



DARTFORD BOROUGH COUNCIL & GRAVESHAM BOROUGH COUNCIL

HABITATS REGULATIONS ASSESSMENT



APPROPRIATE ASSESSMENT REPORT

July 2010



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**DARTFORD BOROUGH COUNCIL &
GRAVESHAM BOROUGH COUNCIL**

**APPROPRIATE ASSESSMENT
REPORT**

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| <i>date:</i> | July 2010 | |
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**Dartford Borough Council and Gravesham Borough Council
Habitats Regulations Assessment: Appropriate Assessment 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 consulted on revised Preferred Options for their Core Strategy in February 2008, and Gravesham Borough Council consulted on their Regulation 25 Document in January 2010.
- 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 (Core Strategies).
- 1.3 Habitats Regulations Assessment (HRA) 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 second AA 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 from the Core Strategies.
- 1.5 The screening stage determined that adverse effects of the Core Strategies on two European sites could not be ruled out, and in line with the precautionary nature of HRA, that further AA would be required. Accordingly, an Appropriate Assessment was undertaken and this report documents the findings of that process. An interim version of this report was published with the Dartford Core Strategy Revised Preferred Options document in January 2008, providing an opportunity for stakeholders and the public to provide comment on the work undertaken at that stage; this has helped to inform this final report.

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 This requirement is set out in the Conservation of Habitats and Species Regulations 2010 which require the application of HRA 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 is also noted in the parallel Sustainability Appraisal/ Strategic Environmental Assessment reports produced alongside the Core Strategies.

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 prepared additional guidance (Appropriate Assessment of Plans, August 2007) to assist planning bodies in complying with the Habitats Directive, and the Royal Society for the Protection of Birds (RSPB) produced guidance on HRA to support the planning community.⁴ Most recently Natural England has produced draft guidance 'The Habitats Regulations Assessment of Local Development Documents (D Tyldesley and

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,

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

Associates, Feb 2009) which takes account of recent development in HRA practice.

- 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> |

Consultation

- 1.12 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.
- 1.13 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.
- 1.14 During the AA stage, further consultation and advice has been sought and provided by Natural England, including additional information relating to the conservation objectives for the European sites.
- 1.15 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. The AA interim report was published for consultation alongside the Dartford Core Strategy Preferred Options report in January 2008. It was then revised to account for responses received during the consultation period, and updated to include an assessment of the Gravesham Core Strategy Preferred Options Report. Further updates were made to site characterisations, plans and programmes and to the assessment to account for emerging HRA practice and other changes that have occurred since the Interim Report was published. This AA Report will be made available online to accompany future iterations of both Core Strategies.

Purpose & Structure of Report

- 1.16 This report documents the process and the [interim](#) findings from the Screening and AA 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) and the Interim AA Report (January 2008). 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 AA and includes reference to the key information sources used.

Section 3 - details the HRA Screening Process and summarises the findings of the screening stage.

Section 4 - details the AA process and provides the key findings from the AA.

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 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 | |
|--|---|
| Task 1 Identification of Natura 2000 sites & characterisation | <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. |
| Task 2 Strategy review and identification of likely impacts | <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. |
| Task 3 Consideration of other plans and programmes | <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. |
| Task 4 Screening Assessment | <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. Particular reference was made to the Appropriate Assessment of the

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

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 likely significant effects 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 102 of the Conservation of Habitats and Species Regulations 2010. Key tasks in the process are outlined below:

| STAGE 2: HRA Appropriate Assessment Stage: Key Tasks | |
|--|---|
| Task 1 Scoping & further information | <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 |
| Task 2 Initial assessment of impacts | <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. |
| Task 3 Considering how to avoid and/or mitigate impacts | <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) |
| Task 4 Concluding the AA | <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

- 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. 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 NE and Dartford and Gravesham Borough Councils.

Task 1: Identification of Natura 2000 sites & characterisation

- 3.2 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.
- 3.3 There are no European sites within Dartford Borough, and there are two European sites partially within Gravesham Borough (Thames Estuary and Marshes SPA & North Downs Woodlands SAC) with assemblages of internationally important bird species and woodland habitats.

| European Sites partly within Dartford & Gravesham | Designation |
|---|---|
| North Downs Woodland | Special Area of Conservation (SAC) |
| Thames Estuary & Marshes | Special Protection Area (SPA) Ramsar |

- 3.4 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 two sites that are located within the potential influence of the Core Strategies: Medway Estuary and Marshes SPA/ Ramsar and Benfleet and Southend Marshes SPA/ Ramsar. Whilst these sites are outside of the plan areas, 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 for significant in combination effects on European sites. This conforms with the

precautionary approach promoted in the Habitats Directive and extant guidance.

- 3.5 The sites represent significant diversity with assemblages of internationally important bird species and habitats ranging from Beech forests to mud flats. These additional two sites are listed below.

| European Sites within the potential influence of the Core Strategies | Designation |
|--|---------------|
| Medway Estuary & Marshes | SPA Ramsar |
| Benfleet & Southend Marshes | SPA Ramsar |

Task 2: Strategy review and identification of likely impacts

- 3.6 Dartford and Gravesham are jointly progressing the HRA alongside the development of their LDFs. At the time of the HRA 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

- 3.7 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.

The Core Strategy and Development Management Policies Regulation 25 Document was consulted on in January 2010. The document sets out the preferred policy approaches and key elements of the planning framework for the Borough.

Dartford Local Development Framework - Core Strategy

- 3.8 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

- 3.9 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

- 3.10 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 was placed on consultation in Jan-March 2008, alongside the Sustainability Appraisal technical report.

The Core Strategy Pre Submission is currently under preparation, for publication in August 2010.

IDENTIFICATION OF LIKELY IMPACTS

- 3.11 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).
- 3.12 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 (revoked July 2010, however the level of development is still relevant) outlines requirements for 17,340 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 (revoked July 2010, however the level of development is still relevant) also outlines requirements for 58,000 new jobs, and associated employment land in North Kent (Dartford, Gravesham, Medway and Swale) 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 and green 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

- 3.13 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.

3.14 Other key plans considered at this stage (outlined at Appendix 2) have included:

- The South East Plan: Regional Spatial Strategy for the South East of England 2009 (revoked July 2010)
- South East England Regional Assembly Strategy for Energy Efficiency and Renewable Energy 2004
- East of England Plan - The Revision to the Regional Spatial Strategy for the East of England 2008 (revoked July 2010)
- River Basin Management Plan for the Thames River Basin District 2009
- Southern Water - Water Resource Management Plan 2010 - 2035 (October 2009)
- Thames Water - Water Resource Management Plan 2009
- Creating Sustainable Communities: Greening the Gateway; a Greenspace Strategy for Thames Gateway (ODPM/DEFRA 2004)
- Creating Sustainable Communities: Greening the Gateway: Implementation Plan (ODPM/DEFRA 2005)
- Waterfronts and Waterways in Kent Thameside - A Strategic Agenda 2005
- Thames Estuary 2100 Project (TE2100)
- Thames Gateway Strategic Framework Interim Report: Key Points, Policy Framework, Development Prospectus/Technical Annex 2006
- Thames Gateway Interim Plan 2006
- Thames Gateway The Delivery Plan 2007
- Strategic Planning Guidance for the River Thames - RPG3B/9B 1997
- The Adopted Kent and Medway Structure Plan 2006
- Kent Local Transport Plan 2006-2011
- Kent Thameside Water Cycle Study Phase 1, 2009
- Environment Agency Review of Consents
- Castle Point Borough Council Core Strategy, 2009
- City of London Draft Core Strategy - Delivering a World Class City, 2009
- The London Plan 2004
- London Gateway
- Maidstone Core Strategy Preferred Options, 2007
- Medway Core Strategy (Issues and Options) 2009
- Sevenoaks Core Strategy Submission (2010)
- Swale Borough Local Plan 2008 (Adopted)
- Thurrock Core Strategy and Development Management Policies Submission (2010)
- Tonbridge and Malling Adopted Core Strategy 2007

3.15 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 The screening assessment addressed the 'in combination' requirement as follows:
1. For European 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 European 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 effects on the integrity of these sites will result from other plans and programmes, which are immediately adjacent to the sites and not from the Core Strategies being assessed in the 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 outside 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 partly within Dartford & Gravesham | Designation | AA Required alone? ✓ Yes ✗ No ? Uncertain | AA Required in-combination with other plans? ✓ Yes ✗ No ? Uncertain |
| North Downs Woodland | SAC | ✗ | ✗ |
| 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 | ✗ | ✗ |

- 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.

4.0 APPROPRIATE ASSESSMENT

- 4.1 The two European sites identified in the HRA Screening process as requiring further consideration have been subject to AA. At the time of writing, a Regulation 25 Document has been prepared for Gravesham Borough. This AA is the final assessment for Dartford and has considered Dartford's Pre Submission Document.

Task 1: Scoping and further information

- 4.2 An ongoing task in undertaking the AA is in revisiting the information obtained during the screening stage relating to the sites that require further assessment. In December 2007, NE was contacted and provided further information relating to the Thames Estuary & Marshes and Medway Estuary and Marshes sites. This information, including Conservation Objectives and Views About Management advice⁶ relates to the Site of Special Scientific Interest (SSSI) designation, rather than the wider features of interest that determine the conservation status of the SPA/ Ramsar under consideration. NE advised that revised conservation objectives for the two European sites are under preparation, however in July 2010, NE advised that this has not yet been undertaken.
- 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/ interim report stage and of relevant plans and programs has also been used to inform the AA.

Dartford & Gravesham Core Strategy Policy Screening

- 4.5 The final action for this task was the screening of each Dartford Pre Submission Policy and Gravesham Regulation 25 policy within the Core Strategies for the potential for adverse effects on the integrity of European sites. 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 NE England Guidance for HRA on Regional Spatial Strategies and Sub-regional

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)

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 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. Potential effects arising from the remaining policies were then considered alongside the cross-cutting effects predicted at the Screening stage. These policies are listed below:

| Dartford Core Strategy Pre Submission Policies Screened-in to assessment process. |
|--|
| <ul style="list-style-type: none"> ■ CS1: Spatial Pattern of Development ■ CS2: Dartford Town Centre ■ CS3: Northern Gateway Strategic Site ■ CS4: Ebbsfleet to Stone Priority Area ■ CS5: Ebbsfleet Valley Strategic Site ■ CS6: Thames Waterfront ■ CS7: Employment Land and Jobs ■ CS10: Housing Provision ■ CS14: Green Space |
| Gravesham Core Strategy Regulation 25 Policies Screened-in to assessment process. |
| <ul style="list-style-type: none"> ■ Core Strategy Policy 1b - Urban Area ■ Core Strategy Policy 5 - Green Infrastructure ■ Core Strategy Policy 8 - Economy and employment ■ Core Strategy Policy 9 - Town Centres and retailing ■ Core Strategy Policy 10 - Culture, tourism and leisure ■ Core Strategy Policy 11 - Residential Development ■ Core Strategy Policy 13b - Modal Objectives ■ Core Strategy Policy 14 - Strategic sites |

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)

- Development Management Policy 1 - Sustainable Energy
- Development Management Policy 7 - Green Grid
- Development Management Policy 20 - PROW

Task 2: Assessment of Impacts

- 4.7 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 for the emerging Core Strategies. Adverse effects on site integrity of European sites are less likely to result from individual policies, rather from the overall quantum of development proposed in both Core Strategies and in combination with development proposed in the wider Thames Gateway.

Appropriate Assessment Analysis & Findings

- 4.8 The interim AA Report (January 2010) identified a number of cross-cutting effects that had the potential for adverse effects on the integrity of European sites. Some of these effects were identified as needing further work in future iterations of the AA. The scoping phase for AA identified which effects are likely to be significant.
- 4.9 Coastal squeeze and habitat fragmentation and loss are not considered to be key issues given that the Medway Estuary is accreting and that project level HRA of the Strategic sites would ensure that there is no loss of important supporting habitat. The interim report recommended that the Core Strategies avoid any loss of grazing marshes as NE identified this habitat is important for the designated SPA bird species. Air quality is also not considered to be a significant issue as there are no major roads within 200m of the site that are likely to see a significant increased in traffic as a result of the Core Strategies alone or in combination. Based on NE advice⁸ to Local Authorities and the HRA of the SE Plan⁹ it is assessed that air pollution only needs to be considered at a site if a road carrying a significant proportion of new traffic related to the plan runs within 200 meters of a European site. Estuarine habitats are also not considered to be particularly sensitive to air pollution effects given that they already receive high nitrogen loads in water.
- 4.10 As a result, it was considered appropriate to focus the assessment on those key issues that have the potential to adversely affect the integrity and favourable condition status of the identified European sites. The issues focused on in the assessment below include recreation, water quality and water resources.

⁸ English Nature (16 May 2006) letter to Runneymede Borough Council, 'Conservation (Natural Habitats &c.) Regulations 1994, Runneymede Borough Council Local Development Framework'.

⁹ Levett-Therivel (2006) Appropriate Assessment of the Draft South East Plan. Final Report.

Recreation

Medway Estuary and Marshes SPA/Ramsar

Thames Estuary and Marshes SPA/Ramsar

What are the issues arising from the plans?

- 4.11 Development proposed in the Core Strategies has the potential to increase the number of new dwellings and employment opportunities in the Boroughs and therefore the population. This has the potential to increase terrestrial and water based recreational activity on and adjacent to the European sites.

How might the sites be affected?

- 4.12 Increased recreational use of the European sites (from water and land-based recreation) has the potential for adverse effects on the integrity of the European sites through increased disturbance to the designated 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).

What other plans/ projects could lead to in-combination effects?

- 4.13 The level of development proposed in the Core Strategies has the potential to act in-combination with development proposed in surrounding areas through increased levels of disturbance. The plans and programmes considered to contribute to the in combination effects of increased recreational activity include:
- Castle Point Core Strategy - Submission
 - Maidstone Core Strategy - Preferred Options
 - Medway Core Strategy - Issues and Options Report
 - Sevenoaks Core Strategy - Draft for Submission
 - Swale Borough Local Plan 2008 (Adopted)
 - Thurrock Core Strategy - Submission
 - Tonbridge and Malling Core Strategy – Adopted
 - The London Plan (2004)

Is there potential for adverse effects on the integrity of European sites?

- 4.14 Determining the significance of increased disturbance due to increased recreational activity as a result of Core Strategies and surrounding development poses a number of difficulties. Additional recreational pressures will depend on a number of factors including demographics, access to sites, alternatives recreational opportunities available, the distance people are prepared to travel for recreational

activities, and national trends in outdoor activities. The additional population also needs to be considered 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.

- 4.15 The Ramsar information sheet for both European sites^{10 11} identifies that bird watching occurs throughout the year, wildfowling is restricted to the period September to February and the remaining activities (listed above) occur year-round but are more prevalent in the summer months. It is noted that disturbance from these recreational activities is a current issue but is being addressed through further research, negotiation and information dissemination. The Natura 2000 data forms for both SPAs^{12 13} identify that the intertidal area is vulnerable to disturbance from water borne recreation but that this is being addressed as part of an estuary management plan.
- 4.16 The majority of areas designated by the Core Strategies for new population growth are greater than 5km from the European sites. Work undertaken for the Thames Basin Heaths SPA indicated that 85% of visitors travel 5km or less for recreational activities and therefore the European sites are at the edge of recreational travel distance. There are already a number of voluntary restrictions in place for particular recreational activities, such as for the use of personal water craft (e.g. jet-skis). Particular areas of the European sites are restricted for recreational use to minimise the level of disturbance on designated features. The Port Authority of London¹⁴ and the Kent Coastal Network¹⁵ identify restricted areas for personal water craft use and provides information on protected areas and rules that should be followed to minimise impacts of personal water craft use on the natural environment. These include:
- Only launch, moor and land your PWC from authorised launch sites and do not use saltmarsh or mudflats for these purposes.
 - Maintain distance from sensitive wildlife and habitats such as saltmarsh and exposed mudflats, particularly during wintering periods (September - March) when birds may be feeding or roosting.

¹⁰ Medway Estuary and Marshes Ramsar Information Sheet:

<http://www.jncc.gov.uk/pdf/RIS/UK11040.pdf>

¹¹ Thames Estuary and Marshes Ramsar Information Sheet:

<http://www.jncc.gov.uk/pdf/RIS/UK11069.pdf>

¹² Medway Estuary and Marshes SPA - Natura 2000 Data Form:

<http://www.jncc.gov.uk/pdf/SPA/UK9012031.pdf>

¹³ Thames Estuary and Marshes SPA - Natura 2000 Data Form:

<http://www.jncc.gov.uk/pdf/SPA/UK9012021.pdf>

¹⁴ Port Authority of London (Accessed 29/07/10)

http://www.pla.co.uk/display_fixedpage.cfm/id/2324

¹⁵ The Kent Coastal Network (2009) Riding Personal Water Craft in Kent:

http://www.dover.gov.uk/council_property/personal_water_craft.aspx

- Avoid shallow waters where your PWC may erode or disturb the seabed and submerged vegetation.
- Do not harass marine mammals such as dolphins, or large flocks of birds. As a general rule, never go closer than 100m (200m if another boat is in the vicinity).
- If wildlife is encountered, maintain a steady direction and a slow 'no wake' speed away from the wildlife.
- Do not exceed 8 knots (10 mph) when within designated conservation areas and do not enter restricted areas (see map below).
- Do not decant petrol or use chemical treatments in the water.

- 4.17 Given the unique recreational opportunities that the European sites provide and the level of development proposed around them, it is not likely that an individual authority alone could avoid, mitigate or compensate for adverse effects of increased disturbance on the integrity of the identified European sites if they should occur. However, at a strategic level, such as the Core Strategy, authorities should seek to ensure that policies recognise and address identified issues and put robust measures in place to provide mitigation.
- 4.18 The Core Strategies contain a number of policies that will help to mitigate the contribution of proposed development to the adverse effects of increased disturbance both alone and in combination; these include: Dartford Core Strategy Pre Submission Policy 13 (Green Belt), which seeks to actively manage the Green Belt as a recreational and ecological resource, through the provision of recreational and biodiversity networks linked with the urban area. Policy CS 14 (Green Space) seeks to implement a multi-functional, high quality, varied and well-managed Green Grid, to be achieved through the creation of approximately 300 hectares of new or improved green spaces as part of new developments by 2026. Where on-site open space is not appropriate or feasible, contributions will be sought to off-site improvements of open space in the vicinity of the site. The policy also seeks to protect and enhance existing open spaces, areas of nature conservation value, Sites of Special Scientific Interest and priority habitats and species.
- 4.19 Gravesham Core Strategy Policy 7 (Green Infrastructure) seeks to protect and enhance the multi-functional green infrastructure network of green spaces and green grid links. This will be achieved, in part, through no net loss of biodiversity in the Borough and seeking opportunities to enhance and re-create habitats. Development Management Policy 10 (Protection of existing Recreation Areas) ensures that the Council will not grant planning permission for proposals that result in the loss of land or buildings provided for recreational use. The Core strategy will also set out minimum open space standards for development once the Borough's PPG17 open space, sport and recreation study is complete.

- 4.20 Co-operative measures such as the voluntary agreements (para 4.16) have been shown to be highly effective in the management of recreation and tourism impacts on European sites¹⁶. These measures have been most successful when affected stakeholders have been invited to participate and contribute in the design of the management measures. For example, the Dutch Wadden Sea Natura 2000 site is a crucial habitat for many plants and animals and is the largest nature protection area in the Netherlands. The area attracts large amount of tourism and many water-based recreation and sports activities, especially sailors. Prior to 2003 restrictions were in place in relation to the mooring of boats, which were heavily criticised by the various water sports associations. To settle the conflict and minimise adverse effects on the site a voluntary code of conduct was developed between the nature administration and the various water sport associations, which permitted exceptions to the mooring restrictions produced prior to 2003. The underlying aim of this voluntary agreement is to motivate visitors to avoid any behaviour that may have negative impacts on biodiversity. The site is also monitored annually for possible negative impacts and the commonly agreed rules of behaviour are evaluated.
- 4.21 NE plays a key role in the collation of information to monitor the identified European sites and is responsible for assessing the condition of each feature within the sites. If monitoring carried out by NE on the Medway Estuary and Marshes SPA and Thames Estuary and Marshes SPA finds that the voluntary agreements and restrictions currently in place are not protecting the designated features then they should be re-evaluated and possibly replaced by stricter regulations. This should be done in co-operation with key stakeholders including the various sport associations and land owners. The development of co-operative measures should already be going on through the production of the management plans for the European sites. The fundamental purpose of the management plans is to ensure the sustainable use of the European sites. It provides the basis for site-specific monitoring and the goal is to either maintain the favourable condition of the site it is protecting, or to define the ideal desired condition and the required actions for achieving them. Representatives of all the various sports and tourism activities will be given the opportunity to participate in the management planning process, which can often provide innovative, practical and widely accepted solutions¹⁷.
- 4.22 The Core Strategies can only mitigate adverse effects arising as a result of recreational activity through policies that provide alternative recreational spaces and by contributions to strategic management approaches in collaboration with NE and other Local Authorities. Policy mitigation and joint working at a strategic level can help to mitigate the impacts of recreational activity to a certain extent,

¹⁶ Proebstl, U. & Prutsch, A. (2010) Natura 2000 - Outdoor Recreation and Tourism; A guideline for the Application of the Habitats Directive and the Birds Directive. Bundesamt fuer Naturschutz, Bonn, Germany.

¹⁷ Ibid.

however; the direct impacts of recreational activity are most appropriately addressed at the site level through co-operative measures. Disturbance to protected bird species and supporting habitats by recreational activities should be tackled through management schemes for the European sites that are currently being developed by NE.

- 4.23 At present there are voluntary codes of conduct and restrictions in place for water based recreation on the identified European sites - similar measures may be put in place for other types of recreation as a result of the development of European site management plans. The Core Strategy policies provide mitigation through the provision of alternative areas for recreation and the North Kent Environmental Planning Group will ensure that there is a strategic approach to management for biodiversity in North Kent, which includes the identified European sites¹⁸. If these measures are effectively delivered then it is possible to assess that the Dartford and Gravesham Core Strategies will not have adverse effects on European site integrity either alone or in-combination through increased levels of recreation.

Water Resources

Medway Estuary and Marshes SPA/Ramsar Thames Estuary and Marshes SPA/Ramsar

What are the issues arising from the plans?

- 4.24 The proposed development of approximately 25,000 new dwellings and the provision of 35,000 new jobs in the Dartford and Gravesham Core Strategies have the potential to increase water demand and therefore abstraction levels.

How might the sites be affected?

- 4.25 The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary to form a single tidal system with a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh. The complex and diverse mixes of coastal habitats support important numbers of designated bird species throughout the year. There is potential for the development proposed in the Core Strategies to reduce water levels in terrestrial areas of the European sites through increased abstraction levels. This could have significant adverse effects on the coastal habitats and invertebrates that support designated bird species.

What other plans/ projects could lead to in-combination effects?

¹⁸ Terms of Reference North Kent Environmental Planning Group – Natural England

- 4.26 The level of development proposed in the Core Strategies has the potential to act in-combination with development proposed in surrounding areas through increased levels of abstraction. The following plans and programmes have the potential to act in-combination with the Core Strategies:
- Darent and Cray Catchment Abstraction Management Strategy
 - Environment Agency Review of Consents
 - Medway Catchment Abstraction Management Strategy
 - Southern Water (October 2009) Water Resource Management Plan 2010 - 2035
 - Thames Water (September 2009) Revised Draft Water Resource Management Plan
 - Maidstone Core Strategy - Preferred Options
 - Medway Core Strategy - Issues and Options Report
 - Sevenoaks Core Strategy - Draft for Submission
 - Tonbridge and Malling Core Strategy – Adopted
 - The London Plan (2004)

Is there potential for adverse effects on the integrity of European sites?

- 4.27 A Water Cycle Study (WCS) was undertaken for the Kent Thameside area to ensure that water infrastructure and interventions are clearly programmed for proposed development. The Kent Thameside area covers Dartford and Gravesham Boroughs between the Thames Estuary and the A2 road. A WCS is the process of assessing environmental capacity and determining the most sustainable water services infrastructure solutions. It will lead to a water cycle strategy which provides a plan and programme of water and environmental infrastructure implementation.
- 4.28 The WCS was undertaken in consultation with key stakeholders including Thames and Southern Water, the EA and LAs. The CAMS (Medway and Darent and Cray), WRMPs (Thames and Southern Water) and EA Review of Consents (RoC) relevant to the Kent Thameside area were considered within the WCS and its findings. The study concluded that there will be sufficient water resources available to allow the delivery of new development in Gravesham and Dartford, if Southern Water and Thames Water are allowed to implement their Water Resource Management Plans in full. This includes plans for a new reservoir (potentially located near Abingdon) to be operational by 2026 and significant investments in local supply infrastructure, as well as some new local resources.
- 4.29 Key recommendations outlined within the study that are of relevance to this assessment include the following:
- Authorities responsible for delivering new development should engage with the water companies early to ensure that the

necessary water supply infrastructure is provided at a timescale to meet demand from new development.

- All new homes should be built to Code for Sustainable Homes level 3/4 in terms of water use.
- Small percentage (approx 5%) of new homes should be built to CSH level 5/6 in terms of water use. This percentage should be increased in future years as technology improves.
- LAs should support and encourage retro-fitting schemes in households and other buildings where appropriate.
- New non-household developments should be constructed to meet BREEAM excellent rating for water efficiency and, where appropriate, the collection of rainwater should be implemented in new developments.

4.30 The Dartford Core Strategy Pre Submission Document has incorporated all of these recommendations within Policy CS 25 (Water Management). The policy seeks to manage the supply and quality of water and assist in moving towards 'water neutrality' in the Thames Gateway. This will be achieved by ensuring that the Council works with water utility providers and monitors development to ensure that new development and water services are co-ordinated and that the pace of development does not outstrip the water supply and waste water/ sewage treatment capacity at anytime. If development is not capable of being adequately supplied then the Council will review the phasing of development and work with the utility providers and developers to address the capacity constraints at the earliest opportunity. The policy also requires all new homes to achieve at least level 4 of the CSH in terms of water use and all non-residential developments of 1,000 sqm and above to meet BREEAM 'excellent' standards of water efficiency. Sites of 500 units or more will be required to incorporate rainwater harvesting, recycling of used water and reduction of water 'hungry' activities and should be designed to enable later retrofitting to achieve the highest levels of the CSH in terms of water use. Finally, the policy ensures that the Council will work with and encourage water utility providers and social landlords to fit existing homes and other buildings with more efficient devices and appliances; reduce leakage; and expand metering.

4.31 The Gravesham Core Strategy Regulation 25 Document includes policies that address the majority of recommendations made within the WCS. Core Strategy Policy 4 (Climate Change) requires all new developments to facilitate the conservation of water resources. Initially this will be achieved through requiring level 3/4 of the CSH in terms of water use and the BREEAM 'excellent' rating in terms of water efficiency and the collection of rainwater, but progressive improvements will be sought to ensure emerging best practice is applied to future development in the Borough. Development Management Policy 2 (Water Resource Management) supports water efficiency measures by refusing planning permission where there is inadequate water supply available to meet the demands of the development, unless there is an agreed phasing agreement between

the developer and the relevant service provider to ensure the provision of the necessary infrastructure.

- 4.32 Further to the policy mitigation outlined above in the Core Strategies, it is considered that existing mitigation mechanisms will help to minimise effects on the integrity of the European sites as a result of increased abstraction levels. Under the Habitats Regulations the Environment Agency Wales (EA) has a duty to assess the effects of existing abstraction licences and any new applications (Review of Consents - RoC) to make sure they are not impacting on internationally important nature conservation sites. Water efficiency is also tested by the EA before a new license is granted. If the assessment of a new application shows that it could have an impact on a SAC/SPA the EA will have to follow strict rules in setting a time limit for that license. This could involve the issue of a license with conditions attached, such as a 'Hands-Off Flow' condition. This specifies that if the flow or level in the river drops below that which is required to protect the environment, the abstraction must stop.
- 4.33 The key issues and findings of the Habitats Directive Review of Consents for the Thames Estuary and Marshes SPA and Medway Estuary and Marshes SPA are now available¹⁹. The appropriate assessment for the European sites considered the potential impacts from licensed abstractions and concluded that with some modifications to existing licenses that there will be no adverse effect on the integrity of the European sites. It was also noted that the designated features of the Medway Estuary and Marshes SPA are not particularly vulnerable to the impacts of abstraction.
- 4.34 Taking into account the findings of the WCS, as well as the mitigation provided by CS policies and existing mechanisms (RoC) that help to minimise the effects of development on water resources, it is assessed that the Dartford and Gravesham Core Strategies will not have adverse effects on European site integrity either alone or in-combination through increased levels of abstraction.

Water Quality

Medway Estuary and Marshes SPA/Ramsar Thames Estuary and Marshes SPA/Ramsar

What are the issues arising from the plans?

- 4.35 The proposed development of approximately 25,000 new dwellings and the provision of 35,000 new jobs in the Core Strategies have the potential to increase pressure on sewerage capacity and discharge consents.

¹⁹ Environment Agency (Accessed on 02/08/10) Review of Consents - Site Fact Sheets. Available online: <http://www.environment-agency.gov.uk/business/regulation/31923.aspx>

How might the sites be affected?

- 4.36 The two European sites identified are designated for a number of important Bird species (e.g. Avocet and Hen Harrier) that rely upon a range of wetland habitats (e.g. estuaries, mudflats and saltmarsh). Water quality is an important factor in maintaining the plant and animal communities, which support the important bird populations by providing feeding, nesting and roosting areas. Effluent discharges can contain contaminants which build up in the food chain and can have toxic effects on organisms. They can also contain non-toxic contaminants, such as oxygen-depleting substances and nutrients. Eutrophication can lead to the excessive growth of planktonic or benthic algae, which is caused by increased nutrient inputs originating from sewage or agricultural run-off.

What other plans/ projects could lead to in-combination effects?

- 4.37 The level of development proposed in the Core Strategies has the potential to act in-combination with development proposed in surrounding areas through increased levels of discharge. The following plans and programmes have the potential to act in-combination with the Core Strategies:

- Darent and Cray Catchment Abstraction Management Strategy
- Environment Agency Review of Consents
- London Gateway
- Medway Catchment Abstraction Management Strategy
- Southern Water (October 2009) Water Resource Management Plan 2010 - 2035
- Thames Water (September 2009) Revised Draft Water Resource Management Plan
- Maidstone Core Strategy - Preferred Options
- Medway Core Strategy - Issues and Options Report
- Sevenoaks Core Strategy - Draft for Submission
- Tonbridge and Malling Core Strategy – Adopted
- The London Plan (2004)

Is there potential for adverse effects on the integrity of European sites?

- 4.38 The development proposed in the Core Strategies will be served by one of the three operating sewage treatment works (STW) within the Kent Thameside area - Long Reach sewage treatment works, owned and operated by Thames Water, and/ or Gravesend and Northfleet sewage treatment works owned and operated by Southern Water. All three of the sewage treatment works discharge into the Thames Estuary. Discharges from sewage treatment works are regulated by

discharge consents set by the Environment Agency, which have been subject to the Habitats Directive RoC.

- 4.39 The findings of the RoC process for the Thames Estuary and Marshes SPA was that 12 consented discharges had the potential for an adverse in combination effect on the integrity of the site through increased levels of copper in discharge effluents. Long Reach and Gravesend sewage treatment works were identified as part of this list and were therefore identified as having the potential to have adverse in combination effects on the integrity of the European site through contributions to the concentration of copper within the estuary. Environmental Quality Standards²⁰ (EQS) used by the EA, measure the degree of risk for copper, which defines a level of copper that must not be exceeded within the water. The Site Action Plan developed as part of the RoC process revealed that the EQS for copper is not being exceeded within the Thames Estuary, where copper levels have actually fallen since 2003. It was also demonstrated that future planned improvements to the identified sewage treatment works will reduce copper loads in the treated effluent through to 2020. The EA therefore concluded that 11 of the 12 discharge consents (including Long Reach and Gravesend) could be affirmed.
- 4.40 The Habitats Directive RoC for the Medway Estuary and Marshes SPA found that there was the potential for 4 discharge consents to have adverse in-combination effects on the integrity of the site through increased levels of copper in discharge effluents. The EA concluded that all discharge consents could be confirmed, as capping the consent for Motney Hill STW would remove the risk of adverse in combination effects on the integrity of the Medway Estuary and Marshes SPA.
- 4.41 The Kent Thameside WCS identified that increasing population should not have an adverse impact on water quality in the area as if consented flow were to be exceeded (i.e. a revised consent would have to be agreed with the EA), it is likely that the EA would impose tighter water quality standards to ensure no overall increase in the consented effluent load. It also states that the additional pollutant loads derived from the population increase in Kent Thameside to 2026 is expected to be a relatively small contribution to total sewage treatment work load discharged to the Thames Estuary. "Considering the large dilutive capacity of the outer Thames Estuary, the three sewage treatment works are regarded as being well positioned to receive additional loads with respect to the receiving environment"²¹.
- 4.42 Policy CS 25 (Water Management) in the Dartford Core Strategy Pre Submission Document seeks to manage the supply and quality of water. This will be achieved by ensuring that the Council will work with

²⁰ Environment Agency website (Accessed on 03/08/10) Environmental Quality Standards: <http://www.environment-agency.gov.uk/research/planning/40295.aspx>

²¹ Kent Thameside Regeneration Partnership (2009) Kent Thameside Water Cycle Study Phase 1.

water utility providers and monitor developments to ensure that new developments and water services are co-ordinated and that the pace of development does not outstrip the water supply and waste water/ sewage treatment capacity at anytime. If development is not capable of being adequately supplied then the Council will review the phasing of development and work with the utility providers and developers to address the capacity constraints at the earliest opportunity. Policy CS 24 requires the sustainable urban drainage system 'management train' to be applied, as appropriate, in all new development.

- 4.43 The Gravesham Core Strategy Regulation 25 Document also includes policies that will help to minimise the adverse impacts of proposed development on water quality. Development Management Policy 2 (Water Resource Management) supports water efficiency measures by refusing planning permission where there is inadequate sewerage or land drainage systems available to meet the demands of the development, unless there is an agreed phasing agreement between the developer and the relevant service provider to ensure the provision of the necessary infrastructure. Core Strategy Policy 4 (Climate Change) requires all new developments facilitate the conservation of water resources and dispose of water through the use of sustainable urban drainage systems wherever practicable.
- 4.44 If the standards, requirements and measures set out in the Core Strategy policies, the RoC process and Thameside WCS are met, then it is possible to assess that the Dartford and Gravesham Core Strategies will not have adverse effects on European site integrity either alone or in-combination through increased pressure on sewerage capacity.

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

- 4.45 The AA has determined that the Core Strategies are not likely to have adverse effects on the integrity of European sites either alone or in combination through increased recreational activity, increased abstraction and increased pressure on sewerage capacity. This conclusion was based on a number of factors including the level of mitigation provided by the Core Strategy Policies. The mitigation provided by the policies include:
- 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 the phasing of proposed development; and
 - measures to reduce the impact of new development on water quality through the phasing of development and requirement for the incorporation of sustainable drainage systems.

- 4.46 Before the completion of this AA, NE announced its intention to form the North Kent Environmental Planning Group (NKEPG). The purpose of the group will be to facilitate closer working between Local Planning Authorities (LPAs) and statutory bodies in order to have a common understanding and approach to the natural environment and biodiversity in North Kent. A key element of this work is to ensure that there is a greater understanding of the issues potentially affecting European sites and how these should be addressed in a consistent and strategic way across the North Kent LPAs. It is hoped that the collaborative work undertaken by the group may help to produce a clearer picture of the issues affecting the sites and that this, in turn, should lead to an understanding of any necessary avoidance, management actions and mitigation measures.
- 4.47 It is possible that future work undertaken or additional evidence obtained by the NKEPG could show that development proposed in the combined Core Strategies might have adverse effects on the integrity of European sites. If necessary, it is recommended that Dartford and Gravesham Borough Council's give material consideration to the findings of the work undertaken by the NKEPG and to any avoidance, management actions and mitigation measures proposed to ensure that the requirements of the Habitats Directive are met.

5.0 CONCLUSIONS, FUTURE WORK

- 5.1 This report outlines the methods used and the findings arising from the Appropriate Assessment stage of the Habitats Regulations Assessment for Dartford Borough Council and Gravesham Borough Council Core Strategies. The first stage of the HRA process (screening) considered the likely significant effects on four European sites within the influence the plan. The screening found that the plan, both alone and in-combination, had the potential for likely significant effects at two of these European sites through increased recreational activity, increased atmospheric pollution, increased water abstraction, increased wastewater discharge and habitat fragmentation and loss. The two European sites were carried forward to the next stage of the HRA process, Appropriate Assessment, to determine if the plan has the potential for adverse effects on site integrity through the impacts identified above.
- 5.2 This AA considered the potential effects of the Core Strategies both alone and in-combination (with development proposed in surrounding areas) on the integrity of the Medway Estuary and Marshes SPA/Ramsar and the Thames Estuary & Marshes SPA/Ramsar. The findings of the AA indicate that there will not be an adverse effect on the integrity of the European sites, as the policies within the Core Strategies and existing regulatory and management measures provide a sufficient level of protection to mitigate potential likely significant effects.
- 5.3 The AA recommends that Dartford and Gravesham Borough Council's give material consideration to the findings of the work undertaken by the North Kent Environmental Planning Group and to any avoidance, management actions and mitigation measures proposed to ensure that the requirements of the Habitats Directive are met.
- 5.4 The findings of this plan level HRA do not obviate the need to undertake HRA for lower level, project scale/ implementation plans where there is potential for significant effect on one or more European Sites. The findings of this HRA should be revisited in the light of any significant changes to the Core Strategies and used to inform any future assessment work.
- 5.5 It is possible that future work undertaken or additional evidence obtained by the NKEPG could show that development proposed in the combined Core Strategies might have adverse effects on the integrity of European sites. If necessary, it is recommended that Dartford and Gravesham Borough Council's give material consideration to the findings of the work undertaken by the NKEPG and to any avoidance, management actions and mitigation measures proposed to ensure that the requirements of the Habitats Directive are met.

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Appendix 1: European Site Characterisations

| Site Name | MEDWAY ESTUARY & MARSHES | |
|------------------------|--|---------|
| Designation[s] | SPA | Ramsar |
| Area (ha) | 4684.36 | 4969.74 |
| Site Code | UK9012031 | UK11040 |
| Reason for Designation | <p>During the breeding season the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> ■ <i>Recurvirostra avosetta</i> 6.2% of the GB breeding population ■ <i>Sterna albifrons</i> 1.2% of the GB breeding population ■ <i>Sterna hirundo</i> 0.6% of the GB breeding population <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ <i>Cygnus columbianus bewickii</i> 0.2% of the GB population ■ <i>Recurvirostra avosetta</i> 24.7% of the GB population <p>Over winter the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> ■ <i>Anas acuta</i> 1.2% of the population ■ <i>Anas clypeata</i> 0.8% of the population in GB ■ <i>Anas crecca</i> 1.3% of the population in GB ■ <i>Anas Penelope</i> 1.6% of the population in GB ■ <i>Arenaria interpres</i> 0.9% of the population in GB ■ <i>Branta bernicla bernicla</i> 1.1% of the population ■ <i>Calidris alpina alpina</i> 1.9% of the population | |

Criterion 2:
Site supports number of rare plant and animal species

- *Hordeum marinum* sea barley
- *Parapholis incurve* curved hard-grass
- *Polypogon monspeliensis* annual beard-grass
- *Puccinellia fasciculata* Borrer's saltmarsh-grass
- *Bupleurum tenuissimum* slender hare`s-ear
- *Trifolium squamosum* sea clover
- *Chenopodium chenopodioides* saltmarsh goose-foot
- *Inula crithmoides* golden samphire
- *Sarcocornia perennis* perennial glasswort
- *Salicornia pusilla* one-flowered glasswort

Total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site.

Criterion 5:
Assemblages of international importance – species with peak count in winter 47637 waterfowl

Criterion 6:
Species/populations occurring at levels of international importance

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| | <ul style="list-style-type: none"> ■ <i>Calidric canutus</i> 0.2% of the population ■ <i>Charadrius hiaticula</i> 1.6% of the population ■ <i>Haematopus ostralegus</i> 1% of the population in GB ■ <i>Limosa limosa islandica</i> 12.9% of the population in GB ■ <i>Numenius arquata</i> 1.7% of the population in GB ■ <i>Pluvialis squatarola</i> 2% of the population ■ <i>Tadorna tadorna</i> 1.5% of the population ■ <i>Tringa nebularia</i> 2.6% of the population in GB ■ <i>Tringa tetanus</i> 2.1% of the population <p>Article 4.2 Qualification: An internationally important assemblage of birds: During the breeding season the area regularly supports <i>Alcedo atthis</i>, <i>Anas platyrhynchos</i>, <i>Asio flammeus</i>, <i>Aythya ferina</i>, <i>Circus cyaneus</i>, <i>Falco columbarius</i>, <i>Gavia stellata</i>, <i>Phalacrocorax carbo</i>, <i>Vanellus vanellus</i>.</p> <p>Over winter the area regularly supports 65496 waterfowl including: <i>Gavia stellata</i>, <i>Podiceps cristatus</i>, <i>Phalacrocorax carbo</i>, <i>Cygnus columbianus bewickii</i>, <i>Branta bernicla bernicla</i>, <i>Tadorna tadorna</i>, <i>Anas penelope</i>, <i>Anas crecca</i>, <i>Anas platyrhynchos</i>, <i>Anas acuta</i>, <i>Anas clypeata</i>, <i>Aythya ferina</i>, <i>Haematopus ostralegus</i>, <i>Recurvirostra avosetta</i>, <i>Charadrius hiaticula</i>, <i>Pluvialis squatarola</i>, <i>Vanellus vanellus</i>, <i>Calidris canutus</i>, <i>Calidris alpina alpina</i>, <i>Limosa limosa islandica</i>, <i>Numenius arquata</i>, <i>Tringa totanus</i>, <i>Tringa nebularia</i>, <i>Arenaria interpres</i>.</p> | <ul style="list-style-type: none"> ■ Grey plover (<i>Pluvialis squatarola</i>) 1.2% of the population ■ Common redshank (<i>Tringa totanus totanus</i>) 1.4% of the population ■ Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 1.1% of the population ■ Common shelduck (<i>Tadorna tadorna</i>) 3.3% of the GB population ■ Northern pintail (<i>Anas acuta</i>) 1.8% of the population ■ Ringed plover (<i>Charadrius hiaticula</i>) 1.6% of the GB population ■ Red knot (<i>Calidris canutus islandica</i>) 1% of the population ■ Dunlin (<i>Calidris alpina alpina</i>) 1.4% of the GB population |
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| Conservation Objectives | <p>To maintain*, in favourable condition, the habitats for the populations of Annex 1 species + of European importance, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ shingle beaches ■ shallow coastal waters ■ grazing marsh <p>+ Avocet, Little Tern</p> <p>To maintain*, in favourable condition, the habitats for the populations of migratory bird species + of European importance, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ shingle beaches ■ shallow coastal waters ■ grazing marsh <p>+ Dark-bellied brent goose, Shelduck, Pintail, Ringed plover, Grey plover, Knot, Dunlin, Redshank</p> <p>To maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ shingle beaches ■ shallow coastal waters ■ grazing marsh <p>* maintenance implies restoration if the feature is not currently in favourable condition.</p> |
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| Site Name | THAMES ESTUARY & MARSHES | |
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| Designation[s] | SPA | Ramsar |
| Area (ha) | 4838.94 | 5588.59 |
| Site Code | UK9012021 | UK11069 |
| Reason for Designation | <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>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 | |

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| | | <ul style="list-style-type: none"> ■ Hen Harrier (<i>Circus cyaneus</i>) 1.0% of the GB population |
| Conservation Objectives | <p>Subject to natural change, to maintain* in favourable condition the habitats of the populations of Annex 1 species and migratory species that contribute to internationally important levels of the Thames Estuary and Marshes SPA, and the habitats of the waterfowl that contribute to the waterfowl assemblage of the Thames Estuary and Marshes SPA, with particular reference to:</p> <ul style="list-style-type: none"> ■ intertidal mudflats ■ saltmarsh ■ intertidal shingle ■ grazing marsh ■ saline lagoons ■ flooded chalk pits <p>*maintenance implies restoration if the feature is not currently in favourable condition.</p> | |

Appendix 2: Relevant Plans and Programmes Review

Regional

| The South East Plan: Regional Spatial Strategy for the South East of England 2009 (revoked July 2010) | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | HRA/AA of the Secretary of State's Final Revisions April 2009 |
| The plan outlines how the region will go about responding to challenges facing the area including housing, economy, transport and the conservation of the environment. The aim to sustain the quality of life whilst remaining economically successful and promoting the area as an attractive place to live corresponds to the sustainable approach the region will take in implementing the plan. | <p><u>Housing</u></p> <ul style="list-style-type: none"> ▪ Providing at least 60% of new housing on brownfield sites. ▪ Increase housing density to an average 40 dwellings per hectare. ▪ 17,340 new dwellings in Dartford from 2006 to 2026. ▪ 9,300 new dwellings in Gravesham from 2006 to 2026. <p><u>Transport and Communications</u></p> <ul style="list-style-type: none"> ▪ Managing transport systems to exploit existing capacity combined with an increased investment in public transport, cycling and pedestrian areas. ▪ Improving access to international and regional gateways. ▪ Accept major future role for road freight but encourage railways to increase share. <p><u>Natural Resource Management</u></p> <ul style="list-style-type: none"> ▪ Improve management of water resources and quality including greater water efficiency and development of new reservoirs. ▪ Decrease the risk of flooding including the use of Sustainable Drainage Systems. | It was concluded that the final South East Regional Spatial Strategy made extensive changes to policy in order to ensure that adverse effects do not result on European sites. It is acknowledged within the RSS that the regional HRA/AA and mitigating policies are inevitably high-level, but this is recognised and allowed for through a policy framework to produce more detailed tailored guidance and for regional allocations to be revised in the light of new data coming forward from lower tier HRA/AA or other relevant studies (e.g. Water Cycle Studies). The report concludes that measures ensure the greatest confidence possible within the confines of regional planning that development under the South East Plan will not result in an adverse effect on European sites. |

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| | <ul style="list-style-type: none"> ▪ Protect ancient woodlands and ensure better management and expansion of key wildlife habitats. ▪ Improve air quality and noise reduction. ▪ Expand the use of renewable energy – setting a target for developers that at least 10% of new developments energy needs are met by renewables. ▪ Promote higher energy efficiency. <p><u>Waste and Minerals</u></p> <ul style="list-style-type: none"> ▪ Minimise reliance on landfill through recycling and composting. ▪ Provide increased facilities for recycling and recovery. ▪ Reduce waste exported from London for disposal in the South East. ▪ Promote use of sustainable construction techniques and recycled aggregates. ▪ Construction process – direct impacts and knock on effects ▪ Increase in waste ▪ Increase in abstraction rates and water use ▪ Contribution to traffic generation ▪ Potential impacts on air, noise and water pollution ▪ Indirect effects via recreation ▪ Obstruct foraging routes ▪ Reduced area of adjacent habitats ▪ Increased access to sites via public transport ▪ Site disturbance ▪ Increase traffic generation ▪ Pollution from runoff | <p>HRA of the Draft South East Plan, Oct 2006</p> <p>The HRA concluded that both the Thames Estuary & Marshes SPA/Ramsar and the Medway Estuary & Marshes SPA/Ramsar may be at risk from water-based and land-based recreational pressures, water quality problems, over abstraction, coastal squeeze and, in some cases, loss of important supporting habitat.</p> <p>The HRA highlights that these potential effects could be controlled by the implementation of appropriate avoidance or mitigation measures at a regional or local level, so long as it is supported by:</p> <ul style="list-style-type: none"> ▪ Commitment ▪ Adequate funding ▪ Appropriate timing of avoidance/ mitigation measures |
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| South East England Regional Assembly Strategy for Energy Efficiency and Renewable Energy 2004 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>A regional strategy plan to increase the efficiency of energy use and substantially increase the proportion of energy from renewable sources.</p> | <p>To generate 5.5% of energy from renewable sources by 2010, and by 2026 16%. Kent's renewable energy target by 2010 is 111MW and by 2016 154 MW. The region has greatest potential to achieve this through onshore wind development. The Thames Estuary is one of three strategic areas identified for offshore wind development.</p> <ul style="list-style-type: none"> ▪ Obstruction to birds migratory flight paths ▪ Construction process – direct impacts and knock on effects ▪ Contribution to traffic generation ▪ Obstruct foraging routes ▪ Reduced area of adjacent habitats ▪ Site disturbance |

| East of England Plan - The Revision to the Regional Spatial Strategy for the East of England 2008 (revoked July 2010) | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008 |
| <p>Draft spatial strategy to guide development in the East of England for at least the next 20 years to sustain and improve the quality of life for all people who live in, work in, or visit the region, by developing a more sustainable, prosperous and outward-looking region, while respecting its diversity and enhancing its assets.</p> <ul style="list-style-type: none"> ▪ 60% of development to be on previously developed | <ul style="list-style-type: none"> ▪ 60% of development to be on previously developed land. ▪ Regeneration, extension and diversification of the region's tourist industry. ▪ Support is given to the expansion of Southend Airport to meet local demand and contribute to local | <p>The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries</p> |

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| <p>land.</p> <ul style="list-style-type: none"> ▪ Regeneration, extension and diversification of the region's tourist industry. ▪ Support is given to the expansion of Southend Airport to meet local demand and contribute to local economic development. ▪ Facilitate the delivery of at least 508,000 net additional dwellings over the period 2001 to 2021. Taking account of completions of 105,550 between 2001 and 2006 the minimum regional housing target 2006 to 2021 is 402,540. ▪ Provide a minimum of 127,000 dwellings in Essex, Thurrock and Southend between 2001 and 2021. ▪ Improvements to the strategic road network including the A130 and A127. ▪ access to the region's airports should be managed and enhanced to support development and enable them to contribute to national and regional objectives for economic growth and regeneration ▪ Essex and Southend should plan for the following quantity of waste during the life of the plan - 9,120 annual tonnages of waste (thousand tonnes). ▪ Essex, Southend and Thurrock should maintain 4.55 million tonnes pa of sand and gravel during the life of the plan. | <p>economic development.</p> <ul style="list-style-type: none"> ▪ Facilitate the delivery of at least 508,000 net additional dwellings over the period 2001 to 2021. Taking account of completions of 105,550 between 2001 and 2006 the minimum regional housing target 2006 to 2021 is 402,540. ▪ Provide a minimum of 127,000 dwellings in Essex, Thurrock and Southend between 2001 and 2021. ▪ Improvements to the strategic road network including the A130 and A127. ▪ access to the region's airports should be managed and enhanced to support development and enable them to contribute to national and regional objectives for economic growth and regeneration ▪ Essex and Southend should plan for the following quantity of waste during the life of the plan - 9,120 annual tonnages of waste (thousand tonnes). ▪ Essex, Southend and Thurrock should maintain 4.55 million tonnes pa of sand and gravel during the life of the plan. ▪ Disturbance - as a result of development near/ adjacent to European sites, including: <ul style="list-style-type: none"> ▪ Recreation ▪ Light Pollution | <p>SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar.</p> <p>HRA of the Draft Revision to Regional Spatial Strategy for the East of England, 2007</p> <p>No effects identified on the integrity of the Thames estuary & Marshes SPA/Ramsar and the Medway Estuary & Marshes SPA/Ramsar.</p> |
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| | <ul style="list-style-type: none"> ▪ Noise Pollution ▪ Atmospheric Pollution - generated as a result of housing, employment and transport growth. ▪ Water Pollution - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ Water Abstraction - as a result of proposed development, potential for reduced water levels. ▪ Land Take - as a result of proposed development. <ul style="list-style-type: none"> ▪ Coastal Squeeze ▪ Modified Drainage - as a result of proposed development altering surface and groundwater flow | |
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| River Basin Management Plan for the Thames River Basin District 2009 | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | HRA of the RBMP for the Thames RBD Nov 2009 |
| The River Basin Management Plan is about the pressures facing the water environment in this river basin district, and the actions that will address them. | <p>Darent and Cray catchment</p> <p>Some key actions for this catchment</p> <ul style="list-style-type: none"> ▪ The Environment Agency will investigate the reasons for low ecological quality. ▪ Thames Water and the Environment Agency will investigate sewage misconnections the Darent and Cray. ▪ Thames Water and the Environment Agency will seek to fulfil the Darent Action Plan to secure sustainable abstraction in the Darent between Otford and Hawley. ▪ Thames Water will assess options for improving | The assessment concluded that the river basin management plan is unlikely to have any significant negative effects on any Natura 2000 sites. The conclusion is reliant on the fact that before any measures in the plan are implemented they must be subject to the requirements of the Habitats Regulations. Any plans, project or permissions required to implement the measures must undergo an appropriate assessment if they are |

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| | <p>groundwater abstraction in the Upper Cray once approved in the Periodic Review.</p> <ul style="list-style-type: none"> ▪ The Environment Agency will investigate sources of hydrocarbons and solvents in Crayford and Dartford and undertake pollution prevention visits at priority sites such as Westerham. ▪ The Environment Agency will work with landowners to address barriers to fish passage at sites including Vitbe Mill and Wellcomme's structure at Dartford. ▪ The Environment Agency will carry out investigative monitoring and field work into the origins of, causes of and solutions to pollution. ▪ The Environment Agency will establish a 'Regional Better Rivers Programme' to improve habitat and ecology in a first round of waters. ▪ The Environment Agency will carry out investigative monitoring and field work into the origins, causes and solutions to sedimentation. ▪ The angling club which controls the fishing at Preston Farm will have an enhancement plan that endeavours to improve the fish habitat. It will provide challenging and varied fly fishing, by installing flow deflectors, where it is deemed necessary. ▪ Pollution prevention campaigns around groundwater abstractions to decrease the inputs of nitrates, pesticides, hydrocarbons and solvents. <p>Medway catchment</p> <p>Some key actions for this catchment</p> <ul style="list-style-type: none"> ▪ Southern Water will improve sewage works at five locations to reduce inputs of nutrients including phosphate and improve shellfish waters. | likely to have a significant effect. |
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| | <ul style="list-style-type: none"> ▪ The Environment Agency will promote good practice to avoid pollution from construction sites in the Loose and Somerhill stream. ▪ South East Water will investigate abstraction from the Greensand Sources in the Leybourne and Bourne in the Periodic Review process. ▪ The Environment Agency will educate and raise awareness of the impact that small discharges to ground and surface water have on water quality of the receiving waters, This is with a view to advising residents of the need to connect to the mains sewer system across many of the rivers including the Barden Mill Stream, Teise, Eden, and Medway between the Eden, Crowborough and Yalding. ▪ The Environment Agency will identify and improve private discharges in rivers such as Eden at Bough Beech, Len and the Loose. ▪ The Environment Agency will carry out additional investigative monitoring and field work into the origins of, causes of and solutions to sedimentation in rivers including Somerhill Stream, Hammer Stream and the Medway at Weir Wood. ▪ The Environment Agency will carry out investigative monitoring and field work into the origins of, causes of and solutions to pollution where we need to improve certainty in many water bodies such as the river Bourne, Eridge Stream, Pippingford Brook and the Beult. ▪ The Environment Agency will establish a 'Regional Better Rivers Programme' to improve habitat and ecology in a first round of waters in rivers such as the Beult, Len and Loose Stream. ▪ The Environment Agency will work with landowners to address barriers to fish passage at | |
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| | <p>sites including Allington and East Farleigh.</p> <ul style="list-style-type: none"> ▪ The Environment Agency will re-survey of the upper reaches of the river Grom to establish current ecological quality, after improvements to the existing combine sewer outfall system. ▪ Pollution prevention campaigns around groundwater abstractions to decrease the inputs of nitrates, pesticides, hydrocarbons and solvents. | |
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| Southern Water - Water Resource Management Plan 2010 - 2035 (October 2009) | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | AA of the SW WRMP October 2009 |
| Sets out how Southern Water proposes to ensure that there is sufficient security of water supplies to meet the anticipated demands of all its customers over the 25-year planning period from 2010 to 2035. | <p>Kent Medway Water Resource Zone</p> <p>Schemes during AMP5</p> <ul style="list-style-type: none"> ▪ Universal metering ▪ Asset improvement schemes for groundwater sources (10.25 Ml/d peak, 8.75 Ml/d average) ▪ Optimisation of interzonal transfers (to Kent Thanet) <p>Schemes beyond AMP5 - company only solution</p> <ul style="list-style-type: none"> ▪ Renewal of the C522 scheme bulk supply to South East Water ▪ Licence variation to the River Medway Scheme ▪ Licence variation of S271 groundwater source ▪ 6.5 Ml/d of further leakage reduction <p>Schemes beyond AMP5 - Water Resources in the South East of England</p> | The AA concluded that the WRMP as proposed, and with the mitigation measures suggested at the more detailed project level that follows, would not adversely affect the integrity of the sites. |

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| | <p>As previous column, but additional schemes</p> <ul style="list-style-type: none"> ▪ Aylesford wastewater recycling scheme ▪ Raising Bewl Water <p>And the assumption that these will enable the following</p> <ul style="list-style-type: none"> ▪ Bulk Supply from Bewl Water to South East Water ▪ Bulk Supply from Burham to South East Water | |
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| Thames Water – Water Resource Management Plan | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | HRA Screening of Thames Water WRMP September 2009 |
| The Plan sets out how Thames Water intends to maintain the balance between supply and demand for water over the next 25 years. | <p>London Water Resource Zone Preferred Programme</p> <p>Demand</p> <ul style="list-style-type: none"> ▪ Leakage Saving (mains replacement, enhanced ALC and metering programme) ▪ Consumption saving (metering, water efficiency and tariffs) <p>Supply</p> <ul style="list-style-type: none"> ▪ ELRED (Development of groundwater resources) ▪ Northern New River 1 ▪ SLARS (Artificial recharge) ▪ Upper Thames Reservoir <ul style="list-style-type: none"> ▪ Dust from pipeline construction ▪ Impedance of groundwater flow due to pipelines | <p>The HRA identifies that at a strategic level, there is generally insufficient information available (i.e. groundwater modelling studies) to state the nature and magnitude of likely impacts.</p> <p>It also states that when the EA's RoC is available, it will then be possible to consider in-combination effects of proposed new schemes with those existing schemes.</p> <p>The HRA screening does not identify any European sites at risk of likely significant effects that are of relevance to this HRA.</p> |

| Creating Sustainable Communities: Greening the Gateway: a Greenspace Strategy for Thames Gateway (ODPM/DEFRA 2004) Creating Sustainable Communities: Greening the Gateway: Implementation Plan (ODPM/DEFRA 2005) | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>The objectives:</p> <ul style="list-style-type: none"> ▪ That a network of varied and well-managed greenspace should be the setting for new and existing residential and commercial areas; ▪ That the landscape should be regarded as functional green infrastructure, recognising a wide range of potential benefits from healthy recreation, to wildlife protection and enhancement, to flood risk management. | <p>Encouraging inclusiveness and integration (integrating landscapes, private and public, green and built), protecting local character and distinctiveness, protecting designated sites (from SAMs to local and international ecological designations), habitat restoration and creation, a dynamic landscape (land management should be responsive, making use of temporary brown field sites, and combining greenspace with flood management, etc).</p> <ul style="list-style-type: none"> ▪ Housing growth – associated development/ construction and ongoing pressures from increased population e.g. recreation ▪ Enhanced transport infrastructure, potential impacts on air, water, land, landscape and townscape ▪ Increased recreational pressures |

| Waterfronts and Waterways in Kent Thameside - A Strategic Agenda 2005 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>The paper represents a synopsis of the issues and opportunities of the Kent Thameside area raised by stakeholders and relevant Government Agencies. The Kent Thameside Delivery Board aims to provide the strategic leadership required to secure optimal use of this unique asset, and to create a waterfront to international standards.</p> | <p>The principal waterfront opportunity sites in Kent Thameside are:</p> <ul style="list-style-type: none"> ▪ River Darent – neglected site with little public access, proposed plans recommend a mix of employment, retail and residential uses with landscaped promenade linking the town centre. ▪ Dartford Marsh – enormous potential as major open space due to designation as potential SSSI. ▪ Dartford Wharves and Ports – stakeholders wish to see these ports safeguarded for continued operational use. ▪ Greenhithe and Swanscombe Peninsula West – valued asset should be |

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| | <p>maintained for river related use.</p> <ul style="list-style-type: none"> Swanscombe Peninsula East and Northfleet Embankment – conflict between industrial and residential use, problems with access Gravesend Town Centre – proximity to waterfront gives major advantage over other Thames Gateway towns. The Canal Basin Area and the Thames and Medway Canal – important feature in terms of local heritage, recreation potential and nature conservation. Blue Lake – major landscape feature provide dramatic setting for business/office space leisure development. <ul style="list-style-type: none"> Potential impacts on air, noise and water pollution Indirect effects via recreation Habitat fragmentation and loss Increased access to sites via public transport Site disturbance Increase traffic generation |
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| Thames Estuary 2100 Project (TE2100) | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| The Environment Agency's Thames Estuary 2100 project (TE2100), is developing a tidal flood risk management plan for London and the Thames estuary. | <p>Tidal defences in the context of the wider Thames Estuary setting; Assessing the useful life of the existing defences and gaining an understanding of the 'drivers' (i.e. climate change, urban development, social pressures and the environment); Inform and gain support of political and funding partners and stakeholders; and Prepare and manage a programme of studies (linked with consultation) that will eventually lead to a strategy for flood risk management in the Thames Estuary for the next 100 years</p> <ul style="list-style-type: none"> Construction process - direct impacts and knock on effects Potential impacts on air, noise and water pollution Reduced area of adjacent habitats Site disturbance |

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| | <ul style="list-style-type: none"> ▪ Pollution from runoff |
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| Thames Gateway Strategic Framework Interim Report: Key Points, Policy Framework, Development Prospectus/Technical Annex 2006 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>The Interim Report describes in more detail what is planned for the three sub-regions of the Gateway (London, South Essex and North Kent) and what developments are going to happen when with supporting information and links to data sources and other research.</p> | <p>The strategy will build on the following opportunities:</p> <ul style="list-style-type: none"> ▪ economic opportunity in the key transformational locations – Canary Wharf, Ebbsfleet Valley, the Olympic site/Stratford City and the Gateway Ports cluster ▪ housing opportunity to accommodate the region's growing workforce and improve conditions for current residents ▪ employment opportunity in town centres and in key regeneration areas, developing the potential in local businesses and brownfield sites ▪ environmental opportunity through the creation of the Thames Gateway Parklands and new approaches to addressing climate change and flood risk ▪ community opportunity through investment in education and training, better quality public services and support for inclusive communities. <ul style="list-style-type: none"> ▪ Construction process - direct impacts and knock on effects ▪ Increase in waste ▪ Increase in abstraction rates and water use ▪ Potential impacts on air, noise and water pollution ▪ Indirect effects via recreation ▪ Obstruct foraging routes ▪ Reduced area of adjacent habitats ▪ Increased access to sites via public transport ▪ Site disturbance ▪ Increase traffic generation ▪ Pollution from runoff |

| Thames Gateway Interim Plan 2006 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>This document is Government and The Thames Gateway Strategic Partnerships statement of common purpose that reflects their ambitions for the Gateway and how they will work together to achieve them. It aims to build on the opportunities offered by the Gateway.</p> | <p>A statement of common purpose that reflects ambitions for the Gateway, it explains how they will build on the opportunities it offers including economic opportunity in key locations and housing opportunity to accommodate the region's growing workforce.</p> <ul style="list-style-type: none"> ▪ Construction process – direct impacts and knock on effects ▪ Increase in waste ▪ Increase in abstraction rates and water use ▪ Contribution to traffic generation ▪ Potential impacts on air, noise and water pollution ▪ Indirect effects via recreation ▪ Obstruct foraging routes ▪ Reduced area of adjacent habitats ▪ Increased access to sites via public transport ▪ Site disturbance ▪ Increase traffic generation ▪ Pollution from runoff |

| Thames Gateway The Delivery Plan 2007 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>The Plan provides a framework for making the best use of public investment, local ownership, big project expertise and private sector entrepreneurship, while also setting out a proposed spending programme for 2008-11.</p> | <p>The Plan is structured around the three driving forces for positive change in the Gateway: a strong economy, improvements in the quality of life for local communities and the development of the Gateway as an eco-region.</p> <ul style="list-style-type: none"> ▪ Enhanced transport network between the four spatial transformers, potential impacts on air, water, land, landscape and townscape ▪ The development of the new Estuary Path which will run along both |

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| | <p>banks of the river could increase recreational pressure.</p> <ul style="list-style-type: none"> ▪ The Plan also supports the mixed-use development proposed as part of the Kent Thameside Waterfront Development. |
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| Strategic Planning Guidance for the River Thames - RPG3B/9B 1997 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>Sets out the Government's planning policies for the River Thames and gives formal planning guidance to local planning authorities. Guidance presents a vision for the river to enhance its status and vitality and develop and exploit its potential.</p> | <p>For the built environment:</p> <ul style="list-style-type: none"> - Enhance vitality of river front development potential and attract a range of users. Regenerate redundant land. <p>River and Riverside</p> <ul style="list-style-type: none"> - Encourage transport potential of river. - Promote the river for recreational purposes. - Maintain and improve public access to, along and across the river. <ul style="list-style-type: none"> ▪ Construction process – direct impacts and knock on effects ▪ Contribution to traffic generation ▪ Contribution to water traffic movement ▪ Obstruct foraging routes ▪ Reduced area of adjacent habitats ▪ Site disturbance ▪ Increase access to sites ▪ Potential impacts on air, noise and water pollution ▪ Indirect effects via recreation |

| The Adopted Kent and Medway Structure Plan 2006 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| Provides strategic guidance for development and includes policies on pollution control. | <p>Provides for: at, and between, the principal urban areas of Dartford and Gravesend/Northfleet major mixed use developments based on previously developed or other damaged land. Development will be comprehensively planned, including appropriate measures to integrate new development with existing communities, and phased in conjunction with the provision of new highway and public transport infrastructure, community services and facilities, air quality management initiatives, flood defences, and water resources and wastewater treatment infrastructure.</p> <p>Potential in-combination impacts arising from housing and economic development, population growth associated travel and recreational pressures.</p> <ul style="list-style-type: none"> ▪ Construction process – direct impacts and knock on effects ▪ Contribution to traffic generation ▪ Increased air, noise and water pollution ▪ Increased pressure on abstraction levels ▪ Increased levels of effluents ▪ Increased access to sites via public transport ▪ Site disturbance |

| Kent Local Transport Plan 2006-2011 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>The document sets out the vision for transport in Kent and how this will be achieved</p> | <p>Increase road maintenance to improve road quality, increase public transport and reduce traffic flows,</p> <ul style="list-style-type: none"> Construction process - direct impacts and knock on effects Increase traffic generation Increase in waste Potential impacts on air, noise and water pollution Increased access to sites via public transport Site disturbance |

| Kent Thameside Water Cycle Study Phase 1, 2009 | |
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| Aim | Elements of the plan that could cause 'in-combination' effects |
| <p>The broad aim is to assist in the sustainable development of the area ensuring that water infrastructure and interventions are clearly programmed.</p> <p>The objectives are:</p> <ul style="list-style-type: none"> Evaluate the initial findings of the scoping study to establish if there is sufficient environmental capacity to receive runoff/wastewater and provide water resources; Establish the requirement for water infrastructure to meet the needs of proposed development Identify optimum solutions to deliver solutions that integrate the different elements of the water cycle to achieve sustainable development across the area Establish whether the required strategic infrastructure can be provided in an appropriate | <p>Positive effects:</p> <ul style="list-style-type: none"> New non household developments should be constructed to meet the BREEAM excellent rating for water efficiency and, where appropriate, the collection of rainwater should be implemented in new developments. The sustainable housing agenda should be promoted to minimise demand from new developments in the Kent Thameside. All new homes should be built to CSH level ¼ in terms of water use. Authorities responsible for delivering new development should engage with the water companies early to ensure that the necessary water supply infrastructure is provided. Promote the optimisation of the water treatment process For larger sites, or where there will be several developments in one area, it is advised that the SUDs "management train" is adopted |

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| <p>timeframe</p> <ul style="list-style-type: none"> Provide the evidence base to support the development of Local Development Framework for Dartford and Gravesham Borough Councils Provide the guidance to developers to meet the objectives of the water cycle study. | |
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| Environment Agency Review of Consents | |
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| Aim | Elements of the plan that could cause 'in-combination' effects |
| <p>The documents summarise the key issues and findings of the Habitats Directive Review of Consents for the Thames Estuary and Marshes Special Protection Area (SPA) and the Medway Estuary and Marshes Special Protection Area (SPA)</p> | <p>Thames Estuary and Marshes SPA</p> <ul style="list-style-type: none"> Assessed 298 permissions at Stage Three Consented discharges from sewage treatment works, in combination with each other, posed a risk of elevated copper levels with the designated site. However the environmental quality standard for copper was not found to be exceeded and conclusion of no adverse effect was found. 'Other action' will be taken to ensure that no adverse effects on the site derive from the discharge of aggregate wash water into Timber Lake. <p>Medway Estuary and Marshes SPA</p> <ul style="list-style-type: none"> Assessed 405 permissions at Stage three Modification of one discharge consent, which permits the discharge of treated effluent from Motney Hill sewage treatment works. The modification will set conditions to limit the concentration of toxic compounds, including copper, allowed to be present in the discharge. The modification will enable the conclusion that no Environment Agency permissions are having an adverse effect on the integrity of the site |

Local

| Castle Point Borough Council Core Strategy, 2009 | |
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| Development proposed | Elements of the development that could cause 'in-combination' effects |
| <p>Housing</p> <ul style="list-style-type: none"> 5,000 new homes in Castle Point between 2001 and 2026 that are well integrated with community service locations. At least 70% of new homes on previously developed land Canvey Town Centre – 400 homes Canvey seafront – 150 homes Hadleigh Town Centre – 500 homes Manor Trading Estate – 200 homes The Point Industrial Estate – 150 homes Land to the East of Canvey Road – 400 homes Castle View School will be redeveloped – 50 homes Land to the north of Kiln Road – 250 homes 650 new homes on PDL in Canvey Island between 2008-2006 800 new homes on PDL in Benfleet, Hadleigh and Thundersley between 2008-2006 <p>Employment</p> <ul style="list-style-type: none"> At least 2,500 additional jobs in Castle Point between 2001 and 2026. South West Canvey – 18ha of employment land Manor Trading Estate – 4ha of employment land Rayleigh Weir – 3ha of employment land <p>Transport</p> <p>Improvements to public transport provision in Castle Point including:</p> | <ul style="list-style-type: none"> Disturbance - as a result of development near/ adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution Noise Pollution Atmospheric Pollution - generated as a result of housing, employment and transport growth. Water Pollution - increased pressure on sewerage capacity and an increase in non-permeable surfaces. Water Abstraction - as a result of proposed development, potential for reduced water levels. Modified Drainage - as a result of proposed development altering surface and groundwater flow. Land Take - as a result of proposed development. Coastal Squeeze |

| Castle Point Borough Council Core Strategy, 2009 | |
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| <ul style="list-style-type: none"> ▪ Delivery of the A13 Passenger Transport corridor through Castle Point by 2011; ▪ Extension of similar Passenger Transport corridor features from the A13 to Canvey Island by 2016; ▪ The delivery of the South Essex Rapid Transit project with connections to the Borough by 2021. <p>Improvements to opportunities for walking and cycling in Castle Point including:</p> <ul style="list-style-type: none"> ▪ Delivery National Cycle Network Routes, and Greenways identified in the Green Grid Strategy; and ▪ Work with ECC to identify and deliver, or improve existing footpaths and cycle routes, and make roads safer for pedestrians and cyclists. | |

| City of London Draft Core Strategy – Delivering a World Class City, 2009 | |
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| Development proposed | Elements of the development that could cause 'in-combination' effects |
| Housing <ul style="list-style-type: none"> ▪ Exceeding the London Plan's minimum annual requirement of 90 additional residential units in the City up to 2026 and guiding housing development to and near existing communities ▪ Requiring residential developments of 10 or more units (or on sites of 0.3 ha or above) to: <ul style="list-style-type: none"> ○ Provide 50% affordable housing on-site or 100% equivalent affordable housing units off-site (aiming to achieve an overall target of 50% affordable housing across all sites); ○ Provide 70% of affordable units as social rented housing and 30% as intermediate housing, including key worker housing. | <ul style="list-style-type: none"> ▪ Disturbance - as a result of development near/ adjacent to European sites, including: <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution ▪ Atmospheric Pollution - generated as a result of housing, employment and transport growth. ▪ Water Pollution - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ Water Abstraction - as a result of proposed development, potential for reduced water levels. ▪ Modified Drainage - as a result of proposed development altering surface and groundwater flow. ▪ Land Take - as a result of proposed development. <ul style="list-style-type: none"> ▪ Coastal Squeeze |

| City of London Draft Core Strategy – Delivering a World Class City, 2009 | |
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| <p>Employment</p> <ul style="list-style-type: none"> To increase the City's office floorspace stock by 1,500,000m² gross during the period 2006–2026 to meet the needs of projected long term economic and employment growth Increase in retail floorspace of 54,324m² (gross 66,795m²) by 2026 <p>Transport</p> <ul style="list-style-type: none"> Securing increased public transport capacity through support for Crossrail, the upgrading of Thameslink and the East London Line scheme. Facilitating further improvements to public transport capacity and step-free access at existing mainline rail and London Underground stations and longer term improvements including the westward extension of the Docklands Light Railway beyond Bank and the City Tram scheme. Improving conditions for walking and cycling | |

| The London Plan 2004 | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>The London Plan replaces existing strategic guidance, and boroughs' local plans must be in 'general conformity' with it. The London Plan acts as the spatial framework integrating crosscutting themes: the health of Londoners, equality of opportunity and its contribution to sustainable development in the UK. The London Plan is required to take account of the European Spatial Development Perspective and other EU Directives. The London Plan includes sub-regions of which the East London objectives are likely to include in combination effects.</p> | <p>The strategic priorities for the East London sub-region will be to:</p> <ul style="list-style-type: none"> deliver the London element of the government's priority for the Thames Gateway for development, regeneration and transport improvement, while recognising the links with other parts of the Thames Gateway and the London-Stansted-Cambridge corridor identify capacity to accommodate new job and housing opportunities and appropriate mixed-use development maximise the number of additional homes, including affordable housing, by exceeding housing provision targets set out in this plan, and secure mixed and balanced communities |

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| | <ul style="list-style-type: none"> ensure that new development is sustainable, safe, secure and well designed. Special attention should be paid to long-term flood risk plan for waste facilities in line with the principle of self-sufficiency, including limited provision to meet part of central London's needs. <p>East London should plan for a minimum 104,000 additional homes and 249,000 jobs up to 2016.</p> <ul style="list-style-type: none"> Construction process – direct impacts and knock on effects Contribution to traffic generation Increased air, noise and water pollution Increased pressure on abstraction levels Increased levels of effluents |
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| London Gateway | | |
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| Development proposed | Elements of the development that could cause 'in-combination' effects | HRA |
| The development of a major deep-sea container port and logistics park on the north bank of the River Thames. | Disturbance to feeding and roosting birds and loss of and disruption to the grazing marsh. | <p>It was determined that direct effects on internationally and nationally designated sites would not be significant, however, indirect effects would be. The sites potentially affected are those listed below:</p> <ul style="list-style-type: none"> the Thames Estuary and Marshes SPA/Ramsar the Benfleet and Southend Marshes SPA/Ramsar the Foulness SPA/Ramsar the Essex Estuaries SAC <p>Compensatory measures include the</p> |

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| | | creation of a new specially protected area of inter-tidal mudflats, known as Site A, for birds and wildlife. |
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| Maidstone Core Strategy Preferred Options, 2007 | | |
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| Planned Development | Elements of the plan that could cause 'in-combination' effects | |
| <p>Housing</p> <ul style="list-style-type: none"> The final dwelling requirement for Maidstone between 2006-2026 will be determined through the South East Plan. However, it is likely to range between 8,200 – 10,080 (or 410pa – 504pa). The KMSP requirement is 6,500 between 2001-2016 (or 415pa) The Council will have regard to a number of other national, regional and local guidance when planning for affordable housing and other housing needs <p>Employment</p> <ul style="list-style-type: none"> New employment locations will be identified to meet the Kent and Medway Structure Plan (KMSP) requirement (36ha minimum) in the Land Allocations DPD. These will include high quality, mixed use business park environments, aimed at attracting companies in the technology and knowledge driven sectors which offer highly skilled, high wage employment. <p>Transport</p> <ul style="list-style-type: none"> To promote additional strategically located quality Park & Ride (P&R) locations, which promotes Best Practice and sustainability and has increased capacity and service levels together with a restriction on non-residential parking on town centre locations to influence modal choice in favour of alternative modes. | <ul style="list-style-type: none"> ▪ Disturbance - as a result of development near/ adjacent to European sites, including: <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution ▪ Atmospheric Pollution - generated as a result of housing, employment and transport growth. ▪ Water Pollution - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ Water Abstraction - as a result of proposed development, potential for reduced water levels. ▪ Modified Drainage - as a result of proposed development altering surface and groundwater flow. ▪ Land Take - as a result of proposed development. ▪ Coastal Squeeze | |

| Medway Core Strategy (Issues and Options) 2009 | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | HRA Findings |
| <p>The Core Strategy will set out the "vision" and "strategic objectives" for Medway up to 2026. It will provide an overall strategic framework for the area, including proposals for minerals and waste. The LDF as a whole will replace the 2003 Medway Local Plan and other pre-2003 plans in due course.</p> | <p>Under the South East Plan between 2006 and 2026 Medway is required to make provision for the completion of 16,300 dwellings, of which 15,700 will be within the Thames Gateway (that is, north of the M2) and 600 within that part of the "Rest of Kent" which lies within Medway (effectively the parishes of Cuxton and Halling).</p> <p>Future population growth: Medway's population is likely to reach 264,300 by 2026 (252,200 in 2007).</p> <p>The role of Medway, as a main economic location, will be promoted. Major sites identified in Medway will be developed to their full potential, building on the existing high technology, aerospace and automotive sectors and attracting new high value activity, or accommodating the expansion of transport, energy, distribution and manufacturing.</p> <ul style="list-style-type: none"> ▪ Housing growth – associated development/ construction and ongoing pressure from increased population e.g. recreation. ▪ Provision of employment, potential impacts on air quality, soil and water, growth in requirement for waste management. ▪ Enhanced transport infrastructure, potential impacts on air, water, land, landscape and townscape. | <p>None</p> |

| Sevenoaks Core Strategy Submission (2010) | |
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| Planned Development | Elements of the plan that could cause 'in-combination' effects |
| Housing <ul style="list-style-type: none"> Total housing allowance is 3,561 In residential developments of 15 dwellings or more gross 40% of the total number of units should be affordable. In residential developments of 10-14 dwellings gross 30% of the total number of units should be affordable In residential developments of 5-9 units gross 20% of the total number of units should be affordable Employment <ul style="list-style-type: none"> Total employment land to be developed - 86.1ha Transport <ul style="list-style-type: none"> The Council will support and promote measures to reduce reliance on travel by car both in providing for new development and in supporting measures promoted through the Transport Strategy. | <ul style="list-style-type: none"> Disturbance - as a result of development near/ adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution Noise Pollution Atmospheric Pollution - generated as a result of housing, employment and transport growth. Water Pollution - increased pressure on sewerage capacity and an increase in non-permeable surfaces. Water Abstraction - as a result of proposed development, potential for reduced water levels. Modified Drainage - as a result of proposed development altering surface and groundwater flow. Land Take - as a result of proposed development. <ul style="list-style-type: none"> Coastal Squeeze |

| Swale Borough Local Plan 2008 (Adopted) | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects |
| <p>This Local Plan provides policies and proposals relating to the development and other use of land in the Borough, with the exception of the extraction of minerals and the management of waste. In so doing it seeks to:</p> <ul style="list-style-type: none"> Apply Government land use planning policy at a local level, including its objective of securing sustainable development; Apply the strategy of the Kent and Medway Structure Plan; | <ul style="list-style-type: none"> Construction process - direct impacts and knock on effects Contribution to traffic generation Increased air, noise and water pollution Increased pressure on abstraction levels Increased levels of effluents |

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| <ul style="list-style-type: none"> ▪ Provide a detailed basis for planning decisions by identifying sites for particular purposes, and criteria based policies against which development proposals will be assessed; ▪ Present local and detailed planning issues to the public, and to foster the community's engagement in the plan making process; and ▪ Provide a basis for decisions on the investment of private and public resources and the management of land. | |
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| Thurrock Core Strategy and Development Management Policies Submission (2010) | |
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| Planned Development | Elements of the plan that could cause 'in-combination' effects |
| Housing <ul style="list-style-type: none"> ▪ Thurrock is required to deliver a minimum of 18,500 dwellings between 2001 and 2021. This will include a mix of dwelling types, size and tenure, to meet the needs of Thurrock's current and future population. ▪ For the period 1 April 2009 to 31 March 2021, an additional 13,550 dwellings are required to meet this policy aim. This equates to an average of 1130 dwellings per year. ▪ For the 4 year period 1 April 2021 to 31 March 2025, the Council has made an indicative provision for 3,800 dwellings subject to RSS Review. ▪ The Council will seek the minimum provision of 35% of the total number of residential units built to be provided and maintained in perpetuity as affordable housing. Employment <ul style="list-style-type: none"> ▪ The Key Strategic Economic Hubs will provide 445 hectares of the Industrial and Commercial and Mixed-Use Land between 2009 and 2021. | <ul style="list-style-type: none"> ▪ Disturbance - as a result of development near/ adjacent to European sites, including: <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution ▪ Atmospheric Pollution - generated as a result of housing, employment and transport growth. ▪ Water Pollution - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ Water Abstraction - as a result of proposed development, potential for reduced water levels. ▪ Modified Drainage - as a result of proposed development altering surface and groundwater flow. ▪ Land Take - as a result of proposed development. <ul style="list-style-type: none"> ▪ Coastal Squeeze |

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| <ul style="list-style-type: none"> ▪ The proposed Primary and Secondary Industrial and Commercial sites (identified in the Site Allocations DPD) will provide approximately 372 hectares of net employment land across the Borough between 2009 and 2021. ▪ The Council has designated 75.4 hectares of land throughout the Borough for mixed-use development between 2009 and 2021. <p>Transport</p> <ul style="list-style-type: none"> ▪ The Council will work with partners to deliver a 10% reduction in forecast traffic levels by 2021 ▪ Improve public transport infrastructure in the Thurrock Urban Area through the phased delivery of the South Essex Rapid Transit (SERT) and other inter-urban public transport and bus priority. ▪ Ensure new development promotes high levels of accessibility by sustainable transport modes | |
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| Tonbridge and Malling Adopted Core Strategy 2007 | | |
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| Aim of the document | Elements of the plan that could cause 'in-combination' effects | HRA of Tonbridge and Malling Local Development Framework, Jan 2009 |
| <p>The Core Strategy is a key planning document under the new planning regime. It sets out the Council's vision, aims and objectives which will determine the future pattern of development in the Borough over the period up until 2021 and the way in which the social, economic and environmental needs of the area can be delivered in the most sustainable</p> | <p>Policy CP15</p> <p>The submission version of the South East Plan requires an average rate of development in Tonbridge and Malling Borough of 425 dwellings per annum for the 2006-21 period; a total of 6,375 dwellings (or such other figure as may ultimately be included in the approved South East Plan).</p> <p>Over 90% of all housing developments will take place on previously developed land; well in excess of the</p> | <p>The HRA was conducted on two European sites. Neither of relevance to this study.</p> |

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| <p>way.</p> | <p>Government's target.</p> <p>The Employment Land Review concluded that, subject to regular monitoring, the existing supply of land for employment development is sufficient, in quantitative and qualitative terms, to meet the employment needs of the Borough at least until 2016. In accordance with the precautionary approach, employment needs beyond 2016 will be reassessed at a future review of the Development Land Allocations DPD having regard to the results of monitoring.</p> <p>In order to deliver the strategic development sites identified in policy CP15, accommodate predicted traffic growth, improve air quality and relieve sensitive areas from traffic congestion, new transport infrastructure will be needed.</p> <ul style="list-style-type: none"> ▪ Housing growth – associated development/ construction and ongoing pressure from increased population e.g. recreation. ▪ Provision of employment, potential impacts on air quality, soil and water, growth in requirement for waste management. ▪ Enhanced transport infrastructure, potential impacts on air, water, land, landscape and townscape. | |
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Appendix 3: Screening Assessment Matrix

| Habitat Regulations Assessment Screening Table: Core Strategies | | | | |
|---|--|---|-------------------------------------|-------------|
| Site | THAMES ESTUARY & MARSHES SPA/RAMSAR Unitary Authorities: Kent, Essex Area Ramsar (ha): 5588.59 Area SPA (ha): 4838.94 | | | |
| 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</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 | Yes | Yes |

| | | | | |
|---|--|--|--|--|
| <p>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> <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>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> | | |
|---|--|--|--|--|

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

| Habitat Regulations Assessment Screening Table: Core Strategies | | | | |
|--|--|--|-------------------------------------|-------------|
| Site | NORTH DOWNS WOODLAND SAC Unitary Authorities: Kent, Medway Area (ha): 287.58 | | | |
| 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 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 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 close to the site 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</p> | <p>No</p> <p>Risk of direct impacts from the Core Strategies are unlikely due to the distance from the designated site and policies proposed which will act as mitigation.</p> | None | No | No |

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

| | | | | |
|--|--|--|--|--|
| Strategy development on this site is not considered significant. | | | | |
| Unknown impact on grazing levels due to new development. | | | | |

| Habitat Regulations Assessment Screening Table: Core Strategies | | | | |
|--|---|--|-------------------------------------|-------------|
| Site | MEDWAY ESTUARY & MARSHES Unitary Authorities: Kent Area Ramsar (ha): 4969.74 Area SPA (ha): 4684.36 | | | |
| 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 (consulted during the AA of the South East Plan) 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 SPA/RAMSAR Unitary Authorities: Essex Area Ramsar (ha): 2251.31 Area SPA (ha): 2251.31 | | | |
| 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. 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</p> | <p>Risk of direct impacts from the Core Strategies unlikely due to the distance from and limited access to the designated site.</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. Any port development and subsequent dredging within the Plan area may in turn affect sediment supply to the site resulting in | <p>Other plans and programmes outwith the Core Strategies areas are more likely to have an impact on site integrity.</p> | No |

⁴ Scott Wilson & Levett-Therivel 2006, *Appropriate Assessment of the Draft South East Plan*

| | | | | |
|---|--|--|--|--|
| 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. | | erosion. Higher risk of incidental pollution from potentially higher volumes of ships. | | |
|---|--|--|--|--|

Appendix 4: Policy Screening

1) Dartford Core Strategy Pre Submission Policies

| Pre Submission Policy | Potential Effect | Potential effect |
|---------------------------------------|--|------------------|
| CS1: Spatial Pattern of Development | The policy focuses development in areas that could have likely significant effects on European sites through reduced water levels (increased abstraction), reduced water quality (increase pressure on sewerage capacity) and increased disturbance (increased recreational activity). | Yes |
| CS2: Dartford Town Centre | Policy has the potential for likely significant effects on European sites in combination with other Core Strategy policies through reduced water levels (increased abstraction), reduced water quality (increase pressure on sewerage capacity) and increased disturbance (increased recreational activity). | Yes |
| CS3: Northern Gateway Strategic Site | See potential effects for Pre Submission Policy CS 2. | Yes |
| CS4: Ebbsfleet to Stone Priority Area | See potential effects for Pre Submission Policy CS 2. | Yes |
| CS5: Ebbsfleet Valley Strategic Site | See potential effects for Pre Submission Policy CS 2. | Yes |
| CS6 Thames Waterfront | See potential effects for Pre Submission Policy CS 2. | Yes |
| CS7 Employment Land and Jobs | See potential effects for Pre Submission Policy CS 2. | Yes |
| CS8: Economic Change | 'No effect' policy - the policy itself will not lead to development. | No |
| CS9: Skills and Training | 'No effect' policy - the policy itself will not lead to development. | No |
| CS10: Housing Provision | Policy has the potential for likely significant effects both alone and in combination on European sites through reduced water levels (increased abstraction), reduced water quality (increase pressure on sewerage capacity) and increased disturbance (increased recreational activity). | Yes |
| CS11: Housing Delivery | 'No effect' policy - the policy itself will not lead to development. | No |
| CS12: Network of Shopping Centres | 'No effect' policy - the policy itself will not lead to development. | No |
| CS13: Green Belt | 'No effect' policy - the policy is intended to protect the Green Belt. | No |
| CS14: Green Space | Policy seeks to implement a multi-functional, high quality, varied and well-managed Green Grid. Part of the policy seeks to join together existing sections of the Thames Riverside Path to create a continuous quality path. This has the | No |

| Pre Submission Policy | Potential Effect | Potential effect |
|---|---|------------------|
| | potential to improve access and therefore increase disturbance on the European sites as a result of increased recreational activity. However, this is not like to have significant effects as the policy contains sufficient mitigation through the provision of alternative areas for recreation. Mitigation includes the creation of approximately 300 hectares of new or improved green spaces as part of new developments by 2026. Where on-site open space is not appropriate or feasible, contributions will be sought to off-site improvements of open space in the vicinity of the site. The policy also seeks to protect and enhance existing open spaces, areas of nature conservation value, Sites of Special Scientific Interest and priority habitats and species. | |
| CS15: Managing Transport Demand | 'No effect' policy - the policy itself will not lead to development. | No |
| CS16: Transport Investment | 'No effect' policy - doesn't specify development locations. | No |
| CS17: Design of Homes | 'No effect' policy - the policy itself will not lead to development. | No |
| CS18: Housing Mix | 'No effect' policy - the policy itself will not lead to development. | No |
| CS19: Affordable Housing | 'No effect' policy - the policy itself will not lead to development. | No |
| CS20: Gypsies and Travellers | No effect' policy - doesn't specify development locations. | No |
| CS21: Community Services | 'No effect' policy - policy promotes concentration of development in urban areas, away from European sites. | No |
| CS22: Sports, Recreation and Culture Facilities | 'No effect' policy - the policy provides alternative areas for recreation. | No |
| CS23: Minimising Carbon Emissions | 'No effect' policy - the policy itself will not lead to development. | No |
| CS24: Flood Risk | 'No effect' policy - the policy itself will not lead to development. | No |
| CS25: Water Management | 'No effect' policy - the policy itself will not lead to development. | No |
| CS26: Implementation and Delivery | 'No effect' policy - the policy itself will not lead to development. | No |

2) Gravesham Core Strategy Regulation 25 Policies

| Regulation 25 Policy | Potential Effect | Potential effect |
|--|--|------------------|
| Core Strategy Policies | | |
| Core Strategy Policy 1a - Settlement Hierarchy | 'No effect policy'. Steers development away from European Sites. | No |
| Core Strategy Policy 1b - Urban Area | Yes. Aims to improve access to and along the waterside, including Green Grid and Thames Path, as well as increased access to the river for boats. May lead to water and land-based recreational impacts. | Yes |
| Core Strategy Policy 1c - Rural Area | 'No effect' policy. Doesn't specify locations for development and aims to protect areas of nature conservation. | No |
| Core Strategy Policy 2 - Climate Change | 'No effect' policy. Doesn't lead directly to development. | No |
| Core Strategy Policy 3 - Design and development principles | 'No effect' policy- doesn't specify development locations. | No |
| Core Strategy Policy 4 - Physical and Social Infrastructure | 'No effect' policy- doesn't specify development locations. | No |
| Core Strategy Policy 5 - Green Infrastructure | Yes. Through promoting enhanced access, may have unintended effects, e.g. through increased noise, disturbance. | Yes |
| Core Strategy Policy 6 - Heritage and the historic environment | 'No effect' policy- doesn't lead to development. | No |
| Core Strategy Policy 7 - Education, Skills and Learning | 'No effect' policy- doesn't specify development locations. | No |
| Core Strategy Policy 8 - Economy and employment | Yes. The amount of employment development proposed may cumulatively lead to adverse effects (e.g. Air pollution). | Yes |
| Core Strategy Policy 9 - Town Centres and retailing | Yes. Proposes new retail development at Canal Basin- may lead to effects on Thames Estuary Ramsar /SPA sites. | Yes |
| Core Strategy Policy 10 - Culture, tourism and leisure | Yes. Policy proposes greater use of Thames Estuary for leisure and culture, may lead to increased disturbance of European sites. | Yes |
| Core Strategy Policy 11- Residential Development | Yes. Proposes significant levels of residential development which may lead to a range of effects on sites due to water quality, air pollution or recreational disturbance. | Yes |

| Regulation 25 Policy | Potential Effect | Potential effect |
|---|---|------------------|
| Core Strategy 12 - Gypsies, Travellers and Travelling Showpeople | 'No effect' policy- doesn't specify development location and only considers development on a minor scale. | No |
| Core Strategy 13a - Strategic Transport Aims | 'No effect' Policy. Refer Development Management policies for further detail on individual schemes. | No |
| Core Strategy 13b - Modal Objectives | Yes. Policy includes proposals for increased river-based services which have the potential to increase disturbance to European sites. | Yes |
| Core Strategy Policy 14 - Strategic sites | Yes. Policy proposes location of key development sites. Whilst sites are generally located away from European sites, development at Canal Basin (including support of Thames and Medway Canal extension) could lead to effects on the Thames Estuary and Marshes SPA/Ramsar site through recreational disturbance, and air pollution. | Yes |
| Development Management Policies | | |
| Development Management Policy 1 - Sustainable Energy | Yes. Development of on-site renewables has the potential for adverse effects, especially the effect of wind turbines on flight paths. | Yes |
| Development Management Policy 2 - Water resource management | 'No effect' policy. Although this policy will have positive mitigative effects through supporting water efficiency measures. | No |
| Development Management Policy 3 - Protecting Amenity | 'No effect' policy. Although policy may have positive mitigating effects through addressing air quality and noise matters. | No |
| Development Management Policy 4 - Design | 'No effect' Policy. Doesn't lead to development. | No |
| Development Management Policy 5 - Cemetery Provision | 'No effect' Policy. Doesn't specify development location. | No |
| Development Management Policy 6 - Green Space | 'No effect' Policy, although this policy will contribute towards mitigation through ensuring provision of green space for recreation. | No |
| Development Management Policy 7 - Green Grid | Yes. Refer Core Strategy policy 5. | Yes |
| Development Management Policy 8 - Biodiversity and Geological Diversity | 'No effect' policy. Does not lead to development. Policy seeks to protect sites of biodiversity importance. May assist in mitigation of other elements of the plan. | No |
| Development Management Policy 9 - Landscape | 'No effect' policy. Does not lead to development. | No |

| Regulation 25 Policy | Potential Effect | Potential effect |
|---|---|------------------|
| Development Management Policy 10 - Heritage and the Historic Environment | 'No effect' policy. Does not lead to development. | No |
| Development Management Policy 12 - Maintaining employment capacity | 'No effect' policy. Does not lead to development. | No |
| Development Management Policy 13 - New employment | 'No effect' policy. Policy does not specify development locations. | No |
| Development Management Policy 14 - Agriculture, equestrian development and rural diversification | 'No effect' policy. Does not lead to development. | No |
| Development Management Policy 15 - Re-use of Rural Buildings | 'No effect' policy. Policy refers to re-use of existing buildings. | No |
| Development Management Policy 16 - Policies for town centre | 'No effect' policy. Steers development away from European Sites. | No |
| Development Management Policy 17 - Local, neighbourhood and village centres | 'No effect' policy. Policy will not lead to new development. | No |
| Development Management Policy 18 - Protection of Existing Recreation Areas | No effect policy. Policy refers to retention of existing land or buildings. | No |
| Development Management Policy 19 - Open space standards | 'No effect' policy. Possible positive mitigative effect through enhancing open space in the Borough (and therefore enhancing alternative recreation space). | No |
| Development Management Policy 20 - PROW | Yes. Possible adverse effects on European sites though enhancing recreation in these areas. | Yes |
| Development Management Policy 21 - Dwelling type, size and mix | 'No effect' Policy. Policy does not lead directly to development. | No |
| Development Management Policy 22 - Extensions and alterations within settlements | 'No effect' policy. Refers only to minor development/extensions to existing settlements. | No |
| Development Management Policy 23 - Extensions and Alterations to Existing Dwellings in the Green Belt | 'No effect' policy. Refers only to minor development/extensions to existing dwellings. | No |
| Development Management Policy 24 - Ancillary Domestic Buildings in the Green Belt | 'No effect' policy. Directs development away from European sites and refers only to minor development. | No |
| Development Management Policy 25 - | 'No effect' policy. Refers to replacement of existing dwellings. | No |

| Regulation 25 Policy | Potential Effect | Potential effect |
|---|---|------------------|
| Replacement of Dwellings in the Green Belt | | |
| Development Management Policy 26 - Conversions and HMO | 'No effect' policy. Refers to existing development. | No |
| Development Management Policy 27 - Affordable housing | 'No effect' Policy. Policy does not lead directly to development. | No |
| Development Management Policy 28 - Rural Housing Exceptions | 'No effect' policy. Policy directs development away from existing European sites. | No |
| Development Management Policy 29 - Non-allocated Gypsy & Traveller sites | 'No effect' policy. Policy refers to minor development and directs development away from European sites (by directing development towards areas that have existing facilities and avoid harm to wildlife sites). | No |
| Development Management Policy 30 - Travelling Showpeople's Quarters | 'No effect' policy. Whilst the policy doesn't specify locations, it refers to minor scale development and would require that development would not have an unacceptable environmental effect. | No |
| Development Management Policy 31 - Residential Institutional Accommodation | 'No effect' policy. This is a development management policy and won't specifically lead to development. | No |
| Development Management Policy 32a - Assessment Criteria for Transport Proposals | 'No effect' policy. This is a development management policy relating to the assessment of transport proposals. It won't specifically lead to development. (Note: this policy might be an appropriate location for any mitigation measures, should it be determined that effects on European sites are likely due to transport proposals). | No |
| Development Management Policy 32b - Transport Assessments and Travel Plans | 'No effect' policy. Policy won't lead to development. (However it may help to provide mitigation from any air pollution-related impacts on European sites.) | No |
| Development Management Policy 32c - Transport Network and Accesses | 'No effect' policy. Policy does not lead to development. | No |
| Development Management Policy 32d - Vehicle Parking Standards | 'No effect' policy. Policy does not lead to development. | No |
| Development Management Policy 32e - Highway Service Provision | 'No effect' policy. Whilst the policy doesn't specify locations, it refers to minor scale development and would require that development would not have an unacceptable environmental effect. | No |
| Development Management Policy 32f - Safeguarding for Transport Schemes | 'No effect' policy. Policy does not directly lead to development. Additionally, the transport schemes mentioned in the policy are not located close to | No |

| Regulation 25 Policy | Potential Effect | Potential effect |
|--|---|------------------|
| | European sites. | |
| Development Management Policy 32g - Additional Lower Thames Crossing Assessment criteria | 'No effect' policy. Will not lead to development (although potential mitigation through ensuring environmental impacts of any lower Thames crossing are mitigated). | No |

Appendix 5: Consultation Commentary

Habitats Regulations Assessment - Draft Screening Report May 2007

| Respondent | Summarised Comment | Council Response |
|---|---|--|
| Natural England Rebecca Moberly (E-mail received 29/05/07) | Generally I'm happy with the approach you've taken and the conclusions, but I have some comments on the details. | Noted. |
| | I have not been able to double-check the site characteristics and reasons for designation for the North Downs Woodlands and Benfleet and Southend Marshes in Appendix 1, but there are a number of errors in the Ramsar site figures for birds for Thames Estuary and Marshes - these should be the same as for the SPA - and with Latin names in the SPA details, whilst the numbers for Medway Estuary and Marshes are wrong. | The characterisations for each European site (Appendix 1) use the information available from the JNCC website. This includes the Ramsar Information Sheets and Natura 2000 Data Forms. |
| | Task 3 Consideration of other plans and programmes I see you have included Medway Local Plan, but what about LDFs and Local Plans for other adjoining districts/boroughs? You may be assuming that issues relating to these will be covered by inclusion of the South East Plan, but it would be good to clarify. | The plans and programmes review (Appendix 2) has been updated to include neighbouring authorities. |
| | Appendix 1 Thames Estuary and Marshes You may want to specify that it is erosion of the saltmarsh that is a particular issue in terms of coastal squeeze in this site. (Paragraph 1) In relation to dredging, the main type of dredging that goes on at present is maintenance and this doesn't usually have an impact. However any future capital dredges could cause more issues. (Paragraph 1) Development SHOULD not lead to a net loss of grazing marsh, but it may still happen nevertheless. I'm not sure | Noted. |

| Respondent | Summarised Comment | Council Response |
|------------|---|------------------|
| | <p>why you have included Brent Goose and Wigeon specifically in relation to grazing marsh, as they are not designated features of this site. I'd suggest reword this as "as it is important habitat for SPA species". (Paragraph 3)</p> | |
| | <p>Appendix 1</p> <p>Medway Estuary and Marshes</p> <p>Coastal squeeze is not an issue at this site as the estuary is accreting. The issue has to do with the loss of upper and mid marsh saltmarsh species * most probably due to the spread of <i>Spartina anglica</i>. (Paragraph 2) The Environment Agency's Review of Consents project has recently shown that eutrophication is not impacting on the site because algal mats are not present in the winter, thus alleviating impacts on wintering birds. The algal mats do not impact on invertebrates in the mud as they don't persist or cause anaerobic conditions. (Paragraph 3) Hyper-nutrition may be an issue for the Medway, but, in terms of algae growth, light levels entering the estuary prevent algae from growing year round. This may actually be more of a perceived problem rather than actual. (Paragraph 4) Loss of habitat due to the A249 bridge was compensated for by the Highways Agency. (Paragraph 5) The erosion of intertidal habitat due to the effects of sea defences and clay extraction all occurred in the past. The estuary is now actually accreting with many believing that it is trying to return to its pre-mud digging form. (Paragraph 6) I would suggest adding in text about the importance of grazing marsh habitat as for Thames Est and Marshes.</p> | Noted. |
| | <p>Appendix 3</p> <p>Comments as above for site vulnerabilities for Thames and Medway. In general in the South East, there are existing difficulties in finding suitable graziers for sites. Increases in urbanisation are likely to exacerbate these, as</p> | Noted. |

| Respondent | Summarised Comment | Council Response |
|------------|--|--|
| | <p>urban fringe locations are difficult to graze/keep livestock on for a number of reasons.</p> <p>I'm not entirely convinced about the justifications in relation to air pollution. Whilst air pollution is a regional, as well as national and international, issue, there are also localised air quality impacts that can potentially be addressed through the LDF, particularly in relation to traffic, e.g. policies to encourage public transport. Also just because there are no new roads being built doesn't mean that there will be no additional air quality impacts. Congestion is likely worsen due to increased population. I would suggest referring to the AA for the South East Plan and see what is said there in relation to local air quality impacts, and in relation to the designated sites considered here. For estuarine sites, it should be noted that recreational impacts should include water-based recreation.</p> | <p>Air quality is not considered to be a significant issue as there are no major roads within 200m of the identified European sites that are likely to see a significant increased in traffic as a result of Dartford and Gravesham Core Strategies alone or in combination. Based on NE advice¹ to Local Authorities and the HRA of the SE Plan² it is assessed that air pollution only needs to be considered at a site if a road carrying a significant proportion of new traffic related to the plan runs within 200 meters of a European site. Estuarine habitats are also not considered to be particularly sensitive to air pollution effects given that they already receive high nitrogen loads in water.</p> |
| | <p>Appendix 3</p> <p>North Downs Woodlands</p> <p>The woodlands are currently suffering due to recreational activities that cause damage to ground flora, so it is not true that their steep and</p> | <p>The screening assessment considered that the policy mitigation offered by the Core</p> |

¹ English Nature (16 May 2006) letter to Runneymede Borough Council, 'Conservation (Natural Habitats &c.) Regulations 1994, Runneymede Borough Council Local Development Framework'.

² Levett-Therivel (2006) Appropriate Assessment of the Draft South East Plan. Final Report.

| Respondent | Summarised Comment | Council Response |
|------------|---|---|
| | <p>inaccessible nature makes them invulnerable to impacts. Both recreation and urbanisation were picked up as issues for which it could not be determined that there would be no adverse impacts on the site in the South East Plan AA.</p> | <p>Strategies in terms of the provision of alternative areas for recreation was sufficient to mitigate the potential for likely significant effects through increased recreational activity.</p> <p>NE plays a key role in the collation of information to monitor the identified European sites and is responsible for assessing the condition of each feature within the sites. If monitoring carried out by NE on the North Downs Woodlands SAC finds that recreational impacts are affecting the designated features then these should be addressed through actions developed in the European site management plan. The development of co-operative measures, such as a voluntary code of conduct or restrictions, would help to address the likely significant effects of recreational activity on the site.</p> |

Habitats Regulations Assessment - Appropriate Assessment Interim Report January 2008

| Respondent | Summarised Comment | Council Response |
|------------------------|---|---|
| 1. Introduction | | |
| Natural England | Introduction The AA Interim Report is clear and concise and is well structured. The introduction clearly sets out the key steps in an Appropriate Assessment and follows good practice by being produced alongside the SA/SEA report and DBC Core Strategy revised Preferred Options. | Noted. |
| | The AA makes it clear that there are no European sites within Dartford Borough and one European site partially within Gravesham Borough. The AA acknowledges that three other European sites could be affected by plans and programmes beyond the intended plan area boundaries. As required by the AA process the site details are set out in the report under Appendix 1. | Noted. |
| | We are concerned that the other plans considered at this stage have not included plans and programmes of neighbouring councils. We would urge the Council to review this omission and collaborate with surrounding councils to determine if there is an effect on the integrity of the four European sites identified. | The plans and programmes review (Appendix 2) has been updated to include neighbouring authorities. Where plans and programmes considered in combination are also identified where necessary within the AA Report. |
| | The interim findings conclude more works needs to be done on the two European sites which are subject to AA. We would urge the Council to also look at other plans and programmes (surrounding authorities) to assess what their impacts singularly or in-combination could have on these two European sites. | See response above. |
| | Based on the information supplied, we concur with the interim findings of the AA and the recommendation that the Council build mitigation measures into the forthcoming Preferred Options. | Noted. |
| GOSE | We expect you to liaise with Natural England, to determine whether an Appropriate Assessment (AA) is necessary based upon the location of protected species or sites within or in the vicinity of the area covered by the DPD, and to have acted accordingly. Any methodology used to carry out an | The HRA Screening (May 2007) concluded that AA would be necessary for two European sites. These findings were agreed with NE. |

| Respondent | Summarised Comment | Council Response |
|----------------------------|--|---|
| | Appropriate Assessment should first be agreed with Natural England. | |
| Kent Wildlife Trust | <p>2.4 Due to the close relationship between all three estuaries we feel that these habitats should be dealt with as a block. In combination effects throughout the Thames gateway could be assessed and a scheme of landscape scale mitigation formulated which can be contributed to by all Thames Gateway Local Authorities in relation to the impact their developments will have individually and in combination. We feel it would be helpful if the impacts on the Swale also be explored in a little more detail. We understand that this is difficult for you as all the research has not been completed on the impacts of development in the Thames Gateway on the estuarine habitats or the birds and it maybe that the Core Strategy will need an overarching policy obligating to work with other authorities within the area on an overall mitigation strategy and advising developers that they will be expected to contribute to this. I feel a meeting to discuss this and if agreeable to NE come up with appropriate wording would be very helpful. I know time is short for you but would you be agreeable to this?</p> <p>It is also important to remember that although not geographically close to Dartford it is likely that the new residents will visit the coast for day trips or longer periods. Due to the level of housing planned within Dartford impacts of recreational pressure on the coastal Natura 2000 and Ramsar sites should be explored.</p> | <p>The North Kent Environmental Planning Group (NKEPG) has recently been created to facilitate closer working between Local Planning Authorities (LPAs) and statutory bodies in order to have a common understanding and approach to the natural environment and biodiversity in North Kent. A key element of this work is to ensure that there is a greater understanding of the issues potentially affecting European sites and how these should be addressed in a consistent and strategic way across the North Kent LPAs. It is hoped that the collaborative work undertaken by the group may help to produce a clearer picture of the issues affecting the sites and that this, in turn, should lead to an understanding of any necessary avoidance and mitigation measures.</p> <p>The AA Report recommends that Dartford and Gravesham Borough Council give material consideration to the findings and outcomes of the NKEPG work.</p> |
| | 3.5 Gravesham Borough Council has now issued their preferred options document and consultation has been undertaken. Any future AA should explore the plans contained within this document to ensure that the AA is as up to date as possible at the time of Dartford's submission. | Gavesham Borough Council's Core Strategy Regulation 25 Document has been considered within the AA. |
| | | |

| Respondent | Summarised Comment | Council Response |
|------------|--|---|
| | 3.12 Medway and Swale have now produced their Issues and Options Report and these should be appraised within the report for in combination effects. | The Medway Core Strategy Issues and Options and Swale Local Plan (Core Strategy is still in the early stages of development) have been included within the relevant plans and programmes review (Appendix 2) and considered within the in combination assessment. |
| | 3.17 We agree in relation to The Swale SPA and Ramsar site that Local Authorities nearer to the Estuary will have the largest impacts on these sites and Dartford may have little impact at all. However if you do end up looking at a Thames Gateway wide strategy then it will be essential to assess impacts of all four LA's both individually and in combination. If this assessment does not include The Swale this may cause difficulties later on. | The AA considers the potential for the Dartford and Gravesham Core Strategies to have adverse effects on the integrity of the identified European sites both alone and in combination. |
| | 4.13 Caution is needed when analysing the results of the Thames Basin heaths study in relation to the estuarine sites. Heathland is a very different habitat and there are many local fragmented heathland sites not included within the SPA which people are likely to visit for shorter walks such as to walk the dog this does not apply in the case of the estuaries. | Noted. |
| | 4.20 Although the provision of a network of green spaces is extremely welcome and could be used as part of a mitigation package, one cannot create habitat that mirrors that to be protected and therefore it is likely that at least some of the population which want to experience the estuary habitat will still gravitate towards these sites. If GI is to be used to try to deflect people away from the Natura 2000 sites then provision for mitigation will need to be supplied above and beyond the NE ANGSt Guidelines which are applicable to all LA's whether development impacts on European sites or not. There may need to be other mitigation such as buffering and wardening needed on a Thames Gateway scale to fully mitigate all impacts on the bird populations from water and land based recreational pressure. However we | Noted, these comments are addressed in the AA Report. |

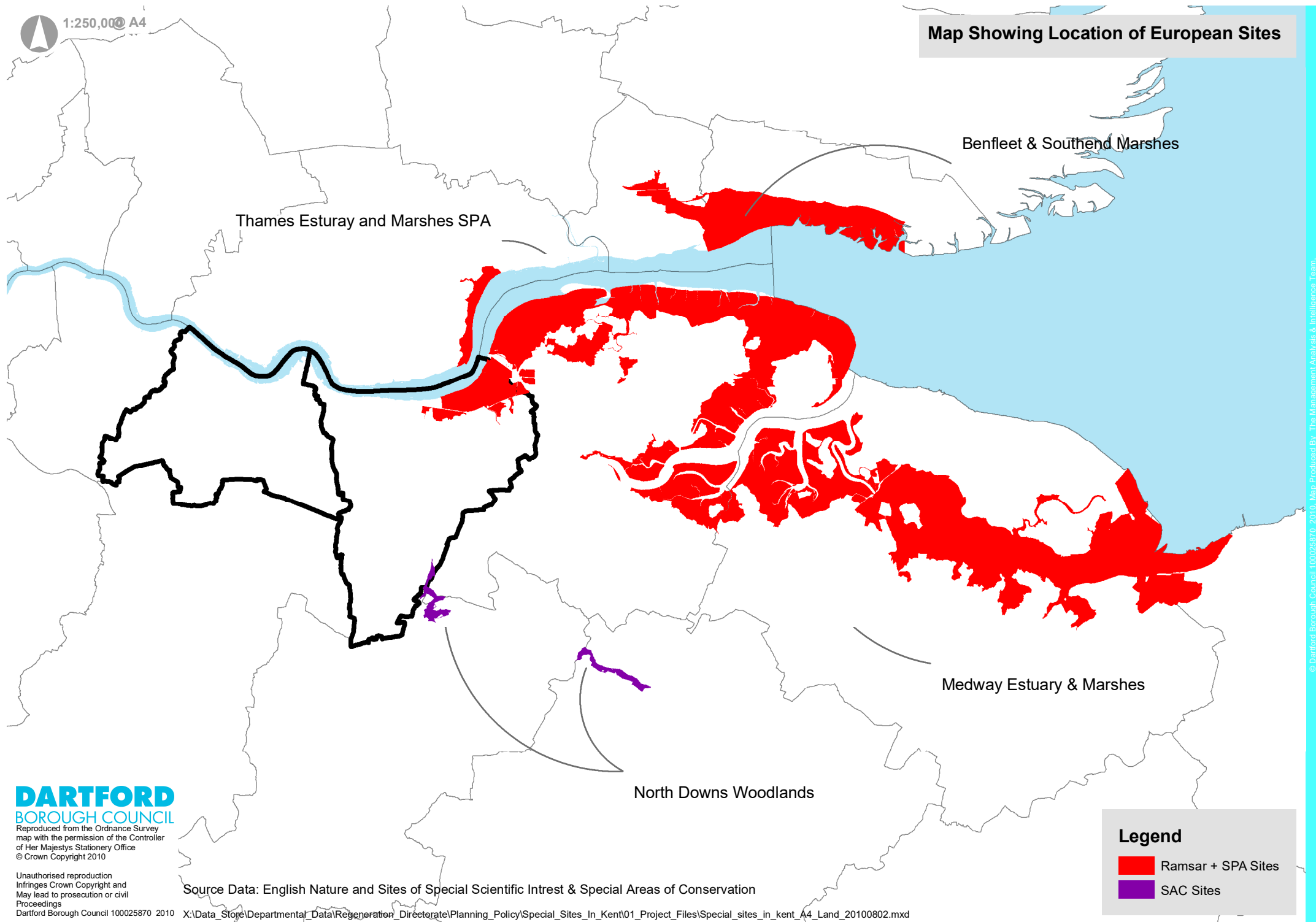
| Respondent | Summarised Comment | Council Response |
|------------|--|--|
| | <p>cannot be sure about this until a full AA is produced and do not intend to predict the impacts found within the updated AA.</p> <p>Much of the suggested work needed within this section conforms to our thinking however the following factors need to be known before any reliable assessment can be made.</p> <ul style="list-style-type: none"> • Current recreational impact on the bird populations. • The impacts of such pressure • How far people will travel to visit the estuarine habitat. • What measures would work on a TG wide scale to endeavour to ensure no impact from recreational pressure. <p>The Trust would not agree that providing information to boat owners would be adequate mitigation on its own.</p> | |
| | <p>We would wish to stress that the above are only initial thoughts and should not be taken as Kent Wildlife Trust's final views on protection of the European sites. We will need to see the final plans and AA before we can make detailed comments. Our initial opinion is that there will need to be policy to protect the European sites at least in partnership with Gravesham and this will need to be firmed up before submission to ensure the Core Strategy is in conformity with the Habitats Regulations and is not deemed unsound. As mentioned earlier I think an emergency meeting between you, NE, the RSPB and ourselves would be helpful to endeavour to formulate policy wording that meets with all our approval.</p> | <p>It is not considered necessary for there to be a Core Strategy policy that specifically seeks the protection of European sites as this would lead to the repetition of national policies.</p> <p>Planning Policy Statement 12: Local Spatial Planning clearly states, "The core strategy should not repeat or reformulate national or regional policy". Planning Policy Statement 9: Biodiversity and Geological Conservation also states that since international sites of biodiversity conservation value, such as European sites, enjoy statutory protection, specific</p> |

| Respondent | Summarised Comment | Council Response |
|------------|--------------------|---|
| | | <p>policies in respect of these sites should not be included in local development documents.</p> <p>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 European sites either individually, or in combination with other plans and projects. The Conservation of Habitats and Species Regulations 2010 transpose these requirements into national law.</p> <p>The inclusion of such as policy will have no bearing on meeting the requirements of the Habitats Directive and Regulations and will not result in the Core Strategy being deemed unsound. As identified within the AA Report, the current Core Strategy policies are considered to contain sufficient mitigation to address the potential likely significant effects on European sites that might arise as a result of the proposed development both alone and in combination.</p> |



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Map Showing Location of European Sites



DARTFORD
BOROUGH COUNCIL

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Source Data: English Nature and Sites of Special Scientific Interest & Special Areas of Conservation