**Project Title:** Dartford Local Plan Sustainability Appraisal Scoping Report

**Client:** Dartford Borough Council

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<th>Version</th>
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<td>1.0</td>
<td>07/06/18</td>
<td>Policy and baseline review</td>
<td>Alex Martin</td>
<td>Sarah Smith</td>
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Sustainability Appraisal Scoping for Dartford's New Local Plan

Scoping Report

Prepared by LUC
January 2019
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1 Introduction

1.1 Dartford Borough Council (the Council) commissioned LUC in 2018 to carry out a Sustainability Appraisal (SA) Scoping Report for their new Local Plan.

1.2 SA is an assessment process designed to consider and communicate the significant sustainability issues and effects of emerging Plans and Policies, including their alternatives. SA iteratively informs the plan-making process by helping to refine the contents of such documents, so that they maximise the benefits of sustainable development and avoid or at least minimise the potential for adverse effects.

1.3 The purpose of a Scoping Report is to provide the context for and determine the scope of, the SA (incorporating Strategic Environmental Assessment (SEA)) of the new Local Plan and to set out the assessment framework for undertaking the later stages of the SA.

1.4 The Scoping Report starts by setting out the policy context of Dartford Borough’s new Local Plan, before describing the current and likely future environmental, social and economic conditions in the Borough. This contextual information is used to identify the key sustainability issues and opportunities that the new Local Plan can address. The key sustainability issues and opportunities are then used to develop a framework of SA Objectives used to appraise the likely significant effects of the constituent parts of the Local Plan, including strategic policies, site allocations and development management policies. This document was sent to the statutory consultees (Natural England, Historic England and Environment Agency) for comment. The purpose of this consultation was to seek views on this framework in particular:

1) Whether the scope of the SA is appropriate as set out considering the role of the Dartford new Local Plan to help meet and manage Dartford’s growth needs and development ambition.

2) Whether there are any additional plans, policies or programmes that are relevant to the SA policy context that should be included.

3) Whether the baseline information provided is robust and comprehensive, and provides a suitable baseline for the SA of the Dartford new Local Plan.

4) Whether there are any additional SA issues relevant to the new Local Plan that should be included.

5) Whether the SA Framework is appropriate and includes a suitable set of SA objectives and site-based assumptions for assessing the effects of the options included within the Dartford new Local Plan and reasonable alternatives.

1.5 Consultation responses received and how these have been addressed are set out in Appendix 2.

Dartford Borough Local Plan

1.6 The statutory development plan for Dartford Borough is currently made up of the Core Strategy 2011 and the Development Policies Plan 2017. These are supported by the policies map and the various evidence bases that support the Core Strategy. In addition, the Kent Minerals and Waste Local Plan guides minerals and waste development across the county.

1.7 The Core Strategy is at the heart of the development plan. It is a long term plan to regenerate the Borough by outlining when, where, and how many, new homes, infrastructure and jobs will be created. Regulations now require a policy review of the Core Strategy, and this has commenced and it will inform work taking place on the new Local Plan. Indications from it so far are that, overall, the continuing relevance of the strategy is apparent.

1.8 Several policy developments have taken place since the adoption of the Core Strategy, including:
• The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) were first published in 2012 - the NPPF has been subject to review and update and was re-published by the Ministry of Housing, Communities and Local Government (MHCLG) in July 2018 and the PPG is constantly being updated. The NPPF and PPG require the preparation of clear, streamlined Local Plan documents as opposed to multiple development management documents.

• The 2018 NPPF sets out a new standard approach for local authorities to follow when assessing housing need and preparing their 5 year housing supply requirements. The Government have recently published further proposed changes, which are being consulted upon.

1.9 Consequently the Council is in the process of preparing a new Local Plan that will guide the regeneration of the Borough into the 2030s. A consultation on the 'strategic issues' took place in June / July 2018. LUC prepared a document to accompany this consultation, which set out the key current sustainability issues in the Borough. The information contained in that document is the basis of that presented in Chapters 2 to 9. Notably, no representations were received on this document.

1.10 The location of Dartford Borough is shown on Figure 1.1 below.

1.11 It is noted that just over half of Dartford Borough is designated as Green Belt, and this will be a key consideration for the Borough when considering locations for new development.
Figure 1.1: Dartford Borough

- Dartford District
- Neighbouring Local Authority boundary
- Ebbsfleet Development Corporation boundary
- Dartford town centre

Source: DBC

Map Scale @ A4: 1:75,000

Contains Ordnance Survey data © Crown copyright and database right 2018
Service Layer Credits: Contains OS data © Crown Copyright and database right 2018
Sustainability Appraisal and Strategic Environmental Assessment

1.12 Under the Planning and Compulsory Purchase Act 2004, SA is mandatory for Development Plan Documents. For these documents it is also necessary to conduct an environmental assessment in accordance with the requirements of the Strategic Environmental Assessment Directive (European Directive 2001/42/EC), as transposed into law in England by the SEA Regulations\(^1\). Therefore, it is a legal requirement for the Local Plan to be subject to SA and SEA throughout its preparation.

1.13 The requirements to carry out SA and SEA are distinct, although it is possible to satisfy both using a single appraisal process (as advocated in the National Planning Practice Guidance\(^2\)), whereby users can comply with the requirements of the SEA Regulations through a single integrated SA process – this is the process that is being undertaken in Dartford. From here on, the term ‘SA’ should therefore be taken to mean ‘SA incorporating the requirements of the SEA Regulations’.

1.14 The SA process comprises a number of stages, with scoping being Stage A as shown in Figure 1.2 below:

**Figure 1.2 Main stages in Sustainability Appraisal**

| Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope |
| Stage B: Developing and refining options and assessing effects |
| Stage C: Preparing the Sustainability Appraisal Report |
| Stage D: Consulting on the Local Plan Part 1 Review and the SA report |
| Stage E: Monitoring the significant effects of implementing the Local Plan Part 1 Review |

Key International Plans, Policies and Programmes

1.15 At the international level, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the ‘SEA Directive’) and Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the ‘Habitats Directive’) are particularly significant as they require Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) to be undertaken in relation to the emerging Local Plan. These processes should be undertaken iteratively and integrated into the production of the Local Plan in order to ensure that any potential negative environmental effects (including on international nature conservation designations) are identified and can be mitigated.

1.16 There are a wide range of other international agreements and EU Directives, which have been transposed into UK law and national policy, which are summarised in the relevant subject area chapters.

National Planning Policy Framework

1.17 The most significant national policy context for the Local Plan is the National Planning Policy Framework (NPPF) which was originally published in 2012 and revised in 2018\(^3\). The Local Plan must be consistent with the requirements of the NPPF. Which states:

“Succinct and up-to-date plans should provide a positive vision for the future of each area; a framework for addressing housing needs and other economic, social and environmental priorities; and a platform for local people to shape their surroundings.”

---

\(^1\) The Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004 No. 1633)


The NPPF sets out information about the purposes of local plan-making, stating that plans should:

- "Be prepared with the objective of contributing to the achievement of sustainable development;
- Be prepared positively, in a way that is aspirational but deliverable;
- Be shaped by early, proportionate and effective engagement between plan-makers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees;
- Contain policies that are clearly written and unambiguous, so it is evident how a decision maker should react to development proposals;
- Be accessible through the use of digital tools to assist public involvement and policy presentation; and
- Serve a clear purpose, avoiding unnecessary duplication of policies that apply to a particular area”.

The NPPF requires local planning authorities to set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver:

- "Housing (including affordable housing), employment, retail, leisure and other commercial development;
- Infrastructure for transport, telecommunications, security, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat);
- Community facilities (such as health, education and cultural infrastructure); and.
- Conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure, and planning measures to address climate change mitigation and adaptation”.

The NPPF also promotes well-designed places and development, as well as protection and enhancing beneficial use of the Green Belt.

Non-strategic policies should be used by local planning authorities and communities to set out more detailed policies for specific areas, neighbourhoods or types of development, including qualitative aspects such as design of places, landscapes, and development.

The NPPF also states that:

“Local plans and spatial development strategies should be informed throughout their preparation by a sustainability appraisal that meets the relevant legal requirements. This should demonstrate how the plan has addressed relevant economic, social and environmental objectives (including opportunities for net gains). Significant adverse impacts on these objectives should be avoided and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Where significant adverse impacts are unavoidable, suitable mitigation measures should be proposed (or, where this is not possible, compensatory measures should be considered).”

Approach to Scoping

Figure 1.3 below sets out the tasks involved in the Scoping stage.
Figure 1.3 Stages in SA Scoping

**Stage A1:** Setting out the policy context for the SA of the Dartford new Local Plan, i.e. key Government policies and strategies that influence what the Local Plan and the SA needs to consider.

**Stage A2:** Setting out the baseline for the SA of the Dartford new Local Plan, i.e. the current and likely future environmental, social and economic conditions in Dartford.

**Stage A3:** Drawing on A1 and A2, identify the particular sustainability problems and/or opportunities (‘issues’) that the new Local Plan and SA should address.

**Stage A4:** Drawing on A1, A2 and A3, develop a framework of SA Objectives and assessment criteria to appraise the constituent parts of the new Local Plan in isolation and in combination.

**Stage A5:** Consulting on the scope of the SA.

1.24 This Scoping Report fulfils the requirements set out above with a view to establishing the likely significant effects of constituent parts of the Local Plan in isolation and in combination. In accordance with PPG the Scoping Report is proportionate and relevant to the Dartford Local Plan, focussing on what is needed to assess the likely significant effects.

**Meeting the Requirements of the SEA Regulations**

1.25 **Table 1.1** below signposts the relevant sections of the Scoping Report that are considered to meet the SEA Regulations requirements (the remainder will be met during subsequent stages of the SA of the Dartford Local Plan). This table will be included in the full SA Report at each stage of the SA to show how the requirements of the SEA Regulations have been met through the SA process.

**Table 1.1 Meeting the Requirements of the SEA Regulations**

<table>
<thead>
<tr>
<th>SEA Regulations Requirements</th>
<th>Covered in this Scoping Report?</th>
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<tbody>
<tr>
<td><em>Environmental Report</em></td>
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<td>Where an environmental assessment is required by any provision of Part 2 of these Regulations, the responsible authority shall prepare, or secure the preparation of, an environmental report in accordance with paragraphs (2) and (3) of this regulation. The report shall identify, describe and evaluate the likely significant effects on the environment of: implementing the plan or programme; and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme. (Regulation 12(1) and (2) and Schedule 2).</td>
<td>The full SA Report produced to accompany consultation on the Dartford Local Plan will constitute the 'environmental report' as well, and will be produced at a later stage in the SA process.</td>
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<tr>
<td>An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.</td>
<td>Chapters 2 to 10.</td>
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<td>The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.</td>
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<td>The environmental characteristics of areas likely to be significantly affected.</td>
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<tr>
<td>Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC on the conservation of wild birds and the Habitats Directive.</td>
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<td>The environmental protection, objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during</td>
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<tr>
<td>SEA Regulations Requirements</td>
<td>Covered in this Scoping Report?</td>
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<td>The likely significant effects on the environment, including short, medium and long-term</td>
<td>Requirement will be met at a</td>
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<td>effects, permanent and temporary effects, positive effects, and secondary, cumulative and</td>
<td>later stage in the SA process.</td>
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<td>synergistic effects, on issues such as:</td>
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<td>(a) biodiversity;</td>
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<td>(b) population;</td>
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<td>(c) human health;</td>
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<td>(d) fauna;</td>
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<td>(e) flora;</td>
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<td>(f) soil;</td>
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<td>(g) water;</td>
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<td>(h) air;</td>
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<td>(i) climatic factors;</td>
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<td>(j) material assets;</td>
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<td>(k) cultural heritage, including architectural and archaeological heritage;</td>
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<td>(l) landscape;</td>
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<td>(m) the interrelationship between the issues referred to in sub-paragraphs (a) to (l).</td>
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<td>Requirement will be met at a later stage in the SA process.</td>
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<tr>
<td>The measures envisaged to prevent, reduce and as fully as possible offset any significant</td>
<td>Requirement will be met at a</td>
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<td>adverse effects on the environment of implementing the plan or programme.</td>
<td>later stage in the SA process.</td>
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<tr>
<td>An outline of the reasons for selecting the alternatives dealt with, and a description of</td>
<td>Requirement will be met at a</td>
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<td>how the assessment was undertaken including any difficulties (such as technical deficiencies</td>
<td>later stage in the SA process.</td>
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<td>or lack of know-how) encountered in compiling the required information.</td>
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<td>A description of the measures envisaged concerning monitoring in accordance with regulation</td>
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<td>later stage in the SA process.</td>
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<td>A non-technical summary of the information provided under paragraphs 1 to 9.</td>
<td>Requirement will be met at a</td>
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<td>later stage in the SA process.</td>
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<td>The report shall include such of the information referred to in Schedule 2 to these</td>
<td>This Scoping Report and the</td>
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<td>Regulations as may reasonably be required, taking account of:</td>
<td>Environmental Reports will adhere</td>
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<td>current knowledge and methods of assessment;</td>
<td>to this requirement.</td>
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<td>the contents and level of detail in the plan or programme;</td>
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<td>the stage of the plan or programme in the decision-making process;</td>
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<td>and</td>
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<td>the extent to which certain matters are more appropriately assessed at different levels in</td>
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<td>that process in order to avoid duplication of the assessment.</td>
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<td>(Regulation 12 (3))</td>
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**Consultation**

When deciding on the scope and level of detail of the information that must be included in the environmental report, the responsible authority shall consult the consultation bodies.

(Regulation 12(5))

This Scoping Report was published for consultation from the 31st October 2018 until the 5th December 2018.

Every draft plan or programme for which an environmental report has been prepared in accordance with regulation 12 and its accompanying report (“the relevant documents”) shall be made available for the purposes of consultation in accordance with the following provisions of this regulation.

As soon as reasonable practical after the preparation of the relevant documents, the responsible authority shall:

send a copy of those documents to each consultation body;

take such steps as it considers appropriate to bring the preparation of the relevant documents to the attention of the persons who, in the

This Scoping Report will be published on Dartford Borough Council’s website and interested parties informed of the consultation. Public consultation on the Local Plan and accompanying SA Reports will continue as the Plan develops, including Draft and Proposed Submission versions of the Plan.
### SEA Regulations Requirements

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<tr>
<th>Requirement</th>
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<tr>
<td>authority’s opinion, are affected or likely to be affected by, or have an interest in the decisions involved in the assessment and adoption of the plan or programme concerned, required under the Environmental assessment of Plans and Programmes Directive (“the public consultees”); inform the public consultees of the address (which may include a website) at which a copy of the relevant documents may be viewed, and the period within which, opinions must be sent. The period referred to in paragraph (2) (d) must be of such length as will ensure that the consultation bodies and the public consultees are given an effective opportunity to express their opinion on the relevant documents. (Regulation 13 (1), (2), and (3))</td>
<td>Unlikely to be relevant to the Local Plan, as there will be no effects beyond the UK.</td>
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<td>Where a responsible authority, other than the Secretary of State, is of the opinion that a plan or programme for which it is the responsible authority is likely to have significant effects on the environment of another Member State, it shall, as soon as reasonable practicable after forming that opinion: notify the Secretary of State of its opinion and of the reasons for it; and supply the Secretary of State with a copy of the plan or programme concerned, and of the accompanying environmental report. (Regulation 14 (1))</td>
<td>Requirement will be met at a later stage in the SA process.</td>
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<tr>
<td>Taking the environmental report and the results of the consultations into account in decision-making (relevant extracts of Regulation 16)</td>
<td>Requirement will be met at a later stage in the SA process.</td>
</tr>
<tr>
<td>As soon as reasonably practicable after the adoption of a plan or programme for which an environmental assessment has been carried out under these Regulations, the responsible authority shall: make a copy of the plan or programme and its accompanying environmental report available at its principal office for inspection by the public at all reasonable times and free of charge. (Regulation 16(1))</td>
<td>Requirement will be met at a later stage in the SA process.</td>
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<tr>
<td>As soon as reasonably practicable after the adoption of a plan or programme: the responsible authority shall inform (i) the consultation bodies; (ii) the persons who, in relation to the plan or programme, were public consultees for the purposes of regulation 13; and (iii) where the responsible authority is not the Secretary of state, the Secretary of State, that the plan or programme has been adopted, and a statement containing the following particulars: how environmental considerations have been integrated into the plan or programme; how the environmental report has been taken into account; how opinions expressed in response to: (i) the invitation in regulation 13(2)(d); (ii) action taken by the responsible authority in accordance with regulation 13(4), have been taken into account; how the results of any consultations entered into under regulation 14(4) have been taken into account; the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and the measures that are to be taken to monitor the significant environmental effects of the implementation of the plan or programme.</td>
<td>Requirement will be met after adoption of the Local Plan.</td>
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### Monitoring

The responsible authority shall monitor the significant effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being
Habits Regulations Assessment

1.26 The requirement to undertake Habitats Regulations Assessment (HRA) of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in July 2007 and updated in 2010\(^4\) and again in 2012\(^5\) and 2017\(^6\). The regulations translate Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) and 79/409/EEC (Birds Directive) into UK law. The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a European Site and to ascertain whether it would adversely affect the integrity of that site.

1.27 The HRA will be undertaken separately but the findings will be taken into account in the SA where relevant (for example to inform judgements about the likely effects of potential development locations on biodiversity).

Structure of the Scoping Report

1.28 This chapter describes the background to the production of the Dartford Local Plan and the requirement to undertake SA and other assessment processes. The remainder of this Scoping Report is structured around a set of SA subject areas designed to draw out the full range of possible sustainability effects generated by the Dartford Local Plan, including all the SEA topics listed in Schedule 2 of the SEA Regulations (2004).

1.29 Each chapter sets out the policy context and baseline for each SA subject area. The subject area chapters are as follows:

- **Chapter 2**: Population Growth, Health and Wellbeing.
- **Chapter 3**: Economy.
- **Chapter 4**: Transport Connections and Travel Habits.
- **Chapter 5**: Air, Land and Water Quality.
- **Chapter 6**: Climate Change Adaptation and Mitigation.
- **Chapter 7**: Biodiversity.
- **Chapter 8**: Historic Environment.
- **Chapter 9**: Landscape.

1.30 SEA Guidance recognises that data gaps will exist, but suggests that where baseline information is unavailable or unsatisfactory, authorities should consider how it will affect their assessments and determine how to improve it for use in the assessment of future plans. Where there are data gaps in the baseline and forthcoming reports, these are highlighted in the text. The collection and analysis of baseline data is regarded as a continual and evolving process, given that information can change or be updated on a regular basis.

1.31 Relevant baseline information will be updated during the SA process as and when data is published.

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\(^4\) The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007. HMSO Statutory Instrument 2007 No. 1843. From 1 April 2010, these were consolidated and replaced by the Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490). Note that no substantive changes to existing policies or procedures have been made in the new version.


\(^6\) The Conservation of Habitats and Species Regulations 2017 (Statutory Instrument 2017 No. 1012) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments.
1.32 Chapter 10 draws together all of the key sustainability issues for Dartford informed by the preceding chapters and sets out their likely evolution without the new Local Plan. Chapter 11 sets out the SA Framework and explains how this has been developed.
2 Population, Health and Wellbeing

Policy Context

International

2.1 United Nations Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the ‘Aarhus Convention’) (1998): Establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective.

2.2 United Nations Declaration on Sustainable Development (Johannesburg Declaration) (2002): Sets broad framework for international sustainable development, including building a humane, equitable and caring global society aware of the need for human dignity for all, renewable energy and energy efficiency, sustainable consumption and production and resource efficiency.

2.3 European Environmental Noise Directive (2002): Sets out a hierarchy for the avoidance, prevention and reduction in adverse effects associated with environmental noise, including noise generated by road and rail vehicles, infrastructure, aircraft and outdoor, industrial and mobile machinery.

National

2.4 National Planning Policy Framework (NPPF)\(^7\) contains the following:

- The NPPF promotes healthy, inclusive and safe places which; promote social integration, are safe and accessible and enable and support healthy lifestyles.
- One of the core planning principles is to “take account of and support the delivery of local strategies to improve health, social and cultural wellbeing for all sections of the community”.
- Plan should “contain policies to optimise the use of land in their area and meet as much of the identified need for housing as possible”. To determine the minimum number of homes needed strategic policies should be informed by a local housing need assessment.
- Access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and wellbeing of communities.
- The NPPF states “good design is a key aspect of sustainable development” and requires development to add to the overall quality of the area over its lifetime. The importance of good architecture and appropriate landscaping to reinforce local distinctiveness, raise the standard more generally in the area and address the connections between people and places is emphasised.
- The NPPF promotes the retention and enhancement of local services and community facilities in villages, such as local shops, meeting places, sports, cultural venues and places of worship.
- Ensure that developments create safe and accessible environments where crime and disorder, and fear of crime, do not undermine quality of life or community cohesion.
- There is a need to take a “proactive, positive and collaborative approach” to bring forward development that will “widen choice in education”, including sufficient choice of school places.

• Health and wellbeing should be considered in local plans. They should promote healthy lifestyles, social and cultural wellbeing and ensure access by all sections of the community is promoted.

• Paragraph 72 states that "The supply of large numbers of new homes can often be best achieved through planning for larger scale development, such as new settlements or significant extensions to existing villages and towns, provided they are well located and designed and supported by the necessary infrastructure and facilities".

2.5 National Planning Practice Guidance (PPG)\(^9\) contains the following:

• Local planning authorities should ensure that health and wellbeing, and health infrastructure are considered in local and neighbourhood plans and in planning decision making.

2.6 Select Committee on Public Service and Demographic Change report Ready for Ageing?\(^9\): warns that society is underprepared for the ageing population. The report states "longer lives can be a great benefit, but there has been a collective failure to address the implications and without urgent action this great boon could turn into a series of miserable crises". The report highlights the under provision of specialist housing for older people and the need to plan for the housing needs of the older population as well as younger people.

2.7 Fair Society, Healthy Lives\(^10\): investigated health inequalities in England and the actions needed in order to tackle them. Subsequently, a supplementary report was prepared providing additional evidence relating to spatial planning and health on the basis that there is "overwhelming evidence that health and environmental inequalities are inexorably linked and that poor environments contribute significantly to poor health and health inequalities".

2.8 Planning Policy for Traveller Sites\(^11\): sets out the Government’s planning policy for traveller sites, replacing the older version published in March 2012. The Government’s overarching aim is to ensure fair and equal treatment for travellers, in a way that facilitates the traditional and nomadic way of life of travellers while respecting the interests of the settled community.

2.9 Housing White Paper 2017 (Fixing our broken housing market)\(^12\): sets out ways to address the shortfall in affordable homes and boost housing supply. The White Paper focuses on the following:

• Planning for the right homes in the right places – Higher densities in appropriate areas, protecting the Green Belt while making more land available for housing by maximising the contribution from brownfield and surplus public land, regenerating estates, releasing more small and medium-sized sites, allowing rural communities to grow and making it easier to build new settlements.

• Building homes faster – Improved speed of planning cases, ensuring infrastructure is provided and supporting developers to build out more quickly.

• Diversifying the Market – Backing small and medium-sized house builders, custom-build, institutional investors, new contractors, housing associations.

• Helping people now – Supporting home ownership and providing affordable housing for all types of people, including the most vulnerable.

2.10 Laying the foundations: a housing strategy for England\(^13\): Aims to provide support to deliver new homes and improve social mobility.


\(^9\) Select Committee on Public Service and Demographic Change (2013) Ready for Ageing? [online] Available at: https://publications.parliament.uk/pa/ld201213/ldselect/ldpublic/140/140.pdf


2.11 **Healthy Lives, Healthy People: Our strategy for public health in England**\(^{14}\): Sets out how our approach to public health challenges will:

- **Protect the population from health threats** – led by central government, with a strong system to the frontline.
- **Empower local leadership** and encourage wide responsibility across society to improve everyone's health and wellbeing, and tackle the wider factors that influence it.
- **Focus on key outcomes**, doing what works to deliver them, with transparency of outcomes to enable accountability through a proposed new public health outcomes framework.
- **Reflect the Government’s core values of freedom, fairness and responsibility** by strengthening self-esteem, confidence and personal responsibility; positively promoting healthy behaviours and lifestyles; and adapting the environment to make healthy choices easier.
- **Balance the freedoms of individuals and organisations with the need to avoid harm to others**, use a ‘ladder’ of interventions to determine the least intrusive approach necessary to achieve the desired effect and aim to make voluntary approaches work before resorting to regulation.

2.12 **A Green Future: Our 25 Year Plan to Improve the Environment**\(^{15}\): Sets out goals for improving the environment within the next 25 years. It details how the Government will work with communities and businesses to leave the environment in a better state than it is presently. Identifies six key areas around which action will be focused. Those of relevance to this chapter are: using and managing land sustainably; and connecting people with the environment to improve health and wellbeing. Actions that will be taken as part of these two key areas are as follows:

- **Using and managing land sustainably**:
  - Embed an ‘environmental net gain’ principle for development, including housing and infrastructure.

- **Connecting people with the environment to improve health and wellbeing**:
  - Help people improve their health and wellbeing by using green spaces including through mental health services.
  - Encourage children to be close to nature, in and out of school, with particular focus on disadvantaged areas.
  - ‘Green’ our towns and cities by creating green infrastructure and planting one million urban trees.
  - Make 2019 a year of action for the environment, working with Step Up To Serve and other partners to help children and young people from all backgrounds to engage with nature and improve the environment.

### Sub-national

2.13 **Kent and Medway Growth and Infrastructure Framework (GIF) 2018 update**\(^{16}\): Provides a view of emerging development and infrastructure requirements to support growth across Kent and Medway. Some of the main sustainability issues for Dartford itself are set out:

- There is an expected increase of 59% in the size of the Borough (households) up to 2031.
- Dartford is a net importer of labour as more people travel to work from outside than commute out of the Borough.

2.14 The document also sets out the main challenges for North Kent, many of which are relevant for Dartford and include:

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Some of the most deprived localities in the South East.

Significant annual net migration into the area from London and population growth placing pressure on local services.

Deficiencies in early years, primary and secondary education, especially in areas of growth.

Healthcare provision struggling to keep up with growth.

2.15 **Thames Estuary 2050 Growth Commission 2050 Vision**\(^{17}\): sets out an ambitious vision and delivery plan for north Kent, south Essex and east London, highlighting the key challenges and opportunities of the area, alongside future trends. The ‘Inner Estuary’ area includes Dartford. Key challenges that have been highlighted for this area include:

- Air quality issues.
- Slow pace of delivery at Ebbsfleet Garden City.
- Poor education and skills attainment.

**Current Baseline**

**Population**

2.16 Dartford is situated in the northwest of the County of Kent, bordering Greater London. The Borough is the smallest of the 12 Kent districts, covering an area of 7,600 hectares. The Borough has two distinct areas. To the north of the A2 lie the built up areas of Dartford, Greenhithe, Stone, Ebbsfleet Garden City and Swanscombe. To the south lies Metropolitan Green belt, consisting of open countryside with 12 villages and a number of small hamlets. Significant development is taking place in the northern half of the Borough.\(^{18}\)

2.17 In 2016 the population of Dartford was estimated to be 105,100. Of this 51,600 residents were male and 53,500 were female.\(^{19}\) The working age population (16-64) was 67,400.

2.18 The population of Dartford increased by 15.8% over the 10 years to 2016\(^{20}\) and up to 2024 the population is expected to rise by 13.3%. These past and future increases illustrate the sustained period of population change that the Borough is experiencing. Of this increase, 6.6% will be attributable to natural change, 2.1% to net international migration and 4.5% to new within UK migration. The largest percentage population change is expected in those aged 65 and over - in 2024 the proportion of the population aged 65 and above will be 16%, an increase of 21.1% since 2014.\(^{21}\) However, the average age in the Borough is currently lower than the national and regional average.\(^{22}\)

2.19 Financial and demographic data has been used to broadly categorise households in Dartford into ‘mosaic groups’. In comparison to Kent as a whole, Dartford has a much higher percentage of ‘aspiring homemakers’ and ‘rental hubs’. With the most common set of households being ‘aspiring homemakers’ and the second most common as ‘senior security’. The least common household type is ‘city prosperity’, followed by ‘country living’ and ‘rural reality’, reflecting the urban and suburban nature of the Borough.


Population density in Dartford is higher than that for other boroughs in Kent, at 13.4 persons per hectare (based on 2011 census data\(^23\)). This is compared to 10.3 and 3.1 in the neighbouring boroughs of Gravesend and Sevenoaks respectively, and 4.1 for Kent as a whole.

There is an expected increase of 59% in terms of households in the Borough from 2006 to 2031, largely to be accommodated through the development of new homes on a number of brownfield sites set out in the Core Strategy. The Borough delivered over 2,000 new homes between April 2016 and March 2018.\(^24\)

**Gypsy, Traveller and Travelling Showpeople**

A Gypsy, Traveller and Traveling Showpeople Accommodation Assessment was undertaken in October 2013, to support the Core Strategy. This estimated that there were at least 408 individuals or 127 Gypsy or Traveller households in the Borough. These are housed on 14 private sites, three unauthorised sites, one Travelling Showpeople yard and 50 households of bricks and mortar. The study identified a need for 34 additional Gypsy and Traveller pitches between 2013 and 2028.\(^25\)

**Housing**

The 2011 ONS census recorded 40,081 dwellings in the Borough. Some 26,819 (66.9%) were owned, either outright or with a mortgage, 5,947 (14.8%) were social rented and 6,385 (16%) were private rented.\(^26\)

The northern area of Dartford Borough contains the most housing and, particularly due to current planning policy, is seeing the most growth, for example within Dartford Town Centre, the Northern Gateway area, Ebbsfleet Garden City and Stone and the Thames Waterfront.\(^27\) The average price of a property in Dartford in the year April 2017 was just over £300,000), which is higher than the national average (£228,807) but just under the regional average (£322,311). Prices stayed fairly static between March 2017 and 2018.\(^28\)

The latest version of Dartford’s Five Year Housing Land Supply Paper shows land supply for the years 2017–2022. This indicates that there is a 5.33 year supply of deliverable housing sites in the Borough (6,934 homes), which exceeds the five year housing requirement of 6,502 homes.\(^29\) This applies the Core Strategy maximum (up to) requirement which addresses both forecast housing need plus additional demand, and reflects identified site opportunities.

The net number of new homes delivered in 2016 – 17 was 1,162 and cumulatively the Borough has delivered 6,431 homes over their current plan period (2006-2017). This is in line with the local housing need management trigger but below the Core Strategy ‘up to’ capacity-based target. Of the houses completed in 2016 – 17, 213, or 18% were affordable (social rented, affordable rented and intermediate housing as defined in the previous NPPF).\(^30\)

In terms of size, 50% of dwellings built in 2016 – 17 were two bed flats and 25% were one bed flats. Some 13% were three bed houses, 9% were four bed houses and only 2% and 1% were one and two bed houses respectively. This was a new build flat to house ratio of 3:1 in that particular year, however there remains more houses in the Borough than flats.

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\(^23\) UK Census Data (2011) [online] available at: [http://www.ukcensusdata.com/dartford-e07000107/population-density-gs102w#hash.5WS1VlAt.dpbs](http://www.ukcensusdata.com/dartford-e07000107/population-density-gs102w#hash.5WS1VlAt.dpbs)


\(^28\) UK House Price Index [online] Available at: [http://landregistry.data.gov.uk/app/ukhol](http://landregistry.data.gov.uk/app/ukhol)


**Education**

2.28 Of the 77,342 residents aged 16 and over in the Borough in 2011; 21.1% have no qualifications, 17.3% have level 1 qualifications, 18.1% have level 2 qualifications, 4.3% are in an apprenticeship, 11.5% have level 3 qualifications and 22% have level 4 qualifications and above.\(^{31,32}\)

2.29 In 2011 there were 2,122 school children and full time students in the Borough, and 2,215 students aged 18 or over.\(^{33}\)

2.30 Following expansions to primary schools in Dartford in recent years, forecast demand over the last four years has been met. The current challenge in Dartford is managing the demand created from new housing development which materialises before a new school can be opened and therefore needs to be accommodated through existing provision and expansion. Figures in the Kent Commissioning Plan for Education Provision 2018 – 2022 show that Dartford North may experience a small deficit in primary school places from 2019/20 onwards. Dartford West and Dartford Rural South are also expected to experience some deficiency between 2016 and 2022. In terms of secondary education forecasts indicate that there is sufficient year 7 provision for 2018/19 but a deficit for 2019/20.\(^{34,35}\)

2.31 According to the Commissioning Plan for Education Provision in Kent\(^{36}\), the number of primary age pupils is expected to continue rising significantly from 123,027 in 2016-17 to 128,905 in 2021-22, which is just fewer than 6,000 extra pupils over the next five years. In the same period the number of secondary age pupils in Kent schools is expected to rise significantly from 79,110 in 2016-17 to 91,520 in 2021-22, a rise of 12,000 pupils. Kent County Council (KCC) will aim to address these increasing school pupil numbers by expanding existing schools and creating new primary, secondary and special schools.

2.32 Overall there is a need for additional school places across the County. Whilst the government has provided funding towards the provision of school places KCC still estimates a funding shortfall of £101m in respect of places required by 2020.\(^{37}\)

**Deprivation**

2.33 When considering all Indices of Deprivation (2015), the Borough of Dartford falls within the 50% of least deprived areas in the country. However, as shown in Figure 2.1, it contains a mix of areas of higher deprivation and areas with low deprivation. For example an area in Littlebrook Ward is one the most deprived neighbourhoods in the Borough and falls within the 10% most deprived areas of the country of Kent. The neighbouring ward of Joyce Green also includes neighbourhoods that fall within the 10% most deprived areas of the country. Both areas are located in the north west corner of the Borough, north of Dartford town.

2.34 Many of the other neighbourhoods in the Borough are some of the least deprived in the country, for example, Dartford Heath and Joydens Wood. In general the southern half of the Borough is less deprived than the northern half and particularly the north west. This pattern generally carries across all of the separate indices, though not including barriers to housing and services which shows high levels of deprivation across the Borough.\(^{38}\)

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\(^{31}\) NOMIS – Local Area Report (2011) – Dartford [online] Available at: https://www.nomisweb.co.uk/reports/localarea?compare=1946157313

\(^{32}\) For qualification level descriptions see: https://www.gov.uk/what-different-qualification-levels-mean/list-of-qualification-levels

\(^{33}\) NOMIS – Local Area Report (2011) – Dartford [online] Available at: https://www.nomisweb.co.uk/reports/localarea?compare=1946157313


2.35 The median weekly full time earnings for Dartford in 2016 was higher than both the Kent and national average. Unemployment in the Borough in 2016 was low and below the average for Kent and Great Britain.

Health

2.36 The 2011 census statistics suggest that health in the Borough is reasonably good with 83% of the population reporting themselves to be in very good, or good health. Some 12% state they are in fair health, with only 3% and 1% in bad or very bad health respectively. Furthermore, 85% of the population reported that their day to day activities are not limited by their health, 8% state that they are limited a little and 7% limited a lot. Some 10% of the population receive paid care.

2.37 Average life expectancy in the Borough is slightly below the national average at 79.3 years for males and 82.2 years for females. However, this varies across neighbourhoods, as life expectancy is 9.4 years lower for men and 4.5 years lower for women in the most deprived areas of Dartford than in the least deprived areas.

2.38 In general, Dartford does not have high levels of health and disability deprivation. There are a number of exceptions, for example part of Joyce Green ward is amongst the 10% most deprived neighbourhoods in the country and part of Bean and Darenth ward falls within the 20% most deprived neighbourhoods in the country.

2.39 Estimated levels of adult excess weight in the Borough are worse than the England average and 21% of children in year 6 are classed as obese. Therefore a priority for Dartford is reducing obesity levels, improving life expectancy and reducing the amount of adult inactivity.

2.40 There is a slight under provision of GP services in the Borough, as average patient list sizes are above the UK guidelines and further provision will be needed to accommodate growth demand.

Open spaces, sports and recreation

2.41 Dartford has approximately 1,466 hectares of open space, which is 19% of Dartford Borough. Of this, 75% is in the Green Belt.

2.42 Open space is reasonably well dispersed across the Borough, however the Dartford Open Spaces Technical Paper (2011) identifies a deficit in open spaces in the northern urban part of the Borough, and parts of the south of the Borough, which do not in places have easy walking access to major parks. In contrast to this, some of the more rural areas, which are set within Green Belt, of the Borough have very large amounts of open space, mainly due to the presence of two country parks and publically accessible lakes and woodlands.

2.43 Evidence submitted by Public Health England to the Inquiry into Public Parks suggests that people who live in urban areas that have good access to green or blue space have better mental health. However with regard other health benefits, Kent Nature Partnership’s study (2014) found that problems of physical inactivity and related health issues in an area are not limited to location and quality of greenspace, but wider socio-economic factors, although it was noted that presence of green space did have a positive effect.
Crime

2.44 Total recorded crime in the Borough has risen since 2010. Violent crime made up the highest proportion of crimes reported between March 2017 and February 2018. This is followed by anti-social behaviour and criminal damage and arson. Crime levels have stayed reasonably consistent over the year, with a very slight decline. In Kent as whole crime has risen since 2010, again with violent crime making up the highest proportion of crimes reported, meaning this issue is not unique to Dartford in the County.

Noise and traffic

2.45 There are several land uses within the Borough that have the potential to affect existing and new communities within close proximity to them. The A2 crosses the Borough east to west and the A282 (part of London Orbital M25 at Dartford Crossing) crosses it north to south. These are strategic roads and have a significant amount of traffic using them. These strategic routes and congestion on the local road network caused by them have the potential to generate significant air pollution and noise for those living nearby. Paragraph 4.16 provides more detail regarding congestion and Air Quality Management Areas (AQMA).
Figure 2.1: Index of Multiple Deprivation (IMD)

Dartford District

Neighbouring Local Authority boundary

IMD decile

- 0 - 10% (most deprived)
- 10 - 20%
- 20 - 30%
- 30 - 40%
- 40 - 50%
- 50 - 60%
- 60 - 70%
- 70 - 80%
- 80 - 90%
- 90 - 100% (least deprived)

Source: DCLG

Map Scale @ A4: 1:65,000

Contains Ordnance Survey data © Crown copyright and database right 2018
3 Economy

Policy Context

International

3.1 There are no specific international or European economic policy agreements relevant to the preparation of the Local Plan and the SA, although there are a large number of trading agreements, regulations and standards that set down the basis of trade within the EU and with other nations.

National

3.2 National Planning Policy Framework (NPPF)\(^{48}\) contains the following:

- The economic role of the planning system is to contribute towards building a “strong, responsive and competitive economy” by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure.
- Planning policies should address the specific locational requirements of different sectors.
- Local planning authorities should promote long term viability and vitality of town centres and take a positive approach to their growth, management and adaption. Recognise that residential development has a role to play in supporting these ambitions.
- When considering edge of centre and out of centre proposals, preference should be given to accessible sites which are well connected to the town centre. Sustainable growth and expansion of all types of business and enterprise in rural areas should be supported, both through conversion of existing buildings and well designed new buildings.
- The NPPF requires Local Plans to "set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth, having regard to Local Industrial Strategies and other local policies for economic development and regeneration."

3.3 National Planning Practice Guidance (PPG)\(^{49}\): Reiterates the importance for Local Plans to include a positive strategy for town centres to enable sustainable economic growth and provide a wide range of social and environmental benefits.

3.4 The Local Growth White Paper (2010)\(^{50}\): Highlights the importance of economic policy that focusses on the delivery of strong, sustainable and balanced growth of income and employment over the long-term, growth which is broad-based industrially and geographically to provide equality of access and opportunity and build businesses that are competitive internationally.

3.5 Rural White Paper 2000 (Our Countryside: the future – A fair deal for rural England)\(^{51}\): Sets out the Government’s Rural Policy Objectives:

- To facilitate the development of dynamic, competitive and sustainable economies in the countryside, tackling poverty in rural areas.

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\(^{49}\) Department for Communities and Local Government (2016) National Planning Practice Guidance [online] Available at: https://www.gov.uk/government/collections/planning-practice-guidance


To maintain and stimulate communities, and secure access to services which is equitable in all the circumstances, for those who live or work in the countryside.

To conserve and enhance rural landscapes and the diversity and abundance of wildlife (including the habitats on which it depends).

To promote government responsiveness to rural communities through better working together between central departments, local government, and government agencies and better co-operation with non-government bodies.

Sub-national

3.6 Kent and Medway Growth and Infrastructure Framework (GIF) 2018 update: Provides a strategic framework across Kent and Medway for identifying and prioritising investment across a range of infrastructure, for planned growth up to 2031. The Framework does not set out specific issues for Dartford but highlights a number of economic challenges faced by North Kent:

- Congestion of highway networks in town centres and arterial routes.
- Capacity limitations of the M2.
- Rail capacity on the North Kent line is stretched and will shortly be overcapacity.
- Growth in retail and hospitality sectors rather than in knowledge industries with their potential for high value added growth.

3.7 Thames Gateway Kent Plan for Growth 2014 - 2020: Sets out the vision and objectives for creating the best conditions possible to attract investment and deliver growth across North Kent. The economic objectives are to:

- Improve the productivity of the North Kent economy.
- Attract and retain investment in priority employment locations.
- Represent North Kent’s interests to Government and the Local Enterprise Partnership.
- Support the delivery of at least 50,000 new homes between 2006 and 2026.
- Ensure all new development is of the highest possible quality.
- Improve the skills of North Kent’s workforce and tackle unemployment.
- Support the creation of at least 58,000 jobs between 2006 and 2026.
- Attract and grow knowledge based employment in North Kent.
- Increase the rate of new business start-ups.
- Maximise the economic benefits of universities.

3.8 Thames Estuary 2050 Growth Commission 2050 Vision: Sets out an ambitious vision and delivery plan for north Kent, south Essex and east London, highlighting the key challenges and opportunities of the area, alongside future trends. The ‘Inner Estuary’ area includes Dartford. Key challenges that have been highlighted for this area include:

- Unresolved approach to the Swanscombe Peninsula.
- Air quality issues.
- Slow pace of delivery at Ebbsfleet Garden City.
- Poor education and skills attainment.
- The need to maximise the homes and jobs that could be unlocked through infrastructure investment.

3.9 The Kent Environment Strategy sets out a strategy for the economy and environment in Kent and considers the challenges and opportunities Kent faces, most notably the sustained austerity.

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on public sector finances and the need to work more efficiently. This means identifying opportunities to deliver across outcomes, working in partnership and accessing external funding wherever possible to deliver priorities.

**Current Baseline**

3.10 Wholesale and retail trade (including the repair of motor vehicles) makes up the largest industry in the Borough with 17.6% of the working population employed in this industry. This is likely to be linked to the Bluewater Regional shopping centre, which is located in the Borough and employs large numbers of people. The next largest industries are human health and social work activities with 11.8% and construction with 10.8%.54

3.11 In terms of retail, it is noted that as well as the town centre, the borough has identified a range of other retail centres, meeting retail demand in the Borough.

3.12 In terms of occupation 14.7% of working residents are in administrative and secretarial occupations, 14.6% are in professional occupations and 12.6% are in skilled trade occupations.55 74.1% (52,400) of 16 – 64 years olds living in Dartford are in employment and Dartford has experienced the largest change in total workforce since 1997 in Kent, with an increase of over 65%.56

3.13 In 2016 there were 63,000 jobs in Dartford, which is a rise of 1,000 from 2015 and 16,300 from 2001. The average gross weekly pay for full time workers was £667.20 for males and £490.10 for females.57 The median weekly full time earnings for Dartford remain higher than both the Kent and Great Britain averages.58

3.14 Unemployment in Dartford is low, at only 1.2% in 201759 and is below the average for Kent and Great Britain. Unemployment is now lower than the level before the recession of the late 2000s and early 2010s.60 However, unemployment between the years of 2016 and 2017 rose slightly with 815 people unemployed in March 2017, up from 740 in 2016 (increase of 7.9%). There is a notable gender split in terms of economic activity. Male rates of activity are high at 89%, but female rates, at 67% are the lowest of all surrounding boroughs / districts61.

3.15 In 2017 there were 4,210 enterprises62 in Dartford along with 5,180 local units63. The number of enterprises has increased from 2,830 in 2010 and the number of local units has increased from 3,765 in 2010.64 Overall in 2016 / 17 there was a gain in employment floorspace, largely due to a large distribution centre being completed in Northern Gateway. The amount of office and industrial floor space declined by a small amount in this time period.

3.16 Dartford town centre is the Borough’s main traditional town centre. Data shows that the town centre vacancy rate for the South East is lower than for England as a whole, at 9.9% compared with 11% and monitoring shows that Dartford’s primary retail frontage is seeing declining vacancy rates. The net change in floor space shows an increase of 2,651 sq m of retail floorspace between

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54 NOMIS – Local Area Report (2011) – Dartford [online] Available at: https://www.nomisweb.co.uk/reports/localarea?compare=1946157313
55 NOMIS – Local Area Report (2011) – Dartford [online] Available at: https://www.nomisweb.co.uk/reports/localarea?compare=1946157313
56 Dartford Borough Council (2018) Economic and Employment Paper
59 Dartford Borough Council (2018) Economic and Employment Paper
61 Dartford Borough Council (2018) Economic and Employment Paper
62 An enterprise is the overall business, made up of all individual sites / workplaces.
63 A local unit is an individual site associated with an enterprise.
2016 and 2017, although financial and professional services, restaurants and cafes and drinking establishments have seen a small decline.\(^{65}\)

3.17 The Thames Gateway Kent Partnership identified the following key investment opportunities in the Borough\(^{66}\):

- Dartford Northern Gateway – mixed use development which will deliver 1,300 new home and 1,200 new jobs.
- Improvements to Dartford town centre.
- Ebbsfleet Garden City – a new generation garden city which includes; 15,000 homes, 5.5 million sq ft of commercial space and two million sq ft of retail, leisure and community facilities, for example:
  - Eastern Quarry – 260 ha site with scope for 6,250 homes.
  - Ebbsfleet Central – 150 ha site which could deliver 790,000 sq m of mixed use development.
  - Swanscombe peninsula – 353 ha site proposed for a world class leisure resort.

3.18 Policy CS7 of the Core Strategy identifies the areas above together with other identified sites which together with new service jobs provide sufficient capacity to achieve a net growth of approximately 26,500 jobs. Thames Waterfront is to provide 456,000 sq m of B1, B2 and B8 use, providing approximately 11,800 jobs and Development at Dartford Town Centre 41,300 sq m of employment floorspace. Some, but not all, of this floorspace, most notably at Ebbsfleet Central, has or is to be delivered in the short to medium term.

3.19 A further 27,200 sq m is to be provided at other sites north of the A2 and 2,500 sq m south of the A2.

3.20 The Borough’s transport infrastructure supports it as a net importer of labour. The M25 and A2 pass through the centre of the Borough and there are seven railway stations linking to London and Kent, including HS1 which access central London in 20 minutes and domestic services. However, the Borough experiences significant difficulties with congestion and delays often spilling over from the strategic road to local road network, which has the potential to inhibit growth in the Borough.\(^{67}\)

3.21 The UK is due to leave the European Union in March 2019. It is uncertain what effect this will have on the Dartford economy, particularly given its excellent transport links to the continent and the rest of the UK.

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4 Transport Connections and Travel Habits

Policy Context

International

4.1 The Trans-European Networks (TEN): Created by the European Union by Articles 154-156 of the Treaty of Rome (1957), with the stated goals of the creation of an internal market and the reinforcement of economic and social cohesion. These include the Trans-European Transport Networks (TEN-T), which includes High Speed 1, and the Trans-European Telecommunications Networks (eTEN).

National

4.2 National Planning Policy Framework (NPPF): Encourages local planning authorities to consider transport issues from the earliest stages of plan making so that; opportunities to promote sustainable transport are identified, the environmental impacts of traffic and transport infrastructure can be identified and assessed, and opportunities from existing or proposed transport infrastructure are realised. States that the planning system should actively manage growth patterns in support of these objectives.

4.3 National Planning Practice Guidance (PPG): Reiterates the requirement for local planning authorities to undertake an assessment of the transport implications of reviewing their Local Plan.

4.4 Door to Door: A strategy for improving sustainable transport integration: Focuses on four core areas which need to be addressed so that people can be confident in choosing greener modes of transport. There are as follows:

- Accurate, accessible and reliable information about different transport options.
- Convenient and affordable tickets.
- Regular and straightforward connections at all stages of the journey and between different modes of transport.
- Safe and comfortable transport facilities.

4.5 The strategy also includes details on how the Government is using behavioural change methods to reduce or remove barriers to the use of sustainable transport and working closely with stakeholders to deliver a better-connected transport system.

4.6 Department for Transport, The Road to Zero (2018): Sets out new measures towards cleaner road transport, aiming to put the UK at the forefront of the design and manufacturing of zero emission vehicles. It explains how cleaner air, a better environment, zero emission vehicles and a strong, clean economy will be achieved. One of the main aims of the document is for all new cars and vans to be effectively zero emission by 2040.

Sub-national

4.7 Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031: Sets out Kent County Council’s Strategy and Implementation Plans for local transport investment for the period 2011-31. Transport priorities for Dartford include the following:

- Improvements or new bridge at A282 Junction 1a.
- Measures to address the impacts of Dartford Crossing traffic on the local road network.
- Swanscombe and Stone crossing station replacements.
- Infrastructure to support the proposed leisure park on the Swanscombe peninsula.
- A226 relief road at Swanscombe peninsula.
- A226 London Road / St Clement's Way.
- Expansion of fastrack bus network.
- A2 Ebbsfleet junction improvements.
- A2 Bean junction improvements, including a new bridge.
- Public transport service improvements in the Borough.
- Improve walking and cycling infrastructure.
- Dartford town centre improvements: walking / cycling, bus access, easing congestion, variable message signs and car park signing.
- Crossrail extension to Dartford/ Ebbsfleet.
- Pedestrian / cycle bridge over River Daren to Northern Gateway strategic site.

4.8 **Kent and Medway Growth and Infrastructure Framework (GIF) 2018 update** provides a view of emerging development and infrastructure requirements to support growth across Kent and Medway. Issues highlighted in the Framework for Dartford include:

- Dartford is a net importer of labour.
- Expected increase of 59% in the size of the Borough (households) up to 2031.
- Dartford is seeing one of the fastest rates of home sales in the Country.
- Investment will be required in the M25 and the A2 in order to enable growth and keep Dartford moving.

4.9 More widely issues for North Kent include:

- Congestion on highway networks in town centres and arterial routes.
- Capacity limitation of the M2.
- Stretched rail capacity on the North Kent Line.

4.10 **The Kent Design Guide** seeks to provide a starting point for good design while retaining scope for creative, individual approaches to different buildings and different areas. With regard to transport, the Design Guide promotes a sustainable approach to development which requires that location, transport connections, mix of uses and community facilities, together with careful husbanding of land and energy resources all combine to produce social and economic benefits: healthier living and working environments; improved efficiency and productivity in use; and reduction of fuel costs and the costs of vehicle ownership.

4.11 **Network Rail South East Route: Kent Area Route Study (May 2018)** sets out the strategic vision for the future of this part of the rail network over the next 30 years. The study builds on the recommendation in the Shaw Review that the railway is planned based on customer, passenger and freight needs. The Route Study seeks to identify capacity requirements in the medium and long term to allow the railway to play its part in delivering economic growth, in addition to improving the connections between people and jobs and businesses and markets.

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identifies some potential sources of capacity to meet needs into the early 2020s but uncertainty remains beyond that.  

**Current Baseline**

4.12 Dartford’s location at the edge of Greater London means that it is a key location in terms of the strategic highway network, with the M25 and A2 passing through the centre of the Borough. Dartford also has a significant rail infrastructure and contains seven railway stations: Dartford, Stone Crossing, Greenhithe, Swanscombe, Ebbsfleet International, Farningham Road, and Longfield. Ebbsfleet International connects the Borough directly to continental Europe and provides high speed services to central London (20 minutes). Figure 4.1 shows the major transport links in the Borough.

4.13 There is a good network of bus services in the northern, more urban part of the Borough, although frequent road congestion, associated with the strategic road network, can make journey times unreliable. Bus services in the more rural, southern part of the Borough are poor.  

4.14 The Fastrack bus service, which ultimately will connect nearly all of the major and new developments in Dartford and Gravesham, opened in 2006 and since then new phases have been introduced. Future plans for enhancements to the service continue in partnership with the Ebbsfleet Development Corporation, Gravesham Borough and Kent County Council.

4.15 As previously stated the major interchange of two strategic traffic routes, the M25 and A2 is located within Dartford. Both of these routes suffer from severe congestion at peak times and when there are traffic incidents – which are frequent and often severe. These sections of the strategic road network cater for both regional and local journeys.

4.16 Various development traffic assessments have identified a significant number of points on the network where current or projected capacity is at a point at which congestion and delays will rise in the absence of mitigation measures. There are four Air Quality Management Areas in the Borough. These are at the A282/M25 tunnel approach, the A2 Bean Interchange, London Road and Dartford Town Centre. The wider trend of increased freight and people movement is exacerbating congestion and air pollution locally.

4.17 In addition to issues with road capacity, rail capacity on the North Kent line is also stretched and is likely to be overcapacity in the near future. A number of the stations have access or safety issues and many are difficult to access by other forms of public transport.

4.18 The Network Rail Kent Area Route Study also highlights capacity issues in the railways in Kent and states that the number of passengers using the railway across the route has increased substantially in recent years and further growth is forecast – up to 15% growth in passenger numbers between 2011 and 2024 and 47% up to 2044. Routes into London are particularly busy, with little capacity to operate additional services.

4.19 Of the 40,081 households in the Borough in 2011, 7,684 had no access to a car or van, whereas 18,252 had one car or van in their household and 10,849 had two cars or vans in the household. In terms of mode of travel to work: 12% of the Borough’s residents use the train, 4% use the bus, 41% drive, 0.75% cycle, 5% walk, 2.5% work from home, 1% use a motorcycle, 3% travel


as a car passenger and the remaining 30% are not in work.\textsuperscript{81} The Dartford Core Strategy includes measures to encourage a shift from dependency on car travel to reduce congestion, improve air quality and to support international and national policy responses to tackling climate change.

4.20 Unlike many of the local authorities surrounding London, Dartford is a net importer of labour as more people travel into Dartford to work than commute out of the Borough. This is due to some large employers and employment centres being located in the Borough,\textsuperscript{82} for example Crossways Business Park, the Bluewater Shopping Centre, Darent Valley Hospital, and Dartford town centre; some of which are not well served by direct rail services.

4.21 The Dartford crossing is located just north of the town of Dartford and is an extremely busy river crossing (linking Kent to Essex and to the north), regularly experiencing congestion. Whilst the location of a new Lower Thames Crossing has been identified east of Gravesend, due to open in 2027, it is not yet certain as to the degree to which it will relieve the level of vehicle crossings at the current location.\textsuperscript{83}


Figure 4.1: Transport Links

Dartford District

Neighbouring Local Authority boundary

Rail station

Bus stop

Street

A Road

B Road

Motorway

Railway line

Rail tunnel

Source: DBC

Map Scale @ A4: 1:65,000

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5 Air, Land and Water Quality

Policy Context

International

5.1 European Nitrates Directive (1991): Identifies nitrate vulnerability zones and puts in place measures to reduce water pollution caused by the introduction of nitrates.


5.3 European Air Quality Framework Directive (1996) and Air Quality Directive (2008): Put in place measures for the avoidance, prevention, and reduction in harmful effects to human health and the environment associated with ambient air pollution and establish legally binding limits for the most common and harmful sources of air pollution.

5.4 European Drinking Water Directive (1998): Protects human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.

5.5 European Landfill Directive (1999): Prevents and reduces the negative effects on the environment from the landfilling of waste by introducing stringent technical requirements for waste and landfills.


5.7 European Waste Framework Directive (2008): Sets out the waste hierarchy requiring the reduction of waste production and its harmfulness, the recovery of waste by means of recycling, re-use or reclamation and final disposal that does not harm the environment, including human health.

5.8 European Industrial Emission Directive (2010): Lays down rules on integrated prevention and control of pollution arising from industrial activities. It also lays down rules designed to prevent or, where that is not practicable, to reduce emissions into air, water and land and to prevent the generation of waste, in order to achieve a high level of protection of the environment taken as a whole.

National

5.9 Marine and coastal Access Act 2009: provides the legal mechanism to help ensure clean, healthy, safe, productive and biologically diverse oceans and seas. It provides for a Marine Management Organisation, a Marine Planning system that agrees objectives and priorities for the future for the sustainable use of the marine environment, the identification of Marine Conservation Zones (MCZ’s) to provide the mechanism to deliver marine conservation commitments, creation of a continuous route around the entirety of the English and Welsh coastline plus a number of other marine management measures.

5.10 National Planning Policy Framework (NPPF)\(^\text{84}\) contains the following:

- The planning system should protect and enhance soils in a manner commensurate with their quality identified in the development plan.

New and existing development should be prevented from contributing to, being put at an unacceptable risk from, or being adversely affected by, soil, air, water or noise pollution or land instability.

“Despoiled, degraded, derelict, contaminated and unstable land” should be remediated where appropriate.

The NPPF encourages the reuse of previously developed land where suitable opportunities exist.

5.11 National Planning Practice Guidance (PPG)\(^85\): Requires local planning authorities to demonstrate every effort has been made to prioritise the use of poorer quality agricultural land for development were it has been demonstrated that significant development is required on agricultural land.

5.12 Waste management plan for England\(^86\): Provides an analysis on the current waste management situation in England, and evaluates how it will support implementation of the objectives and provisions of the revised Water Framework Directive.

5.13 National Planning Policy for Waste (NPPW)\(^87\): Key planning objectives are identified within the NPPW, requiring planning authorities to:

- Help deliver sustainable development through driving waste management up the waste hierarchy.
- Ensure waste management is considered alongside other spatial planning concerns
- Provide a framework in which communities take more responsibility for their own waste
- Help secure the recovery or disposal of waste without endangering human health and without harming the environment.
- Ensure the design and layout of new development supports sustainable waste management.

5.14 Safeguarding our Soils – A Strategy for England\(^88\): Sets out how England’s soils will be managed sustainably. It highlights those areas which Defra will prioritise and focus attention in tackling degradation threats, including: better protection for agricultural soils; protecting and enhancing stores of soil carbon; building the resilience of soils to a changing climate; preventing soil pollution; effective soil protection during construction and; dealing with contaminated land.

5.15 Water White Paper\(^89\): Sets out the Government's vision for the water sector including proposals on protecting water resources and reforming the water supply industry. It states outlines the measures that will be taken to tackle issues such as poorly performing ecosystem, and the combined impacts of climate change and population growth on stressed water resources.

5.16 Water for Life White Paper\(^90\): Sets out how to build resilience in the water sector. Objectives of the White Paper are to:

- Paint a clear vision of the future and create the conditions which enable the water sector and water users to prepare for it.
- Deliver benefits across society through an ambitious agenda for improving water quality, working with local communities to make early improvements in the health of our rivers by reducing pollution and tackling unsustainable abstraction.

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• Keep short and longer term affordability for customers at the centre of decision making in the water sector.
• Protect the interest of taxpayers in the policy decisions that we take.
• Ensure a stable framework for the water sector which remains attractive to investors.
• Stimulate cultural change in the water sector by removing barriers to competition, fostering innovation and efficiency, and encouraging new entrants to the market to help improve the range and quality of services offered to customers and cut business costs.
• Work with water companies, regulators and other stakeholders to build understanding of the impact personal choices have on the water environment, water resources and costs.
• Set out roles and responsibilities – including where Government will take a stronger role in strategic direction setting and assessing resilience to future challenges, as well as clear expectations on the regulators.

5.17 **The Air Quality Strategy for England, Scotland, Wales and Northern Ireland**\(^91\): Sets out a way forward for work and planning on air quality issues by setting out the air quality standards and objectives to be achieved. It introduces a new policy framework for tackling fine particles, and identifies potential new national policy measures which modelling indicates could give further health benefits and move closer towards meeting the Strategy’s objectives. The objectives of the Strategy are to:

• Further improve air quality in the UK from today and long term.
• Provide benefits to health quality of life and the environment.

5.18 **Future Water: The Government’s water strategy for England**\(^92\): Sets out how the Government wants the water sector to look by 2030, providing an outline of steps which need to be taken to get there. These steps include: improving the supply of water; agreeing on important new infrastructure such as reservoirs; proposals to time limit abstraction licences; and reducing leakage. The document also states that pollution to rivers will be tackled, whilst discharge from sewers will be reduced.

5.19 **A Green Future: Our 25 Year Plan to Improve the Environment**\(^93\): Sets out goals for improving the environment within the next 25 years. It details how the Government will work with communities and businesses to leave the environment in a better state than it is presently. Identifies six key areas around which action will be focused. Those of relevance to this chapter are: using and managing land sustainably; recovering nature and enhancing the beauty of landscapes; and increasing resource efficiency, and reducing pollution and waste. Actions that will be taken as part of these three key areas are as follows:

• Using and managing land sustainably:
  o Embed a ‘net environmental gain’ principle for development, including natural capital benefits to improved and water quality.
  o Protect best agricultural land.
  o Improve soil health, and restore and protect peatlands.

• Recovering nature and enhancing the beauty of landscapes:
  o Respect nature by using our water more sustainably.

• Increasing resource efficiency and reducing pollution and waste:
  o Reduce pollution by tackling air pollution in our Clean Air Strategy and reduce the impact of chemicals.

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5.20 **UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations**[^4]: Sets out the Government’s ambition and actions for delivering a better environment and cleaner air, including £1 billion investment in ultra low emission vehicles (ULEVs), a £290 million National Productivity Investment Fund, a £11 million Air Quality Grant Fund and £255 million Implementation Fund to help local authorities to prepare Air Quality Action Plans and improve air quality, an £89 million Green Bus Fund, £1.2 billion Cycling and Walking Investment Strategy and £100 million to help improve air quality on the National road network.

5.21 **Department for Transport, The Road to Zero (2018)**: Sets out new measures towards cleaner road transport, aiming to put the UK at the forefront of the design and manufacturing of zero emission vehicles. It explains how cleaner air, a better environment, zero emission vehicles and a strong, clean economy will be achieved. One of the main aims of the document is for all new cars and vans to be effectively zero emission by 2040.

### Sub-national

5.22 **Water for life and livelihoods. Part1: Thames River Basin District River Basin Management Plan DEFRA (Updated December 2015)**[^5]: Provides a long term framework for managing the issues that affect the quality of the water environment in the Thames District River Basin. A series of actions and time periods is provided to address the significant water management issues within the Basin. These include physical modifications, pollution from waste water and surface water drainage in urban and rural areas, changes in natural flow and water levels due to human activity and climate change. Relevant actions include consideration of the impact on water quality in the preparation of Local Plans, use of planning conditions and SuDS to manage pollution from urban and rural development, and local plan policy to ensure efficient use of water.

5.23 The Darent and Cray catchment partnership are responsible for local measures. Priority issues in the catchment are diffuse pollution, modified physical habitats and invasive non-native species.

5.24 **Kent Environment Strategy**[^6] sets the following targets in relation to the quality of the environment:

- Decrease the number of days of moderate or higher air pollution and the concentration of pollutants (align with the Kent and Medway Air Quality Partnership and national monitoring standards).
- Work to reduce the noise exposure from road, rail and other transport.
- Reduce water use from 160 to 140 litres per person per day.
- 28 Kent and Medway water bodies will be at good status by 2021.

5.25 **Kent and Medway Growth and Infrastructure Framework (GIF) 2018 update**: Sets out the fundamental infrastructure needed to support growth planned to 2031 across Kent and Medway. The document identifies water and waste water challenges across the region arising from new housing, jobs and associated infrastructure. These include the need to provide additional clean water supplies and the management of increased amounts of waste water. Additional demand will need to be met from the abstraction of existing ground or surface water resources or through the development of new resources. Kent and Medway is already an area of serious water stress.

5.26 **Kent Minerals and Waste Local Plan 2013-30**[^7]: Describes (1) the overarching strategy and planning policies for mineral extraction, importation and recycling, and the waste management of all waste streams that are generated or managed in Kent; and (2) the spatial implications of


economic, social and environmental change in relation to strategic minerals and waste planning. The Plan identifies a number of areas of minerals safeguarding across Dartford. Some are already been developed or are identified for future development.

Current Baseline

Air quality

5.27 The Kent Environment Strategy highlights Kent’s unique challenge presented by the County’s position between London and the continent. Easterly winds can bring pollution from cross-channel freight and the continent and westerly winds bring pollution from London. There are currently 40 air quality management areas in the County where air pollutants have been known to exceed objectives set by government.

5.28 There are four Air Quality Management Areas in the Borough. These are shown in Figure 5.1 and are at:

- A282/M25 tunnel approach – declared for exceedances of PM10 and NO2.
- the A2 Bean Interchange - declared for exceedances of NO2.
- London Road, Dartford – declared for exceedances of PM10 and NO2.
- Dartford Town Centre – declared for exceedances of NO2.

5.29 While levels of NO2 in the Borough’s AQMAs is high, overall the pattern is of reducing NO2 (although there are fluctuations year on year). This is highlighted in the 2017 Air Quality Annual Status Report. However there are still significant challenges ahead in order to achieve air quality objectives. Further reductions in NO2 will be achieved through policy documents such as the DfT’s The Road to Zero: Next steps towards cleaner road transport and delivering our industrial strategy, which aims to put the UK at the forefront of the design and manufacturing of zero emission vehicles.

Land quality and soils

5.30 Much of the northern part of the Borough has been developed. However, the majority of the countryside south of the A2 is agricultural land and a significant proportion of it is classified as grades 1, 2 and 3a (the best and most versatile agricultural land). This land lies entirely within the Green Belt.

5.31 The North Kent Plain covers the area south of the A2 and is one of the most fertile and productive agricultural areas in Kent. The agricultural landscape in this area needs enhancing with hedgerows and woodland corridors to encourage ecology. Despite protection under the 1997 Hedgerow Regulations, hedgerows have been lost in the Borough since the mid-70s.

Geology and minerals

5.32 Regionally Important Geological/Geomorphological Sites (RIGS) are designated at the regional level for their geodiversity value. These are sites that do not have national recognition as SSSI but are important in the local area. In the Borough there are two RIGS.

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- Bluewater Quarry.
- Beacon Wood Country Park.

5.33 The main minerals that are safeguarded across the Borough include sub-alluvial river terrace deposits and river terrace deposits.

**Water quality**

5.34 The Kent Environment Strategy\(^{103}\) names Kent as one of the driest regions in England and Wales. Kent’s household water use is above the national average (154 litres per person per day compared with 141 litres nationally) and its water resources are under continued pressure, requiring careful management and planning. The Dartford Development Policies Plan sets a requirement for development to meet water efficiency requirements.

5.35 Groundwater is a key water resource within Kent and supplies a significant proportion of water supply to users within Dartford.\(^{104}\)

5.36 Projected population growth in Dartford is expected to increase demand for sewerage services. The 2009 Thames Gateway Water Cycle Study identified no major barriers to development associated with water supply and waste water infrastructure.\(^{105}\) However, recently Ebbsfleet Development Corporation has worked with utility providers to provide a new network and facilities to accommodate future demand for sewerage services.

5.37 There are two main water bodies that flow through, or past the Borough: the Thames and the Darent. In terms of water quality Middle and Lower Darent achieved moderate ecological water quality and good chemical water quality with a target to achieve good for both by 2021.\(^{106}\) Thames Middle achieved moderate ecological water quality in 2016 but failed to meet the chemical water quality criteria\(^{107}\).

5.38 Kent’s Water for Sustainable Growth Study\(^{108}\) demonstrates that a large proportion of water bodies in Kent are failing to meet the Water Framework Directive objective of ‘Good Status’. This is due to a number of reasons such as pressures ranging from physical modification, to pollution and over-abstraction. The Environment Agency’s River Basin Management Plans\(^{109}\) identify that the pressures are such that aiming to achieve improvement to ‘Good Status’ by 2027 in Kent is unlikely to be possible in many water bodies either due to technical infeasibility or improvement measures being disproportionately costly.

5.39 Pressures related to the provision of water supply and wastewater treatment are key contributors to the current status and future status of water bodies in Kent. In combination with other pressures, abstractions for public water supply and discharges of wastewater are impacting on key Water Framework Directive supporting elements which are critical to attaining overall Good Status; this includes impact on hydrological regime, biological quality and physico-chemical quality\(^{110}\).

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\(^{104}\) Aecom (2017) Kent Water for Sustainable Growth Study


\(^{108}\) Aecom (2017) Kent Water for Sustainable Growth Study


\(^{110}\) Aecom (2017) Kent Water for Sustainable Growth Study
Figure 5.1: Air Quality Management Areas

Dartford District

Neighbouring Local Authority boundary

Air Quality Management Area

Source: DBC

Map Scale @ A4: 1:65,000
6 Climate Change Adaptation and Mitigation

Policy Context

International

6.1 European Floods Directive (2007): A framework for the assessment and management of flood risk, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity.


6.3 United Nations Paris Climate Change Agreement (2015): International agreement to keep global temperature rise this century well below 2 degrees Celsius above pre-industrial levels.

National

6.4 National Planning Policy Framework (NPPF): Contains the following:

- One of the core planning principles is to "support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure".

- Inappropriate development in areas at risk of flooding should be avoided. Where development is necessary, it should be made safe without increasing flood risk elsewhere.

- Local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures.

6.5 National Planning Practice Guidance (PPG): Supports the content of the NPPF by promoting low carbon and renewable energy generation, including decentralised energy, the energy efficiency of existing and new buildings and sustainable transport.

6.6 Climate Change Act 2008: Sets targets for UK greenhouse gas emission reductions of at least 80% by 2050 and CO₂ emission reductions of at least 26% by 2015, against a 1990 baseline.

6.7 Flood and Water Management Act (2010): Sets out measures to ensure that risk from all sources of flooding is managed more effectively. This includes: incorporating greater resilience measures into the design of new buildings; utilising the environment in order to reduce flooding; identifying areas suitable for inundation and water storage to reduce the risk of flooding elsewhere; rolling back development in coastal areas to avoid damage from flooding or coastal erosion; and creating sustainable drainage systems (SuDS).

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6.8 **The UK Renewable Energy Strategy**\(^ {115} \): Sets out the ways in which we will tackle climate change by reducing our CO\(_2\) emissions through the generation of a renewable electricity, heat and transport technologies.

6.9 **The Energy Efficiency Strategy: The Energy Efficiency Opportunity in the UK**\(^ {116} \): Aims to realise the wider energy efficiency potential that is available in the UK economy by maximising the potential of existing dwellings by implementing 21\(^{st}\) century energy management initiatives on 19\(^{th}\) century homes.

6.10 **The National Adaptation Programme: Making the country resilient to a changing climate**\(^ {117} \): Sets out visions for the following sectors:

- **Built Environment** – "buildings and places and the people who live and work in them are resilient to a changing climate and extreme weather and organisations in the built environment sector have an increased capacity to address the risks and take the opportunities from climate change”.

- **Infrastructure** – "an infrastructure network that is resilient to today’s natural hazards and prepared for the future changing climate”.

- **Healthy and resilient communities** – "a health service, a public health and social care system which are resilient and adapted to a changing climate. Communities and individuals, including the most vulnerable, are better prepared to cope with severe weather events and other impacts of climate change. Emergency services and local resilience capability take account of and are resilient to, a changing climate”.

- **Agriculture and Forestry** – "profitable and productive agriculture and forestry sectors that take the opportunities from climate change, are resilient to its threats and contribute to the resilience of the natural environment by helping maintain ecosystem services and protect and enhance biodiversity”.

- **Natural Environment** – "the natural environment, with diverse and healthy ecosystems, is resilient to climate change, able to accommodate change and valued for the adaptation services it provides”.

- **Business** – "UK businesses are resilient to extreme weather and prepared for future risks and opportunities from climate change”.

- **Local Government** – "Local government plays a central in leading and supporting local places to become more resilient to a range of future risk and to be prepared for the opportunities from a changing climate”.

6.11 **Understanding the risks, empowering communities, building resilience: The national flood and coastal erosion risk management strategy for England**\(^ {118} \): This Strategy sets out the national framework for managing the risk of flooding and coastal erosion. It sets out the roles for risk management authorities and communities to help them understand their responsibilities. The strategic aims and objectives of the Strategy are to:

- Manage the risk to people and their property.

- Facilitate decision-making and action at the appropriate level – individual, community or local authority, river catchment, coastal cell or national.

- Achieve environmental, social and economic benefits, consistent with the principles of sustainable development.

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6.12 **A Green Future: Our 25 Year Plan to Improve the Environment**: Sets out goals for improving the environment within the next 25 years. It details how the Government will work with communities and businesses to leave the environment in a better state than it is presently. Identifies six key areas around which action will be focused. Those of relevance to this chapter are: using and managing land sustainably; and protecting and improving our global environment. Actions that will be taken as part of these two key areas are as follows:

- **Using and managing land sustainably:**
  - Take action to reduce the risk of harm from flooding and coastal erosion including greater use of natural flood management solutions.

- **Protecting and improving our global environment:**
  - Provide international leadership and lead by example in tackling climate change and protecting and improving international biodiversity.

**Sub-national**

6.13 **Kent Environment Strategy** sets the following targets in relation to climate change mitigation and adaptation:

- Reduce emissions across the County by 34% by 2020 from a 2012 baseline (2.6% per year).
- More than 15% of energy generated in Kent will be from renewable sources by 2020 from a 2012 baseline.
- Reduce the number of properties at risk from flooding.

6.14 **Growing the Garden of England: A strategy for environment and economy in Kent**: Seeks to ensure that a future sustainable community strategy helps to achieve a high quality Kent environment that is low carbon, resilient to climate change, and has a thriving green economy at its heart. The Strategy is organised into three themes and ten priorities:

- **Living ‘well’ within our environmental limits** – leading Kent towards consuming resources more efficiently, eliminating waste and maximising the opportunities from the green economy:
  - Make homes and public sector buildings in Kent energy and water efficient, and cut costs for residents and taxpayers.
  - Ensure new developments and infrastructure in Kent are affordable, low carbon and resource efficient.
  - Turn our waste into new resources and jobs for Kent.
  - Reduce the ecological footprint of what we consume.

- **Rising to the climate change challenge** – working towards a low carbon Kent prepared for and resilient to the impacts of climate change:
  - Reduce future carbon emissions.
  - Manage the impacts of climate change, in particular extreme weather events.
  - Support the development of green jobs and business in Kent.

- **Valuing our natural, historic and living environment** – optimising the real economic and social benefits of high environmental quality while protecting and enhancing the unique natural and built-in character of Kent:

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o Utilise the full social and economic potential of a high quality natural and historic environment in Kent.

o Conserve and enhance the quality of Kent’s natural and heritage capital.

o Ensure that Kent residents have access to the benefits of Kent’s coast, countryside, green space and cultural heritage.

6.15 **Thames Estuary 2100**: the document sets out the Environment Agency’s recommendations for flood risk management for London and the Thames Estuary through to the end of the century and beyond. The Plan sets out the future shape of flood risk management, strategic action that is needed and options to achieve this, local actions that are needed, and how the impact of rising sea levels needs to be addressed. Action Zone 5 covers Dartford Borough. Actions have been identified which include hard and soft measures including maintaining, enhancing and replacing existing defences and to incorporate Riverside Strategy concept into Local Plans.\(^{122}\)

### Current Baseline

6.16 Changes to the climate will bring new challenges to the Borough’s built and natural environments. Hotter, drier summers may have adverse health impacts and may exacerbate the adverse environmental effects of air and water pollution. The UK Climate Projections (UKCP09) show that in 2050 the climate in the South East will be warmer with wetter winters and drier summers than at present.\(^{123}\) Specifically:

- Under medium emissions, the increase in winter mean temperature is estimated to be 2.2°C; it is unlikely to be less than 1.1°C and is very unlikely to be more than 3.4°C.

- Under medium emissions, the increase in summer mean temperature is estimated to be 2.8°C; it is unlikely to be less than 1.3°C and is very unlikely to be more than 4.6°C.

6.17 A changing climate may place pressure on some native species and create conditions suitable for new species, including invasive non-native species.

6.18 The main sources of flooding in Kent Thameside have been identified as:\(^{124}\)

- Failure / overtopping of the River Thames Tidal Defences.
- Failure / overtopping of the River Thames Tributaries’ defences.
- Surface water and groundwater flooding.
- Failure to operate the flood defence gates.

6.19 The Environment Agency provides mapped data on the risk of flooding. This data is due to be updated in line with an updated hydrological model for the lower river Darent. These updated maps are likely to be available after Spring 2019. **Figure 6.1** shows areas at risk of flooding in the Borough, based on current Environment Agency flood zones.

6.20 The effect of new development on surface water flood risk was investigated further in the Strategic Flood Risk Assessment of Kent Thameside (2005). The outline analysis showed that consequences can be significant in low-lying areas with small catchments draining through the tidal defences. In these low-lying areas, foul drainage will need to be pumped and the siting and continuous operation of pumping stations in flood conditions will be key to prevent health hazards. However, breaching of the tidal flood defences would have much larger consequences, as set out in the Thames Estuary 2100 Plan. Groundwater flooding could similarly become an issue in low-lying areas.


6.21 The Government publishes data on the CO₂ emissions per capita in each local authority that are deemed to be within the influence of local authorities. Kent is committed to reducing greenhouse gas emissions by 34% by 2020 and 60% by 2030 from a 2005 baseline (current progress is a 21% reduction since 2005). In the context of planned growth of Kent’s population and housing development, additional low carbon and appropriate renewable energy infrastructure, as well as an increase in uptake of energy efficiency initiatives will be needed to ensure Kent meets their targets and benefits from the opportunities for innovation in these sectors. Some 80% of the housing stock that will be used over the next few decades is already in place and so opportunities to retrofit energy technologies and support a change to low carbon lifestyles will be key to supporting residents in reducing costs and improving energy security.125

6.22 Table 6.1 shows CO₂ (shown as tonnes of CO₂ per person) emissions for Dartford for 2005 and 2013 across industrial, domestic and transport sectors. As can be seen in Table 6.1, there has been a reduction between 2005 and 2013 across all sectors and transport accounts for the largest amount of CO₂ emissions.126

Table 6.1 CO₂ emissions in Dartford (shown as tonnes of CO₂ per person)

<table>
<thead>
<tr>
<th>Year</th>
<th>Industrial and Commercial</th>
<th>Domestic</th>
<th>Transport</th>
<th>Total</th>
</tr>
</thead>
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<td>3.5</td>
<td>2.3</td>
<td>3.8</td>
<td>9.7</td>
</tr>
<tr>
<td>2013</td>
<td>1.9</td>
<td>1.9</td>
<td>2.9</td>
<td>6.8</td>
</tr>
</tbody>
</table>

6.23 The Dartford Greenhouse Gas Emission Report 2016/17 also reports a decrease in the Borough’s total Greenhouse Gas emissions over the past 9 years. In 2008/9 total emissions in terms of carbon dioxide equivalent were 3580 CO₂e, in 2016/17 this was down to 1792 CO₂e.127

Figure 6.1: Flood Risk

- Dartford District
- Neighbouring Local Authority boundary
- River
- Lake
- Area Benefiting from defences
- Flood Zone 3
- Flood Zone 2

Source: Environment Agency

Map Scale @ A4: 1:65,000

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7  Biodiversity

Policy Context

International

7.1  International Convention on Wetlands (Ramsar Convention) (1976): International agreement with the aim of conserving and managing the use of wetlands and their resources.

7.2  European Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (1979): Aims to ensure conservation and protection of wild plant and animal species and their natural habitats, to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species).

7.3  International Convention on Biological Diversity (1992): International commitment to biodiversity conservation through national strategies and action plans.

7.4  European Habitats Directive (1992): Together with the Birds Directive, the Habitats Directive sets the standard for nature conservation across the EU and enables all 27 Member States to work together within the same strong legislative framework in order to protect the most vulnerable species and habitat types across their entire natural range within the EU. It also established the Natura 2000 network.

7.5  European Birds Directive (2009): Requires the maintenance of all species of naturally occurring birds in the wild state in the European territory at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements.


National

7.7  National Planning Policy Framework (NPPF)\(^{128}\): Encourages plans to "identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation". They should also promote conservation, restoration and enhancement of priority habitats and species, ecological networks and measurable net gains for biodiversity.

7.8  National Planning Practice Guidance (PPG)\(^{129}\): Supports the NPPF by requiring Local Plans to include strategic policies that conserve and enhance the natural environment through sustainable development.

7.9  Natural Environment and Rural Communities Act 2006\(^{130}\): Places a duty on public bodies to conserve biodiversity.

7.10  Biodiversity 2020: A strategy for England’s wildlife and ecosystem services\(^{131}\): Guides conservation efforts in England up to 2020 by requiring a national halt to biodiversity loss,

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supporting healthy ecosystems and establishing ecological networks. The Strategy includes 22 priorities which include actions for the following sectors: Agriculture, Forestry, Planning & Development, Water Management, Marine Management, Fisheries, Air Pollution and Invasive Non-Native Species.

7.11 **Biodiversity offsetting in England Green Paper**\(^{132}\): Biodiversity offsets are conservation activities designed to compensate for residual losses. The Green Paper sets out a framework for offsetting.

7.12 **A Green Future: Our 25 Year Plan to Improve the Environment**\(^{133}\): Sets out goals for improving the environment within the next 25 years. It details how the Government will work with communities and businesses to leave the environment in a better state than it is presently. Identifies six key areas around which action will be focused. Those of relevance to this chapter are: recovering nature and enhancing the beauty of landscapes; securing clean, productive and biologically diverse seas and oceans; and protecting and improving our global environment. Actions that will be taken as part of these three key areas are as follows:

- Recovering nature and enhancing the beauty of landscapes:
  - Develop a Nature Recovery Network to protect and restore wildlife, and provide opportunities to re-introduce species that have been lost from the countryside.
  - A ‘net gain’ (environmental improvements, habitat creation, investment into schemes etc) principle for development to be embedded into national and local policy.

- Securing clean, healthy, productive and biologically diverse seas and oceans:
  - Achieve a good environmental status of the UK’s seas while allowing marine industries to thrive, and complete our economically coherent network of well-managed marine protected areas.

- Protecting and improving our global environment:
  - Provide international leadership and lead by example in tackling climate change and protecting and improving international biodiversity.
  - Support and protect international forests and sustainable agriculture.

7.13 **Marine and coastal Access Act 2009**: provides the legal mechanism to help ensure clean, healthy, safe, productive and biologically diverse oceans and seas. It provides for a Marine Management Organisation, a Marine Planning system that agrees objectives and priorities for the future for the sustainable use of the marine environment, the identification of Marine Conservation Zones (MCZ's) to provide the mechanism to deliver marine conservation commitments, creation of a continuous route around the entirety of the English and Welsh coastline plus a number of other marine management measures.

**Sub-national**

7.14 **Kent Environment Strategy**\(^{134}\) sets the following targets in relation to biodiversity:

- A minimum of 65% of local wildlife sites will be in positive management and 95% of SSSIs will be in favourable recovery by 2020.
- 60% of local wildlife sites will be in positive management.
- SSSIs will be in favourable or recovering status by 2020.
- Status of bird and butterfly species in Kent and Medway are quantified.

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7.15 **Kent Biodiversity Action Plan**\(^{135}\): includes 28 Kent Habitat Action Plans. Each Plan denotes the importance of conserving, enhancing and restoring the natural condition of a habitat by working together on projects.

7.16 **A Living Landscape for the South East**\(^{136}\): Sets out a vision for the South East Ecological Network, which involves the restoration and rebuilding of the natural environment, bringing wildlife into our towns and cities, and addressing the challenge of conserving marine wildlife. The documents highlights the following issues:

- There is a need to increase the ability of the environment to protect us from flooding and to soak up carbon dioxide (‘ecosystem services’). This will demand the restoration of extensive areas of natural habitat, particularly wetlands and woodlands.
- Better access to the natural environment helps improve mental and physical health, and improves quality of life. There is a need to bring wild places to more people, and bring more people into wild places.
- Isolated nature reserves and other protected sites are unlikely to be able to sustain wildlife in the long term. Sites will need to be buffered, extended and linked if wildlife is to be able to adapt to climate change.
- Outside protected sites, once common and widespread species are in catastrophic decline. Reversing this decline needs a new approach.

7.17 **Securing the value of nature in Kent**\(^{137}\): Explains the benefits of harnessing the value of nature to support business and economy, public health and productive and environmental management.

7.18 **Swanscombe Marine Conservation Zone**: a section of the Thames Estuary in the North West of Dartford has been proposed by the Government as a Marine Conservation Zone (MCZ). If designated, the MCZ would protect tidal mud, sand, shell and grave seabeds, which would provide habitat for the tentacled lagoon worm, which is scarce in the UK. Only port development is likely to be impacted by the MCZ.

### Current Baseline

7.19 Despite the small scale of the Borough it encompasses a wide range of habitats. UK BAP priority habitats within Dartford include\(^{138}\):

- Marshes – coastal saltmarshes, coastal grazing marshes and floodplain grazing marshes.
- Water bodies – aquifer fed naturally fluctuating water bodies, eutrophic standing waters, ponds, rivers and streams.
- Lowlands – fens, calcareous grasslands, dry acid grassland, meadows and heathland.
- Woodlands – mixed deciduous woodland, wet woodland.

7.20 Natural England has identified 76 different Natural Areas across England based on distinct ecological divisions, of which three are relevant to Dartford\(^{139}\):

- Greater Thames Estuary - the Natural Area covers the Dartford Marsh, Swanscombe Peninsula, the coast and low-lying hinterland. The intertidal zone in Dartford is dominated by salt marshes. These are separated along most of its length by man-made sea defences. Urban

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\(^{135}\) Kent Biodiversity Action Plan [online] Available at: http://www.kentbap.org.uk/

\(^{136}\) The South East Wildlife Trusts (2006) A Living Landscape for the South East [online] Available at: http://www.kentwildlifetrust.org.uk/sites/kentlive.wt.precedenthost.co.uk/files/A_Living_Landscape_for_the_South_East.pdf


development is also present. The area is characterised by open, predominantly flat landscapes and panoramic seascape views.

- North Kent Plain - the Natural Area covers south of the A2 and consists of open, low and gently undulating land. It is one of the most fertile and productive agricultural areas in Kent with intensively cropped irregular fields in addition to woodland.
- North Downs - the Natural Area is present in the south eastern tip of the Borough. The North Downs form one of the most striking landscape features in the South East of England and have outstanding nature conservation interest.

7.21 The Borough contains a large number of designated wildlife sites. Along with 13 Local Wildlife Sites and five Regional Nature Reserves, there are five sites designated as both Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) in the Borough. These are listed below with Natural England’s SSSI condition summary from May 2018 shown in brackets after each SSSI, with more details about these sites provided on the Natural England website:

- Swanscombe Skull Heritage Park (favourable).
- Baker Hole (unfavourable – declining).
- Wansunt Pit (unfavourable - no change).
- Darenth Wood / Lords Wood / Ladies Wood (90% favourable and 10% unfavourable recovering).
- Farningham Woods (favourable).

7.22 The Thames Estuary and Marshes Ramsar site and Special Protection Area (SPA) lies downstream of Dartford, east of Gravesend. While this European Site does not fall within the Borough itself, research studies have identified that development in the Borough has the potential to impact these internationally important sites.

7.23 There are 16 Biodiversity Opportunity Areas (BOA) across Kent, of which two fall within Dartford. These are the Thames-side Green Corridors BOA and the Central North Downs BOA. These cover almost all of the undeveloped land in the north of the Borough and substantial amounts of land south of the A2.

7.24 Figure 7.1 shows the biodiversity designations in the Borough.

7.25 A number of protected and rare species are found in the Borough including nationally important solitary bees, rare spiders, rare beetles, rare flies, great crested newts, common frogs, grass snakes, common lizards, slow worms, owls, water voles, bats, badgers, hazel dormice and a range of water fowl and wading birds.

7.26 Kent as a whole has not met its 2010 Biodiversity targets and, with biodiversity continuing to decline, it is unlikely that 2020 targets will be met without targeted interventions. Although there have been gains for wildlife in some areas, there is still a gradual loss of habitats and species in the County. For example, of the Local Wildlife Sites monitored over the past five years, 30% have been damaged and 2% lost. This represents a significant threat to the intrinsic value of Kent’s natural environment and to the economic and social benefit that it provides.
Figure 7.1: Biodiversity Designations

- Dartford District
- Neighbouring Local Authority boundary
- Ancient woodland
- Site of Special Scientific Interest
- National Nature Reserve
- Local Nature Reserve
- Local Wildlife Site
- Biodiversity Opportunity Area

Source: Natural England, DBC

Map Scale @ A4: 1:65,000

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8 Historic Environment

Policy Context

International

8.1 **European Convention for the Protection of the Architectural Heritage of Europe** (1985): Defines ‘architectural heritage’ and requires that the signatories maintain an inventory of it and take statutory measures to ensure its protection. Conservation policies are also required to be integrated into planning systems and other spheres of government influence as per the text of the convention.

8.2 **Valletta Treaty** (1992) formerly the European Convention on the Protection of the Archaeological Heritage (Revisited)\(^\text{146}\): Aims to protect the European archaeological heritage "as a source of European collective memory and as an instrument for historical and scientific study”.

National

8.3 **National Planning Policy Framework (NPPF)**\(^\text{147}\): Plans should "set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:

   a) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;
   
   b) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
   
   c) the desirability of new development making a positive contribution to local character and distinctiveness; and
   
   d) opportunities to draw on the contribution made by the historic environment to the character of a place."

8.4 **National Planning Practice Guidance (PPG)**\(^\text{148}\): Supports the NPPF by requiring that Local plans include strategic policies for the conservation and enhancement of the historic environment, including a positive strategy for the conservation and enjoyment of the historic environment. It also states that local planning authorities should identify specific opportunities for conservation and enhancement of heritage assets.

8.5 **The Government’s Statement on the Historic Environment for England 2010**\(^\text{149}\): Sets out the Government’s vision for the historic environment. It calls for those who have the power to shape the historic environment to recognise its value and to manage it in an intelligent manner in light of the contribution that it can make to social, economic and cultural life. Includes reference to promoting the role of the historic environment within the Government’s response to climate change and the wider sustainable development agenda.

\(^\text{146}\) Council of Europe (1992) Valletta Treaty [online] Available at: https://rm.coe.int/168007bd25


8.6 **The Heritage Statement 2017**[^150]: Sets out how the government will support the heritage sector and help it to protect and care for our heritage and historic environment, in order to maximise the economic and social impact of heritage and to ensure that everyone can enjoy and benefit from it.

8.7 **Sustainability Appraisal and Strategic Environmental Assessment, Historic England Advice Note 8**[^151]: Sets out requirements for the consideration and appraisal of effects on the historic environment as part of the Sustainability Appraisal/Strategic Environmental Assessment process.

### Sub-national

8.8 **The Kent Design Guide**[^152]: Seeks to provide a starting point for good design while retaining scope for creative, individual approaches to different buildings and different areas. It aims to assist designers and others achieve high standards of design and construction by promoting a common approach to the main principles which underlie Local Planning Authorities’ criteria for assessing planning applications. It also seeks to ensure that the best of Kent’s places remain to enrich the environment for future generations. The guide does not seek to restrict designs for new development to any historic Kent vernacular. Rather it aims to encourage well considered and contextually sympathetic schemes that create developments where people really want to live, work and enjoy life.

8.9 **The Thames Gateway Delivery Plan**[^153]: seeks to celebrate the character and heritage of the Thames Gateway area, including the rivers and recognises that heritage assets can help build economic prosperity and create quality of life.

### Current Baseline

8.10 Parts of Dartford Borough have been occupied since the Palaeolithic period, but more recently agriculture, industry and human activities have influenced the Borough’s landscapes and townscapes. This has resulted in a number of heritage designations in the Borough including: Listed Buildings, Conservation Areas, Registered Parks and Gardens and Scheduled Monuments.[^154] The Borough’s designated heritage assets are shown in Figure 8.1.

8.11 The Borough contains seven Grade I Listed Buildings, 17 Grade II* and 154 Grade II. Listings tend to be clustered, with 49 in Southfleet, Betsham and Westwood, 30 in Dartford town centre and 27 in Ingress Park and Greenhithe Village. There are other clusters in the small towns and villages throughout the Borough.

8.12 There are a small number of buildings on the ‘heritage at risk’ register, for example Spring Head Roman site, Palaeolithic sites at Baker’s Hole, Roman enclosure south east of Vagniacae.

8.13 The Council began designating Conservation Areas in 1970. Currently Dartford has six Conservation Areas, listed below:

- Greenhithe.
- Southfleet.
- Hook Green.
- Red Street, Southfleet.
- Dartford Town Centre.


[^153]: Communities and Local Government (2007), Thames Gateway: The Delivery Plan

Church Hill, Wilmington.

8.14 Dartford has 12 Scheduled Monuments, which range from Neolithic times onwards and include: field boundaries, enclosures, cemeteries, remains below ground and built structures. The majority, bar a small number in Ebbsfleet Valley and Bakers Hole, are located in the south of the Borough.

8.15 The Borough also has one Designated Gardens of Special Historic Interest, both located in the south of the Borough.¹⁵⁵

- St John’s Jerusalem historic garden, Sutton-at-Hone.

8.16 Dartford protects its heritage assets through Conservation Area Appraisals, and, uniquely to Dartford, Areas of Special Character Appraisals.

Figure 8.1: Historic Environment

- Dartford District
- Neighbouring Local Authority boundary
- Grade I Listed Building
- Grade II* Listed Building
- Grade II Listed Building
- Area of Special Character
- Scheduled Monument
- Conservation Area
- Sites of Archaeological Significance

Source: Historic England, DBC

Map Scale @ A4: 1:65,000

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9 Landscape

Policy Context

International

9.1 **European Landscape Convention** (2002): Promotes landscape protection, management and planning. The Convention is aimed at the protection, management and planning of all landscapes and raising awareness of the value of a living landscape.

National

9.2 **National Planning Policy Framework (NPPF)**\(^{156}\): Planning principles include:

- Recognising the intrinsic beauty and character of the countryside.
- Protecting and enhancing valued landscapes. Development should be sympathetic to local character and history, including the surrounding built environment and landscape setting.
- Conserve and enhance landscape and scenic beauty in National Parks, The Broads and Areas of Outstanding Natural Beauty.

9.3 **A Green Future: Our 25 Year Plan to Improve the Environment**\(^{157}\): Sets out goals for improving the environment within the next 25 years. It details how the Government will work with communities and businesses to leave the environment in a better state than it is presently. Identifies six key areas around which action will be focused. Those of relevance to this chapter are: recovering nature and enhancing the beauty of landscapes. Actions that will be taken as part of this key area are as follows:

- Working with AONB authorities to deliver environmental enhancements.
- Identifying opportunities for environmental enhancement of all England’s Natural Character Areas, and monitoring indicators of landscape character and quality.

Sub-national

9.4 **Kent Downs Area of Outstanding Natural Beauty: Management Plan 2014-2019**\(^{158}\): Sets out measures to ensure that the natural beauty and special character of the landscape and vitality of the communities are recognised maintained and strengthened well into the future. The Kent Downs AONB unit is in the process of updating the management plan.

9.5 **Kent and Medway Growth and Infrastructure Framework (GIF) update 2018**: Provides a view of emerging development and infrastructure requirements to support growth across Kent and Medway. The document highlights the valuable role Green Infrastructure (including woodland in the Borough and the Kent Downs and High Weald Areas of Outstanding Natural Beauty as well as other parks and gardens) plays in assisting to deliver a wide range of benefits including recreation, biodiversity, health, climate change mitigation and adaptation and water quality.


Current Baseline

9.6 Generally Dartford can be split into two, the northern half of the Borough, north of the A2 is mainly urban, containing Dartford, Greenhithe and Swanscombe. To the south of the A2 the Borough is much more undeveloped and apart from a number of small settlements, is designated as Green Belt. This landscape is gently undulating with the prominent features being arable fields and woodlands.

9.7 Classed as urban fringe, the land south of the A2 is an important resource for the enjoyment of rural and urban residents, and provides access to the countryside for recreational pursuits.\(^{159}\)

9.8 There are no national landscape designations in the Borough, although The Kent Downs Area of Outstanding Natural Beauty (AONB) is located just to the south of Dartford and therefore the Borough forms part of the setting of the AONB.

9.9 The Landscape Assessment of Kent\(^ {160}\) splits the Borough into a number of distinct landscape character areas:

- **Western Thames Marshes** – low lying, flat, open marshland adjacent to the River Thames that has become fragmented into isolated remnants by urban and industrial development. Some areas retain a marshland character while others have been degraded by development. The marshes are formed of alluvium deposits, so there is a lack of landform features and the area is very low lying.

- **Dartford and Gravesend Fringes** – pockets of land that have become isolated from the wider countryside to the south by the A2, and are now sandwiched between the road and the urban areas of Dartford and Gravesend. Land uses vary but are strongly influenced by urban areas.

- **Swanley Fringe** – includes land just to the west of the River Darent on the sands, gravels and clays of the tertiary beds. The area is cultivated but also contains ancient woodland. The landscape has been affected by proximity to London, meaning roads and other suburban influences can dominate.

- **Darenth Downs** – a broad steep sided valley either side of the River Darent carved out of the chalk. The slopes have a smooth, open, arable character. The M20 / A20 corridor marks the southern boundary of the character area and A2 crosses to the north and the M25 and A225 cut through the middle. The urban edge is visible from many areas.

- **Lower Darent Valley** – defined by a narrow band of alluvial floodplain gravels which form a flat, wet landscape characterised by water filled gravel pits. Slopes and broad and open and the valley contains extensive Roman remains. The A225 is a busy link through the area and noise from the M20 can be intrusive. The area currently forms a green link from the AONB into the developed Thames Side area.

- **Southfleet Arable Lands** – forms part of the north Kent agricultural belt. It is a mix of flat and undulating landform, sloping generally towards the Thames estuary at Dartford and Gravesend. Apart from a few wooded hill tops, shelter belts and orchards the land is generally open, meaning the A2 dominates a wide area audibly and visually. The Channel Tunnel Rail Link also runs through the area.

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\(^{160}\) Kent County Council and Jacobs Babtie (2004), The Landscape Assessment of Kent [online] available at: https://shareweb.kent.gov.uk/Documents/environment-and-planning/Wildlife%20and%20landscapes/Landscape%20Assessment%20of%20Kent%20October%202004.pdf
10 Sustainability Issues and Likely Evolution of the Issues without the Dartford Local Plan

10.1 Analysis of the baseline information has enabled a number of key sustainability issues in Dartford to be identified. Identification of the key sustainability issues and consideration of how these issues might develop over time if the new Local Plan is not prepared or not adopted helps meet the requirements of Schedule 2 of the SEA Regulations to provide information on:

(2) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.

(4) Any existing environmental problems which are relevant to the plan...

10.2 The key sustainability issues are presented in Table 10.1 overleaf. For each sustainability issue, a reference is given to the relevant SA objective in the SA Framework, which will be used to appraise whether the Local Plan addresses the sustainability issues identified in the Borough (see Chapter 11).

10.3 The SEA Regulations also require consideration of the likely evolution of the environment in the plan area if the new Local Plan is not implemented. This analysis is also presented in Table 10.1, in relation to each of the key sustainability issues.

10.4 The information in Table 10.1 shows that, in general, the current trends in relation to the various social, economic and environmental issues affecting Dartford would be more likely to continue without the implementation of the new Local Plan. In all cases, the new Local Plan offers opportunities to directly affect existing trends in a positive way, through an up-to-date plan which reflects the requirements of the NPPF.

10.5 It is noted that the Local Plan is not the only policy document that will influence evolution of the area as discussed in Table 10.1. Other national policy, such as the NPPF, described in the preceding chapters will also play a part in the future of Dartford. Therefore, changes in national policy could also have an impact on the likely future baseline of the Borough in the absence of the Plan.
### Table 10.1 Key sustainability issues for Dartford and likely evolution without the new Local Plan

<table>
<thead>
<tr>
<th>Key sustainability issues for Dartford</th>
<th>Likely evolution without the new Local Plan</th>
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<tbody>
<tr>
<td>Population growth and demographic change will place additional demand on key services and facilities such as health, education and social care. In particular, there are currently capacity issues with schools and GP services (SA Framework objective SA 2).</td>
<td>Without the Local Plan it is likely that services and facilities will still be delivered. However, it is less likely that these will be in appropriate locations, or of sufficient quality and quantity to keep pace with demand arising from new residential development. The Local Plan offers an opportunity to deliver these in a coherent, sustainable manner alongside development.</td>
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<tr>
<td>There is a need for affordable housing across Dartford. At present the average house prices in the Borough are higher than the national average (SA Framework objective SA 1).</td>
<td>Without the Local Plan it is likely that house prices will continue to rise across the Borough and levels of affordable housing will be low. The Local Plan offers the opportunity to facilitate and expedite the delivery of affordable housing.</td>
</tr>
<tr>
<td>There is a need to reduce the inequalities gap between those living in the most deprived areas of Dartford and those living in the least deprived areas of Dartford. The Borough contains deprivation ‘hot spots’ that are geographically close to some of the least deprived parts of the country (SA Framework objective SA 4).</td>
<td>Without the Local Plan it is possible that the gap between the most and least deprived areas in the Borough will remain or grow. The Local Plan presents the opportunity to address this through the planning of new and improved communities and infrastructure, particularly within the areas that are amongst the 20% most deprived in the country.</td>
</tr>
<tr>
<td>Levels of obesity in the District exceed the national average (SA Framework objective SA 4).</td>
<td>Without the Local Plan levels of obesity in the Borough may continue to rise, although national campaigns may work to reduce this. The Local Plan could further contribute to tackling obesity through policies that encourage active travel and access to green space and other recreation opportunities.</td>
</tr>
<tr>
<td>There is a deficit of open spaces in some areas in the northern half of the Borough, and some of the southern areas are not within walking distance of a park. This could be limiting opportunities for recreation and for people to connect with nature. (SA Framework objective SA 4.)</td>
<td>Without the Local Plan it is likely that the deficit in open spaces will remain. The Local Plan offers the opportunity to address this by ensuring that the accessibility and quality of open space is high and new local green spaces are planned alongside new development. These will help people to connect to nature and natural environment. The new Local Plan provides further opportunities for connecting people with nature, including creating and enhancing green links within and between towns and into the countryside.</td>
</tr>
<tr>
<td>As with the County as a whole, total crime in Dartford has risen and</td>
<td>The Local Plan would provide a contribution, alongside other local and</td>
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### Key sustainability issues for Dartford

<table>
<thead>
<tr>
<th>Violent crime makes up the largest proportion of the increase (SA Framework objective SA 3).</th>
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<tr>
<th>Likely evolution without the new Local Plan</th>
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<table>
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<tr>
<th>Violent crime makes up the largest proportion of the increase (SA Framework objective SA 3).</th>
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<tr>
<th>National measures, to locally reduce crime through policies which aim to make the local environment and streets safer, for example by ‘designing out’ crime.</th>
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<tr>
<th>Although unemployment is low in Dartford, levels rose between 2016 and 2017, and the Borough needs to ensure a future supply of jobs and continued investment to ensure identified employment development opportunities are taken forward and deprivation issues tackled (SA Framework objective SA 5).</th>
</tr>
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<tr>
<th>It is uncertain how the job market will change without the implementation of the Local Plan and some degree of change is inevitable. However, the Local Plan offers the opportunity to create and safeguard jobs through the allocation and promotion of employment generating uses and office and industrial spaces and promotion of the rural economy, as well as promoting access and opportunity for all.</th>
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<tr>
<th>The major traffic routes of the M25 and the A2 pass through Dartford. These experience high levels of congestion and delays and traffic accidents and issues can spread onto the local road network. Rail capacity is also currently stretched. Population growth has the potential to exacerbate these problems (SA Framework objective SA 6).</th>
</tr>
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<tr>
<th>Without the Local Plan it is anticipated that congestion, and the number of traffic accidents will continue to rise with the rising population. The Local Plan presents the opportunity to address this through providing clarity for infrastructure providers and policy that promotes alternative forms of transport and sustainable locations for development that minimise the need to travel by car on the local network, and will complement measures taken by highways authorities to combat congestion on the strategic road network.</th>
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<th>A high proportion of the Borough’s residents drive to work. The uptake of more sustainable travel options is limited (SA Framework objective SA 6).</th>
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<tr>
<th>Without the Local Plan, car dependency will continue to be high. The Local Plan provides an opportunity to prevent this rising further and minimise car use through the promotion of sustainable and active transport (based on sufficient population densities) and sustainable development locations.</th>
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<tr>
<th>There are four Air Quality Management Areas in Dartford District, which have been designated because these areas exceed the annual mean Air Quality Strategy objective for NO₂ and PM₁₀, caused primarily by road traffic emissions (SA Framework objective SA 10).</th>
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<tr>
<th>How air quality will change in the absence of a Local Plan is unknown, given that the Borough accommodates a high volume of through traffic. Without the Local Plan, development may be located in less sustainable locations that increase reliance on car use, which is likely to increase air pollution. Recent national policies and the emergence of new technologies are likely to improve air pollution, for example, through cleaner fuels/energy sources. Nonetheless, the Local Plan provides an opportunity to contribute to improved air quality in the Borough through the sustainable siting of development and the promotion of alternative travel modes to the motorised vehicle, in line with national policy.</th>
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### Key sustainability issues for Dartford

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<th></th>
<th>Likely evolution without the new Local Plan</th>
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<tr>
<td>The Borough contains some of the County’s best and most versatile agricultural land which, where possible, should not be lost or compromised by future growth (SA Framework objective SA 8).</td>
<td>Notwithstanding that the most versatile agriculture land lies within Green Belt that receives national protection outside of the Local Plan without the Local Plan this land may be lost or compromised. The Local Plan provides an opportunity to ensure these natural assets are not lost or compromised, by prioritising brownfield sites and lower quality agricultural land for development.</td>
</tr>
<tr>
<td>Some water bodies in Dartford are failing to meet the Water Framework Directive objective of ‘Good Status’. The issues may be exacerbated by population growth (SA Framework objective SA 9).</td>
<td>Without the Local Plan is it possible that un-planned development could be located in areas that will exacerbate existing water quality issues, although existing safeguards, such as the EU Water Framework Directive, would provide some protection. The Local Plan will provide the opportunity to ensure that development is located and designed to take into account the sensitivity of the water environment and provide an opportunity to plan for adequate wastewater infrastructure.</td>
</tr>
<tr>
<td>Dartford contains a large number of biodiversity sites which could be impacted by climate change and / or harmed by inappropriate development (SA Framework objective SA 13).</td>
<td>Even without the Local Plan, some important habitats and biodiversity sites will continue to receive statutory protection. However, without the Local Plan it is possible that development could be sited inappropriately and adversely impact biodiversity sites, even if indirectly. The Local Plan will also present an opportunity to manage the sensitivities of the sites and biodiversity networks, for example by locating development away from the most sensitive locations, provide for new green infrastructure, and ensure that growth does not adversely affect their current condition but where possible contributes to their improvement.</td>
</tr>
<tr>
<td>Flood risk to Dartford is dominated by tidal flooding, with a breach of the coastal defence structures posing the most risk. The expected magnitude and probability of significant fluvial, tidal ground and surface water flooding is increasing in the Borough due to climate change (SA Framework objective SA 11).</td>
<td>The Local Plan is not expected to reduce the likelihood of tidal flooding or prevent a breach of coastal defence structures. However, it does present the opportunity, alongside national measures, to mitigate the effects of potential future flooding and locate development in sustainable locations that would not be significantly impacted by flooding and ensure it is designed to be flood resilient where appropriate.</td>
</tr>
<tr>
<td>The Borough has an obligation to contribute to the national carbon reduction targets through the generation of low carbon and renewable</td>
<td>The Borough will continue to have an obligation to reduce carbon emissions with or without the Local Plan. The Local Plan provides a way</td>
</tr>
<tr>
<td>Key sustainability issues for Dartford</td>
<td>Likely evolution without the new Local Plan</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>energy, including decentralised energy networks, and encouraging energy efficiency measures in new and existing buildings (SA Framework objective SA 12). The Local Plan does not have the ability to set renewable energy requirements in residential development.</td>
<td>to contribute to these targets being met, by promoting sustainable development, for example by reducing the need to travel, and through encouraging low-carbon design, promotion of renewable energy and sustainable transport.</td>
</tr>
<tr>
<td>There are many sites, features and areas of historical and cultural interest in the Borough, a number of which are at risk, and which could be adversely affected by poorly located or designed development (SA Framework objective SA 14).</td>
<td>While a number of the heritage assets in the Borough, for example listed buildings and scheduled monuments, will be protected by statutory designations, without the Local Plan it is possible that these, and undesignated assets, will be adversely affected by inappropriate development. The Local Plan provides an opportunity to protect these assets (including their setting) from inappropriate development, as well as enhancing the historic environment and improving accessibility and interpretation of distinctive features of local heritage.</td>
</tr>
<tr>
<td>The Borough contains a number of locally distinct landscape character areas that could be harmed by inappropriate development (SA Framework objective SA 15).</td>
<td>The Borough does not contain any national landscape designations and so character areas would be left without protection in the absence of the Local Plan and could be harmed by inappropriate development. The Local Plan offers an opportunity to ensure that the variation in landscape character is taken into account in the design and siting of development and opportunities for the protection and enhancement of the landscape are maximised. Parts of the Borough are also within the setting of the North Downs AONB, and therefore the Local Plan can help to ensure that development does not compromise this protected landscape.</td>
</tr>
</tbody>
</table>
11 The SA Framework

The SA Framework

11.1 The development of a set of SA objectives (known as the SA Framework) is a recognised way in which the likely environmental and sustainability effects of a plan can be described, analysed and compared.

11.2 The proposed SA Framework for the Local Plan is presented in Table 11.1, and has been developed from the analysis of international, national and local policy objectives, the baseline information, and the sustainability issues identified for the Borough.

11.3 The SA Framework is supported by a set of draft site assessment criteria which will be used to establish the potential effects generated by development in site options and allocations identified for consideration by the Borough Council. The performance of sites against the site assessment criteria will be used, alongside other technical assessment, to inform site selection and the subsequent SA of the Council’s preferred spatial strategy and individual site allocations. More detail on the site assessment criteria is provided in paragraphs 11.13 to 11.20.

11.4 The SA objectives and appraisal questions (which provide a guide to the factors that should be considered when carrying out assessments) set out in the SA Framework and the site assessment criteria are subject to change following feedback collated during consultation of this SA Scoping Report.
## Table 11.1 SA Framework for the Dartford Local Plan

<table>
<thead>
<tr>
<th>SA Objective</th>
<th>Appraisal questions</th>
<th>Relevant SEA Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA 1: To ensure that everyone has the opportunity to live in a decent home.</td>
<td>Does the Plan deliver the range of types, tenures and affordable homes the Borough needs over the Plan Period?</td>
<td>Population, Human Health and Material Assets</td>
</tr>
<tr>
<td>SA 2: To ensure ready access to essential services and facilities for all residents.</td>
<td>Does the Plan provide sufficient local services and facilities to support new and growing communities (e.g. schools, employment training and lifetime learning facilities, health facilities, recreation areas and services in local centres)? Does the Plan provide housing within proximity to existing services and facilities that are accessible for all, if not to be provided on site? Does the plan impact on the quality and extent of existing recreational assets, including formal and informal paths?</td>
<td>Population, Human Health and Material Assets</td>
</tr>
<tr>
<td>SA 3: To strengthen community cohesion.</td>
<td>Will the Plan help deliver cohesive neighbourhoods with high levels of pedestrian activity/ outdoor interaction, where people mix? Will the Plan facilitate the integration of new neighbourhoods with existing neighbourhoods? Does the Plan promote developments that benefit and are used by existing and new residents in the Borough, particularly for the Borough’s most deprived areas? Will the Plan help to reduce levels of crime, anti-social behaviour and the fear of crime?</td>
<td>Population and Human Health</td>
</tr>
<tr>
<td>SA 4: To improve the population’s health and reduce inequalities.</td>
<td>Does the Plan promote health and wellbeing by maintaining, enhancing, connecting and creating multifunctional open spaces, green infrastructure, recreation and sports facilities? Does the Plan protect health and wellbeing by preventing, avoiding and mitigating adverse health effects associated with, noise, vibration, pollution/contamination, and odour? Does the Plan promote healthy lifestyles by encouraging and facilitating walking and cycling? Does the Plan safeguard human health and well-being by promoting climate change resilience through sustainable siting, design, landscaping and infrastructure?</td>
<td>Population, Human Health and Climatic Factors</td>
</tr>
<tr>
<td>SA 5: Facilitate a sustainable and growing economy and a vital and viable town centre.</td>
<td>Does the Plan provide an adequate supply of land and infrastructure to meet the Borough’s forecast employment needs with sufficient flexibility to respond to uncertainties and changing economic circumstances?</td>
<td>Population, Human Health and Material Assets</td>
</tr>
<tr>
<td>SA Objective</td>
<td>Appraisal questions</td>
<td>Relevant SEA Topics</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| SA 6: To reduce the need to travel and encourage sustainable and active alternatives to motorised vehicles to reduce congestion. | Does the Plan support opportunities for the expansion and diversification of business and inward investment?  
Does the Plan maintain and enhance the economic vitality and vibrancy of the Borough’s town centre?  
Does the Plan provide new and improved education facilities leading to a work ready population of school and college leavers?  
Does the Plan promote the delivery of integrated, compact communities made-up of a complementary mix of land uses?  
Does the Plan support the maintenance and expansion of public transport networks including areas with sufficient demand for the introduction of new public transport?  
Does the Plan facilitate new and enhanced walking and cycling links?  
Does the Plan help to address road congestion and its causes? | Air, Climatic Factors, Population and Human Health                                                                                                           |
| SA 7: To conserve the Borough’s mineral resources.                           | Does the Plan ensure adequate consideration is given to balancing the need for development with safeguarding resources?  
Does the Plan ensure there is sufficient waste water treatment capacity to accommodate the new development?  
Does the Plan avoid, minimise and mitigate the effects of poor air quality?  
Does the Plan contain measures which will help to reduce congestion, particularly involving HGVs?  
Will the Plan minimise increases in traffic in the Air Quality Management Areas? | Material Assets                                                                                                                   |
| SA 8: To conserve the Borough’s soils.                                      | Does the Plan prioritise the development brownfield land over greenfield land?  
Does the Plan take an appropriate approach to dealing with the potential health and economic risks potentially associated with despoiled land?  
Does the Plan avoid development on the Borough’s best and most versatile agricultural land? | Soil and Human Health                                                                                           |
| SA 9: To maintain and improve the quality of the Borough’s waters.          | Does the Plan minimise inappropriate development in source protection zones?  
Does the Plan ensure there is sufficient waste water treatment capacity to accommodate the new development? | Water                                                                                                           |
| SA 10: To reduce air pollution and ensure improvements in air quality.      | Does the Plan avoid, minimise and mitigate the effects of poor air quality?  
Does the Plan contain measures which will help to reduce congestion, particularly involving HGVs?  
Will the Plan minimise increases in traffic in the Air Quality Management Areas? | Air, Climatic Factors, and Human Health                                                                     |
| SA 11: To avoid and mitigate flood risk.                                   | Does the Plan minimise development in areas prone to flood risk and areas prone to increasing flood risk elsewhere, taking into account the impacts of climate change?  
Does the Plan minimise flood risk and promote the use of SuDS and other flood resilient design? | Water, Soil, Climatic Factors and Human Health                                                                |
<p>| SA 12: To minimise the Borough’s contribution to climate change.           | Does the Plan promote energy efficient design? | Climatic Factors                                                                                                               |</p>
<table>
<thead>
<tr>
<th>SA Objective</th>
<th>Appraisal questions</th>
<th>Relevant SEA Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA Objective 13: To conserve, connect and enhance the Borough’s wildlife,</td>
<td>Does the Plan encourage the provision of renewable energy infrastructure where possible?</td>
<td>Biodiversity, Flora and Fauna,</td>
</tr>
<tr>
<td>habitats and species.</td>
<td>Does the Plan minimise greenhouse gas emissions from transport?</td>
<td>Landscape and Human Health</td>
</tr>
<tr>
<td></td>
<td>Does the Plan conserve and enhance designated and undesignated ecological assets within and outside the Borough, including identification of opportunities for improvements to the conservation, connection and enhancement of ecological assets and achievement of biodiversity net gain?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Does the plan ensure ecological networks are not compromised, and future improvements in habitat connectivity are not prejudiced, taking into account the impact of climate change?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Does the Plan ensure that the biodiversity value of brownfield sites is identified, protected and enhanced?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Does the Plan provide and manage opportunities for people to come into contact with resilient wildlife places whilst encouraging respect for and raising awareness of the sensitivity of such locations?</td>
<td></td>
</tr>
<tr>
<td>SA Objective 14: To conserve and/or enhance the significant qualities,</td>
<td>Does the Plan conserve the Borough’s designated and undesignated heritage assets, including their setting and their contribution to wider local character and distinctiveness?</td>
<td>Cultural Heritage and Human Health</td>
</tr>
<tr>
<td>fabric, setting and accessibility of the Borough’s historic environment.</td>
<td>Does the Plan outline opportunities for improvements to the conservation, management and enhancement of the Borough’s historic environment, particularly at risk heritage assets?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Does the Plan promote access to, as well as enjoyment and understanding of, the local historic environment for the Borough’s residents and visitors?</td>
<td></td>
</tr>
<tr>
<td>SA Objective 15: To conserve and enhance the special qualities, accessibility,</td>
<td>Does the Plan protect the Borough’s sensitive and special landscapes and townscapes?</td>
<td>Landscape and Cultural Heritage</td>
</tr>
<tr>
<td>local character and distinctiveness of the Borough’s settlements,</td>
<td>Does the Plan encourage development that will have a positive effect on the character of the Borough’s neighbourhoods, countryside and settlements?</td>
<td></td>
</tr>
<tr>
<td>countryside and landscape.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Use of the SA Framework

11.5 The SA will be undertaken in close collaboration with the Dartford Borough Council officers responsible for drafting the Local Plan in order to fully integrate the SA process with the production of the Local Plan.

11.6 The findings of the SA will be presented as a colour coded symbol showing a score for the option against each of the SA objectives along with a concise justification for the score given, where appropriate. It may be possible to group the appraisal of strategic and development management policies by theme.

11.7 The use of colour coding in the matrices will allow for likely significant effects (both positive and negative) to be easily identified, as shown in Figure 11.1 below.

### Figure 11.1 SA matrix guide

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>++</td>
<td>Significant positive effect likely</td>
</tr>
<tr>
<td>+/+</td>
<td>Mixed significant positive and minor negative effects likely</td>
</tr>
<tr>
<td>+</td>
<td>Minor positive effect likely</td>
</tr>
<tr>
<td>+/-</td>
<td>Mixed minor effects likely</td>
</tr>
<tr>
<td>-</td>
<td>Minor negative effect likely</td>
</tr>
<tr>
<td>--/+</td>
<td>Mixed significant negative and minor positive effects likely</td>
</tr>
<tr>
<td>--</td>
<td>Significant negative effect likely</td>
</tr>
<tr>
<td>0</td>
<td>Negligible effect likely</td>
</tr>
<tr>
<td>?</td>
<td>Likely effect uncertain</td>
</tr>
</tbody>
</table>

11.8 The dividing line between sustainability scores is often quite small. Where significant effects are distinguished from more minor effects this is because, using the appraisal questions and criteria and applying professional judgement, the effect of the option on the SA objective will be of such magnitude that it will have a noticeable and measurable effect compared with other factors that may influence the achievement of that objective.

11.9 In determining the significance of the effects of the options for potential inclusion in the Local Plan it will be important to bear in mind the Local Plan’s relationship with the other documents in the planning system such as the NPPF and other national policy approaches, and regulatory requirements, as these may provide additional safeguards or mitigation of potentially significant adverse effects.

### Reasonable alternatives

11.10 The SA must appraise not only the preferred options for inclusion in the Local Plan but ‘reasonable alternatives’ to these options. This implies that alternatives that are not reasonable do not need to be subject to appraisal. Part (b) of Regulation 12(2) notes that reasonable alternatives will take into account the objectives of the plan, as well as its geographical scope. Therefore, alternatives that do not meet the objectives of national policy, or are outside the Plan area are unlikely to be reasonable.

11.11 The objectives, policies and site allocations to be considered for inclusion within the Local Plan are in the process of being identified and reviewed. The Council’s reasons for selecting the alternatives to be included in the Local Plan will be reported at a later stage in the SA process.
Strategic Housing Land Availability Assessment

11.12 The Strategic Housing Land Availability Assessment (SHLAA) is an assessment by the Council of land availability, which identifies a future supply of land which is suitable, available and achievable for development uses over the plan period. Site options identified in the SHLAA will be assessed in the SA where these are considered reasonable alternatives. Whilst these are separate processes there are opportunities to align the criteria considered in both. A SHLAA methodology is in the process of being finalised for Dartford, the SHLAA methodology and SA methodology will be aligned where appropriate.

SA site assessment criteria

11.13 The SA will assess the potential social, environmental and economic effects of the Local Plan. SA criteria will be used to establish the potential effects generated by employment and residential development site options to be identified for consideration by the Council. The SA performance of sites will be used to inform site selection and SA of the Council’s preferred spatial strategy and individual site options.

11.14 The draft site assessment criteria are organised under two broad categories:

- Criteria assessing the acceptability of access to the Borough’s existing services and facilities.
- Criteria assessing the likelihood of harm to the Borough’s environmental assets and constraints.

11.15 Appendix 1 sets out the detailed assumptions used to judge the accessibility of access or likelihood of environmental harm for each housing and employment development option against each site assessment criterion\(^1\). The proximity of development site locations to services and facilities and environmental assets and constraints is, for SA purposes, measured in a straight line from the nearest portion of the boundary of each site option. It is acknowledged that the actual distance residents will need to travel will likely be further than this. However, this cannot be known as it depends on the layout of new development and behaviours of new residents. Straight line distances have been used in the SA to order to ensure consistency and transparency in assessments.

11.16 It is advised for consistency with the SA, employment sites research is expected to have regard to the criteria in Table A1.1 and A1.2. The SHLAA is considering these matters, or has applied more stringent criteria to Table A1.1, where in general conformity with the Draft Dartford SHLAA methodology, subject to consultation before the public consultation held on Dartford ‘Strategic Issues’ in summer 2018. Table A1.2 lists factors relevant to the SHLAA, but the SA provides further indications in relation to environmental matters (e.g. noise).

11.17 The scores achieved by site options against the site assessment criteria indicate whether development in a specific location would be consistent with related sustainability objectives; they do not indicate the significance of the Local Plan’s effects against each SA objective. For example, scores assigned to individual site options on the basis of intersection with areas of environmental constraint such as flood zones or areas of ecological value are independent of the proportion of the site intersecting with the constrained area; as such the assessment scores are designed to highlight potential adverse effects and flag these for closer examination through the Council’s parallel site assessment process. Such examination may reveal that only a small proportion of the site overlaps the constrained area so that it may be possible to avoid the potential effect identified by the SA by an appropriate site layout.

11.18 Where an individual site could give rise to significant effects in its own right, or in combination with other sites under consideration, these will be identified at an early stage in order to consider possible mitigation and to influence decisions by the Council on which sites to include as preferred sites. Once preferred sites are selected, discussion of the significance of the effects of the Local Plan as a whole is informed by analysis of the total area of sites falling within areas of environmental constraint. These findings on significance will be presented in the SA Report, along with a concise justification for the score given where appropriate.

\(^1\) The assessment tests applied and information sources used have been adjusted to take account of local issues and evidence.
11.19 It should be noted that there is not a one to one relationship between the site assessment criteria and the sustainability objectives; instead, one site assessment criterion may be relevant to the Local Plan’s effects in relation to achievement of a number of sustainability objectives. **Table A1.3** shows the relationship between the site assessment criteria and the SA objectives defined in SA Framework. **Table A1.4** lists the SA issues which are not considered to be sufficiently area-based to be appropriately assessed using GIS-based site assessment criteria, provides justification as to why, and describes how site options will be assessed against each of these SA objective during the appraisal of the Borough Council’s preferred spatial strategy and site allocations.

11.20 The site assessment criteria provide a framework for assessing individual site options on a like for like basis, based on the existing spatial and environmental conditions within and in close proximity to each site and free from consideration as to what services, facilities, infrastructure and associated environmental mitigation and enhancement each site would provide. The consideration of residential and employment uses is therefore undertaken on a consistent basis. This ensures that all reasonable site options can be assessed at the same level of detail before site selection. The application of the site assessment criteria also serve to highlight gaps in existing services, facilities and sustainable transport links. SA criteria offer a broader, integrated overview, and are not meant to replace or be substituted for the applicable individual factors for each use looked at in detail in key topic-based evidence.
12 Consultation and Next Steps

12.1 In order to meet the requirements of the SEA Regulations, the views of the three statutory consultees (Environment Agency, Historic England and Natural England) have been sought in relation to the scope and level of detail to be included in the SA Report, as well as the views of other interested parties and the public.

12.2 As outlined in the introduction, the consultees were in particular requested to consider:

- Whether the scope of the SA is appropriate as set out considering the role of the Dartford Local Plan to help meet and manage Dartford's needs.
- Whether there are any additional plans, policies or programmes that are relevant to the SA that should be included.
- Whether the baseline information provided is robust and comprehensive, and provides a suitable baseline for the SA of the Dartford Local Plan.
- Whether there are any additional SA issues relevant to the Local Plan that should be included.
- Whether the SA Framework is appropriate and includes a suitable set of SA objectives and site-based assumptions for assessing the effects of the options included within the Dartford Local Plan and reasonable alternatives.

12.3 Responses from consultees have been reviewed and appropriate amendments made to the Scoping Report, where necessary, as set out in Appendix 2.

12.4 The next formal output of the SA process is expected at be at the ‘Regulation 18’ Local Plan stage of public consultation, during which reasonable alternative strategic sites / policies will be assessed. The results of this assessment will inform the Dartford planning team in their preparation of subsequent iterations of the Local Plan. The SA of the Local Plan will be reported in an SA Report (incorporating the later stages of the SA process) which will be published for public consultation alongside the Draft Local Plan. Monitoring indicators to measure the specific performance of the Plan itself will be identified by the SA.

LUC

January 2019
Appendix 1 Site Assessment Criteria
## Table A1.1 Access to services and facilities – walking distance site assessment criteria

<table>
<thead>
<tr>
<th>Site Assessment Criteria</th>
<th>Residential Sites</th>
<th>Employment Sites</th>
<th>Assessment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very good</td>
<td>Good</td>
<td>Poor</td>
</tr>
<tr>
<td>Proximity to GP surgeries/health centres and dentists</td>
<td>&lt;= 400 m</td>
<td>401-800 m</td>
<td>801-1,200 m</td>
</tr>
<tr>
<td>Proximity to primary or middle schools</td>
<td>&lt;= 400 m</td>
<td>401-800 m</td>
<td>801-1,200 m</td>
</tr>
<tr>
<td>Proximity to secondary schools</td>
<td>&lt;= 400 m</td>
<td>401-1,000 m</td>
<td>1,001-2,000 m</td>
</tr>
<tr>
<td>Proximity to further and higher education facilities</td>
<td>&lt;= 400 m</td>
<td>401-1,000 m</td>
<td>1,001-2,000 m</td>
</tr>
<tr>
<td>Proximity to local centres</td>
<td>&lt;= 200 m</td>
<td>201-400 m</td>
<td>401-800 m</td>
</tr>
<tr>
<td>Proximity to town centres</td>
<td>&lt;= 400 m</td>
<td>401-800 m</td>
<td>801-1,200 m</td>
</tr>
<tr>
<td>Site Assessment Criteria</td>
<td>Residential Sites</td>
<td>Employment Sites</td>
<td>Assessment Notes</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Proximity to railway stations</td>
<td>&lt;= 400 m</td>
<td>401-800 m</td>
<td>801-2,000 m</td>
</tr>
<tr>
<td>Proximity to bus stops</td>
<td>&lt;= 200 m</td>
<td>201-400 m</td>
<td>401-800 m</td>
</tr>
<tr>
<td>Proximity to cycle routes</td>
<td>&lt;= 200 m</td>
<td>201-400 m</td>
<td>401-800 m</td>
</tr>
<tr>
<td>Proximity to open spaces and sports centres</td>
<td>&lt;= 400 m</td>
<td>401-800 m</td>
<td>801-1200 m</td>
</tr>
<tr>
<td>Proximity to public rights of way (PRoW)</td>
<td>&lt;= 200 m</td>
<td>201-400 m</td>
<td>401-800 m</td>
</tr>
<tr>
<td>Proximity to centres of employment</td>
<td>&lt;= 400 m</td>
<td>401-1,000 m</td>
<td>1,001-2,000 m</td>
</tr>
</tbody>
</table>
Access to services and facilities

Access to services and facilities will be assessed on the assumption that residents will travel on foot rather than by vehicle, reflecting national policy objectives to manage patterns of growth to make the fullest possible use of public transport, walking and cycling, to increase activity levels and to reduce vehicle emissions. Various pieces of research provide a variety of recommended guidance distances for walking. Those used in the SA are based on 'desired', 'acceptable' and preferred maximum' walking distances described in the publication 'Guidelines for Providing for Journeys on Foot' (Institution of Highways and Transport (IHT), 2000).

This suggests, for example, an acceptable walking distance of 800 m to most destinations, and 400 m to town centres. Professional judgement has been used to vary this standard distance in relation to certain services and facilities, for example, the standard distance of 800 m has been used for railway stations but a shorter distance of 400 m has been used for bus stops, reflecting the fact that individuals are likely to be prepared to walk greater distances to larger scale facilities.

The distance thresholds have also taken into account those used in other relevant Dartford-specific documents. For example, the 2017 Dartford Development Policies Plan (paragraphs 9.11 to 9.13) discusses the fact that 400m is generally considered an appropriate walking distance, as this is commonly used in the IHT guidelines but is also considered important to achieving a modal shift in transport in Dartford.

Proximity to open spaces, sports centres and public rights of way

Sites within reasonable walking distance of areas of open space, sports centres and public rights of way should support residents in leading more active lifestyles. Walking distances used for open space and sport centres are based on IHT guidelines for 'other' destinations. As these are treated as destinations, open spaces are defined as Dartford’s special Protected Local Greenspaces, rather than the general Borough Open Space (BOS) layer. Shorter distances have been used for proximity to PRoW than proximity to open space and sports centres to reflect the fact that people will be walking further once they reach the nearest PRoW access point.

Proximity to sustainable transport links

The proximity of development sites to sustainable transport links will affect the extent to which people are willing and able to make use of non-car based modes of transport for regular travel to places of employment, shops and so on, although the actual use of sustainable transport modes will depend on many factors.

It is assumed that people would generally be willing to travel further to access a railway station than a bus stop.

The proximity of site options to cycle routes is used as an indicator of how likely people are to cycle to or from a development site. While it is recognised that many cyclists will travel on roads as well as dedicated cycle routes, and that the extent to which people choose to do so will depend on a variety of factors that are independent of proximity such as the perceived safety of the road for cyclists and availability of cycle storage facilities at their destination, it is not appropriate to consider such factors at this strategic level of assessment.

Information about the frequency of public transport services is not taken into account in the SA as this is assumed to be too fluid to be a reliable basis of assessment and should also generally be capable of being increased in response to increased demand.

Proximity to employment opportunities

While the location of residential sites will not influence the number of employment opportunities, the proximity of housing to employment opportunities and public transport links can affect people’s ability to access jobs.

Major employment opportunities are located throughout the plan area and neighbouring districts, not only in the areas allocated for employment, but also in the town centres, retail parks, hospitals, and in small scale premises around the towns as well as large scale businesses concentrated at the employment areas. Although there is no guarantee that people will find jobs
at the employment areas closest to them, it is considered that provision of homes close to major sources of employment will support people in making shorter journeys to work.
Table A1.2 Risk of likelihood of harm to environmental assets site assessment criteria

<table>
<thead>
<tr>
<th>Site Assessment Criteria</th>
<th>Residential Sites</th>
<th>Employment Sites</th>
<th>Assessment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Proximity to heritage assets: allocations within existing</td>
<td>All other sites 101-250 m</td>
<td>&lt;=100 m</td>
<td>All other sites 101-250 m</td>
</tr>
<tr>
<td>settlements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity to heritage assets: allocations outside of existing</td>
<td>All other sites 501-1,000 m</td>
<td>&lt;500 m</td>
<td>All other sites 501-1,000 m</td>
</tr>
<tr>
<td>settlements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity to internationally designated wildlife sites(^{162})</td>
<td>All other sites &lt;=6 km of designated site boundary (all residential development)</td>
<td>Intersects with designated site</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>&gt; 6 km and &lt;=10 km of designated site boundary (large residential development only)</td>
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<tr>
<td>Proximity to wildlife or geological sites:</td>
<td>All other sites Intersects with 'residential' or 'rural non- residential' site</td>
<td>Intersects with designated site</td>
<td>All other sites Intersects with 'rural non- residential' site</td>
</tr>
</tbody>
</table>

\(^{162}\) Thames Estuary and Marshes SPA, Thames Estuary and Marshes Ramsar site, Medway Estuary and Marshes SPA, Medway Estuary and Marshes Ramsar site, The Swale SPA, The Swale Ramsar site (known as the ‘North Kent European Sites’)

Sustainability Appraisal Scoping for Dartford’s New Local Plan 73 January 2019
<table>
<thead>
<tr>
<th>Site Assessment Criteria</th>
<th>Residential Sites</th>
<th>Employment Sites</th>
<th>Assessment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>nationally designated wildlife sites - allocations within existing settlements</td>
<td>‘all planning applications’ ‘air pollution’ and ‘water supply’ or ‘all planning applications’ IRZ</td>
<td>residential’, ‘air pollution’ and ‘water supply’ or ‘all planning applications’ IRZ</td>
<td>the SA will also be informed by the findings of the Habitats Regulations Assessment of the Local Plan</td>
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<tr>
<td>Proximity to wildlife or geological sites: nationally designated site - allocations outside existing settlements</td>
<td>All other sites Intersects with ‘rural residential’ or ‘all planning applications’ IRZ</td>
<td>All other sites Intersects with ‘rural non-residential’, ‘air pollution’ and ‘water supply’ or ‘all planning applications’ IRZ</td>
<td></td>
</tr>
<tr>
<td>Proximity to locally designated wildlife sites and ancient woodland</td>
<td>All other sites &lt;=400 m from designated site boundary</td>
<td>All other sites &lt;=400 m from designated site boundary</td>
<td>Includes Local Nature reserves, Local Wildlife Sites and Ancient Woodland</td>
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<tr>
<td>Proximity to wildlife or geological sites: Priority Habitat Inventory (PHI) or local Biodiversity Action Plan (BAP) habitat</td>
<td>All other sites Intersects with habitat N/A</td>
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<tr>
<td>Proximity to locally designated geological site</td>
<td>All other sites Intersects with LGS N/A</td>
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<td>Proximity to designated landscapes:</td>
<td>All other sites Intersects with designated landscape N/A</td>
<td>All other sites Intersects with designated landscape N/A</td>
<td>Proximity to Areas of Outstanding Natural Beauty and any local landscape</td>
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<td>Site Assessment Criteria</td>
<td>Residential Sites</td>
<td>Employment Sites</td>
<td>Assessment Notes</td>
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<tr>
<td>allocations within existing settlements</td>
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<td>All other sites</td>
<td>&lt;=2 km to designated landscape</td>
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<td>Intersection with Source Protection Zones (SPZs)</td>
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<td>Intersects with SPZ1</td>
<td>All other sites</td>
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<tr>
<td>Intersection with flood risk areas</td>
<td>All other sites</td>
<td>Intersects with Flood Zone 2</td>
<td>All other sites</td>
</tr>
<tr>
<td>Likely contribution to road traffic within area suffering from traffic-related air pollution</td>
<td>All other sites</td>
<td>N/A</td>
<td>All other sites</td>
</tr>
<tr>
<td>Proximity to sources of air pollution</td>
<td>All other sites</td>
<td>N/A</td>
<td>All other sites</td>
</tr>
<tr>
<td>Exposure to noise pollution from roads and railways</td>
<td>All other sites</td>
<td>Lnight 50.0-54.9 dB, or Laeq,16 55.0-59.9 dB</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note that Flood Zones relate only to river and tidal flooding.


Lnight rail: [https://data.gov.uk/dataset/rail](https://data.gov.uk/dataset/rail)
<table>
<thead>
<tr>
<th>Site Assessment Criteria</th>
<th>Residential Sites</th>
<th>Employment Sites</th>
<th>Assessment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to waste sites</td>
<td>All other sites</td>
<td>N/A</td>
<td>&lt;=500 m to anaerobic digestion (AD) facility or &lt;=250 m to waste management facility</td>
</tr>
<tr>
<td>Intersection with airport Public Safety Zones</td>
<td>All other sites</td>
<td>N/A</td>
<td>Intersects with an airport PSZ</td>
</tr>
<tr>
<td>Intersection with mineral resources</td>
<td>All other sites</td>
<td>N/A</td>
<td>Intersects with Mineral Safeguarding Area that is not within the urban boundary/village confines</td>
</tr>
<tr>
<td>Intersection with agricultural land</td>
<td>All other sites</td>
<td>Intersects with Grade 3</td>
<td>Intersects with Grade 1 or 2</td>
</tr>
</tbody>
</table>
Proximity to heritage assets

The NPPF states that the ‘significance [of a heritage asset] can be harmed or lost through alteration or destruction of the heritage asset or development within its setting’. However, development could also enhance the significance of the asset, provided that the development preserves those elements of the setting that make a positive contribution to or better reveals the significance of the asset. In all cases, effects from a Local Plan site allocation will be subject to a degree of uncertainty as the actual effects on heritage assets will depend on the particular scale, design and layout of the new development and opportunities which may exist to enhance the setting of heritage features, for example where sympathetic development replaces a derelict brownfield site which is currently having an adverse effect.

The proximity tests used in the SA of the Local Plan site allocations are intended to provide a basis for screening for the potential for adverse effects on heritage assets in the absence of a separately commissioned historic environment sensitivity study or similar. Distances used are based on professional judgement. Longer screening distances are used for site options outside of existing settlements to reflect typically longer sightlines in rural vs. urban areas.

Proximity to wildlife sites

Development sites that are close to wildlife sites may have the potential to adversely affect their features of interest, e.g. through habitat damage/loss, fragmentation, disturbance to species, air pollution, increased recreation pressure and so on. Conversely, there may be opportunities to promote habitat connectivity if new developments include green infrastructure. Therefore, while proximity to designated sites provides an indication of the potential for an adverse effect, uncertainty exists, as actual effects will depend on the particular sensitivities of the interest features of each wildlife site and appropriate mitigation may avoid adverse effects and may even result in beneficial effects. Effects on internationally designated sites are assessed in detail via the HRA of the Local Plan; effects on other wildlife sites will be considered in more detail through the development management process.

For the purposes of the SA and in the absence of separately commissioned evidence, Impact Risk Zones (IRZs) defined by Natural England are used to provide an initial assessment of the potential risks posed by development proposals to Sites of Special Scientific Interest (SSSIs). IRZs define zones around each biodiversity site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

With respect to the internationally designated North Kent European Sites, Natural England agreed during the preparation of the now adopted Dartford Development Policies Plan that development beyond 6km (excluding large sites) can be screened out of requiring an appropriate assessment and assumed to have no likely significant effect on European sites. In addition, a study of North Kent European Sites found that the majority of visitors to European sites in North Kent travelled less than 10km to access these sites. Taking into account the conclusions of Natural England together with these study findings, as reflected in Policy DP25 of the Dartford Development Policies Plan, it is considered that large residential sites located up to 10km from the North Kent Sites may need to consider mitigation measures and cannot be automatically screened out of appropriate assessment due to having a likely effect on the integrity of the European sites. This has informed the selection of distance criteria to determine the risk of likelihood of harm to the North Kent European Sites from potential residential site allocations. As the Local Plan preparation progress, The SA will also take into account the results of the Habitats Regulations Assessment.

A zone of influence of 400 m is assumed for all locally designated wildlife sites and ancient woodland, based on professional judgement.

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163 Thames Estuary and Marshes SPA, Thames Estuary and Marshes Ramsar site, Medway Estuary and Marshes SPA, Medway Estuary and Marshes Ramsar site, The Swale SPA, The Swale Ramsar site
Proximity to designated landscapes

In the absence of a separate study to establish the landscape sensitivity of the area within which the development site falls, assessment is based on proximity to designated landscapes - where development is within or close (i.e. within 2km) to designated landscapes, negative effects could result.

Intersection with Source Protection Zones

The effects of new development on water quality will depend on a variety of factors including whether there is capacity at the relevant wastewater treatment works and in the local sewer network to accommodate the new development; these factors are considered in the discussion of the effects of the plan as a whole rather than on a site by site basis.

Source Protection Zones (SPZs) are areas designated to protect groundwater sources used for public drinking water supply. They relate to the risk of contamination of the water source from various activities, this increasing as the distance between the source of contamination and the groundwater abstraction point decreases:

- Zone 1 = Water borne contamination would take 50 days to travel from any point below the water table to the source (abstraction point); this zone has a minimum radius of 50 metres;
- Zone 2 = Water borne contamination would take 400 days to travel from any point below the water table to the source; this zone has a minimum radius of 250 or 500 metres, depending on the size of the abstraction;
- Zone 3 = Defined as the area around a source within which all groundwater recharge is presumed to be discharged at the source.

Intersection with flood risk areas

The effects of new development on exposure to flood risk will depend to some extent on its design, for example whether it incorporates SuDS, which is more appropriately assessed via SA of the development management policies. Where site options are located in areas of high flood risk, it could increase the number of people and assets at risk from flooding. National Planning Practice Guidance identifies which types of land uses are considered to be appropriate in Flood Zones 2, 3a and 3b with residential properties categorised as a ‘more vulnerable use’ that is suitable in Flood Zones 1 and 2 but would require an exception test in Flood Zone 3a, and is unsuitable in Flood Zone 3b.

Likely contribution to road traffic within areas suffering from traffic-related air pollution

Development sites that are within, or directly connected via road, to an Air Quality Management Areas (AQMA) could increase levels of air pollution in those areas as a result of increased vehicle traffic.

Exposure to noise pollution from roads and railways

The World Health Organization’s Night Noise Guidelines for Europe (2009) set guideline values for health protection in terms of the metric set Lnight, outside which is the average annual noise level in the 8-hour period 2300-0700. The guidelines take account of the fact that the noise levels are measured outside but that the receptor (sleeping person) is inside and that most people to sleep with the window partly open. Adverse health effects begin to be observed when Lnight, outside is in the range 40-55 dB and when Lnight, outside is 55 dB or higher, adverse health effects occur frequently and there is a risk of cardiovascular disease. Since the lowest level of Lnight, outside reported in Defra’s strategic noise maps is 50.0-54.9 dB the SA assumes a MEDIUM likelihood of harm for residential development in this noise zone and a HIGH likelihood of harm for residential development in 55.0 dB-59.9 and higher noise zones.

The World Health Organization’s Guidelines for Community Noise (1999) set a guideline limit for average daytime noise in dwellings of 35 dB. Unlike the Night Noise Guidelines for Europe (2009) this limit is not based on the outdoor noise levels required to be monitored by Member States under the Environmental Noise Directive although, based on professional judgement, noise levels experienced indoors can be estimated to be, on average, 0 dB lower than outdoor noise levels so
this guideline equates to an outdoor value of 45 dB. Serious annoyance in outdoor living areas occurs at outdoor noise levels of 55 dB. Defra’s strategic noise maps show LAeq,16, the annual average outdoor noise levels for the 16-hour period 0700-2300, with the lowest reported noise band 55.0-59.9. The SA assumes a MEDIUM likelihood of harm for residential development in this noise zone and a HIGH likelihood of harm for residential development in 60.0 dB-64.9 and higher noise zones.

The World Health Organization's Night Noise Guidelines for Europe (2009) confirm that more vulnerable groups such as children, the chronically ill or the elderly are more susceptible to adverse effect from night noise. The SA therefore assumes that proposals for developments to serve such groups have a high likelihood of harm in locations where Lnight, outside is 50.0-54.9 dB or LAeq,16 is 55.0-59.9 dB. The SA does not consider exposure to noise pollution from roads and railways in relation to employment development as noise levels experienced by workers will be heavily influenced by the type of work carried to be out on the premises, whether hearing protection is worn by employees, and the design of the building (e.g. offices are more likely than dwellings to be air conditioned and acoustically insulated).

**Proximity to waste sites**

Correspondence with the Environment Agency in the course of other SA projects indicates that:

- New development within 500 m of an existing Anaerobic Digestion (AD) activity can result in people being exposed to odour and noise emissions. The severity of these impacts will depend on the size of the facility, the way it is operated and managed, the nature of the waste it takes and the prevailing weather conditions. The odour from an AD plant can be particularly offensive, even at low levels.

- New development within 250 m of a waste management facility could result in the community at the proposed development being exposed to odour, noise, dust and pest impacts. The severity of these impacts will depend on the size of the facility, the nature of the waste it takes and prevailing weather conditions.

**Intersection with mineral resources**

All new development will result in the increased consumption of minerals for construction but this will not be influenced by the location of development sites. However, development within a Mineral Safeguarding Area may sterilise mineral resources. This could leave insufficient resources for future generations or mean that the minerals planning system loses the flexibility to extract resources at sites that would have a lower impact on the environment.

**Agricultural land**

The effects of new development on soils will depend on its location in relation to the areas of highest quality agricultural land in the Plan area, and whether the land has previously been developed. While prioritisation of brownfield land for development helps to make efficient use of land and soils, reliable and comprehensive data on the greenfield/brownfield status of land within the plan area is not always available, meaning that sites cannot be assessed on a consistent basis against this criterion. Potential loss of agricultural land is assessed by reference to the Agricultural Land Classification (ALC) used by Natural England to give advice to planning authorities and developers. The classification is based on the long term physical limitations of land for agricultural use; factors affecting the grade are climate, site and soil characteristics, and the important interactions between them. The ALC system classifies land into five grades, with Grade 3 subdivided into Subgrades 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a by policy guidance (see Annex 2 of NPPF). This is the land which is most flexible, productive and efficient in response to inputs and which can best deliver future crops for food and non-food uses such as biomass, fibres and pharmaceuticals.

**Translating site assessment scores into SA objective effects**

The site assessment criteria scores will be reorganised under the agreed SA Framework using Table A1.3 below, i.e. the scores for site assessment criteria with a 'yes' against a particular SA objective will be combined to give an overall score for each site by SA objective.
To sum the site assessment scores by SA objective, the ‘colour’ scores will be translated into numerical scores as set out below:

- **Accessibility criteria scores (desirability of walking distance):**
  - Very good = 3
  - Good = 2
  - Poor = 1
  - Very poor = 0

- **Environmental criteria scores (risk of likelihood of harm):**
  - Low = -1
  - Medium = -2
  - High = -3

Where an individual site could give rise to significant effects in its own right, or in combination with other sites under consideration, these will be identified at an early stage in order to consider possible mitigation and to influence decisions by the Council on which sites to include as preferred sites. Once preferred sites are selected, discussion of the significance of the effects of the Local Plan as a whole will be informed by the above analysis. These findings on significance will be presented in the SA Report, along with a concise justification for the score given where appropriate.
Table A1.3 Relationship between site assessment criteria and SA objectives

<table>
<thead>
<tr>
<th>Site Assessment Criteria</th>
<th>Relevant to residential sites?</th>
<th>Relevant to employment sites?</th>
<th>SA1 Housing</th>
<th>SA2 Access to services and facilities</th>
<th>SA3 Crime and deprivation</th>
<th>SA4 Equality, health and economy</th>
<th>SA5 Sustainable and active</th>
<th>SA6 Minerals</th>
<th>SA7 Soils</th>
<th>SA8 Water</th>
<th>SA9 Air pollution</th>
<th>SA10 Flood risk mitigation</th>
<th>SA11 Climate change</th>
<th>SA12 Biodiversity</th>
<th>SA13 Historic Environment</th>
<th>SA14 Landscape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to GP surgeries/health centres</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Proximity to primary or middle schools</td>
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<td>Proximity to secondary schools</td>
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<td>Proximity to local centres</td>
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<td>Proximity to bus and tram stops</td>
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<td>Proximity to cycle paths</td>
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<td>Proximity to open spaces and sports centres</td>
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<td>Relevant to employment sites?</td>
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<td>SA2</td>
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<tr>
<td>Proximity to heritage assets: allocations within existing settlements</td>
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<tr>
<td>Proximity to wildlife or geological sites: internationally or nationally designated wildlife sites - allocations within existing settlements</td>
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<td>No</td>
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<td>Proximity to wildlife or geological sites: internationally or nationally designated site - allocations outside existing settlements</td>
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<td>Proximity to wildlife or geological sites:</td>
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<tr>
<td>Site Assessment Criteria</td>
<td>SA1 Housing</td>
<td>SA2 Access to services and facilities</td>
<td>SA3 Crime and deprivation</td>
<td>SA4 Equality, health and safety</td>
<td>SA5 Economy</td>
<td>SA6 Sustainable and active landscapes</td>
<td>SA7 Minerals</td>
<td>SA8 Soils</td>
<td>SA9 Water</td>
<td>SA10 Air pollution</td>
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<td>SA12 Climate change</td>
<td>SA13 Biodiversity</td>
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<td>SA15 Landscape</td>
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<td>locally designated wildlife sites and ancient woodland</td>
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<td>Proximity to wildlife or geological sites: Priority Habitat Inventory (PHI) or local Biodiversity Action Plan (BAP) habitat</td>
<td>Yes</td>
<td>Yes</td>
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<td>Proximity to wildlife or geological sites: locally designated geological site</td>
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<td>Intersection with Source Protection Zones (SPZs)</td>
<td>Yes</td>
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<td>Intersection with flood risk areas</td>
<td>Yes</td>
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<td>Likely contribution to road traffic within areas suffering from traffic-related air pollution</td>
<td>Yes</td>
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<tr>
<td>Site Assessment Criteria</td>
<td>Relevant to residential sites?</td>
<td>Relevant to employment sites?</td>
<td>SA1 Housing</td>
<td>SA2 Access to services and facilities</td>
<td>SA3 Crime and deprivation</td>
<td>SA4 Equality, health and SA5 Economy</td>
<td>SA6 Sustainable and active SA7 Minerals</td>
<td>SA8 Soils</td>
<td>SA9 Water</td>
<td>SA10 Air pollution</td>
<td>SA11 Flood risk mitigation</td>
<td>SA12 Climate change</td>
<td>SA13 Biodiversity</td>
<td>SA14 Historic Environment</td>
<td>SA15 Landscape</td>
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<td>Proximity to sources of air pollution</td>
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<td>Intersection with airport Public Safety Zones (PSZ)</td>
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<td>Intersection with mineral resources</td>
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<td>SA Issue</td>
<td>Relevant SA Objective</td>
<td>Why SA issue not covered by site assessment criteria</td>
<td>How the issue will be appraised</td>
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<tr>
<td>Housing provision</td>
<td>SA1 - Housing</td>
<td>All residential sites will contribute to meeting housing need but the effects of the Local Plan in relation to this SA objective will not depend on the locations of individual sites but rather on the policies determining the total amounts, types and tenures of houses to be provided and their broad distribution across the plan area.</td>
<td>All site options with the potential to deliver homes within the plan period have the potential for positive effects on SA Objective 1. However, an appraisal of the Plan’s ability to deliver the quantity, quality and range of homes required in the plan period will be included in the SA Report as part of the appraisal of the cumulative effects of the plan as a whole.</td>
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<td>Reducing crime and fear of crime</td>
<td>SA3 – Crime and deprivation</td>
<td>The effects of new development on levels of crime and fear of crime will depend on factors such as the incorporation of green space within development sites which, depending on design and the use of appropriate lighting, could have an effect on perceptions of personal safety, particularly at night. However, such issues will not be influenced by the location of development sites (rather they will be determined through the detailed proposals for each site).</td>
<td>The performance of the Local Plan in relation to achieving this objective is assessed via SA objective 3 and the SA of development management policies rather than SA of site options.</td>
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<td>Employment provision</td>
<td>SA5 – Economy</td>
<td>All employment sites will contribute to meeting employment need but the effects of the Local Plan in relation to this SA objective will not depend on the locations of individual sites but rather on the policies determining the total projected number and type/range of jobs to be provided and their broad distribution across the plan area.</td>
<td>All site options with the potential to deliver jobs and employment land within the plan period have the potential for positive effects on SA Objective 5. However, an appraisal of the Plan’s ability to deliver the quantity, quality and range of jobs required in the plan period will be included in the SA Report as part of the appraisal of strategic planning policies and the cumulative effects of the Plan’s site allocations as a whole.</td>
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<td>Social Inclusion</td>
<td>SA2 – Access to services and facilities, SA3 – Crime and deprivation and SA4 – Equality, health and wellbeing</td>
<td>The location of new development will affect social inclusion to some extent by influencing how easily people are able to access job opportunities, services and facilities etc. However, these factors are assessed under other SA objectives. The Indices of Multiple Deprivation (IMD) may provide a useful overview of the spatial distribution of deprivation but it is not valid to conclude that development in an area of high deprivation is likely to positively or negatively affect existing deprivation levels based purely on the type and location of</td>
<td>The accessibility of job opportunities, services and facilities are assessed under SA objective 2. The performance of the Local Plan in relation to achieving this objective is assessed via the SA of development management policies rather than SA of site options.</td>
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<td>To promote and ensure high standards of sustainable design and construction</td>
<td>SA6 – Sustainable Travel, SA9 – Water, SA10 Air pollution, SA11 – Flood risk, SA12 – Climate change minimisation and SA13 Biodiversity</td>
<td>Specific design and construction methods used and whether renewable energy infrastructure is to be incorporated in the development will not be known until planning applications come forward.</td>
<td>The SA considers the effects of the Local Plan on these factors via assessment of development management policies rather than assessment of site options.</td>
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<td>To prioritise use of brownfield land for development.</td>
<td>SA8 - Soils</td>
<td>The potential adverse environmental effects of loss of greenfield land are covered by other SA objectives. Therefore, avoiding loss of greenfield land is not separately assessed.</td>
<td>The environmental effects of loss of greenfield land are assessed, either directly or indirectly, under SA objectives 8 and 13.</td>
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<td>Climate change mitigation</td>
<td>SA2 – Access to services and facilities, SA4 – Equality, health and wellbeing, SA6 – Sustainable travel and SA10 – Air pollution</td>
<td>While new development will inevitably lead to an increase in greenhouse gas emissions (both through emissions from buildings and the increased vehicle traffic associated with growth), the location of individual development sites will only affect these in relation to the accessibility of the site to sustainable transport modes and employment areas, services and facilities.</td>
<td>The influence of development design is assessed via the SA of development management policies, and either directly or indirectly through SA objectives 2, 4, 6 and 10.</td>
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<td>Climate change adaptation</td>
<td>SA12 – Climate change minimisation</td>
<td>The influence of development design and construction methods will not be known until planning applications come forward.</td>
<td>The influence of development design is assessed via the SA of development management policies and through SA objective 12.</td>
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Appendix 2  Responses to consultation comments
Table A2.1: Consultation comments on the Draft Scoping Report and how these have been addressed

<table>
<thead>
<tr>
<th>Party</th>
<th>Summary of Submission</th>
<th>DBC Response</th>
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<tbody>
<tr>
<td>Historic England</td>
<td>Report adequately covers historic asset effects</td>
<td>None</td>
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<tr>
<td>Environment Agency</td>
<td>No comments. Section 6.19 – flood risk modelling delayed until Spring 2019</td>
<td>Clarified in text</td>
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<td></td>
<td>The correct issues have been highlighted in the groundwater and contaminated land parts of the report. Environmental gains should be included as well as social economic gains</td>
<td>The SA Scoping Report considers environmental, social and economic issues. It is uncertain which part of the report this comment relates to, but the SA will continue to consider the possibility for social, economic and environmental gains throughout.</td>
</tr>
<tr>
<td></td>
<td>Section SA4 should indicate pollution or contamination in addition to the factors set in the question on health and well-being.</td>
<td>Text updated</td>
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<td>Table A1.3 should have yes linking soils and SPZs</td>
<td>Updated</td>
</tr>
</tbody>
</table>
| Natural England       | Generally good coverage of plans, policies and programmes. Following should be used as relevant; GI strategies, Biodiversity plans, Rights of Way improvement plans, shoreline management plans, river basin management plans, AONB management plans. Reference to Marine and coastal Access Act (2009) should be included. Should consider including EA Water for Life and livelihoods 2015. Part 1 Thames River Basin District River Basin management Plan DEFRA, EA Estuary Edges: Ecological Design Advice. (Links provided) | Marine and Coastal Act 2009  
Thames River Basin management Plan  
Have been added to the review of plans and programmes, other suggested strategies do not exist or are not relevant to Dartford.  
The Estuary Edges: Ecological Design Advice is a guidance document, rather than a plan or policy document, therefore it has not been included. However, the Council will have regard to the document when preparing the Local Plan policies. |
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<th>Party</th>
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<th>DBC Response</th>
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<tr>
<td></td>
<td>Key sustainability Issues. Welcomed that LP will address the importance of accessibility, quality and inclusion of new green spaces. A further comment could be added to refer to connecting people to the environment.</td>
<td>Reference inserted</td>
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<tr>
<td></td>
<td>Happy to see biodiversity opportunities highlighted. More comprehensive review of vulnerabilities of designated sites can be found on the NE designated site system (link supplied).</td>
<td>Added reference and website link to Biodiversity baseline.</td>
</tr>
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<td></td>
<td>Lack of coverage of enhancement or impacts on recreational resources and assets. Add supporting question to objective SA2 or 4. 'Does the plan impact on the quality and extent of existing recreational assets, including formal or informal paths? Improving people’s access to nature should be included as key issue.</td>
<td>Question on impact on recreational assets added to SA objective 2. Have included access to nature in the evolution without a plan section, in regard the opportunity afforded by the Plan. An appraisal question in SA13 also identifies the Plan approach to managing opportunities for people to connect to nature.</td>
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<td>In ecological connectivity add ‘Ensure current ecological networks are not compromised, and future improvements in habitat connectivity are not prejudiced’.</td>
<td>Included in SA13</td>
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<td></td>
<td>Satisfied that the SEA Regulation Requirements cover NE key interests. Advise use of GI standard as an indicator such as Accessible natural Greenspace Standard.</td>
<td>See response on SEA indicators below.</td>
</tr>
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<td></td>
<td>Chapter 2: Highlight a possible connection between open space provision and the health of the population – this could support future open space provision in areas where health deprivation and deficit of open space. Objective SA4 supporting question in the SA framework could also consider quality of existing sites. In line with the question, reference could be added to improvement or enhancement in SA4.</td>
<td>The potential for connection between open space and particularly mental health of population has been inserted referencing research findings from Kent Nature Partnership. 'Enhancing’ added to SA 4 questions. The existing text assesses if the plan provides for a variety of open spaces and recreation facilities. An assessment of the relative quality of existing sites would be difficult and may not indicate the extent of potential for positive</td>
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<td>Chapter 5: Generally happy but advised to include River Basin management plans.</td>
<td>Thames River Basin Management Plan added.</td>
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<td>Chapter 11 SA8 question in the Framework should note that some brownfield sites can have significant biodiversity value, particularly for invertebrates, and this should be a consideration in individual site appraisals.</td>
<td>SA8 objective is to conserve soils, this does not seem to be an applicable place to comment on brownfield biodiversity value. A question focused on brownfield site biodiversity value has been inserted in SA13. We do not have the evidence available to assess biodiversity value of brownfield sites in terms of individual site appraisals. We would suggest that this is recognised in the Local Plan DM policies to ensure biodiversity of brownfield sites is considered at the planning application stage.</td>
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<td>Chapter 7: the main issues have been identified. Advised to use terminology ‘net gain’ in support of Government’s 25 Year Environment Plan and which is to be achieved via the development process. Consider including an appraisal question for objective SA13 to test Plan’s delivery of ‘net gain’. The aquatic environment should be considered. Reference must be made to the Marine and coastal Access Act (2009) and the Swanscombe Marine Conservation Zone. Electronic link provided to information on the site.</td>
<td>Reference made to ‘net gain’ in overview of 25 year Environment Plan and question added to SA13. Swanscombe MCA and 2009 Marine and Coastal Access Act referenced.</td>
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<td>Monitoring indicators – It is important that monitoring indicators relate to the effects of the plan itself not general environmental baseline metrics which will be driven by factors outside of the plan. A number of suggestions have been listed which may be suitable</td>
<td>As the contents of the Local Plan and likely sustainability effects are currently unknown, it is not appropriate to provide details on suggested monitoring indicators at this time. A reference to the SA providing</td>
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<td>Party</td>
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<td>relating to the outcome of development management decisions and an information sheet on sources of local plan evidence on the natural environment has been provided.</td>
<td>specific LP performance indicators has been added to Chapter 12. The suggestions provided will be considered during the drafting of the SA.</td>
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</table>