



Medway Council Core Strategy

Habitats Regulations Assessment (Appropriate Assessment) Report

December 2011

enfusion



HABITATS REGULATIONS ASSESSMENT (APPROPRIATE ASSESSMENT) REPORT

Medway Council Core Strategy

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EXECUTIVE SUMMARY

- 0.1 Habitats Regulations Assessment (HRA) of spatial development plans is a requirement of the Habitats Directive (92/43/EEC) as set out in the Conservation of Habitats and Species Regulations 2010 (as amended 2011). This report details the Habitats Regulations Assessment for the Medway Core Strategy (Submission Draft). It sets out the method, findings and conclusions of the Screening and Appropriate Assessment (AA) stages of the HRA process.
- 0.2 The first stage of the HRA process (screening) considered the likely significant effects at the following European sites within the influence the plan:
- Medway Estuary & Marshes SPA/Ramsar
 - North Downs Woodlands SAC
 - Peters Pit SAC
 - Queendown Warren SAC
 - Thames Estuary & Marshes SPA/Ramsar
 - The Swale SPA/Ramsar
- 0.3 The screening concluded that the potential effects of the Plan on the European sites was uncertain as a result of reduced air quality; reduced water levels and quality; increased disturbance and habitat fragmentation and loss. Based on the precautionary approach these issues were progressed through to the Appropriate Assessment (AA) stage to be considered in more detail.
- 0.4 The AA considered the potential for the Core Strategy (both alone and in combination) to have adverse effects on the integrity of identified European sites through reduced air quality and reduced water levels and quality. Based on the sensitivity of the European sites, as well as mitigation provided through Core Strategy Policies and recommendations made by the AA, it was assessed that the Core Strategy alone would not have adverse effects on the European sites through reduced air quality. However, given a lack of available evidence the AA was unable to conclude with certainty that the Core Strategy would not have adverse effects on the integrity of the identified European sites through reduced air quality (in combination) and reduced water levels and quality (both alone and in combination). To strengthen the mitigation already proposed in the Plan the AA recommended a number of policy safeguards to help provide effective plan level mitigation that will contribute to minimising the impacts of proposed development on air quality, water levels and water quality. These include:
- supporting the Kent and Medway Air Quality Network during the life of the plan;
 - monitoring of air quality at key locations within or close to the proposed strategic sites;

- supporting and seeking opportunities for a wider approach to the management of Air Quality in North Kent in co-operation with surrounding Authorities;
- considering opportunities for the phasing and management of construction to minimise any impacts on air quality (especially from vehicular movement);
- ensuring that development proposals that pose material risk or harm to the quality and/or quantity of ground waters, surface waters, wetlands or coastal water systems either alone or in combination will not be permitted;
- requiring major proposals for new development to demonstrate that there are, or will be, adequate water supply and waste-water treatment facilities in place to serve the whole development;
- requiring Sustainable Drainage Systems to be incorporated into all new development; and
- requiring any proposal for Lodge Hill to be accompanied by a surface water strategy that considers the incorporation of Sustainable Drainage Systems.

0.5 The assessment also considered the potential for the Core Strategy to have adverse effects on the estuarine and coastal SPAs and Ramsar sites through habitat loss and fragmentation. The AA concluded that as the majority of development is being directed on previously developed land and the Lodge Hill area does not contain any suitable supporting habitat for designated bird species the Core Strategy will not have adverse effects on European site integrity (either alone or in combination) through habitat fragmentation and loss, provided the recommendations of the AA are incorporated in to the Plan. These include:

- incorporating wording to ensure that supporting habitats are protected, maintained and enhanced and that the Council does not permit development that could lead to the loss or fragmentation of these habitats unless it can be demonstrated that appropriate mitigation is available;
- requiring the HRA undertaken for the Allocations and Development Management DPD to include consideration of the potential impacts of waste and minerals allocations; and
- ensuring that any future employment development at the Isle of Grain employment site and the Kingsnorth commercial park should remain within the existing boundaries of the employment areas, unless it can be shown that there will be no loss of designated and/or supporting habitats.

0.6 The AA then considered the potential for the Core Strategy to have adverse effects on the integrity of North Downs Woodlands SAC; Thames Estuary & Marshes SPA/Ramsar; Medway Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar through disturbance. The assessment concluded that the Core Strategy would not have adverse effects on the integrity of North Downs Woodlands SAC through

disturbance given the location of proposed development, management of the site, availability of alternative areas for recreation and mitigation provided by Core Strategy Policies.

- 0.7 The findings of the first phase of the NKEPG bird disturbance work suggests that there may be a correlation between recreational disturbance and bird decline along the North Kent coast and that recreational visitors tend to be from within the local area. This is significant given the level of development proposed in the Core Strategy, particularly the development of 5,000 new homes at Lodge Hill (Policy CS33), which is within 2 km of the Thames Estuary & Marshes SPA/Ramsar and the Medway Estuary & Marshes SPA/Ramsar. The AA concluded that until future phases of the NKEPG work have been completed - further surveys and predictive modeling - it is not possible to quantify the contribution that planned growth in Medway and surrounding areas may have on bird populations at the Medway Estuary & Marshes SPA/Ramsar, Thames Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar. As a result the assessment could not conclude with certainty that the Core Strategy will not have adverse effects on the integrity of the SPAs and Ramsar sites through increased recreational activity. To strengthen the mitigation already proposed in the Plan the AA recommended the following:
- policy wording to ensure that the findings of the bird disturbance studies are implemented and any proposed strategic avoidance and/or mitigation measures are adopted, as appropriate in all planning documents and in the assessment of planning application;
 - Requiring any proposal for Lodge Hill to incorporate suitable areas for dog walking;
 - requiring water taxis to remain within the urban waterfront and not travel further downstream than Lower Upnor; and
 - Cross-referencing particular policies (CS6, CS8, CS13 , CS21 & CS33) to ensure the protection of European designated sites.
- 0.8 Provided that the recommendations of the AA are incorporated, it is considered that the Core Strategy will contain effective strategic plan level mitigation to address the issues identified through the HRA process, as far as is possible within the remit of a planning document. The plan should, however be seen in conjunction with the need for wider measures (e.g. effective European site management and coordinated regional approaches to air quality). 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 a significant effect on one or more European Sites. Accordingly, this AA should be used to inform any future assessment work. It should also be revisited in the light of any significant changes to the Core Strategy and/ or if any further information becomes available.
- 0.9 These findings are subject to consultation comments and advice from NE and wider stakeholders.

1.0 INTRODUCTION

- 1.1 This is the Habitats Regulations Assessment (HRA) Appropriate Assessment (AA) Report for the Medway Local Development Framework (LDF) Core Strategy. It has been prepared by Environmental Planning Consultants, Enfusion for Medway Council, and is the second formal stage of the HRA process for the Council's Core Strategy.
- 1.2 The screening stage determined that there was the potential for the Publication Draft Core Strategy (PDCS) to have likely significant effects at six European sites, 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.

Background

- 1.3 The HRA for the Core Strategy has been an ongoing and iterative process, undertaken alongside plan-making to inform the emerging Medway Core Strategy. Enfusion's involvement began in June 2011 with the preparation of an HRA Working Paper, which sought to provide a strategic HRA overview of the key issues arising from development proposed in the Pre-Publication Draft Core Strategy (PPDCS- published October 2010) and how these issues could affect particular European sites. The Paper recommended a number of early mitigation measures to help inform the development of the Publication Draft Core Strategy (PDCS- published August 2011).
- 1.4 Concurrently, work was being undertaken by Footprint Ecology on the first of a number of studies commissioned by the North Kent Environmental Planning Working Group¹ (NKEPG) to investigate the issues around bird decline in the three North Kent Special Protection Areas² (SPAs). As these findings would be important in informing the HRA work it was decided to delay the formal HRA process and instead proceed with the Working paper initially to explore the issues, followed by an HRA Screening Report to accompany the Publication Draft Core Strategy on Consultation in August 2011.
- 1.5 Whilst the HRA assessment process itself would be ongoing, it was agreed with Council Officers and discussed with the NKEPG that publishing of the full HRA report (incorporating the Stage 2; Appropriate Assessment) would be delayed until the findings of the Footprint Studies were made available later in 2011.

¹ The North Kent Environmental Planning Group was established in 2010 to facilitate closer working between Local Planning Authority planning policy teams, statutory bodies and NGOs in order to develop a common understanding and approach to the natural environment and biodiversity in North Kent. NKEPG comprises members from Dartford, Gravesham, Medway, and Swale councils, Kent Wildlife Trust, Natural England, Environment Agency, Greening the Gateway Kent and Medway, RSPB and Kent County Council.

² The Thames Estuary and Marshes SPA, Medway Estuary and Marshes SPA and The Swale SPA

Consultation

- 1.6 A meeting was held with members of the North Kent Environmental Planning Working Group (NKEPG) on 29th June 2011 to discuss the initial findings and recommendations of the Working Paper and the HRA process. The notes from this meeting were circulated to NKEPG members and can be found in **Appendix 4**.
- 1.7 The Working Paper, including the updated mitigation suggestions discussed at the 29th June meeting, was subsequently sent to NKEPG members for informal comments, along with draft proposed policy wording and supporting text for Policy CS6: Preservation and Enhancement of Natural Assets. Responses were received from NE, RSPB, the Kent Wildlife Trust and Greening the Gateway Kent and Medway. The findings of the Working Paper and the comments received from stakeholders then helped to inform the undertaking of the formal HRA process: Stage 1: HRA Screening and Stage 2: Appropriate Assessment, alongside the emerging findings of the bird decline studies commissioned by the NKEPG. Of particular note were concerns around bird decline and atmospheric pollution at the European sites, and policy CS6 was subsequently amended to address this.
- 1.8 The requirements for a formal HRA screening stage were met through the production of a separate Stage 1 HRA Screening Report. This was formally made available for public consultation alongside the Publication Draft Core Strategy in August 2011. The responses received helped to further inform the Stage 2 Appropriate Assessment. In particular, two further policies were screened in to the HRA process, and further consideration was to be given to the effects of recreational disturbance on the North Downs Woodlands SAC.
- 1.9 A draft HRA (AA) Report was forwarded to Council Officers and to members of the NKEPG, and a meeting was held on the 15th November 2011 to discuss the initial findings and recommendations. Further comments were received after the meeting which helped to inform this HRA. A table summarising the comments and how these have been addressed is provided in **Appendix 5**

Structure of the Report

- 1.10 Following this introductory section the document is organised into four further sections:
- **Section 2** summarises the requirement for HRA and the background to Medway's Core Strategy.
 - **Section 3** summarises the method and findings of the screening process.
 - **Section 4** details the method and findings of the AA.

- **Section 5** summarises the conclusions of the HRA and outlines consultation arrangements.

2.0 HABITATS REGULATIONS ASSESSMENT (HRA) & THE PLAN

Requirement for Habitats Regulations Assessment

- 2.1 The Conservation of Habitats and Species Regulations Regulations 2010 (as amended 2011) [the Habitats Regulations] requires that HRA is applied to all statutory land use plans in England and Wales. The aim of the HRA process is to assess the potential effects arising from a plan against the conservation objectives of any site designated for its nature conservation importance.
- 2.2 The Habitats Regulations transpose the requirements of the European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna [the Habitats Directive] which aims to protect habitats and species of European nature conservation importance. The 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) which are designated under European Directive (2009/147/EC) on the conservation of wild birds [the Birds Directive]. In addition, Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance [Ramsar Convention]) are included within the HRA process as required by the Regulations.
- 2.3 The process of HRA is based on the precautionary principle. Evidence should be presented to allow a determination of whether the impacts of a land-use plan, when considered in combination with the effects of other plans and projects against the conservation objectives of a European Site; would adversely affect the integrity of that site. Where effects are considered uncertain, the potential for adverse impacts should be assumed.

Guidance and Good Practice

- 2.4 The application of HRA to Local Development Documents is an emerging field and has been informed by a number of key guidance and practice documents. Draft guidance for HRA 'Planning for the Protection of European Sites: Appropriate Assessment', was published by the Government (DCLG, 2006) and is based on the European Commission's (2001) guidance for the Appropriate Assessment of Plans. The DCLG guidance recommends three main stages to the HRA process:
 - **Stage 1:** Screening for Likely Significant Effect
 - **Stage 2:** Appropriate Assessment, Ascertaining Effects on Integrity
 - **Stage 3:** Mitigations Measures and Alternatives Assessment.

- 2.5 If alternative solutions or avoidance/ mitigation measures to remove adverse effects on site integrity cannot be delivered then current guidance recommends an additional stage to consider Imperative Reasons of Overriding Public Interest (IROPI) for why the plan should proceed. For the HRA of land use plans IROPI is only likely to be justified in a very limited set of circumstances and must be accompanied by agreed, deliverable compensation measures for the habitats and species affected. For this reason the IROPI stage is not detailed further in this report.
- 2.6 More recently Natural England has produced additional, detailed guidance on the HRA of Local Development Documents (Tyldesley, 2009) that complements the DCLG guidance, and builds on assessment experience and relevant court rulings. The guidance: sets out criteria to assist with the screening process; addresses the management of uncertainty in the assessment process; and importantly outlines that for the HRA of plans; ' ... what is expected is as rigorous an assessment as can reasonably be undertaken in accordance with the requirements of the Regulations ...'.
- 2.7 The approach taken for the HRA of the Core Strategy follows the method set out in formal guidance documents and has additionally been informed by recent good practice examples. The key stages of the HRA process overall, and the specific tasks undertaken for the first, Screening Stage as detailed in this report; are set out in **Table 1**.

Table 1: Habitats Regulations Assessment: Key Stages	
Stages	Habitats Regulations Assessment
Stage 1: Screening for Likely significant Effects	1. Identify European sites in and around the plan area.
	2. Examine the conservation objectives of each interest feature of the European site(s) potentially affected.
	3. Analyse the policy/ plan and the changes to environmental conditions that may occur as a result of the plan. Consider the extent of the effects on European sites (magnitude, duration, location) based on best available information.
	4. Examine other plans and programmes that could contribute (cumulatively) to identified impacts/ effects.
	5. Produce screening assessment based on evidence gathered and consult statutory nature conservation body on findings.
	6. If effects are judged likely or uncertainty exists – the precautionary principle applies. Proceed to Stage 2 .
Stage 2: Appropriate Assessment	1. Agree scope and method of Appropriate Assessment with statutory nature conservation body.
	2. Collate all relevant information and evaluate potential impacts on site(s) in light of conservation objectives.
Stage 3: Mitigation Measures and Alternatives Assessment	1. Consider how effect on integrity of site(s) could be avoided by changes to plan and the consideration of alternatives (e.g. an alternative policy/ spatial location). Develop mitigation measures (including timescale and mechanisms for delivery).
	2. Prepare HRA/ AA report and consult statutory body.
	3. Finalise HRA/AA report in line with statutory advice to accompany plan for wider consultation.

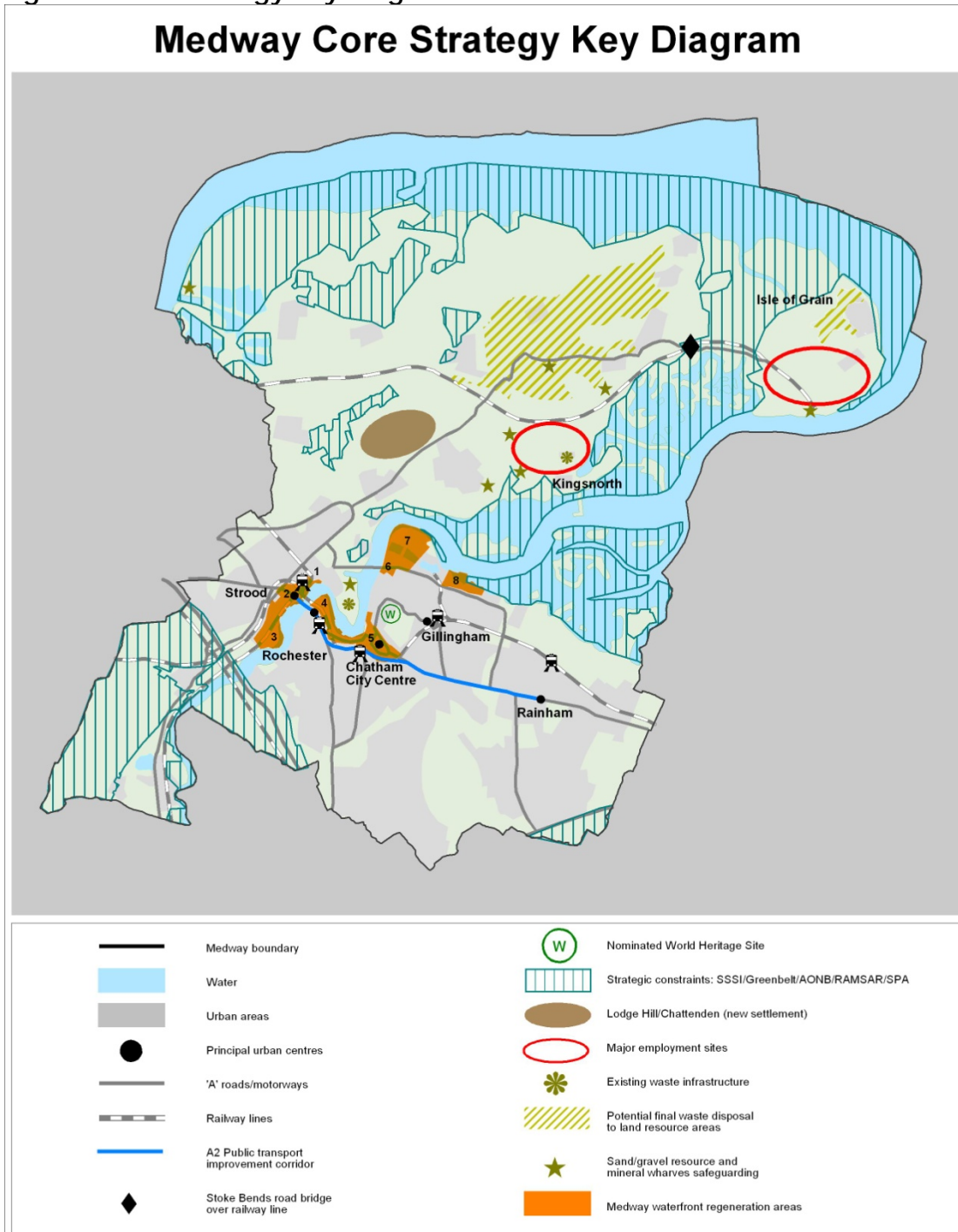
The Medway Core Strategy

- 2.8 The Medway Core Strategy sets out how the Council sees Medway developing over the period up to 2028. When adopted, the Core Strategy will guide all major development decisions and investment plans. It sets out the overall vision and strategy for the area and will guide the development of further documents in Medway's Local Development Framework, including Allocations and Other Development Management Policies Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs).
- 2.9 A Publication Draft Core Strategy (PDCS) was consulted upon in August 2011. Comments received on the PDCS were then considered in the preparation of the Submission Draft Core Strategy (SDCS). The Core Strategy sets out the context, options considered, vision and objectives and draft policies based around the following themes:
- Cross Cutting Themes;
 - Housing;
 - Economic Development;
 - Energy Waste and Minerals;
 - Transport and Movement;
 - The River Medway, and
 - Area policies.
- 2.10 The Core Strategy proposes to build approximately 17,930 new homes and 935,995 sq m of employment floorspace (accommodating up to 21,500 additional jobs) up to the year 2028. A key component of housing supply will be the large waterfront regeneration sites within the main urban area and a new settlement at Lodge Hill.

Overview of the Plan Area

- 2.11 **Figure 1** illustrates the main features of the Plan area including transport and infrastructure links and key environmental areas.

Figure 1: Core Strategy Key Diagram



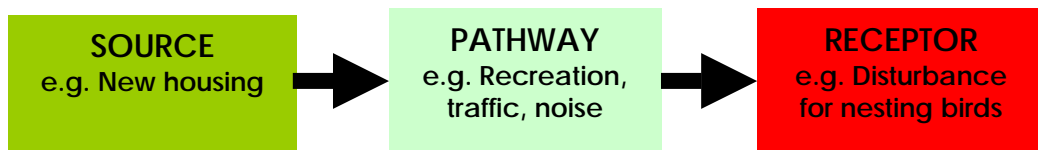
3.0 SCREENING STAGE METHOD & FINDINGS

3.1 As detailed in Section 2, **Table 1**, HRA typically involves a number of stages. This section of the report sets out the approach taken for Stage 1, HRA Screening for the Core Strategy and also outlines the findings. The aim of the screening stage is to assess in broad terms whether the policies and proposals set out in the plan are likely to have a significant effect on a European site(s), and whether in the light of available avoidance and mitigation measures, an AA is necessary.

Scope of HRA

- 3.2 Plans such as the Core Strategy can have spatial implications that extend beyond the intended plan boundaries. In particular, it is recognised that when considering the potential for effects on European sites, distance in itself is not a definitive guide to the likelihood or severity of an impact. Other factors such as inaccessibility/ remoteness, the prevailing wind direction, river flow direction, and ground water flow direction will all have a bearing on the relative distance at which an impact can occur. This means that a plan directing development some distance away from a European Site could still have effects on the site and therefore, needs to be considered as part of the HRA screening.
- 3.3 Therefore, rather than rely on distance alone, a more effective mechanism for considering the scope of the HRA is to use a 'source-pathway-receptor' model (see Figure 2) which focuses on whether there is a pathway by which impacts from the plan can affect the identified sensitivities/ vulnerabilities of European site(s)' environmental conditions.

Figure 2: Source, Pathway, Receptor Model



3.4 Using this approach the following sites that lie both within and outside the plan were scoped into the HRA Screening for the Core Strategy.

Table 2: European Sites within HRA Scope	
European Sites within Plan Area	Designation
Medway Estuary & Marshes	SPA/ Ramsar
North Downs Woodland	SAC
Thames Estuary & Marshes SPA/Ramsar	SPA/ Ramsar
European Sites outside Plan Area	Designation
Peters Pit SAC	SAC
Queendown Warren SAC	SAC
The Swale SPA/Ramsar	SPA/ Ramsar

Identification & Characterisation of European Sites

- 3.5 Summary site characterisations of the six sites scoped into the assessment are provided below in **Figure 3**. More detailed descriptions including conservation objectives and the specific sensitivities and vulnerabilities for each site are provided in **Appendix 1**.

Figure 3: European Site Characterisations
<p><i>Medway Estuary & Marshes SPA/Ramsar</i></p> <p>The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary in Kent. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and Sheerness. It has a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh. The mud-flats are rich in invertebrates and also support beds of Enteromorpha and some Eelgrass <i>Zostera</i> spp. Small shell beaches occur, particularly in the outer part of the estuary. Grazing marshes are present inside the sea walls around the estuary. The complex and diverse mixes of coastal habitats support important numbers of waterbirds throughout the year. In summer, the estuary supports breeding waders and terns, whilst in winter it holds important numbers of geese, ducks, grebes and waders. The site is also of importance during spring and autumn migration periods, especially for waders.</p>
<p><i>North Downs Woodland SAC</i></p> <p>This site consists of mature beech forests (<i>Asperulo-Fagetum</i>) and also yew (<i>Taxus baccata</i>) woods on steep slopes, with scrub and small areas of unimproved grassland on thin chalk soils. The stands lie within a mosaic of scrub and other woodland types and are the most easterly of the beech woodland sites selected. Where the shade is less dense dog's mercury <i>Mercurialis perennis</i> predominates in the ground flora.</p>
<p><i>Peters Pit SAC</i></p> <p>Peter's Pit is an old chalk quarry situated in the North Downs in north Kent, with large ponds situated amongst grassland, scrub and woodland. The ponds have widely fluctuating water levels and large great crested newt (<i>Triturus cristatus</i>) populations have been recorded breeding here.</p>
<p><i>Queendown Warren SAC</i></p> <p>Queendown Warren consists of grassland (<i>Bromus erectus</i>) and contains an important assemblage of rare and scarce species, including early spider-orchid (<i>Ophrys sphegodes</i>), burnt orchid (<i>Orchis ustulata</i>) and man orchid (<i>Aceras anthropophorum</i>).</p>
<p><i>Thames Estuary & Marshes SPA/Ramsar</i></p> <p>The Thames Estuary and Marshes SPA is located on the south side of the Thames Estuary. The marshes extend for about 15 km along the south side of</p>

the estuary and also include intertidal areas on the north side of the estuary. To the south of the river, much of the area is brackish grazing marsh, although some of this has been converted to arable use. At Cliffe, there are flooded clay and chalk pits, some of which have been infilled with dredgings. Outside the sea wall, there is a small extent of saltmarsh and broad intertidal mud-flats. The estuary and adjacent grazing marsh areas support an important assemblage of wintering waterbirds including grebes, geese, ducks and waders. The site is also important in spring and autumn migration periods.

The Swale SPA/Ramsar

The Swale is located on the south side of the outer part of the Thames Estuary. The Swale is an estuarine area that separates the Isle of Sheppey from the Kent mainland. To the west it adjoins the Medway Estuary. It is a complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarshes and mud-flats. The intertidal flats are extensive, especially in the east of the site, and support a dense invertebrate fauna. These invertebrates, together with beds of algae and Eelgrass *Zostera* spp., are important food sources for waterbirds. Locally there are large Mussel (*Mytilus edulis*) beds formed on harder areas of substrate. The SPA contains the largest extent of grazing marsh in Kent (although much reduced from its former extent). There is much diversity both in the salinity of the dykes (which range from fresh to strongly brackish) and in the topography of the fields. The wide diversity of coastal habitats found on the Swale combine to support important numbers of waterbirds throughout the year. In summer, the site is of importance for Marsh Harrier (*Circus aeruginosus*), breeding waders and Mediterranean Gull (*Larus melanocephalus*). In spring and autumn migration periods, as well as during winter, the Swale supports very large numbers of geese, ducks and waders.

Effects of the Plan

- 3.6 The Core Strategy proposes the development of approximately 17,930 new homes and 935,995 sq m of employment floorspace up to 2028. Housing, employment and infrastructure development have the potential to generate a range of environmental impacts which can, (depending on their nature, magnitude, location and duration), have effects on European sites. A summary of the types of impacts and effects that can arise from these types of development is provided in **Figure 4**.

Figure 4: Housing, Employment and Infrastructure Development: Summary of Impacts and Effects on European Sites

Effects on European Sites	Impact Types
<p>Habitat (& species) fragmentation and loss</p>	<ul style="list-style-type: none"> ■ Direct land take, removal of green/ connecting corridors/ supporting habitat, changes to sediment patterns (rivers and coastal locations) ■ Coastal squeeze ■ Introduction of invasive species (predation) ■ Disturbance

Figure 4: Housing, Employment and Infrastructure Development: Summary of Impacts and Effects on European Sites	
Effects on European Sites	Impact Types
Disturbance	<ul style="list-style-type: none"> ■ Increased recreational activity (population increase) ■ Noise and light pollution (from development and increased traffic)
Changes to hydrological regime/ water levels	<ul style="list-style-type: none"> ■ Increased abstraction levels (new housing) ■ Increased hard standing non-permeable surfaces/ accelerated run-off ■ Laying pipes/ cables (surface & ground) ■ Topography alteration
Changes to water quality	<ul style="list-style-type: none"> ■ Increase in run-off/ pollutants from non-permeable surfaces (roads, built areas) ■ Increased air pollution (eutrophication) (traffic, housing) ■ Increased volume of discharges (consented)
Changes in air quality	<ul style="list-style-type: none"> ■ Increased traffic movements, including from construction ■ Increased emissions from buildings

3.7 The first stage in the Screening process is to consider whether the policies and allocations proposed in the plan, have the potential to lead to likely significant effects³ (LSE), such as those identified in **Figure 4**, on the European sites scoped into the assessment. In order to do this the policies and allocations were screened and categorised according to their potential effects. The approach taken was in accordance with Natural England guidance which details four main categories (supported by more detailed sub categories) of potential effect, as summarised in Figure 5.

Figure 5: Categorising the Potential Effects of the Plan (Tyldesley, 2009)
Category A: elements of the plan/options that would have no negative effect on a European site at all.
Category B: elements of the plan/options that could have an effect, but the likelihood is there would be no significant negative effect on a European site either alone or in combination with other elements of the same plan, or other plans or projects.
Category C: elements of the plan/options that could or would be likely to have a significant effect alone and will require the plan to be subject to an appropriate assessment before the plan may be adopted.
Category D: elements of the plan/options that would be likely to have a significant effect in combination with other elements of the same plan, or other plans or projects and will require the plan to be subject to an appropriate assessment before the plan may be adopted.

³ An effect is considered to be significant when it could potentially undermine the conservation objectives of a European site, and is considered likely if it can't be excluded on the basis of objective information that it will occur.

- 3.8 Proposals falling with categories A and B are considered not to have an effect on a European site and can be eliminated from the assessment procedure. Proposals falling within category C and Category D require further analysis, including the consideration of in combination effects to determine whether they should be included in the next stage of the HRA process.

Publication Draft Core Strategy Policy Screening

- 3.9 **Appendix 3** details the results of the HRA screening process for the PDCS policies, the key findings are summarised below. Amendments made as a result of formal consultation responses received for the HRA Screening) are *highlighted in red text and italics*.

Effects of the plan - alone

- 3.10 The PDCS policies which were considered to potentially lead to significant effects alone on European sites are listed in **Table 3**.

Table 3: PDCS Policies with potential for likely significant effects alone	
PDCS policies screened in to the assessment process	Assessment Category
Policy CS1: Regenerating Medway	C
Policy CS4: Energy Efficiency and Renewable Energy	C
Policy CS13: Housing Provision and Distribution	C
Policy CS16: Gypsies, Travellers and Travelling Showpeople	C
Policy CS17: Economic Development	C
Policy CS18: Tourism	C
Policy CS21: Conventional Energy Generation	C
Policy CS22: Provision for Minerals	C
Policy CS23: Waste Management	C
Policy CS24: Transport and Movement	C
Policy CS25: The River Medway	C
Policy CS26: Strood	C
Policy CS27: Rochester	C
Policy CS28: Chatham	C
Policy CS29: Gillingham	C
Policy CS30: Rainham	C
Policy CS31: Hoo Peninsula and the Isle of Grain	C
Policy CS32: Medway Valley	C
Policy CS33: Lodge Hill	C

- 3.11 Policies CS1, CS4, CS16 and CS21 make provision for a type and/ or quantity of development but the effects are uncertain because the detailed location of the development won't be determined until the preparation of a later, more specific plan (the Allocations DPD). The consideration of options in the later plan will need to assess potential

effects on European sites, meanwhile a significant effect cannot be ruled out at this stage.

- 3.12 Policies CS13, CS17, CS18 and CS22 to CS33 make provision for a type and quantity of development in locations that have potential for indirect Likely Significant Effects on European sites alone. The potential impacts arising from proposed development and the nature and significance of effects on European sites requires further consideration.

Effects of the plan - in combination

- 3.13 Other plans, programmes and projects that are being prepared and/or implemented in the area have the potential to have significant effects on European sites. Effects from different plans may interact leading to a cumulative, significant effect overall for the area's biodiversity interests. It is a key requirement of the Habitats Regulations that effects identified through the plan screening are considered for their potential in combination effects. Guidance recommends that the in combination assessment is undertaken in a targeted way, to ensure that the assessment is most effective, by focusing on those plans most likely to interact with the plan under consideration.

- 3.14 The plans and projects listed below have formed the basis of the in combination test for this policy screening. This list is not exhaustive and represents the most relevant current plans (further details are provided in **Appendix 2**).

- Swale Borough Council Core Strategy
- Gravesham Borough Council Core Strategy
- Dartford Borough Council Core Strategy
- Maidstone Borough Council Core Strategy
- Tonbridge and Malling Borough Core Strategy
- Southern Water - Water Resource Management Plan
- South East Water - Water resource Management Plan
- Thames Estuary 2100 Plan (TE2100)
- Kent Local Transport Plan
- Kent County Council Minerals and Waste Core Strategy
- Isle of Grain to South Foreland Shoreline Management Plan
- Medway Estuary and Swale Shoreline Management Plan
- Medway Local Transport Plan 2011-2026
- London Gateway - Deep Sea Container Port

- 3.15 The Screening identified that the policies listed in **Table 4** make provision for a type and quantity of development that could potentially lead to significant effects on European sites when considered in combination with other plans and projects.

Table 4: : PDCS Policies with potential for likely significant effects in combination	
PDCS policies screened in to the assessment process	Assessment Category
<i>Policy CS5: Development and Flood Risk⁴</i>	<i>D</i>
<i>Policy CS8: Open Space, Green Grid and Public Realm</i>	<i>D</i>
Policy CS7: Countryside and Landscape	D
Policy CS11: Culture and Leisure	D
Policy CS13: Housing Provision and Distribution	D
Policy CS17: Economic Development	D
Policy CS18: Tourism	D
Policy CS19: Retail and Town Centres	D
Policy CS22: Provision for Minerals	D
Policy CS23: Waste Management	D
Policy CS24: Transport and Movement	D
Policy CS25: The River Medway	D
Policy CS26: Strood	D
Policy CS27: Rochester	D
Policy CS28: Chatham	D
Policy CS29: Gillingham	D
Policy CS30: Rainham	D
Policy CS31: Hoo Peninsula and the Isle of Grain	D
Policy CS32: Medway Valley	D
Policy CS33: Lodge Hill	D

Screening Assessment

- 3.16 HRA screening good practice combines both a **plan** and a **site** focus. The policy screening removes from consideration, those elements of the **plan** unlikely to have effects on European sites. The remaining plan elements (summarised above) can then be considered in more detail for their impacts on European sites. The **site** focus considers the impacts and potential effects identified through the policy screening, in the light of the environmental conditions necessary to maintain site integrity for the European sites scoped into the assessment (**Table 2**).
- 3.17 **Table 5** considers the impacts arising from the PDCS (policy screening) against the sensitivities and conservation objectives of the identified European sites (**Appendix 1**) to determine if there is the potential for likely significant effects.

⁴ Respondents to the HRA Screening Consultation requested that policies CS 5 and CS 8 be considered further in the Stage 2 Appropriate Assessment; both policies have now been screened-in for their potential to lead to alone and in-combination effects. Refer Appendix 5 for consultation responses.

Key		
Likely Significant Effect	✓	Further Appropriate Assessment required
No Likely Significant Effect	✗	No further Appropriate Assessment required as no pathways identified
Significant Effect Uncertain	?	Precautionary approach taken and further Appropriate Assessment required

Table 5: Screening Matrix				
European sites	Potential Likely Significant Effects			
	Habitat (& species) Fragmentation & Loss	Disturbance	Water Levels & Quality	Air Quality
Medway Estuary & Marshes SPA/Ramsar	?	✓	?	?
<i>North Downs Woodlands SAC⁵</i>	✗	?	?	?
Peters Pit SAC	✗	✗	?	?
Queendown Warren SAC	✗	✗	?	?
Thames Estuary & Marshes SPA/Ramsar	?	✓	?	?
The Swale SPA/Ramsar	?	✓	?	?

3.18 The screening assessed that given the location, size and sensitivity of the Peters Pit and Queendown Warren SACs in relation to the location of proposed development, the Core Strategy will not have likely significant effects (either alone or in combination) through disturbance and/or habitat fragmentation and loss.

3.19 Based on the emerging findings of the Stage 1 visitor and bird disturbance studies commissioned by the NKEPG, which indicate that

⁵ Disturbance was screened-out in the initial HRA Screening report for the North Downs Woodland SAC, however this was raised as an area of concern by respondents (refer to Appendix 5) and as a consequence, this site has now been screened into the Stage 2 Assessment for the potential for recreational disturbance.

there is a correlation between recreational disturbance and bird decline and that recreational visitors tend to be from within the local area - it is assessed that there is the potential for likely significant effects on Medway Estuary & Marshes SPA/Ramsar, Thames Estuary & Marshes Spa/Ramsar and The Swale SPA/Ramsar as a result of increased recreational activity. The effects of increased recreational activity on the integrity of the identified European sites are considered in more detail in the AA.

- 3.20 The screening assessment also identified uncertainty with regard to the potential for significant effects on European sites as a result of changes to air quality and water levels and quality. Based on the precautionary approach these issues are considered in more detail in the AA.

Screening Conclusions

- 3.21 The screening concluded that the policies proposed in the PDCS have the potential for likely significant effects (both alone and in combination) on the following European sites:

- Medway Estuary & Marshes SPA/Ramsar
- North Downs Woodlands SAC
- Peters Pit SAC
- Queendown Warren SAC
- Thames Estuary & Marshes SPA/Ramsar
- The Swale SPA/Ramsar

- 3.22 As a result a Stage 2 Appropriate Assessment has been undertaken to consider the effects associated with habitat fragmentation and loss, disturbance, water levels and quality and air quality on the identified European sites. This is presented in section 4 of this report.

4.0 APPROPRIATE ASSESSMENT STAGE METHOD AND FINDINGS

AA Method

4.1 Assessing the impacts of plans, policies and proposals against the European site conservation objectives is required by Regulation 102 of the Conservation of Habitats and Species Regulations 2010 (as amended 2011). Guidance recommends three main stages to the HRA process:

- **Stage 1:** Screening for Likely Significant Effect
- **Stage 2:** Appropriate Assessment, Ascertaining Effects on Integrity
- **Stage 3:** Mitigation Measures and Alternatives Assessment.

4.2 The AA is the second stage of the HRA process and the approach will follow the method set out in formal guidance documents. The specific tasks to be undertaken are set out in **Table 6**.

Table 6 Appropriate Assessment Stage: Key Tasks	
Task 1 Scoping and Additional Information Gathering	<ul style="list-style-type: none"> ■ Gathering additional information on European sites ■ Gathering additional data on background environmental conditions ■ Further analysis of plans/ projects that have the potential to generate 'in-combination' effects
Task 2 Assessing the Impacts (in-combination) Appropriate Assessment	<ul style="list-style-type: none"> ■ Examination of the policies and proposals identified during the screening phase and their likely significant effects on European sites ■ Consideration of whether effects are direct/ indirect/ cumulative ■ Consideration of whether other plans and programmes are likely to generate effects that have the potential to act cumulatively with those arising from the plan
Task 3 Developing Mitigation Measures (including initial avoidance)	<ul style="list-style-type: none"> ■ If effects identified – either arising from the plan alone and/or 'in-combination' with other plans - consider initial opportunities to avoid (e.g. delete/ remove or amend policy from plan) ■ Develop mitigation measures – must be deliverable by the plan and have clear delivery/ monitoring responsibilities
Task 4 Findings & Recommendations	<ul style="list-style-type: none"> ■ Conclude the assessment, explain key findings and analysis informing conclusions.
Task 5 Consultation	<ul style="list-style-type: none"> ■ Undertaken further consultation with NE (assumes that consultation has also been an iterative process throughout the HRA/AA).

AA Scope

- 4.3 The HRA Screening found that there is potential for likely significant effects on European sites as a result of development proposed in the Core Strategy and surrounding areas. This AA takes forward the findings of the screening assessment to determine if there is the potential for the Core Strategy to have adverse effects on the integrity of the identified European sites.
- 4.4 The policy screening (**Appendix 3**), review of plans and programmes in combination (**Appendix 2**) and consultation with key stakeholders (**Appendix 5**) identified four main areas of impact arising that may have the potential for adverse effects when combined with the effects arising from other plans, programmes and projects on the integrity of the identified European sites: habitat fragmentation & loss, water resources & quality, disturbance and air quality. **Table 7** shows (shaded red) the European sites against the potential issues that will be investigated further below.

Table 7: AA Scope				
European sites	Potential Effects			
	Habitat (& species) Fragmentation & Loss	Disturbance	Water Levels & Quality	Air Quality
Medway Estuary & Marshes SPA/Ramsar				
North Downs Woodlands SAC				
Peters Pit SAC				
Queendown Warren SAC				
Thames Estuary & Marshes SPA/Ramsar				
The Swale SPA/Ramsar				

Air Quality

- 4.5 The screening assessment identified that there was the potential for likely significant effects at the following European sites through reduced air quality:
- Medway Estuary & Marshes SPA/Ramsar

- North Downs Woodlands SAC
- Peters Pit SAC
- Queendown Warren SAC
- Thames Estuary & Marshes SPA/Ramsar
- The Swale SPA/Ramsar

What are the issues arising from the plan?

4.6 The growth proposed in the Core Strategy will lead to increased atmospheric pollution (local and regional), which will predominantly arise from an increase in traffic associated with the projected population growth over the life of the plan. Embodied energy in construction materials and increased energy use from new housing and employment development will also contribute to increased atmospheric pollution through the emission of greenhouse gases. The construction of new development can also lead to direct effects on air quality (dust, equipment and vehicular emissions), although these are carefully regulated through development controls/ site management measures.

How might the European sites be affected?

4.7 Atmospheric pollution from traffic is most likely to affect the habitats which comprise the qualifying features of the identified European sites, although there is the potential for designated species to also be affected, as in most cases they rely upon the designated habitats. **Table 8** below, identifies the potential impacts of atmospheric pollution on the habitats present within the European sites considered in this AA.

Table 8: Impacts of Atmospheric Pollution on Habitats

European site[s]	Potential impacts of Atmospheric Pollution ⁶
Marine, Coastal and Halophytic⁷ Habitats⁸	
<ul style="list-style-type: none"> ■ Medway Estuary & Marshes SPA/Ramsar ■ Thames Estuary & Marshes SPA/Ramsar ■ The Swale SPA/Ramsar 	<p>Air pollution affects coastal and marine habitats differently to other terrestrial and freshwater habitats, which are dealt with separately below.</p> <p>Eutrophication - Many coastal habitats are potentially sensitive to nitrogen deposition. Similarly, salt water ecosystems, such as estuarine habitats may be under the dual threat of nutrient inputs from river inputs and atmospheric deposition. Some coastal environments can be highly eutrophic (highly productive ecosystems, which are rich in plant nutrients) as a result of droppings from sea bird colonies.</p> <p>Ozone - As with other semi-natural ecosystems, coastal habitats can be sensitive to ozone concentrations. The effects are expected to parallel those for example grassland ecosystems. It should be noted, however, that the structure of the coastal atmospheric boundary layer permits a greater mixing down of ozone concentrations, so that the ozone exposure of coastal ecosystems is larger than for inland areas. This</p>

⁶ APIS - Impacts by Ecosystem: <http://www.apis.ac.uk/>

⁷ Halophytic plants are plants that can tolerate salty conditions.

⁸ JNCC - Annex I Habitat Accounts:
http://www.jncc.gov.uk/ProtectedSites/SACselection/SAC_habitats.asp

European site[s]	Potential impacts of Atmospheric Pollution ⁶
	<p>additional stress will encourage the development of ozone tolerant ecotypes. As these are expected to have different competitive abilities, the community species composition may gradually change. Impacts of ozone on marine ecosystems are not expected, since the ozone is rapidly destroyed following contact with the sea surface.</p>
Freshwater Habitats⁹	
<ul style="list-style-type: none"> ■ Peters Pit SAC 	<p>There are five pollutant groups that could affect the quality of freshwater habitats: nutrients, acid deposition, heavy metals, POPs and radioactive particles.</p> <p>Eutrophication - nutrients, specifically phosphorus and nitrogen, are responsible for the eutrophication of rivers and lakes. There are signs of eutrophication in rivers, mainly of lower oxygen concentrations and increased macrophyte growth. The response of lakes to increased phosphorus concentrations is quite well understood and, in general, there is increased growth and change of species of phytoplankton, zooplankton, sediment-dwelling invertebrates, fish and macrophytes and lower oxygen concentrations, especially in the deeper parts of lakes.</p> <p>Acid Deposition - onto freshwaters (and catchments) can lead to acidification. The management and regulation of the acidification of freshwater is well developed in the United Kingdom. The biological groups affected by freshwater acidification are fish (mainly brown trout), invertebrates (mayfly and caddis larvae) and macrophytes (aquatic plants).</p> <p>Deposition of heavy metals and Persistent Organic Pollutants (POPs) - onto lakes occurs, even in rural and remote areas, but the ecological effects of this are not known. If any biological group are affected, they are likely to be fish (and fish-eating birds) and sediment-dwelling organisms.</p>
Forests¹⁰	
<ul style="list-style-type: none"> ■ North Downs Woodlands SAC 	<p>Nitrogen Deposition - Woodlands and forests scavenge air pollutants effectively, with the result that inputs of nitrogen deposition to woodlands are generally larger than for other habitat types. There has been a long-running debate regarding the extent to which actual "forest decline" occurs as a result of nitrogen deposition. What is clear is that the most sensitive elements are actually the woodland ground flora and epiphyte communities, which are particularly relevant in defining conservation status. Changes in forest ground flora have been clearly documented as a result of enhanced Nitrogen deposition near farms and are also expected to occur in regions with high wet deposition of ammonium and nitrate.</p> <p>Acid Deposition - Deposition of acidifying air pollutants is primarily seen as affecting the soils of woodland habitats, where effective inputs of sulphuric and nitric acids lead to leaching of the soil. The resulting soil acidification can lead to mobilisation of naturally occurring aluminium in the soil, which may have toxic effects on plant roots, leading to problems of tree health. Acidification also has the potential to reduce tree growth.</p> <p>Ozone - The impacts of ozone on forests are predicted to be widespread in the UK, due to the exceedance of the critical level for forests. The expected impacts include reduction in growth, as well as possibly changes in ground flora and epiphyte species composition. The latter is an area where there is a serious gap in information.</p> <p>Heavy Metals - Heavy metals (especially lead, cadmium, copper,</p>

⁹ Ibid.

¹⁰ Ibid.

European site[s]	Potential impacts of Atmospheric Pollution ⁶
	<p>mercury and zinc) can, at high concentrations, have toxic effects on plants. Symptoms include reduced root growth, and inhibition of various physiological processes including transpiration, respiration and photosynthesis. However large variations in inter-species sensitivity and bioavailability heavy metals must be taken into account when assessing possible effects. Heavy metals can accumulate over a long period in the organic layer and top soil leading to contamination of soil organisms, especially those that play a role in the formation of the soil. Furthermore, acidification of soils cause the mobilisation of these accumulations in the soil where they can be taken up by plant and animal species of the forest ecosystems.</p>
Raised Bogs and Mires and Fens¹¹	
<ul style="list-style-type: none"> ■ Medway Estuary & Marshes SPA/Ramsar ■ Thames Estuary & Marshes SPA/Ramsar ■ The Swale SPA/Ramsar 	<p>Bog habitats divide into two types: raised bogs and blanket bogs These ecosystems - often described as 'ombrotrophic' (rain-fed) mires - are especially sensitive to nitrogen air pollutants, and may be sensitive to ozone.</p> <p>Wetlands habitats divide into alkaline fens, reedbeds and grazing marsh. These habitats experience rather different sensitivity to nitrogen air pollutants, although similar responses to ozone might be expected.</p> <p>Nitrogen Deposition:</p> <ul style="list-style-type: none"> ■ Fen ecosystems - can be 'ombrotrophic' (rain-fed) and are therefore especially sensitive to nitrogen deposition, as they derive all their nutrients from the atmosphere. Excess nitrogen leads to preferential growth of grass and tree species at the expense of the forming species. Coupled to these changes, the presence of less dominant associated herbs, bryophytes and lichens may change accordingly. ■ Bogs are highly sensitive to nitrogen deposition, as they derive all their nutrients from the atmosphere. Excess nitrogen leads to preferential growth of grass and tree species at the expense of the bog forming Sphagnum mosses, this can have a substantial impact on the development of bog systems. Coupled to these changes, the presence of less dominant associated herbs, bryophytes and lichens may change accordingly. By contrast, grazing marshes may be less sensitive to atmospheric deposition, although there is much less information regarding the impacts on this habitat type. The most concern in such systems is often the species composition adjacent to ditches, and this may be differently sensitive to the main sward. <p>Ozone - the impact of ozone on habitats is generally mediated through a primary impact on plants, either directly in the case of mosses and lichens or indirectly for higher plants. Ozone episodes often occur in periods with dry conditions, when plants will tend to close their stomata. Wetland habitats in the UK are less likely to experience water shortage; as a result, such habitats may be particularly prone to ozone impacts. Currently there is little available data on ozone impacts on wetlands. However, it is expected that responses will be similar to grassland ecosystems.</p>
Natural and Semi-natural grassland formations¹²	
<ul style="list-style-type: none"> ■ Queendown Warren SAC ■ Medway Estuary & Marshes SPA/Ramsar ■ North Downs Woodlands SAC 	<p>Ozone - Expected effects include the development of ozone tolerant sub-species, which may lead to altered competitive abilities between plants. Studies on both acid and calcareous grasslands showed an increased ageing in plants subject to higher levels of ozone. Species composition changes were also observed in some studies. Where they have been studied, lowland and upland hay meadows (neutral grassland types) have not been demonstrated to be sensitive to ozone. However,</p>

¹¹ Ibid.

¹² Ibid.

European site[s]	Potential impacts of Atmospheric Pollution ⁶
<ul style="list-style-type: none"> ■ Thames Estuary & Marshes SPA/Ramsar ■ The Swale SPA/Ramsar 	<p>both lowland and upland acid grasslands are sensitive to ozone particularly at the community level. Studies on calcareous grasslands have shown a reduction in plant growth. Ozone also affects agricultural grassland.</p> <p>Nitrogen (N) deposition is of particular concern for semi-natural grasslands that are not fertilised. In these situations, plant species composition is adapted to nutrient-poor conditions, with low productivity. Enhanced nitrogen supply from atmospheric deposition tends to favour the growth of some grasses at the expense of other herbs, bryophytes and lichens, which may be of more conservation interest. Studies on acid grasslands across the UK and Europe, showed a decline in species richness caused mainly by increasing N deposition. Management regimes may obscure or modify some of the relationships between atmospheric deposition and habitat change. Intensive management can offset higher N inputs to a certain extent from high N inputs and by removal through grazing, mowing or harvesting.</p> <p>Acid deposition - Critical loads are estimated for the effects of acid deposition on to grasslands, depending on soil type. Most at risk are grasslands which are already moderately acidic, while base-rich calcareous grasslands are resistant to acid deposition, due to a high weathering potential. A particular concern is where small base-rich areas occur in otherwise acid grasslands, as it has been suggested that these, and the associated species communities, may be rather sensitive to acid inputs.</p>

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

4.8 The following plans and programmes have the potential to act in-combination with the Core Strategy as they propose development that will lead to cumulative increases in road based traffic over the life of the plan:

- Swale Borough Council Core Strategy
- Gravesham Borough Council Core Strategy
- Dartford Borough Council Core Strategy
- Maidstone Borough Council Core Strategy
- Tonbridge and Malling Borough Core Strategy
- Kent Local Transport Plan
- Kent County Council Minerals and Waste Core Strategy
- Medway Local Transport Plan 2011-2026
- London Gateway - Deep Sea Container Port

What is the current situation?

4.9 The Annual Report (2010) for the Kent and Medway Air Quality Monitoring Network identified that background nitrogen dioxide (NO₂) concentrations have remained relatively stable in Kent since the mid-2000's. In 2010 the general trend at the background monitoring sites across the survey area was an overall reduction in NO₂ concentrations. A number of monitoring sites showed a slight increase at the end of

2010 reflecting an increase in NO₂ concentration seen during the cold weather experienced across the UK in December. Some reductions were seen at roadside sites during 2010; however this is thought to have been influenced by a general reduction in concentrations across the region rather than any significant reduction in local emissions sources. In contrast, the roadside sites which recorded an increase in concentrations (Swale Ospringe Roadside 2, Tunbridge Wells A26 Roadside and Maidstone A229) are likely to have been significantly influenced by changes in local emissions.

- 4.10 A proportion of the particulate matter present in Kent is from non-local sources, most significantly London and mainland Europe. This results in relatively high background and rural concentrations of particulate matter (PM₁₀) across Kent. The non-local origins of this particulate matter makes it difficult to achieve a significant reduction in ambient concentrations at a local level. Monitoring data shows that the contribution of PM₁₀ from road traffic results in increased concentrations at the roadside sites (e.g. Dover Centre, Tunbridge Wells A26, Maidstone A229, Ashford and Chatham). The Annual report identified that the PM₁₀ concentrations at the automatic monitoring sites remained relatively constant over the period 1998 to 2007. Between 2008 and 2010 there was some variation in the rolling annual mean concentration however there is a general downward trend in concentrations at almost all of the monitoring sites. At a local level, nitrogen dioxide (NO₂) is the only pollutant that exceeds air quality objectives within Medway and these exceedences are contained in the three declared Air Quality Management Areas (AQMAs) in Pier Road (Gillingham), High Street (Rainham) and Central Medway.
- 4.11 Information on atmospheric pollution at the European sites is currently limited. The Air Pollution Information System (APIS) provides critical loads for acidity and nitrogen for each designated feature within every SAC and SPA in the UK, however this information is based on predictivemodeling rather than from real monitoring data taken at the sites themselves. The different environmental conditions at each European site mean that the sensitivity of qualifying features to atmospheric pollution can vary between European sites, therefore this information is of limited use to the assessment.
- 4.12 The APIS 'Site Relevant Critical Loads' tool identifies that the critical load levels for nitrogen and acidity are not being exceeded at Queendown Warren SAC. No information is available for Peter's Pit SAC as APIS has not set critical load levels for freshwater habitats, however SSSI information indicates that the freshwater habitats are sensitive to both nitrogen and acid deposition. For the North Downs Woodlands SAC the critical load levels for nitrogen are being exceeded for the two woodland qualifying features but not for the grassland qualifying feature, whereas acidity critical loads are not being exceeding for any of these qualifying features.

- 4.13 Estuarine habitats are generally not considered to be particularly sensitive to air pollution effects given that they already receive high nitrogen loads in water. However, as previously stated the sensitivity of qualifying features is often determined by local environmental conditions. APIS provides information on the estimated level of deposition at broad supporting habitats used by the bird species designated as part of the SPAs being considered in this AA. It identifies that critical loads for nitrogen are being exceeded at only one of the supporting habitats (supralittoral sediment - acidic type). The remainder of the broad supporting habitats are either identified as not being sensitive to nitrogen or acid deposition or that critical loads are not being exceeded.

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

- 4.14 Levels of primary pollutants emitted directly into the atmosphere, tend to be highest around their sources; these are usually located in urban and industrial areas. Motor vehicles are a major source of primary pollution throughout the UK, in particular, traffic is an important source of carbon monoxide, nitrogen dioxide and volatile hydrocarbons (VOCs) such as benzene and 1,3-butadiene and primary particles (PM₁₀). Concentrations of all these pollutants are therefore usually highest in built-up urban areas.
- 4.15 Currently the only pollutant that is exceeding air quality objectives in Medway is nitrogen oxide (NO_x), the impacts of which are most relevant close to source. Therefore, the contribution of NO_x beyond the specific areas where development and related infrastructure is located is likely to be negligible. The most acute impacts of NO_x take place close to where they are emitted (generally within 200m of the roadside¹³) but these gases also have the potential to contribute to background pollution levels. Incineration can also contribute to levels of NO_x - Policy CS21 supports proposals for additional power generation and energy storage capacity on the Hoo Peninsula and the Isle of Grain.
- 4.16 European sites in close proximity (within 200m) to a major road (Motorway or A road) that are likely to see a significant increase in traffic as a result of development proposed in the Core Strategy and surrounding areas are North Downs Woodlands SAC (adjacent to the A249 and a portion lies within 200m of the A229), Medway Estuary & Marshes SPA/Ramsar (portion lies within 200m of the A249), Thames Estuary & Marshes SPA/Ramsar (portion lies within 200m of the A228) and The Swale SPA/Ramsar (portion lies within 200m of the A249 and A299). Peter's Pit SAC and Queendown Warren SAC are not within 200m of a major road.
- 4.17 The Core Strategy proposes the development of 17,930 new homes and 935,998 sq m of employment floorspace between 2006 and 2028.

¹³ Highways Agency (2007) Design Manual for Roads and Bridges: Volume 11, Section 3, Part 1.

This includes the development of a free-standing mixed-use settlement at Lodge Hill (providing 5,000 homes, 5,000 sq m GEA retail and at least 43,000 sq m GEA for business uses) and other waterfront regeneration sites along the River Medway. The increased population as a result of the development will inevitably lead to an increase in traffic and therefore atmospheric pollution in Medway.

- 4.18 Determining the significance of this impact in relation to the integrity of European sites is extremely complex. The sensitivity of European sites to atmospheric pollutants is dependent on a range of factors including the types of habitat present and the environmental conditions at each site. This means the sensitivity of each European site is different, even if they have the same designated features. Determining the critical loads for sites (habitats) and assessing the effect of atmospheric pollution is most appropriately carried out at a site specific level. The information available on APIS indicates that a number of qualifying features are sensitive to atmospheric pollution and that critical loads in certain areas are possibly being exceeded. Whilst this may be the case, the site specific information provided by JNCC and Natural England for the European sites scoped into this HRA does not indicate that atmospheric pollution is currently having adverse effects on the qualifying features of any of the sites.
- 4.19 Estuarine sites: The type of air pollution that marine and coastal habitats are most sensitive to is nitrogen deposition (atmospheric and river inputs). The North Kent estuarine ecosystem already receives high nitrogen inputs; and this, coupled with the fact that emissions are highest close to source (and the majority of development proposed within the Core Strategy is more than 200m from an Estuarine site) means that the PDCS is considered unlikely to have any adverse effects on the integrity of the estuarine European sites.
- 4.20 Terrestrial and freshwater sites: For the terrestrial European sites it is also unlikely that the Core Strategy alone will have adverse effects on site integrity as a result of increased atmospheric pollution. Only one of the terrestrial/freshwater sites (North Downs Woodlands SAC) is within 200m of a road that has the potential to see an increase in traffic as a result of proposed development. Less than 3.5 ha out of a total 287.58 ha (1.2 per cent) of designated habitat is within 200m of a major road and the SSSI units (Unit 15 & 26 of the Wouldham to Detling Escarpment SSSI) that make up the 3.5 ha are assessed by NE as being in a favourable condition¹⁴. Given that such a small proportion of the SAC is within 200m of any major roads (A229 and A249) and available information on the site indicates that site level management of the qualifying features, such as grazing is the most important factor in maintaining site integrity, it is unlikely that the development proposed in the Core Strategy alone will have adverse effects on the integrity of the SAC through increased atmospheric pollution.

¹⁴ Natural England: Sites of Special Scientific Interest - Wouldham to Detling Escarpment SSSI Information. Available online: http://www.sssi.naturalengland.org.uk/Special/sssi/sssi_details.cfm?sssi_id=1001339

- 4.21 Whilst effects from the plan alone are considered unlikely, it is clear that the development proposed in the Core Strategy will contribute to background pollution levels in combination with other plans, programmes and projects. There is uncertainty however with regard to the significance of this in combination impact on the European sites. The Core Strategy alone cannot be expected to mitigate for the in combination effects of increased background pollution on the European sites. To effectively address the issue of air quality across the wider North Kent area, and in particular, the effects on European designated sites, a strategic regional approach to air quality management is required.

What existing mitigations are provided in the Core Strategy?

- 4.22 At a strategic level Medway Council has sought to ensure that Core Strategy policies address identified issues - in relation to potential adverse impacts on air quality - and has put the following robust policy measures in place to provide mitigation:

- The Core Strategy (in particular Policy CS24: Transport and Movement) seeks to minimise congestion through the operation of urban traffic management and control systems as well as improvements to junctions in congestion/ air quality hotspots. It also seeks to reduce reliance on the private vehicle through a quality bus network and improvements to walking and cycling networks.
- All significant developments are required to be subject to an agreed transport assessment, which includes an assessment of the potential modal shift away from private car use.
- Policy CS3 (Mitigation and Adaptation to Climate Change) will help to minimise increased emissions from buildings through the requirement for residential development to achieve Code for Sustainable Homes Level 3 until the end of 2013, Code Level 4 between 2014 and 2016 and then Code Level 5 from the beginning of 2016. Commercial buildings (over 1,000 sq m) are required to meet BREEAM 'very good' standard until 2016 and thereafter BREEAM 'excellent'.

Further recommendations for avoidance and mitigation

- 4.23 Along with the strategic policy mitigation already in place the following recommendations should be incorporated into the Core Strategy to address identified issues with regard to air quality:
- It is recommended that the supporting text of Policy CS3 (Mitigation and Adaptation to Climate Change) should include wording to ensure that the Council will support the Kent and Medway Air Quality Network during the life of the plan.
 - It is recommended that the Council requires the monitoring of air quality at key locations within or close to the proposed strategic sites to determine if air quality is worsening as a result of new

development (this is also a recommendation of the Sustainability Appraisal). This information can then inform the Council and County Council's wider approach to air quality management.

- The Council should support and seek opportunities for a wider approach to the management of Air Quality in North Kent in co-operation with surrounding Authorities.
- In preparing the Allocations and Other Development Management Policies DPD, the Council should consider opportunities for the phasing and management of construction to minimise any impacts on air quality (especially from vehicular movement).

4.24 The policy mitigation outlined above is effective plan level mitigation and will contribute to minimising the impacts of proposed development on air quality. Supporting the Kent and Medway Air Quality Network during the life of the plan will allow the Council to determine if the policy mitigation contained within the plan is working effectively.

Disturbance

4.25 The screening assessment identified that there was the potential for likely significant effects at the following European sites due to disturbance:

- Medway Estuary & Marshes SPA/Ramsar
- North Downs Woodlands SAC
- Thames Estuary & Marshes SPA/Ramsar
- The Swale SPA/Ramsar

What are the issues arising from the plan?

4.26 Development proposed in the Core Strategy will increase the residential population in Medway and therefore levels of recreational activity (both water and land-based) on and around the designated sites. It also has the potential to result in increased levels of noise and light pollution through building construction /operation and activities (e.g. minerals and waste workings) through increased vehicular traffic and plant operation.

How might the European sites be affected?

4.27 Increased recreational activity at European sites has the potential to cause disturbance to designated habitats and species through a variety of different pathways. This could include physical disturbance through trampling of habitats as a result of increased recreation or non-physical disturbance to species through noise and light pollution as a result of increased traffic or development itself.

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

4.28 The following plans and programmes have the potential to act in-combination with the Core Strategy as they propose development that will lead to cumulative increases in recreational activity and noise and light pollution over the life of the plan:

- Swale Borough Council Core Strategy
- Gravesham Borough Council Core Strategy
- Dartford Borough Council Core Strategy
- Maidstone Borough Council Core Strategy
- Tonbridge and Malling Borough Core Strategy
- Thames Estuary 2100 Plan (TE2100)
- Kent Local Transport Plan
- Kent County Council Minerals and Waste Core Strategy
- Isle of Grain to South Foreland Shoreline Management Plan
- Medway Estuary and Swale Shoreline Management Plan
- Medway Local Transport Plan 2011-2026
- London Gateway - Deep Sea Container Port

What is the current situation?

4.29 There have been reported declines in the numbers of important bird species in the three north Kent Special Protection Areas (Thames Estuary and Marshes SPA, Medway Estuary and Marshes SPA and The Swale SPA), in particular Medway Estuary and Marshes SPA. Studies have been commissioned by the NKEPG to identify the causes of these declines, which may include recreational disturbance. The first phase of this work has been completed in the form of a visitor survey and bird disturbance study. The studies are focussed along the stretch of shoreline that encompasses the Medway Estuary & Marshes SPA/Ramsar, Thames Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar.

4.30 The visitor surveys were conducted in February and March 2011 to assess the level and type of visitor use at 21 locations across the shoreline. A total of 1,398 visitors were recorded entering and leaving the survey locations and 542 visitor groups were interviewed. Key findings from the survey include:

- The main recreational activities being undertaken were dog walking (62%) and walking without dogs (23%), which accounted for 85% of the main activity responses.
- Across all locations visits were typically short with 57% of them lasting less than an hour.
- Two main modes of transport were used to access the locations with 63% of visitors arriving by car and 34% by foot. 50% of visitors who arrived by foot lived within 0.9km and 90% lived within 2.7km while 50% of visitors who arrived by car lived within 4.2km and 90% lived within 24.6km.

- The length of each visitor route varied depending on the activity they undertook and the location visited.
- It was also noted that 23% of visitor routes strayed from the path network and crossed onto the intertidal areas.

4.31 The bird disturbance study surveyed 22 locations, which were visited repeatedly between December 2010 - February 2011. The survey work comprised of bird counts and counts of people with a record of the recreational activity they undertook. Findings include:

- The study recorded a wide range of bird species (34 in total) with oystercatcher, dunlin, curlew and redshank present at every survey location.
- The highest counts of waders and wildfowl were recorded on the outer Swale.
- There were 1,879 observations of visitors recorded in the vicinity of the bird survey locations accounting for 2,609 people.
- Visitors were recorded undertaking a wide range of shore and water based activities with dog walking (46% of groups) and walking without dogs (24% of groups) being the most common activities recorded.

4.32 Of the 34 recorded bird species 19 are designated as protected species under the Birds Directive and/or Ramsar Convention. The European protected bird species recorded were as follows:

- | | |
|-----------------------|----------------------------|
| ■ Avocet | ■ Redshank |
| ■ Bar-tailed Godwit | ■ Ringed Plover |
| ■ Black-tailed Godwit | ■ Turnstone |
| ■ Curlew | ■ Dark-bellied Brent Goose |
| ■ Dunlin | ■ Pintail |
| ■ Golden Plover | ■ Shelduck |
| ■ Greenshank | ■ Shoveler |
| ■ Grey Plover | ■ Teal |
| ■ Knot | ■ Widgeon |
| ■ Oystercatcher | |

4.33 The study also recorded the behavioural response of birds to people, as well as the distance between the birds and people, which allowed it to determine if the behavioural response of birds to people differs with distance. As the activity of each person was noted the type of response exhibited by the birds to people undertaking different activities was also recorded. Key findings included:

- Around one quarter (26%) of species-specific observations resulted in birds being 'disturbed' - i.e. becoming alert, walking/swimming away, undertaking a short flight (<50m) or a major flight (>50m).
- Major flight occurred in 14% of the species specific observations and around one fifth (18%) of disturbance events caused a major flight.

- Walking dogs that were off their leads was the activity responsible for the majority of observed species-specific major flight events - with a total of 189 major flight observations attributed to this activity - which is nearly half (46%) of all the major flight events.
 - 55% of species specific observations of major flight were attributed to dog walkers (leads on and off).
- 4.34 The two locations with the highest proportion of major flight observations were locations 16 (Stoke Ouze A228 layby) and 7 (Harty), where 57 and 41% of observations resulted in major flight. Both these locations were comparatively 'quiet', in that levels of recreational use here were actually low. The study noted that there was a lower proportion of major flights observed at the busier sites, in other words at locations with lots of people visiting, there were fewer major flights per person counted. The birds typically tended to respond (whether becoming alert, walking, short flight or a major flight) to potential disturbance events at around 50m.
- 4.35 The study identified that the following factors were significant in predicting whether major flight would take place or not:
- distance (the shorter the distance, the more likely major flight);
 - species;
 - flock size (larger flocks less likely to take flight);
 - number of dogs off leads (more dogs and major flight more likely);
 - dog present or not (major flight more likely if dogs present);
 - 'zone' in which activity occurred (major flight more likely with activities on the intertidal or on the water); and
 - state of tide (major flight more likely at high tide).
- 4.36 The interactions between distance and tide were highlighted by the study. It suggested that birds respond differently in terms of the distance at which they respond according to the state of the tide. The results of the visitor bird disturbance work will eventually be used in predictive models in later phases of the work to determine the extent to which disturbance currently impacts on the designated sites and their ability to support the important waterfowl populations.
- 4.37 There is currently no information available on the levels of recreational activity occurring at the North Downs Woodlands SAC.

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

- 4.38 Policies within the Core Strategy propose the development of 17,930 new homes and 935,998 sq m of employment floorspace between 2006 and 2028. This includes the development of a free-standing mixed-use settlement at Lodge Hill (providing 5,000 homes, 5,000 sq m GEA retail and at least 43,000 sq m GEA for business uses) and other waterfront regeneration sites along the River Medway. Other policies seek to increase access to coastal areas (Policy CS8) and improve the leisure use of the river (Policy CS18) as well as facilitate the introduction

of water bus/taxis services along the urban waterfront (Policies CS24 & CS25). Policy CS17: Economic Development also supports tourism in the area.

- 4.39 The findings of the NKEPG visitor and bird disturbance survey work suggests that there may be a correlation between recreational disturbance and bird decline and that recreational visitors tend to be from within the local area. This is significant given the level of development proposed in the Core Strategy, particularly the development of 5,000 new homes at Lodge Hill (Policy CS33), which is within 2 km of the Thames Estuary & Marshes SPA/Ramsar and the Medway Estuary & Marshes SPA/Ramsar. It is important to note that the bird disturbance study did not consider disturbance in relation to the distribution of prey or the consequences of disturbance in terms of population size. The distribution of birds within the designated sites is likely to be governed by a range of factors, in particular the abundance and distribution of their food.
- 4.40 There was no significant correlation between bird numbers (or densities) and the number of people present. However, there were no visits where high numbers of people were counted and high numbers of birds also occurred. The study suggests that birds are perhaps avoiding the busiest sites, but at the other sites other factors may be influencing distribution. Until the future phases of work have been completed – further surveys and predictive modeling - it is not possible to quantify the contribution that planned growth in Medway and surrounding areas may have on bird populations at the Medway Estuary & Marshes SPA/Ramsar, Thames Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar. As a result there is uncertainty as to whether the CS will have adverse effects on the integrity of the European sites through increased recreational activity.
- 4.41 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. This might include policies that provide alternative recreational spaces or by contributions to strategic management approaches in collaboration with NE and other Local Authorities.
- 4.42 Policy mitigation and joint working at a strategic level can help to mitigate the impacts of recreational activity to a certain extent, however; the direct impacts of recreational activity are most appropriately addressed at the site level through co-operative measures.

- 4.43 Water-based recreation/travel: 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 London¹⁵ and the Kent Coastal Network¹⁶ identify restricted areas for personal water craft use and provide 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.
 - 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.
- 4.44 Co-operative measures such as the voluntary agreements outlined above have been shown to be highly effective in the management of recreation and tourism impacts on European sites¹⁷. 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

¹⁵ Port Authority of London (Accessed 07/11/11)

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

¹⁶ The Kent Coastal Network (2009) Riding Personal Water Craft in Kent:

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

¹⁷ 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.

have negative impacts on biodiversity. The site is also monitored annually for possible negative impacts and the commonly agreed rules of behaviour are evaluated.

- 4.45 The introduction of water taxis (as proposed in Policies CS24 & 25) is unlikely to significantly affect the European sites as long as they remain within the urban waterfront and are a sufficient distance from the European sites themselves, as well as any suitable supporting habitat. It is recommended that the water taxis - if implemented - remain within the urban water front and travel no further downstream than Lower Upnor.
- 4.46 Monitoring: 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/Ramsar, Thames Estuary and Marshes SPA/Ramsar and The Swale SPA/Ramsar 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 solutions¹⁸.
- 4.47 For an individual strategic development such as Lodge Hill, there is the potential for proposals to incorporate suitable alternative areas for recreation. In this case areas that provide suitable alternatives for the recreational activity that is identified by the bird disturbance work as having the greatest impact, which is dog walking. Mitigation measures could include alternative areas for dog walking, such as a 'dog friendly park' that provides an area for dogs to be let off the lead. The requirement for project level HRA for this development will ensure that specific mitigation measures for addressing the potential impacts of recreational activity will be considered within any proposal for the site.
- 4.48 Consultation on the HRA has indicated that there is the potential for urbanisation impacts on the North Downs Woodlands SAC. In response to the Draft HRA (AA) Report NE stated that 'Natural England do not consider that current unauthorised activities and recreational disturbance is sufficient in the North Downs Woodlands SAC to cause

¹⁸ Ibid.

any of the units to be in unfavourable condition. Over recent years we have worked with landowners to reduce incidences. However, there are still areas that are impacted i.e. around Halling.

- 4.49 North Downs Woodlands is composed of two separate sections, the first of which contains part of the Halling To Trottiscliffe Escarpment SSSI. The second contains part of the Wouldham to Detling Escarpment SSSI. A small proportion of the SAC near Upper Halling falls within Medway's boundary. The majority of the SAC falls within the boundaries of Maidstone Borough Council and Tonbridge and Malling Borough Council, with a small proportion also within Gravesham Borough. The Core Strategy is making no proposals for significant development in the south of the plan area that do not already have planning permission. The majority of development proposed in the Core Strategy is over 5km from both sections of the SAC.
- 4.50 NE has assessed that the majority of the SSSI units that make up the SAC are either in a 'favourable' or 'unfavourable recovering' condition. Only one unit (unit 39 of the Halling To Trottiscliffe Escarpment SSSI) is identified as 'unfavourable no change' as a result of conifer plantations. There are also large areas of woodland in the surrounding areas which can serve as alternative green spaces for recreation. Given the relationship between the SAC boundary and wider SSSI boundary it's possible that the recreation and urbanisation activities - particularly with regard to the Halling to Trottiscliffe Escarpment SSSI Map 3 - are occurring on the wider SSSI areas rather than on the SAC itself.
- 4.51 Based on available evidence it is unlikely that development proposed in the Core Strategy will lead to a significant increase in the levels of recreational and urbanisation activities at the SAC, especially given the large alternative areas of woodland that are in close proximity to the designated areas. Given this and the mitigation provided by Core Strategy Policies (seeking for new development to provide open space and contribute to the formation of the green grid, and requiring developers to provide for new recreational facilities if the need arises), it is considered highly unlikely that the Core Strategy would have significant effects alone on the SAC through increased recreation and urbanisation. It is considered that based on available evidence, the residual effects of other plans and programmes (in particular the Gravesham, Maidstone and Tonbridge and Malling Core Strategies) will not make the potential in combination effects of the Core Strategy significant.

What existing mitigations are provided in the Core Strategy?

- 4.52 A number of measures have been included within the PDCS to minimise disturbance:
- Policy CS6 (Preservation and Enhancement of Natural Assets) seeks to protect and enhance international wildlife habitats and sites

through long term management. The policy also ensures that the Council will implement the findings of the bird population and visitor studies commissioned by the NKEPG and will ensure that any proposed strategic avoidance and/or mitigation measures are considered in all planning documents and in the assessment of planning applications. Development will not be permitted if it causes unacceptable harm to important habitats and species through increased noise or light pollution unless it can be demonstrated that measures can be taken to overcome any significant risk.

- Policy CS8 (Open Space, Green Grid and Public Realm) ensures that opportunities will be sought for new development to provide open space and contribute to the formation of the green grid. Where open space cannot be provided on-site, alternative equivalent provision of new open space or the enhancement of existing open space will be required off-site. Existing open space will be preserved and poor quality open space enhanced unless an improved provision can be made by new development. Major regeneration proposals will be required to provide recreational areas as part of new or enhanced urban spaces. The policy helps to ensure provision of Strategic Alternative Green Spaces, hence providing alternatives to recreating within European sites.
- Policy CS10 (Sport and Recreation) seeks to safeguard existing recreational facilities and extend them where appropriate.
- Policy CS35 (Developer Contribution) requires that where the need arises the Council will seek to enter into a legal agreement with the developer(s), to provide for new recreational facilities.

Further recommendations for avoidance and mitigation

- 4.53 Whilst Policy CS6 (Preservation and Enhancement of Natural Assets) is considered to afford good protection to habitat and species more generally, there is potential to strengthen the wording with specific regard to European sites. It is recommended that the following text is removed from Policy CS6:

The Council will implement the findings of the bird population and visitor studies commissioned by the North Kent Environmental Planning Group and will ensure that any proposed strategic avoidance and/or mitigation measures are adopted in all planning documents and in the assessment of planning applications.

- 4.54 It is recommended that the following text should then be inserted at the end of Policy CS6:

As part of its commitment to ensuring the ongoing protection of SACs, SPAs and Ramsar sites, the Council will:

- *implement the findings of the bird population and visitor studies commissioned by the North Kent Environmental Planning Group;*

- *ensure that any proposed strategic avoidance and/or mitigation measures are adopted, as appropriate in all planning documents and in the assessment of planning applications¹⁹;*
- *adopt a flexible approach that enables development plan documents to be reviewed in the light of emerging evidence; and*
- *deal with developments on a case by case basis - also taking into consideration the potential for in combination effects - based on best available evidence until the full results of the NKEPG studies are available- using a precautionary approach to require HRA where effects are uncertain.*

4.55 To address the identified issue of recreational disturbance on the designated bird species it is recommended that the following should be incorporated into the Core Strategy:

- It is recommended that Policy CS33 (Lodge Hill) should require any proposal for the site to incorporate suitable areas for dog walking. This should include if possible, a 'best practice' dog friendly park', which provides a suitable area for dogs to be let off the lead and that is of sufficient size and quality to deter owners from travelling to the European sites. This should be developed in consultation with local dog owners and trainers.

4.56 Any development proposal for Lodge Hill will be required to submit a project-level HRA to ascertain whether there are likely to be significant effects arising from the proposed development. This document will be based on the detailed development application for the site and will therefore be able to provide a further detailed assessment of this particular development. It is understood that this document is under preparation and it is recommended that the report be reviewed prior to this Core Strategy HRA report being finalised for adoption.

4.57 It is recommended that - if implemented - the water taxis should remain within the urban waterfront and not travel further downstream than Lower Upnor.

4.58 To address identified issues with regard to the potential for increased access (Policy CS8) to European sites:

- It is recommended that Policy CS8 (Open Space, Green Grid and Public Realm) should make reference to Policy CS6 and the protection of European designated sites to ensure that changes to the Green Infrastructure network and increased access to coastal areas has no adverse effect on European sites.
- It is recommended that Policies CS13 (Housing Provision and Distribution) and CS33 (Lodge Hill) cross refer to Policy CS8 (Open Space, Green Grid and Public Realm) to ensure that changes to

¹⁹ Sites with outline planning permission should be re-assessed at the reserved matters stage to take account of available evidence at the time.

the Green Infrastructure network and increased access to coastal areas has no adverse effect on European sites.

- 4.59 It is also recommended that Policy CS21 makes reference to Policy CS6 and the protection of European designated sites.

Habitat (& species) Fragmentation & Loss

- 4.60 The screening assessment identified that there was the potential for likely significant effects at the following European sites through habitat fragmentation and loss:

- Medway Estuary & Marshes SPA/Ramsar
- Thames Estuary & Marshes SPA/Ramsar
- The Swale SPA/Ramsar

What are the issues arising from the plan?

- 4.61 Development proposed in the Core Strategy and surrounding areas could lead to the loss and fragmentation of supporting habitats, i.e. those that lie outside the designated area but have an identified role to play in maintaining the overall integrity of the European sites. It is unlikely that development proposed in the Core Strategy will lead directly to the loss of designated habitat as policies within the plan divert development away from European sites and actively seek to protect habitats and species.

How might the European sites be affected?

- 4.62 The loss or reduced connectivity of supporting habitats can adversely affect the designated species that rely upon them.

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

- 4.63 The following plans and programmes have the potential to act in-combination with the Core Strategy as they propose development that will lead to the cumulative increase of habitat fragmentation and loss:

- Swale Borough Council Core Strategy
- Gravesham Borough Council Core Strategy
- Dartford Borough Council Core Strategy
- Maidstone Borough Council Core Strategy
- Tonbridge and Malling Borough Core Strategy
- Thames Estuary 2100 Plan (TE2100)
- Kent Local Transport Plan
- Kent County Council Minerals and Waste Core Strategy
- Isle of Grain to South Foreland Shoreline Management Plan
- Medway Estuary and Swale Shoreline Management Plan

- Medway Local Transport Plan 2011-2026
- London Gateway - Deep Sea Container Port

What is the current situation?

- 4.64 The estuarine and coastal European sites in North Kent are under threat from the potential loss and fragmentation of supporting habitat. Development along the coast through increased housing/ industrial expansion in the area can result in coastal squeeze and the subsequent loss and fragmentation of habitat. Another cause is often the development of structures that seek to protect the land and/or infrastructure from erosion and sea defences to prevent erosion and/or flooding. These and other techniques effectively 'fix' the coastline, which is particularly important where it affects habitats and ecosystems that would normally move landward in response to erosive forces. Where there is a rise in sea level relative to the land a coastal squeeze takes place.

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

- 4.65 Development proposed in the Core Strategy is unlikely to lead to the direct loss of designated habitats. There is however, the potential for loss of supporting habitats in combination with other plans, programmes and projects through land take and coastal squeeze, which are important to the designated bird species.
- 4.66 Policy CS1 (Regenerating Medway) seeks to focus development on underused, derelict and previously developed land in the town centres and along the Medway Riverside. In line with this Policy (CS1) the Area Policies (Policies CS26 - 32) direct development along the River in a number of waterfront regeneration areas. The riverside regeneration sites are all previously developed land and are therefore unlikely to contain any important supporting habitat. The requirement for project level HRA for individual development would also ensure that there is no loss of important supporting habitat as a result of the waterfront regeneration areas.
- 4.67 Policy CS33 (Lodge Hill) proposes the development of a free-standing mixed-use settlement providing 5,000 homes, 5,000 sq m GEA retail and at least 43,000 sq m GEA for business uses. Ecological surveys undertaken as part of the Lodge Hill evidence base did not identify any habitats that could be considered of importance to the European designated bird species. Wintering and breeding bird surveys did not identify any European protected bird species on the site. It is therefore considered that the development of Lodge Hill will not result in the loss of any important supporting habitats.
- 4.68 Policy CS22 (Provision of Minerals) identifies areas of search for land won sand and gravel that are within and adjacent to Medway Estuary & Marshes SPA/Ramsar. Mineral activities within these areas has the potential for adverse effects on the integrity of Medway Estuary &

Marshes SPA through habitat loss and fragmentation. To address this issue we would recommend the Council amend Figure 7 1(Land won sand and gravels) to illustrate the relationship between the search areas and the European designated site boundaries. The boundary of the search area should be outside of the European site boundaries. Additional text should also be included to ensure no significant adverse effects on European sites.

- 4.69 Policy CS23 (Waste Management) identifies waste disposal to land resource areas that are directly adjacent to the Medway Estuary & Marshes SPA/Ramsar. The development of a landfill directly adjacent to the European site has the potential for adverse effects on its integrity. To address this issue we would recommend the Council amend Figure 7 3(Potential final Waste Disposal to Land resource Area) to illustrate the relationship between the search areas and the European designated site boundaries. The boundary of the search area should be outside of the European site boundaries. Additional text should also be included to ensure no significant adverse effects on European sites.
- 4.70 Policy CS17 (Employment Development) makes provision for the expansion of the existing economic functions of the area, which includes the development of the Isle of Grain employment site and the Kingsnorth commercial park. Both of these employment sites are adjacent to European sites and have been allocated for employment development for many years. Both sites have been granted planning permission for B1, B2 and B8 uses. Given the proximity of European sites any expansion of the employment areas outside their existing boundary could result in the loss of designated and or supporting habitats. It is recommended that any future employment development should remain within the existing boundary of the employment areas to avoid the loss or fragmentation of designated and or supporting habitats.

What existing mitigations are provided in the Core Strategy?

- 4.71 A number of measures have been included within the PDCS to protect habitats and avoid loss or fragmentation:
- Policy CS6 (Preservation and Enhancement of Natural Assets) seeks to protect, maintain and enhance important wildlife habitats and species through long term management and habitat creation schemes that increase connectivity. It also ensures that when development is permitted, opportunities are pursued and secured for the incorporation, enhancement, re-creation or restoration of wildlife habitat, either on-site, off-site or through contributions to the strategic provision of natural open space and that these strategies are in place and functioning prior to commencement of the development. The Policy also states that any negative impact on recognised wildlife habitats or other biodiversity features should be avoided or minimised through the appropriate siting and/or design of development. Where the negative impact cannot be avoided,

but the importance of the development is considered to outweigh the impact, then environmental compensation will be sought by the creation by the developer of new habitats or features on other suitable sites and their long term management will need to be secured. The policy also states that compensation will normally be provided on more than like-for-like basis, in order to secure both the maintenance and enhancement of biodiversity.

- The protection of important wildlife habitats in the countryside is reinforced by Policy CS7 (Countryside and Landscape), which requires that proposals have regard to the type and distribution of wildlife habitats.
- Policy CS35 (Developer Contributions) requires that where the need arises the Council will seek to enter into a legal agreement with the developer(s), to provide for environmental mitigation or compensation measures where mitigation on site is impossible or inadequate on its own.
- The Core Strategy (Policy CS8: Open Space, Green Grid and Public Realm) also ensures that opportunities will be sought for new development to provide open space and contributes to the formation of the green grid.

Further recommendations for avoidance and mitigation

- It is recommended that Policy CS6 (Preservation and Enhancement of Natural Assets) incorporates wording to ensure that supporting habitats are protected, maintained and enhanced and that the Council does not permit development that could lead to the loss or fragmentation of these habitats unless it can be demonstrated that appropriate mitigation is available. Further detail on the types of supporting habitat could be clarified in the supporting text of the policy.
- It is recommended that Figure 7 1 (Land won sand and gravels) is amended to illustrate the relationship between the search areas and the European designated site boundaries. The boundary of the search area should be outside of the European site boundaries. Additional text should also be included to ensure no significant adverse effects on European sites.
- It is recommended that Figure 7 3 (Potential final Waste Disposal to Land resource Area) is amended to illustrate the relationship between the search area and the European designated site boundaries. The boundary of the search area should be outside of the European site boundaries. Additional text should also be included to ensure no significant adverse effects on European sites.
- The HRA undertaken for the Allocations and Development Management DPD will be required to include consideration of the potential impacts of waste and minerals allocations and the recommendations of this HRA will need to be incorporated into the DPD.
- It is recommended that any future employment development at the Isle of Grain employment site and the Kingsnorth commercial

park should remain within the existing boundaries of the employment areas, unless it can be shown that there will be no loss of designated and/ or supporting habitats.

Water Levels & Quality

4.72 The screening assessment identified that there was the potential for likely significant effects at the following European sites through reduced water levels and quality:

- Medway Estuary & Marshes SPA/Ramsar
- North Downs Woodlands SAC
- Peters Pit SAC
- Queendown Warren SAC
- Thames Estuary & Marshes SPA/Ramsar
- The Swale SPA/Ramsar

What are the issues arising from the plan?

4.73 The level of development proposed in the Core Strategy has the potential to act in combination with development proposed in surrounding areas through increased levels of abstraction to provide water supply; increased pressure on sewerage capacity and increased surface water run-off.

How might the European sites be affected?

4.74 Increased abstraction has the potential to lead to reduced water levels, which can have adverse effects on the integrity of water dependent European sites. Changes to water levels can impact river flow and water quality, which can adversely affect water dependent habitats and the species that rely upon them. Increased waste water discharges (consented) and surface water run-off (which can transfer pollutants to water bodies) have the potential to reduce water quality, which can also have adverse effects on designated habitats and species.

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

4.75 The following plans and programmes have the potential to act in-combination with the Core Strategy as they propose development that will lead to the cumulative increase in water abstraction, consented discharges and surface water run-off:

- Swale Borough Council Core Strategy
- Gravesham Borough Council Core Strategy
- Dartford Borough Council Core Strategy
- Maidstone Borough Council Core Strategy
- Tonbridge and Malling Borough Core Strategy

- Southern Water - Water Resource Management Plan
- South East Water - Water resource Management Plan
- Thames Estuary 2100 Plan (TE2100)
- Kent Local Transport Plan
- Kent County Council Minerals and Waste Core Strategy
- Isle of Grain to South Foreland Shoreline Management Plan
- Medway Estuary and Swale Shoreline Management Plan
- Medway Local Transport Plan 2011-2026
- London Gateway - Deep Sea Container Port

What is the current situation?

- 4.76 Water resources: The principal supplier of water to the Medway area is Southern Water with South East Water and Thames Water also serving small parts of the District. At present 76% of the water is supplied from local groundwater sources with the remainder (24%) from surface water sources outside the area. There are 34 groundwater sources and 1 surface water source within the local area.
- 4.77 According to the figures within Southern Water's Water Resources Management Plan (WRMP) average annual demand within the Kent Medway Water Resource Zone (WRZ) is 111.97 Megalitres per day (MI/d), which can rise to 148.95 MI/d during peak times in dry years. This will increase given the level of growth proposed within the Kent Medway WRZ itself and surrounding areas. To meet demand the WRMP proposes a number of measures, which include:
- Universal metering for both domestic and commercial properties
 - Asset improvement schemes for groundwater sources (10.25 MI/d peak, 8.75 MI/d average)
 - Optimisation of interzonal transfers (to Kent Thanet WRZ)
- 4.78 Even with these measures in place the WRMP predicts that on the basis of the average annual period²⁰, there will be a deficit within the Kent Medway WRZ during 2010-11. The WRZ would then go into surplus in 2014/15 and continue to be in surplus until the end of 2019/20. However, at the end of the period 2024-2025 supply is forecast to return to deficit. Alternatively using the peak demand period²¹ as the basis instead, the WRMP predicts the supply to the Kent Medway WRZ to begin and remain in surplus till after 2034/35. However this would require a consistently reliable rainfall pattern and all planned supply measures being put in place. The predictions made by the WRMP are based on the assumption that proposed measures will be implemented within the time periods specified.

²⁰ The "average annual period", whereby average demand over the year is compared against the average annual supplies that are available.

²¹ The "peak demand period", whereby the demands over the period of peak demand during the year, normally defined as a week, are compared against the supplies available during that period.

- 4.79 Water quality: River water quality in Medway is currently assessed as having moderate ecological quality. Groundwater is assessed having good chemical quality with poor chemical quality in certain areas. The Medway and Thames Estuaries are both assessed as having moderate ecological quality and poor chemical quality.
- 4.80 The effects of abstraction and discharge of water on European sites are considered through the Environment Agency's Habitats Directive Review of Consents process (RoC). The RoC concluded that no existing permissions for abstraction or discharge are posing a risk of adversely impacting the designated interest features of the North Down Woodland SAC, Peter's Pit SAC, Queendown Warren SAC and The Swale SPA.
- 4.81 Stage 4 RoC Action Plans were prepared for both the Medway Estuary & Marshes SPA and the Thames Estuary & Marshes SPA as a number of existing permissions had the potential for adverse effects on site integrity. For the Thames Estuary & Marshes SPA the Action Plan identified 11 discharge consents that posed a risk of adverse effect on site integrity due to their potential contribution of copper, which may have contributed to an exceedance to the environmental standard for copper within the estuary. Further consideration of the water quality data for the Thames Estuary revealed that the concentration of copper in the estuary has fallen and that the environmental standard for copper has not been exceeded since 2003. In addition, the EA undertook further water quality modelling to produce a copper budget that demonstrates only a fraction of copper present in the site is attributable to the consented discharges, and consideration was given to how future planned improvements to a number of the Sewage Treatment Works (STWs) will significantly reduce copper loads in the treated effluent through to 2020. As a result a conclusion of no adverse effect on site integrity was reached for the 11 discharge consents acting alone and in combination. One further discharge consent was identified as posing a risk of habitat loss from siltation. After further investigations the EA concluded that the discharge consent should be affirmed and that a management plan agreement be drawn up between NE and the discharger.
- 4.82 For Medway Estuary & Marshes SPA the RoC process identified one discharge consent that could not be shown to have no adverse effect alone due to toxic contamination. The consent is held by Southern Water Services Ltd. and permits the discharge of treated sewage effluent from Motney Hill STW. A further three consents permitting the discharge of trade effluent from industrial/trade premises could not be shown to have no adverse effect in combination with each other and Motney Hill STW. The risk of impact from all four discharges was that of toxic contamination within the site, particularly from copper. The RoC proposed modifications to the discharge consent for Motney Hill STW and concluded there will be no adverse effect on the integrity of the European site as a result of the identified consents.

- 4.83 The Stage 4 Action Plan for Medway Estuary & Marshes SPA also identified two abstraction licences that could not be shown to have no adverse effect when assessed in combination with the previously discussed discharge consents. The EA concluded that the modification of the discharge consent for Motney Hill STW would remove the risk of adverse effect from the Southern Water Services Ltd. discharge consent acting alone and thus remove the majority of the risk posed to the site, making the remaining in-combination risks negligible. As a result a conclusion of no adverse effect was reached for the remaining two abstraction licences.

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

- 4.84 All of the identified European sites are sensitive to changes in water levels and quality, in particular European sites with water dependent interest features. Sufficient levels of freshwater inputs are important to the designated species and habitats. Development proposed in the Core Strategy (provision of 17,930 new homes and 935,998 sq m of employment floorspace between 2006 and 2028) and surrounding areas will increase abstraction levels which has the potential to result in reduced water levels. Development proposed in the PDCS and surrounding areas will also increase pressure on sewerage capacity and increase levels of surface water run-off, which can result in reduced water quality. 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 of water based habitats 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. Medway Estuary & Marshes SPA/Ramsar, Thames Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar are designated for a number of important bird species 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.
- 4.85 Any applications for new abstraction licences are assessed by the EA through the RoC process to ensure that adverse impacts on internationally important nature conservation sites do not occur. If the assessment of a new application shows that it could have an impact on a European site the EA follows strict rules in setting a time limit for that license. This ensures that water levels at European sites do not fall below critical levels. 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. The EA also has a duty to assess the effects of consented discharges to address the potential for impacts on internationally important nature conservation sites. This regulated process serves to protect European sites.

- 4.86 Even with the regulatory processes in place to protect European sites there is still uncertainty with regard to the potential impacts of proposed development on the integrity of European sites through reduced water levels and quality. At a strategic level the Council should seek to ensure that Core Strategy policies address these issues and put robust policy measures in place to provide mitigation.

What existing mitigations are provided in the Core Strategy?

- Policy CS3 (Mitigation and Adaptation to Climate Change) requires residential development to achieve Code for Sustainable Homes Level 3 until the end of 2013, Code Level 4 between 2014 and 2016 and then Code Level 5 from the beginning of 2016. In addition the policy requires all residential development to achieve water efficiency of no more than 80 litres per person per day. Commercial buildings (over 1,000 sq m) to meet BREEAM 'very good' standard until 2016 and thereafter BREEAM 'excellent'. Policy CS3 also supports the proposals in the Southern Water's Final Water Resources Management Plan, 2010- 2035 or other measures that have been agreed to improve the efficiency of water use and maintain supplies at the level required to meet local needs. It also supports the objectives of the Water Framework Directive for water bodies to reach Good Ecological Status by 2027.
- Policies CS3 (Mitigation and Adaptation to Climate Change) and CS5 (Development and Flood Risk) require that development should incorporate Sustainable Urban Drainage Systems in line with national standards, prior to construction.
- Policy CS35 (Developer Contributions) requires that where the need arises the Council will seek to enter into a legal agreement with the developer(s), to provide for new physical infrastructure.

Further recommendations for avoidance and mitigation

- 4.87 To address the uncertainty surrounding water levels and quality it is recommended that Policy CS3 contain the following additional points:
- The policy should include wording to ensure that development proposals that pose material risk or harm to the quality and/or quantity of ground waters, surface waters, wetlands or coastal water systems either alone or in combination will not be permitted.
 - It should also require that major proposals for new development should be able to demonstrate that there are, or will be, adequate water supply and waste-water treatment facilities in place to serve the whole development.
 - The policy should require Sustainable Drainage Systems to be incorporated into all new development.
- 4.88 It is also recommended that Policy CS33 (Lodge Hill) should be amended to require that any proposal for the site is accompanied by a surface water strategy that considers the incorporation of Sustainable Drainage Systems.

- 4.89 The policy mitigation outlined above is effective plan level mitigation and will contribute to minimising the impacts of proposed development on the water environment. However, given the ongoing pressures on water resources for domestic supply, including the implications of climate change for water supply reliability, it is recommended that the Council consider a requirement for water neutrality for large/strategic development proposals and also provide further detail in relation to water efficient devices and rainwater harvesting. This is a matter that should be further addressed through the Land Allocations and Development Management DPD.

5.0 HRA CONCLUSIONS

- 5.1 This report outlines the methods used and the findings arising from the Appropriate Assessment stage of the Habitats Regulations Assessment for the Medway Core Strategy. The HRA of the Core Strategy has been undertaken in accordance with available guidance and good practice and has been informed by the HRA screening work and findings produced for earlier iterations of the Core Strategy, as well as advice received from Natural England and wider stakeholders.
- 5.2 The first stage of the HRA process (screening) considered the likely significant effects of the Core Strategy on nine European sites within the influence of the plan. The screening concluded that the effects of the Plan on the nine European sites through reduced air quality and reduced water levels and quality was uncertain. It also concluded that the effects of the plan on six of the European sites (coastal and estuarine SPAs and Ramsar sites) through habitat loss and fragmentation was uncertain. Based on the precautionary approach these issues were progressed through to the Appropriate Assessment stage to be considered in more detail. The screening also concluded that there was the potential for likely significant effects on six of the European sites (coastal and estuarine SPAs and Ramsar sites) through increased recreational activity. This issue was progressed through to the AA stage to be considered in more detail.
- 5.3 The AA considered the potential for the Core Strategy (both alone and in combination) to have adverse effects on the integrity of identified European sites through reduced air quality and reduced water levels and quality. Based on the sensitivity of the European sites, as well as mitigation provided through Core Strategy Policies and recommendations made by the AA, it was assessed that the Core Strategy alone would not have adverse effects on the European sites through reduced air quality. However, given a lack of available evidence the AA was unable to conclude with certainty that the Core Strategy would not have adverse effects on the integrity of the identified European sites through reduced air quality (in combination) and reduced water levels and quality (both alone and in combination). To strengthen the mitigation already proposed in the Plan the AA recommended a number of policy safeguards to help provide effective plan level mitigation that will contribute to minimising the impacts of proposed development on air quality, water levels and water quality.
- 5.4 The assessment also considered the potential for the Core Strategy to have adverse effects on the estuarine and coastal SPAs and Ramsar sites through habitat loss and fragmentation. The AA concluded that as the majority of development is being directed on previously developed land and the Lodge Hill area does not contain any suitable supporting habitat for designated bird species the Core Strategy will not have adverse effects on European site integrity (either alone or in

combination) through habitat fragmentation and loss, provided the recommendations of the AA are incorporated in to the Plan.

- 5.5 The AA then considered the potential for the Core Strategy to have adverse effects on the integrity of North Downs Woodlands SAC; Thames Estuary & Marshes SPA/Ramsar; Medway Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar through disturbance. The assessment concluded that the Core Strategy would not have adverse effects on the integrity of North Downs Woodlands SAC through disturbance as there is no evidence to suggest recreational activity on the site is affecting qualifying features and available information suggests that site level management, such as continuous grazing of the grassland feature is the most important factor in maintaining site integrity.
- 5.6 The findings of the first phase of the NKEPG bird disturbance work suggests that there may be a correlation between recreational disturbance and bird decline along the North Kent coast and that recreational visitors tend to be from within the local area. This is significant given the level of development proposed in the Core Strategy, particularly the development of 5,000 new homes at Lodge Hill (Policy CS33), which is within 2 km of the Thames Estuary & Marshes SPA/Ramsar and the Medway Estuary & Marshes SPA/Ramsar. To strengthen the mitigation already proposed in the Plan the AA recommended policy wording to ensure that the findings of the bird disturbance studies are implemented and any proposed strategic avoidance and/or mitigation measures are adopted, as appropriate in all planning documents and in the assessment of planning application. The AA also made specific recommendations for the development of Lodge Hill to ensure that any proposal for the site will incorporate suitable alternative areas for recreation. In particular, it recommends suitable alternatives for dog walking, the recreational activity that is identified by the bird disturbance work as having the greatest impact.
- 5.7 The AA concluded that until future phases of the NKEPG work have been completed - further surveys and predictive modeling - it is not possible to quantify the contribution that planned growth in Medway and surrounding areas may have on bird populations at the Medway Estuary & Marshes SPA/Ramsar, Thames Estuary & Marshes SPA/Ramsar and The Swale SPA/Ramsar. As a result the assessment could not conclude with certainty that the Core Strategy will not have adverse effects on the integrity of the SPAs and Ramsar sites through increased recreational activity. Policy mitigation provided in the Core Strategy and joint working at a strategic level can help to mitigate the impacts of recreational activity to a certain extent, however; the direct impacts of recreational activity are most appropriately addressed at the site level through co-operative measures.
- 5.8 Provided that the recommendations of the AA are incorporated, it is considered that the Core Strategy will contain effective strategic plan level mitigation to address the issues identified through the HRA

process, as far as is possible within the remit of a planning document. The plan should, however be seen in conjunction with the need for wider measures (e.g. effective European site management and coordinated regional approaches to air quality). 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 a significant effect on one or more European Sites. Accordingly, this AA should be used to inform any future assessment work. It should also be revisited in the light of any significant changes to the Core Strategy and/ or if any further information becomes available, including further studies commissioned by the NKEPG.

- 5.9 These findings have been subject to comments and advice from NE and wider stakeholders.

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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 	<p>Criterion 2: Site supports number of rare plant and animal species</p> <ul style="list-style-type: none"> ■ <i>Hordeum marinum</i> sea barley ■ <i>Parapholis incurve</i> curved hard-grass ■ <i>Polypogon monspeliensis</i> annual beard-grass ■ <i>Puccinellia fasciculata</i> Borrer's saltmarsh-grass ■ <i>Bupleurum tenuissimum</i> slender hare`s-ear ■ <i>Trifolium squamosum</i> sea clover ■ <i>Chenopodium chenopodioides</i> saltmarsh goose-foot ■ <i>Inula crithmoides</i> golden samphire ■ <i>Sarcocornia perennis</i> perennial glasswort ■ <i>Salicornia pusilla</i> one-flowered glasswort <p>Total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site.</p> <p>Criterion 5: Assemblages of international importance – species with peak count in winter 47637 waterfowl</p> <p>Criterion 6: Species/populations occurring at levels of international importance</p>

	<ul style="list-style-type: none"> ■ <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>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories)</p> <p style="text-align: center;">Improved Grassland Fen, Marsh and Swamp Littoral Sediment Coastal Lagoon</p> <p style="text-align: center;">Geological features (Geological SiteTypes)</p> <p style="text-align: center;">N/A</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>
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Site Name	NORTH DOWNS WOODLANDS
Designation[s]	SAC
Area (ha)	287.58
Site Code	UK0030225
Reason for Designation	<p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> ■ <i>Asperulo-Fagetum</i> beech forests ■ <i>Taxus baccata</i> woods of the British Isles * Priority feature <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> ■ Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)
Conservation Objectives	Wouldham to Detling Escarpment SSSI

	<p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories)</p> <p style="text-align: center;">Broadleaved, mixed and yew woodland Lowland calcareous grassland</p> <p style="text-align: center;">Geological features (Geological SiteTypes)</p> <p style="text-align: center;">Disused Quarries, Pits and Cuttings</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p> <p>Halling to Trottscliffe Escarpment SSSI</p> <p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories)</p> <p style="text-align: center;">Broadleaved, mixed and yew woodland Lowland calcareous grassland</p> <p style="text-align: center;">Geological features (Geological SiteTypes)</p> <p style="text-align: center;">N/A</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>
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Site Name	PETERS PIT
Designation[s]	SAC
Area (ha)	28.3
Site Code	UK0030237
Reason for Designation	Annex II species that are a primary reason for selection of this site: <ul style="list-style-type: none"> Great crested newt <i>Triturus cristatus</i>
Conservation Objectives	<p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, SAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories)</p> <p style="text-align: center;">Standing open water and canals Broadleaved, mixed and yew woodland Lowland calcareous grassland Inland Rock</p> <p style="text-align: center;">Geological features (Geological SiteTypes)</p> <p style="text-align: center;">N/A</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>

Site Name	QUEENDOWN WARREN
Designation[s]	SAC
Area (ha)	14.28

Site Code	UK0012833
Reason for Designation	Annex I habitats that are a primary reason for selection of this site: <ul style="list-style-type: none"> Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)
Conservation Objectives	<p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories) Lowland Calcareous Grassland</p> <p style="text-align: center;">Geological features (Geological SiteTypes) Not applicable</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>

Site Name	THAMES ESTUARY & MARSHES	
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>Recuvirostra 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 	<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</p>

	<ul style="list-style-type: none"> ■ <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>peak counts in winter, 75019 waterfowl.</p> <p>Criterion 6: Species/populations occurring at levels of international importance.</p> <ul style="list-style-type: none"> ■ Ringer plover (<i>Charadrius hiaticula</i>) 2.6% of the GB population ■ Black tailed Godwit (<i>Limosa limosa islandica</i>) 2.6% of the GB population ■ Grey plover (<i>Pluvialis squatarola</i>) 1.7% of the GB population ■ Red knot (<i>Calidris canutus</i>) 1.4% of the population ■ Common redshank (<i>Tringa tetanus</i>) 2.2% of the GB population ■ Avocet (<i>Recurvirostra avosetta</i>) 28.3% of the GB population ■ Hen Harrier (<i>Circus cyaneus</i>) 1.0% of the GB population
<p>Conservation Objectives</p>	<p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories)</p> <p style="text-align: center;">Supralittoral Sediment Littoral Sediment Fen, Marsh and Swamp Neutral Grassland – Lowland Standing Open Water and Canals Coastal Lagoon</p> <p style="text-align: center;">Geological features (Geological Site Types)</p> <p style="text-align: center;">N/A</p>	

(*) or restored to favourable condition if features are judged to be unfavourable.

Site Name	THE SWALE	
Designation[s]	SPA	Ramsar
Area (ha)	6514.71	6514.71
Site Code	UK9012011	UK11071
Reason for Designation	<p>Over winter the area regularly supports (Article 4.1):</p> <ul style="list-style-type: none"> ■ <i>Branta bernicla bernicla</i> 0.7% of the population ■ <i>Calidris alpina alpina</i> 2.3% of the population in Great Britain ■ <i>Tringa tetanus</i> 0.9% of the population <p>During the breeding season the area regularly supports (Article 4.2):</p> <p><i>Acrocephalus scirpaceus, Anas crecca, Anas platyrhynchos, Anas strepera, Charadrius hiaticula, Emberiza schoeniclus, Fulica atra, Gallinula chloropus, Haematopus ostralegus, Numenius arquata, Pluvialis squatarola, Tadorna tadorna, Tringa totanus, Vanellus vanellus.</i></p> <p>Over winter the area regularly supports (Article 4.2):</p> <ul style="list-style-type: none"> ■ 65588 waterfowl (5 year peak mean 	<p>Ramsar criterion 2 The site supports nationally scarce plants and at least seven British Red data book invertebrates.</p> <p>Ramsar criterion 5 Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ 77501 waterfowl (5 year peak mean 1998/99-2002/2003) <p>Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> ■ Common redshank , <i>Tringa totanus totanus</i> <p>Species with peak counts in winter:</p>

	<p>01/04/1998) Including: <i>Branta bernicla bernicla</i> , <i>Anas strepera</i> , <i>Anas crecca</i> , <i>Haematopus ostralegus</i> , <i>Charadrius hiaticula</i> , <i>Pluvialis squatarola</i> , <i>Calidris alpina alpina</i> , <i>Numenius arquata</i> , <i>Tringa totanus</i> .</p>	<ul style="list-style-type: none"> ■ Dark-bellied brent goose, <i>Branta bernicla bernicla</i> ■ Grey plover, <i>Pluvialis squatarola</i> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> ■ Ringed plover , <i>Charadrius hiaticula</i> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ Eurasian wigeon , <i>Anas penelope</i>, ■ Northern pintail , <i>Anas acuta</i> ■ Northern shoveler , <i>Anas clypeata</i> ■ Black-tailed godwit , <i>Limosa limosa islandica</i>
<p>Conservation Objectives</p>	<p>The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).</p> <p style="text-align: center;">Habitat Types represented (Biodiversity Action Plan categories)</p> <p style="text-align: center;">Neutral grassland Fen, marsh and swamp Standing open water and canals Littoral sediment</p> <p style="text-align: center;">Geological features (Geological Site Types)</p> <p style="text-align: center;">Not applicable</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>	

Appendix 2: Plans, Programmes & Projects Review

River Basin Management Plan for the Thames River Basin District 2009		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	HRA of the RBMP for the Thames RBD Nov 2009
<p>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>	<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 groundwater abstraction in the Upper Cray once approved in the Periodic Review. ▪ 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 	<p>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 likely to have a significant effect.</p>

	<p>ecology in a first round of waters.</p> <ul style="list-style-type: none"> ▪ 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. ▪ 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. 	
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	<ul style="list-style-type: none"> ▪ 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 sites including Allington and East Farleigh. ▪ 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)		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	AA of the SW WRMP October 2009

<p>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>	<p>Kent Medway Water Resource Zone</p> <p><i>Schemes during AMP5</i></p> <ul style="list-style-type: none"> ▪ Universal metering ▪ Asset improvement schemes for groundwater sources (10.25 MI/d peak, 8.75 MI/d average) ▪ Optimisation of interzonal transfers (to Kent Thanet) <p><i>Schemes beyond AMP5 - company only solution</i></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 MI/d of further leakage reduction <p><i>Schemes beyond AMP5 - Water Resources in the South East of England</i></p> <p>As previous column, but additional schemes</p> <ul style="list-style-type: none"> ▪ Aylesford wastewater recycling scheme ▪ Raising Bewl Water <p>An 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 	<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.</p>
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South East Water – Water Resource Management Plan 2010 - 2035		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	HRA of SEW WRMP 2009

<p>The Water Resource Management Plan outlines how South East Water intends to maintain the long-term balance between increasing demand and its available supplies.</p>	<p>A number of the water supply options have the potential to impact upon the integrity of European designated (Natura 2000) conservation sites. The HRA of the WRMP considered this in further detail.</p>	<p>An initial screening process identified that 27 feasible options had the potential to impact upon a Natura 2000 site through an impact pathway or proximity to such a site. These options were passed through a formal screening to determine whether any Likely Significant Effect existed.</p> <p>This 'LSE' test identified that 15 of these feasible options had the potential to have a Likely Significant Effect on the designated features of a Natura 2000 site. For these options, Appropriate Assessment would be required if the option was selected by SEW's final preferred strategy.</p> <p>Only one Appropriate Assessment was carried out, for Option 30a (Broad Oak Reservoir), as none of the other feasible options passing through Step 2 of the screening process was selected by SEW's final preferred strategy. This concluded that the option would have no significant effect on the integrity of the Natura 2000 sites affected by the proposals either alone, in-combination with other EA permissions, in-combination with the plans or projects of other competent authorities and prevailing background conditions or in-combination with other SEW proposed options. It should be noted that the outline and strategic nature of the assessment completed, combined with the uncertain timescale for the final implementation of this strategic option, make this 'in combination' assessment with other projects, plans and</p>
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		<p>policies very uncertain. However, the assessment is undertaken 'in-combination' in order to try to ensure that all potential effects on Natura 2000 sites through the implementation of an option are explored and assessed, even if this is only a strategic level.</p> <p>Three options [30a, WRSE1 and 25(vii)] within SEW's final preferred strategy are likely to require Appropriate Assessment as part of any future scheme implementation. While it must be noted that the Appropriate Assessments completed as part of the WRMP option appraisal process are at a strategic level, as scheme definition and design are not yet finalised, the conclusions reached suggest that none of these options, with the inclusion of suitable mitigation, should adversely affect the integrity of any Natura 2000 sites.</p>
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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)	
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 	<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</p>

<p>wide range of potential benefits from healthy recreation, to wildlife protection and enhancement, to flood risk management.</p>	<p>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
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Waterfronts and Waterways in Kent Thameside - A Strategic Agenda 2005	
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 maintained for river related use. ▪ 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. <p>▪ Potential impacts on air, noise and water pollution</p>

	<ul style="list-style-type: none"> ▪ 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 Plan (TE2100)	
Aim of the document	Elements of the plan that could cause 'in-combination' effects
<p>The Environment Agency's Thames Estuary 2100 project (TE2100), is developing a tidal flood risk management plan for London and the Thames estuary.</p>	<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 ▪ Pollution from runoff

Thames Gateway Strategic Framework Interim Report: Key Points, Policy Framework, Development Prospectus/Technical Annex 2006	
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</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

<p>supporting information and links to data sources and other research.</p>	<ul style="list-style-type: none"> ▪ 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. ▪ 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
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Thames Gateway Interim Plan 2006	
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

	<ul style="list-style-type: none"> ▪ 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
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Thames Gateway The Delivery Plan 2007	
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 banks of the river could increase recreational pressure. ▪ The Plan also supports the mixed-use development proposed as part of the Kent Thameside Waterfront Development.

Strategic Planning Guidance for the River Thames - RPG3B/9B 1997	
Aim of the document	Elements of the plan that could cause 'in-combination' effects
<p>Sets out the Governments planning policies for the River Thames and gives formal planning guidance to local planning authorities. Guidance presents a vision for the</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 to enhance its status and vitality and develop and exploit its potential.</p>	<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
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<p>The Adopted Kent and Medway Structure Plan 2006</p>	
<p>Aim of the document</p>	<p>Elements of the plan that could cause 'in-combination' effects</p>
<p>Provides strategic guidance for development and includes policies on pollution control.</p>	<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

	<ul style="list-style-type: none"> ▪ Increased air, noise and water pollution ▪ Increased pressure on abstraction levels ▪ Increased levels of effluents ▪ Increased access to sites via public transport ▪ Site disturbance
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Local Transport Plan for Kent 2011-2016		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	SA & HRA of Kent's Local Transport Plan 3 Final Report (April 2011)
<p>Its purpose is to set out Kent County Council's (KCC) Strategy and Implementation Plans for local transport investment for the period 2011-16.</p>	<p>Kent's approach to LTP3 has been based on the County Council's new Regeneration Framework, <i>Unlocking Kent's Potential</i>; a 25 year masterplan which identifies the opportunities and challenges facing the County over the coming decades. Supporting this is a Transport Delivery Plan for Kent, <i>Growth without Gridlock</i>, which highlights the key transport solutions needed over the next 20 years. The key elements of this delivery plan are securing a Lower Thames Crossing to support housing and employment growth in the Thames Gateway; delivering a long-term solution to Operation Stack; cutting congestion along the A21 corridor; improving rail journey times to East Kent; creating an integrated bus network; and linking new infrastructure process.</p> <p>The strategy approach for LTP3 has been to develop five Themes, based on the previous Government's five National Transport Goals as set out in the LTP3 Guidance, but made relevant to Kent:</p> <ul style="list-style-type: none"> • Growth Without Gridlock • A Safer and Healthier County 	<p>The HRA screening concluded that there are no likely significant effects on European sites.</p> <p>The screening recommended that two schemes mentioned in the LTP3 - Kent International Airport Parkway Station and the Lower Thames Crossing - will require project-level HRA when more detailed proposals are developed.</p>

	<ul style="list-style-type: none"> • Supporting Independence • Tackling a Changing Climate • Enjoying Life in Kent 	
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Kent County Council Minerals and Waste Core Strategy - Strategy and Policy Directions Consultation (May 2011)	
Aim of the document	Elements of the plan that could cause 'in-combination' effects
<p>Kent's new Minerals and Waste Development Framework (M&WDF) will set out the Council's strategy and planning policies for mineral extraction, importation and recycling as well as waste management of all of the waste streams that are generated or managed in Kent. It will only cover the county of Kent. Medway Council are addressing minerals and waste matters themselves in their own Local Development Framework (LDF). However Kent and Medway Councils have worked together in the preparation of part of the evidence base required for their Development Plan Documents (DPDs).</p> <p>The Core Strategy identifies the need and makes provision for the amount of waste treatment, mineral extraction and recycling that will be required in the County up to the end of 2030. It will also identifies the spatial pattern for minerals and waste development and broad areas showing where new facilities and sites are needed. It safeguards existing mineral importation facilities at wharves and rail sidings.</p>	<p>Suggestions for Strategic Sites for Minerals</p> <ul style="list-style-type: none"> • Option 1A -The permitted, but as yet, undeveloped cement works at Medway Works, Holborough (which straddles the Medway/ Kent administrative boundary) and its associated, permitted, land-won minerals needed to supply the cement works. • Option 1B - Northfleet Bulk Aggregate Import Terminal, which has now been granted planning permission subject to Section 106 legal agreements. As it has an extant planning permission, there is no need to identify it as a 'Strategic Site', instead in will be safeguarded in policy. • Option 1C -The ragstone quarry at Hermitage Farm, Maidstone, which currently is the subject of a planning application for a major extension. • Option 1D - The extraction of clay at Norwood to provide void space for hazardous waste disposal. The stock of planning permissions for clay for engineering and sea defence work is more than sufficient for the plan period. • Option 1E - The underground limestone mine at Richborough. • Option 1F - Operational wharves at Greenhithe (Johnsons Wharf) and Northfleet Works. As these are operational they do not need to be strategic sites, instead they will be covered by safeguarding policies. • Option 1G - Other unspecified wharves and rail connected facilities with known connectivity /jetty capability that must be preserved for the future. Again, these will be better covered by safeguarding policies. • Option 1H - An extension at H&H Ightham Works.

	<p>Possible Options for Strategic Sites for Waste</p> <ul style="list-style-type: none"> • Option 11A - A site which can deal with contaminated soil, asbestos and incinerator ash. A site located in Medway was suggested for this. However, Kent County Council cannot identify Strategic Sites outside its county boundaries. • Option 11B - The site at Richborough Power Station will be able to accommodate large scale Mechanical Biological Treatment (MBT) plant which could receive household and non household waste for treatment by rail or water. Waste biomass fuel can also be delivered to a power/Combined Heat and Power (CHP) station from the site by rail or water. • Option 11C - The clay quarry and hazardous waste landfill site at Norwood Farm, Sheppey. The operators have promoted an extension to this site through the 'Call for Sites'. • Option 11D - The existing Integrated Waste Management Centre at Richborough Hall and its proposed extensions. • Option 11E - The existing, operational composting facility at Blaise Farm (West Malling), which has capacity to treat up to 100,000tpa. The site has been promoted to the 'Call for Sites' for other waste management uses.
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London Gateway		
Development proposed	Elements of the development that could cause 'in-combination' effects	HRA
<p>The development of a major deep-sea container port and logistics park on the north bank of the River Thames.</p>	<p>Disturbance to feeding and roosting birds and loss of and disruption to the grazing marsh.</p>	<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

		<p>SPA/Ramsar</p> <ul style="list-style-type: none"> ▪ the Benfleet and Southend Marshes SPA/Ramsar ▪ the Foulness SPA/Ramsar ▪ the Essex Estuaries SAC <p>Compensatory measures include the creation of a new specially protected area of inter-tidal mudflats, known as Site A, for birds and wildlife.</p>
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Medway Local Transport Plan 2011-2026	
Aim of the document	Elements of the plan that could cause 'in-combination' effects
<p>Medway's third Local Transport Plan (LTP) sets out Medway's transport strategy for the next 15 years and acts as a mechanism to obtain significant funding to deliver transport projects.</p>	<p>The Transport Strategy support Medway's plans by:</p> <ul style="list-style-type: none"> • ensuring highway infrastructure is maintained to the highest possible standard within the available resources • efficiently managing and improving Medway's local highway network to ensure reliability of journey times • ensuring public transport becomes a realistic alternative choice to the private car • contributing to better health by encouraging walking and cycling and by improving accessibility to key services • ensuring that people can move around safely in Medway

Maidstone Core Strategy Preferred Options, 2007	
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 	<ul style="list-style-type: none"> ▪ Disturbance - as a result of development near/ adjacent to European sites, including:

<p>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)</p> <ul style="list-style-type: none"> ▪ 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"> o Recreation o Light Pollution o Noise Pollution <ul style="list-style-type: none"> ▪ 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
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Swale Borough Council Core Strategy: Pick your own - Issues and Strategic Spatial Options (Jan 2011)	
Aim of the document	Elements of the plan that could cause 'in-combination' effects
<p>The Core Strategy sets out the vision and overall spatial strategy for the area and how it will be achieved for the period until 2031 and beyond. It focuses on outcomes,</p>	<p>Option 1 Continuing previous policy provision for development concentrated at urban areas <i>Results in housing provision of 13,500 homes, alongside the delivery of previously</i></p>

<p>setting out broad areas and principles, and where, how and when development should be delivered across the Borough.</p>	<p><i>identified employment sites to meet a lower growth scenario of 415,000 sq m. The option focuses upon urban areas within Thames Gateway, whilst at Faversham, policies promote the meeting of local needs. Rural areas are addressed by Development Management Policies intended to encourage their continued social, economic and environmental health. For new housing, some 4,500 houses would need to be identified, with most of these (circa 3,280 homes) requiring greenfield sites as urban extensions. At the Kent Science Park, further expansion is limited to existing environmental and transport capacity. The Sittingbourne Northern Relief Road would be completed to the A2, whilst further assessment of the capacity of Junction 5 of the M2 undertaken.</i></p> <p>Option 2 Continuing previous policy provision for development concentrated at urban areas and larger villages. <i>As per option 1, with additional greenfield housing provision (circa 3,250) diverted from urban areas to larger village centres to support/expand their sustainability, as an alternative to urban extensions. Rural areas (outside identified larger villages) are addressed by Development Management Policies intended to encourage their continued social, economic and environmental health.</i></p> <p>Option 3 Step change in employment growth and continuing previous policy provision for development concentrated at urban areas. <i>Housing growth levels and distribution as outlined in option 1, but led by employment provision at higher growth level (595,000 sq m), with additional 'step change' provision. Development provisions extending beyond plan period aimed at capturing greater share of economic development and meeting specific needs in key employment sectors. Greater housing focus upon urban previously developed land due to regeneration and expansion at Port of Sheerness. Villages close to employment locations considered for remaining greenfield housing provision. Major expansion of Kent Science Park with a new junction to M2 to form access to the Kent Science Park.</i></p> <p>Option 4 Step change in employment and housing growth <i>Higher growth levels for housing (18,500 dwellings) and employment (595,000 sq m), with additional 'step change' provision. Development provisions extending</i></p>
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	<p><i>beyond plan period aimed at capturing greater share of economic development and meeting specific needs in key employment sectors, supported by new housing. Additionally, the option focuses on the need to grow Sittingbourne as a main centre for enhanced retail and leisure facilities and to develop new transport infrastructure for the town. Focus for both greenfield and previously developed land for housing upon main urban areas at greater levels than options 1 and 2, including expansion of Port of Sheerness for housing, as part of wider employment expansion proposals. Circa 5,850 new homes on greenfield urban extensions and key village locations where close to employment opportunities and proposed new infrastructure, but with primary focus for both greenfield housing and employment growth on Sittingbourne and environs (inc. Bapchild).</i></p> <p>Potential for proposed development to:</p> <ul style="list-style-type: none"> ▪ Increase traffic ▪ Increased air, noise and water pollution ▪ Increased pressure on abstraction levels ▪ Increased levels of effluents ▪ Increased recreational activity
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Tonbridge and Malling Adopted Core Strategy 2007		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	HRA of Tonbridge and Malling Local Development Framework, Jan 2009
The Core Strategy is a key planning document under the new planning regime. It sets out the Council's vision,	Policy CP15 The submission version of the South East Plan requires an average rate of development in Tonbridge and Malling	The HRA was conducted on two European sites. Neither of relevance to this study.

<p>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 way.</p>	<p>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 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> <p>Potential for proposed development to:</p> <ul style="list-style-type: none"> ▪ Increase traffic ▪ Increased air, noise and water pollution ▪ Increased pressure on abstraction levels ▪ Increased levels of effluents ▪ Increased recreational activity 	
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Gravesham Borough Council (2011) Core Strategy and Development Management Policies Development Plan Document - Regulation 25 Consultation																																			
Development proposed		Elements of the development that could cause 'in-combination' effects	Appropriate Assessment Report (July 2010)																																
<p>Over the period 2006 to 2026 the Council will make provision for 10,000 net new full-time equivalent (FTE) jobs and the delivery of 9,300 net dwellings, of which 9,200 should be within the Kent Thames Gateway sub-region. The strategic sites are:</p> <table border="1"> <thead> <tr> <th><u>Strategic Site</u></th> <th><u>Approximate Housing Development Requirement</u> (No. of dwellings from draft SLAA)</th> <th><u>Approximate Employment Development Requirement</u> (Employment SQM)</th> <th><u>Approximate Other Development Requirement</u> (SQM – No. of jobs created from draft SLAA to be added)</th> </tr> </thead> <tbody> <tr> <td>Ebbsfleet</td> <td>1,064</td> <td>107,000</td> <td>49,000</td> </tr> <tr> <td>Land at Swanscombe Peninsula</td> <td>-</td> <td>40,000 (B1-B8)</td> <td>70,000 (D2)</td> </tr> <tr> <td>Land at Northfleet Embankment West</td> <td>910</td> <td>850 (A1) 46,500 (B1, B2, B8)</td> <td>180 (D2)</td> </tr> <tr> <td>Land at Northfleet Embankment East</td> <td>1500</td> <td>20,000 and 40,000 committed (B1, B2, B8)</td> <td>33,000 (D1 and D2)</td> </tr> <tr> <td>Town Centre</td> <td>810</td> <td>42,330 (A1, A3, B1a, B2 and B8)</td> <td>5,400 (D2, C1)</td> </tr> <tr> <td>Canal Basin</td> <td>1,268</td> <td>35,000 (rationalising existing employment)</td> <td>-</td> </tr> <tr> <td>Total</td> <td>5,552</td> <td></td> <td></td> </tr> </tbody> </table>		<u>Strategic Site</u>	<u>Approximate Housing Development Requirement</u> (No. of dwellings from draft SLAA)	<u>Approximate Employment Development Requirement</u> (Employment SQM)	<u>Approximate Other Development Requirement</u> (SQM – No. of jobs created from draft SLAA to be added)	Ebbsfleet	1,064	107,000	49,000	Land at Swanscombe Peninsula	-	40,000 (B1-B8)	70,000 (D2)	Land at Northfleet Embankment West	910	850 (A1) 46,500 (B1, B2, B8)	180 (D2)	Land at Northfleet Embankment East	1500	20,000 and 40,000 committed (B1, B2, B8)	33,000 (D1 and D2)	Town Centre	810	42,330 (A1, A3, B1a, B2 and B8)	5,400 (D2, C1)	Canal Basin	1,268	35,000 (rationalising existing employment)	-	Total	5,552			<p>Taking a strategic approach the AA identified the following aspects of the emerging Core Strategies that were considered to have implications for European sites:</p> <ul style="list-style-type: none"> 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, 	<p>The AA jointly considered the potential effects of the Dartford and Gravesham 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.</p> <p>The AA recommends that Dartford and Gravesham Borough Council's give material consideration to</p>
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	<p>Medway and Swale) between 2006 and 2026.</p> <ul style="list-style-type: none"> • 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 	<p>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.</p>
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	<p>estuarine sites due to increased population, although this will be dependent on levels of access.</p> <p>Potential for proposed development to:</p> <ul style="list-style-type: none"> ▪ Increase traffic ▪ Increased air, noise and water pollution ▪ Increased pressure on abstraction levels ▪ Increased levels of effluents ▪ Increased recreational activity 	
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Dartford Borough Council (2011) Core Strategy Submission Document.		
Development proposed	Elements of the development that could cause 'in-combination' effects	Appropriate Assessment Report (July 2010)
<p>Development focussed in three priority areas:</p> <ol style="list-style-type: none"> 1. Dartford Town Centre & Northern Gateway 2. Ebbsfleet to Stone 3. The Thames Waterfront <p>The CS seeks provide sufficient capacity to achieve a net growth of up to approximately 26,500 jobs through:</p>	<p>Taking a strategic approach the AA identified the following aspects of the emerging Core Strategies that were considered to have implications for European sites:</p> <ul style="list-style-type: none"> • 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 	<p>The AA jointly considered the potential effects of the Dartford and Gravesham 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</p>

<p>1. The development of 760,000 sq m gross of employment floorspace (B1, B2, B8, A2 and sui generis)</p> <p>2. Take-up of vacancies of existing employment estates</p> <p>3. Protection of existing employment land for B1, B2, B8 and A2 uses</p> <p>4. Facilitating job growth in services needed to support the growth in population, through identification of sites and granting of planning permission for retail, leisure and community facilities and working in partnership with service providers, including Kent County Council and the Health Authority to ensure that the provision comes forward.</p> <p>The CS seeks to provide 17,340 homes in Dartford during the period 2006-2026. The indicative capacity is as follows:</p> <ul style="list-style-type: none"> • Dartford Town Centre inc Northern Gateway up to 3,100 • Ebbsfleet to Stone up to 7,850 • Thames Waterfront up to 3,750 • Other sites north of A2 up to 2,400 • Sites south of A2, normally provided within village boundaries 200 	<p>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.</p> <ul style="list-style-type: none"> • 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 	<p>existing regulatory and management measures provide a sufficient level of protection to mitigate potential likely significant effects.</p> <p>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.</p>
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Isle of Grain to South Foreland Shoreline Management Plan Review 2010		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	Appendix J – Habitats Regulations Assessment 2009
<p>The document provides a large-scale assessment of the risks associated with coastal evolution and presents a policy framework to address these risks to people and the developed, historic and natural environment in a sustainable manner. It identifies identify policies to manage coastal flood and erosion risks, deliver a wide ranging assessment of risks, opportunities, limits and areas of uncertainty.</p>	<p>Managed Realignment and Hold the Line Policies have the potential to result in freshwater habitat displacement and intertidal habitat growth.</p>	<p>Stage 2 - Assessment of Likely Significant Effect</p> <p>Stage 2 identified that the SMP would have a likely significant effect on the Ramsar sites / SPAs and SACs due to freshwater habitat displacement and intertidal habitat growth through Managed Realignment and Hold the Line Policies. Based on the 2002 North Kent Coastal Habitat Management Plan (CHaMP) for the area, coastal squeeze was not considered a likely significant effect at the time of the Stage 2 work. Stage 2 identified that there would be No Likely Significant Effect on Sandwich Bay and Dover to Kingsdown Cliffs SACs.</p> <p>Stage 3 - Appropriate Assessment</p> <p>The Habitats Regulations Assessment concludes that, Alone and In Combination, it is not possible to</p>

		<p>demonstrate that Managed Realignment policies would not have an Adverse effect on the integrity of the Thames Estuary and Marshes and The Swale SPA / Ramsar sites through displacement of Grazing Marsh and Standing Water habitats.</p> <p>Stage 4 Alternatives, Imperative Reasons for Overriding Public Interest (IROPI) and Compensation</p> <p>The competent authority identified the following less damaging alternatives:</p> <ul style="list-style-type: none"> a) Hold the Line, or b) Managed Realignment with a Controlled Extent (to minimise ecological impact) <p>The least damaging alternative for implementing this plan was considered to cause adverse effect either through freshwater habitat displacement or coastal squeeze. As such, the competent authority need to consider whether the plan is necessary and needs to be implemented for 'IROPI.'</p> <p>The Shoreline Management Plan was considered to have the following 'Imperative Reasons of Overriding Public Importance:'</p> <p>A need to address a serious risk to human health and public safety (uncoordinated and uncontrolled flood and erosion risks to large residential populations and major infrastructure); Where failure to proceed would have unacceptable social and/or economic consequences (loss of economic infrastructure, commercial property and community areas) through coastal flood and erosion damage;</p>
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		<p>Whilst this is a damaging plan, it is the least damaging option for the designated sites in adjusting to the climate change impacts of sea level rise. This SMP therefore has beneficial consequences of primary importance for the environment.</p> <p>Proposed Freshwater Compensation Sites for Habitat Creation Programme</p> <p>Rank 1 – South Swale (Grazing Marsh & Standing Water) 665 ha</p> <p>Rank 2 – Possible additional sites within the Thames Estuary to be identified by the TE2100 programme (Grazing Marsh & Standing Water) tbc</p> <p>Should sufficient areas not be available within these sites, the RHCP will secure investigate locations increasingly further afield until suitable sites are found.</p>
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Medway Estuary and Swale Shoreline Management Plan Review 2010		
Aim of the document	Elements of the plan that could cause 'in-combination' effects	Appendix J – Habitats Regulations Assessment (amended 2007)
<p>The document provides a large-scale assessment of the risks associated with coastal evolution and presents a policy framework to address these risks to people and the developed, historic and natural environment in a sustainable manner. It identifies identify policies to manage coastal flood and erosion risks, deliver a wide ranging assessment of risks, opportunities, limits and areas of uncertainty.</p>	<p>Managed Realignment and Hold the Line Policies have the potential to result in freshwater habitat displacement and intertidal habitat growth.</p>	<p>Stage 2 - Assessment of Likely Significant Effect</p> <p>Stage 2 identified that the SMP would have a likely significant effect on the Ramsar sites / SPAs due to freshwater habitat displacement and intertidal habitat growth through Managed Realignment Policies. Based on the 2002 North Kent Coastal Habitat Management Plan (CHaMP) for the area, coastal squeeze was not considered a likely significant effect at the time of the stage 2 work. Stage 2 identified that there would be No Likely Significant Effect on Peter's Pit SAC.</p> <p>Stage 3 Appropriate Assessment</p> <p>The Habitats Regulations Assessment concludes that, Alone and In Combination, it is not possible to demonstrate that Managed Realignment policies would not have an Adverse effect on the integrity of the Thames Estuary and Marshes and The Swale SPA / Ramsar sites through displacement of Grazing Marsh and Standing Water habitats.</p> <p>Stage 4 Alternatives, Imperative Reasons for Overriding Public Interest (IROPI) and Compensation</p> <p>The competent authority identified the following less damaging alternatives: a) Hold the Line, or b) Managed Realignment with a Controlled Extent (to</p>

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		<p>Rank 2 - South Swale (Grazing Marsh & Standing Water) 665ha</p> <p>50-100 Years Rank3 - Hoo St. Werburg (Grazing Marsh & Standing Water) 860ha</p> <p>Should sufficient areas not be available within these sites, the RHCP will secure investigate locations increasingly further afield until suitable sites are found.</p>
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Appendix 3: Publication Draft Core Strategy Policy Screening

Policy Screening: Categorising the Potential Effects of the Plan (Tyldesley, 2009)	
Criteria Category	Rationale
Category A: No negative effect	
A1	Options/ policies that will not themselves lead to development e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.
A2	Options/ policies intended to protect the natural environment, including biodiversity.
A3	Options/ policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site.
A4	Options/ policies that positively steer development away from European sites and associated sensitive areas.
A5	Options/ policies that would have no effect because no development could occur through the policy itself, the development being implemented through later policies in the same plan, which are more specific and therefore more appropriate to assess for their effects on European Sites and associated sensitive areas.
Category B: No significant effect	
B	Options/ policies that could have an effect but would not be likely to have a significant (negative) effect on a European site (alone or in-combination with other plans or projects) because the effects are trivial or 'de minimis' even if combined with other effects.
Category C: Likely significant effect alone	
C1	The option, policy could directly affect a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it.
C2	The option, policy could indirectly affect a European site e.g. because it provides for, or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it or it may increase disturbance as a result of increased recreational pressure.
C3	Proposals for a magnitude of development that, no matter where it is located, the development would be likely to have a significant effect on a European site.
C4	An option, or policy that makes provision for a quantity/ type of development (and may indicate one or more broad locations e.g. a particular part of the plan area), but the effects are uncertain because the detailed location of the development is to be selected following consideration of options later in the plan or in a separate more specific plan . The consideration of options in the later plan will assess potential effects on European Sites, but because the development could possibly affect a European site a significant effect cannot be ruled out on the basis of objective information
C5	Options, policies or proposals for developments or infrastructure projects that could block options or alternatives for the provision

Policy Screening: Categorising the Potential Effects of the Plan (Tyldesley, 2009)	
Criteria Category	Rationale
	of other development or projects in the future, which will be required in the public interest, that may lead to adverse effects on European sites, which would otherwise be avoided.
C6	Options, policies or proposals which depend on how the policies etc are implemented in due course, for example, through the development management process. There is a theoretical possibility that if implemented in one or more particular ways, the proposal could possibly have a significant effect on a European site
C7	Any other options, policies or proposals that would be vulnerable to failure under the Habitats Regulations at project assessment stage; to include them in the plan would be regarded by the EC as 'faulty planning'.
C8	Any other proposal that may have an adverse effect on a European site, which might try to pass the tests of the Habitats Regulations at project assessment stage by arguing that the plan provides the imperative reasons of overriding public interest to justify its consent despite a negative assessment.
Category D: Likely significant effects in combination	
D1	The option, policy or proposal alone would not be likely to have significant effects but if its effects are combined with the effects of other policies or proposals provided for or coordinated by the Local Development Document (internally) the cumulative effects would be likely to be significant.
D2	Options, policies or proposals that alone would not be likely to have significant effects but if their effects are combined with the effects of other plans and projects and possibly the effects of other developments provided for in the Local Development Document as well, the combined effects are likely to be significant.
D3	Options or proposals that are, or could be, part of a programme or sequence of development delivered over a period, where the implementation of the early stages would not have a significant effect on European sites, but which would dictate the nature, scale, duration, location, timing of the whole project, the later stages of which could have adverse effects on such sites.

Publication Draft Core Strategy Policies	Assessment Category	Commentary
Policy CS1: Regenerating Medway	C4	The policy identifies locations for development but does not provide any detail on the quantum of development.
Policy CS2: Quality and Sustainable Design	A1	Policy will not lead to development itself.
Policy CS3: Mitigation and Adaptation to Climate Change	A1	Policy will not lead to development itself.
Policy CS4: Energy Efficiency and Renewable Energy	C4	The policy requires that for all new developments of 10 dwellings or more, or over 1,000 sq m of floor space 20% of the remaining on-site energy loading will be delivered from renewable energy sources. It also promotes the development of large scale district heating schemes that utilise waste heat from conventional power generation.
Policy CS5: Development and Flood Risk	D2	Potential for flood risk management development to act in combination with other plans, programmes and projects.
Policy CS6: Preservation and Enhancement of Natural Assets	A3	Policy intends to protect and enhance biodiversity.
Policy CS7: Countryside and Landscape	D2	The policy permits development in the countryside depending on a number of criteria.
Policy CS8: Open Space, Green Grid and Public Realm	D2	Part of the policy seeks to improve access to the coastal areas of Medway.
Policy CS9: Health and Social Infrastructure	B	The policy permits the development of health and social infrastructure.
Policy CS10: Sport and Recreation	B	The policy seeks to safeguard and extend existing sport facilities and to continue developing a strategy to maximise local benefits of the London Olympics in 2012.
Policy CS11: Culture and Leisure	D2	Policy supports the implementation of Medway's Cultural Strategy, which includes the development of new cultural venues centered on Chatham and extending along the Medway waterfront.
Policy CS12: Heritage Assets	B	Policy seeks to preserve and enhance the historic environment.
Policy CS13: Housing Provision and Distribution	C2 & D2	The policy makes provision for at least 17,930 new homes to be delivered between 2006 and 2028 (average of 815 per year). This includes provision for 5,000 dwellings at the strategic allocation of Lodge Hill.
Policy CS14: Affordable Housing	A1	Policy sets criteria for the provision of affordable housing and will not lead to development itself.

Publication Draft Core Strategy Policies	Assessment Category	Commentary
Policy CS15: Housing Design and Other Housing Requirements	A1	Policy sets criteria for housing design and will not lead to development itself.
Policy CS16: Gypsies, Travellers and Travelling Showpeople	C4	The policy seeks to provide sufficient sites for Gypsy, Traveller and Travelling Showpeople pitches to be allocated within the Allocations and Development Management DPD
Policy CS17: Economic Development	C2 & D2	The policy makes provision for a supply of around 935,995 sq m of employment floorspace to be delivered up to 2028.
Policy CS18: Tourism	C2 & D2	Policy seeks to positively promote sustainable tourism development this includes development of the leisure use of the river.
Policy CS19: Retail and Town Centres	D2	Policy makes provision for retail development, predominantly in Chatham.
Policy CS20: Education and Personal Development	A1	Policy seeks to improve the Medway's educational offer.
Policy CS21: Conventional Energy Generation	C4	Policy supports proposals for additional power generation and energy storage capacity on the Hoo Peninsula and the Isle of Grain.
Policy CS22: Provision for Minerals	C2 & D2	The policy makes provision for the extraction of at least 0.18 million tonnes per annum of land won aggregates within the area identified to the east of Hoo St. Werburgh, together with at least a 7 year land bank of permitted reserves in the areas of search identified on the Hoo Peninsula over the plan period.
Policy CS23: Waste Management	C2 & D2	The policy makes provision for the collection, reuse. Recycling, treatment and disposal of Medway's waste. The policy identifies potential areas for disposal to land on the Hoo Peninsula and the Isle of Grain.
Policy CS24: Transport and Movement	C2 & D2	The policy seeks to extend walking and cycling networks and safeguard a network of piers and landing places in order to facilitate the introduction of water bus/taxi services along the urban waterfront, linking visitor and other attractions and providing capacity for visiting vessels.
Policy CS25: The River Medway	C2 & D2	The policy promotes mixed use development along the urban waterfront as well as a riverside walk and cycle way and increased public access to the river. It also promotes greater use of the river. Existing infrastructure that provides access to the river will be protected and new facilities, including piers for river taxis will be encouraged. Leisure activities on and along the river are also supported as long as they will not harm the environment or natural ecosystems.
Policy CS26: Strood	C2 & D2	Policy promotes housing and mixed use developments, which includes the

Publication Draft Core Strategy Policies	Assessment Category	Commentary
		provision of 2,331 new dwellings, 38,435 sq m of employment floorspace and 27,520 sq m of retail floorspace in Strood.
Policy CS27: Rochester	C2 & D2	Policy promotes housing and mixed use developments, which includes the provision of 3,117 new dwellings, 26,338 sq m of employment floorspace and 10,075 sq m of retail floorspace in Rochester.
Policy CS28: Chatham	C2 & D2	Policy promotes the redevelopment of Chatham, which includes the provision of 3,843 new dwellings, 56,590 sq m of employment floorspace and 90,790 sq m of retail floorspace in Chatham.
Policy CS29: Gillingham	C2 & D2	Policy promotes housing and mixed use developments, which includes the provision of 1,488 new dwellings, 19,221 sq m of employment floorspace and 8,384 sq m of retail floorspace in Gillingham.
Policy CS30: Rainham	C2 & D2	Policy promotes housing and mixed use developments, which includes the provision of 123 new dwellings, 14,132 sq m of employment floorspace and 5,483 sq m of retail floorspace in Rainham.
Policy CS31: Hoo Peninsula and the Isle of Grain	C2 & D2	Policy promotes housing and mixed use developments, which includes the provision of 5,522 new dwellings, 712,294 sq m of employment floorspace and 5,161 sq m of retail floorspace in Hoo Peninsula and Isle of Grain.
Policy CS32: Medway Valley	C2 & D2	Policy promotes housing and mixed use developments, which includes the provision of 548 new dwellings, 3,660 sq m of employment floorspace and 700 sq m of retail floorspace in Medway Valley.
Policy CS33: Lodge Hill	C2 & D2	Provision of 5,000 new dwellings, employment opportunities generally in balance with the resident population working age and 5,000 sq m of retail floorspace in Lodge Hill.
Policy CS34: Implementation of the Core Strategy	A1	Policy sets out measures to ensure the effective implementation of the Core Strategy.
Policy CS35: Developer Contribution	A1	Policy sets out criteria for developer contributions.

Appendix 4: Medway Core Strategy HRA Meeting Minutes

Project:	Medway Council Core Strategy HRA
Date:	29 th June 2011
Time:	12.15- 1.15
Venue:	Canterbury Council Offices
Attendance:	Toney Hallahan - Enfusion Alastair Peattie - Enfusion Brian McCutcheon – Medway Council Charlotte Hardy – Medway Council Andrea Wright- Gravesham Borough Council Nigel Jennings- Natural England Francis Davies- Natural England Sophie Flax- RSPB Debbie Salmon-Kent Wildlife Trust Martin Hall- Greening the Gateway Kent & Medway Apologies- Swale Borough Council, Environment Agency

1. Introduction

- Toney explained purpose of meeting: updating NKEPG on HRA findings to date, discussing early ideas for mitigation, considering the findings/implications of the Footprint study.

Medway Core Strategy- progress to date

- Brian discussed progress to date on the Medway Core Strategy- next consultation on Pre-publication draft taking place in September 2011. Council working in an open and transparent way on the strategy and also with the HRA/SA work. A draft of the Core Strategy will be completed 15 July for 2 August Cabinet Meeting.

Core Strategy HRA Progress

- Alastair discussed HRA progress to date: draft working paper prepared for Council and sent to Natural England; agreed to circulate this to wider group by week's end.

2. Discussion of the issues/mitigations/early findings:

- Alastair provided a summary of the key issues identified to date and discussion was held around early findings and possible mitigations (list of proposed mitigations circulated).

Air Quality

- A number of the European sites are within 200m of a major road that could see a significant increase in traffic as a result of development proposed in the Core Strategy and surrounding areas.
- KWT discussed concerns around cumulative effects across the Gateway, especially in relation to nitrogen deposition.

Habitat loss/fragmentation

- Role of group in helping identifying important supporting habitats.
- Discussed Thames Estuary 2100 proposals for habitat replacement within Medway boundaries.
- Role of greenspace and green grid discussed.

Water levels/quality

- Review of consents process will help identify if any problems. Early findings suggest new Core Strategy policy on water resources/ quality required. This reflects comments from other stakeholders- Council Officers support this and suggest it could be linked to Southern Water's business plan targets.

Disturbance

- This is the key significant issue for the Core Strategy. Enfusion have been awaiting results of the Footprint study before doing further work. This issue will be carried into the Appropriate Assessment stage of the work. Discussed the importance of taking a precautionary approach to this.
- Findings of Footprint study to date are showing that a local element is exacerbating the national picture of bird decline; a correlation between dog-walking and the disturbance of birds has been shown through the study; also that most visitors to the estuary are local to Medway.
- Discussed use of SANGS (Strategic Alternative Natural Greenspace). Debbie commented that this would not be sufficient, that appropriate management actions will also be required at a European site level.
- Discussion around Community Infrastructure Levy (CIL) and whether it is possible to obtain develop contributions to support management of habitat sites- Brian suggested this is something the Council could look into.
- Agreed that given timescales and the need for ongoing work on the issue (Stage 2 of Footprint work due October, may not be ready to inform Medway draft submission document), a precautionary approach will need to be taken to the disturbance issues.
- Discussed possible wording: it should include a precautionary approach, recognise the probability of increased disturbance as a result of development and the need to mitigate this. That SANGS and active management will be required. That should future work find evidence of developments contribution to the decline, that developments may be required to provide a contribution towards management of the issue.
- Enfusion to draft policy wording and circulate to the group for comments.
- Natural England discussed need to consider disturbance on other species, e.g. invertebrates.

3. Next steps

- Enfusion to send HRA working paper to the group for comments- to include the current list of draft mitigations-any comments welcome. Actioned.
- Enfusion to draft policy wording on disturbance and circulate to the group for comments. Actioned.
- Group asked to think about and forward any relevant studies/information to Alastair at Enfusion; also any comments on Draft HRA Working paper: alastair.peattie@enfusion.co.uk
- HRA Screening report under preparation, and will send consultation version to the NKEPG group.
- HRA Appropriate Assessment will be prepared September/October to accompany draft Submission Core Strategy.

Appendix 5: Consultation Commentary**Publication Draft Core Strategy: HRA Screening Report**

Respondent	Summarised Comment	Response
<p>Natural England Nigel Jennings 14 October 2011</p>	<p>Much to be applauded with policies covering climate change, biodiversity, landscape and green infrastructure.</p> <p>Notes that a Screening Report has been submitted that has identified a need for a Stage 2 Appropriate Assessment. However states that it is a disappointing that a full Habitats Regulations Assessment did not accompany the draft Publication Core Strategy. This is not sufficient as the HRA process should be in tandem with the Core Strategy.</p>	<p>Concerns noted, however the HRA process has been carried out in tandem with the policy development and has influenced the Publication Draft Core Strategy.</p> <p>An HRA Working paper was presented to Natural England and the North Kent Environment and Planning Group (NKEPG) at a meeting on 29 June 2011 and shortly thereafter forwarded by email. This paper included proposed mitigations that were discussed at that meeting and that subsequently informed the development of the Core Strategy, including revised policy text for policy CS6: Preservation and Enhancement of Natural Assets and more stringent targets for energy efficiency in Policy CS3.</p> <p>At that meeting it was discussed that work on the HRA would be ongoing, however that the Stage 2 HRA Report itself was dependent on forthcoming information (including the final North Kent Bird Report, published September 2011), and therefore the Stage 2 report would be published later in 2011.</p>

	<p>The following comments relate to Policies: CS1, CS4, CS7, CS13, CS16, CS17, CS18, CS19, CS21, CS22, CS24, CS25, CS26-CS32, CS 3.</p> <p>Until an HRA has been prepared and assessed the impacts of these policies is unknown. NE's support is dependent on the outcome of the full HRA and any changes that may be recommended in accordance with the Conservation of Habitats and Species Regulations.</p>	<p>Noted, however, as noted above, work has been ongoing to consider the impacts of these policies and to develop mitigations. The current Stage 2 Appropriate Assessment report should be referred to for further information.</p>
	<p>Policy CS8: Note that under para 4.89 it is a key aim to open up access to the marshes bordering the Thames and Medway- potential negative effects should be explored in HRA- this policy should be screened-in.</p>	<p>Noted and agreed. Policy has been screened-in to the Stage 2 Appropriate Assessment.</p>
	<p>Policy CS22: Provision for minerals: Potential for adverse impacts from air pollution, noise and water quality on European sites- specific reference to Figure 7.1 on safeguarding.</p>	<p>Noted. Further consideration given to this policy in this Stage 2 Appropriate Assessment.</p>
	<p>Policy CS33: Lodge Hill. In addition to requiring further consideration in Core Strategy HRA, also mention the need for a separate HRA of the Development Brief as the HRA of the Core Strategy will not have the detailed information that will be needed to assess all impacts.</p>	<p>Noted. However an HRA of the Development Brief is not formally required unless it is adopted as SPD. Medway Council are aware of the concerns raised by NE, however notes that a Project-level HRA is being undertaken by the proponents for the development of Lodge Hill and will shortly be submitted. This document will cover the detailed information required by NE- to require an HRA of the Development brief will only result duplication.</p>

<p>RSPB Sophie Flax 12 October 2011</p>	<p>Have reviewed recommendations emerging from the HRA Screening report and are concerned that a full HRA report has not been made available at the draft strategy consultation. Without this the level of impact on European sites cannot be determined and compliance with the Habitats Regulations cannot be demonstrated.</p>	<p>Noted. Refer to response to Natural England comments on page 1.</p>
	<p>Specifically object to the following policies as they may have an impact on designated site network and have not been assessed as part of a full HRA. Policies CS1, 5,8,13,17,21,22,23,25,33.</p> <p>The RSPBs response includes further detailed information relating to potential impacts of these policies on European sites.</p>	<p>As above. Refer to response to Natural England comments on page 1.</p> <p>Detailed comments provided by the RSPB in relation to these policies have been referred to in undertaking the HRA.</p>
	<p>CS 1: Once the detailed location of riverside regeneration sites is known these should be thoroughly assessed in the AA to the forthcoming DPDs.</p> <p>Concerned that number and scale of developments on the River Medway, including from land/water-based recreational activities is likely to have a negative effect.</p>	<p>Concerns noted- this is addressed in the Stage 2 AA report.</p>
	<p>CS5: Development and Flood risk. Object to policy, as there is the potential for flood risk management to impact on European sites, so policy should be subject to AA.</p>	<p>Noted, this policy has been screened in to the AA, and is considered under habitat loss and fragmentation. However it is noted that any flood defences plans and policies will be also be subject to plan and project-level HRA.</p>

	<p>CS6: Preservation & Enhancement of Natural assets The RSPB objects to this policy. While the wording in this policy is very strong and there is much of it which has the support of the RSPB, unfortunately the protection it affords European sites is not sufficient.</p> <p>RSPB welcome the commitment to implementing the findings of the visitor and bird and disturbance study commissioned by NKEPG.</p> <p>The commitment to ensuring "that any proposed strategic avoidance and/or mitigation measures are <u>considered</u> in all planning documents and in the assessment of planning applications" <u>should be strengthened, so that it proposed strategic avoidance and mitigation measures are implemented.</u></p> <p>We welcome the strengthening of the wording of this policy since the previous iteration of the Core Strategy, so that opportunities for replacement or enhancement of habitat will be "pursued and secured" either directly or by obtaining contributions to the strategic provision of natural open space. We welcome the inclusion of the principle that "such strategies should be in place and functioning prior to commencement of the development." In addition, we welcome the commitment to "normally" providing compensation on more than a like-for-like basis, however <u>this statement could be strengthened by adding "unless it can be shown there will be no impact on biodiversity."</u></p>	<p>Comments noted. The Stage 2 AA report proposes a stronger approach to the protection of European sites within this policy.</p> <p>Noted.</p> <p>Noted and agreed. HRA suggests amending considered to 'adopted'.</p> <p>Noted, however it is felt that the policy text as presented is clear.</p>
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	<p>CS6: Although European sites are separately protected by European Habitat Regulations we do not agree that the protection of the Natural 2000 network "does not require specific policies in local development frameworks." (CS 4.53) We must object to this policy since it does not afford sufficient protection to European sites.</p> <p>Policies in the Draft Strategy (for example CS13 Housing Provision and Distribution) have the potential to contribute to and exacerbate recreational disturbance on SPA/Ramsar sites however this is not addressed through Policy CS6. We recognise that Medway Council is committed to address this matter, through its involvement in the North Kent Environmental Planning Group, and we welcome the commitment to implementing the findings of this group in CS6. However, given the scope and complexity of this issue we recommend the inclusion of a separate policy to detail how Medway Council intends to address this, to include recreation impacts on SAC and Ramsar designated sites as well as SPAs.</p> <p>Policy should consider the following:</p> <ul style="list-style-type: none"> • Since baseline evidence is not yet available to determine the true impact of recreational disturbance on the Natural 2000 and Ramsar Network a precautionary approach to be taken until the study is concluded so that any application for development which is likely to have a significant effect on the Natura 2000 and Ramsar network will require a Habitats Regulations Assessment under the Habitats Regulations 2010. • A condition should be attached to any permission granted to ensure that if studies show that impacts are thought to be greater than those identified within the original HRA additional mitigation will be implemented. 	<p>Noted. The HRA supports a stronger approach to European site protection.</p> <p>The HRA is recommending changes to Policy CS6 to address these concerns.</p> <p>The HRA is recommending changes to Policy CS6 to address these concerns.</p>
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	<ul style="list-style-type: none"> • If studies show an adverse impact is likely, either a core strategy review or a development plan document will be required to incorporate the findings of the studies so that the plan can be updated in light of subsequent information. • NKPEG have commissioned initial research to assess the causes of the bird declines. Medway Council is committed to working with its partners through NKPEG to develop a strategic approach to protecting European sites and to identify sufficient, appropriate and proportionate mitigation measures. • A flexible approach to housing numbers should be established in this plan so that it can be applicable in light of emerging evidence. Mitigation and avoidance measures such as wardening, access management, green infrastructure and a co-ordinated developer-funded approach might be needed. • Consideration of these issues should not be left until application stage but considered at a strategic level as part of a development plan document once the evidence base is complete. Developments coming forward in the near future should be dealt with on a case by case basis, based on the best available evidence until the result of this study have come forward. All development coming forward should have regard to this policy. 	
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	CS8: Open Space, Green grid and public realm The HRA has screened this policy out, however we strongly recommend this matter be thoroughly appraised in the AA of the Core Strategy, and mitigation measures such as access management considered.	Noted, the policy has been screened-in to the Stage 2 AA.
	CS33: Lodge Hill The RSPB objects to this policy. The impacts of this policy on European sites and nearby SSSIs have not been fully assessed, and appropriate avoidance and mitigation or compensation measures have not been incorporated into the document.	Noted, this policy has been screened in to the AA and further information provided to support the assessment.
Friends of the North Kent Marshes	Concerned that a full HRA report has not been made available at the draft strategy consultation.	Noted. Refer to response to Natural England comments on page 1.
	Specifically object to the following policies as they may have an impact on designated site network and have not been assessed as part of a full HRA. Policies CS1, 5,8,13,17,21,22,23,25,33. The FoNKM response includes further detailed information relating to the potential impacts of these policies on European sites.	As above. Refer to response to Natural England comments on page 1. Detailed comments provided by the FoNKM in relation to these policies have been referred to in undertaking the HRA.
	Object to Policy CS 1: Once the detailed location of the riverside regeneration sites are available this should be thoroughly assessed in the AA to the forthcoming DPDs. Concerned that the number and scale of developments on the banks of the river Medway, including from land and/or water-based recreational activities, is likely to have a negative impact on the Medway Estuary and Marshes SPA/Ramsar site.	Concerns noted- this is addressed in the Stage 2 AA report.

	CS5: Development and Flood risk. Object to policy, as there is the potential for flood risk management to impact on European sites, so policy should be subject to AA.	Noted, this policy has been screened in to the AA, and is considered under habitat loss and fragmentation. However it is noted that any flood defences plans and policies will be also be subject to plan and project-level HRA.
	CS6: Preservation & Enhancement of Natural assets Object to this policy. While the wording in this policy is very strong and there is much of it which to support, unfortunately the protection it affords European sites is not sufficient.	Comments noted. The Stage 2 Screening report proposes a stronger approach to the protection of European sites within this policy.
	CS8: Open Space, Green grid and public realm The HRA has screened this policy out, however strongly recommend this matter be thoroughly appraised in the AA.	Noted, the policy has been screened in to the Stage 2 Appropriate Assessment.
Kent Wildlife Trust 14 October 2011 Debbie Salmon	Due to the lack of a full Habitats Regulations Assessment there is no evidence that all individual and in-combination impacts on the Natura 2000 and Ramsar network have been considered in the formulation the Core Strategy policies.	Noted. Refer to response to Natural England comments on page 1.
	As no HRA has informed the policies the protection measures only consider the issue of recreational pressure on the bird populations. Even in this respect, it is our view that the measures proposed do not fully protect the SPAs from in-combination impacts.	Disagree. The HRA process has informed the plan-making process as detailed in the response to Natural England comments on page 1.
	Due to the lack of a HRA there is no assessment in regard to hydrological and pollution impacts and direct land take on the Ramsar Network within the Thames Gateway.	Noted. Refer to response to Natural England comments on page 1. Hydrological, pollution and direct land take matters are discussed in the current HRA report.
	Due to the lack of a HRA no assessment has been made in regard to the possible recreational and air quality impacts on the North Downs Woodlands SAC from the increased population and the increase road use and emissions in the locality of the SAC.	Concerns noted. The North Downs Woodlands SAC has now been scoped into the Appropriate Assessment- refer to section 4 of the report for more detail. However concerns relating to eutrophication from dog fouling are not considered to warrant further investigation due to the distance of the SAC from the new development.

	<p>Object to the following policies as they may have an impact on designated site network and have not been assessed as part of a full HRA: policies CS1, 5,6,13,17,18,21,22,23,24,25,26,27,28,29,31,32,33. KWT response includes further detailed information relating to potential impacts of these policies on European sites.</p>	<p>Refer to response to Natural England comments on page 1. Detailed comments provided by KWT in relation to these policies have been referred to in undertaking the HRA.</p>
	<p>CS 1: The HRA scoping report identifies that Policy CS1 could have an impact on the European network in its own right. Kent Wildlife Trust would also wish to see in-combination impacts assessed within the HRA. Concerned that number and scale of developments on the River Medway, including from land/water-based recreational activities is likely to have a negative effect.</p>	<p>Concerns noted- this is addressed in the Stage 2 AA report.</p>
	<p>CS5: Development and Flood risk. Object to policy, as there is the potential for flood risk management to impact on European sites, so policy should be subject to AA.</p>	<p>Noted, this policy has been screened in to the AA, and is considered under habitat loss and fragmentation. However it is noted that any flood defences plans and policies will be also be subject to plan and project-level HRA.</p>

	<p>CS 6: Concerns regarding the lack of protection for European sites.</p> <p>Once a complete evidence base is available, resilient measures should be incorporated into either a Core Strategy review, or future DPD policies. It is imperative that the avoidance, mitigation and compensation measures are included within DPD policy - recommend this be clearly stated within clause 2.</p> <p>A clause is required both within Core Strategy policy and as a condition of any planning permission granted to ensure that, should evidence become available that there is a significant ecological impact over and above that assessed and mitigated within the application process, for sites already granted permission or those gaining planning permission before research is completed, it must be fully mitigated by the developer.</p> <p>Welcome the protection incorporated into the policy for atmospheric light and noise pollution. However, there is no policy to protect the Natura 2000 and Ramsar network from possible hydrological and ground source pollution.</p>	<p>Noted. The HRA supports a stronger approach to European site protection and has made recommendations accordingly.</p> <p>The HRA is recommending changes to Policy CS6 to address these concerns.</p>
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	<p>CS 13 Housing Provision and Distribution Kent Wildlife Trust disputes only one aspect of the scoping report, it being our view that the North Downs Woodlands SAC should be scoped in for further assessment in relation to recreational pressure on the chalk and woodland habitats with possible impacts of development proposed within the Core Strategy and in-combination impacts with Gravesham Borough Council and Tonbridge and Malling Borough Council being assessed.</p>	
	<p>CS23: Waste Management The area identified for possible landfill, although it does not appear to impact directly on the Ramsar designation, covers land immediately adjacent to the Medway Estuary and Marshes Ramsar designation and could support species for which the site is designated. Depending on the sites selected, there is also a risk that land raising and excavation related to landfill could impact on the hydrology of the Ramsar site.</p>	<p>Refer to section 4 of the Stage 2 AA for assessment in relation to this issue.</p>
	<p>Area policies CS 26- CS30 Note that many of the larger developments have been granted permission and under construction, Advice sought from NE who have clarified that if new information becomes available then a full HRA should be undertaken to assess impacts.</p>	<p>Noted.</p>

	<p>CS 33: Lodge Hill. Due to the valuable national and international sites there is a need for high ecological protection within the policy, In relation to Policy CS33 it is our view that due to the lack of a HRA for the Core Strategy there is insufficient information to ensure no impact on the designations from 5000 dwellings. Suggestion for vision for Lodge Hill: <i>It will be a distinctive place that connects to the surrounding rich countryside, with a land use pattern that minimises the need to travel. It will be an exemplar for the Thames Gateway in the way that it minimises ensures no impact on the internationally and nationally designated sites and its impact on the environment, enhances and extends biodiversity on site providing a net gain and provides for an excellent quality of life for all its residents.</i></p> <p>Development Principles For the third principal with paragraph 10.105, recommend that the following wording be added.</p> <p><i>Environmentally sensitive – design, infrastructure, delivery and management both on site and within or adjacent to the internationally and nationally designated sites to be impacted will that respect and enhance and extend the natural environment, conserve natural resources and support people to lead sustainable lifestyles</i></p> <p>Suggested additions: - <i>Appropriate avoidance mitigation and compensation measures for the Natura 2000 and Ramsar network which will be informed by the conclusions of a comprehensive Habitats Regulations Assessment which will examine the individual and in-combination impacts of the development</i></p>	<p>Noted and refer to response to Natural England on page 1 of this appendix. Lodge Hill has been considered in the stage 2 AA and recommendations are include in section 4 of the AA report.</p> <p>Suggestion: If adopting this recommendation the Council should change 'no adverse impact' to 'no significant adverse impact'.</p> <p>Noted and supported.</p> <p>Noted and supported.</p>
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	<p><i>Off site</i> <i>The land take for mitigation for impacts on the SSSI and biodiversity more widely is likely to be in excess of 100ha.</i></p> <p><i>Within or adjacent to the Natura 2000 and Ramsar network</i> <i>Avoidance, mitigation and compensation measures will be provided to alleviate any direct or indirect impacts found within the HRA.</i></p>	<p>Noted and supported.</p>
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