation with Natural England where appropriate. ▪ This included information relating to the sites' qualifying features; conservation objectives; vulnerabilities/ sensitivities and geographical boundaries.
<p>Task 2</p> <p>Strategy review and identification of likely impacts</p>	<ul style="list-style-type: none"> ▪ A review of the emerging Dartford and Gravesham Core Strategies, and spatial implications where indicated and identification of likely impacts.
<p>Task 3</p> <p>Consideration of other plans and programmes</p>	<ul style="list-style-type: none"> ▪ Consideration, where appropriate of other plans and programmes that may have in-combination effects with the Dartford and Gravesham Core Strategies.
<p>Task 4</p> <p>Screening Assessment</p>	<ul style="list-style-type: none"> ▪ Summary of screening outcomes and recommendations.

2.2 As part of this screening process, consideration was also given to related HRA work being undertaken at a Regional and local level.

⁵ Key Information Sources:

Joint Nature Conservation Committee (JNCC) web resource www.jncc.gov.uk including site details/ character contained on Natura 2000 Standard Data Form.

Conservation Objectives, management plan information, Natural England web resource www.english-nature.org.uk/special/ssi/index.cfm

Particular reference was made to The Appropriate Assessment of the Draft South East Plan, prepared by Scott Wilson and Levett-Therivel for the South East England Regional Assembly (October 2006).

- 2.3 Further detail on the individual tasks undertaken in the screening stage is provided in Chapter 3: Screening.
- 2.4 The Screening stage concluded that impacts on two of the European sites (Thames Estuary and Marshes SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar) could not be ruled out, and that a Stage 2: Appropriate Assessment would be required.

Stage 2: HRA Appropriate Assessment Stage

- 2.5 The Appropriate Assessment is a core part of the HRA process, required by Regulation 85 (B) of the amended Habitats Regulations 2007. Key tasks in the process are outlined below:

STAGE 2: HRA Appropriate Assessment Stage: Key Tasks	
<p>Task 1</p> <p>Scoping & further information</p>	<ul style="list-style-type: none"> ▪ Revisiting screening information to determine need for additional information. ▪ Collate additional information on sites, as identified as necessary during screening stage and consultation. ▪ Collate detailed information on likely impacts identified at screening ▪ Update information on relevant plans and programs
<p>Task 2</p> <p>Initial assessment of impacts</p>	<ul style="list-style-type: none"> ▪ Evaluate impacts in light of conservation objectives ▪ Consider how plan 'in combination' with other plans and programmes will interact when implemented. ▪ Assessment to consider individual plan policies as well as cross cutting issues.
<p>Task 3</p> <p>Considering how to avoid and/or mitigate impacts</p>	<ul style="list-style-type: none"> ▪ Consider how the effect on integrity of sites could be avoided by changes to the plan and the consideration of alternatives ▪ Develop mitigation measures (including timescale and mechanisms)
<p>Task 4</p> <p>Concluding the AA</p>	<ul style="list-style-type: none"> ▪ Report outcomes and recommendations. ▪ If effects remain, following the consideration of alternatives and development of mitigation measures, proceed to stage 3

- 2.6 Further detail on the individual tasks undertaken in the Appropriate Assessment is provided in Chapter 4: Appropriate Assessment.

3.0 HRA SCREENING: METHODS AND SUMMARY FINDINGS

- 3.1 Undertaken in early 2007, the aim of the screening stage was to determine whether an Appropriate Assessment of the Dartford and Gravesham Core Strategies would be required, and to inform the development of the Plan options and Preferred Options. Whilst the Core Strategy Preferred Options for Gravesham Borough had not been prepared at this stage, it was considered that sufficient information was available to make a screening assessment on the information available in the emerging South East Plan (and the AA of the South East Plan).
- 3.2 The following details the method and results of the screening stage, as provided in the HRA Screening Report (May 2007), and updated to incorporate comments received from English Nature and Dartford and Gravesham Borough Councils.

Task 1: Identification of Natura 2000 sites & characterisation

- 3.1 Dartford & Gravesham Boroughs feature riverside marshes which are characteristic of the highly valued habitats of the Greater Thames Estuary. South of the principal urban areas, undulating countryside rises towards the South Kent Downs. This area, populated by villages and dormitory settlements, features areas of high agricultural and landscape value. The Boroughs of Dartford and Gravesham, therefore, include a contrast of landscapes, from estuarine to semi-upland countryside, in addition to the townscapes. Within this varied environment diverse sites have been designated for their international, national and local importance.
- 3.2 There are no European sites within Dartford Borough, and there is only one European site partially within Gravesham Borough (Thames Estuary and Marshes SPA) with assemblages of internationally important bird species and habitats. Detailed information for this site is provided in **Appendix 1**.

European Sites entirely or partly within Dartford & Gravesham	Designation
Thames Estuary & Marshes	Special Protection Area (SPA) Ramsar

- 3.3 Plans and programmes have spatial implications that frequently extend beyond the intended plan area boundaries. This means that a plan located some distance away from a European site could still have effects on the site and, therefore, needs to be considered as part of the screening process. There are an additional three sites that are located within the potential influence of the two plan areas: Medway Estuary and Marshes SPA, Benfleet and Southend Marshes SPA and the

North Downs Woodland SAC. Whilst these sites are of considerable distance from the plan areas (particularly Dartford Borough), it was considered that impacts on estuarine sites cannot be ruled out at this early stage (due to the complex nature of impact pathways for estuarine sites). The overall level of development proposed in the Thames Gateway was also considered to have potential cumulative effects on European sites. This conforms with the precautionary approach promoted in the Habitats Directive and the guidance.

- 3.4 The sites represent significant diversity with assemblages of internationally important bird species and habitats ranging from Beech forests to mud flats. These additional three sites are listed below and are also detailed at **Appendix 1**.

European Sites within the potential influence of the Core Strategies	Designation
Medway Estuary & Marshes	SPA Ramsar
Benfleet & Southend Marshes	SPA Ramsar
North Downs Woodland	Special Area of Conservation (SAC)

Task 2: Strategy review and identification of likely impacts

- 3.4 Dartford and Gravesham Boroughs are working together closely on the development of their Local Development Frameworks. At the time of the AA Screening, both Authorities had undertaken consultation on the key issues and options facing the Boroughs in the development of their Core Strategies, and Dartford had additionally undertaken consultation on the Preferred Policy Approaches Document, in Summer 2006.

GRAVESHAM LOCAL DEVELOPMENT FRAMEWORK – CORE STRATEGY

Gravesham Core Strategy - Issues and Options

- 3.5 Gravesham has undertaken two rounds of consultation on the issues and options facing the Borough in the preparation of its LDF. These were titled: 'Gravesham Local Development Framework- The Key Issues - ' We need your views', and 'The Future of Gravesham'. Issues raised included; regeneration and transport; lifelong learning; jobs and business; the environment; housing and the built environment; health and well being; community safety, leisure and culture; major sites including Gravesend Town Centre, Swanscombe Peninsula, Northfleet Embankment and Ebbsfleet, North East Gravesend and Canal basin; the countryside and villages; and the A2 Corridor.

A consultation on Strategic Options was underway at the time of the AA Screening. The Core Strategy Preferred Options are currently under preparation, for publication in Spring 2007.

DARTFORD LOCAL DEVELOPMENT FRAMEWORK – CORE STRATEGY

- 3.6 The Dartford Core Strategy is the key Development Plan Document within the Dartford Local Development Framework (LDF). The Core Strategy sets the LDF's long-term Spatial Vision and Strategic Objectives for development planning and it considers the options available through the planning system to the Council and communities in the Dartford Borough area.

Dartford Core Strategy - Issues and Options

- 3.7 Dartford Borough Council published an Issues Paper in August 2005 ('A Postcard from the Future – Making Dartford a Good Place to Live'). This set out eight key issues for the Borough which were considered to influence the content of the LDF, and sought responses from the public concerning how they would prefer to see these issues being addressed and progressed in the future. The results of this consultation were then considered in the development of the Core Strategy Preferred Policy Approaches Document.

Dartford Core Strategy - Preferred Policy Approaches 2006 and Preferred Options 2008

- 3.8 In Summer 2006, Dartford Borough Council consulted on the Preferred Policy Approaches for its LDF Core Strategy. The Document set out the Council's Preferred Policy Approaches to inform and guide the development of policies in the Core Strategy Submission Document. It included a spatial vision for future development, strategic objectives to guide the Local Development Framework and Preferred Policy Approaches.

The Core Strategy Preferred Policy Approaches were revised by Dartford Council in late 2007, resulting in significant policy revisions. Consequently a revised Preferred Options report has been published and is being placed on consultation in Jan-March 2008, alongside the Sustainability Appraisal technical report.

IDENTIFICATION OF LIKELY IMPACTS

- 3.9 In March-May 2007, the likely impacts of the emerging Core Strategies for Dartford and Gravesham were subject to a screening exercise, to determine the likely effects on European sites. As both Core Strategies were at different and early stages in their preparation, the Screening looked primarily at the key potential effects arising from the level of development proposed in the Draft South East Plan, and the information provided in the production of both Boroughs 'Issues and Options' papers. It was considered that the key potential effects were likely to arise from the overall level of the development, rather than

site-specific impacts (although clearly consideration would need to be given to the small area of Thames Estuary and Marshes SPA/Ramsar within Gravesham Borough).

3.10 Taking this strategic approach, aspects of the emerging Core Strategies that were considered to have implications for European sites are as follows:

- Dartford and Gravesham Boroughs contain the area known as the 'Kent Thameside' regeneration area, one of the largest areas for development in the Thames Gateway. This scale of redevelopment has potential significant environmental effects on the Thames Gateway environment, including European sites.
- The Draft South East Plan outlines requirements for 15,700 dwellings for Dartford and 9,200 for Gravesham in the period 2006 to 2026, in the urban area- this is a significant level of growth that will potentially have impacts on the built and natural environment of the Boroughs.
- The Draft South East Plan also outlines requirements for 58,000 new jobs, and associated employment land in the two Boroughs between 2006 and 2026.
- Development is planned to be focused close to existing urban areas and facilities. Development preferences are for redundant quarries, damaged land and brownfield sites, and river frontage development where possible and desirable.
- New facilities and services, including strategic transport infrastructure, will be required to meet the needs of this increased growth. However, all development will need to reflect approaches that reduce the need for car travel and provide access to [transport] facilities.
- The level of planned growth is likely to place significant strain on resources (particularly water resources, including the identified requirement for a 40 mega litre reservoir within the Dartford Borough), increase energy usage and waste production and increased pollution, particularly air pollution.
- There will be additional pressure placed on the Thames Estuary and its natural environment from development pressure, including increased risk of water pollution and recreational activity.
- There may be an increase in recreation at existing natural sites, for example woodlands, marshes and estuarine sites due to increased population, although this will be dependant on levels of access.

Task 3: Identification of other plans and programmes

- 3.11 It is a requirement of Article 6(3) of the Habitats Directive that HRA examines the potential for plans and projects to have a significant effect either individually or 'in combination' with other plans or projects.
- 3.12 Other key plans considered at this stage (outlined at Appendix 2) have included:
- The emerging South East Plan - the Draft Regional Spatial Strategy for the South East 2006-2026
 - Thames Estuary 2100 Project
 - Greening the Gateway; a Greenspace Strategy for Thames Gateway
 - Waterfronts and Waterway in Kent Thameside - A Strategic Agenda 2005
 - Thames Gateway Strategic Regional Framework Interim Report 2006
 - Kent Local Transport Plan 2006-2011
 - Strategic Planning Guidance for the River Thames – RPG3B/9B 1997
 - South East England Regional Assembly Strategy for Energy Efficiency and Renewable Energy 2004
 - The London Plan
 - The East of England Plan
- 3.13 The screening assessment has also noted the potential for 'in-combination' effects between the two Core Strategies under consideration, and this is further considered in Section 4.

Task 4: Screening Assessment of Dartford and Gravesham Core Strategies

3.16 In line with the screening requirement of the Habitats Regulations an assessment was then undertaken to identify the potential significant impacts of the **Dartford and Gravesham Borough Councils Core Strategies** on the integrity of four Natura 2000 sites which lie either within the Borough boundaries or within the potential influence of the Plan areas. This full analysis is set out in the Screening Tables at **Appendix 3** and is summarised in **Table 3** below. This process was based on:

- The review of the Core Strategies and their likely impacts;
- The information gathered on the Natura 2000 sites – **Appendix 1**; and;
- The review of other relevant plans – **Appendix 2**.

3.17 This screening assessment has addressed the 'in combination' requirement as follows:

1. For Natura 2000 sites where it has been determined that the Core Strategies **on their own** will require Appropriate Assessment in relation to that site, 'in-combination' effects have also been taken into consideration and will be further examined in the Appropriate Assessment itself.

2. For Natura 2000 sites where it is unlikely that the Core Strategy **on their own** will require Appropriate Assessment in relation to that site, the possibility of impacts from 'in-combination' effects has been considered. However, for sites outside of the plan area, it is more likely that any effects on the integrity of these sites will result from other plans and programmes, not from the Core Strategies being assessed for this HRA screening.

Assessment Summary

3.18 Where the potential for significant impacts has been identified, this relates primarily to the, as yet un-quantified, effects of large scale, cumulative development pressures from housing, industry and transport in the area. The detailed screening assessment is provided in **Appendix 3**, however the main potential impacts identified are summarised below:

- **Coastal squeeze and the subsequent loss of habitat and habitat fragmentation** – potentially resulting from river frontage development through increased housing/ industrial expansion in the area
- **Increased recreational pressures** – resulting from the planned for and predicted, population growth
- **Water quality issues, particularly estuarine impacts including pollution, sediment removal & disturbance, and eutrophication** – as a result of development adjacent to and near the river frontage as well as

hinterland development impacting linked surface and groundwater sources

- **Air quality issues** – potential localised impacts associated with housing development, increased transportation and construction activities - that need to be addressed in a regional context

3.19 The screening assessment provided in **Appendix 3** looks at each individual European site, considering these main potential impacts highlighted above, and any other potential impacts identified in the process. The following conclusions were made for each European site:

Thames Estuary & Marshes SPA/Ramsar

3.20 The Screening identified the potential for significant effects for this site. These effects may occur as a result of the Core Strategies alone and in combination with other plans and programs. Key potential impacts identified related to recreational pressure (water and land based), coastal squeeze, abstraction, effluent disposal, potential surface and groundwater contamination effects, effects on grazing and air quality impacts. Whilst the boundaries of the site are outwith the Dartford Borough boundary, and only a small section of the site overlaps with the Gravesham Local Government boundary, the estuarine nature of the site means that it is susceptible to impacts from a considerable distance, and it should therefore be considered further.

Medway Estuary & Marshes SPA/Ramsar

3.21 Similarly, the Screening identified potential effects for this site, both due to the implementation of the Core Strategies alone, and in combination with other plans and programs. Key potential impacts identified related to recreational pressure (water and land based), effluent disposal, potential surface and groundwater contamination effects, and air quality impacts. Medway Estuary and Marshes is a considerable distance from the two Borough Boundaries, however, as an estuarine site it may be susceptible to wider impacts, particularly in combination with new development in Medway and Swale.

Benfleet & Southend Marshes SPA/ Ramsar

3.22 Despite having similar characteristics, and hence sensitivities to the Thames Estuary & Marshes and Medway Estuary and Marshes SPA/Ramsar sites, Benfleet and Southend Marshes is entirely located on the northern side of the River Thames. The Thames provides a significant barrier to land and water-based recreation arising from Dartford and Gravesham Boroughs. This, combined with the distance of the site from the two Boroughs, led to the conclusion that any impact arising from the two Core Strategies, either alone, or in combination with other plans and programs would not be significant. It was therefore concluded that further Appropriate Assessment was not required.

North Downs Woodland SAC

- 3.23 This site has some vulnerability to reduced air quality, however the concentration of development to the North of the two Boroughs (away from the SAC), would result in a negligible impact. The grassland component of the site is susceptible to recreational disturbances, however, again, the concentration of development north of the A2, and the indirect access to the SAC, would result in a negligible impact. Additionally, both Boroughs are proposing significant levels of green space and green networks, which will assist in meeting recreational needs of new development. It was therefore concluded that further Appropriate Assessment was not required.

3.24 The results of the screening process are summarised below.

Table 3 HRA Screening Table Summary			
European Sites entirely or partly within Dartford & Gravesham	Designation	AA Required alone? ✓ Yes ✗ No ? Uncertain	AA Required in-combination with other plans? ✓ Yes ✗ No ? Uncertain
Thames Estuary & Marshes	SPA, Ramsar	✓	✓
European Sites within the influence of the Core Strategies	Designation		
Medway Estuary & Marshes	SPA, Ramsar	✓	✓
Benfleet & Southend Marshes	SPA, Ramsar	✗	✗
North Downs Woodland	SAC	✗	✗

3.25 The Core Strategies emerging from Dartford and Gravesham Borough Councils are strongly focused on ensuring that development – in particular, the planned expansion of urban space - is undertaken in a way that is commensurate with wider sustainable development principles. Specific attention is focused on developing within existing urban space, on brownfield sites, redundant quarries and damaged land and on minimising the potential impacts [of this growth] on the natural environment. Specifically, the Core Strategies are jointly recognising the potential knock-on impacts of population growth for 'green space' by using the 'Green Grid' concept. In this way, key elements of the planning process can provide mitigation, and this is further discussed in section 4 of this report.

4 APPROPRIATE ASSESSMENT- METHODS AND SUMMARY INTERIM FINDINGS

4.1 The two European sites identified in the HRA Screening process as requiring further consideration are now subject to Appropriate Assessment. Current good practice guidance recommends Appropriate Assessment be undertaken of DPD Preferred Options, providing opportunity for recommendations to influence further policy development. At the time of writing, Preferred Options have been prepared for Dartford Borough, with Gravesham Preferred Options still under preparation. Consequently this section presents only interim findings of assessment work undertaken to date on Dartford, with some consideration of in-combination effects. It was decided to publish these findings alongside the Dartford Preferred Options Report to provide an opportunity for consultees and the public to input on the emerging work prior to the AA of Gravesham's policies and the final assessment of the in-combination effects of the two Core Strategies.

Task 1: Scoping and further information

- 4.2 An ongoing task in undertaking the Appropriate Assessment is in revisiting the information obtained during the screening stage relating to the sites that require further Appropriate Assessment. In December 2007, Natural England was contacted and provided further information relating to the Thames Estuary & Marshes and Medway Estuary and Marshes sites. This information, including Conservation Objectives and View about Management advice⁶ relates to the (Site of Special Scientific Interest (SSSI) designation of the site, rather than the wider features of interest that determine the conservation status of the SAC/SPA under consideration. Natural England has also advised that the current Conservation objectives need updating and that new Conservation Objectives for the sites, covering the Ramsar and SPA designations are under preparation, however these are unlikely to be available to inform this Appropriate Assessment. In undertaking the AA, these limitations are therefore acknowledged.
- 4.3 Meeting site conservation objectives is largely determined by site integrity. Integrity describes a set of conditions that maintain ecological structure and function in order that the habitats, or the complex habitats/ species (for which the site is designated) can be sustained. Additional information was, therefore, also sought in order to understand which factors help to maintain site integrity.
- 4.4 The collation and interpretation of information relating to impacts identified at the screening stage and of relevant plans and programs is

⁶ Conservation Objectives for South Thames Estuary and Marshes SSSI (English Nature 2000); Conservation Objectives for the European interests on the Medway Estuary and Marshes SSSI (English Nature 2000); Views About Management: A statement of English Nature's Views about the management of the South Thames Estuary and Marshes SSSI (English Nature 12/12 /05); Views About Management: A statement of English Nature's Views about the management of the Medway Estuary and Marshes SSSI (English Nature 12/12/ 05)

also an ongoing process and will continue to inform the Appropriate Assessment stage of the process. Particular reference was made to the following further information;

- Medway Council Appropriate Assessment (2006)
- Appropriate Assessment of the Re-Deposit Swale Borough Local Plan, prepared by Entec for Swale Borough Council (October 2006).
- Habitats Regulation Assessment Final Report, prepared by Scott Wilson for Thurrock Council (October 2007).
- Appropriate Assessment: Proposed LNG Terminal, Calor Gas, Canvey Island, prepared by the London Port Authority (September 2006).

Screening of Preferred Policy Approaches- Dartford Core Strategy

- 4.5 The final action for this task was the screening of each Preferred Policy Approach within the Dartford Core Strategy for its potential impact on European sites (this will also be undertaken for Gravesham's Core Strategy). Those policies that were identified to have no effect on any European site were screened out of the assessment, with a commentary provided relating to why this was the case. These policies were classed as 'no effect' policies. In accordance with Natural England Guidance for HRA on Regional Spatial Strategies and Sub-regional Strategies⁷, these policies are considered to have no effect because of the following criteria:
1. The policy itself will not lead to development
 2. The location of the development is unknown, and will be selected following consideration of options in lower plans.
 3. Policy will have no effect because development is dependent on implementation of lower tier policies.
 4. Policy concentrates development in existing urban areas, steering development away from European sites and sensitive areas.
 5. Policy will steer development away from European sites and associated sensitive areas.
 6. Policy is intended to protect the natural environment, including biodiversity.
 7. Policy is intended to conserve or enhance the natural, built or historic environment, and such enhancements are unlikely to affect a European site.
- 4.6 The Screening Assessment of Dartford Policies is provided in Appendix 4, with reasons for a 'no effect' result given, where applicable. No further consideration of these policies is considered necessary.

⁷ The Assessment of Regional Spatial Strategies and Sub-regional strategies under the Provisions of the Habitats Regulations - (David Tyldesley and Associates for English Nature August 2006)

Dartford Preferred Policy Approaches Screened-out of assessment process ('No effect 'policies)

- Network of Key Centres : Preferred Option 3
- Green Belt and Green Spaces : Preferred Approach 4
- Sustainable Transport and Land-use : Preferred Approach 5
- Employment Land : Preferred Approach 6
- Housing Delivery: Preferred Approach 11
- Windfall Housing Sites : Preferred Approach 13
- Integrated Transport and Land-use : Preferred Approach 14
- Strategic Transport Investment : Preferred Approach 15
- Water Supply and Treatment Capacity : Preferred Approach 16
- Design of Homes : Preferred Approach 17
- Form of Development : Preferred Approach 18
- Housing Mix : Preferred Approach 19
- Affordable Housing : Preferred Approach 20
- Gypsies and Travellers : Preferred Approach 21
- Community Services : Preferred Approach 22
- Skills and Training : Preferred Approach 23
- Flood Risk : Preferred Approach 27
- Water Efficiency : Preferred Approach 28

- 4.7 Potential effects arising from the remaining policies (where a potential effect was predicted) were then considered alongside the cross-cutting effects predicted at Screening stage. Those policies are listed below:

Dartford Preferred Policy Approaches Screened-in to assessment process.

- Selection of Development Sites : Preferred Approach 1
- Spatial Pattern of Development : Preferred Approach 2
- Economic Change : Preferred Approach 7
- Employment Growth : Preferred Approach 8
- Ensuring the Success of Ebbsfleet : Preferred Approach 9
- Balanced Housing Development : Preferred Approach 10
- Priority Sites for Housing : Preferred Approach 12
- Green Spaces : Preferred Approach 24
- Sports, Cultural and Recreational Facilities : Preferred Approach 25
- Energy : Preferred Approach 26

Task 2: Assessment of impacts- Cross-cutting effects

- 4.8 Due to the potential for in-combination effects on European sites arising from the two Core Strategies of Dartford and Gravesham, it was considered necessary to undertake a combined assessment of the two Core Strategies. As the Preferred Options Consultation stage for Gravesham Borough is due to occur in Spring 2008, it is envisaged the assessment will take place at this stage. However, some further work has been undertaken to consider the cross-cutting effects identified

during the screening process. These effects are less likely to result from individual policies, rather from the overall quantum of development proposed and in combination with development proposed in the wider Thames Gateway. The following information will be further developed in the final AA report.

Coastal squeeze, habitat fragmentation, climate changes

- 4.9 Coastal squeeze and the subsequent loss of habitat was raised as a potential issue at the Screening stage for the Thames Estuary site. Natural England have since advised that it is the erosion of the saltmarsh that is a particular issue in terms of coastal squeeze for this site. Dredging (in particular future capital dredging) is also considered to be a potential issue at this site. The key mitigation possible for the Gravesham Core Strategies would be to ensure no land take or loss of coastal grazing marshes, and ensuring space for the migration of habitats due to sea-level rise (this could involve a buffer zone around the SAC boundary, allowing movement of habitat). The two Authorities should also ensure supporting habitats for listed species are protected.
- 4.10 Coastal squeeze is not an issue at the Medway Estuary and Marshes site as the estuary is accreting.

Recreational disturbances

- 4.11 Recreational use of the European Sites (from Water and land-based recreation) is likely to increase as a result of the housing developments and increased population in the wider South East. This increased recreational use is in line with Government and local policies since The Countryside and Rights of Way Act 2000, in increasing outdoor activities and access (Bathe 2007), but has the potential to disturb site integrity by disturbing the bird species (direct disturbance and noise impacts) for which the SPAs are listed. There has been concern in recent years that declining numbers of birds may be due to increased recreational pressures (RSPB Warden & Wildlife Ranger Service, Medway & Swale Estuary Partnership, 2004).
- 4.12 Determining the significance of recreational pressures due to the two Core Strategies poses a number of difficulties. Additional recreational pressures will depend on a number of factors including demographics, access to sites, the distance people are prepared to travel for recreational activities, and national trends in outdoor activities. The additional population also needs to be seen against the existing activities and land and water use that may already affect the birds in the SPAs. These include commercial and recreational fishing, gathering of shellfish, bait collection, agriculture, livestock watering and grazing, wildfowling, boating, yachting, jet skiing, waterskiing, microlites and general tourism, including bird watching.

- 4.13 The distance of the new population in Dartford, and likely the majority of Gravesham's new population from the European sites is greater than 5 km, and work undertaken for the Thames Basin Heaths SPA indicated that 85% of visitors travel 5km or less for recreational activities.
- 4.14 It is noted that a carrying capacity study for recreational uses of the Medway Estuary & Marshes is underway, funded by the Medway and Swale Estuary Partnership. This study has reviewed existing recreational impacts in relation to the Estuary's social, physical and environmental characteristics. Further work will be undertaken to investigate and assess this potential impact.

Water quality/resources issues

- 4.15 These issues were flagged-up at the Screening stage as potential issues, due to increased volumes of treated effluent being discharged into The River Thames (as a result of new development) and a potential reduction in freshwater input into the estuarine sites due to abstraction (required to provide potable water for new development). The Environment Agency advised in the South East Plan that neither of these matters would lead to adverse effects. A water cycle study for Kent Thameside has been commissioned by the Environment Agency, and initial results should be available to further inform the assessment work, however this is considered unlikely to be an issue.

Air quality issues

- 4.16 The proposed housing and commercial developments are likely to increase local traffic and hence increased air pollution, principally oxides of nitrogen (NO_x) (and smaller amounts of ammonia). Road traffic is considered to be responsible for approximately 50% of NO_x emissions (Dore et al, 2003) and accounts for >90% of Nitrogen deposition in urban areas (Scott-Wilson & Levett-Therivel, South East Plan, Appropriate Assessment, 2006).
- 4.17 However, the majority of deposition from vehicles occurs within about 200 metres of release and then background levels are reached (Scott-Wilson & Levett-Therivel, South East Plan, Appropriate Assessment, 2006), therefore it is more likely that development in Medway and Swale Council areas would contribute to nitrogen deposition. Another mitigating factor is that the estuarine habitats of the SPAs are not considered sensitive sites for air pollution effects given that they already receive high nitrogen loads in water, so the Medway & Thames Estuary & Marshes SPAs are unlikely to be adversely affected by air pollution.
- 4.18 Whilst further consideration will be given to critical loads at the site, at this stage it is considered unlikely that air quality will be an issue from the two Core Strategies as relates to the European sites.

Land take

- 4.19 Some protected species of birds are known to forage outside the SPA boundary on supporting grassland habitats. These habitats provide necessary support for the structure and function of the SPA. Direct land-take of these habitats may therefore have indirect negative effects on the SPA/ Ramsar sites. This can easily be mitigated through the avoidance of developments that would lead to loss of supporting grassland habitats, within an agreed distance from the SPA.

Task 3: Considering how to avoid and/or mitigate impacts

- 4.20 This task will be completed once Task 2 is complete, however early indications and comments from Natural England suggest that the Dartford Core Strategy Preferred Policy Approaches already contain a number of mitigation measures to minimise any in-combination effects on European sites, specifically:

- measures to minimise air pollution through encouraging sustainable, public-transport oriented development,
- the implementation of a strategic network of green spaces to ensure extensive and attractive alternative recreational spaces.
- Measures to reduce water abstraction through water conservation measures and aiming for water-neutrality

Other measures likely to be given further consideration in the AA final report are:

- Promote access management by working with RSPB and Wildlife Trusts with existing Nature Reserves
- Avoid developing on sites abutting the SPAs.
- Restriction of access to open spaces is contrary to Government Policy but increasing access by provision of additional road links should be avoided
- Information dissemination by Borough Councils to reduce water and land based recreational disturbance. This can include local provision of information within the Borough Council and working with existing systems of advice along the coast dealing with recreational activities and their impacts. For example the Medway Wildlife Ranger Service already provides information to boaters during peak season.
- Any facilities that are developed to specifically increase waterborne recreation should develop ways of educating users as to the potentially adverse impacts of their activities. For example, leaflets about site sensitivities and website information giving conservation information about the SPA/Ramsar sites.

5.0 CONCLUSIONS, FUTURE WORK

- 5.1 This HRA screening process identified four SAC/SPAs/Ramsar sites within and outside the plan areas that are potentially affected by the Dartford Borough Council and Gravesham Borough Council Core Strategies. Of those sites, potentially significant impacts were identified for two SACs/Ramsar sites: the Thames Estuary & Marshes SPA/Ramsar and the Medway and Estuary SPA/Ramsar sites. Impacts may result from either the Core Strategies alone or as a result of 'in-combination' effects from other plans and programmes, particularly those promoting development in the Thames Gateway region.
- 5.2 It was determined that further Appropriate Assessment work would be required to assess and where possible, quantify those impacts. That work is currently underway, however is dependent on the preparation of the forthcoming Gravesham Preferred Options document.
- 5.3 The interim findings from work undertaken to date suggest that the main potential for impact relates to increased water and land-base recreation, which can disturb habitats and species. However, mitigation measures already built into the Preferred Options for Dartford will assist in minimising any disturbances. The AA of the Gravesham Core Strategy will generate similar impacts, and it is likely that recreational disturbance will be a potential impact. As such it is recommended that Gravesham build mitigation measures into the forthcoming Preferred Options; in particular the provision of adequate alternative green space for recreation.
- 5.4 Further work will be ongoing to assess the impact of both the Gravesham Core Strategy Preferred Options, and the combined effects of the two strategies in combination with other plans and policies. A final HRA report will then be prepared to detail these findings. Comments on the findings outlined in this interim report are welcome.