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Sustainability Appraisal of Dartford Local Plan Review: Preferred Options Consultation Document

Sustainability Appraisal Report
Prepared by LUC
October 2019

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Client: Dartford Borough Council

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1 Introduction

- 1.1 This Sustainability Appraisal Report has been prepared by LUC on behalf of Dartford Borough Council as part of the integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) of the Dartford Local Plan Review.
- 1.2 This report relates to the Preferred Options Consultation Document and it should be read in conjunction with that document.

Context for the Dartford Local Plan

- 1.3 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 guide minerals and waste development across the county.
- 1.4 The Core Strategy is at the heart of the current 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.
- 1.5 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 then updated again in February 2019 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 2019 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.
- 1.6 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.
- 1.7 The location of Dartford Borough is shown in **Figure 1.1**.

Sustainability Appraisal and Strategic Environmental Assessment

- 1.8 Sustainability Appraisal is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the plan preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process involves appraising the likely social, environmental and economic effects of the policies and proposals within a plan from the outset of its development.
- 1.9 Strategic Environmental Assessment (SEA) is also a statutory assessment process, required under the SEA Directive¹, transposed in the UK by the SEA Regulations (Statutory Instrument

¹ SEA Directive 2001/42/EC

2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment and which set the framework for future consent of projects requiring Environmental Impact Assessment (EIA)². The purpose of SEA, as defined in Article 1 of the SEA Directive is *'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans.... with a view to promoting sustainable development'*.

- 1.10 SEA and SA are separate processes but have similar aims and objectives. Simply put, SEA focuses on the likely environmental effects of a plan whilst SA includes a wider range of considerations, extending to social and economic impacts. National Planning Practice Guidance³ shows how it is possible to satisfy both requirements by undertaking a joint SA/SEA process, and to present a SA Report that incorporates the requirements of the SEA Regulations. The SA/SEA of the Dartford Local Plan is being undertaken using this integrated approach and throughout this report the abbreviation 'SA' should therefore be taken to refer to 'SA incorporating the requirements of SEA'.

Structure of this Report

- 1.11 This report is the SA Report for the Dartford Local Plan Review Preferred Options Consultation Document. **Table 1.1** signposts how the requirements of the SEA Regulations have been met in this report.

Table 1.1 Requirements of the SEA Regulations and where these are addressed in this SA Report

SEA Regulation Requirements	Where covered in this SA Report
Preparation of an environmental report in which 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, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes	Chapter 3.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Chapter 3.
c) The environmental characteristics of areas likely to be significantly affected	Chapter 3.
d) 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 and 92/43/EEC.	Chapter 3.
e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation	Chapter 3.

² Under EU Directives 85/337/EEC and 97/11/EC concerning EIA.

³ <http://planningguidance.planningportal.gov.uk/>

SEA Regulation Requirements	Where covered in this SA Report
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects)	Chapter 4.
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	To be addressed once detailed policies have been developed.
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapter 2 provides information about how the assessment was undertaken and difficulties encountered. Chapter 4 outlines why the Council selected the preferred approach in light of the alternatives for each set of options.
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	To be addressed once detailed policies have been developed.
j) a non-technical summary of the information provided under the above headings	A separate non-technical summary document will be prepared to accompany the SA Report for the Proposed Submission Local Plan.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Addressed throughout this SA Report.
<p>Consultation:</p> <ul style="list-style-type: none"> authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Art. 5.4) 	Consultation was undertaken on the SA Scoping Report from the 31 st of October 2018 to the 5 th of December 2018.
<ul style="list-style-type: none"> authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2) 	Consultation is being undertaken in relation to the Dartford Local Plan and will continue to be for all future stages of the plan. The current consultation document is accompanied by this SA Report.

SEA Regulation Requirements	Where covered in this SA Report
<ul style="list-style-type: none"> other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7). 	N/A
Taking the environmental report and the results of the consultations into account in decision-making (Art. 8)	
<p>Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Art.7 must be informed and the following made available to those so informed:</p> <ul style="list-style-type: none"> the plan or programme as adopted a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report of Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Art. 7 have been taken into account in accordance with Art. 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and the measures decided concerning monitoring (Art. 9) 	To be addressed after the Local Plan is adopted.
<p>Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10)</p>	To be addressed after the Local Plan is adopted.
<p>Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).</p>	This report has been produced in line with current guidance and good practice for SEA/SA and this table demonstrates where the requirements of the SEA Directive have been met.



1.12 This section has introduced the SA process for the Dartford Local Plan. The remainder of the report is structured into the following sections:

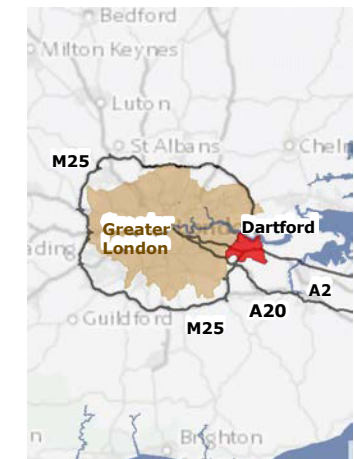
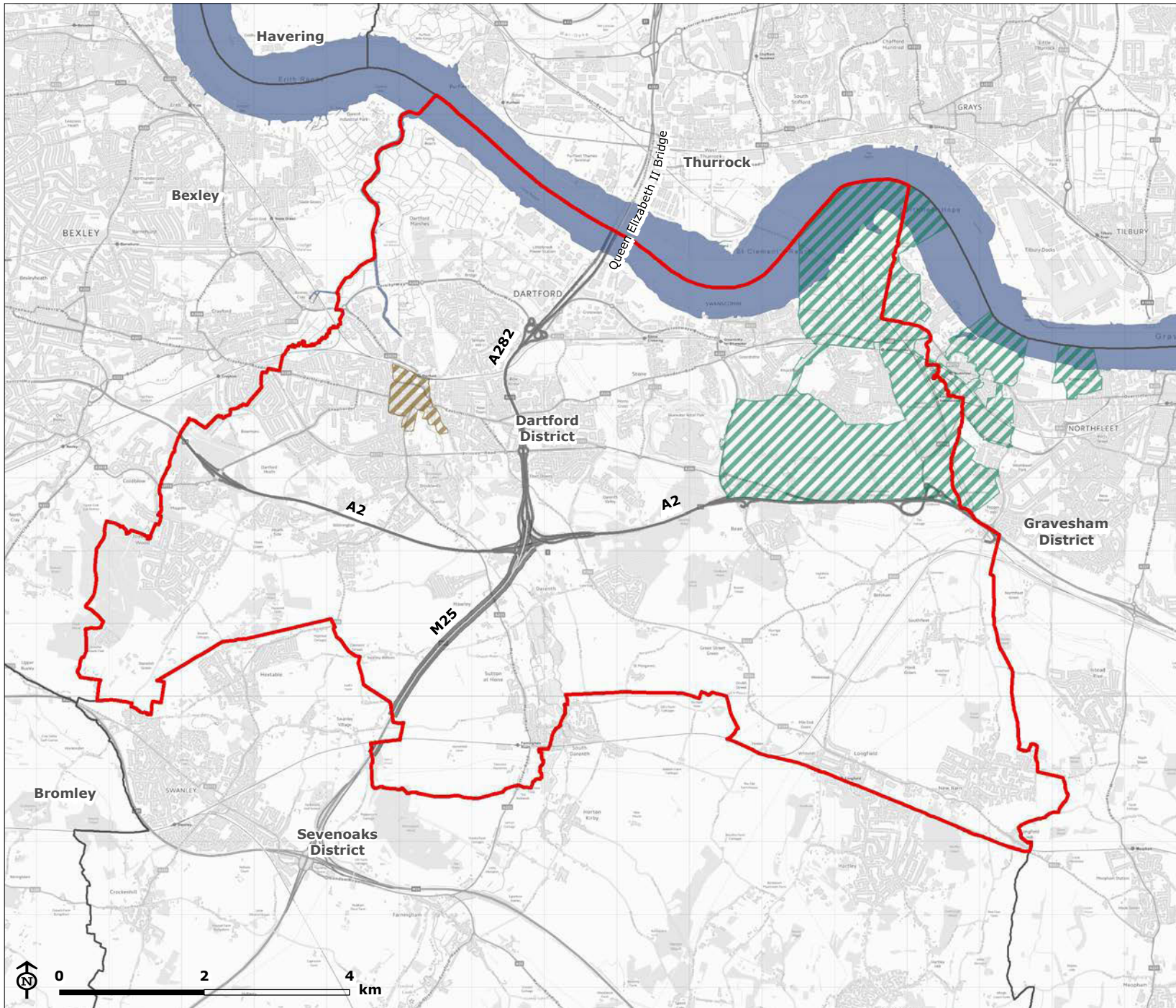
- **Chapter 2: Methodology** describes the approach that is being taken to the SA of the Local Plan.
- **Chapter 3: Sustainability Context for Development in Dartford** describes the relationship between the Dartford Local Plan and other relevant plans, policies and programmes; summarises the social, economic and environmental characteristics of the Borough and identifies the key sustainability issues.
- **Chapter 4: Sustainability Appraisal Findings** summarises the SA findings for the proposed vision and objectives, 'Main Alternatives' for the Plan and options for policy approaches.
- **Chapter 5: Conclusions** summarises the key findings from the SA of the Consultation Document and describes the next steps to be undertaken.

1.13 The main body of the report is supported by a number of appendices as follows:

- **Appendix 1** presents the **consultation responses** that were received in relation to the SA Scoping Report and explains how each one has been addressed.
- **Appendix 2** presents the **review of relevant plans, policies and programmes and updated baseline information**, taking into account comments on the SA Scoping Report.
- Error! Reference source not found. presents the **assessment matrices** for the options included in the Dartford Local Plan.

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



2 Methodology

- 2.1 In addition to complying with legal requirements, the approach being taken to the SA of the Dartford Local Plan is based on current best practice and the guidance on SA/SEA set out in the National Planning Practice Guidance, which involves carrying out SA as an integral part of the plan-making process. **Table 2.1** below sets out the main stages of the plan-making process and shows how these correspond to the SA process.

Table 2.1 Corresponding stages in plan making and SA

Local Plan Step 1: Evidence Gathering and Engagement
SA stages and tasks
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope
1: Identifying other relevant policies, plans and programmes, and sustainability objectives
2: Collecting baseline information
3: Identifying sustainability issues and problems
4: Developing the SA framework
5: Consulting on the scope of the SA
Local Plan Step 2: Production
SA stages and tasks
Stage B: Developing and refining options and assessing effects
1: Testing the Local Plan objectives against the SA framework
2: Developing the Local Plan options
3: Evaluating the effects of the Local Plan
4: Considering ways of mitigating adverse effects and maximising beneficial effects
5: Proposing measures to monitor the significant effects of implementing the Local Plan
Stage C: Preparing the Sustainability Appraisal Report
1: Preparing the SA Report
Stage D: Seek representations on the Local Plan and the Sustainability Appraisal Report
1: Public participation on Local Plan and the SA Report
2(i): Appraising significant changes
Local Plan Step 3: Examination
SA stages and tasks
2(ii): Appraising significant changes resulting from representations
Local Plan Step 4 & 5: Adoption and Monitoring
SA stages and tasks
3: Making decisions and providing information
Stage E: Monitoring the significant effects of implementing the Local Plan
1: Finalising aims and methods for monitoring
2: Responding to adverse effects

- 2.2 The sections below describe the approach that has been taken to the SA of the Dartford Local Plan to date and provide information on the subsequent stages of the process.

Stage A: Scoping

- 2.3 The SA process began with the production of a Scoping Report for the Dartford Local Plan, which was prepared by LUC on behalf of Dartford Borough Council.

- 2.4 The Scoping stage of the SA involves understanding the social, economic and environmental baseline for the Plan area as well as the sustainability policy context and key sustainability issues. The Scoping Report presented the outputs of the following tasks:
- Policies, plans and programmes of relevance to the Local Plan were identified and the relationships between them were considered, enabling any potential synergies to be exploited and any potential inconsistencies and incompatibilities to be identified and addressed (see **Appendix 2**).
 - Baseline information was collected on environmental, social and economic issues in Dartford Borough Council. This baseline information provides the basis for predicting and monitoring the likely effects of options for policies and site allocations and helps to identify alternative ways of dealing with any adverse effects identified (see Error! Reference source not found.).
 - Key sustainability issues for Dartford were identified and their likely evolution without the implementation of the Local Plan was considered (see **Table 3.1**).
 - A Sustainability Appraisal framework was presented, setting out the SA objectives against which options and subsequently policies would be appraised. The SA framework provides a way in which the sustainability impacts of implementing a plan can be described, analysed and compared. It comprises a series of sustainability objectives and associated sub-questions that can be used to 'interrogate' options and policies drafted during the plan-making process. These SA objectives define the long-term aspirations of the district with regard to social, economic and environmental considerations. During the SA, the performances of the plan options (and later, policies) are assessed against these SA objectives and sub-questions (see **Table 2.2**).
- 2.5 Public and stakeholder participation is an important part of the SA and wider plan-making processes. It helps to ensure that the SA Report is robust and has due regard for all appropriate information that will support the plan in making a contribution to sustainable development. The Scoping Report was published for consultation from 31st October 2018 until 5th December 2018. An updated Scoping Report was published in January 2019, which responded to the comments received in this consultation.
- 2.6 **Appendix 1** lists the comments that were received during the consultation on the SA Scoping Report and describes how each one was addressed. In light of the comments received, minor changes have been made to the baseline information, the key sustainability issues and SA framework.
- 2.7 The review of plans, policies and programmes and the baseline information are summarised in **Chapter 3**. The full review of plans, policies and programmes and the baseline information is included in the SA Scoping Report (January 2019) and in **Appendix 2**. These will continue to be updated to account for any new information in future iterations of the SA.
- 2.8 **Table 2.2** presents the updated SA framework for the Dartford Local Plan, which includes 15 SA objectives. The table also shows the appraisal questions and SEA topics that are relevant to each SA objective.

Table 2.2: SA Framework for the Dartford Local Plan

SA objective	Appraisal questions	Relevant SEA Topics
SA 1: To ensure that everyone has the opportunity to live in a decent home.	Does the Plan deliver the range of types, tenures and affordable homes the Borough needs over the Plan Period?	Population, Human Health and Material Assets
SA 2: To ensure ready access to essential services and facilities for all residents.	<p>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)?</p> <p>Does the Plan provide housing within proximity to existing services and facilities that are accessible for all, if not to be provided on site?</p> <p>Does the plan impact on the quality and extent of existing recreational assets, including formal and informal paths?</p>	Population, Human Health and Material Assets
SA 3: To strengthen Community cohesion.	<p>Will the Plan help deliver cohesive neighbourhoods with high levels of pedestrian activity/ outdoor interaction, where people mix?</p> <p>Will the Plan facilitate the integration of new neighbourhoods with existing neighbourhoods?</p> <p>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?</p> <p>Will the Plan help to reduce levels of crime, anti-social behaviour and the fear of crime?</p>	Population and Human Health
SA 4: To improve the population's health and reduce inequalities.	<p>Does the Plan promote health and wellbeing by maintaining, enhancing, connecting and creating multifunctional open spaces, green infrastructure, recreation and sports facilities?</p> <p>Does the Plan protect health and wellbeing by preventing, avoiding and mitigating adverse health effects associated with, noise, vibration, pollution/contamination, and odour?</p> <p>Does the Plan promote healthy lifestyles by encouraging and facilitating walking and cycling?</p> <p>Does the Plan safeguard human health and well-being by promoting climate change resilience through sustainable siting, design, landscaping and infrastructure?</p>	Population, Human Health and Climatic Factors

SA objective	Appraisal questions	Relevant SEA Topics
SA 5: Facilitate a sustainable and growing economy and a vital and viable town centre.	<p>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?</p> <p>Does the Plan support opportunities for the expansion and diversification of business and inward investment?</p> <p>Does the Plan maintain and enhance the economic vitality and vibrancy of the Borough's town centre?</p> <p>Does the Plan provide new and improved education facilities leading to a work ready population of school and college leavers?</p>	Population, Human Health and Material Assets
SA 6: To reduce the need to travel and encourage sustainable and active alternatives to motorised vehicles to reduce congestion.	<p>Does the Plan promote the delivery of integrated, compact communities made-up of a complementary mix of land uses?</p> <p>Does the Plan support the maintenance and expansion of public transport networks including areas with sufficient demand for the introduction of new public transport?</p> <p>Does the Plan facilitate new and enhanced walking and cycling links?</p> <p>Does the Plan help to address road congestion and its causes?</p>	Air, Climatic Factors, Population and Human Health
SA 7: To conserve the Borough's Mineral resources.	<p>Does the Plan ensure adequate consideration is given to balancing the need for development with safeguarding resources?</p>	Material Assets
SA 8: To conserve the Borough's soils.	<p>Does the Plan prioritise the development brownfield land over greenfield land?</p> <p>Does the Plan take an appropriate approach to dealing with the potential health and economic risks potentially associated with despoiled land?</p> <p>Does the Plan avoid development on the Borough's best and most versatile agricultural land?</p>	Soil and Human Health
SA 9: To maintain and improve the quality of the Borough's waters.	<p>Does the Plan minimise inappropriate development in source protection zones?</p> <p>Does the Plan ensure there is sufficient waste water treatment capacity to accommodate the new development?</p>	Water
SA 10: To reduce air pollution and ensure improvements in air quality.	<p>Does the Plan avoid, minimise and mitigate the effects of poor air quality?</p> <p>Does the Plan contain measures which will help to reduce congestion, particularly involving HGVs?</p> <p>Will the Plan minimise increases in traffic in the Air Quality Management Areas?</p>	Air, Climatic Factors, and Human Health

SA objective	Appraisal questions	Relevant SEA Topics
SA 11: To avoid and mitigate Flood risk.	<p>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?</p> <p>Does the plan minimise Flood risk and promote the use of SuDS and other flood resilient design?</p>	Water, Soil, Climatic Factors and Human Health
SA 12: To minimise the Borough's contribution to climate change.	<p>Does the Plan promote energy efficient design?</p> <p>Does the Plan encourage the provision of renewable energy infrastructure where possible?</p> <p>Does the Plan minimise greenhouse gas emissions from transport?</p>	Climatic Factors
SA 13: To conserve, connect and enhance the Borough's wildlife, habitats and species.	<p>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?</p> <p>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?</p> <p>Does the Plan ensure that the biodiversity value of brownfield sites is identified, protected and enhanced?</p> <p>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?</p>	Biodiversity, Flora and Fauna, Landscape and Human Health
SA 14: To conserve and/or enhance the significant qualities, fabric, setting and accessibility of the Borough's historic environment.	<p>Does the Plan conserve the Borough's designated and undesignated heritage assets, including their setting and their contribution to wider local character and distinctiveness?</p> <p>Does the Plan outline opportunities for improvements to the conservation, management and enhancement of the Borough's historic environment, particularly at risk heritage assets?</p> <p>Does the Plan promote access to, as well as enjoyment and understanding of, the local historic environment for the Borough's residents and visitors?</p>	Cultural Heritage and Human Health
SA 15: To conserve and enhance the special qualities, accessibility, local character and distinctiveness of the Borough's settlements, countryside and landscape.	<p>Does the Plan protect the Borough's sensitive and special landscapes and townscapes?</p> <p>Does the Plan encourage development that will have a positive effect on the character of the Borough's neighbourhoods, countryside and settlements?</p>	Landscape and Cultural Heritage

- 2.9 The SA framework is designed to strike a balance between providing sufficient detail to identify key effects, whilst keeping analysis at a strategic level. Many of the objectives are cross-cutting, as they relate to a number of SEA topics. In order to avoid repetition and to ensure assessments are effective and useful in decision-making, each SA objective is considered individually. For example, SA objective 1 relates to provision of suitable homes, including affordable housing. Provision of housing is not a sustainability issue in its own right but is important in ensuring people have a suitable place to live, which in turn benefits the health and wellbeing of residents and their economic productivity, among other social and economic benefits. As such, these factors are not repeated in the assessment of other SA objectives.

SA Stage B: Developing and Refining Options and Assessing Effects

- 2.10 Developing options for a plan is an iterative process, usually involving a number of consultations with public and stakeholders. Consultation responses and the SA can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan.
- 2.11 Regulation 12 (2) of the SEA Regulations requires that:
- "The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of—*
- (a) implementing the plan or programme; and*
- (b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme."*
- 2.12 Any alternatives considered for the plan need to be 'reasonable'. This implies that alternatives that are not reasonable do not need to be subject to appraisal. Examples of unreasonable alternatives could include policy options that do not meet the objectives of the plan or national policy (e.g. the National Planning Policy Framework) or site options that are unavailable or undeliverable.
- 2.13 The SA findings are not the only factors taken into account when determining a preferred option to take forward in a plan. Indeed, there will often be an equal number of positive or negative effects identified for each option, such that it is not possible to 'rank' them based on sustainability performance in order to select a preferred option. Factors such as public opinion, deliverability and conformity with national policy will also be taken into account by plan-makers when selecting preferred options for their plan.
- 2.14 This section provides an overview of how the appraisal of options has been undertaken and how this will feed into the development of the Dartford Local Plan.

Identifying options for the Consultation Document

- 2.15 In identifying the 'Main Plan Options' for the Local Plan, the Council focused on the most critical planning policy matters, topics and sustainable development locations which will define the Borough in future, its environment and main areas of regeneration. The policy approach options were identified by considering how the preferred Main Plan Options could come forward.
- 2.16 In developing these options, the Council considered responses received in response to the Strategic Issues Consultation, which took place from June to July 2018. This consisted of a series of open-ended questions so that residents and stakeholders could voice their opinions on the direction that the new Local Plan should take.

SA Stage C: Preparing the SA Report

- 2.17 This SA Report describes the process that has been undertaken to date in carrying out the SA of Dartford Local Plan. It sets out the findings of the appraisal of options, highlighting any likely

significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects).

SA Stage D: Consultation on Local Plan and this SA Report

- 2.18 Dartford Borough Council is inviting comments on the Consultation Document and this SA Report.
- 2.19 **Appendix 1** presents the consultation comments that were received in relation to the SA Scoping Report and explains how they have been addressed. Information about the consultation responses received in relation to this SA Report and how they have been addressed will be provided in the next iteration of the SA Report to be prepared.

SA Stage E: Monitoring Implementation of the Local Plan

- 2.20 The Consultation Document identifies some of the key issues that will be considered in preparing the Local Plan and presents options for responding to these, most notably with regards to the spatial distribution of development. As detailed policies have not been drawn up at this stage and preferred policy approaches have not been selected, the effects of the plan cannot be assessed in detail. Recommendations for monitoring the implementation of the Local Plan will be included in future iterations of the SA, once detailed policies and site allocations have been selected.

Appraisal Methodology

- 2.21 The options set out in the Consultation Document have been appraised against the SA objectives in the SA Framework (see **Table 2.2** earlier in this section) with symbols and colours being attributed to each option to indicate its likely sustainability effects on each objective as follows:

Figure 2.1: Key to symbols and colour coding used in the SA of Dartford’s Local Plan

++	The option is likely to have a significant positive effect on the SA objective(s).
++/-	The option is likely to have a mixture of significant positive and minor negative effects on the SA objective(s).
+	The option is likely to have a minor positive effect on the SA objective(s).
0	The option is likely to have a negligible or no effect on the SA objective(s).
-	The option is likely to have a minor negative effect on the SA objective(s).
+/--	The option is likely to have a mixture of significant negative and minor positive effects on the SA objective(s).
--	The option is likely to have a significant negative effect on the SA objective(s).
?	It is uncertain what effect the option will have on the SA objective(s).
+/- or ++/--	The option is likely to have an equal mixture of both minor or both significant positive and negative effects on the SA objective(s).

- 2.22 Due to the high-level nature of options assessed at this stage, all potential effects identified are uncertain. Where this uncertainty is considered to be particularly significant, a question mark was added to the relevant score (e.g. +? or -?) and the score is colour coded as per the potential positive, negligible or negative score (e.g. green, yellow, orange, etc.).
- 2.23 The plan may affect certain objectives to different degrees, i.e. the magnitude of effects will differ. As the purpose of SA is to identify likely significant effects, the symbols and colours shown

in **Figure 2.1** only indicate whether an effect is positive or negative (and/or uncertain) and whether it is minor or significant. Differences in the magnitude of similar effects were discussed in the assessment text, where relevant.

- 2.24 The assessment of each element of the Consultation Document has been carried out in isolation, i.e. without reference to the potential effects of other aspects of the Consultation Document. This allows identification of effects arising from each part of the Consultation Document individually, which is important as these are subject to change. When preferred options are known, a cumulative assessment of the plan as a whole will also be undertaken.
- 2.25 The likely effects of options need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. This appraisal has attempted to differentiate between the most significant effects and other more minor effects through the use of the symbols shown above. The dividing line in making a decision about the significance of an effect is often quite small. Where either (++) or (--) has been used to distinguish significant effects from more minor effects (+ or -) this is because the effect of an option on the SA objective in question is considered to be of such magnitude that it will have a noticeable and measurable effect taking into account other factors that may influence the achievement of that objective. However, scores are relative to the scale of proposals under consideration.

Difficulties Encountered and Limitations

- 2.26 It is a requirement of the SEA Regulations that consideration is given to any data limitations or other difficulties that are encountered during the SA process. The high-level nature of the options meant that at times it was difficult to assess in detail the likely effects of the options on each SA objective. Once policies have been worked up in more detail, it should be possible to draw more certain conclusions about their likely effects.
- 2.27 Because many effects of development are dependent on the exact location, layout and design of development, it may be possible to mitigate some of the effects highlighted in this SA. However, given the inherent uncertainties about these details at this strategic stage of planning and assessment, the SA focuses on identifying potential significant effects of the options considered, whilst making no assumptions about detailed design or mitigation matters.
- 2.28 The SA of the options has been undertaken using available evidence. The nature of the options is high level and as such there is a considerable degree of uncertainty attached. In addition, there may be gaps in this evidence base that, where possible, will be filled as information and data to inform the Local Plan preparation process continues. For example:
- The need for further investment in infrastructure (e.g. transport, water), services and facilities are likely to be identified once options for development are firmed up, which may address some of the issues identified in the SA at this early stage of the process.
 - There could be undiscovered archaeological features at any location within Dartford. For the purposes of this SA, we have focused on assessing the likely effects of development on known heritage assets, but further archaeological work may be necessary prior to any development in order to avoid loss of archaeological resources.
 - The rate at which emissions from private vehicles will change over the course of the plan period as a result of technological improvements cannot be predicted or realistically factored in to judgements about air quality.

3 Sustainability Context for Development in Dartford

Review of Plans, Policies and Programmes

- 3.1 The Dartford Local Plan is not prepared in isolation, being greatly influenced by other plans, policies and programmes and by broader sustainability objectives. It needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and strategies, such as those relating to social policy, culture and the historic environment. It must also conform to environmental protection legislation and the sustainability objectives established at an international, national and regional level.
- 3.2 During the Scoping stage of the SA, a review was undertaken of the other plans, policies and programmes that are relevant to the Local Plan, as described in **Chapter 2**. The key findings are summarised below, and the full review can be found in the January 2019 SA Scoping Report.
- 3.3 Annex 1 of the SEA Directive requires:
- (a) *“an outline of the...relationship with other relevant plans or programmes”*; and
 - (e) *“the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation”*
- 3.4 It is necessary to identify the relationships between the Dartford Local Plan and the relevant plans, policies and programmes so that any potential links can be built upon and any inconsistencies and constraints addressed.

Key international plans, policies and programmes

- 3.5 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 plan in order to ensure that any potential negative environmental effects (including on European-level nature conservation designations) are identified and can be mitigated.
- 3.6 There are a wide range of other EU Directives relating to issues such as Water quality, waste and air quality, most of which have been transposed into UK law through national-level policy.
- 3.7 Should the UK leave the European Union on 31st October, as planned, these EU Directives will cease to apply to the UK. However, all have been transposed into UK law, such as via the SEA Regulations and Habitats Regulations, which will continue to apply in their slightly amended form (EU Exit versions, which are slightly amended versions, which ensure they apply when the UK is no longer a member state).

Key national plans, policies and programmes

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 and updated once again in 2019⁴. The NPPF sets out information about the purposes of local plan-making, stating that:

⁴ Ministry of Housing, Communities and Local Government (February 2019) National Planning Policy Framework. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

"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."

- 3.8 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 (including policies in this Framework, where relevant)".*
- 3.9 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".*
- 3.10 The NPPF also promotes well-designed places and development, as well as protection and enhancing beneficial use of the Green Belt.
- 3.11 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.
- 3.12 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)."*

Neighbourhood Plans

- 3.13 The Localism Act (2011) sought to move decision-making away from central government and towards local communities. Part of this included the introduction of Neighbourhood Planning.
- 3.14 Neighbourhood Plans must be consistent with the requirements of the NPPF and, once adopted, Neighbourhood Plans form part of the statutory development plan for the district or Borough

within which they are located. The NPPF sets out information about the purposes of Neighbourhood Plan-making, stating that:

“Neighbourhood planning gives communities the power to develop a shared vision for their area.”

- 3.15 The NPPF also states that Neighbourhood Plans *“can shape, direct and help to deliver sustainable development”*, but they should not promote less development than set out in the strategic policies in a Local Plan covering the neighbourhood area. Within this context, Neighbourhood Plans typically include policies to deliver:
- Site allocations for small and medium-sized housing.
 - The provision of infrastructure and community facilities at a local level.
 - Establishing design principles.
 - Conservation and enhancement of the natural and historic environment.
- 3.16 There is one designated neighbourhood area within the Borough of Dartford, Stone is in the process of creating a Neighbourhood Development Plan.

Baseline Information

- 3.17 Baseline information provides the context for assessing the sustainability of proposals in the Dartford Local Plan and it provides the basis for identifying trends, predicting the likely effects of the plan and monitoring its outcomes. The requirements for baseline data vary widely, but it must be relevant to environmental, social and economic issues, be sensitive to change and should ideally relate to records which are sufficient to identify trends.
- 3.18 Schedule 2 of the SEA Regulations requires data to be gathered on biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors. As an integrated SA and SEA is being carried out, baseline information relating to other sustainability topics has also been included; for example, information about housing, education, transport, energy, waste and economic growth. This information can be found in the January 2019 Scoping Report and **Appendix 2**.

Key Sustainability Issues

- 3.19 A set of key sustainability issues for Dartford was identified during the Scoping stage of the SA and was presented in the Scoping Report.
- Identification of the key sustainability issues and consideration of how these issues might develop over time if the Local Plan is not prepared, help meet the requirements of Annex 1 of the SEA Directive to provide information on:
- “the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan; and any existing environmental problems which are relevant to the plan.”*
- In recognition of the SEA Regulation requirement (Schedule 2) that the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme must be described in the Environmental Report, **Table 3.1** overleaf describes the likely evolution of each key sustainability issue if the Local Plan were not to be adopted.

Table 3.1: Key sustainability issues for Dartford and likely evolution without the new Local Plan

Key sustainability issues for Dartford	Likely evolution without the new Local Plan
<p>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).</p>	<p>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.</p>
<p>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).</p>	<p>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.</p>
<p>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).</p>	<p>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.</p>
<p>Levels of obesity in the District exceed the national average (SA Framework objective SA 4).</p>	<p>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.</p>
<p>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.)</p>	<p>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.</p>

Key sustainability issues for Dartford	Likely evolution without the new Local Plan
<p>As with the County as a whole, total crime in Dartford has risen and violent crime makes up the largest proportion of the increase (SA Framework objective SA 3).</p>	<p>The Local Plan would provide a contribution, alongside other local and national measures, to locally reduce crime through policies which aim to make the local environment and streets safer, for example by 'designing out' crime.</p>
<p>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).</p>	<p>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.</p>
<p>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).</p>	<p>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.</p>
<p>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).</p>	<p>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.</p>
<p>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).</p>	<p>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</p>

Key sustainability issues for Dartford	Likely evolution without the new Local Plan
	sustainable siting of development and the promotion of alternative travel modes to the motorised vehicle, in line with national policy aspirations.
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).	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.
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).	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.
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).	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.
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).	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.

Key sustainability issues for Dartford	Likely evolution without the new Local Plan
<p>The Borough has an obligation to contribute to the national carbon reduction targets through the generation of low carbon and renewable 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.</p>	<p>The Borough will continue to have an obligation to reduce carbon emissions with or without the Local Plan. The Local Plan provides a way 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.</p>
<p>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).</p>	<p>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.</p>
<p>The Borough contains a number of locally distinct landscape character areas that could be harmed by inappropriate development (SA Framework objective SA 15).</p>	<p>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.</p>

4 Sustainability Appraisal Findings

Proposed Vision and Strategic Objectives

Table 4.1: Summary of SA scores for the Vision and Strategic Objectives

SA objectives	Vision	Strategic Objective 1	Strategic Objective 2	Strategic Objective 3	Strategic Objective 4	Strategic Objective 5	Strategic Objective 6	Strategic Objective 7	Strategic Objective 8	Strategic Objective 9
SA 1: Housing	++	++	0	+	++	0	0	0	0	0
SA 2: Services and facilities	++	++	+	+	0	+	0	0	0	+
SA 3: Community cohesion	++	++	+	+	0	+	+	+	0	0
SA 4: Health and inequality	+	0	+	+	+	+	+	++	+	+
SA 5: Economy	++	+	+	+	+	++	0	+	+	+
SA 6: Sustainable travel	+	0	++	0	0	0	0	++	0	0
SA 7: Mineral resources	0	0	0	0	0	0	0	0	0	0
SA 8: Soil	0	0	0	++	0	0	0	0	0	0
SA 9: Water quality	0	0	0	0	0	0	0	0	0	0
SA 10: Air pollution	+?	0	+	0	0	0	0	+	0	0
SA 11: Flood risk	0	0	0	0	0	0	0	0	++	0
SA 12: Climate change	+?	0	+	0	0	0	0	+	++	0
SA 13: Biodiversity	+?	0	0	+	0	0	0	++	++	0
SA 14: Historic environment	+	+	0	0	0	0	0	0	0	0
SA 15: Landscape	+	+	0	+	0	0	+	0	0	0

Vision

- 4.1 The Vision states that local residents will be able to access a choice of homes to suit their needs at different stages of their life, through a diverse range of accommodation available in a variety of types and tenures. A significant positive effect is therefore expected for SA objective 1 (Housing).
- 4.2 With regard to SA objectives 2 (Services and facilities) and 3 (Community cohesion), the Vision states that Dartford's towns will be well connected and recognised for their local facilities. Specifically, the towns will serve convenient healthcare, education, sports and other community resources, as well as good employment and shopping opportunities. These facilities will be newly provided or upgraded. Therefore, a significant positive effect is expected for SA objectives 2 and 3.
- 4.3 The Vision states that Dartford's towns and villages will also be recognised for their proximity to the open countryside and riverside. Furthermore, the neighbourhoods will be sensitively integrated with the local environment, providing new public greenspaces and attractive waterside settings. For example, Ebbsfleet Garden City will be characterised by healthy, green and waterside environments. This will have a beneficial effect on people's health and well-being. Despite this, the Vision does not address the inequalities present within the Borough. Therefore, overall, a minor positive effect is expected for SA objective 4: Health and inequality.
- 4.4 With regard to SA objective 5 (Economy), the Vision states that Dartford's towns and villages will be served by good employment and shopping opportunities. It also states that Dartford Town Centre will be the community heart of Dartford Borough with a thriving, creative and innovative ambience, with the mix and diversity of its offer giving many reasons to come and visit it. Furthermore, the vibrancy of the town centre will be supported by more residents living in the town and may attract more visitors. Therefore, a significant positive effect is expected for SA objective 5.
- 4.5 According to the Vision, Dartford's towns and villages will be well connected and communities will benefit from reliable transport links. It also references the rapid public transport connections at Ebbsfleet. However, it does not directly address the provision of sustainable modes of transport elsewhere. Overall, a minor positive effect is expected for SA objective 6 (Sustainable travel).
- 4.6 The Vision does not directly address Mineral resources (SA objective 7), soils (SA objective 8) and Water quality (SA objective 9). Therefore, a negligible effect is expected for these SA objectives.
- 4.7 With regard to SA objective 10 (Air pollution), the Vision states that Dartford's towns and villages will be well connected. This has the potential to reduce use of the private car, assuming this focuses on sustainable transport, and, combined with the provision of healthy, green environments, particularly those that encourage walking, could help reduce air pollution and go some way to minimising greenhouse gas emissions. As such, a minor positive uncertain effect is expected for SA objectives 10 and 12 (Climate change).
- 4.8 The Vision does not directly address the avoidance and mitigation of Flood risk. Therefore, a negligible effect is expected for SA objective 11 (Flood risk).
- 4.9 The Vision states that new neighbourhoods will be provided with public greenspaces and that Ebbsfleet Garden City will be characterised by healthy, green and waterside environments. This suggests that the Borough's wildlife, habitats and species will, to an extent, be protected and additional habitat may be created. However, the Vision does not directly address the conservation, connection and enhancement of the Borough's wildlife, habitats and species. Therefore, a minor positive uncertain effect is expected for SA objective 13 (Biodiversity).
- 4.10 According to the Vision, the identity of Dartford's established towns and villages will be retained and enhanced. With regard to Dartford Town Centre, its sense of history will be retained whilst its streets, open spaces and riverside will be further rejuvenated. However, the Vision does not directly address the conservation and enhancement of heritage assets within the Borough. Therefore, a minor positive effect is expected for SA objective 14 (Historic environment).
- 4.11 Furthermore, new neighbourhoods will be sensitively integrated with existing communities and the local environment, which could have beneficial effects on the landscape across the Borough.

However, the Vision does not directly address landscape character. As such, a minor positive effect is expected for SA objective 15 (Landscape).

Strategic Objectives

Strategic Objective 1

- 4.12 Strategic Objective 1 encourages the development of neighbourhoods wherein residents enjoy a choice of homes suited to their needs, with easy access to local everyday facilities. As such, a significant positive effect is expected for SA objectives 1 (Housing) and 2 (Services and facilities).
- 4.13 Strategic Objective 1 also seeks to promote cohesive, safe and attractive neighbourhoods. This could reduce levels of crime, anti-social behaviour and the fear of crime, therefore a significant positive effect is expected for SA objective 3 (Community cohesion).
- 4.14 Lastly, Strategic Objective 1 promotes the development of neighbourhoods with a real sense of place that reflects the area's heritage. A minor positive effect is therefore expected for SA objective 14 (Historic environment) and SA objective 15 (Landscape). Minor positive effects are also expected against SA objective 5 (Economy) as Strategic Objective 1 aims to provide a range of homes which will help to generate economic activity through construction and provide homes for the resident workforce.
- 4.15 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 2

- 4.16 Strategic Objective 2 seeks to reduce the need to travel by locating new services and jobs close to where people live, whilst also protecting valued neighbourhood shops and community facilities. It also seeks to facilitate a choice of Sustainable travel options through the provision of a public transport system, together with a cohesive walking and cycling network. Therefore, a significant positive effect is expected for SA objective 6 (Sustainable travel) and a minor positive effect is expected for SA objectives 2 (Services and facilities) and 3 (Community cohesion).
- 4.17 An increase in the number of people using sustainable transport modes is likely to reduce use of the private car. This will have beneficial effects on air quality, whilst also reducing the Borough's contribution towards climate change. Therefore, a minor positive effect is expected for SA objectives 10 (Air pollution) and 12 (Climate change).
- 4.18 The provision of jobs close to where people live and a convenient and reliable public transport system could have beneficial effects on the economy of the area by providing residents with greater employment opportunities. Therefore, a minor positive effect is also expected for SA objectives 5 (Economy). This, along with nearby services and facilities and promotion of walking and cycling is likely to result in minor positive effects for SA objective 4 (Health and inequality).
- 4.19 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 3

- 4.20 Strategic Objective 3 promotes the continued regeneration of the northern urban area through the re-use of brownfield land. The re-use of brownfield land will help prevent the amount of greenfield land lost to development, which will have a significant positive effect on SA objective 8 (Soil). Regeneration also has the potential to reduce inequality, levels of crime, anti-social behaviour and fear of crime, with a minor positive effect expected for SA objectives 4 (Health and inequality) and 3 (Community cohesion).
- 4.21 Strategic Objective 3 states that the regeneration of the northern urban area through the re-use of brownfield land will help meet future housing and employment needs, as well as supporting services. Therefore, a minor positive effect is expected for SA objectives 1 (Housing), 2 (Services and facilities) and 5 (Economy).
- 4.22 Strategic Objective 3 also seeks to maintain the positive character of the Borough's rural villages and countryside, through the protection and enhancement of Green Belt countryside. A minor positive effect is therefore expected for SA objective 15 (Landscape). A minor positive effect is also expected for SA objective 13 (biodiversity) as this Strategic Objective aims to regenerate the

northern urban area and maintain the Borough's countryside, although it is recognised that the river is also an important biodiversity asset.

4.23 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 4

4.24 Strategic Objective 4 encourages the development of 'whole lifetime' buildings, which cater for people as their circumstances change, to enable them to live in their own home or within the Borough. This is likely to have a significant positive effect on SA objective 1 (Housing).

4.25 Offering a range of accommodation to meet various needs and enabling people to stay in their own homes is more likely to result in residents finding suitable accommodation and maintaining a sense of independence, which could have positive effects for their wellbeing. As such, minor positive effects are expected for SA objective 4 (health and inequalities).

4.26 Strategic Objective 4 is also likely to have a minor positive effect on SA objective 5 (Economy) because people are more likely to remain in the Borough if there are a range of properties available that meet their needs. This could have beneficial effects on employment levels and the economy overall.

4.27 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 5

4.28 Strategic Objective 5 includes provision of new homes in the town centre, which would be well located in terms of accessing town centre services, facilities and jobs, leading to a minor positive effect on SA objective 2 (Services and facilities).

4.29 This Strategic Objective promotes the development of an attractive and vibrant Dartford Town Centre, which provides a mix of uses to achieve a flourishing day and evening economy. It also seeks to deliver a choice of modern business premises and high-quality jobs at Ebbsfleet and other well-connected locations in Dartford, including suitable premises for local businesses. Therefore, a significant positive effect is expected for SA objective 5 (Economy).

4.30 Strategic Objective 5 also seeks to provide an elegant and engaging public realm. This could increase levels of pedestrian activity and outdoor interaction, with a minor positive effect recorded against SA objectives 4 (Health and inequality) and 3 (Community cohesion).

4.31 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 6

4.32 Strategic Objective 6 hopes to promote high quality built design and open space provision in the Borough, so that it can be enjoyed by current and future generations. An attractive environment is expected to benefit mental wellbeing and encourage active travel and therefore increasing interactions between residents. A minor positive effect is therefore expected for SA objectives 3 (Community cohesion) and 4 (Health and inequality). High quality design is also expected to have minor positive effects for SA objective 15 (Landscape).

4.33 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 7

4.34 Strategic Objective 7 seeks to give people the opportunity for active and healthy living through the provision of an enhanced green network of landscaped paths, cycle routes, countryside links, open spaces and natural environments. It also aims to create resilient rivers and environments along the Thames Waterfront and the River Darent corridor so that they can be used for leisure and movement. This is likely to promote active transport and promoting river transport could help ease congestion on the road network and may lead to improvements to the river and surrounds that improve Water quality and benefit biodiversity. As such, a significant positive effect is expected for SA objectives 4 (Health and inequality) and 6 (Sustainable travel), and minor positive effects are expected for SA objectives 3 (Community cohesion), 10 (Air pollution), 12 (Climate change) and 13 (Biodiversity).

4.35 Additionally, by helping to support the health and wellbeing of the workforce through an enhanced green network and open spaces, productivity of workers will improve and will make the Borough a more attractive place to live, work and invest in minor positive effects are expected for SA objective 5 (Economy).

4.36 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 8

4.37 Strategic Objective 8 seeks to ensure that the Borough is resilient and able to adapt to the effects of climate change, through an increase in the proportion of water efficient buildings, the uptake of domestic and small-scale renewable energy, and promoting biodiversity and flood resilience. Therefore, a significant positive effect is expected for SA objectives 11 (Flood risk), 12 (Climate change) and 13 (Biodiversity). Mitigating the impacts of climate change will also have minor positive effects on SA objective 4 (Health and inequality), as this may help to protect people against flooding and more extreme weather events.

4.38 Minor positive effects are expected against SA objective 5 (Economy) as building resilience and effectively adapting to the effects of climate change will avoid disruption to trade and transport networks.

4.39 A negligible effect is expected for the remaining SA objectives.

Strategic Objective 9

4.40 Strategic Objective 9 encourages development that provides a wide range of opportunities for residents to enjoy cultural, leisure and sports pursuits, which is likely to result in increased leisure facilities, both fitness-based and otherwise. A minor positive effect is therefore expected for SA objectives 2 (Services and facilities) and 4 (Health and inequality).

4.41 Additionally, by providing a wide range of cultural, leisure and sports opportunities, productivity of workers will improve and will make the Borough a more attractive place to live, work and invest in minor positive effects are expected for SA objective 5 (Economy).

4.42 A negligible effect is expected for the remaining SA objectives.

Main Alternatives for the Plan

4.43 The Preferred Options Consultation Document sets out six matters where strategic decisions need to be made by the Council in carrying out the Local Plan Review. These are described in the Consultation Document as the 'Main Plan Options' and relate to the approaches to:

- Brownfield land.
- Dartford town centre.
- Ebbsfleet Central Area.
- Swanscombe Peninsula
- Green space.
- Transport.

4.44 For each of the Main Plan Options, the Preferred Options Consultation Document sets out the preferred option and alternative options that were also considered by the Council in coming to a decision about which approach to pursue. Each of these options have been subject to SA. The findings are presented below, with the detailed appraisal matrices presented in Appendix 3.

4.45 In addition, the Preferred Options Consultation Document includes three strategic sites:

- Ebbsfleet Central.
- Hythe Street/Kent Road (being the former Co-Op and Westgate Car Park site in Dartford town centre).

- Littlebrook Power Station.

4.46 The options for Ebbsfleet Central were considered in the SA of the Ebbsfleet Central Area Main Plan Options. The options for the Hythe Street/Kent Road site and the Littlebrook Power Station were separately appraised, as these form distinct components in a wider policy approach in the Local Plan Review. The findings of the SA of these two sites are also presented below.

Main Plan Option 1: To what extent should brownfield land in the Borough be used for new homes and jobs?

4.47 This Main Plan Option comprised four options:

- 1A: Brownfield land should be used to its greatest extent across both the urban and rural parts of the Borough (alternative option).
- 1B: Brownfield land should be used to a full extent in locations very well served by public transport (preferred option).
- 1C: Brownfield land not a strong priority, with non-Green Belt land encouraged for development (including some greenfield sites).
- 1D: Reject a brownfield land focus, in favour of new growth locations elsewhere in the Borough, including more dispersed development that may include locations within the Green Belt.⁵

SA findings

Table 4.2 Summary of SA scores for Main Plan Options 1

SA objectives	Option 1A	Option 1B	Option 1C	Option 1D
SA 1: Housing	++?	++?	++	++
SA 2: Services and facilities	+/-?	++/-	+/--?	+/--?
SA 3: Community cohesion	+/-?	++	+/--	+/--
SA 4: Health and inequality	+/-?	++/-	+/--	+/-
SA 5: Economy	+/--?	++	+/-	+/--
SA 6: Sustainable travel	+/-?	++	+/--	+/--?
SA 7: Mineral resources	-?	-?	-?	-?
SA 8: Soil	++	++	--	--
SA 9: Water quality	-?	-?	-?	-?
SA 10: Air pollution	+/--?	++/--	+/--	+/--?
SA 11: Flood risk	-?	-?	--?	--?
SA 12: Climate change	+/-?	++/-	+/--	+/--?

⁵ Please note that Option 1D is no longer included in the Consultation Document, however it has been appraised.

SA objectives	Option 1A	Option 1B	Option 1C	Option 1D
SA 13: Biodiversity	-?	+/-?	-?	--?
SA 14: Historic environment	+/--?	+/-?	-?	-?
SA 15: Landscape	+/--?	+/-?	-?	--?

- 4.48 Each option is expected to have significant positive effects against SA objective 1 (Housing) as each would contribute strongly towards the local housing need in the Borough. Option 1B is expected to have the only significant positive effects for SA objectives 2 (Services and facilities), 3 (Community cohesion), 4 (Health inequality), 5 (Economy), 6 (Sustainable travel) and 12 (Climate change) compared to the other options. These significant positive effects are expected as the option would enable new infrastructure requirements to be identified and planned alongside development, result in the regeneration of brownfield sites which could help to strengthen the quality of design, and legibility of development in places that already form part of the urban fabric, strengthening a sense of identity and would support the regeneration of brownfield land at locations well served by public transport. Regarding SA objective 2 (Services and facilities), 4 (Health and inequality) and 12 (Climate change) minor negative effects were also recorded for Option 1B as it may lead to increased pressure and capacity issues for local services and facilities.
- 4.49 With regard to Options 1C and 1D in relation to SA objectives 2 (Services and facilities), 3 (Community cohesion), 4 (Health inequality), 5 (Economy) and 6 (Sustainable travel) significant negative effects are expected as the more dispersed pattern of growth could limit the potential for a high proportion of new residents to have a good level of access to existing services, facilities and public transport. These effects are mixed with minor positive effects as well. Significant negative effects mixed with minor positive effects are also expected against Option 1A in relation to SA objective 5 (Economy) as it could help to attract new business to the Borough through the development of high-quality employment space, but some of the new growth is to be achieved through the redevelopment of industrial areas which could reduce employment land in the Borough.
- 4.50 Significant positive effects are also expected against SA objective 8 (Soil) for Options 1A and 1B as they help promote the use of brownfield in the Borough, as such limiting the potential for loss of high value agricultural soils and resulting in a more efficient use of land in the area.
- 4.51 Significant positive effects are expected against Option 1B for SA objective 10 (Air pollution) as the regeneration of selected brownfield urban locations could help to locate new residents near existing provisions and support development in locations well served by public transport, which is likely to help reduce reliance on travel by private vehicle. However, significant negative effects are expected against each option for this SA objective as it is likely that Options 1A and 1B will contribute to traffic in existing AQMAs and Options 1C and 1D will result in a high dependency on private car journeys, at least until improved public transport links are provided. The effect is also felt in relation to SA objective 12 (Climate change) for Options 1C and 1D.
- 4.52 Significant negative effects are expected against Option 1C and 1D for SA objectives 8 (Soil) and 11 (Flood risk) as the options reject a brownfield land focus and thereby would increase the number of impermeable surfaces which could increase Flood risk.
- 4.53 Significant negative effects are also felt against Option 1D for SA objectives 13 (Biodiversity) and 15 (Landscape) as it would not only increase greenfield land take in Dartford but also lead to higher likelihood that development will negatively affect ecologically sensitive areas, including

areas of ancient woodland as well nationally designated biodiversity sites. Significant negative effects are also expected against Option 1A for SA objective 14 (Historic environment) and 15 (Landscape) as it would take a less strategic approach to the redevelopment of brownfield land, with unplanned 'windfall' development forming a part of the strategy, it has potential to result in greater potential for adverse impacts in terms of heritage assets, historic character and landscape. However, for Option 1A minor positive effects are also expected.

SA conclusion

- 4.54 Option 1B performs best in sustainability terms as it has received the most significant positive effects. It is considered that focussing a large amount of development on brownfield land would have multiple benefits for the Borough, such as protection of the natural environment, including finite natural resources, biodiversity and landscape. As more urban areas of the Borough provide the largest supplies of brownfield land, a focus on brownfield development is likely to reduce the need for residents to travel longer distances by private vehicle. This could help to reduce any contribution new development makes in terms of air pollution and release of greenhouse gases. Positive effects are expected to be more pronounced where brownfield land is considered strategically to result in the allocation of those sites which are most accessible by public transport, as is set out in Option 1B.

Recommendations

- 4.55 Opportunities to enhance local character and biodiversity corridors should be taken as brownfield land comes forward for development.

Council reasons for taking forward the preferred option

- 4.56 Option 1B is preferred as it would ensure that development makes the best use of brownfield land in sustainable locations which are well served by public transport. This option would mean that infrastructure can be properly planned to meet the needs arising from new development. Options 1A and 1C could lead to development in locations which are not well served by public transport and are likely to have greater impacts on biodiversity, the historic environment and landscape. Option 1A would result in more unplanned windfall development and option 1C would lead to more dispersed development away from existing services and facilities, both of which make the provision of supporting infrastructure more difficult to achieve.

Main Plan Option 2: How to ensure Dartford is a thriving town centre?

- 4.57 This Main Plan Option comprised three options:
- 2A: Support extensive radical change through promoting residential redevelopment in and around the town centre, (including at high densities), achieving a rapid expansion of residents in the town centre and new premises for businesses and shops.
 - 2B: Encourage redevelopment of selected areas in and around the town centre; creating new spaces where this will achieve significant diversification over time of activities, and transformation of the attractiveness of Dartford town centre.
 - 2C: New development proposals considered on a case-by-case basis, based on a looser vision which aims for gradual regeneration but with limited direction on where and how redevelopment should occur.

Table 4.3 Summary of SA scores for Main Plan Options 2

SA objectives	Option 2A	Option 2B	Option 2C
SA 1: Housing	++	++	+
SA 2: Services and facilities	++/-?	+++?	+/-?
SA 3: Community cohesion	+/-?	+?	+/-
SA 4: Health and inequality	++/-?	+++?	+/-
SA 5: Economy	++/-?	++	-
SA 6: Sustainable travel	++/-?	+++?	+/--
SA 7: Mineral resources	+	+	+/-
SA 8: Soil	++	++	++/-?
SA 9: Water quality	-?	-?	-?
SA 10: Air pollution	++/--	++/-	+/--
SA 11: Flood risk	--	+/--	+/-
SA 12: Climate change	++/-	+++?	+/--
SA 13: Biodiversity	+/-	+/-	--?
SA 14: Historic environment	--?	+/--?	+/-?
SA 15: Landscape	+/--?	++/-?	-?

- 4.58 Significant positive effects are expected with regards to SA objective 1 (Housing) for Options 2A and 2B as these would provide a substantial amount of new residential development in Dartford town centre, whilst Option 2C would provide a lesser level of residential development. Significant positive effects are expected against Options 2A and 2B for SA objectives 2 (Services and facilities), 4 (Health and inequality), 5 (Economy), 6 (Sustainable travel), 8 (Soil), 10 (Air pollution) and 12 (Climate change). This is because each option is likely to provide a high number of new residents with access to a wide range of existing services and facilities, including public transport links, vitality and viability of the town centre is likely to be supported, increase access to services and facilities and employment opportunities by sustainable transport and development would likely be on brownfield land. It should be noted that for Option 2A minor negative effects are also expected in relation to many of the SA objectives as issues relating to the capacity of existing services and facilities, such as public transport services, may emerge as a result of intensification of development, particularly in the short term. However, in relation to SA objective 10 (Air pollution) negative effects are expected against both Option 2A and 2B. The negative effects are expected to be significant against Option 2A as part of Dartford town centre is an AQMA and allowing for a very high level of development is likely to intensify existing air quality issues as at least some new residents are still likely to travel by private car. Significant negative

effects are also expected against Option 2C with regard to air pollution as it is expected that this approach could result in the stagnation of existing services and facilities in the town centre location as a high proportion of new growth is provided at alternative locations over the plan period. Development provided in this manner could further limit the potential for modal shift to be achieved. This significant negative effect is also expected against Option 2C for SA objective 6 (Sustainable travel) for the same reason. Significant positive effects are also expected against SA objective 8 (Soil) for Option 2C, but a minor negative effect has also been recorded.

- 4.59 Significant positive effects are expected against SA objective 15 (Landscape) for Option 2B as it would allow for appropriate redevelopment in selected parts of the town centre and the surrounding areas to be achieved in a more phased manner and support the creation of high-quality environment with part of the emphasis being placed on improving prominent 'gateways' on the edge of the town. However, minor negative effects are also expected against this option. Option 2A is expected to have significant negative effects against this objective as it would support a high amount of development in the town centre. This would include a potential intensification of development as well as scope for some taller buildings, as such could have an adverse impact in terms of the established character of this area. This option is also expected to have a minor positive effect on this objective.
- 4.60 Significant negative effects are expected against Option 2A and 2B for SA objective 11 (Flood risk) and 14 (Historic environment) as development around Dartford town centre could fall within Flood Zones 2 or 3 around the River Darent and as the town centre includes a number of heritage assets, therefore development in the area could have an impact on the existing character and the setting of heritage assets. Option 2B is also expected to have minor positive effects against these SA objectives.
- 4.61 Significant negative effects are expected against SA objective 13 (Biodiversity) in relation to Option 2C as providing a modest level of growth in the town centre is likely to mean there is potential for more development to occur at alternative locations on greenfield land, which could have higher biodiversity value.

SA conclusion

- 4.62 Of the options considered, Option 2B performs most favourably in that it would allow for the regeneration of the town centre in a more considered and strategic manner. This option also allows for an appropriate phasing of regeneration and in all is likely to help reduce the potential for significant adverse impacts occurring in relation to the capacity of services at this location as well as in relation to the historic environment and the established character of the area. By securing for regeneration of the town centre and surrounding areas, Option 2B is expected to help attract inward investment, maintain the viability of the town centre, as well as service provision and public transport links at these locations. It is expected that this option would also perform most favourably in terms of reducing the need for residents to travel longer distances by private vehicle, which is likely to have associated benefits in terms of air quality and greenhouse gas emissions.

Recommendations

- 4.63 The centre of Dartford contains an AQMA and measures should be encouraged to help reduce the potential for intensification of air quality issues at this location.
- 4.64 As significant parts of Dartford town centre are in Flood risk zones mitigation measures should be put into place to address this.

Council reasons for taking forward the preferred option

- 4.65 Option 2B is the Council's preferred option. This would ensure that redevelopment of sites in Dartford Town Centre is focussed on those areas which would transform the town and provide more diversification of activities. This targeted approach would ensure that there is a greater likelihood of services and facilities being provided to support development compared to options 2A and 2C, and that flood risk issues and impacts on the historic environment are adequately addressed.

Main Plan Option 3: What strategy is most likely to retain green space in the Borough and deliver improvements?

4.66 This Main Plan Option comprised three options:

- 3A: Change the network of greenspaces in local planning policy to clearly indicate where is and is not priority in the Borough’s securing greenspace, and possible improvements.
- 3B: Maintain the existing strategy for a green Borough through requiring new development to provide sufficient new open space and generally retaining existing local greenspace designations but consolidate how policies are presented.
- 3C: Increasing the amount and extent of Borough Open Space to protect green Dartford further.

SA Findings

Table 4.4 Summary of SA scores for Main Plan Options 3

SA objectives	Option 3A	Option 3B	Option 3C
SA 1: Housing	0	0	0?
SA 2: Services and facilities	0	0	0
SA 3: Community cohesion	+/-	+	+
SA 4: Health and inequality	++/-	+	++
SA 5: Economy	++/-	+	++
SA 6: Sustainable travel	++/-	+	++
SA 7: Mineral resources	0	0	0
SA 8: Soil	-	+	+
SA 9: Water quality	++/-	+	++
SA 10: Air pollution	+/-?	+	+
SA 11: Flood risk	+/-	+	+
SA 12: Climate change	+/-?	+	+
SA 13: Biodiversity	+/-	+	++
SA 14: Historic environment	0	0	0
SA 15: Landscape	+/-	+	+

4.67 Significant positive effects are expected against SA objectives 4(Health and inequality), 5 (Economy), 6 (Sustainable travel) and 9 (Water quality) for Options 3A and 3C. This is because both options have the potential to promote recreation and access to greenspace both of which are essential for both mental and physical health and wellbeing, increasing greenspace would help to make the Borough more attractive to those living, working and visiting the area and could be used to facilitate, enhance and connecting walking and cycling links and aim to expand the

amount of greenspace in the Borough as well as enhance the existing greenspace. However, minor negative effects are also expected against Option 3A in relation to each of the objectives mentioned above some greenspace may be released for development.

- 4.68 Significant positive effects are also expected in relation to SA objective 13 (Biodiversity) for Option 3C as it aims to expand the amount of greenspace within the Borough and apply criteria to restrict the development of greenspace, thus contributing to strengthening ecological connectivity.

SA Conclusion

- 4.69 Of the options, Option 3C is expected to have the most significant positive effects and as such should be the preferred option. Option 3C performs best as it aims to set aside more land for open space.

Recommendations

- 4.70 The Council should focus new open space provision in areas where there is a deficiency and improve open space in areas where there is a good existing quantity and accessibility. Consideration should be given to green space by typology and hierarchy. Green infrastructure (GI) is key and should be considered at the site selection stage, so that existing GI features are conserved and enhanced, and new GI is created in the most viable areas. Consideration should be given to GI provision in the surrounding areas to ensure the proposed development links to, enhances and mitigates impact on these assets.

Council reasons for taking forward the preferred option

- 4.71 The Council's preferred approach is Option 3B. This would ensure that existing open space is protected and new open space is provided as a result of new development. It would have positive impacts in terms of improving health, mitigating air pollution and adapting to climate change. Whilst option 3C has additional beneficial impacts against the SA objectives, Borough Open Spaces were only recently designated and covered all known opportunities then. Broadening the areas designated will be challenging given the extensive existing coverage, and finding further land to include could lead to a diminution of the quality of land designation and may not always be very well justified. This could therefore place at risk the robustness of the policy and its effectiveness in protection open spaces as a whole.. Option 3A would focus provision on the areas most in need but could lead to a deterioration in the level of provision as a whole and in quality and may not relate well to new development which provides the best opportunity for new open space provision.

Main Plan Option 4: What is the best future for the Ebbsfleet Central area?

- 4.72 This Main Plan Option comprised three options:
- 4A: High-density business district.
 - 4B: High-density urban heart with a range of uses, including employment, residential, a key health/education or leisure/culture use.
 - 4C: Residential-led development.

Table 4.5 Summary of SA Scores for Main Plan Options 4

SA objectives	Option 4A	Option 4B	Option 4C
SA 1: Housing	+?	+?	++
SA 2: Services and facilities	+?	++	++
SA 3: Community cohesion	+/-	++?	+?
SA 4: Health and inequality	+?	++?	+?
SA 5: Economy	++?	++/-	+?
SA 6: Sustainable travel	++/-	++?	++/-?
SA 7: Mineral resources	--?	--?	--?
SA 8: Soil	+/--?	+/--?	+/--?
SA 9: Water quality	-	-	-
SA 10: Air pollution	+/-	++/-	++/-
SA 11: Flood risk	-?	-?	-?
SA 12: Climate change	++/-?	++?	++/-?
SA 13: Biodiversity	--?	--?	--?
SA 14: Historic environment	--?	--?	--?
SA 15: Landscape	-?	-?	-?

- 4.73 Significant positive effects are expected against Options 4A and 4B for SA objectives 5 (Economy), as jobs would be generated and access to economic opportunities would be improved. Minor positive effects are expected for Option 4C, as a low level of employment would be provided through on-site services and facilities and commercial uses, but many residents would need to travel outside the site to work. Significant positive effects are expected for all options with regards to SA objective 6 (Sustainable travel), as each scheme would include footpaths and possibly cycle routes increasing access to sustainable modes of transport. Minor negative effects are also expected against Option 4B in relation to SA objective 5 (Economy) and against Options 4A and 4C in relation to SA objective 6 (Sustainable travel).
- 4.74 Significant positive effects are expected in relation to SA objectives 3 (Community cohesion) and 4 (Health Inequality) for Option 4B as it would provide a mixed-use development scheme that according to its description would generate a vibrant lively community and include a key health/education or leisure/culture use and a range of prominent open spaces and public facilities.
- 4.75 Significant positive effects are expected for all options with regards to SA objective 12 (Climate change), as residents and workers will be able to access public transport at Ebbsfleet International station. For Options 4A and 4C this is mixed with minor negative effects as both are likely to result in additional commuting. Options 4B and 4C are also expected to have significant positive effects in relation to SA objectives 2 (Services and facilities) and 10 (Air pollution) as both

options would provide development alongside supporting facilities to serve the local community thereby reducing the need to travel by private car. It is also assumed that all schemes would include footpaths and possibly cycle routes which would encourage people to walk and cycle to work, helping reduce the amount of greenhouse gas emissions generated by the private car. Minor negative effects are also recorded against all options regarding SA objective 10 (Air pollution).

- 4.76 Significant positive effects are also expected against SA objective 1 (Housing) for Option 4C as it is an entirely residential-led development that would help address a substantial part of the Borough's housing need.
- 4.77 Significant negative effects are expected in relation to SA objective 7 (Mineral resources), 13 (Biodiversity) and 14 (Historic environment) for each Option as there is potential for each option to result in development which could have an adverse effect on access to finite Mineral resources, a number of biodiversity assets and heritage assets. Significant negative effects are also expected against SA objective 8 (Soil) as there is a small area in the south of the site that is designated as Grade 2 agricultural land; therefore, it is possible that development proposed by each of the options could result in a loss of Dartford Borough's Best and Most Versatile Agricultural Land. Minor positive effects are also expected for each of the options in relation to this SA objective.

SA Conclusion

- 4.78 Option 4B is considered to be the best performing option as it focuses on compact, mixed development, including housing and employment as well as additional uses such as health, education and leisure. This should help to reduce the need to travel and promote Community cohesion, as residents and workers would be able to meet their daily needs within the site.

Recommendations

- 4.79 Appropriate design and layout should be specified as a condition of consent as Mineral resources, biodiversity and heritage assets could be lost to poorly designed development of the area.

Council reasons for taking forward the preferred option

- 4.80 The preferred option is Option 4B. It provides a mixed use, city scale development taking advantage of its proximity to Ebbsfleet International Station, with significant positive benefits in terms of access to services and facilities. Option 4A has not been pursued as there is no evidence that this form of development is achievable or deliverable. A residential led approach (Option 4C) would fail to capitalise on the presence of the international station as a hub for high quality transport and jobs.

Main Plan Option 5: What is the best future for the Swanscombe Peninsula area?

- 4.81 This Main Plan Option comprised three options:
- 5A: Support the development of an internationally important entertainment resort.
 - 5B: A strategy to encourage sensitively integrated, lower density, mixed uses and ecological improvements.
 - 5C: Do not specify potential uses but include a criteria-based policy to provide a basis for dealing with proposals that may be put forward.

SA Findings Table 4.6 Summary of SA Scores for Main Plan Options 5

SA objectives	Option 5A	Option 5B	Option 5C
SA 1: Housing	0	+	0?
SA 2: Services and facilities	0	+	0?
SA 3: Community cohesion	-	+?	0?
SA 4: Health and inequality	+/--?	++?	0?
SA 5: Economy	++	+	0?
SA 6: Sustainable travel	--?	++/-	0?
SA 7: Mineral resources	--?	--?	0?
SA 8: Soil	+/-	+?	+?
SA 9: Water quality	-?	-?	+?
SA 10: Air pollution	--	++/-	+?
SA 11: Flood risk	--?	+/--?	+?
SA 12: Climate change	--	++/-	+?
SA 13: Biodiversity	--	++?	+?
SA 14: Historic environment	--?	--?	0?
SA 15: Landscape	--?	+/-?	+?

- 4.82 Significant positive effects are expected for Option 5B against SA objectives 4 (Health and Inequality), 6 (Sustainable travel), 10 (Air pollution), 12 (Climate change) and 13 (Biodiversity). This is due to the option's proposal of an ecological park which may incorporate footpaths and cycle routes that would help connect different areas within the site and provide further opportunities for biodiversity enhancement, improvements to public transport and delivery of linkages to Swanscombe town and its station. Minor negative effects are also expected in relation to SA objectives 6 (Sustainable travel), 10 (Air pollution) and 12 (Climate change) as the proposed development would result in an overall increase in people coming to the area, some of which may come via private car, which would contribute towards CO₂ emissions.
- 4.83 Significant negative effects are expected for Option 5A against SA objectives 4 (Health and inequality), 6 (Sustainable travel), 7 (Mineral resources), 10 (Air pollution), 11 (Flood risk), 12 (Climate change), 13 (Biodiversity), 14 (Historic environment) and 15 (Landscape). This is due to the option's proposal to develop an internationally important entertainment resort, which could generate noise and light pollution and potentially vibrations, such as from themed rides, live music and increased traffic. In addition, development would likely be highly reliant on the car, particularly as the peninsula is not currently served by public transport and access to finite Mineral resources could be adversely affected. Finally, the peninsula falls within Flood Zones 2 and 3 and includes marshland, the site falls within a Biodiversity Opportunity Area, is adjacent to the Swanscombe Marine Conservation Zone and is within a Site of Archaeological Significance, therefore development of the area could have adverse effects. Significant negative effects are also

recorded for Option 5B for SA objectives 7 (Mineral resources), 11 (Flood risk) and 14 (Historic environment) for similar reasons. However, minor positive effects are also recorded for Option 5A in relation to SA objective 4 (Health and inequality) and in relation to SA objective 11 (Flood risk) for Option 5B.

SA Conclusion

- 4.84 Option 5B is considered to be the best performing option as it aims to create a development with mixed uses and improved transport links, which would help to reduce the need to travel and promote use of sustainable transport. Option 5B also performs well in relation to environmental objectives, as development would focus on brownfield land and would promote ecological improvements, particularly through the estuarine ecological park, which would likely have benefits both for wildlife and human health and wellbeing.

Recommendations

- 4.85 Appropriate design and layout should be specified as a condition of consent as Mineral resources, biodiversity and heritage assets could be lost to poorly designed development of the area.

Council reasons for taking forward the preferred option

- 4.86 Option 5B is preferred as this would ensure that development is only located on brownfield land and would retain existing jobs. It would also be sensitively integrated taking account of the character of the area and its biodiversity value. Option 5A has is not supported as there is significant uncertainty on whether the development would be implemented and there is potential for adverse environmental, social and infrastructure impacts, including transport impacts on the local highways network. Option 5C fails to positively plan for the area which lies within Ebbsfleet Garden City, leading to lost opportunities for regeneration, ecological and land remediation benefits.

Main Plan Option 6: How can Dartford best plan ahead for a better transport network?

- 4.87 This Main Plan Option comprised three options:
- 6A: To base the Local Plan's transport and development strategy Borough heavily on plan to extend Crossrail (Elizabeth Line) services to the Borough, and workup long-term development proposals now in support of major new rail provision.
 - 6B: To focus on a Local Plan taking forward current transport schemes (Fastrack/buses, key road junctions, and rail), expecting development to be in walkable locations, and in parallel continue to explore the best longer-term way to secure a major 'modal shift' in transport choice, particularly through investigating Crossrail (Elizabeth Line) extension. We will minimise need to travel for journeys, through planning for trips that can be done by walking (or cycling); particularly to access schools, healthcare, shops and jobs.
 - 6C: To focus Local Plan strategy heavily on securing new development that will help fund new road junctions.

SA Findings

Table 4.7 Summary of SA Scores for Main Plan Options 6

SA objectives	Option 6A	Option 6B	Option 6C
SA 1: Housing	0	0	0?
SA 2: Services and facilities	+/-?	+	-
SA 3: Community cohesion	+	+	-
SA 4: Health and inequality	+/-?	+	+/--
SA 5: Economy	++?	+	+/-
SA 6: Sustainable travel	++/-?	++	--
SA 7: Mineral resources	-?	-?	-?
SA 8: Soil	+	+	-
SA 9: Water quality	-?	-?	-?
SA 10: Air pollution	++/-?	++	+/--
SA 11: Flood risk	+/-?	+	-
SA 12: Climate change	++/-	++	--
SA 13: Biodiversity	+/-?	+/-?	--?
SA 14: Historic environment	+/--?	+/-?	+/--?
SA 15: Landscape	+/-?	+/-?	+/--?

- 4.88 Significant positive effects are expected for Options 6A and 6B in relation to SA objective 6 (Sustainable travel), 10 (Air pollution) and 12 (Climate change) as they would directly seek to achieve the promotion of modal shift in Dartford. This would be achieved supporting major new rail provision in the Borough or by supporting a ranging approach including the investigation of the potential for extending Crossrail and delivering new local public transport schemes and promoting development in walkable locations, respectively. Minor negative effects are also expected for Option 6A in relation to these SA objectives. Regarding Option 6C significant negative effects are expected in relation to the above SA objectives as is likely to result in car dominant environments being promoted in the District and may also result in a more dispersed pattern of growth.
- 4.89 Significant positive effects are also expected against SA objective 5 (Economy) for Option 6A as it would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough.
- 4.90 Option 6C is expected to have significant negative effects on SA objective 4 (Health and inequality) as it is likely to result in a greater likelihood of car dominant travel being promoted in the Borough and may also result in a more dispersed pattern of growth. As such, some residents (particularly those without access to a private vehicle) are likely to have a reduced level of access to services and facilities (including healthcare) in Dartford.

- 4.91 Significant negative effects are expected against SA objective 13 (Biodiversity) for Option 6C, as it is likely to lead to more dispersed development, which is expected to result in greater greenfield land take and may lead to development in close proximity to designated biodiversity sites. Mixed minor positive and minor negative effects are recorded against Options 6A and 6B.
- 4.92 Significant negative effects are also expected against SA objectives 14 (Historic environment) and 15 (Landscape) for Option 6C as it could result in a greater dispersal of growth in the plan area which could adversely affect the historic environment and landscape within the Borough. Significant negative effects are also expected in relation to Option 6A against SA objective 14 (Historic environment) as it is expected to support a focus which would allow for regeneration of the town centre. This area contains a high number of heritage assets and there is potential for adverse impacts on their respective settings. Minor positive effects are expected against both Options against the above SA objectives.

SA Conclusion

- 4.93 It is likely that providing development at appropriate densities at areas around public transport in the Borough, in line with Options 6A and 6B, would have benefits in terms of achieving modal shift, access to services and other sustainability benefits associated with a reduced need to travel in the Borough. This is likely to include limited increases in air pollution and greenhouse gas emissions as new development is provided, with more residents having good access to sustainable transport options. Providing a focus at the main rail improvements in the Borough, set out through Option 6A could have further benefits related to regeneration of the town centre and the local economy considering its route and the potential to encourage footfall towards Dartford town centre. However, a narrow focus such as this is unlikely to help benefit the wider communities in Dartford. It may also have particularly adverse impacts in terms of the historic environment considering the specific sensitivities of the town centre. Overall Option 6B performs slightly better than 6A, due to the large amount of uncertainty associated with the provision of a new rail link under 6A.

Recommendations

- 4.94 Appropriate design and layout should be specified as a condition of consent as biodiversity and heritage assets could be lost to poorly designed development of the area.

Council reasons for taking forward the preferred option

- 4.95 The Council prefers option 6B as it would have significant benefits in terms of encouraging sustainable modes of travel with consequent positive impacts in terms of improving health, addressing air pollution and mitigating climate change. Option 6A has considerable uncertainty at present and benefits may not materialise for several years. It could, depending on scheme design details (that won't emerge for a number of years) have potential for adverse localised impacts on biodiversity and the historic environment. Option 6C would fail to encourage sustainable forms of transport with consequent negative impacts on health, air quality and mitigating climate change.

Strategic Site Options

Hythe Street/Kent Road

- 4.96 This Strategic Site Option comprised two options:
- A: Mixed use redevelopment, part of town centre regeneration. It will be allocated for: leisure uses, a new primary care health hub and residential development. Development will be expected to retain the Co-op façade on Spital Street, provide active uses on street frontages and incorporate a public square.
 - B: Residential-led development.

Table 4.8 Summary of SA scores for Hythe Street/Kent Road

SA objectives	Option A	Option B
SA 1: Housing	+	++?
SA 2: Services and facilities	++	+/-?
SA 3: Community cohesion	++/-?	+/-?
SA 4: Health and inequality	++/-?	+/-
SA 5: Economy	++?	+/-?
SA 6: Sustainable travel	++/-?	+/-?
SA 7: Mineral resources	0	0
SA 8: Soil	++	++
SA 9: Water quality	-	-
SA 10: Air pollution	+/-	+/-
SA 11: Flood risk	--?	--?
SA 12: Climate change	++/-?	+/-?
SA 13: Biodiversity	0?	0?
SA 14: Historic environment	?	?
SA 15: Landscape	+?	+?

- 4.97 Significant positive effects are expected against Option A in relation to SA objectives 2 (Services and facilities), 3 (Community cohesion), 4 (Health and inequality), 5 (Economy), 6 (Sustainable travel) and 12 (Climate change) as is likely that new residents would be provided with access to a wide range of existing and new services and facilities, including a new primary care health-hub, cultural floorspace, leisure uses and a public square, as well as good public transport links. As such vitality and viability of the town centre is likely to be supported and a high level of growth in the town centre is likely to encourage journeys to be made by more sustainable modes of transport considering the shorter travel times involved. Minor negative effects are also recorded against SA objectives 3 (Community cohesion), 4 (Health and inequality), 6 (Sustainable travel) and 12 (Climate change) as allowing for additional growth could result in issues of over capacity of existing public transport services, particularly in the short term as well as congestion problems as some new residents will continue to travel by private car.
- 4.98 Significant positive effects are expected against Options A and B in relation to SA objective 8 (Soil) as the site consists of previous developed land. Significant positive effects are also expected against Option B in relation to SA objective 1 (Housing) as it is likely to make a contribution to the Borough's overall housing need.
- 4.99 Significant negative effects are expected against SA objective 11 (Flood risk) as the majority of the site lies within Flood Zone 3 and the remainder within Flood Zone 2.

SA Conclusion

4.100 With the exception of SA objective 1 (Housing), Option A performs as well as, and sometimes better, against the SA objectives than Option B.

Recommendations

4.101 As the site lies within an area of archaeological significance and partially within Dartford Town Centre Conservation Area, any development on the site will need to be sensitively designed.

4.102 An uncertain significant effect was recorded in relation to Flood risk as the site lies within Flood Zones 2 and 3, although it is recognised that the site benefits from the protection of flood defences.

Council reasons for taking forward the preferred option

4.103 Option A is preferred as the Hythe Street/Kent Road site would have a key role in transforming Dartford Town Centre by providing a diversification of uses, including leisure facilities which would assist the evening economy and a health facility. Option B would not contribute to this transformation and is less likely to provide key services and facilities.

Former Littlebrook Power Station

4.104 This Site Option comprised two options:

- A: Brownfield land for employment / high tech logistics (up to 88,000 sqm) with greenspace and infrastructure appropriate for its location and riverside setting.
- B: Residential-led development.

SA Findings

Table 4.9 Summary of SA scores for Former Littlebrook Power Station

SA objectives	Option A	Option B
SA 1: Housing	0	++
SA 2: Services and facilities	+/-?	+/-?
SA 3: Community cohesion	+	+/-
SA 4: Health and inequality	+/-	+/-
SA 5: Economy	++	+
SA 6: Sustainable travel	+/--?	+/--?
SA 7: Mineral resources	-	-
SA 8: Soil	++	++
SA 9: Water quality	-	-
SA 10: Air pollution	--?	--?
SA 11: Flood risk	--?	--?

SA objectives	Option A	Option B
SA 12: Climate change	--	--
SA 13: Biodiversity	+/--?	+/--?
SA 14: Historic environment	--?	--?
SA 15: Landscape	+?	+?

- 4.105 Significant positive effects have been recorded against SA objective 8 for both options as the site consists of previously developed land.
- 4.106 Significant positive effects are also expected against SA objective 1 (Housing) for Option B as it is a residential led development. Option A is expected to have significant positive effects against SA objective 5 (Economy) as it aims to provide additional employment / high tech logistics (up to 88,000 sqm) and as such provide employment opportunities in the area.
- 4.107 Significant negative effects are expected for both options against SA objectives 6 (Sustainable travel), 10 (Air pollution), 11 (Flood risk), 12 (Climate change), 13 (Biodiversity) and 14 (Historic environment) as employment and residential development in the area could result in issues of over capacity of existing public transport services, particularly in the short term, increasing the likelihood of private vehicle use, the majority of the site lies within Flood Zone 3 and the remainder lies within Flood Zone 2, the site is not well located to sustainable modes of transport, and it lies within a Biodiversity Opportunity Area – Thames-side Green Corridor and close to Dartford Marshes Local Wildlife Site. Minor positive effects are also recorded against SA objective 6 (Sustainable travel) and SA objective 13 (Biodiversity) for both options as there is potential for transport improvements in the long term and redevelopment may provide an opportunity to contribute positively to the Biodiversity Opportunity Area.

SA Conclusion

- 4.108 The differences between the two options against the SA objectives are not that distinct. Option A would provide a significant contribution to the economy whereas Option B would provide a significant contribution to meeting the Borough's housing needs. However, both options are likely to generate traffic impacts and associated pollution and carbon emissions. The site lies close to the strategic road network, and is a significant difference from existing centres, and therefore probably lends itself more to economic development (albeit it has no train access).

Recommendations

- 4.109 As the site is not easily accessible, additional public transport infrastructure projects should be incorporated in any type of development within the area. Infrastructure projects should also emphasise the need for sustainable and active modes of transport which could utilise the potential of the riverside and should seek to minimise as far as possible contributions from traffic to air pollution in the AQMA, as well as carbon emissions.
- 4.110 As the site lies within an area of archaeological significance and adjacent to the River Thames, any development on the site will need to be sensitively designed.
- 4.111 Development of the site should ensure that opportunities to improve the ecology of the area, including its connections to the wider ecological network, including the Thames.

4.112 Given its proximity to the River Thames, full account of Flood risk, taking into changes in sea level and tidal regimes as a result of climate change. This may also help determine an appropriate land use (employment uses carry lower risks than housing, although it still has risks).

Council reasons for taking forward the preferred option

4.113 The Council's preference is option A as the former Littlebrook Power Station site would have a key role in providing new jobs. It was previously in industrial use and the area to the east already has planning permission for employment use. Option B is ruled out as the provision of residential led development in this location is likely to lead to a poor environment for any future occupiers, located between the Long Reach Sewage Treatment Works to the west and a new employment area to the east. It is also not within easy access of supporting services and facilities for residents.

Preferred Policies Approach

4.114 This section summarises the findings of the SA of the Preferred Policies approach component of the Consultation Document. In many instances, the Preferred Policies are based on the work presented in the Main Options part of the Consultation Document, the SA of which is described above.

4.115 In some instances, the Preferred Policies component of the Consultation Document presents potential reasonable alternatives in the form of questions, which the SA has also appraised for completeness. The detailed SA matrices can be found in **Appendix 3**.

4.116 The Preferred Policies Approach covers the following themes:

- A. Pattern of development and Green Belt in the Borough
- B. Development delivery and housing location criteria
- C. Infrastructure
- D. Town centres and retailing
- E. Ebbsfleet Garden City
- F. Business premises and employment
- G. Natural environment and open space
- H. Water management and renewable energy
- I. Affordable housing
- J. Housing type and size
- K. Gypsies, travellers and travelling showpeople

4.117 It should be noted that, at this stage of the Local Plan Review, the Preferred Policies have not presented as policy wording with supporting text, but as a narrative of the intended policy direction. A summary of the findings of the SA for each theme is provided below:

A. Pattern of Development and Green Belt in the Borough

4.118 The Preferred Policy approach is to focus development on the two Priority Regeneration Centres of Dartford Town Centre and Ebbsfleet Garden City. It allows for some brownfield development at locations well located for public transport and within villages. It does not allow for any strategic release of Green Belt land.

4.119 The Preferred Policy approach derives primarily from the Main Plan Option 1, for which three alternative options were appraised. No further alternatives have been appraised.

SA findings

4.120 The SA scores for the Preferred Policy approach are set out in **Table 4.10** below.

Table 4.10: SA scores for the Pattern of Development and Green Belt in the Borough

SA objective	Likely effect
SA 1: Housing	++?
SA 2: Services and facilities	++/-?
SA 3: Community cohesion	++
SA 4: Health and inequalities	++/-?
SA 5: Economy	++
SA 6: Sustainable travel	++
SA 7: Mineral resources	-?
SA 8: Soils	++
SA 9: Water quality	-?
SA 10: Air pollution	++/--
SA 11: Flood risk	+/--?
SA 12: Climate change	++/-
SA 13: Biodiversity	+/-
SA 14: Historic environment	+/-?
SA 15: Landscape	+/-?

- 4.121 The Preferred Policy approach scores well against many of the SA objectives, with significant positive effects recorded against SA objective 1 (Housing), SA objective 2 (Services and facilities) albeit mixed with a minor negative effect, SA objective 3 (Community cohesion), SA objective 4 (health and inequalities) albeit mixed with a minor negative effect, SA objective 5 (Economy), SA objective 6 (Sustainable travel), SA objective 8 (Soils), and SA objective 12 (Climate change), albeit mixed with a minor negative. The primary reason for these significant positive effects is that the development strategy concentrates development primarily on brownfield land at locations that are well located for public transport, jobs and services and facilities, or where it is planned there will be investment in such assets and services.
- 4.122 A significant positive and significant negative score was recorded against SA objective 10 (Air pollution). Although the spatial strategy should ensure that there is less need to travel by car, it is still likely to result in increased traffic in the Air Quality Management Areas (AQMAs) where reducing air pollution is a priority.
- 4.123 Minor, often mixed, effects were recorded for the remaining SA objectives. In coming to this conclusion, it is assumed that concentrating development on brownfield land and the Priority Regeneration Centres should help to avoid significant adverse effects, although this will be very much dependent upon the precise location and design of development, including any mitigation measures to ensure no significant effects arise. For example, there is potential for a high amount of growth to come forward in close proximity to Bakers Hole SSSI, Swanscombe Skull Site SSSI and NNR as well as Alkerden Lane Pit and Dartford Marshes Local Designated Wildlife Sites, and development within Dartford Town Centre will need to take into account the listed buildings, conservation area and other historic assets that characterise this part of the Borough.
- 4.124 Development in northern urban areas, including much of the Priority Regeneration Centres would fall within high Flood risk areas, which means that an uncertain significant negative effect is recorded, as these areas also benefit from flood defences.

Recommendations

- 4.125 Reference could be made in the Spatial Strategy to the need to ensure no adverse impacts upon designated biodiversity sites and to support the improvement of ecological networks. Similarly, it could refer to the need to ensure no harm to the historic environment, and also highlight the potential for heritage-led regeneration.
- 4.126 The Strategy could be strengthened with reference to the need to address pollution from traffic in the AQMAs, and how it intends to achieve this.

Council reasons for taking forward the Preferred Policy approach

- 4.127 This is the Council's Preferred Policy approach as it ensures that development is concentrated in the urban area where there is best access to services, facilities and sustainable modes of transport whilst protecting the Green Belt. This approach complies with national planning policy.

B. Development Delivery and Housing Location Criteria

- 4.128 This Preferred Policy approach is to provide for 797 to 865 homes per annum, with the focus of development on brownfield land, strategic allocations, and the Priority Regeneration Centres of Dartford Town and Ebbsfleet Central. The Preferred Policy approach sets out criteria for the consideration of windfall development (Option B1).
- 4.129 An alternative of delivering a higher level of housing was also considered by the SA (Option B2).

SA findings

- 4.130 The SA scores for the Preferred Policy approach and its alternative are set out in **Table 4.11** below.

Table 4.11: SA scores for Development Delivery and Housing Location Criteria

SA objective	Likely effect	
	Preferred Option B1	Alternative Option B2
SA 1: Housing	++	++?
SA 2: Services and facilities	++/-	++/--?
SA 3: Community cohesion	++/-	++/--?
SA 4: Health and inequalities	++/-?	++/--?
SA 5: Economy	++	++/-?
SA 6: Sustainable travel	+?	+/-?
SA 7: Mineral resources	-?	-?
SA 8: Soils	++/-	++/-
SA 9: Water quality	-?	-?
SA 10: Air pollution	+/--?	+/--?
SA 11: Flood risk	--?	--?
SA 12: Climate change	+/-	+/--
SA 13: Biodiversity	+/-?	+/--?
SA 14: Historic environment	+/-?	+/--?
SA 15: Landscape	+/-?	+/--?

- 4.131 The SA found that the Preferred Policy approach performed better than the alternative of delivering higher housing numbers, particularly with regards to SA objectives 6 (Sustainable travel), 12 (Climate change), 13 (Biodiversity), 14 (Historic environment) and 15 (Landscape). The Consultation Paper does not describe in detail how a higher housing figure would be delivered, although this could not be accommodated within the Preferred Options set out, therefore it was assumed it could lead to higher density development in Dartford town centre, maximising use of brownfield land (including in rural areas), and greater greenfield land take.
- 4.132 Both the Preferred Approach and the higher housing alternative were recorded as having significant positive effects against a number of SA objectives, being SA objective 1 (Housing), SA objective 2 (Services and facilities), SA objective 3 (Community cohesion), SA objective 4 (Health inequalities), SA objective 5 (Economy), and SA objective 8 (Soils), albeit in some cases this was also accompanied by a negative effect to reflect, for example, the additional pressure that could be placed on services and facilities to support the additional housing growth. For SA objectives 2 (Services and facilities), SA objective 3 (Community cohesion) and SA objective 4 (Health inequalities), the significant positive effect for Option B2 is mixed with a significant negative effect, as the higher level of development included in Option B2 would require a higher level of development outside of urban areas, therefore a higher proportion of development would be provided away from areas with good access to existing services and facilities and away from existing sustainable transport links.
- 4.133 As with the Spatial Strategy, the potential for significant negative effects on SA objective 10 (Air pollution) were identified, and the potential for significant adverse effects on SA objective 11 (Flood risk) were also noted for both options.
- 4.134 As with the Spatial Strategy, the SA recorded minor negative effects for most other SA objectives. Similar issues were identified for SA objective 13 (Biodiversity) and SA objective 14 (Historic environment) as the SA of the Spatial Strategy. However, for Option B2, significant negative effects (mixed with minor positive effects) were identified for SA objectives 12 (Climate change), 13 (Biodiversity), 14 (Historic environment) and 15 (Landscape). This is because this option will require greater greenfield land take and is likely to result in high density development in Dartford town centre, due to the higher level of development.

Recommendations

- 4.135 The recommendations were similar to those for the Spatial Strategy. In addition, consideration could be given in the Local plan Review for ensuring that housing is not located within areas where air pollution could damage health.

Council reasons for taking forward the Preferred Policy approach

- 4.136 Option B1 is the Council's Preferred Policy approach. This would ensure that the Local Plan addresses housing needs in the Borough whilst allowing some flexibility should this change over time. Much of this could be achieved on brownfield land. Option B2 has been discounted as it is likely that this would require the release of more greenfield land, possibly including land in the Green Belt and/or dense development at locations without good public transport.

C Infrastructure

- 4.137 This section of the Consultation Paper sets out the Preferred Policy approach to infrastructure, with respect to transport, community services such as health and education, plus flood management. It focuses on the need to alleviate congestion, and the importance of providing for public transport improvements, also making provision for an extension of Crossrail (the Elizabeth Line). It also sets out the funding arrangements.
- 4.138 The Preferred Policy approach derives from Main Plan Options for Transport. No further alternatives were identified.

SA findings

- 4.139 The SA scores for the Preferred Policy approach and its alternative are set out in **Table 4.12** below.

Table 4.12: SA scores for Infrastructure

SA objective	Likely effect
SA 1: Housing	+/-?
SA 2: Services and facilities	++
SA 3: Community cohesion	+
SA 4: Health and inequalities	++
SA 5: Economy	++
SA 6: Sustainable travel	++/-
SA 7: Mineral resources	-?
SA 8: Soils	+
SA 9: Water quality	-?
SA 10: Air pollution	++/-
SA 11: Flood risk	++
SA 12: Climate change	++/-
SA 13: Biodiversity	+/--
SA 14: Historic environment	--?
SA 15: Landscape	+/-?

- 4.140 The SA found that the Preferred Policy approach to infrastructure is likely to result in primarily positive effects. Significant positive effects were identified for SA objective 2 (Services and facilities), SA objective 4 (Health and inequalities), SA objective 5 (Economy), SA objective 6 (Sustainable travel), SA objective 10 (Air pollution), SA objective 11 (Flood risk) and SA objective 12 (Climate change).
- 4.141 Although there is considerable emphasis on public transport improvements, and the provision of community services to support new development, it also provides for junction improvements and road upgrades which, although designed to alleviate congestion, could facilitate increased car travel, which potential effects on Sustainable travel, air quality and carbon emissions, so minor negative effects are also identified for these SA objectives.
- 4.142 An uncertain significant effect was identified for SA14 (Historic environment), due to the potential for harm to designated assets resulting from upgrades to the A2 and the extension to Crossrail. Similarly, significant adverse effects were identified for SA objective 13 (Biodiversity) due to the potential for habitat fragmentation, disruption to ecological networks, and disturbance from noise and light to sensitive species from new transport infrastructure.
- 4.143 Minor effects were recorded for the other SA objectives.

Recommendations

- 4.144 Specific reference could be made to the need to avoid significant harm to the historic environment and biodiversity in the delivery of the Preferred Policy approach to infrastructure, for example through the identification and safeguarding of sensitive assets in route selection and upgrades, and the need to take into account ecological networks.

Council reasons for taking forward the Preferred Policy approach

- 4.145 This is the Council’s Preferred Policy approach for infrastructure as it ensures that services, facilities and transport infrastructure are planned to take account of the location and timescales

for new development. It involves close coordination with service providers to identify what infrastructure is required and when.

D. Town Centres and Retailing

- 4.146 This section of the Consultation Paper sets out the Preferred Policy approach to Dartford Town Centre, including residential, retail and other uses, and diversification, how the Town Centre’s historic character will be taken into account, plus other aspects relevant to the operation of the Town Centre such as movement and smart technology. It identifies Town Centre regeneration locations, including the Hythe Street/Kent Road (Westgate) site, which is subject to separate SA as reported above.
- 4.147 It refers to the potential relocation of Dartford station, which could open up new opportunities for regeneration at Station Quarter and Prospect Place, but this has not been subject to SA at this stage because details are only beginning to emerge.
- 4.148 The Preferred Policy approach goes on to set out the network of shopping centres across the Borough, from Bluewater regional shopping centre, to Ebbsfleet, District and Neighbourhood Centres, describing the Preferred Policy approach for each to ensure they support rather than compete with one another. A more detailed policy approach is proposed for Bluewater, which focuses on remodeling and repurposing existing space, and considering the potential for appropriate leisure and sports provision, and potentially residential and small-scale employment uses.
- 4.149 Although no specific reasonable alternatives are identified, the SA has been broken down into the two main components of the Preferred Policy approach, being Preferred Approach D1, which relates to Dartford Town Centre and Town Centre Regeneration Locations, and Preferred Approach D2, being Borough-wide and Bluewater. For clarification, these are two parts of a single approach, rather than alternative options.

SA findings

- 4.150 The SA scores for the two aspects of the Preferred Policy approach are set out in **Table 4.13** below.

Table 4.13: SA scores for Town Centres and Retailing

SA objective	Likely effect	
	Dartford Town Centre and Regeneration Locations (D1)	Borough wide and Bluewater (D2)
SA 1: Housing	++	+?
SA 2: Services and facilities	++/-?	+/-
SA 3: Community cohesion	++/-?	+/-
SA 4: Health and inequalities	++/-	+/-
SA 5: Economy	++/-?	++/-?
SA 6: Sustainable travel	++/-?	+/-?
SA 7: Mineral resources	-?	-?
SA 8: Soils	++	-
SA 9: Water quality	-	-
SA 10: Air pollution	++/-?	+/-?
SA 11: Flood risk	--?	?

SA objective	Likely effect	
	Dartford Town Centre and Regeneration Locations (D1)	Borough wide and Bluewater (D2)
SA 12: Climate change	++/-?	+/-?
SA 13: Biodiversity	+/-	-?
SA 14: Historic environment	+/--?	+/--?
SA 15: Landscape	+/-?	+/-?

- 4.151 The Preferred Policy approach for Dartford Town Centre and the Regeneration Locations was considered to have a large number of significant positive effects, being against SA objective 1 (housing), SA objective 2 (Services and facilities), SA objective 3 (Community cohesion), SA objective 4 (Health and inequalities), SA objective 5 (Economy), SA objective 6 (Sustainable travel), SA objective 8 (Soils), SA objective 10 (Air pollution), and SA objective 12 (Climate change). These significant positive effects of investing in the established town centre and in the regeneration locations, which provide an opportunity to strengthen and diversify the mix of uses, although within easy reach of one another, and in good proximity of a range of public transport options. Some of the significant positive effects were mixed with minor negative effects, to reflect issues such as the potential to overburden existing services and facilities, and possible increased congestion affecting air pollution within the AQMA.
- 4.152 Only two significant negative effect were identified for the Preferred Policy approach for Dartford Town Centre and the Regeneration Locations, and this was with respect to SA objective 11 (Flood risk), recognizing that parts of the Town Centre lie within Flood Zones 2 and 3. However, the appraisal acknowledges that the Town Centre benefits from flood defences, so an uncertain effect is recorded. The other potential significant negative effect was with respect to SA objective 14 (Historic environment) given the wealth of historic assets within Dartford Town Centre. However, this acknowledged within the Preferred Policy approach, which states that heritage assets are an irreplaceable resource and proposals will need to be justified with an assessment of the impacts of proposals affecting heritage assets or their setting and need to take into account the significance of the assets. It states that it will ensure that development is sensitively designed in reflecting the town's unique historic character. The significant negative effect was therefore recorded as uncertain and accompanied by a minor positive effect.
- 4.153 With respect to the Preferred Policy approach to retailing Borough-wide and Bluewater in particular, only one significant positive effect was identified, which was in relation to SA objective 5 (Economy), because of the employment and economic benefits that derive from retailing, particularly given the regional significance of Bluewater. The significant positive effect was accompanied by a minor negative effect in recognition of potential disruption to traffic from further investment at Bluewater, and the knock-on impacts this can have on other sectors of the local economy.
- 4.154 Minor effects were recorded for all the other SA objectives for the Borough-wide and Bluewater Preferred Policy approach, with the exception of SA objective 14 (Historic environment), which is assessed as having a mixed minor positive and significant negative uncertain effect. Whilst most district and neighbourhood centres do not include conservation areas or listed buildings, there are a number of designated and non-designated assets across the Borough that could be affected by development, depending on where this comes forward. Bluewater has less in the way of historic interest although a Grade II listed building is within close proximity (although it is noted that Bluewater is set down in a quarry, which could minimize any effects on the listed building).

Recommendations

- 4.155 Continued consideration should be given to the potential for, and management of, Flood risk within Dartford Town Centre.

4.156 The Preferred Policy approach could encourage further greening and biodiversity improvements for both Dartford Town Centre and Bluewater by the incorporation of additional habitats such as green roofs and walls.

Council reasons for taking forward the Preferred Policy approach

4.157 The approach for Dartford Town Centre (D1) takes on board the opportunities to remodel existing shopping centres, diversify uses to promote more of an evening economy, provide further residential development to support the retail and leisure uses, and provide better services and facilities. It is recognised that there are potential negative effects in terms of flood risk from developing in Dartford town centre, but the Council considers that the wider regeneration benefits of transforming the town centre will outweigh this. In terms of wider preferred approach to retail (D2), the focus will be on retaining the role of Bluewater as a regional centre and the network of district and neighbourhood centres.

E Ebbsfleet Garden City

4.158 This Preferred Policy approach sets out the proposals to create Ebbsfleet Garden City, which will comprise a mixed-use development, focused on Ebbsfleet International rail station, with interchanges with Northfleet station, linked into Fastrack and the local bus network. It includes the strategic site of Ebbsfleet Central which will comprise residential, employment, health, leisure, education, restaurants/bars and retail, with the potential to include a centre of excellence for medical, education and learning purposes. The proposals for Ebbsfleet Garden City incorporate open space and structural green space.

4.159 The Preferred Policy approach also includes proposals for Swanscombe Peninsula, where the focus for development will be on brownfield land in the south/centre of the Peninsula (predominantly west of High-Speed rail/tunnel) and to the north of Swanscombe Town/Ebbsfleet Central Area. The main priority for development will be employment uses (including upgrades to existing employment areas) and improved transport links including Fastrack. Provision is also made for outdoor/ leisure uses and possible low-key visitor accommodation; plus local scale neighbourhood uses facilitated by limited residential development. The proposals include the creation of an ecological estuarine park (from Black Duck Marsh north-eastwards to the tip of the peninsula and adjoining land).

4.160 The Preferred Policy approach derives from Main Plan Options for Ebbsfleet Central and Swanscombe. No further alternatives were identified.

SA findings

4.161 The SA scores for the Preferred Policy approach are set out in **Table 4.14** below.

Table 4.14: SA scores for Ebbsfleet Garden City

SA objective	Likely effect
SA 1: Housing	++?
SA 2: Services and facilities	++
SA 3: Community cohesion	++?
SA 4: Health and inequalities	++?
SA 5: Economy	++
SA 6: Sustainable travel	++/-?
SA 7: Mineral resources	--?
SA 8: Soils	+/-?
SA 9: Water quality	-

SA objective	Likely effect
SA 10: Air pollution	++/-?
SA 11: Flood risk	+/-?
SA 12: Climate change	++/-?
SA 13: Biodiversity	++/-?
SA 14: Historic environment	--?
SA 15: Landscape	+/-?

- 4.162 The Preferred Policy approach scored well against many of the SA objectives, with likely significant positive effects identified for SA objective 1 (Housing), SA objective 2 (Services and facilities), SA objective 3 (Community cohesion), SA objective 4 (Health and inequalities), SA objective 5 (Economy). These scores were in recognition of the range of uses, and the creation of a community with homes, jobs and a good range of services and facilities.
- 4.163 The Preferred Policy approach also recorded likely significant positive effects against SA 6 (Sustainable travel), SA objective 10 (Air pollution) and SA objective 12 (Climate change) albeit these were mixed with potential minor negative effects. The significant positive effects were identified because of the emphasis on high quality public transport services and interchanges, which will help to address air pollution and carbon emissions from transport. However, it also recognized that development at this scale will inevitably generate additional traffic, some of which could add to pollution along the AQMA corridors, particularly London Road.
- 4.164 Similarly, a significant positive effect was identified for SA objective 13 (Biodiversity) mixed with a minor negative effect, reflecting both the creation of an ecological park and the incorporation of waterscapes, open space and green infrastructure, but noting that the site includes a Local Wildlife Site as well as Bakers Hole SSSI, designated for its geodiversity.
- 4.165 Potential significant negative effects SA objective 7 (Mineral resources), given that parts of both the Ebbsfleet Central site and Swanscombe Peninsula is with Minerals Safeguarding Areas. A significant negative effect was recorded for SA objective 11 (Flood risk), because of the existence of Flood risk Zones 2 and 3 in this location, although a minor positive was also recorded because the area benefits from flood defences, and some of the proposals, such as the ecological estuarine park, could help manage Flood risk. An uncertain significant negative effect was identified for SA objective 14 (Historic environment), because the area contains a number of areas of archaeological potential, a site of archaeological significance, as well as scheduled monuments and listed buildings.
- 4.166 For all other SA objectives minor effects were identified.

Recommendations

- 4.167 Going forward, it would be beneficial for this Preferred Policy approach to ensure that flood defence measures are in place at Ebbsfleet Central and Swanscombe in order to reduce Flood risk.
- 4.168 Mitigation measures should be put into place regarding Dartford's AQMA as it is likely that private vehicle use will increase in the short-term increasing greenhouse gas emissions in the area as it is likely that movement from both sites would be along London Road.
- 4.169 The Preferred Policy approach could include a requirement for 10% net biodiversity gain delivered, consistent with the Preferred Policy approach for the former Littlebrook PowerStation.
- 4.170 Specific mention should be made to the need to safeguard the historic environment assets and their setting in Ebbsfleet Garden City, in particular the Palaeolithic sites near Baker's Hole and Neolithic sites near Ebbsfleet, both of which are Scheduled Monuments and lie within Ebbsfleet Central strategic site.
- 4.171 No mention of climate change in the entire section. Climate change is a cross-cutting issue that should be integrated into design, planning and maintenance of development.

Council reasons for taking forward the Preferred Policy approach

4.172 The Council is taking forward this Preferred Policy approach as it reflects the principles of Ebbsfleet Garden City and the Ebbsfleet Implementation Framework. Ebbsfleet Central would provide a mixed use, city scale development taking advantage of its proximity to Ebbsfleet International Station, with significant positive benefits in terms of access to services and facilities.

F. Business Premises and Employment

4.173 The Preferred Policy approach for Business Premises and Employment builds on the high level of job growth and economic regeneration experienced by the Borough in recent years. It provides for a mix of premises, with encouragement for knowledge based, creative or high technology industries, with a focus on locations well served by public transport. Intensification and new job provision will be supported at selected sustainable locations, where consistent with improving environmental quality. It also supports a prosperous rural economy.

4.174 Two strategic allocations are identified, one at Ebbsfleet Central, which is appraised as part of the proposals for Ebbsfleet Garden City, and the other at Littlebrook Power Station, which is separately appraised, with the findings reported above.

4.175 Two alternatives were appraised to the Preferred Policy approach (F1) being not intensifying employment sites (F2) and releasing employment land for other uses (F3).

SA findings

4.176 The SA scores for the Preferred Policy approach and its alternatives are set out in **Table 4.15** below.

Table 4.15: SA scores for Business Premises and Employment

SA objective	Likely effect		
	Preferred Option F1	Alternative Option F2	Alternative Option F3
SA 1: Housing	0	0	?
SA 2: Services and facilities	+	0	?
SA 3: Community cohesion	+	0	?
SA 4: Health and inequalities	+	-	?
SA 5: Economy	++	-	--
SA 6: Sustainable travel	+/-	0	0
SA 7: Mineral resources	-?	0	0
SA 8: Soils	++/-?	0	++
SA 9: Water quality	-	0	-?
SA 10: Air pollution	+/-?	0	0
SA 11: Flood risk	--	0	?
SA 12: Climate change	+/-	0	0
SA 13: Biodiversity	++/--?	0	+/-
SA 14: Historic environment	+/-?	0	+
SA 15: Landscape	+/-?	0	+

- 4.177 The Preferred Policy approach recorded a significant positive effect against SA objective 5 (Economy) because of its strong support for economic and job growth. Significant positive effects were also recorded for SA objective 8 (Soils), because of the focus on brownfield land but with a minor negative effect to reflect that a risk that best and most versatile agricultural land could also potentially be developed.
- 4.178 A mixed significant positive and significant negative effect was identified for SA objective 13 (Biodiversity), because the brownfield focus will minimise undeveloped habitats being developed, but recognises that brownfield land can have its own biodiversity interest, and that Littlebrook Power Station is in a Biodiversity Opportunity Area and Ebbsfleet Central partially contains a Local Wildlife Site and SSSI. It is noted though, that the proposals for Littlebrook Power Station include 30% greenspace and 10% net biodiversity gain to be delivered, so uncertainty is also recorded depending upon its deliverability.
- 4.179 A significant negative effect was identified for SA objective 11 (Flood risk) because of the former Littlebrook Power Station falls entirely within Flood Zone 3 and parts of Ebbsfleet Central do too.
- 4.180 Minor effects were identified for all other SA objectives.
- 4.181 The alternatives considered do not perform noticeable better than the Preferred Policy approach. Alternative F2, which would not lead to the intensification of employment sites is, in practice, a continuation of the status quo, so no significant effects were identified, whether positive or negative. Alternative F3 performed poorly against SA objective 5 (Economy) because it would lead to a reduction or loss of existing employment sites, although a significant positive effect was recorded against SA objective 8 (Soils), because it would release previously developed sites for other uses. In many instances there was uncertainty about the effects of the alternatives because of the lack of detail about what they would mean with respect to, for example, housing delivery.

Recommendations

- 4.182 Going forwards, it would be beneficial for this Preferred Policy approach to ensure that flood mitigation measures in place at the former Littlebrook Power Station site and at Ebbsfleet Central in order to reduce Flood risk.

Council reasons for taking forward the Preferred Policy approach

- 4.183 The Preferred Policy approach is F1 as it would ensure that more jobs are provided by making the most efficient use of existing employment areas and identifying appropriate sites well supported by public transport This would continue the longstanding strategy of regenerating the Borough. Options F2 and F3 would have negative effects on the Borough's economy and contravene the vision for regeneration of the area.

G. Natural Environment and Open Space

- 4.184 The Preferred Policy approach is to maintain an overarching strategy to create a multi-functional network of green spaces, protecting and enhancing biodiversity, retaining open space and playing pitches, and to ensure that new development provides for good quality amenity space, community resident space and public open space. The Preferred Policy approach seeks to protect and enhance designated sites, features and habitats, and requires new developments to provide for biodiversity net gain.
- 4.185 The Preferred Policy approach builds on Main Plan Option on Greenspace Strategy appraised above. No further alternatives were identified for appraisal.

SA findings

- 4.186 The SA scores for the Preferred Policy approach are set out in **Table 4.16** below.

Table 4.16: SA scores for Natural Environment and Open Space

SA objective	Likely effect
SA 1: Housing	0

SA objective	Likely effect
SA 2: Services and facilities	+
SA 3: Community cohesion	+
SA 4: Health and inequalities	++
SA 5: Economy	+
SA 6: Sustainable travel	+
SA 7: Mineral resources	0
SA 8: Soils	+
SA 9: Water quality	+
SA 10: Air pollution	+?
SA 11: Flood risk	+
SA 12: Climate change	+
SA 13: Biodiversity	++
SA 14: Historic environment	0
SA 15: Landscape	+

4.187 The SA of the Preferred Policy approach found that it would have positive effects for a number of SA objectives, in particular for SA objective 4 (Health and inequalities) and SA objective 13 (Biodiversity) for which significant positive effects were identified. This is because the Preferred Policy approach is to safeguard and enhance green space and biodiversity assets, including making provision for new open space in new developments and net biodiversity gain. These should have significant positive benefits not only for biodiversity but also for people's health and wellbeing.

4.188 No significant negative effects were identified.

Recommendations

4.189 The Preferred Policy approach mentions the role that multi-functional greenspace can play in mitigating climate change. It could be further strengthened by making specific reference to the need for ecological networks to be restored and strengthened to allow for species migration and adaptation.

Council reasons for taking forward the Preferred Policy approach

4.190 The Preferred Policy approach is in accordance with national planning policy. It would have significant benefits in terms of improving health and enhancing biodiversity. It would also have a number of other positive impacts, including mitigating flood risk and climate change.

H. Renewable Energy and Water Management

4.191 The Preferred Policy approach to Renewable Energy and Water Management addresses the need for the Borough to mitigate (i.e. reduce carbon and other greenhouse gas emissions) and adapt to (i.e. ensure the Borough is resilient to a changing climate such as extreme weather events) climate change.

4.192 With respect to climate change mitigation, the Preferred Policy approach encourages energy efficiency in the built environment and transport, the encouragement of renewable and low carbon energy sources. For climate change adaptation, the Preferred Policy approach is to encourage water efficiency in new development and minimise Flood risk.

4.193 No reasonable alternatives were identified.

SA findings

4.194 The SA scores for the Preferred Policy approach are set out in **Table 4.17** below.

Table 4.17: SA scores for Renewable Energy and Water Management

SA objective	Likely effect
SA 1: Housing	+
SA 2: Services and facilities	0
SA 3: Community cohesion	0
SA 4: Health and inequalities	+
SA 5: Economy	0
SA 6: Sustainable travel	+
SA 7: Mineral resources	0
SA 8: Soils	0
SA 9: Water quality	+
SA 10: Air pollution	+
SA 11: Flood risk	++
SA 12: Climate change	++
SA 13: Biodiversity	+
SA 14: Historic environment	0
SA 15: Landscape	+

4.195 The Preferred Policy approach is likely to give rise to positive effects for many of the SA objectives. Significant positive effects were identified for SA objective 11 (Flood risk) and SA objective 12 (Climate change) given the Preferred Policy approach’s focus on these two aspects of sustainability.

4.196 No significant negative effects were identified.

Recommendations

4.197 Paragraph H2 of the Preferred Policy approach lists a good range of measures to be taken to both mitigate and adapt to climate change. However, not all of them are clearly addressed in the section on ‘Locations/Delivery methods’.

4.198 For example, tree planting and the design of the public realm is important for the adaptation to climate change through cooling effects and shelter, and also absorbing pollutants. For thoroughfares, retail areas, public transport hubs, bus stops, etc, it is important that protection from both heat and heavy rainfall events is provided, which in turn will encourage people to use these services and facilities. This could be more clearly expressed in the Preferred Policy approach.

Council reasons for taking forward the Preferred Policy approach

4.199 The Preferred Policy approach is in accordance with national planning policy. It would have significant benefits in terms of mitigating flood risk and climate change. It would also have a number of other positive impacts, including health and water and air quality.

I. Affordable Housing

- 4.200 The Preferred Policy approach aims to deliver a mix of housing tenures, including an increase in affordable housing. It sets out threshold criteria to be applied to development proposals to determine whether they should contribute to the affordable housing needs of the Borough. The Preferred Policy Approach will require proposals in the urban area of 15 dwellings (or 0.5ha) or more to contribute to the provision of affordable housing provision and, south of the A2, the threshold for seeking affordable housing provision will be a minimum of 10 dwellings. The Preferred Policy approach is to require a 35% affordable housing target subject to viability.
- 4.201 Two reasonable alternatives were identified to the Preferred Policy approach (I1). One reasonable alternative was to apply a Borough-wide threshold of 10 dwellings for the delivery of affordable housing (I2). The other was to retain the current overall target for affordable housing of 30% on qualifying sites (I3).

SA findings

- 4.202 The SA scores for the Preferred Policy approach and the reasonable alternatives are set out in **Table 4.18** below.

Table 4.18: SA scores for Affordable Housing

SA objective	Likely effect		
	Preferred Option I1	Alternative Option I2	Alternative Option I3
SA 1: Housing	++/-?	++/-?	++/-
SA 2: Services and facilities	-?	-?	-?
SA 3: Community cohesion	+	+	+
SA 4: Health and inequalities	++/-?	++/-?	++/-
SA 5: Economy	0	0	0
SA 6: Sustainable travel	0	0	0
SA 7: Mineral resources	0	0	0
SA 8: Soils	0	0	0
SA 9: Water quality	0	0	0
SA 10: Air pollution	0	0	0
SA 11: Flood risk	0	0	0
SA 12: Climate change	0	0	0
SA 13: Biodiversity	0	0	0
SA 14: Historic environment	0	0	0
SA 15: Landscape	0	0	0

- 4.203 The Preferred Policy approach and the two reasonable alternatives were considered to affect only a small number of SA objectives. All three approaches were considered likely to result in significant positive effects with respect to SA objective 1 (Housing). In all instances, it was considered that minor negative effects against this objective may also materialise, with respect to I1 and I2, because the higher thresholds may slow down delivery, and for I3, because it may be less likely to meet the full housing needs of the Borough.
- 4.204 Minor or neutral effects were considered likely for all other SA objectives.

Recommendations

4.205 No recommendations were identified.

Council reasons for taking forward the Preferred Policy approach

4.206 The Council's Preferred Policy approach is option I1 as it addresses the needs for affordable housing set out in the Dartford and Ebbsfleet Residential Needs Assessment whilst recognising that developments in the urban area are likely to be larger than developments in the rural area. The percentage requirement and thresholds will be subject to a viability assessment. Option I2 could have an adverse impact on the viability of development and not be effective in practice in any event, and option I3 would mean that the plan would not be able to meet the identified affordable housing needs.

J. Housing Type and Size

4.207 The Preferred Policy approach is to provide for a range of dwelling sizes and types designed and located in accordance with the future needs of Dartford's population. This includes considering the lifetime requirements of the population, such as disabled, younger and older people, and families.

4.208 No reasonable alternative policy approach was identified.

SA findings

4.209 The SA scores for the Preferred Policy approach and the reasonable alternatives are set out in **Table 4.19** below.

Table 4.19: SA scores for Housing Type and Size

SA objective	Likely effect
SA 1: Housing	++
SA 2: Services and facilities	0
SA 3: Community cohesion	+
SA 4: Health and inequalities	++
SA 5: Economy	0
SA 6: Sustainable travel	+
SA 7: Mineral resources	0
SA 8: Soils	0
SA 9: Water quality	0
SA 10: Air pollution	+
SA 11: Flood risk	0
SA 12: Climate change	+
SA 13: Biodiversity	0
SA 14: Historic environment	0
SA 15: Landscape	+

4.210 The Preferred Policy approach was considered likely to result in significant positive effects against SA objective 1 (Housing) and SA objective 4 (Health and inequalities), because it would deliver

the range of homes needed in the Borough and would provide for those in need of special housing such as the elderly and disabled.

4.211 All other SA objectives had minor or negligible effects.

Recommendations

4.212 No recommendations were identified.

Council reasons for taking forward the Preferred Policy approach

4.213 The Council wishes to ensure that the type and size of housing provided in the Borough meets the needs of different sectors of the population, including families and elderly/disabled people. In light of this, the Plan will set out requirements for the provision of accessible/adaptable housing and larger family homes. This will have significant positive impacts in terms of the SA objectives relating to housing and health and inequalities.

K. Gypsies, Travellers and Travelling Showpeople

4.214 The Preferred Policy approach identifies the need to deliver 48 additional permanent pitches for gypsies and travellers (which does not equal 48 new sites) and 1 additional permanent plot for travelling showpeople. This need will be accommodated within existing authorised site boundaries, sites occupied under temporary planning permission where permanent planning permission will be granted, small scale extensions to existing authorised sites, and potentially sites within Ebbsfleet Garden City. If these sites are unable to meet need, new sites would be researched.

4.215 No reasonable alternative policy approach was identified.

SA findings

4.216 The SA scores for the Preferred Policy approach are set out in **Table 4.20** below.

Table 4.20: SA scores for Gypsies, Travellers and Travelling Showpeople

SA objective	Likely effect
SA 1: Housing	++
SA 2: Services and facilities	+?
SA 3: Community cohesion	0
SA 4: Health and inequalities	+?
SA 5: Economy	0
SA 6: Sustainable travel	+?
SA 7: Mineral resources	-?
SA 8: Soils	-?
SA 9: Water quality	0
SA 10: Air pollution	+/-?
SA 11: Flood risk	0
SA 12: Climate change	+?
SA 13: Biodiversity	-?
SA 14: Historic environment	-?

SA objective	Likely effect
SA 15: Landscape	-?

- 4.217 Significant positive effects were identified for the Preferred Policy approach with respect to SA objective 1 (Housing), because it would meet the housing needs of the gypsies, travellers and travelling showpeople community.
- 4.218 Each of the potential sites listed in the Preferred Policy approach was examined to see whether they would be likely to give rise to significant effects. Although a number of potential effects were identified, both positive, for example with respect to proximity to open space and public transport, and negative, for example with respect to proximity to designated biodiversity sites and heritage assets, in all instances the effects were considered uncertain, and not great enough to warrant being identified as significant effects.

Recommendations

- 4.219 No recommendations were identified.

Council reasons for taking forward the Preferred Policy approach

- 4.220 Whilst there could be impacts on the landscape, soils and other sustainability objectives, the Council is required to meet the needs of gypsies, travellers and travelling showpeople. The preferred policy approach reflects deliverable options for the provision of sites to meet these needs.

Summary of SA findings for retained policies

- 4.221 The final component of the Consultation Document lists the policies from the adopted Local Plan that the Council intends to save as they are worded and incorporated into the Local Plan Review. At this stage of the SA process of the Local Plan Review, the saved policies have not been subject to re-appraisal, as they were previously appraised in the 'Sustainability Appraisal of the Dartford Local Plan Development Policies Document' (AECOM, January 2016). For comprehensiveness and consistency, the final version of the policies as they appear in the Local Plan Review will be subject to SA using the current SA Framework, along with all the new and revised policies.
- 4.222 The policies were appraised by AECOM against six main sustainability issues/objectives, which were established through SA scoping and are set out below:
- Biodiversity
 - Climate change
 - Community and Wellbeing
 - Flood risk
 - Cultural Heritage and Landscape
 - The Local Economy
 - Water

Heritage Conservation

DP12 – Historic environment Strategy

- 4.223 The previous SA (2016) considered the sustainability effects of Policy DP12 in relation to Biodiversity and Cultural Heritage and Landscape.
- 4.224 Whilst the policy does not include any specific reference to biodiversity, the previous SA (2016) concluded that the policy is likely to result in secondary benefits due to a focus on the enjoyment of the Borough's historic environment, which includes preservation of the natural environment setting of assets.

- 4.225 The previous SA (2016) concluded that the draft plan performs well in terms of Cultural Heritage and Landscape, with Policy DP12 providing a comprehensive (designated assets, non-designated assets, archaeological sites and sites of archaeological potential) approach to the management of the Borough's heritage assets and a particular focus on keeping in use or bringing back into use key heritage assets where it is viable to do so.

DP13 – Designated Heritage Assets

- 4.226 The previous SA work (2016) considered Policy DP13 in relation to Cultural Heritage and Landscape. The policy was considered to be consistent with national policy, in ensuring that there is relevant evidence in Design and Access Statements to demonstrate that sufficient consideration has been given to designated heritage assets in the locality, with permission being refused if there is not.

Green Belt Level Protection

DP22 – Green Belt in the Borough

- 4.227 The previous SA work (2016) considered the sustainability effects of Policy DP22 in relation to the sustainability topics of Biodiversity, Community and Wellbeing, Cultural Heritage and Landscape and the Local Economy
- 4.228 In terms of Biodiversity, the SA concluded that the inclusion of the policy would ensure that potential adverse effects on Biodiversity are given due consideration, due to the measure that development within the Green Belt will be supported only where it would meet the objectives of conserving the Green Belt as an ecological resource.
- 4.229 Significant positive effects were identified by the SA for the policy in relation to Community and Wellbeing as they concluded it seeks to preserve the recreational benefits of Green Belt and will consider proposals for outdoor sport and recreation, which may improve local access to open space and play space.
- 4.230 For Cultural Heritage and Landscape, the SA concluded that the policy includes a number of criteria with particular relevance to effects on the openness of the Green Belt and its effects on visual amenity or character.
- 4.231 In terms of the Local Economy, the SA identified that the policy includes provisions that development should not impede existing agricultural development, which they concluded contributes to the plan performing well in safeguarding the primary and secondary economic land use functions.

DP23 – Protected Local Green Space

- 4.232 For Policy DP22, the previous SA (2016) considered the potential effects of the inclusion of the policy in the plan in relation to the sustainability topics of Biodiversity, Community and Well-Being and Cultural Heritage and Landscape.
- 4.233 Discussion under the Biodiversity topic identified that the policy will ensure that development that impedes on Protected Local Green Space will only be considered under very special circumstances. The SA concluded that this approach is appropriate but there could be a greater focus on managing biodiversity, rather than just a focus on managing green infrastructure for access.
- 4.234 Significant positive effects were identified by the SA for the policy in relation to Community and Wellbeing due to the potential for access to local open space and play space to be improved by the designation of local green spaces, which it was concluded also likely to play a wider role in promoting attractive and sustainable communities.
- 4.235 In terms of Cultural Heritage and Landscape, it was identified that the policy states that any development within Protected Local Green Space will only be acceptable in very special circumstances. Therefore, the SA concluded that the policy is adequate in the protection of cultural heritage and landscape as it is consistency with national policy.

Community Services Uses

DP21 – Securing Community Facilities

- 4.236 The previous SA (2016) considered the sustainability effects of Policy DP21 in relation to Community and Wellbeing. Significant positive effects were identified for the policy as it was concluded that it is likely to support local centres and community facilities by seeking contributions from proposed development to provide on-site new community facilities that suit a range of local needs and it seeks to restrict the loss of existing facilities, with exceptions only being made where the facility is not need by the local community.

Design and Amenity

DP2: Good design in Dartford

- 4.237 The previous SA (2016) considered the sustainability effects of Policy DP2 in relation to the following sustainability topics: Biodiversity; Climate change; Community and Wellbeing; Flood risk; Cultural Heritage and Landscape; Water and Other Natural Resources.
- 4.238 For Biodiversity, the SA concluded that improvement of the area through high quality design offers potential to increase opportunities to explore nature routinely, making the best use of the area's riverside environments, cliff faces and extensive network of open spaces. However, the SA also concluded that the policy could place greater emphasis on managing green infrastructure for biodiversity rather than the key focus being access.
- 4.239 In terms of Climate change, the SA identified that the policy contributes to reducing emissions from transport by promoting walking/cycling and implementing a careful design and layout in new developments that will reduce the need to travel. Therefore, the SA concluded that these provisions will make positive contributions to achieving a high modal shift in local transport choices.
- 4.240 Significant positive effects were identified by the SA for the policy in relation to Community and Wellbeing due to the support for local centres and community facilities that a high standard of design can contribute to. The SA concluded that buildings and spaces that are designed to be accessed by range of demographics contribute positively to addressing community and wellbeing related issues. The SA also concluded that significant positive effects may occur through the policy due to the potential benefits in relation to public health and safety that high-quality design can provide through clear cycling and pedestrian linkages.
- 4.241 In consideration of Flood risk, the SA identified that the policy includes early consideration of achieving on-site flood alleviation in developments, which they concluded to be useful in elaborating on Core Strategy Policy on Flood risk by considering the designing in of effects Sustainable Drainage Systems (SuDS).
- 4.242 For Cultural Heritage and Landscape, the SA concluded that the elements of the policy concerning preservation of the role and vitality of Dartford Town Centre and other centres go notably further than national policy. The policy seeks to maintain and enhance heritage and landscape by preserving heritage assets and making sure that development design is considerate of the existing local character. Significant positive effects were identified by the SA for the policy in relation to Cultural Heritage and Landscape.
- 4.243 The SA concluded that the policy performs satisfactorily in relation to Water and Other Natural Resources due to provisions made for the efficient management of natural resources and the specific mention of waste management.

DP5 - Environmental and Amenity Protection

- 4.244 The previous SA (2016) considered the sustainability effects of Policy DP5 were in relation to Biodiversity, Community and Wellbeing, Cultural Heritage and Landscape and Water and Other Natural Resources.
- 4.245 For Biodiversity, the SA identified the intention of the policy to minimise adverse material impacts of development on the Borough's environment, but it was also identified that the policy does not

specifically reference biodiversity, which the SA concluded may potentially limit the positive impacts of the policy.

- 4.246 In terms of Community and Wellbeing, significant positive effects were identified by the SA for the policy in response to the potential benefits it may have on ensuring the environmental quality of the borough. Specifically, the SA identified that the policy includes a requirement that development should not be in the immediate vicinity of landfill sites, which is one of many amenity/safety factors that are considered through the policy.
- 4.247 The SA identified that heritage impacts are not specifically mentioned in the policy, but it was concluded that positive impacts, in terms of preservation of heritage assets and landscape setting, may arise from the requirement that development should not result in unacceptable material impacts on the Borough's environment.
- 4.248 The SA concluded that the policy contributes satisfactorily to the pollution issues of water bodies and groundwater by stating that development will not be permitted where it results in unacceptable material impacts on the Borough's environment.

DP7 – Borough Housing Stock and Residential Amenities

- 4.249 The previous SA (2016) considered the sustainability effects of Policy DP5 in relation to Biodiversity, Community and Wellbeing and Cultural Heritage and Landscape.
- 4.250 In terms of Biodiversity, the SA concluded that the policy makes a contribution to minimising negative effects from the biodiversity baseline by resisting inappropriate development on residential garden land and proposals that would result in harm due to the loss of gardens.
- 4.251 Significant positive effects were identified by the SA for the policy in relation to Community and Wellbeing due to the contribution the policy makes to ensure a housing mix that is appropriate for the Borough. Specifically, the policy seeks to maintain a stock of family homes across the Borough not granting permission to the conversion of smaller homes into two or more units.
- 4.252 For Cultural Heritage and Landscape, the SA concluded that the policy will have a positive impact as it will contribute to preserving the local character and historical development patterns of existing residential areas.

Transport

DP3 – Transport Management

- 4.253 The previous SA (2016) considered Policy DP3 in relation to Climate change and Community and Wellbeing.
- 4.254 Although significant effects were not predicted by the SA for the policy, the SA concluded that the policy has the potential to result in per capita reductions in greenhouse gas emissions by ensuring that development will not give rise to significant localised effects on congestion.
- 4.255 Significant positive effects predicted by the SA for the policy in relation to Community and Wellbeing due to the potential benefits to public safety that will arise as a result of restricting development in locations that will result in adverse traffic impacts that cannot be mitigated.

DP4 – Transport Access and Design

- 4.256 The previous SA (2016) considered the sustainability effects of Policy DP4 in relation to Climate change and Community and Wellbeing.
- 4.257 In terms of Policy DP4's contribution to mitigating climate change, the SA found that there is strong promotion of walking, cycling and public transport in new developments, which they concluded is likely to contribute to a high modal shift in local transport choices and therefore potentially reduced greenhouse gas emissions. In addition, the SA also concluded that the creation of 'connected streets' and mixed-use development works in combination with the provision of sustainable transport options to reduce overall emissions.
- 4.258 Significant positive effects were identified by the SA for the policy in relation to Community and Wellbeing due to the increased levels of access that the policy contributes to by supporting development that has safe and convenient pedestrian and cycle routes and good public transport.

connections. The SA also concluded that the provision of disabled access at focal points plays a key role in the positive impacts identified.

Local Shops

DP17 – District Centres

- 4.259 The previous SA (2016) considered Policy DP17 in relation to Community and Wellbeing and The Local Economy.
- 4.260 Significant positive effects were identified by the SA for the policy in relation to Community and Wellbeing due to the support for local centres and community facilities. Namely, the policy seeks to support retail, community and business uses and to restrict proposals for takeaway or drinking establishments. In addition, the SA concluded that the policy also contributes positively through measures to ensure that there will be no adverse effects on the vitality and viability of the existing centres through development.
- 4.261 In terms of The Local Economy, the SA concluded that the policy contributes positively to preventing the loss of existing economic land functions, which specifically in this case is to be achieved by retaining above 50% of A1/A2 use class buildings and restricting change of use to vacant buildings that are not viable for A1/A2 use.

DP18 – Neighbourhood Centres

- 4.262 The previous SA (2016) considered the sustainability effects of Policy DP18 in relation to The Local Economy. The SA concluded that the policy contributes to an appropriate level of flexibility for changes of uses to support the vitality and viability of neighbourhood centres. Specifically, the policy allows for changes of use where sufficient A1 use units are retained within the centre and allows for non-residential uses where that use has not already been provided in the existing centre.

DP19 – Food and Drink Establishments

- 4.263 The previous SA considered Policy DP19 in relation to Cultural Heritage and Landscape. The SA concluded that the assessment criteria in the policy for considering applications for takeaways and drinking establishments would contribute positively to preserving townscape character, in line with national policy.

Council reasons for taking forward the saved policies

- 4.264 These policies were recently adopted in the Development Policies Plan 2017 and were subject to SA in their formulation. The policies continue to comply with national planning policy and are still relevant to the Borough. For these reasons, the Council considers that they should be the Preferred Policy approach for the relevant topic areas going forward.

Cumulative Effects

- 4.265 The cumulative effects assessment is undertaken in two parts. The first part considers the cumulative effects of the Preferred Policy approaches and the saved policies taken as a whole on each of the SA objectives. The second part considers the potential for in-combination effects with development proposals in the Local Plans for neighbouring authorities, because the relationship of Dartford with its neighbours, including Thurrock on the northern side of the Thames Estuary, to which Dartford is connected via the Dartford Crossing.

Cumulative effects of the Local Plan

SA objective 1: To ensure that everyone has the opportunity to live in a decent home

- 4.266 The Preferred Policy approaches in the Local Plan Review Consultation Document strongly support this SA objective with a number resulting in significant positive effects. The Preferred Policy approaches recognise the need to provide for a range of types and tenure of housing, and also to

provide for all life stages, including for the elderly and disabled, as well as for the gypsies, travellers, and travelling showpeople members of the community.

4.267 Overall, a **significant positive effect (++)** is anticipated.

SA objective 2: To ensure ready access to essential Services and facilities for all residents

4.268 The Preferred Policy approaches emphasise the need to deliver new services and facilities alongside new development. The overall Spatial Strategy focuses development on where existing services and facilities exist and, where major new development is proposed, such as at Ebbsfleet Garden City, a comprehensive range of services and facilities are to be provided. Notwithstanding the Preferred Policy Approach, there is a risk that some services and facilities could become overburdened if sufficient investment and expansion is not forthcoming to meet the increased demand.

4.269 Overall, a **mixed significant positive a minor negative effect with uncertainty (++)/(-?)** is anticipated.

SA objective 3: To strengthen Community cohesion

4.270 Community cohesion will be influenced by a number of Preferred Policy approaches, particularly those that relate to housing, services and facilities such as education and health, jobs, public transport, and access to open space and leisure opportunities. Regeneration, particularly of areas that are currently under-used, such as development in Ebbsfleet, can also bring opportunities to build new communities.

4.271 The Preferred Policy approaches are all positive with respect to these factors, and therefore significant positive effects can be anticipated. However, there is a risk that, with significant levels of growth, existing communities may not welcome some of the changes, and there is also a risk that increased intensification and pressure on services and facilities could lead to some negative effects for some communities.

4.272 Overall, a **mixed significant positive a minor negative effect with uncertainty (++)/(-?)** is anticipated.

SA objective 4: To improve the population's health and reduce inequalities

4.273 Health and health inequalities can be affected by a range of factors, such as opportunities to live in the right type of quality home at a cost that can be afforded, being in employment, access to open space, sport, leisure and nature, and the ease with which active, rather than car, travel can be achieved. Access to healthcare facilities is also important.

4.274 The Preferred Policy approaches go a long way to address these issues. There are residual health risks with respect to air pollution, particularly if the planned growth leads to more traffic within the AQMAs, and also given that the planned for open space, public transport and healthcare facilities will need to be delivered alongside, or in advance of, development.

4.275 Overall, a **mixed significant positive a minor negative effect with uncertainty (++)/(-?)** is anticipated.

SA objective 5: Facilitate a sustainable and growing economy and a vital and viable town centre

4.276 The Preferred Policy approaches are strongly supportive of investing in the local economy and provide a very positive framework for key locations for employment both existing and proposed, such as Dartford Town Centre and Regeneration Locations, Ebbsfleet Garden City, and the Littlebrook Power Station site.

4.277 Overall, a **significant positive effect (++)** is anticipated.

SA objective 6: To reduce the need to travel and encourage sustainable and active alternatives to motorised vehicles to reduce congestion

4.278 There is considerable emphasis in the Preferred Policy approaches on public transport, including investment in extending Fastrack, new bus services and accommodating the potential for extension of Crossrail (the Elizabeth Line). It also supports improved walking and cycling

networks, and green infrastructure. The focus of development is on locations that have good access to public transport, such as Ebbsfleet Garden City, and Dartford Town Centre.

- 4.279 Notwithstanding this Preferred Policy approach, it is likely that vehicular travel will grow, in terms of both private cars and heavy goods vehicles. This will be partly as a consequence of growth in housing and employment, but also because the Preferred Policy approaches provide for road upgrades and junction improvements. The aim of these is to ease congestion but, paradoxically, they could also encourage more travel by car.
- 4.280 The former Littlebrook Power Station site is earmarked for employment development, potentially including logistics. It is currently not well located with respect to the public transport network, although the Preferred Policy approach is to address this issue. The proposed Lower Thames Crossing, although not a proposal of the Local Plan, could add to traffic in Dartford.
- 4.281 Overall, a **mixed significant positive a minor negative effect with uncertainty (++)/-?)** is anticipated.

SA objective 7: To conserve the Borough's Mineral resources

- 4.282 The Preferred Policy approach is to prioritise the use of brownfield land in the Borough for development over use of greenfield land, which would have a positive effect on this SA objective. Nonetheless, some development locations do include Minerals Safeguarding Areas, and therefore it is considered that this needs to be reflected in the scores. It should be noted, that Mineral resources can often be worked prior to development to avoid their being sterilised.
- 4.283 Overall, a **minor negative effect (-)** is anticipated.

SA objective 8: To conserve the Borough's soils

- 4.284 As mentioned above, the Preferred Policy approach is to prioritise the use of brownfield land over greenfield land, and there are plenty of opportunities to achieve this within Dartford, with the added advantage that many of the brownfield sites are well located for public transport.
- 4.285 There is nonetheless the potential for some greenfield development that will result in the loss of agricultural land, although this will not necessarily be best and most versatile agricultural land.
- 4.286 Overall, a **mixed significant positive a minor negative effect with uncertainty (++)/-?)** is anticipated.

SA objective 9: To maintain and improve the quality of the Borough's waters

- 4.287 The Preferred Policy approaches include considerations with respect to water efficiency, sustainable drainage systems, and green infrastructure all of which should contribute positively to this SA objective. Otherwise, water quality is addressed through retained Policy DP5: Environmental and Amenity Protection. The Preferred Policy approaches do not give the issue of water quality great prominence which, given that some of the watercourses in the Borough are not reaching quality standards, could be improved.
- 4.288 Overall, a **minor negative effect (-)** is anticipated.

SA objective 10: To reduce Air pollution and ensure improvements in air quality

- 4.289 Dartford Borough has four AQMAs within its boundaries, as a result of pollution from traffic. It is therefore important that the Local Plan Review as far as possible addresses this issue by seeking to minimise the growth in traffic. The Preferred Policy approaches acknowledge the need to do this, and therefore there is considerable emphasis on concentrating development where there is good access to public transport, ensuring that services and facilities are provided where there is significant residential development in order to reduce the need to travel by car, and by promoting employment uses close to homes. It also encourages walking and cycling and green infrastructure, including tree planting, which should help to mitigate some of the air pollution.
- 4.290 However, the increased growth will inevitable additional car movements, and the improvements to road junctions and upgrading of roads will facilitate car travel, which may lead to increased air pollution in the AQMAs. In addition, the proposals for employment uses at the former Littlebrook Power Station site, notwithstanding the proposed public transport links, could result in commuting to and from this site at peaks hours plus the generation of heavy good vehicle traffic.

- 4.291 Overall, a **mixed significant positive and significant negative effect (+ +/--)** is anticipated.
SA objective 11: To avoid and mitigate Flood risk
- 4.292 Several of the proposals in the Preferred Policy approaches would result in development in areas categorised as Flood risk Zones 2 and 3, which indicates that they are at risk of flooding. These include parts of Dartford Town Centre, Ebbsfleet Garden City including Ebbsfleet Central Area, the Swanscombe Peninsula, and the former Littlebrook Power Station site. However, much of these areas benefit from flood defences, which should help to reduce the risk of flood events occurring. The Preferred Policy approaches include provision for sustainable drainage systems, which should help to ameliorate some flood events as a result of run-off from hard surfaces at new developments. Nonetheless, a risk remains, particularly taking into account tidal surges on the River Thames and extreme rainfall events, which are likely to increase over time as a result of climate change.
- 4.293 Overall, a **mixed significant negative and minor positive effect (--/+)** is anticipated.
SA objective 12: To minimise the Borough's contribution to climate change
- 4.294 Then main contributor to carbon emissions in Dartford Borough is traffic, followed by industrial and commercial operations and domestic energy use. It is difficult to anticipate whether carbon emissions are likely to grow as a result of further growth in the Borough. Improvements in technology improving the efficiency of combustion engines, improved insulation in buildings including homes, and increased renewable energy production across the country as a whole are all helping to address the nation's carbon emissions.
- 4.295 The Preferred Policy approaches seek to address the Borough's carbon emissions through encouragement of energy efficiency in built development, the incorporation of renewable energy sources to serve development, and an emphasis upon investment in the public transport network and services across the Borough and linking into the wider public transport network, and the incorporation of charging points for electric cars in new development. In addition, the Preferred Policy approaches concentrate development where there is good access to public transport, and they also seek to ensure that services and facilities are provided where there is significant residential development in order to reduce the need to travel by car, and promote employment uses close to homes.
- 4.296 The strategy for green infrastructure, including tree planting, should help to absorb some carbon emissions, although this will be on a limited scale, compared to the carbon emissions that are likely to be generated through growth in the Borough.
- 4.297 Overall, a **mixed significant positive a minor negative effect with uncertainty (+ +/-?)** is anticipated.
SA objective 13: To conserve, connect and enhance the Borough's wildlife, habitats and species
- 4.298 Dartford Borough includes a number of biodiversity designations, including Sites of Special Scientific Interest, a National Nature Reserve, Local Wildlife Sites and Ancient Woodland. These can be found in various parts of the Borough and are not confined to the more rural area south of the A2. Also, large parts of the Borough have been identified as Biodiversity Opportunity Areas.
- 4.299 A number of the proposed development locations in the Preferred Policy approaches contain or are close to biodiversity designations (including a geodiversity SSSI), in particular Ebbsfleet Garden City and the former Littlebrook Power Station site. These locations also include Biodiversity Opportunity Areas. The proposed development and supporting infrastructure have the potential to fragment non-designated habitats and the wider ecological network, and increase people disturbance, noise and light disturbance, as well as damage to habitats from air pollution.
- 4.300 However, the Preferred Policy approaches focus development on brownfield land rather than undisturbed habitats, although it is noted that brownfield land can contain biodiversity interest in its own right. The development proposals for Ebbsfleet Garden City include a significant amount of greenspace, and the former Littlebrook Power Station requires at least 30% greenspace, with new useable open space ecological habitat creation, with 10% net biodiversity gain delivered.

- 4.301 The Preferred Policy approach for Swanscombe Peninsula includes the creation of an ecological park, which should make an important contribution to improved biodiversity in the Borough.
- 4.302 Overall, a **mixed significant positive and significant negative effect (+ +/--)** is anticipated.
SA objective 14: To conserve and/or enhance the significant qualities, fabric, setting and accessibility of the Borough's historic environment
- 4.303 Dartford Borough has a rich historic environment, which tends to be concentrated along the A2 corridor, within Dartford Town Centre and Greenhithe, although there is also considerable historic interest in Ebbsfleet, and in the villages and more rural parts of the Borough. In addition, large parts of the Borough have been identified as being Sites of Archaeological Significance, indicating that they probably contain archaeological interest, albeit currently not designated or unknown. This includes the areas along both the River Thames and River Darent corridors.
- 4.304 The Preferred Policy approaches focus a significant amount of development in areas where there is historic interest. In particular, Dartford Town Centre includes a large number of listed buildings and a Conservation Area, and Ebbsfleet includes two Scheduled Monuments and a small number of listed buildings. Both are also within areas identified as Sites of Archaeological Interest, as is the former Littlebrook Power Station site.
- 4.305 The Preferred Policy approaches recognise the importance of safeguarding the historic interest of the Borough, in particular with respect to Dartford Town Centre, although the Scheduled Monuments in Ebbsfleet Central are not mentioned. In many instances, new development can help to enhance the setting of historic assets, if sensitively designed, but risks remain that harm could arise, pending detailed assessment policy wording.
- 4.306 Overall, a **mixed significant negative and minor positive effect (--/+)** is anticipated.
SA objective 15: To conserve and enhance the special qualities, accessibility, local character and distinctiveness of the Borough's settlements, countryside and landscape
- 4.307 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. No development of any significance is proposed in the Preferred Policy approaches for this area.
- 4.308 The SA of a number of the Preferred Policy approaches identified the potential for minor effects on the landscape, character and distinctiveness of the Borough, both positive and negative. However, the preferred Spatial Strategy, which focuses development north of the A2, away from the more rural part of the Borough, and on brownfield rather than greenfield land, means that the overall character of the more landscape sensitive parts of the Borough should be safeguarded, and areas of brownfield land that currently detract from the overall character and distinctiveness of the Borough, such as the strategic site in Dartford town centre, parts of Ebbsfleet and the Swanscombe Peninsula, and the former Littlebrook Power station site, offer the opportunity for improvements. Set against this, the increase in development and supporting infrastructure will continue to lead to more urbanisation, although there is considerable provision for new greenspace.
- 4.309 Overall, a **mixed significant positive a minor negative effect with uncertainty (+ +/-?)** is anticipated.

In-combination Effects

- 4.310 To the east, Gravesham Borough Council adopted the Local Plan Core Strategy in 2014. Currently, a Site Allocations and Development Management Policies Document is being consulted upon, but once it is adopted it will form part of the Development Plan. Gravesham's Core Strategy has identified that in order to meet its own objectively assessed needs during the plan period of 2011 to 2028 at least 6,170 new dwellings will be delivered at three different development rates over the plan period. The greatest capacity for new housing is identified in the Opportunity Areas and Key Sites. Gravesham has designated two key sites along the Dartford Borough boundary that have the potential to increase traffic and congestion on Dartford's London Road AQMA.

Additionally, Gravesham is seeking to substantially diversify and strengthen its economy to reduce out-commuting, it aims to provide at least 4,600 new B class jobs over the plan period.

- 4.311 To the west, the London Borough of Bexley is currently reviewing its Local Plan, however the Core Strategy (2012) notes that the London Plan at the time stated that 335 homes per year should be achieved by Bexley. Additionally, as London is expected to have job growth of 912,000 by 2026 this is expected to translate to 10,000 jobs in Bexley. The Preferred Approaches to Planning Policies and Land-Use Designations notes that there are opportunity areas around Crayford, a district centre, which lies on the border of Dartford and Bexley. Additionally, it is possible that the Crossrail will extend into Dartford to Ebbsfleet. As such, development in Crayford and the possible extension of the Crossrail could increase air pollution and affect amenity in Dartford.
- 4.312 To the south west, the London Borough of Bromley recently adopted its Local Plan in conjunction with the London Plan. In relation to Bromley, the London Plan requires 641 additional homes over the ten-year plan period. According to the Borough's new Local Plan the Cray corridor, a focus of their spatial strategy, is the main industrial and business area within the Borough, providing accommodation for a full range of businesses and improving the offer for modern business. As the Cray Corridor lies in close proximity to the Dartford boundary there is a possibility for increased air pollution and traffic congestion within Dartford through the increase of workers commuting in and out of Bromley into Dartford via private vehicle. Additionally, the Cray Valley has been noted as a regeneration area which could entail a large amount of development along the border with Dartford.
- 4.313 To the north, Thurrock Council is currently reviewing their Local Plan, but the current planning policy is the Core Strategy which was adopted in 2011 and subsequently updated in 2015. Thurrock needs to plan to accommodate at least an additional 18,500 new homes over the period 2001 to 2021 and up to a further 4,750 dwellings to 2026 and beyond in order to provide a 15-year supply to meet Government requirements. Additionally, the Core Strategy aspires to help secure an additional 26,000 jobs in Thurrock over the period 2011 to 2026. The Council has identified five key regeneration areas and key economic hubs which focus development on the Thurrock Urban Areas and the London Gateway site. One of the key areas of regeneration and growth is Purfleet which is north of Dartford only separated by the River Thames. Regeneration in Purfleet will be founded on the development of a mix of dwellings, employment and community facilities focused around a new centre adjoining the railway station and riverside. As such, adverse effects on Dartford are likely through increased air and noise pollution from construction and traffic congestion from commuting in and out of Dartford to Purfleet. However, a new road link connecting London Road with the Purfleet by-pass to improve access and traffic flow has been suggested. Also, the new Lower Thames Crossing will create a new link between the A2 and M25 and reduce the burden and congestion on the busy Dartford Crossing. The Lower Thames Crossing is expected to carry 4.5 million heavy goods vehicles in its first year. While the Lower Thames Crossing could increase connectivity to London and the Channel ports as well as reduce traffic congestion around Dartford it is likely that air pollution will increase as a result within Dartford.
- 4.314 To the south, Sevenoaks District Council adopted the Core Strategy in 2011, but the Council submitted their Submission Local Plan in April 2019 to the Secretary of State. The plan sets a minimum housing provision for the District of 165 dwellings per annum until 2026 (3,300 dwellings overall) with a broad split of 85/80 dwellings per annum between the London Fringe and the Rest of Kent. Swanley is the second largest settlement within Sevenoaks and is on the border of Dartford Borough. As Swanley is considered a secondary strategic development location, it is likely development will be centred around Swanley which could increase traffic congestion and air pollution on the M25 that funnels into Dartford.

Mitigation

- 4.315 The SA of the Preferred Policy approaches has identified the potential for significant negative effects with respect to:
- SA objective 7 (Mineral resources).

- SA objective 10 (Air pollution).
- SA objective 11 (Flood risk).
- SA objective 13 (Biodiversity).
- SA objective 14 (Historic environment).

4.316 In all instances, the potential for significant negative risks should be considered as the 'risk' of a significant negative effect occurring, rather than actual outcomes. The Preferred Policy approaches already include a range of measures that seek to avoid or reduce the likelihood of these effects occurring, or measures are already in place. These are described below.

SA objective 7: To conserve the Borough's mineral resources

4.317 The Preferred Policy approach prioritises the use of brownfield land in the Borough for development over use of greenfield land, which should reduce the need to develop areas where there are Mineral resources. It is standard planning practice to avoid the sterilisation of Mineral resources where possible, and where appropriate minerals can be worked prior to development to taking place.

SA objective 10: To reduce air pollution and ensure improvements in air quality

4.318 The Preferred Policy place considerable emphasis on concentrating development where there is good access to public transport, ensuring that services and facilities are provided where there is significant residential development in order to reduce the need to travel by car, and by promoting employment uses close to homes. It also encourages walking and cycling and green infrastructure, including tree planting, which should help to mitigate some of the air pollution.

SA objective 11: To avoid and mitigate flood risk

4.319 Although several of the proposals in the Preferred Policy approaches would result in development in areas categorised as Flood risk Zones 2 and 3, much of these areas already benefit from flood defences, which should help to reduce the risk of flood events occurring. The Preferred Policy approaches also refer to:

- Enhancing the appeal and functionality of land along the Rivers Thames and Darent to improve flood resilience.
- Safeguarding land facilities as required for future flood infrastructure.
- Accommodating the TE2100 plan to tackle Flood risk in the Thames Estuary and climate change implications, by protecting the Dartford Marshes development through Green Belt policy and land at Long Reach, which may be needed for a new Thames Barrier, and considering policy for riparian design principles to safeguard areas around the existing flood defences for future improvements.

4.320 The Local Plan Review will also be subject to a Strategic Flood risk Assessment (SFRA).

SA objective 13: To conserve, connect and enhance the Borough's wildlife, habitats and species

4.321 The Preferred Policy approaches focus development on brownfield land rather than undisturbed habitats, although it is noted that brownfield land can contain biodiversity interest in its own right. The development proposals for Ebbsfleet Garden City include a significant amount of greenspace, and the former Littlebrook Power Station requires at least 30% greenspace, with new useable open space ecological habitat creation, with 10% net biodiversity gain delivered.

4.322 The Preferred Policy approaches make specific reference to the need to enhancing the appeal and functionality of land along the Rivers Thames and Darent to improve biodiversity, amongst other objectives. It also states that development will be directed away from ecologically sensitive sites.

4.323 The Preferred Policy approaches state that the aim is to continue to protect and enhance the hierarchy of designated sites (including SSSIs, National Nature Reserves and Local Wildlife Sites), biodiversity features, habitats (including ancient woodland), Biodiversity Opportunity Areas,

species and trees (policies CS14 and DP25). It states that this will be updated to require new developments to provide biodiversity net gain and make reference to the newly designated Swanscombe Marine Conservation Zone.

- 4.324 The Local Plan Review is also expected to retain policy for large residential development in the east of the Borough (including Ebbsfleet Garden City) in relation to the potential impact on North Kent European Protected Sites, with updates to the supporting text/ implementation details. Updating will reflect the changes to the way that mitigation measures are considered as part of the Habitats Regulations Assessment process.

SA objective 14: To conserve and/or enhance the significant qualities, fabric, setting and accessibility of the Borough’s historic environment

- 4.325 The Preferred Policy approaches recognise that a positive strategy for the conservation and enjoyment of the historic environment in the Borough is required. It notes that the town centre regeneration is taking place in and around the largest Conservation Area in the Borough, and listed buildings on the former Roman Road and elsewhere, such as at Acacia Hall. It states that heritage assets are an irreplaceable resource and proposals will need to be justified with an assessment of the impacts of proposals affecting heritage assets or their setting and need to take into account the significance of the assets, in line with national policy.
- 4.326 The Preferred Policy approaches retain Policy DP12 (Dartford’s Historic environment Strategy) and Policy DP13 (Designated Heritage Assets) from the adopted Local Plan which set out the policy safeguards for the historic environment of the Borough.

Recommendations

- 4.327 Throughout the SA process to date there has been close engagement between LUC and the planning officers at Dartford Borough responsible for preparing the Consultation Document. This has involved LUC reviewing early versions of the Consultation Document and making recommendations for improvement, some of which have fed into the version of the Consultation Document that will be subject to public consultation.
- 4.328 These are listed in **Table 4.21** below.

Table 4.21 Recommendations made for the Consultation Document

Reference within the Consultation Document	Recommendations	How they have been addressed
Vision to 2036	To include the aspiration of being low carbon.	The Vision now states that ‘Neighbourhoods across the Borough will be attractive, healthy, secure, environmentally resilient and low-carbon.’
Strategic Objectives	There should be a reference to the historic environment within the objectives.	Historic environment and heritage are included within SO1 and SO6.
Main Plan Option 1	To include access to jobs as a critical factor in Dartford for brownfield land to be regarded as positive and sustainable for development.	Jobs has been added.

Reference within the Consultation Document	Recommendations	How they have been addressed
Main Plan Option 2	To include that significant parts of the town centres is within flood risk zones and the entire town centre lies within an AQMA and how these will be addressed through town centre development.	Full account of flood risk and air quality are requirements for town centre redevelopment as set out in the criterion of paragraph D15.
	To put greater emphasis on the importance of the historic environment within the town centre and how development will need to be sensitively designed.	Paragraph D13 covers this point, but we propose to amend it to take on board this recommendation.
	To include further national policy relevant to Dartford Town Centre, such as historic environment, air pollution, flood risk and transport.	These are not specifically town centre or retail issues and apply Borough-wide. The plan is brief in terms of repeating national policy.
Main Plan Option 3	Option 3C performed the best against the SA objectives taken as a whole and should be the preferred option.	Borough Open Spaces were only recently designated and covered all known opportunities then. Broadening the areas designated will be challenging given the extensive existing coverage, and finding further land to include could lead to a diminution of the quality of land designation and may not always be very well justified. This could therefore place at risk the robustness of the policy and its effectiveness in protecting open spaces as a whole.
Main Plan Option 4	It should be noted that while Option 4B is the preferred option, there is potential for significant negative effects against mineral resources, soils, biodiversity and the historic environment. As such, this need to be factored into the development of this location. Also, the potential to generate traffic that flows into the AQMA should be taken into account.	Paragraph E4 emphasises environmental, design and public transport requirements. It should be noted that Ebbsfleet Central already benefits from a planning permission and the detailed provisions of the non-statutory Ebbsfleet Implementation Framework.

Reference within the Consultation Document	Recommendations	How they have been addressed
Main Plan Option 5	To include another option making the peninsula into a nature reserve or country park, similar to Gillingham Riverside Country Park. This could be linked to large-scale development in the area, such as Ebbsfleet.	Option 5B now involves directing development away from and helping facilitate a proposed estuarine ecological park as part of the Garden City and the wider green network of the Borough.
	Option 5B is supported by the SA, although potential significant negative effects in relation to mineral resources, flood risk and the historic environment were identified. As such, these will need to be addressed in proposals for the peninsula.	The coverage of this broad location approach in a consultation document is considered appropriate. However, consideration will be given to further evidence and these factors for the Publication version of the plan.
B. Development Delivery and Housing Location Criteria	To also identify environmental assets and constraints in accordance with policies elsewhere in the plan within paragraph B23.	The current criteria address locational requirements to minimise likely key environmental impacts. Moreover, inevitably decisions will be made in parallel with more detailed environmental policies. The proposal flows from a specific local and national policy context. However, consideration may be given to extending the criteria after consultation responses have been received.
C. Infrastructure	To include the priority of reducing air pollution especially in the AQMAs and for Dartford to be seeking to reduce its greenhouse gas emissions from transport as far as possible.	Reducing air pollution in AQMAs has not been specifically addressed. However, it is now emphasised within the Consultation Document that Dartford seeks to reduce its carbon emission and air pollution as far as possible.
	To include the need to safeguard and where possible restore ecological networks with regard to transport infrastructure.	'To benefit ecological networks' has now been included.

Reference within the Consultation Document	Recommendations	How they have been addressed
	To include linking the bus network to Littlebrook Power Station and Swanscombe Peninsula development areas.	A new local bus service may be part of the package of transport improvements. However, its feasibility would need to be confirmed. Rerouting Fastrack has been considered but is not currently regarded as a reasonable option given the operational impact on achieving a fast as possible public transport network. The policy emphasises links to the existing stops.
D. Town Centres and Retailing	To promote the greening of the town centre e.g. tree planting and green roofs and walls etc. to help ameliorate air pollution and carbon emissions, to provide habitats and cooling of temperatures in extreme heat events.	Paragraph D15 was refined in response to the SA and includes soft landscaping, shelter and tree planting.
	To add 'adapt to climate change' to paragraph D6.	
E. Ebbsfleet Garden City	To incorporate references to biodiversity net gain and design to adapt to climate change.	Biodiversity net gain is expected to become a statutory requirement, and its handling will be reviewed in the Publication plan.
G. Natural Environment and Open Space	To incorporate restoring ecological networks within paragraph G10.	It is proposed to include reference to this in paragraph G2.

- 4.329 In addition, we have included further recommendations that have arisen as a result of the detailed SA of the final version of the Consultation Document, which the Council will consider during the next stages of the Local Plan Review.
- 4.330 In general, improving air quality and Water quality should be integrated more thoroughly into the Consultation Document. It is recommended, for example that a focus on Air Quality Management Areas (AQMAs) be included within the Document as improving air quality in those areas should be prioritised.
- 4.331 Much of the Borough lies within Source Protection Zones (SPZs), and the River Darent is not achieving water quality targets. Water quality is not specifically addressed in the Consultation Document. Therefore, a focus on water quality should be introduced into the Local Plan Review to ensure the risk of contamination and pollution is reduced.

Monitoring

- 4.332 It is a requirement of the SEA Regulations that a description of the measures envisaged for monitoring the effects of implementing a plan are included in the Environmental Report.
- 4.333 A monitoring framework will be prepared during the next stage of the Local Plan Review, once the detailed policies have been drafted.

5 Conclusions and Next Steps

Conclusions

- 5.1 The Dartford Borough Local Plan Review 'Preferred Options' Consultation Document has been subject to Sustainability Appraisal (SA). The Consultation Document includes six Main Plan Options, which represent reasonable alternatives for the purposes of SA, each of which has been subject to appraisal. In addition, the SA has considered alternatives with respect to strategic sites and Preferred Policy approaches where appropriate.
- 5.2 The SA has found that the Preferred Policy approaches set out in the document perform well against several SA objectives, particularly those relating to housing, access to services and facilities, Community cohesion, health, the economy, reducing the need to travel, soils, carbon emissions, and landscape.
- 5.3 The potential for significant negative effects were identified with respect to air quality, minerals, Flood risk, biodiversity, and the historic environment. In many instances, mitigation is provided for in the Preferred Policy approaches, and the negative effects identified were often combined with minor positive, or significant positive effects.
- 5.4 The Preferred Policy approaches generally perform well, because they focus development at brownfield locations, close to public transport, and the larger scale developments, such as Ebbsfleet Garden City, are designed to provide a mix of uses, including homes, services and facilities and jobs. The proposed development within Dartford Town Centre and at the Regeneration Locations will be well served by all of these. Where good public transport does not exist, the Preferred Policy approach is to ensure that such services are provided and linked into or extending the existing public transport network. The redevelopment of the former Littlebrook Power Station is not so well located, and is earmarked primarily for employment uses, and so could result in additional traffic.
- 5.5 The Preferred Policy approaches will deliver the overall housing need of the Borough and will also provide for a range of housing to reflect the different needs of the population, including affordable housing, homes for all life stages and requirements, including families, the elderly and disabled.
- 5.6 The economy of Dartford is fully embraced within the Preferred Policy approaches, so that the good performance over recent years should continue, subject to external factors such as global economic trends.
- 5.7 Although the Preferred Policy approaches will result in development close to designated biodiversity assets, the overall aim is to protect these sites, and to improve biodiversity overall. The greenspace that will be incorporated into the development proposals, and the creation of an ecological park on the Swanscombe Peninsula will help to achieve this.
- 5.8 Although many of the development proposals are in Flood risk zones, these benefit from flood defences and the Preferred Policy approaches seek to ensure that further flood management measures are delivered with development.
- 5.9 Air quality is an important challenge for the Borough. Despite the emphasis on public transport and locating development so that there are a mix of uses nearby, the growth proposals could result in more traffic, which could harm air quality in the Air Quality Management Areas, particularly given the significant development in neighbouring authority areas, and the proposed Lower Thames Crossing.
- 5.10 The Preferred Policy approaches recognise that there will be considerable new development close to historic assets in the Borough, such as the listed buildings and Conservation Area in Dartford Town Centre. If these developments are not designed sensitively, taking into account their setting, there is a risk of harm. There are policies in the Preferred Policy approaches that seek to

address this issue. The Scheduled Monuments at Ebbsfleet could be given greater prominence to ensure that these are safeguarded, and due account needs to be given to undesignated heritage assets too.

- 5.11 It is difficult to say whether carbon emissions will increase or reduce as a result of the Preferred Policy approaches, but the Spatial Strategy, emphasis on energy efficiency, renewable energy sources, and public transport will help to address the Borough's contributions. There will no doubt be an increase in vehicular movements, as a result of the planned growth, but it is not known whether this will be offset by other measures in the Preferred Policy approaches, or by other advances in fuel efficiency and the introduction of low energy use vehicles.
- 5.12 Overall, the Preferred Policy approaches take forward and further improves the current approach in the adopted Local Plan in a way that achieves a number of SA objectives. There will be some tensions and conflicts with some SA objectives, which is inevitable given the plan to accommodate more growth.
- 5.13 LUC has worked closely with Council officers, including providing recommendations for improvement to the Consultation Document during its preparation. This SA Report of the final version of the Consultation Document has identified a number of areas where further improvements can be made. It is anticipated that the Council will consider these as the detailed policies are drafted during the next stage of plan preparation.

Next Steps

- 5.14 This SA Report will be available for consultation from early November for a period of 6 weeks.
- 5.15 Following this consultation, the responses will be reviewed and addressed. The findings of the SA and the outcomes of the consultation will be taken into account by the Council as it prepares the next iteration of the Local Plan. The SA will then be updated to reflect that version of the Local Plan and further consideration will be given to potential mitigation measures as well as the approach to monitoring the likely significant effects of the plan.

LUC

October 2019

Appendix 1

Consultation Comments on Scoping Report

Party	Summary of Submission	DBC Response
Historic England	Report adequately covers historic asset effects	None
Environment Agency	No comments. Section 6.19 – Flood risk modelling delayed until Spring 2019	Clarified in text
	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	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.
	Section SA4 should indicate pollution or contamination in addition to the factors set in the question on health and well- being.	Text updated
	Table A1.3 should have yes linking soils and SPZs	Updated
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.
	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.	Reference inserted
	Happy to see biodiversity opportunities highlighted. More comprehensive review of vulnerabilities of designated sites can be	Added reference and website link to Biodiversity baseline.

	found on the NE designated site system (link supplied).	
	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.	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 Preferred Policy approach to managing opportunities for people to connect to nature.
	In ecological connectivity add 'Ensure current ecological networks are not compromised, and future improvements in habitat connectivity are not prejudiced'.	Included in SA13
	Satisfied that the SEA Regulation Requirements cover NE key interests. Advise use of GI standard as an indicator such as Accessible natural Greenspace Standard.	See response on SEA indicators below.
	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.	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 health outcomes.
	Chapter 5: Generally happy but advised to include River Basin management plans. 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.	Thames River Basin Management Plan added. 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.

		<p>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.</p>
	<p>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.</p>	<p>Reference made to 'net gain' in overview of 25-year Environment Plan and question added to SA13.</p> <p>Swanscombe MCA and 2009 Marine and Coastal Access Act referenced.</p>
	<p>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 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.</p>	<p>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 specific LP performance indicators has been added to Chapter 12. The suggestions provided will be considered during the drafting of the SA.</p>

Appendix 2

Review of Relevant Plans, Policies and Programmes and Baseline Information

Population, Health and Wellbeing

Policy Context

International

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.

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.

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

National Planning Policy Framework (NPPF)⁶ 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.
- The NPPF seeks to take account of and support the delivery of local strategies to improve health, social and cultural wellbeing for all sections of the community.
- Plans 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.

⁶ Ministry of Housing, Communities and Local Government (June 2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

- 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*”.

National Planning Practice Guidance (PPG)⁷ contains the following:

- The design and use of the built and natural environments, including green infrastructure are major determinants of health and wellbeing. Planning and health need to be considered together in two ways: in terms of creating environments that support and encourage healthy lifestyles, and in terms of identifying and securing the facilities needed for primary, secondary and tertiary care, and the wider health and care system (taking into account the changing needs of the population).

Select Committee on Public Service and Demographic Change report Ready for Ageing?⁸: 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.

Fair Society, Healthy Lives⁹: 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*”.

Planning Policy for Traveller Sites¹⁰: 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.

Housing White Paper 2017 (Fixing our broken housing market)¹¹: 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.

7 Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

8 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>

9 The Marmot Review (2011) Fair Society, Healthy Lives. [online] Available at: <http://www.parliament.uk/documents/fair-society-healthy-lives-full-report.pdf>

10 Department for Communities and Local Government (2015) Planning policy for traveller sites [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/457420/Final_planning_and_travellers_policy.pdf

11 Department for Communities and Local Government (2017) Fixing our broken housing market [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/590464/Fixing_our_broken_housing_market_-_print_ready_version.pdf

- 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.

Laying the foundations: a housing strategy for England¹²: Aims to provide support to deliver new homes and improve social mobility.

Healthy Lives, Healthy People: Our strategy for public health in England¹³: 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.

A Green Future: Our 25 Year Plan to Improve the Environment¹⁴: 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.

12 HM Government (2011) Laying the Foundations: A Housing Strategy for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7532/2033676.pdf

13 HM Government (2010) Healthy Lives, Healthy People: Our strategy for public health in England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf

14 HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf

Sub-national

Kent and Medway Growth and Infrastructure Framework (GIF) 2018 update¹⁵: 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.

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

- 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.

Thames Estuary 2050 Growth Commission 2050 Vision¹⁶: 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

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.¹⁷

In 2018 the population of Dartford was estimated to be 109,700. Of this, 54,100 residents were male and 55,600 were female.¹⁸ The working age population (16-64) was 69,800.

The population of Dartford increased by 15.8% over the 10 years to 2016¹⁹ 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

¹⁵ Kent County Council (2018) Kent and Medway Growth and Infrastructure Framework [online] available at: http://www.kent.gov.uk/data/assets/pdf_file/0018/80145/GIF-Framework-full-document.pdf

¹⁶ Thames Estuary 2050 Growth Commission (2018) 2050 Vision [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718805/2050_Vision.pdf

¹⁷ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0010/443386/Dartford-AMR-2016-17.pdf

¹⁸ NOMIS – Official Labour Market Statistics (2019) Labour Market Profile – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157313/report.aspx#tabrespop>

¹⁹ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

2014.²⁰ However, the average age in the Borough is currently lower than the national and regional average.²¹

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 data²²). This is compared to 10.3 and 3.1 in the neighbouring Boroughs of Gravesham 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 2018.²³

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 2028.²⁴

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.²⁵

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.²⁶ The average price of a property in Dartford in August 2019 was £291,692, which is higher than the national average (£251,233) but under the regional average (£325,232).

The latest version of Dartford's Five-Year Housing Land Supply Paper shows land supply for the years 2018-2023. This indicates that there is a 6.4 year supply of deliverable housing sites in the Borough (4,289 homes), which exceeds the five-year housing requirement of 5,492 homes.²⁷ This applies the Core Strategy maximum (up to) requirement which addresses both forecast housing need plus additional demand and reflects identified site opportunities.

20 ONS (2016) Subnational population projections for England: 2014-based projections [online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2014basedprojections>

21 Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] Available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

22 UK Census Data (2011) [online] available at: <http://www.ukcensusdata.com/dartford-e07000107/population-density-qs102ew#sthash.5W5IVjAt.dpbs>

23 Kent County Council (2018) Kent and Medway Growth and Infrastructure Framework [online] available at: http://www.kent.gov.uk/data/assets/pdf_file/0018/80145/GIF-Framework-full-document.pdf

24 P and J Brown (2013) Salford Housing and Urban Studies Unit, Dartford Gypsy, Traveller and Travelling Showpeople Accommodation Assessment [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0004/127282/Dartford-GTAA-Final-Report-2013-DBC.pdf

25 NOMIS – Official Labour Market Statistics (2015) Labour Market Profile – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/localarea?compare=1946157313>

26 Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

27 Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

The net number of new homes delivered in 2017 – 18 was 1,031 and cumulatively the Borough has delivered 7,460 homes over their current plan period (2006/07-2017/18). 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 2017 – 18, 160, or 16% were affordable (social rented, affordable rented and intermediate housing as defined in the previous NPPF).²⁸

In terms of size, 17% of new dwellings completed on sites of up to 100 dwellings were two bed flats and 17% were one bed flats. Some 23% were three bed houses, 29% were four bed houses and only 5% and 4% 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.

Education

6.7% of residents in the Borough have no qualifications, 87.7% have level 1 qualifications, 75.1% have level 2 qualifications, 57.3% have level 3 qualifications and 46% have level 4 qualifications and above.^{29,30}

In 2011 there were 2,122 school children and full-time students in the Borough, and 2,215 students aged 18 or over.³¹

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.^{32 33}

According to the Commissioning Plan for Education Provision in Kent³⁴, 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.

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 2020.³⁵

Deprivation

When considering all Indices of Deprivation (2019), the Borough of Dartford falls within the 50% of least deprived areas in the country. However, as shown in **Figure A2.1**, it contains a mix of areas of higher deprivation and areas with low deprivation. For example, an area in Joyce Green

²⁸ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

²⁹ NOMIS – Local Area Report (2011) – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/localarea?compare=1946157313>

³⁰ For qualification level descriptions see: <https://www.gov.uk/what-different-qualification-levels-mean/list-of-qualification-levels>

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

³² Kent County Council (2018) Commissioning Plan for Education Provision in Kent [online] available at: https://www.kent.gov.uk/_data/assets/pdf_file/0003/66990/Kent-Commissioning-Plan-for-Education-Provision-2018-22.pdf

³³ Kent County Council (2015) Kent and Medway Growth and Infrastructure Framework [online] Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0012/50124/Growth-and-Infrastructure-Framework-GIF.pdf

³⁴ Kent County Council (2018) Commissioning Plan for Education Provision in Kent [online] Available at: <http://www.kent.gov.uk/education-and-children/schools/education-provision/education-provision-plan#>

³⁵ Kent County Council (2018) Commissioning Plan for Education Provision in Kent [online] Available at: <http://www.kent.gov.uk/education-and-children/schools/education-provision/education-provision-plan#>

Ward is the most deprived neighbourhood in the Borough and falls within the 10% most deprived areas nationally. The neighbouring ward of Littlebrook contains a neighbourhood that falls within the 20% most deprived areas nationally. Both areas are located in the north west corner of the Borough, north of Dartford town.

Many of the other neighbourhoods in the Borough are some of the least deprived in the country, for example, 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 crime and barriers to housing and services which shows high levels of deprivation across the Borough.³⁶

The median weekly full-time earnings for Dartford in 2017 was higher than both the Kent and national average. Unemployment in the Borough in 2017 was low and below the average for Kent and Great Britain³⁷.

Health

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.³⁸

Average life expectancy in the Borough is slightly below the national average at 79.3 years for males and 82.2 years for females.³⁹ However, this varies across neighbourhoods, as life expectancy is 9.1 years lower for men and 4.4 years lower for women in the most deprived areas of Dartford than in the least deprived areas.⁴⁰

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.

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.

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

Dartford has approximately 1,466 hectares of open space, which is 19% of Dartford Borough. Of this, 75% is in the Green Belt⁴¹.

Open space is reasonably well dispersed across the Borough, however the Dartford Open Spaces Technical Paper (2011)⁴² 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

³⁶ Indices of deprivation explorer (2019) [online] available at: <http://dclgapps.communities.gov.uk/imd/idmap.html>

³⁷ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

³⁸ NOMIS – Local Area Report (2011) – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/localarea?compare=1946157313>

³⁹ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

⁴⁰ Public Health England (2018) Dartford District: Health Profile 2018 [online] Available at: https://fingertips.phe.org.uk/profile/health-profiles/area-search-results/E07000107?place_name=Dartford&search_type=parent-area

⁴¹ Dartford Borough Council (2015) Dartford Open Space Report 2015/16 Final [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0004/232591/030-10Open-Space-report-201516-Final.pdf

⁴² Dartford Borough Council (2011) Open Spaces Technical Paper Update [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0019/63280/EB12OpenSpaceTechnicalPaperUpdate2011_000.pdf

Belt, of the Borough have very large amounts of open space, mainly due to the presence of two country parks and publicly accessible lakes and woodlands.⁴³

Evidence submitted by Public Health England to the Inquiry into Public Parks⁴⁴ 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)⁴⁵ 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

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

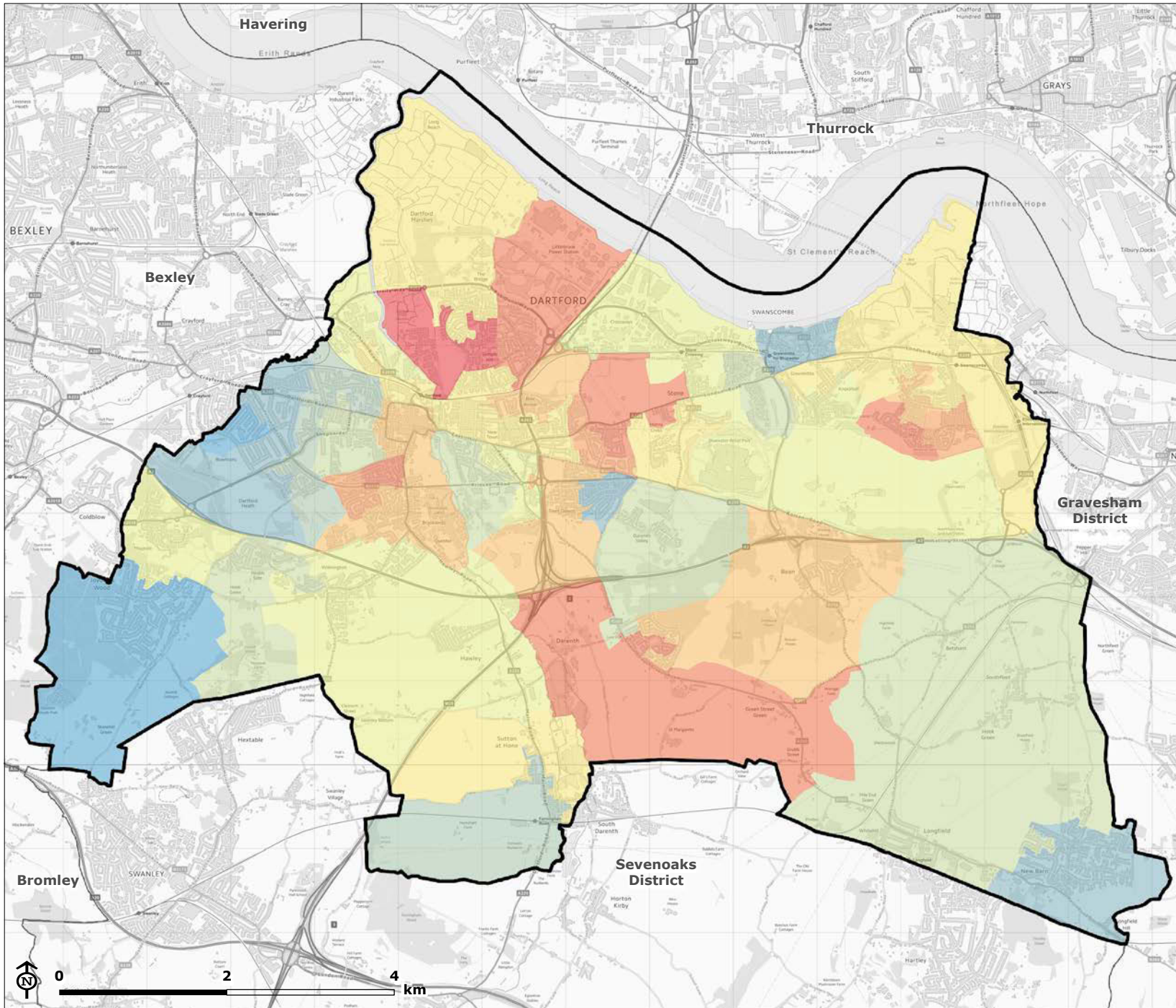
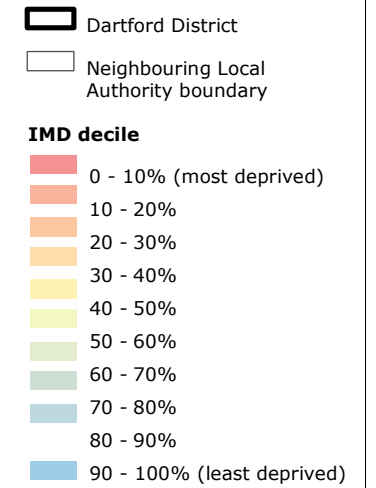
There are several land uses within the Borough that have the potential to affect existing and new communities within close proximity to them. The A2 crosses the Borough east to west and the A282 (part of London Orbital M25 at Dartford Crossing) crosses it north to south. These are strategic roads and 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 0 provides more detail regarding congestion and Air Quality Management Areas (AQMA).

⁴³ URS (2013) SA of the Dartford Borough Development Management Plan [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0005/91274/Dartford-DM-Policies-SA-Scoping-Report-26th-April-incorporates-NE-and-EA-comms-.pdf

⁴⁴ <https://publichealthmatters.blog.gov.uk/2016/11/09/green-space-mental-wellbeing-and-sustainable-communities/>

⁴⁵ <http://www.kentnature.org.uk/uploads/files/Health/UNEDBH-in-Kent-Final-Report.pdf>

Figure A2.1: Index of Multiple Deprivation (IMD)



Source: MHCLG

Map Scale @ A4: 1:65,000

Economy

Policy Context

International

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

National Planning Policy Framework (NPPF)⁴⁶ 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, innovation and improved productivity; and by identifying and coordinating 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.*”

National Planning Practice Guidance (PPG)⁴⁷: 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.

The Local Growth White Paper (2010)⁴⁸: 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.

Rural White Paper 2000 (Our Countryside: the future – A fair deal for rural England)⁴⁹ : 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.

⁴⁶ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

⁴⁷ Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

⁴⁸ Department for Business, Innovation and Skills (2010) Local Growth: Realising Every Place’s Potential. Available at: <https://www.gov.uk/government/publications/local-growth-realising-every-places-potential-hc-7961>

⁴⁹ HM Government (2000) Rural White Paper 2008 (Our Countryside: the future – A fair deal for rural England) [online] Available at: <http://www.tourisminsights.info/ONLINEPUB/DEFRA/DEFRA%20PDFS/RURAL%20WHITE%20PAPER%20-%20FULL%20REPORT.pdf>

- 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

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.

Thames Gateway Kent Plan for Growth 2014 - 2020⁵⁰: 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.

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.

⁵⁰ Thames Gateway Kent Partnership (2014) Thames Gateway Kent Plan for Growth 2014 – 20 [online] available at: <http://www.tgkp.org/content/documents/TGKP%20Growth%20Plan%20brochure%20-%20web.pdf>

The Kent Environment Strategy⁵¹ sets out a strategy for the economy and environment in Kent and considers the challenges and opportunities Kent faces, most notably the sustained austerity 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

Wholesale and retail trade (including the repair of motor vehicles and motorcycles) makes up the largest industry in the Borough with 21.7% 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 and administrative and support service activities, both with 13.3%.⁵²

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.

In terms of occupation 23.1% of working residents are in associate professional and technical occupations, 21.5% are in professional occupations.⁵³ 83.9% (59,400) 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%⁵⁴.

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 £642.⁵⁵ The median weekly full-time earnings for Dartford remain higher than both the Kent and Great Britain averages.⁵⁶

Unemployment in Dartford is low, at only 1.2% in 2017⁵⁷ 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.⁵⁸ 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 / districts⁵⁹.

In 2019 there were 4,450 enterprises⁶⁰ in Dartford along with 5,390 local units⁶¹. The number of enterprises has increased from 2,830 in 2010 and the number of local units has increased from 3,765 in 2010.⁶² 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.

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 10.4% compared with 13.1% and monitoring shows that Dartford's primary retail frontage is seeing declining

⁵¹ Kent County Council (2016) Kent EnvironmentStrategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

⁵² NOMIS – Local Area Report (2019) – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157313/report.aspx#tabquals>

⁵³ NOMIS – Local Area Report (2019) – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157313/report.aspx#tabquals>

⁵⁴ Dartford Borough Council (2018) Economic and Employment Paper

⁵⁵ NOMIS – Official Labour Market Statistics (2015) Labour Market Profile – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/localarea?compare=1946157313>

⁵⁶ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

⁵⁷ Dartford Borough Council (2018) Economic and Employment Paper

⁵⁸ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

⁵⁹ Dartford Borough Council (2018) Economic and Employment Paper

⁶⁰ An enterprise is the overall business, made up of all individual sites / workplaces.

⁶¹ A local unit is an individual site associated with an enterprise.

⁶² NOMIS – Official Labour Market Statistics (2010) Labour Market Profile – Dartford [online] Available at: <https://www.nomisweb.co.uk/reports/lmp/la/1946157313/report.aspx#tabquals>

vacancy rates⁶³. The net change in floor space shows an increase of 2,651 sqm of retail floorspace between 2016 and 2017, although financial and professional services, restaurants and cafes and drinking establishments have seen a small decline.⁶⁴

The Thames Gateway Kent Partnership identified the following key investment opportunities in the Borough⁶⁵:

- 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 sqm of mixed-use development.
 - Swanscombe peninsula – 353 ha site proposed for a world class leisure resort.

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 sqm of B1, B2 and B8 use, providing approximately 11,800 jobs and Development at Dartford Town Centre 41,300 sqm 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.

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

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.⁶⁶

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.

⁶³ Dartford Borough Council (2018) Authority Monitoring Report 2017 – 2018 [online] available at: _

https://fingertips.phe.org.uk/profile/health-profiles/area-search-results/E07000107?place_name=Dartford&search_type=parent-area

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Dartford Borough Council (2017) Authority Monitoring REPORT 2016 – 2018 [online] Available at:

https://www.dartford.gov.uk/data/assets/pdf_file/0007/475009/Approved-CIL-Monitoring-Report-1st-April-2016-to-31st-March-2017.pdf

⁶⁵ Thames Gateway Kent Partnership (2014) Thames Gateway Kent Plan for Growth 2014 – 20 [online] available at:

<http://www.tgkp.org/content/documents/TGKP%20Growth%20Plan%20brochure%20%20-%20web.pdf>

⁶⁶ URS (2013) SA of the Dartford Borough Development Management Plan [online] available at:

https://www.dartford.gov.uk/data/assets/pdf_file/0005/91274/Dartford-DM-Policies-SA-Scoping-Report-26th-April-incorporates-NE-and-EA-comms-.pdf

Transport Connections and Travel Habits

Policy Context

International

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

National Planning Policy Framework (NPPF)⁶⁷: Encourages local planning authorities to consider transport issues from the earliest stages of plan making so that: the potential impacts of development on transport networks can be addressed; opportunities from existing or proposed transport infrastructure, and changing technology and usage, are realised; opportunities to promote walking, cycling and public transport use are identified and pursued; and the environmental impacts of traffic and transport infrastructure can be identified and assessed. States that the planning system should actively manage growth patterns in support of these objectives.

National Planning Practice Guidance (PPG)⁶⁸: Reiterates the requirement for local planning authorities to undertake an assessment of the transport implications of reviewing their Local Plan.

Door to Door: A strategy for improving sustainable transport integration⁶⁹: 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.

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.

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.

⁶⁷ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

⁶⁸ Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

⁶⁹ Department for Transport (2013) Door to Door: A strategy for improving sustainable transport integration [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/142539/door-to-door-strategy.pdf

Sub-national

Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031⁷⁰: 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.

Kent and Medway Growth and Infrastructure Framework (GIF) 2018 update⁷¹: 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.

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.

The Kent Design Guide⁷²: 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.

⁷⁰ Kent County Council (2011) Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031 [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0011/72668/Local-transport-plan-4.pdf

⁷¹ Kent County Council (2018) Kent and Medway Growth and Infrastructure Framework [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0018/80145/GIF-Framework-full-document.pdf

⁷² Kent Design Initiative (2008) The Kent Design Guide [online] Available at: https://www.kent.gov.uk/data/assets/pdf_file/0014/12092/design-guide-foreword.pdf

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. It identifies some potential sources of capacity to meet needs into the early 2020s, but uncertainty remains beyond that.⁷³

Current Baseline

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).⁷⁴ **Figure A2.2** shows the major transport links in the Borough.

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.⁷⁵

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.

As previously stated, the major interchange of two strategic traffic routes, the M25 and A2 is located within Dartford. Both 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.⁷⁶

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.⁷⁷

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.⁷⁸

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

⁷³ Network Rail (2018) South East Route: Kent Area Route Study [online] Available at: <https://cdn.networkrail.co.uk/wp-content/uploads/2018/06/South-East-Kent-route-study-print-version.pdf>

⁷⁴ Dartford Borough Council (2019) Authority Monitoring Report 2017 – 2018 [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/690750/AMR-2017-18.pdf

⁷⁵ Kent County Council (2011) Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031 [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0011/72668/Local-transport-plan-4.pdf

⁷⁶ Kent County Council (2011) Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031 [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0011/72668/Local-transport-plan-4.pdf

⁷⁷ URS (2013) SA of the Dartford Borough Development Management Plan [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0005/91274/Dartford-DM-Policies-SA-Scoping-Report-26th-April-incorporates-NE-and-EA-comms-.pdf

⁷⁸ Kent County Council (2011) Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031 [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0011/72668/Local-transport-plan-4.pdf

numbers between 2011 and 2024 and 47% up to 2044. Routes into London are particularly busy, with little capacity to operate additional services⁷⁹.

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.⁸⁰ 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.

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,⁸¹ 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.

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.⁸²











⁷⁹ Network Rail (2018) South East Route: Kent Area Route Study [online] Available at: <https://cdn.networkrail.co.uk/wp-content/uploads/2018/06/South-East-Kent-route-study-print-version.pdf>

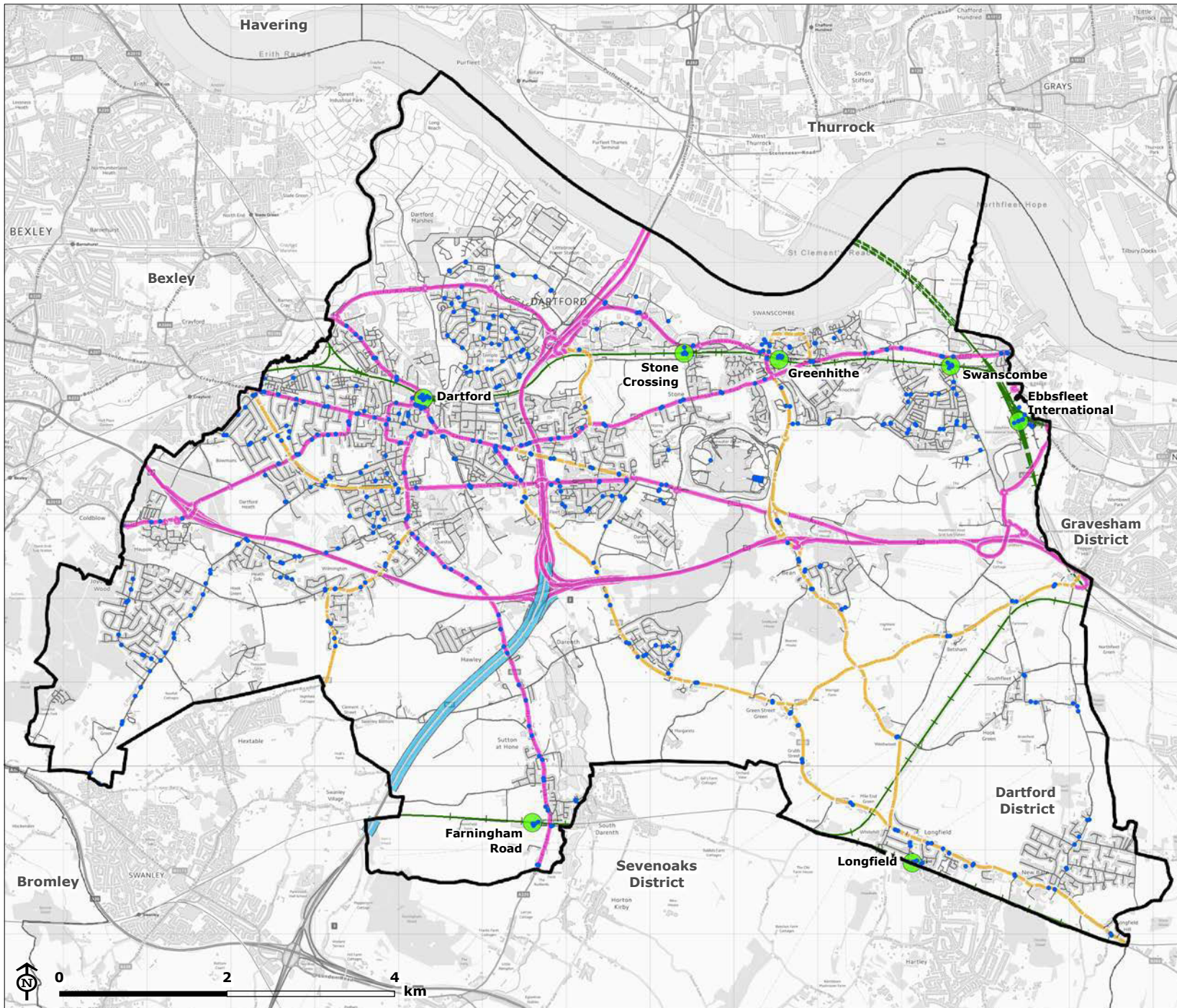
⁸⁰ NOMIS method of travel to work (2011) Dartford Borough [online] available at: http://www.nomisweb.co.uk/census/2011/QS701EW/view/1946157313?rows=cell&cols=rural_urban

⁸¹ Kent County Council (2018) Kent and Medway Growth and Infrastructure Framework [online] available at: http://www.kent.gov.uk/data/assets/pdf_file/0018/80145/GIF-Framework-full-document.pdf

⁸² Gov.uk New Lower Thames Crossing: <https://www.gov.uk/government/news/new-lower-thames-crossings-to-cut-congestion-and-create-thousands-of-jobs>

Figure A2.2: 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

Air, Land and Water quality

Policy Context

International

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

European Urban Waste Water Directive (1991): Protects the environment from the adverse effects of urban waste water collection, treatment and discharge, and discharge from certain industrial sectors.

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.

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.

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.

European Water Framework Directive (2000): Protects inland surface waters, transitional waters, coastal waters and groundwater.

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.

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

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.

National Planning Policy Framework (NPPF)⁸³ contains the following:

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

⁸³ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

- 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.

National Planning Practice Guidance (PPG)⁸⁴: Requires local planning authorities to demonstrate every effort has been made to prioritise the use of poorer quality agricultural land for development where it has been demonstrated that significant development is required on agricultural land.

Waste management plan for England⁸⁵: 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.

National Planning Policy for Waste (NPPW)⁸⁶: 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.

Safeguarding our Soils – A Strategy for England⁸⁷: 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.

Water White Paper⁸⁸: 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.

Water for Life White Paper⁸⁹: 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.

⁸⁴ Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

⁸⁵ Department for Environment, Food and Rural Affairs (2013) Waste management plan for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/265810/pb14100-waste-management-plan-20131213.pdf

⁸⁶ Department for Communities and Local Government (2014) National Planning Policy for Waste [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf

⁸⁷ Department for Environment, Food and Rural Affairs (2009) Safeguarding our Soils: A Strategy for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69261/pb13297-soil-strategy-090910.pdf

⁸⁸ Department for Environment, Food and Rural Affairs (2012) The Water White Paper [online] Available at: <https://publications.parliament.uk/pa/cm201213/cmselect/cmenvfru/374/374.pdf>

⁸⁹ Department for Environment, Food and Rural Affairs (2011) Water for life [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228861/8230.pdf

- 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.
- 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.

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland⁹⁰: 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.

Future Water: The Government's water strategy for England⁹¹: 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.

A Green Future: Our 25 Year Plan to Improve the Environment⁹²: 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:
 - Embed a 'net environmental gain' principle for development, including natural capital benefits to improved and Water quality.
 - Protect best agricultural land.
 - Improve soil health and restore and protect peatlands.
- Recovering nature and enhancing the beauty of landscapes:

⁹⁰ Department for Environment Food and Rural Affairs (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69336/pb12654-air-quality-strategy-vol1-070712.pdf

⁹¹ HM Government (2008) Future Water: The Government's water strategy for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69346/pb13562-future-water-080204.pdf

⁹² HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf

- Respect nature by using our water more sustainably.
- Increasing resource efficiency and reducing pollution and waste:
 - Reduce pollution by tackling air pollution in our Clean Air Strategy and reduce the impact of chemicals.

UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations⁹³: 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 (ULESvs), 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.

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

Water for life and livelihoods. Part1: Thames River Basin District River Basin

Management Plan DEFRA (Updated December 2015⁹⁴): 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.

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.

Kent Environment Strategy⁹⁵ 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.

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

⁹³ Department for Environment Food and Rural Affairs and Department for Transport (2017) UK plan for tackling roadside nitrogen dioxide concentrations [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/633269/air-quality-plan-overview.pdf

⁹⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718342/Thames_RBD_Part_1_river_basin_management_plan.pdf

⁹⁵ Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

resources or through the development of new resources. Kent and Medway are already areas of serious water stress.

Kent Minerals and Waste Local Plan 2013-30⁹⁶: 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

The Kent Environment Strategy⁹⁷ 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.

There are four Air Quality Management Areas in the Borough. These are shown in **Figure A2.3** 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.

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 Report⁹⁸. 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

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).⁹⁹ This land lies entirely within the Green Belt.

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

⁹⁶ Kent County Council (2016) Kent Minerals and Waste Local Plan 2013-30 [online] Available at: <https://www.kent.gov.uk/about-the-council/strategies-and-policies/environment-waste-and-planning-policies/planning-policies/minerals-and-waste-planning-policy#tab-1>

⁹⁷ Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

⁹⁸ Dartford Borough Council (2017) 2017 Air Quality Annual Status Report [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0005/571136/Dartford-ASR-2017.pdf

⁹⁹ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

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.¹⁰⁰

Geology and minerals

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:¹⁰¹

- Bluewater Quarry.
- Beacon Wood Country Park.

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

Water quality

The Kent Environment Strategy¹⁰² 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.

Groundwater is a key water resource within Kent and supplies a significant proportion of water supply to users within Dartford.¹⁰³

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.¹⁰⁴ However, recently Ebbsfleet Development Corporation has worked with utility providers to provide a new network and facilities to accommodate future demand for sewerage services.

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 2021¹⁰⁵. Thames Middle achieved moderate ecological Water quality in 2016 but failed to meet the chemical Water quality criteria¹⁰⁶.

Kent's Water for Sustainable Growth Study¹⁰⁷ 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 Plans¹⁰⁸ 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.

¹⁰⁰ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

¹⁰¹ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

¹⁰² Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

¹⁰³ Aecom (2017) Kent Water for Sustainable Growth Study

¹⁰⁴ Entec (2009) Kent Thameside Regeneration Partnership, Kent Thameside Water Cycle Study Phase 1 [online] available at: <https://windmz.dartford.gov.uk/media/01WaterCycleStratFinal.pdf>

¹⁰⁵ Environment Agency (2016) <http://environment.data.gov.uk/catchment-planning/WaterBody/GB106040024222>

¹⁰⁶ Environment Agency (2016) <http://environment.data.gov.uk/catchment-planning/WaterBody/GB530603911402>




¹⁰⁷ Aecom (2017) Kent Water for Sustainable Growth Study

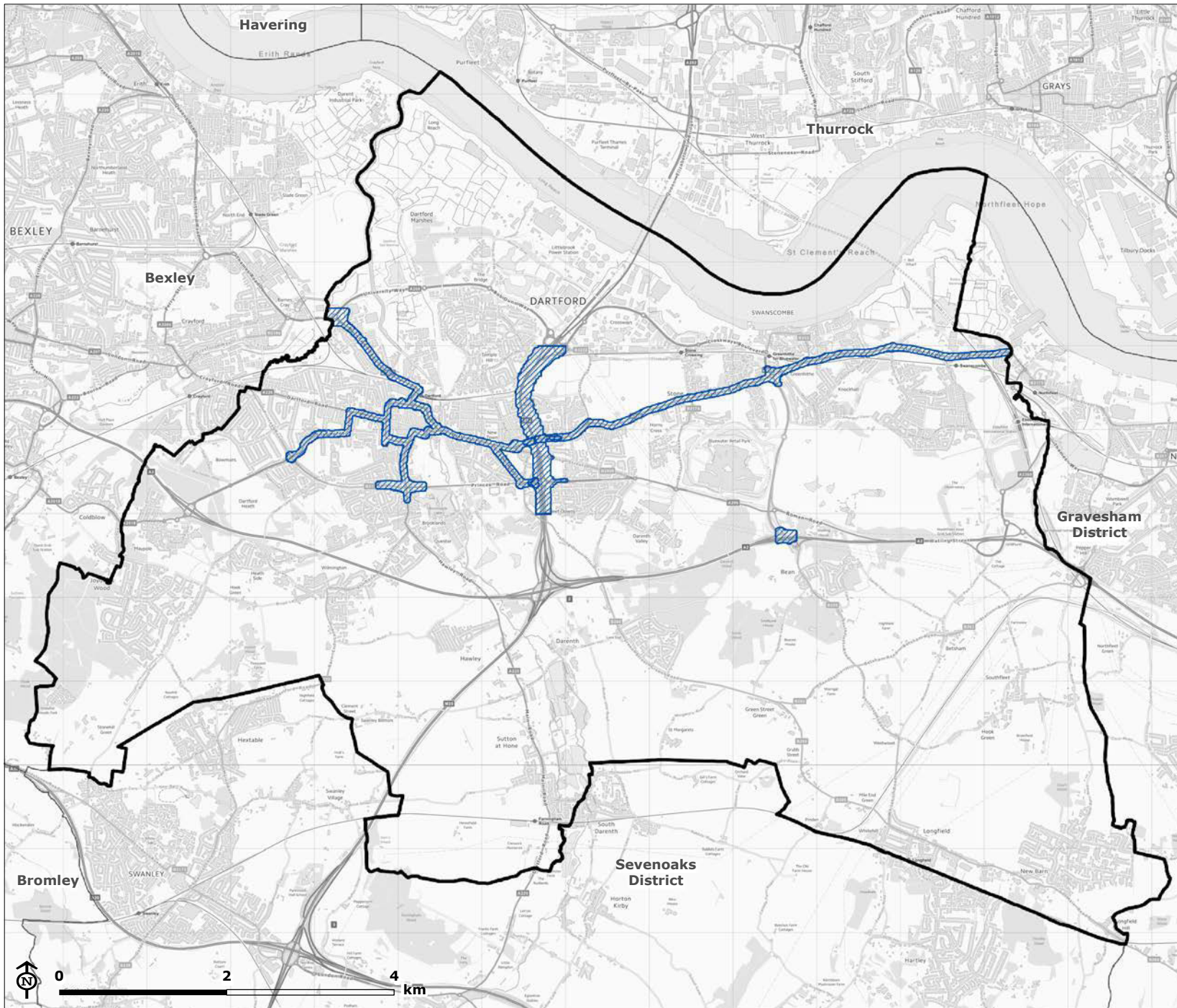
¹⁰⁸ Department for Environment Food & Rural Affairs (2016) River Basin Management Plans [online] Available at: <https://www.gov.uk/government/collections/river-basin-management-plans-2015>

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 quality¹⁰⁹.

¹⁰⁹ Aecom (2017) Kent Water for Sustainable Growth Study

Figure A2.3: Air Quality Management Areas

-  Dartford District
-  Neighbouring Local Authority boundary
-  Air Quality Management Area



Source: DBC

Map Scale @ A4: 1:65,000



Climate change Adaptation and Mitigation

Policy Context

International

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.

European Energy Performance of Buildings Directive (2010): Aims to promote the energy performance of buildings and building units. Requires the adoption of a standard methodology for calculating energy performance and minimum requirements for energy performance.

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

National Planning Policy Framework (NPPF)¹¹⁰: contains the following:

- 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 by directing development away from areas at highest risk (whether existing or future). 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.

National Planning Practice Guidance (PPG)¹¹¹: 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.

Climate change Act 2008¹¹²: Sets targets for UK greenhouse gas emission reductions of at least net zero by 2050 (this was originally 80% but was updated to 100% in June 2019) and CO₂ emission reductions of at least 26% by 2015, against a 1990 baseline.

Flood and Water Management Act (2010)¹¹³: 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

¹¹⁰ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

¹¹¹ Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

¹¹² HM Government (2008) Climate change Act 2008 [online] Available at: https://www.legislation.gov.uk/ukpga/2008/27/pdfs/ukpga_20080027_en.pdf

¹¹³ HM Government (2010) Flood and Water Management Act 2010 [online] Available at: http://www.legislation.gov.uk/ukpga/2010/29/pdfs/ukpga_20100029_en.pdf

elsewhere; rolling back development in coastal areas to avoid damage from flooding or coastal erosion; and creating sustainable drainage systems (SuDS).

The UK Renewable Energy Strategy¹¹⁴: Sets out the ways in which we will tackle climate change by reducing our CO₂ emissions through the generation of a renewable electricity, heat and transport technologies.

The Energy Efficiency Strategy: The Energy Efficiency Opportunity in the UK¹¹⁵: Aims to realise the wider energy efficiency potential that is available in the UK economy by maximising the potential of existing dwellings by implementing 21st century energy management initiatives on 19th century homes.

The National Adaptation Programme: Making the country resilient to a changing climate¹¹⁶: 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”.*

Understanding the risks, empowering communities, building resilience: The national flood and coastal erosion risk management strategy for England¹¹⁷: 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.

¹¹⁴ HM Government (2009) The UK Renewable Energy Strategy [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228866/7686.pdf

¹¹⁵ Department of Energy & Climate change (2012) The Energy Efficiency Strategy: The Energy Efficiency Opportunity in the UK [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65602/6927-energy-efficiency-strategy--the-energy-efficiency.pdf

¹¹⁶ HM Government (2013) The National Adaptation Programme: Making the country resilient to a changing climate [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/209866/pb13942-nap-20130701.pdf

¹¹⁷ HM Government (2011) Understanding the risks, empowering communities, building resilience: The national flood and coastal erosion risk management strategy for England [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228898/9780108510366.pdf

- 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.

A Green Future: Our 25 Year Plan to Improve the Environment¹¹⁸: 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

Kent Environment Strategy¹¹⁹ 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.

Growing the Garden of England: A strategy for environment and economy in Kent¹²⁰: 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.

¹¹⁸ HM Government (2018) A Green Future: Our 23 Year Plan to Improve the Environment [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf

¹¹⁹ Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

¹²⁰ Kent Forum (2011) Growing the Garden of England: A strategy for environment and economy in Kent [online] Available at: <https://shareweb.kent.gov.uk/Documents/environment-and-planning/environment-and-climate-change/the-kent-environment-strategy-and-progress-reports/kent-environment-strategy.pdf>

- 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:
 - Utilise the full social and economic potential of a high quality natural and historic environment in Kent.
 - Conserve and enhance the quality of Kent’s natural and heritage capital.
 - Ensure that Kent residents have access to the benefits of Kent’s coast, countryside, green space and cultural heritage.

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 Plans¹²¹.

Current Baseline

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 present¹²². 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.

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

The main sources of flooding in Kent Thameside have been identified as¹²³:

- 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.

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 A2.4** shows areas at risk of flooding in the Borough, based on current Environment Agency flood zones.

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

¹²¹ Environment Agency (2012) Thames Estuary 2100 Plan Managing Flood risk through London and the Thames Estuary [online] available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/322061/LIT7540_43858f.pdf

¹²² UK Climate Projections (2014) ‘Maps & key findings’ [online] Available at: <http://ukclimateprojections.metoffice.gov.uk/21708?projections=23833>

¹²³ Kent Thameside Delivery Board and jba consulting (2005) Strategic Flood risk Assessment of Kent Thameside [online] available at: <http://windmz.dartford.gov.uk/media/Eb53%20SFRAReport.pdf>

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.

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.¹²⁴

Table A2.1 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 A2.1**, there has been a reduction between 2005 and 2013 across all sectors and transport accounts for the largest amount of CO₂ emissions.¹²⁵

Table A2.1 CO₂ emissions in Dartford (shown as tonnes of CO₂ per person)

Year	Industrial and Commercial	Domestic	Transport	Total
2005	3.5	2.3	3.8	9.7
2013	1.9	1.9	2.9	6.8








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.¹²⁶

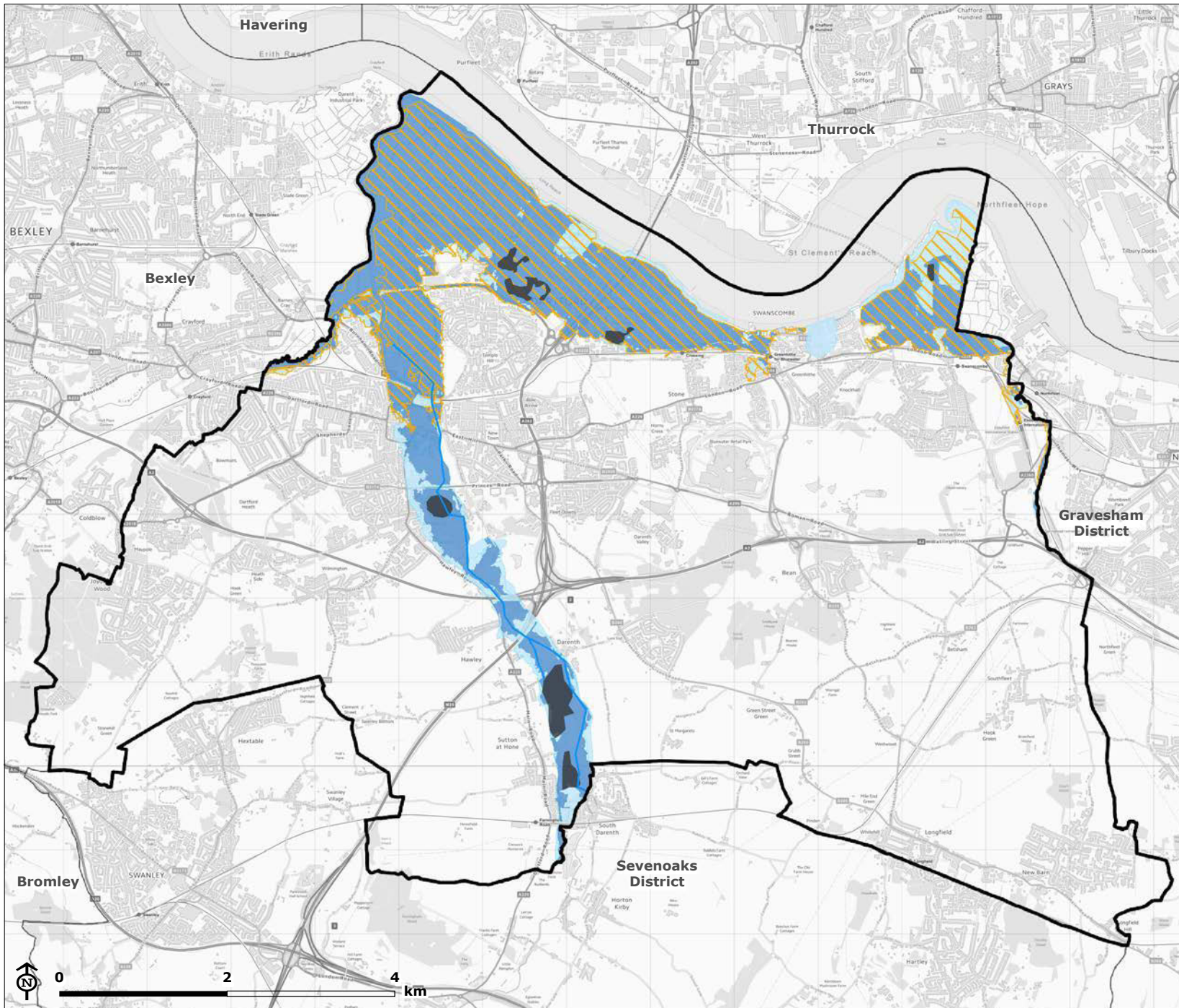
¹²⁴ Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/_data/assets/pdf_file/0020/10676/KES_Final.pdf

¹²⁵ Gov.uk (2013) UK local authority and regional carbon dioxide emissions national statistics: 2005 – 2013. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2013>

¹²⁶ Dartford Borough Greenhouse Gas Emissions Report 2016/17 [online] available at: https://www.dartford.gov.uk/_data/assets/pdf_file/0020/440309/Greenhouse-Gas-Emissions-2016-17-APPENDIX-A.pdf

Figure A2.4: 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

Biodiversity

Policy Context

International

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

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).

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

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.

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.

United Nations Declaration on Forests (New York Declaration) (2014): international commitment to cut natural forest loss by 2020 and end loss by 2030.

National

National Planning Policy Framework (NPPF)¹²⁷: 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 the conservation, restoration and enhancement of priority habitats and species, ecological networks and measurable net gains for biodiversity.

National Planning Practice Guidance (PPG)¹²⁸: Supports the NPPF by requiring Local Plans to include strategic policies that conserve and enhance the natural environment through sustainable development.

Natural Environment and Rural Communities Act 2006¹²⁹: Places a duty on public bodies to conserve biodiversity.

¹²⁷ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

¹²⁸ Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

¹²⁹ HM Government (2006) Natural Environment and Rural Communities Act 2006 [online] Available at: http://www.legislation.gov.uk/ukpga/2006/16/pdfs/ukpga_20060016_en.pdf

Biodiversity 2020: A strategy for England's wildlife and ecosystem services¹³⁰: Guides conservation efforts in England up to 2020 by requiring a national halt to biodiversity loss, 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.

Biodiversity offsetting in England Green Paper¹³¹: Biodiversity offsets are conservation activities designed to compensate for residual losses. The Green Paper sets out a framework for offsetting.

A Green Future: Our 25 Year Plan to Improve the Environment¹³²: 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.

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

Kent Environment Strategy¹³³ 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.

¹³⁰ Department for Environment, Food and Rural Affairs (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf

¹³¹ Department for Environment, Food and Rural Affairs (2013) Biodiversity offsetting in England Green Paper [online] Available at: https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting/supporting_documents/20130903Biodiversity%20offsetting%20green%20paper.pdf

¹³² HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf

¹³³ Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

- 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.
- Complete a natural capital assessment for Kent by 2017.

Kent Biodiversity Action Plan¹³⁴: 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.

A Living Landscape for the South East¹³⁵: 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 document 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.

Securing the value of nature in Kent¹³⁶: Explains the benefits of harnessing the value of nature to support business and economy, public health and productive and environmental management.

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

Despite the small scale of the Borough it encompasses a wide range of habitats. UK BAP priority habitats within Dartford include¹³⁷:

- 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.

¹³⁴ Kent BAP (2011) Kent Biodiversity Action Plan [online] Available at: <http://www.kentbap.org.uk/>

¹³⁵ The South East Wildlife Trusts (2006) A Living Landscape for the South East [online] Available at: http://www.kentwildlifetrust.org.uk/sites/kent.live.wt.precedenthost.co.uk/files/A_Living_Landscape_for_the_South_East.pdf

¹³⁶ Pape, D and Johnston, J (2011) Securing the value of nature in Kent [online] Available at: http://www.kentbap.org.uk/images/uploads/Securing_the_Value_of_Nature_in_Kent.pdf

¹³⁷ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

Natural England has identified 76 different Natural Areas across England based on distinct ecological divisions, of which three are relevant to Dartford¹³⁸:

- 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 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.

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 Borough¹³⁹. 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 website¹⁴⁰:

- 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).

Additionally, in May 2019 the Swanscombe Marine Conservation Zone (MCZ) was designated. The MCZ is a small inshore site which covers an area of approximately 3km² and is located within the Thames Estuary. MCZs will form the UK contribution to an international network of protected sites in the north east Atlantic. The network will help to deliver the government's vision of clean, healthy, safe, productive and biologically diverse oceans and seas. MCZs protect typical, rare or declining habitats and species found in our seas.

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 sites¹⁴¹.

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 A2.¹⁴²

Figure A2.5 shows the biodiversity designations in the Borough.

¹³⁸ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

¹³⁹ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

¹⁴⁰ <https://designatedsites.naturalengland.org.uk/>

¹⁴¹ Dartford Borough Council (2017) Large Site Options and Habitat Regulations in Dartford [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0007/382390/Final-large-site-options-and-Habitat-Regulations-Developer-Guide-updated-July-2017.pdf

¹⁴² Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

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.¹⁴³

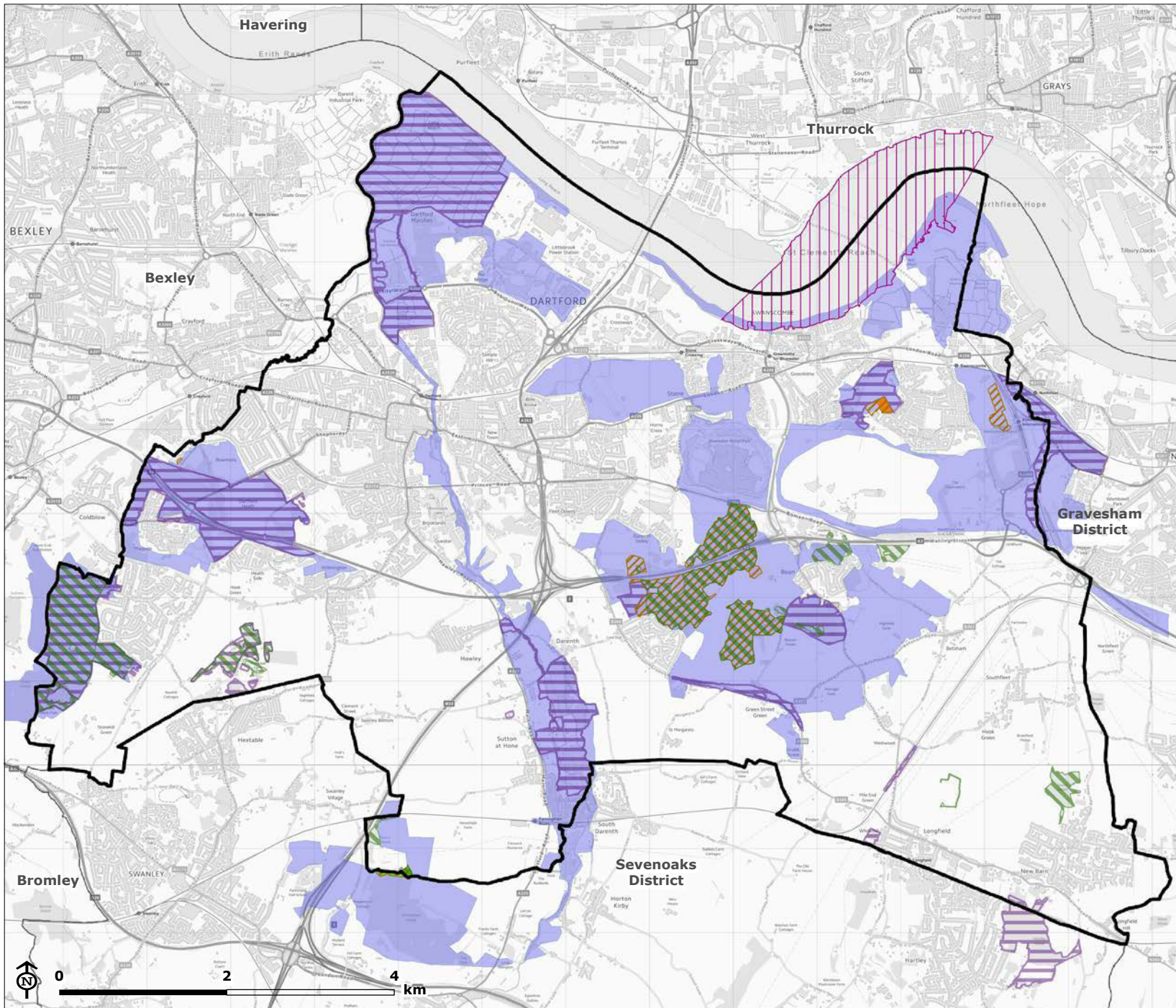
Kent as a whole has not met its 2010 Biodiversity targets and, with biodiversity continuing to decline, it is unlikely that 2020 targets will be met without targeted interventions. Although there have been gains for wildlife in some areas, there is still a gradual loss of habitats and species in the 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.¹⁴⁴

¹⁴³ Dartford Borough Council (2010) Dartford's Natural Environment, Biodiversity and Landscape Background Paper [online] available: https://www.dartford.gov.uk/data/assets/pdf_file/0020/63326/EB39DartfordsNaturalEnvironmentBiodiversityandLandscapeBackgroundPaper2010.pdf

¹⁴⁴ Kent County Council (2016) Kent Environment Strategy [online] Available at: http://www.kent.gov.uk/data/assets/pdf_file/0020/10676/KES_Final.pdf

Figure A2.5: Biodiversity Designations

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



Source: Natural England, DBC

Map Scale @ A4: 1:65,000



Historic environment

Policy Context

International

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.

Valletta Treaty (1992) formerly the European Convention on the Protection of the Archaeological Heritage (Revisited)¹⁴⁵: Aims to protect the European archaeological heritage "as a source of European collective memory and as an instrument for historical and scientific study".

National

National Planning Policy Framework (NPPF)¹⁴⁶: 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."

National Planning Practice Guidance (PPG)¹⁴⁷: 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.

The Government's Statement on the Historic environment for England 2010¹⁴⁸: 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.

¹⁴⁵ Council of Europe (1992) Valletta Treaty [online] Available at: <https://rm.coe.int/168007bd25>

¹⁴⁶ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

¹⁴⁷ Ministry of Housing, Communities and Local Government (2019) National Planning Practice Guidance [online] Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>

¹⁴⁸ HM Government (2010) The Government's Statement on the Historic environment for England 2010 [online] Available at: <https://www.gov.uk/government/publications/the-governments-statement-on-the-historic-environment-for-england>

The Heritage Statement 2017¹⁴⁹: 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.

Sustainability Appraisal and Strategic Environmental Assessment, Historic England Advice Note 8¹⁵⁰: 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

The Kent Design Guide¹⁵¹: 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.

The Thames Gateway Delivery Plan¹⁵²: 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

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.¹⁵³ The Borough's designated heritage assets are shown in **Figure A2.6**.

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.

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.

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

- Greenhithe.
- Southfleet.
- Hook Green.
- Red Street, Southfleet.

¹⁴⁹ Department for Digital, Culture Media and Sport (2017) Heritage Statement 2017 [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/664657/Heritage_Statement_2017_final_-_web_version_.pdf

¹⁵⁰ Historic England (2016) Sustainability Appraisal and Strategic Environmental Assessment: Historic England Advice Note 8 [online] Available at: <https://content.historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/heag036-sustainability-appraisal-strategic-environmental-assessment.pdf/>

¹⁵¹ Kent Design Initiative (2008) The Kent Design Guide [online] Available at: https://www.kent.gov.uk/_data/assets/pdf_file/0014/12092/design-guide-foreword.pdf ¹⁵² Communities and Local Government (2007), Thames Gateway: The Delivery Plan

¹⁵³ Dartford Borough Council (2011) Dartford's Historic environment and Heritage Technical Paper [online] available at: https://www.dartford.gov.uk/_data/assets/pdf_file/0009/63288/EB16HistoricEnvironmentandHeritageTechnicalPaperJan2011.pdf

- Dartford Town Centre.
- Church Hill, Wilmington.

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.






The Borough also has one Designated Gardens of Special Historic Interest, both located in the south of the Borough¹⁵⁴.

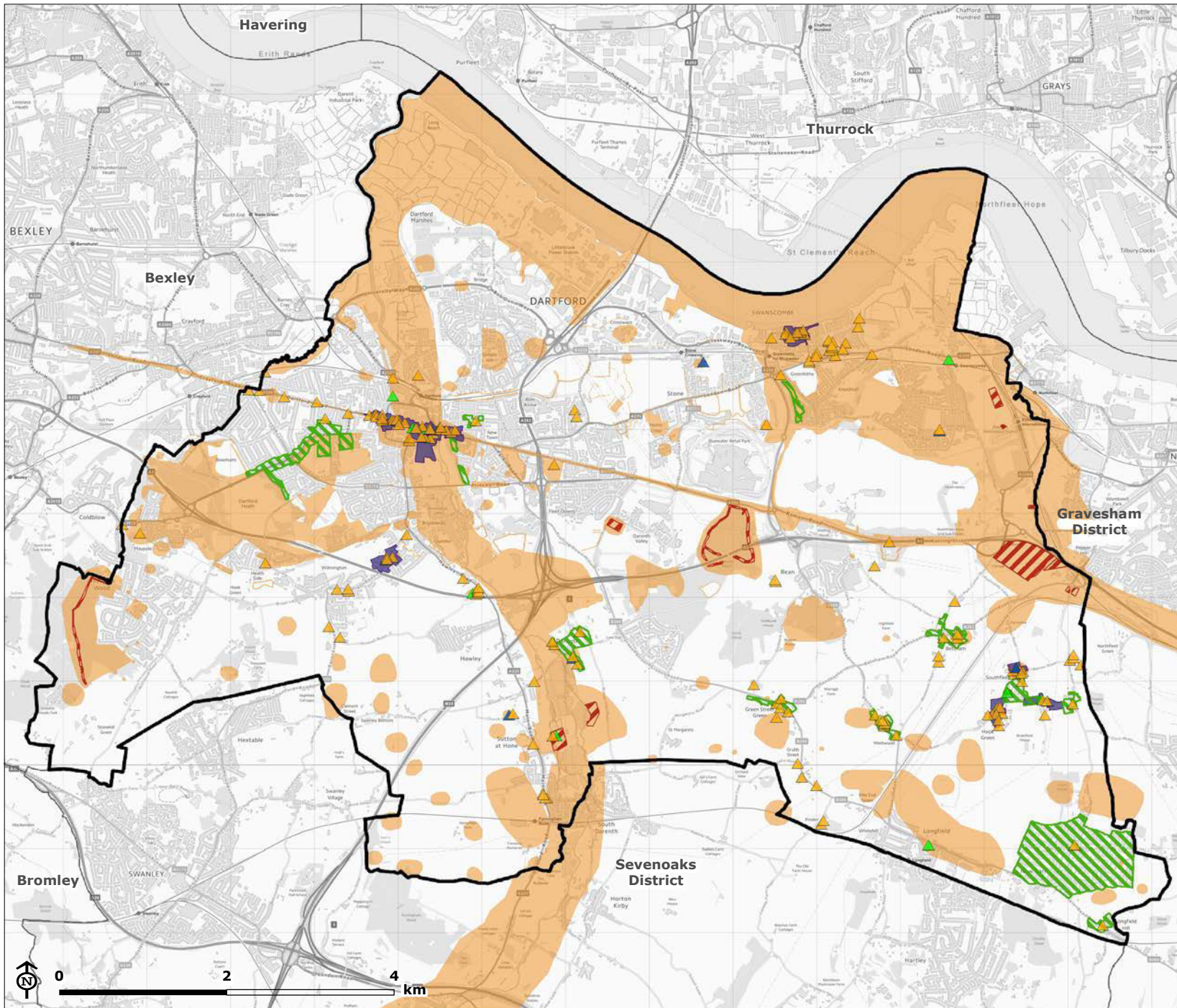
- St John's Jerusalem historic garden, Sutton-at-Hone.

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

¹⁵⁴ Dartford Borough Council (2011) Historic environment and Heritage Technical Paper [online] available at: https://www.dartford.gov.uk/data/assets/pdf_file/0009/63288/EB16HistoricEnvironmentandHeritageTechnicalPaperJan2011.pdf

Figure A2.6: 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

Landscape

Policy Context

International

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

National Planning Policy Framework (NPPF)¹⁵⁵: 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.

A Green Future: Our 25 Year Plan to Improve the Environment¹⁵⁶: 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

Kent Downs Area of Outstanding Natural Beauty: Management Plan 2014-2019¹⁵⁷: 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.

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.

¹⁵⁵ Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

¹⁵⁶ HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf

¹⁵⁷ Kent Downs AONB Unit (2014) Kent Downs Area of Outstanding Natural Beauty: Management Plan 2014-2019 [online] Available at: http://www.kentdowns.org.uk/uploads/documents/1_The_Kent_Downs_AONB.pdf

Current Baseline

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.

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.¹⁵⁸

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.

The Landscape Assessment of Kent¹⁵⁹ 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.
- Darent 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 are 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.

¹⁵⁸ Dartford Borough Council (2010) Dartford's Green Belt Technical Paper [online] available at: <https://windmz.dartford.gov.uk/media/44/DartfordsGreenBeltLandSouthoftheA2TechnicalPaper2010.pdf>

¹⁵⁹ Kent County Council and Jacobs Babbie (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>

Appendix 3

Appraisal Matrices

Main Plan Options

Main Plan Options 1: To what extent should Dartford fully optimise the use of brownfield land for new homes and jobs?

OPTION 1A: Brownfield land should be used to its greatest extent across both the urban and rural areas the Borough.

OPTION 1B: Brownfield land should be used to a full extent in locations that are very well served by public transport.

OPTION 1C: The use of brownfield land is not a strong priority. Non-Green Belt land (including some greenfield sites) could be encouraged for development (including some greenfield sites).

OPTION 1D: Reject a brownfield land focus, in favour of new growth locations elsewhere in the Borough, including more dispersed development that may include locations within the Green Belt.

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
SA 1: Housing	+++	+++	++	++	It is expected that Option 1A, Option 1B, Option 1C and Option 1D would contribute strongly towards the local housing need in the Borough. The focus of development on brownfield land set out through Option 1A and Option 1B could potentially result in higher costs for developers due to the requirement to make brownfield sites ready for development. As such this may have implications in terms of viability, and may result in lesser provision of affordable housing. A significant positive effect is expected for all options in relation to this SA objective. The significant positive effects expected for Option 1A and 1B is uncertain given that the approach of making use of mostly brownfield land may reduce the level of affordable homes which can be delivered in the Borough. Option 1A and Option 1B would limit much of the development over the plan period to brownfield which could result in a reduced number of sites coming forward. However, Option 1A is expected to maximise the scope for regeneration. Furthermore, Option 1B would focus on the regeneration of the northern urban area to meet future housing, and therefore it is not expected that either of

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					these options would significantly limit the supply of land to mean local housing requirements are not met.
SA 2: Services and facilities	+/-?	++/-	+/--?	+/--?	<p>Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites. It also provides scope for a high level of regeneration to occur in the Borough. It is expected that this approach could mean that some new residents have a reduced level of access to services and facilities, with the use of brownfield land promoted at both the urban and rural parts the Borough. The scope for regeneration offered by this option could see new service provision in the Borough. As such a mixed minor positive and minor negative effect is expected for Option 1A. The effect is uncertain considering that there is a high degree of uncertainty attached to the location of new development sites. By planning for regeneration at selected brownfield urban locations Option 1B would allow for a high amount of growth at locations which have access to services and facilities, or public transport to access these. This would include redevelopment for mixed use which, if new service provision was included, would reduce travel times to these types of provisions. Similarly to Option 1A, Option 1B areas may lead to increased pressure and capacity issues for local services and facilities. Option 1B may also lead to a more strategic approach than Option 1A, which would enable new infrastructure requirements to be identified and planned alongside development. A mixed significant positive effect and minor negative is therefore expected for Option 1B.</p> <p>Option 1C would result some development at urban locations outside of, but not in/next to, the major centres and railway stations. As urban areas tend to provide the most immediate access to existing services and facilities, it is expected that this approach would provide some residents with a poor level of access to these. This option may also impact on the delivery of regeneration at other locations in Dartford, as it would not make the redevelopment of brownfield land a priority. Development of greenfield land can prove to be more viable for developers, which may help to secure contributions to local service provision. However, Option 1C could help to support the viability of services in locations where service provision is currently weak. As such a mixed minor positive and significant negative effect, with uncertainty, is expected for Option 1C.</p> <p>Option 1D could result in a more dispersed pattern of growth in the Borough. This approach would provide some residential development at locations where new residents may not have a good level of access to services and facilities. The development of greenfield land can prove to be more viable for developers, which may help to secure contributions to local service provision, and may still lead to development in proximity to public transport</p>

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					corridors. Option 1D could also help to support the viability of services in more rural parts of the borough. New service provision could be of a more substantial scale if larger growth is provided at a single location in Dartford. As such a mixed (minor positive and significant negative) effect, with uncertainty, is expected for Option 1D.
SA 3: Community cohesion	+/-?	++	+/--	+/--	<p>Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites. It also provides scope for a high level of regeneration to occur in the Borough. It is expected that this approach could result some new residents have a reduced level of access to services and facilities and could therefore also discourage journeys by foot, which would otherwise present opportunities for informal social interactions between residents. It may also prove challenging to plan for development in a coordinated and integrated way, reducing the scope to design development in a community-oriented way. Alternatively, this option would help provide scope for regeneration in the Borough. Brownfield development could help to strengthen the quality of design and legibility of existing development could help to improve the sense of identity of places. It is noted that the higher densities of development, which are likely to result from this option, could help promote the number of informal interactions in the community, but could also be challenging to deliver in a way that promotes community cohesion. As such a mixed minor positive and minor negative effect is expected for Option 1A. The effect is uncertain considering that there is a high degree of uncertainty attached to the location of new development sites.</p> <p>Option 1B is also expected to result in the regeneration of brownfield sites which could help to strengthen the quality of design, and legibility of development in places that already form part of the urban fabric, strengthening a sense of identity. In addition, this option would help to encourage residents to travel by foot or public transport, thereby increasing the potential for informal social interaction to occur. A significant positive effect is therefore expected for Option 1B. Option 1C could result in land that is not well served by key facilities and public transport being brought forward for development. This option is expected to reduce the potential for travel by foot in the District but may help to improve service provision which support community cohesion at which there is currently poor provision. This option could also have adverse impacts in terms of identity of neighbourhoods in the Borough where large developments are provided. A mixed minor positive and significant negative effect is expected for Option 1C. The more dispersed pattern of growth likely to come through Option 1D, could limit the potential for a high proportion of new residents to have a good level of access to existing services and facilities. This option is also considered unlikely to promote journeys by foot, thereby limiting the potential for informal interactions to occur</p>

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					between residents. The development of greenfield land can prove to be more viable for developers which may help to secure contributions to local service provision. As such a mixed (minor positive and significant negative) effect is expected for Option 1D.
SA 4: Health and inequalities	+/-?	++/-	+/--	+/-	<p>Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites. It also provides scope for a high level of regeneration to occur in the Borough at both rural and urban locations. It is expected that this approach could result in some new residents having a reduced level of access to healthcare provisions. The provision of high density development could allow for access to services and facilities for a high number of residents, particularly where mixed used development is provided. Furthermore, high density development in urban areas and maximising development of windfall sites may lead to increased pressure and capacity issues for local services and facilities. Similarly, windfall development in some locations (e.g. garden land in rural areas) could also discourage journeys by foot which could otherwise be of benefit to public health in the area, but most development would be expected to take place in areas where services and facilities are accessible by foot. This option could involve loss of garden land and crowded developments, which could reduce quality of life and mental wellbeing. As such a mixed minor positive and minor negative effect is expected for Option 1A. The effect is uncertain considering that there is a high degree of uncertainty attached to the location of new development sites. By planning for regeneration at selected brownfield urban locations Option 1B would allow for a high amount of growth at locations which have access to services and facilities, including health and recreation facilities, or public transport to access these. Similarly to Option 1A, Option 1B areas may lead to increased pressure and capacity issues for local services and facilities. However, Option 1B specifically states that it will promote regeneration to meet needs in terms of supporting services. It may also lead to a more strategic approach than Option 1A, which would enable new infrastructure requirements to be identified and planned alongside development. A mixed significant positive and minor negative effect is therefore expected for Option 1B. Option 1C could result in land that is not well served by existing key facilities being brought forward for development, which could limit the potential for a high proportion of new residents to have a good level of access to healthcare facilities. If this option came through as a smaller number of larger development sites, it may be easier to design in healthy behaviours and health and recreation facilities. However, the option may also result in the development of open urban land. This option is also considered less likely to promote journeys by foot. The development of greenfield land can prove to be more viable for developers which may help to secure contributions to local service provision such</p>

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					<p>as healthcare, and may still lead to development in proximity to public transport corridors, which could facilitate access to healthcare facilities. Option 1C could also result in development with better access to the countryside, which could improve mental wellbeing and encourage physical activity. As such a mixed minor positive and significant negative effect is expected for Option 1C.</p> <p>Option 1D is expected to result in similar effects to those identified for Option 1C. This option may result in development at higher number of new locations in Dartford (i.e. more dispersed), although this is uncertain. It is, however, unlikely to result in the development of open urban land, which could help to preserve recreational areas. A mixed minor positive and minor negative effect is therefore expected for Option1D.</p>
SA 5: Economy	+/--?	++	+/-	+/--	<p>Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites. It also provides scope for a high level of regeneration to occur in the Borough. High density development in urban areas is likely to result in good access to employment opportunities, although conversely this approach could mean that some residents (e.g. of developments on rural brownfield sites) would not be provided with easy access to employment opportunities. This option could help to attract new business to the Borough through the development of high quality employment space, but some of the new growth is to be achieved through the redevelopment of industrial areas which could reduce employment land in the borough. An overall mixed minor positive and uncertain significant negative effect is therefore expected for Option 1A. Option 1B would support regeneration (including economic regeneration) at the most sustainable locations, which are likely to include more urban locations, which could help boost the local economy by attracting more people to the area, thus boosting spending and the local workforce. Locations which are most accessible to service provision are to be supported which is likely to help maintain the vitality and viability of town centre and district centre locations in Dartford. A significant positive effect is therefore expected for Option 1B. Option 1C and Option 1D are expected to provide new residents with reduced levels of access to existing job opportunities and may discourage footfall within the town centre and district centres, considering that as development is more likely to take place away from sustainable transport links in the major centres. Both options would however allow for employment provision at greenfield sites which may prove to be more viable for some developers. As Option 1C would focus development within the urban area, it is likely to perform more favourably than Option 1D, which could include greenfield land at more rural locations, as development is likely to be more accessible locations. A mixed minor positive and significant negative effect is expected</p>

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					for Option 1C. The effect for Option 1D is expected to be minor positive and significant negative.
SA 6: Sustainable travel	+/-?	++	+/--	+/--?	Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites. It also provides scope for a high level of regeneration to occur in the Borough at both rural and urban locations. As such it is likely that this option could also provide a high level of growth in areas which have a reduced level of access to sustainable transport links and services and facilities, although most development would likely take place in urban areas, which generally have better access to services and facilities, including public transport. A mixed minor positive and minor negative effect is therefore expected for Option 1A. The effect is uncertain considering that there is a high degree of uncertainty attached to the location of new development sites. Option 1B would support the regeneration of brownfield land at locations well served by public transport. This option is expected to help reduce reliance on travel by private vehicle in Dartford. A significant positive effect is therefore expected for Option 1B. Option 1C would involve development within urban areas that are not within or in close proximity to the major centres and railway stations. It is likely that this approach would result in a high dependency on private car journeys, at least until improved public transport links are provided. It is recognised that this approach would include some development at areas which benefit from public transport links. Furthermore, development of greenfield land can prove to be more viable for developers, which may help to secure contributions to service provision which is likely to help reduce the need to travel by car. A mixed minor positive and significant negative effect is therefore expected for Option 1C. Option 1D would likely result in a more dispersed pattern of development. It is expected that this approach could limit the potential for a high proportion of new residents to have a good level of access to existing public transport provisions. New development provided at greenfield locations in Dartford may mean that the provision of new transport links becomes viable particularly if a high amount of growth is focussed in one location. As such a mixed uncertain minor positive and significant negative effect is expected for Option 1D.
SA 7: Mineral resources	-?	-?	-?	-?	There a number of Mineral Safeguarding Areas (MSA) across the Borough. There is potential for all options to result in development which could have adverse impacts in terms of access to finite mineral resources in Dartford. Uncertain minor negative effects are expected for all options.
SA 8: Soils	++	++	--	--	Option 1A and Option 1B are expected to help promote the use of brownfield in the Borough, as such limiting the potential for loss of high value agricultural soils and resulting in a more efficient use of land in the area. Significant positive effects are therefore expected for these

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					options. A small area of the Borough to the north of the A2 as well as much of the Borough which falls to the south of the A2 contains significant areas of Grade 2 agricultural land with a small area of Grade 1 agricultural land to the east. As Option 1C and Option 1D would allow for new growth at alternative locations in Dartford, rejecting a brownfield land focus, and therefore increasing the likelihood of development on best and most versatile agricultural land, a significant negative effect is expected for these options.
SA 9: Water quality	-?	-?	-?	-?	Much of the Borough falls within various Source Protection Zones (SPZ), including Zones 1, 2 and 3. It is expected that development under all options could result in risk of contamination from construction activities. It is expected that all options would result in some level of development within the identified SPZs. A minor negative effect is therefore expected for all four options. The effect for each option is uncertain given that impacts in terms of potential for new development to overburden wastewater treatment facilities are unknown.
SA 10: Air pollution	+/--?	++/--	+/--	+/--?	All options would support the delivery of a level of growth which would have implications in terms of travel in Dartford. A proportion of trips generated from new development are likely to be made by petrol and diesel vehicles. There are a number of AQMAs within and adjacent to the Borough including along the A226, A282 and A2026, which includes Dartford town centre and its radial routes. Development which would result in increased levels of traffic along these routes is likely to exacerbate existing air quality issues. Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites, taking in both rural and urban locations. As such it is likely that this option could provide a high level of growth in areas which have a reduced level of access to sustainable transport links and services and facilities, although most development would likely take place in urban areas, which generally have better access to services and facilities, including public transport. A mixed minor positive and significant negative effect is therefore expected for Option 1A. The effect is uncertain considering that there is a high degree of uncertainty attached to the location of new development sites. The regeneration of selected brownfield urban locations through Option 1B could help to locate new residents in close proximity to existing provisions and support development in locations very well served by public transport, which is likely to help reduce reliance on travel by private vehicle. However, development of brownfield land, under Option 1B in particular, is more likely to be in the urban area and may be within or in close proximity to the AQMAs. Therefore this option is more likely to contribute to traffic in existing AQMAs, resulting in significant negative effects. A mixed significant positive and significant negative effect is therefore expected for Option 1B.

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					Option 1C would lead to development within urban areas that are not within or in close proximity to the major centres and railway stations. It is likely that this approach would result in a high dependency on private car journeys, at least until improved public transport links are provided. However, it recognised that this approach would include some development at areas which benefit from public transport links. Furthermore, development of greenfield land can prove to be more viable for developers, which may help to secure contributions to service provision, which is likely to help reduce the need to travel by car. A mixed minor positive and significant negative effect is therefore expected for Option 1C. A significant negative effect is expected for Option 1D considering the potential for development to come forward in a more dispersed pattern, which could encourage car dependency. The negative effect is combined with an uncertain minor positive given that the focussing of growth to a large scale growth point may allow for the provision of large scale new services and facilities as well as potentially new public transport links. Furthermore, moving away from a focus on brownfield development may make provision of new services and facilities more viable.
SA 11: Flood risk	-?	-?	--?	--?	Areas of the north of the Borough towards the Thames and from its north western corner to the south along the River Darent fall with flood zones 2 and 3. Many of the northern areas of the Borough also benefit from flood defences. All options could result in development in areas at risk of flooding, although development in urban areas, which is more likely through Option 1B, in particular, is more likely to benefit from existing flood defences. The development of greenfield land in the Borough, which would be more likely to result through Option 1C and Option 1D, would increase the area of impermeable surfaces and could increase local flood risk. As such, minor negative effects are expected for Options 1A and 1B and significant negative effects are expected for Option 1C and Option 1D. However, all likely effects are uncertain, as this depends on the exact location of development.
SA 12: Climate change	+/-?	++/-	+/--	+/--?	Option 1A could result in a substantial proportion of development occurring at unplanned 'windfall' sites. It also provides scope for a high level of regeneration to occur in the Borough. As such it is likely that this option could provide a high level of growth in areas which have a reduced level of access to sustainable transport links and services and facilities, although most development would likely take place in urban areas, which generally have better access to services and facilities, including public transport. A mixed minor positive and minor negative effect is therefore expected for Option 1A. The effect is uncertain considering that there is a high degree of uncertainty attached to the location of new development sites. The regeneration of selected brownfield urban locations at locations that is very well served

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					by public transport through Option 1B is likely to help reduce reliance on travel by private vehicle. A mixed significant positive and minor negative effect is therefore expected for Option 1B. Option 1C would lead to development within urban areas that are not within or in close proximity to the major centres and best railway stations. It is likely that this approach would result in a high dependency on private car journeys, at least until improved public transport links are provided. However, it recognised that this approach would include some development at areas which benefit from public transport links. Furthermore, development of greenfield land can prove to be more viable for developers, which may help to secure contributions to service provision, which would help reduce the need to travel by car. A mixed minor positive and significant negative effect is therefore expected for Option 1C. Option 1D is expected to result in a more dispersed pattern of growth. The weaker service provision at these locations is likely to encourage travel by private vehicle, although this is uncertain as this could be in proximity to public transport links. The provision of a high amount of new development at a single site may support new large scale service provision particularly if greenfield land comes forward considering that viability issues are less likely to be a concern at these types of locations. As such the significant negative effect expected is combined with an uncertain minor positive effect.
SA 13: Biodiversity	-?	+/-?	-?	--?	Option 1A and Option 1B would limit the potential for development of greenfield land in the Borough, which forms part of the more 'natural' ecological network. These options would both focus a high proportion of growth at brownfield land; however brownfield land can also have potential value for biodiversity, particularly in terms of invertebrates. Option 1A would provide a higher proportion of growth at windfall sites, and the development of larger gardens, including at rural locations, which could result in locations that support biodiversity coming forward for development when compared to Option 1B. Considering that the specific location of a substantial amount of growth supported through Option 1A would be unknown the minor negative effect expected for 1A is uncertain. The greater certainty attached to the location of sites through Option 1B which might allow for opportunities to facilitate habitat improvements and connectivity means that an overall mixed minor positive and minor negative effect uncertain is expected. Option 1C would not encourage the re-use of brownfield in Dartford. This could involve the development of open urban land, which currently allows for some level of habitat connectivity in the urban areas of the Borough. This option would not rely on development at Green Belt sites, some of which are in ecologically sensitive locations, although could still coincide with biodiversity opportunity areas. Option 1D would not only increase greenfield land take in Dartford but also lead to

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					higher likelihood that development will negatively affect ecologically sensitive areas, including areas of ancient woodland as well nationally designated biodiversity sites, such as Darenth Wood SSSI, as well as local designations, such as the Sutton at Hone Lakes LWS, and Biodiversity Opportunity Areas. Many of these areas overlap with the Green Belt in the Borough to the south and north west. A significant negative effect is therefore expected for this option, but this is uncertain given that the location of development that would come through under this option is unknown.
SA 14: Historic environment	+/--?	+/--?	-?	-?	<p>Considering that impacts on the historic environment will be dependent in part on the design of new development which is unknown at this stage the effects recorded for this SA objective are all uncertain.</p> <p>Option 1A and Option 1B would prioritise the development of brownfield land in the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and character. It is expected that the delivery of a high level of development over the plan period would result in changes to established character as well as potentially the setting of heritage assets. As Option 1A would take a less strategic approach to the redevelopment of brownfield land, with unplanned 'windfall' development forming a part of the strategy, it has greater potential to result in adverse impacts in terms of heritage assets and historic character. As such a mixed minor positive and significant negative effect is expected for Option 1A and a mixed minor positive and minor negative effect is expected for Option 1B. Options 1C and 1D would not prioritise development at brownfield sites. It is likely that this approach would present a reduced number of opportunities to achieve the enhancement of this established character considering that redevelopment of brownfield would be less likely. It is expected that these options would, however, provide for a relatively strategic approach to development which could prevent particular adverse impacts in relation to the historic environment from resulting. As such a minor negative effect is expected for Options 1C and 1D.</p>
SA 15: Landscape	+/--?	+/--?	-?	--?	<p>Considering that impacts on the existing character of the townscape and landscape in Dartford will be dependent in part on the design of new development which is unknown at this stage the effects recorded for this SA objective are all uncertain.</p> <p>Option 1A and Option 1B would prioritise the development of brownfield land in the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and benefit in terms of townscape and landscape. Development over the plan period is likely to result in changes to the townscape and landscape, but Option 1B is likely to provide more certainty in terms of limiting the significance of these changes. Option 1A</p>

SA objective	Likely effect				Justification
	Option 1A	Option 1B	Option 1C	Option 1D	
					<p>would include a focus on unplanned 'windfall' development on brownfield land and also the potential for high density of development in inappropriate locations. As such a mixed minor positive and significant negative effect is expected for Option 1A and a mixed minor positive and minor negative effect is expected for Option 1B. Option 1C would lead to development of a higher amount of greenfield land, including urban locations outside of the major centres and railway stations (i.e. away from Ebbsfleet and Dartford town centre). It is expected that this option would provide for a relatively strategic approach to development which could prevent particular adverse impacts in relation to landscape and townscape from resulting. However this option would also potentially lead to development of open urban land, which could affect the existing character of urban locations in the Borough. A minor negative effect is therefore expected for Option 1C. The greater dispersal of development likely to be supported through Option 1D would include the development of higher amount of greenfield land in Dartford. This option is also expected to result in potential for the expansion of development into more the rural areas. While this option is likely to allow for some level of development within the Green Belt the approach is expected to incorporate a more strategically planned approach to development, which could limit the potential for the expansion of development to impact negatively on areas which are more sensitive in terms of landscape and/or townscape. Therefore the negative effect expected for Option 1D is significant uncertain.</p>

Main Plan Options 2: How to ensure Dartford is a thriving town centre?

OPTION 2A: Support extensive radical change through promoting residential redevelopment in and around the town centre, (including at high densities), achieving a rapid expansion of residents in the town centre and new premises for businesses and shops.

OPTION 2B: Encourage redevelopment of selected areas in and around the town centre where this will achieve significant diversification of activities over time, a substantial new residential community, and the transformation of the attractiveness of Dartford town centre through creating new places and spaces.

OPTION 2C: The consideration of new development proposals on a case-by-case basis, based on a looser vision which aims for gradual regeneration but limited direction on where and how redevelopment should occur.

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
SA 1: Housing	++	++	+	As Options 2A and 2B aim to promote residential redevelopment in and around the town centre, specifically a substantial new residential community through Option 2B, they are likely to have a significant positive effect on this objective. Minor positive effects are expected against Option 2C as a lower level of residential development is likely to come forward under this option.
SA 2: Services and facilities	++/-?	++?	+/-	<p>By supporting radical change at and around the town centre, with a focus on residential redevelopment, Option 2A is likely to provide a high number of new residents with access to a wide range of existing services and facilities, including public transport links. It is noted that social facilities within the town centre (e.g. health) are currently limited although significant work is occurring to deliver a new facility. This approach could potentially result in issues of capacity at existing services and facilities as high levels of development are delivered within the confinement of the town centre and the surrounding area. There is also noted to be limited land available to provide new essential services at these locations. Overall an uncertain mixed (significant positive and minor negative) effect is expected for Option 2A.</p> <p>Identifying locations where redevelopment is to occur to achieve significant diversification of uses over time is expected to help secure a high level of access to services and facilities for a high number of residents. This approach is also likely to help ensure that existing services and facilities are less likely to become overburdened in the short term. Access to services and facilities is likely to be secured for residents in the centre as well as those in other areas of the Borough considering the strong public transport links to this area. As such a significant positive uncertain effect is expected for Option 2B.</p> <p>Option 2C would allow for modest scale change in the town centre and by allowing for only piecemeal change is less likely to allow for infrastructure to be strategically planned. Although it would still allow some development to come forward in town centres, where there is good access to services and</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				facilities, this approach could result in the stagnation of existing services and facilities in the town centre location as a high proportion of new growth is provided at alternative locations over the plan period. While this option would fail to make the town centre (which is likely to be more attractive in terms of securing inward investment) open to accommodate a high level of new growth, it could help to support service provision at other locations of Dartford. As such an overall mixed minor positive and minor negative effect is expected for Option 2C.
SA 3: Community cohesion	+/-?	+	+/-	<p>By allowing supporting radical change at and around the town centre, with a focus on residential redevelopment, , it is likely that Option 2A would provide new residents with access to a wide range of existing services and facilities, including community facilities, particularly by public transport links. It is, however, noted that there is likely to be limited land to allow for the delivery of necessary community facilities at these locations of the Borough. An approach which increases the density of development at central locations may encourage the number of residents accessing services and facilities by foot which may give rise to an increased number of positive informal interactions. However, delivering such a high level of growth may result in the overburdening of existing services and facilities particularly in the short term, and a potential sense of over-development. As such an uncertain mixed minor positive and minor negative effect is expected for Option 2A.</p> <p>Option 2B would identify targeted locations where redevelopment could achieve significant diversification of uses over time. In taking a more targeted approach to creating new communities, this option could result in developments better designed to promote community cohesion and include new service provision. This option would also include the incorporation of an attractive network of pedestrian routes linking new public spaces and squares, which could encourage people to spend time outside in the neighbourhood. As such it is expected that Option 2B could help to create the potential for residents to benefit from regular positive informal interactions. A minor positive is therefore expected for Option 2B. This is uncertain as there is still potential for this option to result in overburdening of existing community facilities.</p> <p>By planning for only a modest scale growth in the town centre, in a piecemeal manner, Option 2C is likely allow for more development to occur more reactively and possibly in isolation. This option may fail to capitalise on the strong access to services and facilities at the town centre. Although it would still allow some development to come forward in town centres, where there is good access to services and facilities, the stagnation of existing services and facilities in the town centre locations may result, which could diminish a sense of pride in the community. Furthermore a higher proportion of growth is likely to be provided at locations which are not in close proximity to existing service provision. Overall a mixed minor positive and minor negative effect is expected for Option 2C.</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
SA 4: Health and inequalities	++/-?	++?	+/-	<p>By supporting radical change at and around the town centre, with a focus on residential redevelopment, it is likely that Option 2A would provide a high number of new residents with access to a wide range of existing services and facilities, including healthcare facilities. It is noted that social facilities within the town centre (e.g. health) are currently limited although significant work is occurring to deliver a new facility. This approach may also result in an increase in the number of residents accessing services and facilities by foot which is likely to benefit the health of residents. However, allowing for a high level of redevelopment in the town centre may result in the overburdening of existing services and facilities particularly in the short term, including healthcare provision. Furthermore it is noted that this location may lack available land to support necessary community facilities. The impact of this approach will be dependent in part on the delivery of new healthcare facilities in the town centre. As such an uncertain mixed significant positive and minor negative effect is expected for Option 2A.</p> <p>Option 2B would identify targeted town centre locations where redevelopment could occur to achieve significant diversification of uses over time. It is likely that this approach would help to avoid services being overburdened as new growth is provided. This option is also likely to help encourage travel by more active modes of transport by providing services and facilities at the more suitable locations. The potential for active travel is likely to be increased further through this option considering that an attractive network of pedestrian routes is to be incorporated. This is likely to benefit health and wellbeing of residents. A significant positive but uncertain effect is therefore expected for Option 2B.</p> <p>Option 2C would be less likely to increase service provision in the town centre by allowing for only a modest scale growth in the town centre, in a piecemeal manner. Although some development would come forward in town centres through this option, where there is good access to services and facilities, the stagnation of existing services and facilities in the town centre locations where they are accessible to a higher number of residents may result. By potentially failing to make best use of the strong service provision in the town centre, Option 2C could also reduce the potential for a high proportion of journeys to be made by active modes of transport. This option may allow for the strengthening of service provision at other locations of Dartford. Overall a mixed (minor positive and minor negative) effect is expected in relation to this SA objective.</p>
SA 5: Economy	++/-?	++	-	<p>By supporting radical change at and around the town centre, with a focus on residential redevelopment, it is likely that new residents would be encouraged to make use of existing services and facilities at these locations. As such the vitality and viability of the town centre is likely to be supported. This approach would also include the creation of choice for business owners by providing new larger and smaller premises. If businesses can be attracted to the town centre as new development occurs, this option also offers a highly sustainable location for new jobs. It is recognised</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				<p>that the high level of growth supported in the town centre could have adverse impacts in terms of disruption to local character and transport which could have implications in terms of the town centre economy. As such an uncertain mixed significant positive and minor negative effect is expected for Option 2A.</p> <p>Option 2B would identify targeted locations where redevelopment could occur to achieve significant diversification of uses over time and creation of a high quality environment in which to shop, live, relax and work. It is expected that this approach would result in benefits in terms of the accessibility of new homes to jobs and services and facilities in (and within good walking distance of) the town centre, while also providing attractive employment spaces which may help encourage inward investment. As such this approach is likely to benefit the vitality and viability of the town centre. It is considered that the phased and more targeted approach to town centre regeneration would help to limit the potential for overly adverse impacts occur in relation to local character and transport provisions. As such a significant positive effect is expected for Option 2B.</p> <p>By allowing for only a modest scale growth in the town centre in a piecemeal manner, Option 2C is considered likely to place a lower number of new residents in close proximity to existing services and facilities and sustainable locations for job provision. This option is considerably less likely to support the vitality and viability of the town centre in Dartford and target development to the most appropriate areas in terms of taking advantage of opportunities for coordinating redevelopment. It would also not help to ensure the accessibility of employment opportunities locally. A minor negative effect is therefore expected for Option 2C.</p>
SA 6: Sustainable travel	++/-?	++?	+/--	<p>Option 2A would allow for a high density of development in or near the town centre for Option 2A through redevelopment. It is likely that this approach would mean new residents would be provided with access to a wide range of existing services and facilities as well as employment opportunities, including by public transport links. It is noted that social facilities within the town centre (e.g. health) are currently limited although significant work is occurring to deliver a new facility. A high level of growth to the town centre is likely to encourage journeys to be made by more sustainable modes of transport considering the shorter travel times involved. However, allowing for a high level of growth could result in issues of over capacity of existing public transport services, particularly in the short term and well as congestion problems as some new resident will continue to travel by private car. Overall an uncertain mixed significant positive and minor negative effect is expected for Option 2A. For Option 2B, appropriate redevelopment in selected areas in and around the town centre will enable residents to access to a wide range of existing services and facilities as well as employment opportunities, including by public transport links, walking and cycling. This approach to redevelopment is expected to include the delivery of new service provision which would boost the</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				<p>currently limited social service provision at this location, further increasing access to services and facilities and employment opportunities by sustainable transport. It would also involve the creation of attractive network of pedestrian routes. This more focused approach to the delivery of development in the town centre is considered less likely to overwhelm existing public transport services at this location, although this could still be an issue. As such a significant positive uncertain effect is expected for Option 2B.</p> <p>Option 2C would be less likely to increase service provision in the town centre, as the piecemeal approach is considered less likely to allow for new infrastructure, including sustainable transport infrastructure, to be strategically planned. Although it would still allow some development to come forward in the town centre, where there is good access to services and facilities, it is also expected that this approach could result in the stagnation of existing services and facilities in the town centre location as a high proportion of new growth is provided at alternative locations over the plan period. Option 2C could therefore result in an increased proportion of journeys being made by private car if more development is located in areas which do not benefit from such good public transport links or facilities as in the town centre. The potential for the achievement of modal shift is expected to be more limited. As such an overall mixed minor positive and significant negative effect is expected for Option 2C.</p>
SA 7: Mineral resources	+	+	+/-	<p>Allowing for a high level of redevelopment at areas within the town centre is considered likely to help avoid loss of access to finite mineral resources in Dartford considering that the majority of these areas are already developed. As such a minor positive effect is expected for Option 2A and Option 2B. As Option 2C would allow for only a modest amount of regeneration within the town centre, it is likely that much of the remaining development required over the plan period would come forward at greenfield sites which could fall within MSAs. As such a mixed minor positive and minor negative effect is expected for Option 2C.</p>
SA 8: Soils	++	++	++/-?	<p>Option 2A would allow for radical change at the town centre through promoting residential redevelopment. This would include elements of a high density of development in or near the town centre. Much of this area is already developed and therefore a higher number of opportunities for brownfield development are likely to result if a high level of growth is focussed towards this location. A significant positive effect is therefore expected for Option 2A.</p> <p>Option 2B is expected to allow for a more selective approach to development in the town centre. Over time new spaces for diversification of use would be created. This would include focus on areas that no longer contribute effectively to the functioning of the town, which is likely to involve the redevelopment of brownfield land. As such this approach is expected to help minimise the need for</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				<p>the development of greenfield land, although this may be to a lesser extent than Option 2A. A significant positive effect is therefore expected for Option 2B.</p> <p>Option 2C would allow for only a very modest amount of planned development within the town centre in a piecemeal manner. It is expected that this approach would allow for a high proportion of growth to be delivered in a less targeted and more ad hoc manner with some development on brownfield land but development also more likely to occur on greenfield sites outside of the town centre, than the other options. There are areas of Grade 2 and 3 Agricultural Land in the south of the Borough around and beyond the route of the A2 as well as around Dartford Marshes. However, Option 2C would result in some regeneration occurring but would be less likely to take advantage of opportunities for coordination of this type of growth. A mixed significant positive and minor negative effect is therefore expected for Option 2B.</p>
SA 9: Water quality	-?	-?	-?	<p>Much of the Borough (including parts of the town centre) falls within various Source Protection Zones (SPZ), including Zone 1, Zone 2 and Zone 3. It is expected that development at these locations could result in risk of contamination from construction activities. A minor negative effect is expected for all three options in relation to SA objective 9. The effect for each option is uncertain given that impacts in terms of potential for new development to overburden wastewater treatment facilities are unknown.</p>
SA 10: Air pollution	++/--	++/-	+/--	<p>By allowing for radical change at the town centre through promoting residential redevelopment Option 2A is likely to accommodate a high number of new residents at areas with good access to a wide range of existing services and facilities particularly by public transport links, walking and cycling. It is noted that there may be limited land available to provide new services. There is also potential for the capacity of services to be overburdened given that some of the new growth would be provided through intensification including some taller buildings. As these issues emerge there may be increased need to travel. Furthermore, part of Dartford town centre is an AQMA and allowing for a very high level of development is likely to intensify existing air quality issues as at least some new residents are still likely to travel by private car. Overall a mixed significant positive and significant negative effect is expected for Option 2A.</p> <p>Allowing for appropriate redevelopment in selected parts of the town centre including the creation of new spaces to achieve diversification of uses over time under Option 2B is expected to improve that service provision for a number of residents. Travel by walking, cycling and public transport could therefore be promoted through this option. This option would also include the provision of attractive networks of pedestrian routes which could further benefit modal shift. As this option would deliver a lower level of growth within the town centre than Option 2A it is expected to have reduced adverse</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				<p>impacts in terms of implications for the Dartford Town Centre AQMA and local congestion. As such a mixed significant positive and minor negative effect is expected for Option 2B.</p> <p>Option 2C would allow for very modest new development in the town centre in a more piecemeal manner. Impacts on the AQMA are therefore likely to be more limited. Option 2C would be less unlikely to increase service provision in the town centre, as a reactive approach does not allow for new infrastructure, including sustainable transport infrastructure, to be strategically planned.</p> <p>Although it would still allow some development to come forward in town centres, where there is good access to services and facilities, it is expected that this approach could result in the stagnation of existing services and facilities in the town centre location as a high proportion of new growth is provided at alternative locations over the plan period. Development provided in this manner could further limit the potential for modal shift to be achieved. As such an overall mixed minor positive and significant negative effect is expected for Option 2C.</p>
SA 11: Flood risk	--	+/--	+/-	<p>Much of the area around Dartford town centre falls within Flood Zone 2 or 3 around the River Darent. As such delivering a higher level of growth at this location in line with Option 2A and Option 2B is expected to have a significant negative effect in relation to this SA objective. The negative effect expected for Option 2B is likely to be combined with a minor positive effect given that this approach would deliver development in a more targeted and phased manner thereby limiting the potential for areas of high flood risk to come forward. This type of approach is also likely to encourage the redevelopment of brownfield land. There is potential for the development of greenfield which otherwise would result in increased areas of impermeable surfaces in the Borough to be more limited. Option 2C would deliver a more modest level of development within the town centre but could result in the development of a higher proportion of greenfield land at other locations within the Borough. An overall mixed minor positive and minor negative effect is therefore expected in relation to this SA objective.</p>
SA 12: Climate change	++/-	++?	+/--	<p>By allowing for radical change at the town centre through promoting residential redevelopment it is likely that Option 2A would provide new residents with access to a wide range of existing services and facilities as well as employment opportunities, particularly by public transport links, walking and cycling. A high level of growth in the town centre is likely to encourage journeys by more sustainable modes of transport considering the shorter travel times involved. Issues relating to the capacity of existing public transport services may emerge as a result of intensification of development, particularly in the short term. Overall an uncertain mixed significant positive and minor negative effect is expected for Option 2A in relation to this SA objective.</p> <p>For Option 2B, allowing for appropriate redevelopment in selected parts of the town centre and the surrounding areas will enable residents to access to a wide range of existing services and facilities as</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				<p>well as employment opportunities, including by public transport links, walking and cycling. This approach to redevelopment is expected to include the delivery of new service provision which would boost the currently limited health service provision at this location, further increasing access to services and facilities and employment opportunities by sustainable transport. The phased approach set out through Option 2C is considered less likely to overwhelm existing public transport services at this location, although this could still be an issue. As such a significant positive uncertain effect is expected for Option 2B.</p> <p>Option 2C would allow for a modest amount of redevelopment at the town centre which is likely to result in only small improvements to service provision in the town centre. The piecemeal approach set out through this option is also less likely to allow for the coordination of regeneration and opportunities for new infrastructure, including sustainable transport infrastructure. Although it would still allow some development to come forward in town centres, where there is good access to services and facilities, it is also expected that this approach could result in the stagnation of existing services and facilities in the town centre location. This effect is expected considering the high proportion of new growth which is likely to be provided at alternative locations over the plan period. Option 2C could therefore result in an increased proportion of journeys being made by private car if more development is located in areas which do not benefit from such good public transport links or facilities as in the town centre. As such an overall mixed minor positive and significant negative effect is expected for Option 2C.</p>
SA 13: Biodiversity	+/-	+/-	--?	<p>It is expected that Option 2A and Option 2B in particular, have the potential to result in a high amount of development at brownfield sites within the town centre location. Whilst brownfield sites can have high biodiversity value, brownfield town centre sites are considered less likely to have biodiversity value than more rural sites. The town centre is not in close proximity to any national biodiversity designations but is in close proximity to Dartford Marshes Designated Local Wildlife Site as well as the Thameside Green Corridors Biodiversity Opportunity Area. As such there is potential for development to result in degradation of important links which allow for habitat connectivity. A level of species disturbance may also occur as a result of noise and light pollution during construction and occupation of new development. However, such effects are likely to be minimised as redevelopment would be set against the already urban context of Dartford town centre. A mixed minor positive and minor negative effect is therefore expected for Option 2A and Option 2B in relation to this SA objective. Option 2C is expected to have a significant negative effect, although this is uncertain as it depends on the exact location and design of development. Providing a modest level of growth in the town centre is likely to mean there is potential for more development to occur at alternative locations on greenfield land, which could have higher biodiversity value. A higher level of</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
				development is also likely to occur in closer proximity to areas of ancient woodland as well the national biodiversity and geodiversity designations at Bakers Hole SSSI, Darenth Wood SSSI, Swanscombe Skull Site SSSI and Swanscombe Skull Site NNR which fall outside of the town centre.
SA 14: Historic environment	--?	+/--?	+/-?	<p>Considering that impacts on the historic environment will be dependent in part on the design of new development, which is unknown at this stage, the effects recorded for this SA objective are all uncertain. The town centre includes a number of listed buildings, including Grade I Church of the Holy Trinity and a number of Grade II* and Grade II listed properties. Much of the town centre also falls within Dartford Town Centre Conservation Area as well as an Area of Archaeological Potential. Areas of Special Character at Chaucer Park, Darenth Road and New Town also lie at the eastern edge of the town centre.</p> <p>By allowing for an intensification of development (including scope for some new tall buildings) Option 2A has the potential to have an impact on the existing character and the setting of heritage assets in the town centre. A significant negative effect is therefore expected for this option.</p> <p>Option 2B would allow for appropriate redevelopment in selected parts of the town centre and the surrounding areas. This redevelopment may come forward in a more phased manner than Option 2A. Locations which no longer contribute effectively to the functioning and environment of the town centre would be prioritised for redevelopment meaning there is potential for the redevelopment of areas of brownfield land to enhance local character at this location. Option 2B seeks to create a high quality environment in the town centre, particularly at prominent 'gateways' on the edge of the town, or by upgrading unappealing buildings or places. This type of approach may offer opportunities to avoid the most sensitive areas and encourage the enhancement of the setting of heritage assets in the town centre. It is recognised that the high number of heritage assets in and around the town centre means that this area is particularly sensitive to change. Overall a mixed minor positive and significant negative effect is expected for Option 2B.</p> <p>Option 2C would plan for a small amount of development in the town centre, which could help to avoid change in areas of sensitive historic character. While development of this scale would reduce the potential for development of an inappropriate scale being planned for, it is possible that additions would be piecemeal which may have some adverse impacts in terms of the setting of individual heritage assets in the town centre. As this option could result in adverse impacts in terms of the town centre economy it could also mean that there is less demand for historic buildings which could have adverse impacts in terms of them falling into disrepair. In effect this option could result in a lack of investment in historic buildings in the town centre and would also provide less incentive for the re-use of brownfield land. A mixed minor positive and minor negative effect is therefore expected for Option 2C.</p>

SA objective	Likely effect			Justification
	Option 2A	Option 2B	Option 2C	
SA 15: Landscape	+/--?	++/--?	-?	<p>Considering that impacts on the existing character of the townscape and landscape in Dartford will be dependent in part on the design of new development which is unknown at this stage the effects recorded for this SA objective are all uncertain.</p> <p>Option 2A would support a high amount of development in the town centre. This would include a potential intensification of development as well as scope for some taller buildings. As such it is expected that this option would have a particular adverse impact in terms of the established character of this area. The area does not contain any designated landscapes there is potential for the established character of the Dartford Town Centre Conservation Area, in particular, to be adversely affected. There is also potential for adverse impacts on the Areas of Special Character at Chaucer Park, Darenth Road and New Town to the east of the town centre. This approach may, however, help to protect the open nature of much of the Green Belt in Dartford by accommodating a high level of growth over the plan period within the town centre. A mixed minor positive and significant negative effect is therefore expected for Option 2A in relation to this SA objective.</p> <p>Option 2B would allow for appropriate redevelopment in selected parts of the town centre and the surrounding areas to be achieved in a more phased manner. Locations which no longer contribute effectively to the functioning and environment of the town centre would be prioritised for redevelopment meaning there is potential for the redevelopment of areas of brownfield land at this location. This approach would also support the creation of high quality environment with part of the emphasis being placed on improving prominent 'gateways' on the edge of the town. Such an approach may offer opportunities to encourage the enhancement of the established character of the town centre. It recognised that this approach is likely to result in changes to the character of the town centre although this change would be more targeted and phased in a more gradual manner than Option 2A. Overall a mixed significant positive and minor negative effect is expected for Option 2B in relation to this SA objective.</p> <p>Option 2C would plan for a small amount of development in the town centre. While this would reduce the potential for development of an inappropriate scale being planned for the additions would be piecemeal which may have some impact in terms of the Conservation Area and the town's character. This option would be less likely to promote the use of brownfield land in the town centre which might otherwise help achieve the improvement of the aesthetic quality of this location. It is also likely that this approach could have adverse impacts in terms of the open nature of areas of the Green Belt as more development occurs at this location over the plan period. A minor negative effect is therefore expected for Option 2A in relation to this SA objective.</p>

Main Plan Options 3: What strategy is most likely to retain green space in the Borough and deliver improvements?

Option 3A: Alter the network of green spaces in local planning policy to priority and non-priority areas for securing greenspace and possible improvements.

Option 3B: Maintain the existing strategy for a green Borough through requiring new development to provide sufficient new open space and retaining the existing green space designations, but consolidate how policies are presented.

Option 3C: Increasing the amount and extent of Borough Open Space to provide greater policy protection and to green Dartford further.

SA objective	Likely effect			Justification
	Option 3A	Option 3B	Option 3C	
SA 1: Housing	0	0	0?	It is not expected that any of the options considered would directly affect housing provision in the Borough, therefore all options are expected to have negligible effects. The score for Option 3C is uncertain as it could restrict land from being released for development.
SA 2: Services and facilities	0	0	0	It is not expected that any of the options considered would directly affect the provision of services and facilities in the Borough.
SA 3: Community cohesion	+/-	+	+	Option 3A may result in the release of greenspace for development, but the remaining greenspace will likely be improved thereby encouraging people to spend more time within those spaces. Therefore, mixed minor positive and minor negative effects are expected against this option. Option 3B is expected to maintain current greenspace, require new development to provide sufficient new open space and promote a higher proportion of greenspace provision on larger sites; therefore minor positive effects are expected for this option. Option 3C is expected to increase the amount of greenspace within the Borough, which has the potential to increase and improve public access and recreation aspects of greenspace. As such, minor positive effects are expected for this option.
SA 4: Health and inequalities	++/-	+	++	Option 3A would indicate where in the Borough there is a priority for securing greenspace and possible improvements. Option 3C aims to expand the current extent of open space in the Borough for greening Dartford further. Both options have the potential to promote recreation and access to greenspace both of which are essential for both mental and physical health and wellbeing. Therefore, these options are expected to have a significant positive effect on this objective. However, Option 3A also allows for the release of greenspace in exchange for new development, so a minor negative effect is also expected against this option. Option 3B aims to maintain the current strategy for a green Borough through retaining existing local greenspace and requiring new

SA objective	Likely effect			Justification
	Option 3A	Option 3B	Option 3C	
				development to provide sufficient new open space which has positive implications for this objective, therefore a minor positive effect is expected.
SA 5: Economy	++/-	+	++	Option 3A is expected to have mixed significant positive and minor negative effects as it will release some greenspace for development, but will improve the remaining greenspace. Improvement of existing greenspace could boost the attractiveness of the area and release of greenspace could enable employment development to come forward, although loss of greenspace could have negative implications for this objective. Option 3B is expected to have a minor positive effect on this objective as it aims to maintain the existing local greenspace and ensure greenspace is incorporated into new developments. Option 3C is expected to have significant positive effects on this objective as increasing the amount of greenspace within the Borough would help to make the Borough more attractive to those living, working and visiting the area, which will benefit the local economy in the long term.
SA 6: Sustainable travel	++/-	+	++	Option 3A is expected to have a significant positive effect on this objective as improving priority areas of greenspace could encourage people to spend more time in greenspace and facilitate, enhance and connect walking and cycling links. However, minor negative effects are also expected for this option as some greenspace may be released for development. As Option 3B aims to maintain current greenspace and require new green space in new developments, leading to a minor positive effect. By increasing the amount of greenspace, Option 3C could lead to an increase in attractive areas that could be used to facilitate, enhance and connect walking and cycling links. A significant positive effect is expected in relation to this option.
SA 7: Mineral resources	0	0	0	It is not expected that any of the options considered would affect mineral resources in the Borough.
SA 8: Soils	-	+	+	Option 3B aims to include policies that would feature the provision for tree planting, which have the potential to maintain soil stability, therefore a minor positive effect is expected. Option 3A may have the opposite effect if it leads to removal of trees and vegetation, leading to a minor negative effect. Option 3C could also help to maintain soil stability, particularly if it contributes to increased tree planting, therefore minor positive effects are expected for this objective.
SA 9: Water quality	++/-	+	++	Each of these options is expected to have positive effects on this objective, as greenspace can act as a natural filter for water. Options 3A and 3C are expected to have significant positive effects as Option 3C aims to expand the amount of greenspace in Dartford and Option 3A aims to improve existing greenspace. However, Option 3A is also expected to have minor negative effects as the option will release greenspace for development creating more impermeable surfaces. As Option 3B

SA objective	Likely effect			Justification
	Option 3A	Option 3B	Option 3C	
				is expected to maintain the existing greenspace and require greenspace in new developments, it is expected to have a minor positive effect.
SA 10: Air pollution	+/-?	+	+?	Options 3A and 3C would have minor positive effects on this objective as increasing and improving the greenspace could reduce the amount of air pollution, as vegetation can filter pollutants from the air. Some uncertainty is attached until such time as the locations of such enhancements are known. However, Option 3A is also expected to have minor negative effects as the option will release greenspace for development thereby reducing the potential for carbon sequestration within the Borough. Option 3B is expected to have a similar effect as it aims to maintain existing greenspace and require open space in new developments and include policies that would feature the provision for tree planting.
SA 11: Flood risk	+/-	+	+	Each of these options would limit the potential for an increase of impermeable surfaces locally as they aim to retain existing greenspace and therefore reduce the risk of flooding. As such minor positive effects are expected in relation to all options. However, Option 3A is also expected to have minor negative effects as the option will release greenspace for development creating more impermeable surfaces.
SA 12: Climate change	+/-?	+	+	Option 3A is expected to have a mixed minor positive and minor negative effect as the option may lead to loss of carbon sinks through loss of greenspace, however the remaining greenspace will be improved, which could increase its ability as a carbon sink, depending on what the improvement involves. Options 3B and 3C will have a positive effect on this objective as each aims to retain existing greenspace which acts as a carbon sink. Option 3B also aims to include policies that feature more tree planting which also has positive implications as trees sequester carbon. Option 3C aims to expand the Borough's existing greenspace and is expected to contribute the most to this objective of the three options. As such, minor positive effects are expected for Options 3B and 3C.
SA 13: Biodiversity	+/-	+	++	Option 3A is expected to have a mixed minor positive and minor negative effect as the option will release greenspace for development thereby reducing local biodiversity; however it aims to improve the remaining greenspace. Option 3B is expected to have a minor positive effect, as this option aims to maintain the current strategy maintaining existing local greenspace rather than necessarily improving the greenspace network. Option 3C is expected to have significant positive effects on this objective as it aims to expand the amount of greenspace within the Borough and apply criteria to restrict the development of greenspace, thus contributing to strengthening ecological connectivity.

SA objective	Likely effect			Justification
	Option 3A	Option 3B	Option 3C	
SA 14: Historic environment	0	0	0	It is not expected that any of the options considered would directly affect the historic environment within the Borough. Therefore, negligible effects are expected.
SA 15: Landscape	+/-	+	+	Each of the options could enhance Dartford's landscape character and quality as they aim to maintain and improve greenspace, which can help contribute to local character. Therefore, minor positive effects are expected. However, Option 3A is also expected to have a minor negative uncertain effect on this objective as it will release some greenspace for development, which could have negative effects on the landscape character of the Borough, but it will improve the remaining greenspace.

Main Plan Options 4: What is the best future for the Ebbsfleet Central area?

Option 4A: Provide a high-density business district adjacent to Ebbsfleet International Station alongside a mix of uses, including residential, to generate a lively and vibrant community.

Option 4B: Create a distinctive mixed and lively urban heart for Ebbsfleet Garden City and the wider area. The provision of a range of uses in higher intensity Garden City form, provided through the Ebbsfleet Implementation Framework, including substantial city centre level commercial space, community uses, open space, and residential accommodation. It is expected to feature a key health/education and/or leisure/culture facility.

Option 4C: Support a residential-led development.

SA objective	Likely effect			Justification
	Option 4A	Option 4B	Option 4C	
SA 1: Housing	+?	+?	++	<p>Option 4A would help address Dartford Borough’s housing need through the provision of residential units, as part of the proposed mixed-use development scheme adjacent to Ebbsfleet International Station. Option 4B would help address Dartford Borough’s housing need through the provision of residential units at Ebbsfleet Central, which is a new mixed use site. As part of all options, it is likely that a percentage of affordable housing would be provided, although a higher level of affordable housing is likely to be provided at schemes with a more residential focus. A minor positive effect is therefore expected for this SA objective for both Options 4A and 4B, although 4B is likely to provide a higher level of housing than 4A. The effect is recorded as uncertain because it is unknown how much housing would actually be delivered.</p> <p>Option 4C is an entirely residential-led development that would help address a substantial part of Dartford Borough’s housing need. Depending on the scale and density of proposals that would be put forward by developers, it could provide housing to meet needs beyond (as well as within) the plan period, therefore a significant positive effect is expected for this SA objective.</p>
SA 2: Services and facilities	+?	++	++	<p>Option 4A would provide a mixed-use development scheme which, according to its description, would generate a lively and vibrant community. It is assumed that services and facilities would be provided as part of the mixed-use scheme. Therefore, this option is expected to have a minor positive with some uncertainty for this SA objective.</p> <p>Option 4B would provide a mixed-use development scheme that, according to its description, would generate a vibrant lively community and include a key health/education or leisure/culture use and a range of prominent open spaces and public facilities. Option 4C is a residential-led development which, according to its description, would provide residential development alongside supporting facilities to serve the local community. These options are therefore expected to provide a higher level</p>

SA objective	Likely effect			Justification
	Option 4A	Option 4B	Option 4C	
				of services and facilities than 4A, possibly being fairly self-sufficient in terms of these. A significant positive effect is therefore expected for this SA objective.
SA 3: Community cohesion	+/-	++?	+?	<p>It is assumed for all options that a number of external spaces would be provided across the site, which would help generate interaction between residents. It is also assumed that spaces and footpaths would be well-lit so as to improve visibility and reduce crime, anti-social behaviour and fear of crime. Option 4A would provide a mixed-use development scheme that according to its description would generate a lively and vibrant community. Similarly, Option 4C is a residential-led development that would contain supporting non-residential uses to serve the community, such as a local centre that contains a food shop and community facility. A minor positive effect is expected for this SA objective with regard to both options. Additionally, a minor negative effect is also expected in relation to Option 4A as in a high-density business district there may be limited potential for developing a more rounded sense of community cohesion.</p> <p>Option 4B would provide a mixed-use development scheme that according to its description would generate a vibrant lively community and include a key health/education or leisure/culture use and a range of prominent open spaces and public facilities. A health/education, leisure/culture centre or well-designed open space could act as a focal point for the community and increase interaction between residents. Overall, a significant positive effect is expected for this SA objective. However, it is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.</p>
SA 4: Health and inequalities	+?	++?	+?	<p>It is assumed that all options would include footpaths and possibly cycle routes that would help connect different areas within the site, including any external spaces. This would promote walking and cycling and help contribute towards a healthy lifestyle. Both Options 4A and 4C would contain supporting uses, which might include a GP surgery. A minor positive effect is expected for this SA objective in relation to Options 4A and 4C. However, these effects are uncertain because the actual effect will depend on the design, scale and layout of the final development.</p> <p>Option 4B would include a key health/education or leisure/culture centre and prominent open spaces, which would have beneficial effects on people's health and wellbeing – either through the provision of primary care services or the facilitation of physical exercise. Furthermore, this option is described as potentially becoming a centre of excellence for medical, education and learning purposes. A significant positive effect is expected for this SA objective. However, it is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development, and successful delivery of the aspiration regarding the centre of excellence.</p>
SA 5: Economy	++?	++/-	+?	Option 4A would see the creation of a high-density business district adjacent to Ebbsfleet International Station, alongside a mix of uses. The new business district would generate a high number of jobs that

SA objective	Likely effect			Justification
	Option 4A	Option 4B	Option 4C	
				<p>for many would be very accessible, due to its location next to Ebbsfleet International Station. A significant positive but uncertain effect is expected for this SA objective. The effect is recorded as uncertain because the delivery of a business district has been on the agenda for many years but is yet to be delivered.</p> <p>Option 4B would see the creation of a high-density commercial hub within Ebbsfleet that as well as employment space, would also contain residential space. It would be home to a key health/education or leisure/culture centre and major public space and would have the potential to become a commercial and transport hub. It is described as a major mixed use city centre style site that would become the 'beating heart' of Ebbsfleet. However, this could result in competition with Dartford town centre and lead to a decrease in the vitality and viability of Dartford town centre. A mixed significant positive and minor negative effect is expected for this SA objective.</p> <p>Option 4C is for a residential-led development that would be located alongside supporting facilities. Whilst the area surrounding the development could provide a small number of employment opportunities, residents would be able to access more economic opportunities in close proximity. A minor positive uncertain effect is expected for this SA objective.</p>
SA 6: Sustainable travel	++/-?	++?	++/-?	<p>The location of all options next to Ebbsfleet International Station would have a beneficial effect on this SA objective because it would encourage use of the train, which is a sustainable mode of transport. Furthermore, it is assumed that, due to the scale of development, all schemes would include footpaths and possibly cycle routes that would help connect different areas within each site, including any external spaces, which would promote walking and cycling, although site layout and design is uncertain.</p> <p>However, the creation of a business district as set out in Option 4A has the potential to encourage in-commuting, some of which would be made by the private car despite the presence of the train station. The creation of a commercial hub as set out in Option 4B, could also result in some trips being made by private car. However, the creation of a major transport hub around Ebbsfleet International as proposed by this option, would help maintain and expand the public transport network. This would make public transport more accessible to people living further out.</p> <p>Option 4C is a residential-led development with the aim of developing supporting facilities alongside it, which would decrease the use of private vehicles. However, a residential development of this scale would still result in an increase in the overall number of vehicles on the road. Furthermore, despite people's proximity to supporting facilities, it's likely that some people would still need to commute to their workplace.</p> <p>Overall, each option is expected to have a significant positive effect on this objective. However, Options 4A and 4C are also given a minor negative effect because they could both result in additional</p>

SA objective	Likely effect			Justification
	Option 4A	Option 4B	Option 4C	
				commuting. All effects are recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.
SA 7: Mineral resources	--?	--?	--?	The easternmost part of this site, along the river, is within a Minerals Safeguarding Area. As such, there is potential for each option to result in development which could have an adverse effect on access to finite mineral resources within the Borough. As such, a significant negative is expected, but this is uncertain as there is a possibility that development could avoid this area or that the minerals could be worked prior to development of the site.
SA 8: Soils	+/--?	+/--?	+/--?	Most of the site is classed as urban land in the agricultural land classification. In addition, the site includes car parking and other previously developed land around Ebbsfleet station, although it is uncertain whether these would be subject to a change of use. There is a small area in the south of the site that is designated as Grade 2 agricultural land; therefore it is possible that development proposed by each of the options could result in a loss of Dartford Borough's Best and Most Versatile Agricultural Land. A mixed significant negative and minor positive but uncertain effect is therefore expected for all options.
SA 9: Water quality	-	-	-	This area falls within Source Protection Zones (SPZs) 1, 2 and 3. It is therefore likely that development of each of the options would result in some level of development in an SPZ. A minor negative effect is expected.
SA 10: Air pollution	+/-	++/-	++/-	All options are likely to increase the proportion of journeys made by train, which is a more sustainable mode of transport than the car, due to the proximity of Ebbsfleet International Station. Furthermore, for Options 4A and 4B, it is likely that more people would be within walking or cycling distance of their workplace, which is likely to reduce the number of journeys made by car. This will especially be the case for Option 4B as the site would be a commercial and transport hub. It is assumed that all schemes would include footpaths and possibly cycle routes which would encourage people to walk and cycle to work, helping reduce air pollution. However, the large-scale development proposed by all three options and the fact that Option 4A is a business district that would encourage in-commuting, there is potential for each option to generate traffic along AQMA corridors, particularly the London Road AQMA, which would exacerbate air pollution issues. Although Option 4C is likely to increase the amount of housing in a highly accessible area, overall, Option 4B and 4C are expected to have a mixed significant positive and minor negative effect and Option 4A is expected to have a mixed minor positive and minor negative effect.
SA 11: Flood risk	-?	-?	-?	A small area around Ebbsfleet International Station and along the river falls within Flood Zones 2 and 3. As such, delivering a high level of growth at this location could have a minor negative effect on this

SA objective	Likely effect			Justification
	Option 4A	Option 4B	Option 4C	
				SA objective. However, this effect is uncertain as most of the area benefits from existing flood defences.
SA 12: Climate change	++/-?	++?	++/-?	<p>All options are likely to increase the proportion of journeys made by train, which is a more sustainable mode of transport than the car, due to the proximity of Ebbsfleet International Station. Furthermore, for each option, it is likely that more people will be within walking or cycling distance of their workplace, which is likely to reduce the number of journeys made by car. This will especially be the case for Option 4B and 4C, as 4B would be a commercial and transport hub and 4C aims to provide local facilities alongside residential development. It is assumed that all schemes would include footpaths and possibly cycle routes which would encourage people to walk and cycle to work, helping reduce the amount of greenhouse gas emissions generated by the private car.</p> <p>However, the creation of a business district as set out in Option 4A has the potential to encourage in-commuting, some of which would be made by the private car despite the presence of the train station. For Option 4B, the creation of a major transport hub around Ebbsfleet International as proposed by this option, would help maintain and expand the public transport network. This would make public transport more accessible to people living and working in the area.</p> <p>Option 4C is a residential-led development with the aim of developing supporting facilities alongside it, which would decrease the use of private vehicles. However, a residential development of this scale would still result in an increase in the overall number of private vehicles on the road. Furthermore, despite people's proximity to supporting facilities, it's likely that some people would still need to commute to their workplace.</p> <p>Overall, all Options are expected to have a significant positive uncertain effect, as all will benefit from transport links at Ebbsfleet International station, but effects will depend on the layout, scale and design of development. For Options 4A and 4C, this is mixed with minor negative effects, as these options are likely to result in additional commuting.</p>
SA 13: Biodiversity	--?	--?	--?	The site contains a number of biodiversity assets, including a Local Wildlife site, as well as a geodiversity asset (Bakers Hole SSSI). As such, the potential of each of the Options to deliver a high level of growth at this location could have a significant negative but uncertain effect on this SA objective. This is because the actual effect will depend on the final design, scale and layout of development.
SA 14: Historic environment	--?	--?	--?	The area around Ebbsfleet International Station contains a number of areas of archaeological potential, as well as scheduled monuments and listed buildings. Therefore, as all Option delivers a high level of growth at this location they could have a significant negative but uncertain effect on this SA objective. This is because the actual effect will depend on the final design, scale and layout of development.

SA objective	Likely effect			Justification
	Option 4A	Option 4B	Option 4C	
SA 15: Landscape	-?	-?	-?	This site is within a fairly urbanised area, as it contains Ebbsfleet International Station, the train line and associated car parks. It is bordered to the west by development, including the growing Ebbsfleet Garden City. However, the site includes attractive areas of green space and water, as well as shrubland and regenerated woodland that might help to buffer existing development from the trainline, especially in the northern part of the site. The 'parkway' type landscape and approach to the station are also positive features. Therefore, each Option could have a minor negative effect on this SA objective. However, this effect is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.

Main Plan Options 5: What is the best future for the Swanscombe Peninsula area?

Option 5A: Support the development of an internationally important entertainment resort.

Option 5B: A strategy to encourage both sensitively integrated, lower density, mixed uses and ecological improvements.

Option 5C: Refrain from proposing acceptable potential uses but formulate policy criteria to provide a basis for dealing with proposals that may be put forward.

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
SA 1: Housing	0	+	0?	<p>Option 5A proposes the development of an internationally important entertainment resort and Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals therefore, both options will have a negligible effect on this SA objective. As housing development would not be planned for but could come forward under Option 5C, this option has some associated uncertainty.</p> <p>Option 5B would help address Dartford Borough's housing need through the provision of limited residential development, as part of the proposed mixed-use development scheme. Although limited in scale, it is likely that a percentage of affordable housing would be provided. Therefore, a minor positive effect is expected for this SA objective for Option 5B.</p>
SA 2: Services and facilities	0	+	0?	<p>Option 5A is unlikely to contribute to local services and facilities, as it is expected to be a largely self-contained use that is not accessible to the general public, therefore negligible effects are expected. Option 5B proposes the development of a mixed-used development scheme that would incorporate employment which could provide a level of services and facilities to help support new and growing communities and therefore have a minor positive effect on this SA objective.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals. Therefore, a negligible effect with uncertainty is expected for Option 5C, as development could come forward, however, the nature, scale, design and location are unknown.</p>
SA 3: Community cohesion	-	+?	0?	<p>Option 5A proposes the development of an internationally important entertainment resort. Whilst the provision of this attraction as a place to enjoy, it is likely to serve a national or international audience, rather than being a local attraction and therefore will not necessarily serve local people. Furthermore, it's likely that the attraction would result in a large number of people travelling to and from the park via private car, which could have an adverse effect on the local road network by causing traffic congestion, with an adverse effect on residents' amenity and access to local services. It may also reduce access to the area, as there would likely be an entry fee. Therefore, a minor negative effect is likely.</p>

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
				<p>Option 5B proposes the development of a mixed-used development scheme, which could provide additional local facilities, therefore a minor positive effect is therefore expected for this SA objective. However, it is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect is likely. The effect is recorded as uncertain because the nature, scale, design and location of development is unknown.</p>
SA 4: Health and inequalities	+/--?	++?	0?	<p>Option 5A proposes the development of an internationally important entertainment resort. However, this attraction could generate noise and light pollution and potentially vibrations, such as from themed rides, live music and increased traffic. This could have an adverse effect on residential amenity, whilst also affecting habitats located within close proximity to the site and along the River Thames, which can help to improve mental health and wellbeing. Furthermore, whilst the provision of this attraction as a place to enjoy could have a positive effect on the health and wellbeing of some residents, it is more likely to serve regional or national visitors. Additionally, visitors to the attraction could generate traffic, congestion, noise and air pollution on the local road network, with an adverse effect on residents' amenity and access to local services.. However, the site proposed for the development of this visitor attraction contains contaminated land, the development of which will facilitate remediation of this land. Overall, a mixed minor positive and significant negative but uncertain effect is likely.</p> <p>The scheme proposed by Option 5B would include an ecological park and may incorporate footpaths and cycle routes that would help connect different areas within the site, including any external spaces. This would promote outdoor recreation and connecting with nature and help contribute towards a healthy lifestyle. A significant positive effect is expected for this SA objective. However, it is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect with uncertainty is expected as development could arise, however, the scale, design and location are unknown at this stage.</p>
SA 5: Economy	++	+	0?	<p>Option 5A proposes the development of an internationally important entertainment resort. This would generate a large number of training and employment opportunities for local residents, whilst also attracting a considerable amount of tourists to the area. This would help increase employment and spending, resulting in a significant positive effect on this objective.</p> <p>Option 5B proposes retaining local jobs and the development of a mixed-use development scheme including an ecological park, which would incorporate employment uses and therefore generate a</p>

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
				<p>high number of jobs. However, this option would involve the development of only part of the peninsula and at a lower intensity compared to Option 5A. Therefore, although a number of jobs would be generated, this option is unlikely to generate as many jobs as Option 5A. Overall, a minor positive effect is expected for this SA objective.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect with uncertainty is expected as development could arise, as the nature, scale, design and location are unknown at this stage.</p>
SA 6: Sustainable travel	--?	++/-	0?	<p>Option 5A proposes the development of an internationally important entertainment resort. Development would likely be highly reliant on the car, particularly as the peninsula is not currently served by public transport. Therefore, a significant negative but uncertain effect is likely.</p> <p>Option 5B proposes the development of a mixed-use development scheme that would involve public transport improvements. In the description for Option 5B, it states that high quality linkages with Swanscombe town and its station would be delivered. Despite this, it's likely that this large-scale development would result in an increase in use of the private car for those wanting to travel to places other than those served by the bus and train routes. A mixed significant positive and minor negative effect is therefore expected for this SA objective.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect with uncertainty is expected as development could arise, as the nature, scale, design and location are unknown at this stage.</p>
SA 7: Mineral resources	--?	--?	0?	<p>Swanscombe Peninsula falls within a Minerals Safeguarding Area. As such, there is potential for Options 5A and 5B to result in development which could have an adverse effect on access to finite mineral resources within the Borough. Therefore, a significant negative effect is likely in relation to Options 5A and 5B, but this is uncertain as there is possibility that development could avoid this area or that minerals could be worked prior to development of the site.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect with uncertainty is expected as development could arise, as the nature, scale, design and location are unknown at this stage.</p>
SA 8: Soils	+/-	+?	+?	<p>As set out in the Agricultural Land Classification, Swanscombe Peninsula is comprised of 'Urban' land. However, although the Peninsula contains a small number of industrial estates and quarried land, a large proportion of the site remains undeveloped. Whilst development would lead to loss of some greenfield land, it would also enable contaminated land to be remediated. Therefore, a mixed minor positive and minor negative effect is expected in relation to Option 5A. Option 5B states that any development sites would be located on brownfield land or, if necessary, on the least sensitive</p>

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
				<p>locations. As such, a minor positive uncertain effect is expected as the exact location, design and scale are unknown.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. However, it would include an assessment against ecological criteria, which could help to maintain soil resources. As such, a minor positive uncertain effect is expected.</p>
SA 9: Water quality	-?	-?	+	<p>A large proportion of Swanscombe Peninsula falls within Source Protection Zone (SPZ) 3. Therefore, a minor negative but uncertain effect is expected in relation to Option 5A and 5B. Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. However, it would include an assessment against hydrological criteria, which could help to maintain water quality, therefore a minor positive uncertain effect is expected.</p>
SA 10: Air pollution	--	++/-	+	<p>Option 5A proposes the development of an internationally important entertainment resort. A large proportion of visitors would likely travel to the park via car, particularly as the peninsula is not currently served by public transport, which would generate traffic along AQMA corridors, particularly the London Road AQMA, which would exacerbate existing air pollution issues. Therefore, a significant negative effect is likely.</p> <p>Option 5B proposes the development of a mixed-use development scheme that would involve public transport improvements. In the description for Option 5B, it states that high quality linkages with Swanscombe town and its station will be delivered. As such, it is likely that more people would travel to the site via public transport. This would reduce the number of private cars on the road. However, considering the site is currently underused, the proposed development would result in an overall increase in people coming to the area, some of which may come via private car. Therefore, overall, a mixed significant positive and minor negative effect is likely.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. However, it would include an assessment against traffic and parking criteria, which could help to maintain air quality, therefore a minor positive uncertain effect is expected.</p>
SA 11: Flood risk	--?	+/--?	+	<p>Swanscombe Peninsula falls within Flood Zones 2 and 3 and includes some marshland. However, most of the area at risk of flooding benefits from flood defences and flood risk mitigation measures may be implemented as part of the development. Therefore, a significant negative but uncertain effect is likely for both Options 5A and 5B. A minor positive effect is also expected against 5B because the ecological park could be used to coincide with and help manage, flood risk.</p>

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
				Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. However, it would include an assessment against flood risk criteria, which could help to minimise flooding, therefore a minor positive uncertain effect is expected.
SA 12: Climate change	--	++/-	+?	<p>Option 5A proposes the development of an internationally important entertainment resort. A large proportion of visitors would likely travel to the park via car, particularly as the peninsula is not currently served by public transport, which would have an adverse effect on traffic congestion and CO₂ emissions. Furthermore, it is likely that the features present within this attraction, such as themed rides and performance arenas, would require a large amount of energy to run, therefore also emitting high amounts of CO₂, either directly or as a result of high energy use. This would have a significant negative effect on this objective.</p> <p>Option 5B proposes the development of a mixed-use development scheme that would involve public transport improvements. In the description for Option 5B, it states that high quality linkages with Swanscombe town and its station will be delivered. An improved public transport network would reduce the amount of car users and therefore the amount of CO₂ emitted from these cars. However, considering the site is currently underused, the proposed development would result in an overall increase in people coming to the area, some of which may come via private car, which would contribute towards CO₂ emissions. Therefore, overall, a mixed significant positive and minor negative effect is likely.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. However, it would include an assessment against flood risk, traffic and ecological criteria, which could help to minimise contribution to and adapt to climate change, therefore a minor positive uncertain effect is expected.</p>
SA 13: Biodiversity	--	++?	+?	<p>Option 5A proposes the development of an internationally important entertainment resort. However, the site contains marshland and part of a Biodiversity Opportunity Area and is adjacent to the Swanscombe Marine Conservation Zone (MCZ), which is located in the Thames Estuary. The MCZ could be affected by use of the river or activities affecting water quality, which could include contaminated runoff from both construction and operation. Therefore, it is likely that development of this visitor attraction would have an adverse effect on biodiversity. However, as with most theme parks, provision is often made for open space and vegetation, which might help protect some of the biodiversity already present on the site. Despite this, it is considered that the adverse effects associated with the development of this internationally important visitor attraction will outweigh any positive effects that the provision of open spaces and vegetation may bring. For example, the attraction proposed by Option 5A could generate noise and light pollution and</p>

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
				<p>potentially vibrations, as well as disturbance from visitors, which could negatively impact the ecology of the area, including species reliant on the Thames. Overall, a significant negative effect is likely.</p> <p>Option 5B proposes the development of a mixed-use development scheme which includes an ecological park and may provide some further opportunities for biodiversity enhancement. At present, the Swanscombe Peninsula does not contain any designated biodiversity assets. Therefore, Option 5B would likely enhance biodiversity in the area whilst also helping contribute to the objectives of the Biodiversity Opportunity Area. In addition, the option states that development would be directed to the least sensitive locations and would be directed away from (although help facilitate) an ecological park. However, as the exact location of the site is not known as of yet, there is uncertainty regarding the future impact from the development on the local biodiversity. A significant positive effect with uncertainty is therefore likely.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. However, it would include an assessment against ecological criteria, which could help to maintain biodiversity, therefore a minor positive uncertain effect is expected.</p>
SA 14: Historic environment	--?	--?	0?	<p>Option 5A proposes the development of an internationally important entertainment resort and Option 5B proposes the development of a mixed-use development. As the Swanscombe Peninsula comprises a Site of Archaeological Significance and is located within close proximity to a number of Grade II listed buildings, significant negative effect is therefore likely. However, this effect is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect with uncertainty is expected as development could arise, as the nature, scale, design and location are unknown at this stage.</p>
SA 15: Landscape	--?	+/-?	+?	<p>Option 5A proposes the development of an internationally important entertainment resort. The site is very exposed and located on the Thames riverfront. As such, the development of an entertainment resort with features such as roller coasters would have an adverse effect on the landscape. Overall, a significant negative effect is likely. The effect is recorded as uncertain because the actual effect will depend on the final design, scale and layout of the development.</p> <p>Option 5B proposes substantial development, which could have a significant landscape impact. However, Option 5B also proposes the delivery of an ecological park which could provide an opportunity to restore a more estuarine character to the area, in line with its natural character. Therefore, a mixed minor positive and minor negative effect is likely. The effect is recorded as</p>

SA objective	Likely effect			Justification
	Option 5A	Option 5B	Option 5C	
				<p>uncertain because the actual effect will depend on the final design, scale and layout of development.</p> <p>Option 5C does not specify any potential uses but will include a criteria-based policy to provide a basis for proposals going forward. Therefore, a negligible effect with uncertainty is expected as development could arise, as the nature, scale, design and location are unknown at this stage.</p>

Main Plan Options 6: How can Dartford best plan ahead for a better transport network?

OPTION 6A: Require the Local Plan's transport and planning strategy to be centred on major new rail provision. Provision is unconfirmed but it is expected to result from work exploring how to deliver extra capacity and new stations and, hopefully, how to address journey times.

OPTION 6B: Continue a strategy focussed on where development is located and taking forward beneficial transport schemes (e.g. Fastrack/buses, key road junctions). Continue in parallel to explore the best ways to secure a major modal shift in transport choice over time. Policies would minimise the need to travel through planning for development that has easy walking or cycling access to schools, healthcare, shops and jobs.

OPTION 6C: Focus Local Plan strategy heavily on securing new development that will help fund new highways schemes.

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
SA 1: Housing	0?	0	0	It is not expected that any of the options considered would directly affect housing provision in the Borough, therefore all are likely to have negligible effects on this objective. Option 6A could result in a delay to the adoption of a plan considering uncertainty about when the proposed Crossrail extension may go ahead. This is likely to mean that the calculated housing requirement for Dartford may have been updated and there would be some uncertainty regarding policy in the meantime, therefore effects for Option 6A are uncertain. This is, however, not expected to directly affect the rate of housing delivery which could be achieved in the Borough.
SA 2: Services and facilities	+/-?	+	-	<p>Option 6A would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough. The town centre location provides access to a high number of services and facilities. As such this approach is likely to support access to a wide range of services and facilities to a high number of residents by public transport links. The potential delay to the adoption of the new plan and uncertainty attached to this may mean that planning the delivery of services and facilities is uncertain however, particularly at the early stages. Overall an uncertain mixed minor positive and minor negative effect is therefore expected for Option 6A.</p> <p>Option 6B would provide development in walkable locations and seeks to reduce the need to travel, which will promote accessibility to services and facilities. Making best use of land that is well-served by public transport is likely to help encourage combined trips to services and facilities. A minor positive effect is therefore expected for Option 6B.</p> <p>By adopting a focus on development, Option 6C would help to secure new road junctions. This approach may promote car-based development and urban expansion, which is not likely to make</p>

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
				services and facilities accessible to a high number of residents. A minor negative effect is therefore expected for Option 6C.
SA 3: Community cohesion	+	+	-	<p>Option 6A would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough. It is expected that this could present increased opportunities for positive informal interactions between residents when they visit the improved public spaces at these locations. A minor positive effect is therefore expected for Option 6A.</p> <p>Option 6B would result in development being delivered at walkable locations with appropriate densities being achieved in areas around public transport. It is likely that this approach could directly help to promote modal shift (particularly travel by active modes of transport) and encourage informal interactions between residents on a regular basis. A minor positive effect is therefore expected for Option 6B.</p> <p>Option 6C is considered likely to promote car-based and more urban expansion, which is not conducive to the achievement of modal shift. It is more likely to lead to a car dominant environment in which there are reduced opportunities for regular informal interactions between residents. A minor negative effect is therefore expected for Option 6C.</p>
SA 4: Health and inequalities	+/-?	+	+/--	<p>Option 6A would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough. This approach could help to provide a high level of access to services and facilities (including healthcare), particularly in the areas of regeneration. There may be delays to adoption of the plan through Option 6A which is likely to adversely affect the provision of new services and facilities at more sustainable locations, particularly in the short term. As such an uncertain overall mixed minor positive and minor negative effect is expected for Option 6A.</p> <p>Option 6B would result in development being delivered at walkable locations with appropriate densities being achieved in areas around public transport. This would not only help to provide a high number of residents with access to services and facilities (including healthcare) but would help to promote levels of active transport among residents. A minor positive effect is therefore expected for Option 6B.</p> <p>Option 6C is likely to result in a greater likelihood of car dominant travel being promoted in the Borough and may also result in a more dispersed pattern of growth. As such some residents (particularly those without access to a private vehicle) are likely to have a reduced level of access to services and facilities (including healthcare) in Dartford. This approach is also likely to result in lower uptake of modes of active transport in the Borough. While increased release of air pollutants from private vehicles may also result, this approach could lead to improvements to highway junctions that may help to reduce congestion and alleviate issues at specific locations. An overall mixed minor positive and significant negative effect is therefore expected for Option 6C.</p>

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
SA 5: Economy	++?	+	+/-	<p>Option 6A would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough. It is expected that a high number of residents would have access to employment opportunities, as development would be focused around the town centre and in proximity to public transport links. Promoting regeneration of the town centre is likely to encourage footfall at this location thereby helping to secure its long-term vitality and viability. Whilst introducing an extension to the Elizabeth Line to Dartford could bring more people to the area, the reverse could be true and more of the workforce may commute out to London. As such, significant positive but uncertain effects are expected for Option 6A.</p> <p>Option 6B would focus employment growth at locations with good public transport links. It would provide less emphasis on the potential for the redevelopment of Dartford town centre. This option is expected to provide a high number of residents with access to employment opportunities by sustainable modes of transport. A minor positive effect is therefore expected for Option 6B.</p> <p>Option 6C would focus on delivering development which could help to fund new road junctions. Many businesses, particularly distribution businesses, at present prefer to locate near major highways and therefore this option could help to improve efficiency of existing business operations, attract new businesses to the area and therefore provide new employment opportunities in Dartford. This option is also likely to result in a greater dispersal of growth which would place some residents in areas which are not easily accessible to employment sites. A mixed minor positive and minor positive effect is therefore expected for Option 6C.</p>
SA 6: Sustainable travel	++/-?	++	--	<p>Option 6A and Option 6B would directly seek to achieve the promotion of modal shift in Dartford. This would be achieved supporting major new rail provision in the Borough or by supporting a ranging approach including the investigation of the potential for extending Crossrail and delivering new local public transport schemes and promoting development in walkable locations, respectively. It is expected that both options would help to reduce reliance on private vehicle in the long term. A significant positive effect is therefore expected for Option 6A and Option 6B. Option 6A could, however, result in delays to adoption of the plan. The potential for achieving modal shift could therefore be reduced considering the uncertainty in relation to the provision of new infrastructure in the most sustainable locations, particularly in the short term. As such the significant positive effect is expected to be combined with an uncertain minor negative effect for Option 6A.</p> <p>Option 6C is likely to result in car dominant developments in Dartford. The more dispersed distribution of growth is furthermore not expected to support the viability of public transport provision in the plan area. A significant negative effect is therefore expected in relation to this SA objective.</p>
SA 7: Mineral resources	-?	-?	-?	<p>There are a number of Mineral Safeguarding Areas (MSA) in close proximity to the town centre of Dartford. While Option 6A could result in an approach which might focus more on the regeneration of the town</p>

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
				centre, Option 6B and Option 6C could have impacts on mineral resources elsewhere in Dartford given that many of the remaining areas of the Borough also fall within MSAs. As such uncertain minor negative effects for all options are expected in relation to this SA objective.
SA 8: Soils	+	+	-	<p>Option 6A could result in an approach which would allow for some focus on the regeneration of the town centre. This is likely to involve the regeneration of brownfield land at this location. A minor positive effect is therefore expected for Option 6A.</p> <p>Option 6B would allow for higher densities of development thereby achieving more efficient land use, particularly where public transport access is good. As such this option could reduce the need for a high amount of greenfield land to be developed in the Borough. A minor positive effect is therefore expected for 6B.</p> <p>Option 6C could result in a more dispersed pattern of development in the Borough. It is expected that a higher level of greenfield land take would result if this option is taken forward. Areas of Grade 2 and 3 Agricultural Land are present in the south of the Borough around and beyond the path of the A2 as well as around Dartford Marshes. Option 6C is considered more likely to result in development occurring at these locations. A minor negative effect is therefore expected for Option 6C.</p>
SA 9: Water quality	-?	-?	-?	Much of the Borough (including parts of the town centre) falls within various Source Protection Zones (SPZ), including Zone 1, Zone 2 and Zone 3. It is expected that the approach to development supported through each option could result in development which fall within these locations. As such there is likely to be potential for risk of contamination from construction activities. A minor negative effect is expected for all three options. The effect for each option is uncertain given that impacts in terms of potential for new development to overburden wastewater treatment facilities are unknown.
SA 10: Air pollution	++/-?	++	+/--	<p>Option 6A would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough. As such this approach would directly support modal shift through the securing of new sustainable transport infrastructure, to the benefit of air quality. It is also likely to make services and facilities more accessible by alternative modes of transport. There may be delays to adoption of the plan through Option 6A which may result in uncertainty in terms of securing modal shift, particularly in the short term. As such an uncertain overall mixed (significant positive and minor negative) effect is expected for Option 6A.</p> <p>Option 6B would result in development being delivered at walkable locations with appropriate densities being achieved in areas around public transport. It would also continue support for current transport schemes, particularly sustainable transport schemes, such as Fastrack buses. This approach is expected to help encourage travel by sustainable modes of transport to the overall benefit of air quality. A significant positive effect is therefore expected for Option 6B.</p>

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
				Option 6C is likely to result in car dominant environments being promoted in the District and may also result in a more dispersed pattern of growth. This approach is also likely to result in lower uptake of modes of active transport and may also impact upon the viability of current provisions in the Borough. While increased release of air pollutants from private vehicles may also result, this approach could lead to improvements to highway junctions that may help to reduce congestion and alleviate issues at specific locations. An overall mixed minor positive and significant negative effect is therefore expected for Option 6C.
SA 11: Flood risk	+/-?	+	-	Option 6A is expected to allow for a focus on the redevelopment of the town centre. This may allow for a high level of growth to occur as brownfield redevelopment, as such limiting the need for greenfield land take in Dartford. This approach could limit the potential for an increase of impermeable surfaces locally. Much of the area around Dartford town centre falls within Flood Zone 2 or 3 around the River Darent, although most of this benefits from existing flood defences. As such a mixed minor positive and minor negative uncertain effect is expected for Option 6A. Option 6B could allow for high densities of development at areas which benefit from better sustainable transport provision. This more efficient approach to land use may reduce the need for greenfield land in Dartford thereby limiting any increase in flood risk which might occur as the area of impermeable surfaces is increased. A minor positive effect is therefore expected for Option 6B. Option 6C is expected to support a wider dispersal of growth in the Borough. This approach is expected to result in the development of a higher proportion of greenfield land. A minor negative effect is therefore expected for Option 6C.
SA 12: Climate change	++/-	++	--	Option 6A would place emphasis on new rail provision in the Borough and is likely to support the regeneration of Dartford town centre and the north of the Borough. As such this approach would support modal shift through the securing of new sustainable transport infrastructure, helping to minimise carbon emissions. It is also likely to make services and facilities more accessible by alternative modes of transport. There may be delays to adoption of the plan through Option 6A which may result in uncertainty in terms of securing modal shift, particularly in the short term. As such an uncertain overall mixed significant positive and minor negative effect is expected for Option 6A. Option 6B would result in development being delivered at walkable locations with appropriate densities being achieved in areas around public transport. It would also continue support for current public transport schemes. This approach is expected to help encourage travel by active modes, therefore helping to minimise carbon emissions. A significant positive effect is therefore expected for Option 6B. Option 6C is likely to result in car dominant environments being promoted in the District and may also result in a more dispersed pattern of growth. This approach is likely to result in lower uptake of modes of active transport and may also impact upon the viability of current provisions in the Borough. It is expected that this approach would result in increased levels of carbon emissions resulting in Dartford,

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
				although this approach could also lead to improvements to highway junctions that may help to reduce congestion and alleviate issues at specific locations. An overall mixed minor positive and significant negative effect is therefore expected for Option 6C.
SA 13: Biodiversity	+/-?	+/-?	--?	<p>It is expected that Option 6A in particular, has the potential to result in the regeneration of the town centre which may help to prioritise the use of brownfield land over greenfield land. Option 6B may have the effect of allowing for higher densities of development and achieving more efficient land use reducing the need for more greenfield land take as growth occurs. It is expected that both of these approaches would have beneficial effects in terms of encouraging the incorporation greeninfrastructure and minimising the potential for habitat loss and disturbance, although it is recognised that brownfield land can also have biodiversity value. Options 6A and 6B are likely to encourage regeneration in areas at the town centre which are in close proximity to Dartford Marshes Local Designated Wildlife Site as well as a number of the Thameside Green Corridors. As such there is potential for development to result in degradation of important links which allow for habitat connectivity as well species disturbance. A mixed minor positive and minor negative uncertain effect is therefore expected for Option 6A and Option 6B.</p> <p>A significant negative effect is expected in relation to Option 6C. This option is expected to result in a more dispersed distribution of growth in Dartford, which may involve a higher amount of greenfield land take. This approach could result in adverse impacts on biodiversity, as it may increase the likelihood of development in proximity to sensitive biodiversity designations. For example, the Borough includes areas of ancient woodland as well the national biodiversity designations at Bakers HoleSSSI, Darenth Wood SSSI, Swanscombe Skull Site SSSI and Swanscombe Skull Site NNR.</p>
SA 14: Historic environment	+/--?	+/-?	+/--?	<p>Considering that impacts on the historic environment will be dependent in part on the design of new development which is unknown at this stage the effects recorded for this SA objective are all uncertain. Option 6A is expected to support a focus which would allow for regeneration of the town centre. This area contains a high number of heritage assets and there is potential for adverse impacts on their respective settings. The regeneration of this area may also allow for opportunities for enhancement of setting, however, particularly through bringing brownfield land back into use. A mixed minor positive and significant negative effect is therefore expected for Option 6A.</p> <p>Option 6B could allow for high densities of development at specific locations of the Borough. This development is to meet criteria for high quality design, but it is noted that there is likely to be potential for changes in terms of the character of parts of Dartford through this approach. Overall a mixed minor positive and minor negative effect is expected for Option 6B.</p> <p>Option 6C could result in a greater dispersal of growth in the plan area. This approach could help to avoid development in Dartford town centre, where many heritage assets are concentrated, but could</p>

SA objective	Likely effect			Justification
	Option 6A	Option 6B	Option 6C	
				adversely affect heritage assets elsewhere in the borough. This option is also considered less likely to help encourage footfall towards the town centre location which might otherwise help to promote the economic viability. As such there is likely to be less demand for bringing historic buildings into use in the town centre through Option 6C which could have adverse impacts in terms of them falling into disrepair. A mixed minor positive and significant negative effect is therefore expected for Option 6C.
SA 15: Landscape	+/-?	+/-?	+/--?	<p>Impacts on the landscape and townscape in the Borough will be dependent in part on the design of new development, which is unknown at this stage. As such all effects are recorded as uncertain.</p> <p>It is expected that Option 6A in particular, has the potential to result in the regeneration of the town centre. This is likely to result in changes to the townscape, however, regeneration is likely to present opportunities for enhancements by bringing brownfield land back into use, for example. Option 6B may have the effect of allowing for higher densities of development and achieving more efficient land use reducing the need for more greenfield land take as growth occurs. This is likely to help reduce the potential for a more dispersed distribution of growth and the need for a high level of growth occurring within the Green Belt. A mixed minor positive and significant negative effect is therefore expected for Option 6A and Option 6B.</p> <p>Option 6C is expected to result in a more dispersed distribution of growth in Dartford which may involve a higher amount of greenfield land take, which otherwise may contribute to the setting of Dartford. This could include development within the Green Belt and loss of openness at these locations. However, this option may not require such substantial change of character to any one area. As such, mixed minor positive and significant negative uncertain effects are expected.</p>

Strategic Site Appraisals

The Preferred Options Consultation Document includes three strategic sites:

- Ebbsfleet Central.
- Hythe Street/Kent Road (being the former Co-Op and Westgate Car Park site in Dartford town centre).
- Littlebrook Power Station.

The options for Ebbsfleet Central were considered in the SA of the Ebbsfleet Central Area Main Plan Options. The options for the Hythe Street/Kent Road site and the Littlebrook Power Station were separately appraised, as these form distinct components in a wider policy approach in the Local Plan Review. The findings of the SA of these two sites are also presented below.

Hythe Street/Kent Road

Option A: Mixed use redevelopment, part of town centre regeneration. It will be allocated for: leisure uses, a new primary care health hub and residential development. Development will be expected to retain the Co-op façade on Spital Street, provide active uses on street frontages and incorporate a public square

Option B: Residential-led development

SA objective	Likely effects		Commentary
	Option A	Option B	
SA 1: Housing	+	++?	As Option A is a mixed-use redevelopment it will include new homes. However, given the size of the site and the need to accommodate uses other than housing, it is unlikely that the contribution to the overall housing need of the Borough will be significant, therefore a minor positive effect is expected. Option B would be for residential led development. As the site would be used primarily for housing, it is likely to make a more significant contribution to the Borough’s overall housing need, therefore a significant positive effect is expected, although this is uncertain as the quantity of housing that could be delivered is unknown.

SA objective	Likely effects		Commentary
	Option A	Option B	
SA 2: Services and facilities	++	+/-?	By providing a mixed-use redevelopment as part of Option A, it is likely that new residents would be provided with access to a wide range of existing and new, services and facilities including a new primary care health-hub, cultural floorspace, leisure uses and a public square, as well as good public transport links. The site is within close proximity to a number of services and facilities including GP practices, employment areas, multiple education establishments and lies within a town centre secondary retail frontage area. Currently the site is undeveloped brownfield land, therefore it is assumed that this site would have a significant positive effect for this objective. Option B is likely to have a similar effect. However, as this option is residential-led development there is the potential for existing services to become over-capacity, with fewer services provided on-site. School capacity is already an issue in Dartford and the town centre is over-capacity in terms of health facilities. As such, mixed minor positive and minor negative effects with uncertainty are expected.
SA 3: Community cohesion	++/-?	+/-?	By providing a mixed-use redevelopment as part of Option A, it is likely that new residents would be provided with access to a wide range of existing and new, services and facilities including a new primary care health-hub, cultural floorspace, leisure uses and a public square, as well as good public transport links. These improvements may help deliver cohesive neighbourhoods with higher levels of pedestrian activity and opportunities for social interaction. As such, it is assumed that this site would have a mixed significant positive effect and minor negative effect with uncertainty on this objective. Option B is likely to have a similar effect. However, as this option is residential-led development there is the potential for existing services to become over-capacity and potentially development may not be able to provide necessary community facilities. As such, mixed minor positive and minor negative effects with uncertainty are expected.
SA 4: Health and inequalities	++/-	+/-	The site lies within one of the 30% most deprived areas nationally. As such, regeneration of this area, through Option A, is likely to provide new residents with access to a wide range of existing and new, services and facilities, including a new primary care health-hub, cultural floorspace, leisure uses and a public square. Additionally, there are open spaces within close proximity to the site, which may provide opportunities for outdoor recreation and social interaction. Being in close proximity to existing services and facilities could also encourage residents to travel by foot or bike, therefore encouraging active lifestyles. However, delivering additional growth, including a hotel, food and drink premises and around 120 homes may result in the overburdening of existing services and facilities particularly in the short term. As such, the site is assumed to have a mixed significant positive and minor negative effect. Similar, but minor effects are felt against Option B as the option is solely for residential development and the area is within close proximity to services and facilities but may overburden them in the short term.
SA 5: Economy	++?	+/-?	By allowing for mixed use redevelopment in Dartford town centre it is likely that new residents would be encouraged to make use of existing services, facilities and shopping opportunities at this location. As such the vitality and viability of the town centre is likely to be supported. It is recognised however that the additional growth supported in the town centre could have adverse impacts in terms of disruption to local character and

SA objective	Likely effects		Commentary
	Option A	Option B	
			transport which could have negative implications in terms of the town centre economy. However, as the site is currently cleared and unoccupied it is likely that development will have a positive effect on character and the local economy depending on the design of the development. Additionally, the site consists of previously developed land and car parks therefore loss of existing employment land would not occur. As such, significant positive effects with uncertainty is expected. Similar, but minor effects are expected for Option B as the area is within close proximity to services and facilities but may overburden them in the short term, therefore mixed minor positive and minor negative uncertain effects are expected for Option B.
SA 6: Sustainable travel	++/-?	+/-?	By allowing for redevelopment in Dartford town centre, it is likely that new residents would be provided with access to a wide range of existing services and facilities, such as leisure facilities and a new primary care health hub, as well as employment opportunities, as well as good public transport links. There are five bus stops along the edges of the site as well as many more bus stops in the area and Dartford railway station is also within close proximity to the site. Additional growth in the town centre is likely to encourage journeys to be made by more sustainable modes of transport considering the shorter travel times involved. However, allowing for additional growth could result in issues of over capacity of existing public transport services, as well as congestion problems as some new residents will continue to travel by private car. As such, mixed significant positive and minor negative effects with uncertainty is expected. Similar, but minor effects are felt against Option B as the area is within close proximity to services and facilities but may overburden them in the short term.
SA 7: Mineral resources	0	0	The site does not lie within a Mineral Safeguarding Areas (MSA), as such a negligible effect is expected.
SA 8: Soils	++	++	The site consists of previously developed land as such a significant positive effect is expected.
SA 9: Water quality	-	-	Much of the Borough (including parts of the town centre) falls within various Source Protection Zones (SPZ), including Zone 1, Zone 2 and Zone 3. This site falls within Zone 1. It is expected that development at this location could result in risk of contamination from construction activities. A minor negative effect is expected.
SA 10: Air pollution	+/-	+/-	The site is within close proximity to the Dartford Town Centre AQMA. It is likely that new residents would be provided with access to a wide range of existing services and facilities, as well as public transport links, walking and cycling routes, it is likely that some new residents will have private vehicles and could exacerbate air quality issues in the AQMA. Therefore, mixed minor positive and minor negative effects are expected for both options.
SA 11: Flood risk	--?	--?	The majority of the site lies within Flood Zone 3 and the remainder lies within Flood Zone 2. However, the entire site lies within an area that benefits from flooding defences and consists of previously developed land. As such, a significant negative effect with uncertainty is expected.

SA objective	Likely effects		Commentary
	Option A	Option B	
SA 12: Climate change	++/-?	+/-?	By allowing for a redevelopment in Dartford town centre, it is likely that new residents would be provided with access to a wide range of existing services and facilities, such as leisure facilities and a new primary care health hub, as well as employment opportunities, as well as good public transport links. A high level of growth in the town centre is likely to encourage journeys to be made by more sustainable modes of transport considering the shorter travel times involved. However, allowing for additional growth could result in issues of over capacity of existing public transport services, particularly in the short term as well as congestion problems as some new residents will continue to travel by private car. Additionally, as the town centre currently has limited facilities, new residents may need to drive to facilities outside of the town increasing the use of private vehicle. As such, mixed significant positive and minor negative effects with uncertainty is expected. Similar, but minor effects are felt against Option B as the area is within close proximity to services and facilities but may overburden them in the short term.
SA 13: Biodiversity	0?	0?	Whilst brownfield sites can have high biodiversity value, brownfield town centre sites are considered less likely to have biodiversity value than more rural sites. Effects are uncertain at this stage until more information is known about the potential for the brownfield land to support habitats and species of biodiversity importance. As such, negligible uncertain effects are expected against both options.
SA 14: Historic environment	?	?	The site lies entirely within an area of archaeological significance. It also lies partially within the Dartford Town Centre Conservation Area, which contains multiple Grade II Listed Buildings as well as two Grade II* and one Grade I Listed Building. However, as the site has been previously developed any archaeological interest is already likely to have been lost/disturbed. Additionally, development, if carefully, designed, could enhance the setting of existing historic assets. As such, uncertain effects are expected against both options.
SA 15: Landscape	+?	+?	Redevelopment could have positive effects on town centre character if it is sensitively designed, especially as it is currently a derelict site. Uncertainty is attached depending on the specific design of the redevelopment through Option A or residential development through Option B. As such, minor positive effects with uncertainty are expected against both options.

Former Littlebrook Power Station

Option A: Brownfield land for employment / high tech logistics (up to 88,000 sqm) with greenspace and infrastructure appropriate for its location and riverside setting

Options B: Residential-led development

SA objective	Likely effects		Commentary
	Option A	Option B	
SA 1: Housing	0	++	As Option A is employment-led, with no provision for housing, a negligible effect is expected. Option B would be for residential-led development. Given the scale of the site, a significant positive effect is expected in terms of its contribution to the housing need of the Borough.
SA 2: Services and facilities	+/-?	+/-?	The site is within reasonably close proximity (within 1km) of a number of services and facilities including GP practice, employment areas and multiple education establishments. However, the A206 and A282 roads act as barriers to accessing many services via sustainable modes of transport, such as walking and cycling for residents and workers. However, Option A aims to design good pedestrian and cycle connectivity and deliver it across the employment area to be linked well with Fastrack stops, the Bridge development and local facilities. Additionally, Option A aims to achieve 30% greenspace and enhance the current Public Right of Way. Therefore, Option A is expected to have a mixed minor positive and minor negative effect on this objective. Uncertainty is attached however as workers may choose to access facilities closer to where they live instead. As Option B is residential-led development there is the potential for existing services to become over-capacity and school capacity is already an issue in Dartford, however, it is likely that a residential development of its size would provide additional services and facilities, therefore Option B would have a mixed minor positive and minor negative effect.
SA 3: Community cohesion	+	+/-	Option A is expected to have a minor positive effect on this objective as it aims to design good pedestrian and cycle connectivity, achieve 30% greenspace and enhance the current Public Right of Way, all of which could be used by nearby residents. Therefore, Option A would have a minor positive effect. It is also likely that residential development under Option B would provide additional community facilities. However, it is not explicit, therefore, current facilities are likely to become overcapacity and A206 and A282 roads could act as barriers to access. Therefore, mixed minor positive and minor negative effects are expected.
SA 4: Health and inequalities	+/-	+/-	The site lies within the 0-10% most deprived area nationally. As such by providing employment, additional sustainable transport links and greenspace through Option A and residential development through Option B it is likely that new workers and residents would be provided with access to a range of new services and facilities. Additionally, there are existing open spaces within close proximity to the site. However, as both Options deliver a high level of growth they may result in the overburdening of existing services and facilities particularly in the short term. Access to services and facilities could also be hindered as the A206 and A282 roads could act as

SA objective	Likely effects		Commentary
	Option A	Option B	
			barriers to access. Additionally, there is a large sewage treatment plant to the north-west of the site (which is also where the prevailing winds come from) that could cause unwanted odours. As such, the site is assumed to have a mixed minor positive and minor negative effect on both options.
SA 5: Economy	++	+	This site aims to provide additional employment / high tech logistics (up to 88,000 sqm) and as such provide employment opportunities in the area. As such, significant positive effects are expected. Option B would have a minor positive effect on this objective as it is a residential led development, additional residents could have positive implications on the economy through additional workers and consumers, and during construction.
SA 6: Sustainable travel	+/--?	+/--?	There are bus stops, such as the Fastrack A -Bus Lane, within reasonably close proximity to the site, but no train station. As Option A proposes logistics employment it is likely that HGVs will access the site through the strategic road network contributing to traffic congestion and pollution on a daily basis, and it would attract in-commuting. While there is potential for transport improvements in the long term, such as good pedestrian and cycle connectivity and delivery of it across the employment area to be linked well with Fastrack stops, the Bridge development and local facilities through Option A, employment and residential development in the area could result in issues of over capacity of existing public transport services, particularly in the short term. New residents, through Option B, will most likely continue to travel by private car, as the existing public transport infrastructure may not be sufficient thereby increasing traffic congestion and pollution. Mixed minor positive and significant negative effects with uncertainty is expected against Option A. Similar, effects are recorded for Option B as residential development could increase residents use of private vehicles. Although cars are likely to have fewer impacts than HGVs, the actual impacts also depend on the quantity of traffic generated, which could be more under Option B.
SA 7: Mineral resources	-	-	Part of the site lies within a Mineral Safeguarding Area (MSA), as such a minor negative effect is expected for both options.
SA 8: Soils	++	++	The site consists entirely of previously developed land as such a significant positive effect is expected against both options.
SA 9: Water quality	0	0	Although much of the Borough falls within various Source Protection Zones (SPZ), this site does not fall within a source protection zone, therefore negligible effects are expected against both options.

SA objective	Likely effects		Commentary
	Option A	Option B	
SA 10: Air pollution	--?	--?	The site is not within an AQMA, however, as the site is not within an easily accessible location, it is likely that residents and workers will travel to and from the site via the A282, part of which is designated as an AQMA, which leads into the Town Centre AQMA, by private vehicle or HGV, for Option A, thereby increasing traffic congestion and greenhouse gas emissions. While mitigation, such as pedestrian and cycle connectivity and public transport schemes, may come forward in the long term, it is likely that current public transport options will be limited in the short term. , As Option A proposes logistics employment it is likely that HGVs will access the site through the strategic road network, therefore contributing to traffic congestion and pollution on a daily basis. As Option B is residential led development it is most likely that residents will travel by private car, as the existing public transport infrastructure may not be sufficient. As such, significant negative effects with uncertainty is expected against Option A. Similar effects are felt against Option B as residential development could increase residents use of private vehicles. Although they are less harmful than HGVs, the volumes at peaks times could be greater. It is notable that a significant proportion of residents at Temple Hill just to the south of the Littlebrook power station site, commute into Dartford, which suggests that residents of the Littlebrook power station could adopt similar travel behaviour. In both cases the potential effects are uncertain as volumes of traffic could vary depending upon uses, as well as travel destinations.
SA 11: Flood risk	--?	--?	The majority of the site lies within Flood Zone 3 and the remainder lies within Flood Zone 2. However, the entire site lies within an area that benefits from flooding defences. As such, a significant negative effect with uncertainty is expected against both options.
SA 12: Climate change	--	--	While there is potential for transport improvements in the long term, through good pedestrian and cycle connectivity and delivery of public transport schemes, , it is likely that i issues of over capacity of existing public transport services could occur in the area, particularly in the short term. Additionally, congestion problems could arise as new residents and workers will most likely continue to travel by private car as the existing public transport infrastructure is limited. The site is not well located to sustainable modes of transport, especially train stations. Additionally, Option A is likely to increase the number HGVs driving through the area as it includes logistics employment and Option B will increase the number of private vehicles in the area. As such, significant negative effects are expected against both options.
SA 13: Biodiversity	+/--?	+/--?	The majority of the site lies within a Biodiversity Opportunity Area – Thames-side Green Corridor and redevelopment of the site could provide an opportunity to contribute positively to this. The site is also within close proximity to Dartford Marshes LWS. Brownfield sites can have high biodiversity value, as such it is considered likely that this site has biodiversity value especially since it lies adjacent to the River Thames. Additionally, both options could harm ecosystems within the River Thames both during construction and once the site is operational (e.g. through contaminated runoff). Effects are uncertain at this stage until more information is known about the potential for the brownfield land to support habitats and species of biodiversity importance

SA objective	Likely effects		Commentary
	Option A	Option B	
			and if mitigation measures are put into place to safeguard the marine wildlife of the River Thames. As such, mixed minor positive and significant negative effects with uncertainty are expected against both options.
SA 14: Historic environment	--?	--?	The site lies entirely within an area of archaeological significance. As such, significant negative effects with uncertainty are expected against both options.
SA 15: Landscape	+?	+?	As this site is a former power station, development on this site could improve the landscape depending on the layout and design of the development. As such, uncertain minor positive effects are expected against both options.

Policy Approach Options

A. Pattern of development and Green Belt in the Borough

SA objective	Likely effect	Justification
SA 1: Housing	++?	The approach outlined would contribute strongly towards the local housing need in the Borough. The focus of development on brownfield land set out could, however, potentially result in higher costs for developers due to the requirement to make brownfield sites ready for development. As such this may have implications in terms of viability and may result in lesser provision of affordable housing. New housing proposed is to be designed to meet local housing needs which is likely to result in accommodation which is of a high standard. A significant positive effect is therefore expected in relation to this SA objective. Uncertainty is attached to the positive effect considering that the focus on brownfield land may reduce the delivery of affordable housing over the plan period.
SA 2: Services and facilities	++/-?	The approach outlined would allow for a focus of much of the new development in the northern urban area, including the Priority Regeneration Centres. These areas provide access to higher order facilities of good public transport, public services and shopping/cultural services. Priority for growth is given where in close proximity to public transport and services. It is recognised that there may be some capacity issues as new housing is provided. Some development is to be provided at locations away from the Priority Regeneration Centres where there is a recognised need for new service provision. This would include some growth within the urban area where much of the development focus will be on allowing infrastructure to catch up with housing growth. It is recognised that focusing much of the new growth at the northern urban area could result in capacity issues while in other areas issues of access to existing services could result. Only proportionately small-scale brownfield development focussed on local needs would be supported at the smaller villages. Overall a mixed significant positive and minor negative effect is therefore expected in relation to this SA objective. The minor negative effect is uncertain considering that the requirement to plan new services alongside other forms of development is likely to help address capacity issues across the plan area.
SA 3: Community cohesion	++	The approach outlined is expected to encourage a high level of new growth to occur as the regeneration of brownfield land. This type of approach could help to strengthen the quality of design and legibility of development in places that already form part of the urban fabric, contributing to a sense of identity. Focussing a high proportion of growth towards the northern urban area, where a range of services and facilities are within proximity to be accessed by foot, could also help to increase the potential for informal social interaction to occur. A significant positive effect is therefore expected in relation to this SA objective.

SA objective	Likely effect	Justification
SA 4: Health and inequalities	++/-?	By planning for a high level of new growth as regeneration at selected brownfield within the northern urban areas the approach outlined would provide many residents with access to services and facilities, including health and recreation facilities, or public transport to access these. This approach could, however, potentially lead to increased pressure and capacity issues for local services and facilities at these locations. Some development would also come forward at locations away from the Priority Regeneration Centres of Dartford Town and Ebbsfleet Central which provide access to a lower number of services and facilities. At these locations, however, much of the development focus will be on allowing infrastructure to catch up with housing growth. Furthermore, development is to be provided to maintain and to be served by a network of open spaces which is likely to help increase the potential for uptake of physical activities by residents. At the smaller villages only proportionately small-scale brownfield development focussed on local needs is to be provided. A mixed significant positive and minor negative effect is therefore expected for Option 1B. The minor negative effect is uncertain given that capacity issues will partly depend on the delivery of new services and facilities.
SA 5: Economy	++	The approach outlined would focus employment development at locations in Dartford well served by public transport and existing identified employment locations, with commercial growth to be made a priority at the two Priority Regeneration Centres. It is stated that this type of growth should be well located to the labour force and new housing. Furthermore, an improved transport network should be available for major job growth proposals. It is expected that this approach would not only help boost the local economy by attracting more people to the town centre locations and boosting spending but would also provide residents with high levels of access to employment opportunities. A significant positive effect is therefore expected in relation to this SA objective.
SA 6: Sustainable travel	++	The approach outlined would focus much of the new growth at the northern urban area including the Priority Regeneration Centres. These areas provide a good level of access to public transport links as well as services and facilities. As such this approach is likely to help encourage travel by alternative modes and furthermore likely to make improvements to current provisions more viable. In general employment generation, key community services, retail/leisure and cultural attractions of large numbers of people, are to be concentrated at locations well served by public transport. A significant positive effect is therefore expected in relation to this SA objective.
SA 7: Mineral resources	-?	There a number of Mineral Safeguarding Areas (MSA) across the Borough. There is potential for the pattern of growth supported to adversely impact on the accessibility of these finite resources as new development is delivered. A minor negative effect is therefore expected in relation to this SA objective. The negative effect is uncertain dependent upon the precise location of new development and considering that development may be provided in a manner to allow for some access to Mineral resources to remain.
SA 8: Soils	++	The approach outlined would help promote the use of brownfield in the Borough, with the northern urban areas with the most sustainable regeneration potential expected to accommodate the largest proportion of growth. As such this approach is likely to help limit the potential for loss of high value agricultural soils in the area. A significant positive effect is therefore expected in relation to this SA objective.
SA 9: Water quality	-?	Much of the Borough falls within various Source Protection Zones (SPZ), including Zones 1, 2 and 3. It is expected that development at many locations in the Borough could result in risk of contamination from construction activities and activities

SA objective	Likely effect	Justification
		once development is occupied. A minor negative effect is therefore expected in relation to this SA objective. The negative effect is uncertain given that impacts in terms of potential for new development to overburden wastewater treatment facilities are unknown.
SA 10: Air pollution	++/--	It is expected that the delivery of a high level of growth within Dartford has the potential to have implications in terms of increased levels of travel in Dartford. A proportion of trips generated from new development is likely to be made by petrol and diesel vehicles to the detriment of local air quality. Development focused as regeneration of the two Priority Regeneration Centres has the potential to increase the number of trips being made within the AQMAs in Dartford Town Centre in particular. As such there is potential for existing air quality issues to be exacerbated. The focus of growth as regeneration of brownfield locations at the two Priority Regeneration Centres would help to locate new residents in close proximity to existing service provision and support development in locations very well served by public transport, which is likely to help reduce reliance on travel by private vehicle. This promotion of modal shift is likely to be strengthened considering the approach for the urban area away from the Priority Regeneration Centres. At these locations the focus is to be on consolidating improvements to social infrastructure and development should also meet priorities for better bus and rail provision, and improved cycle and walking routes. When delivered, these improvements are likely to reduce the need for residents to undertake transport by less sustainable means from these locations regularly. Only proportionately small-scale brownfield development focussed on local needs is to be provided at the smaller villages. A mixed significant positive and significant negative effect is therefore expected in relation to this SA objective.
SA 11: Flood risk	+/--?	Areas of the north of the Borough towards the River Thames and from its north western corner to the south along the River Darent fall with flood zones 2 and 3. Many of the northern areas of the Borough also benefit from flood defences. Development in northern urban areas, including much of the Priority Regeneration Centres would fall within high Flood risk areas, which is therefore recorded as a potential significant negative effect, although it is noted that these areas also benefit from flood defences. Away from these areas development in the Borough is to be of a more limited nature with a focus on consolidating improvements to social infrastructure. Furthermore, development would be required to improve flood resilience at the Rivers Thames and Darent. As such, a mixed minor positive and significant negative effect is expected in relation to this SA objective.
SA 12: Climate change	++/-	It is expected that the delivery of a high level of growth within Dartford has the potential to have implications in terms of increased levels of travel in Dartford. A proportion of trips generated from new development are likely to be made by private vehicles which emit greenhouse gases. The approach outlined would allow for a focus of much of the new development in the northern urban area, including the Priority Regeneration Centres. These areas provide access to higher order facilities of good public transport, public services and shopping/cultural services. Priority for growth is given where in close proximity to public transport and services. Some development is to be provided at locations away from the Priority Regeneration Centres within the urban area, where there is a recognised need for new service provision. At these locations, however, much of the development focus will be on allowing infrastructure to catch up with housing growth. Development should also meet priorities for better bus and rail provision, and improved cycle and walking routes. It is expected that a reduced need for residents to travel by less sustainable modes will result as these new provisions are made. Only proportionately small-scale

SA objective	Likely effect	Justification
		brownfield development focussed on local needs is to be provided at the smaller villages. A mixed significant positive and minor negative effect is expected in relation to this SA objective.
SA 13: Biodiversity	+/-	The approach outlined would limit the potential for development of greenfield land in the Borough, which forms part of the more 'natural' ecological network. A high proportion of growth would be focussed at brownfield land; however, it is recognised that brownfield land can also have potential value for biodiversity, particularly in terms of invertebrates. Through the approach outlined development is also to be directed away from ecologically sensitive sites. However, by focussing development towards the northern urban area, and the Priority Regeneration Centres in particular, there is potential for a high amount of growth to come forward in close proximity to a number of biodiversity designations. This would include Bakers Hole SSSI, Swanscombe Skull Site SSSI and NNR as well as Alkerden Lane Pit and Dartford Marshes Designated Local Wildlife Sites. There is potential for habitat loss, fragmentation and disturbance to result as new development is delivered and occupied at these locations. The limited amount of development which is to be provided away from the northern urban area is required to enhance the area around the Rivers Thames and Darent which will include improvements to biodiversity. As such a mixed minor positive and minor negative effect is expected in relation to this SA objective.
SA 14: Historic environment	+/-?	Considering that impacts on the historic environment will be dependent in part on the design of new development which is unknown at this stage the effect recorded for this SA objective is uncertain. The approach set out would prioritise the development of brownfield land in the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and character. Furthermore, it is set out that the clear pattern of development and policies in the new Local Plan, will ensure that designated and non-designated heritage and natural assets will be appropriately conserved over the plan period. However, it is expected that the delivery of a high level of development over the plan period would result in changes to established character as well as potentially the setting of heritage assets. Focussing a high proportion of growth towards the northern urban areas and the Priority Regeneration Centres in particular has the potential to affect the setting of heritage assets such as Dartford Town Centre Conservation Area and the numerous Listed Buildings at these locations. As such a mixed minor positive and minor negative effect is expected in relation to this SA objective.
SA 15: Landscape	+/-?	Considering that impacts on the existing character of the townscape and landscape in Dartford will be dependent in part on the design of new development which is unknown at this stage the effect recorded for this SA objective is uncertain. The approach outlined would prioritise the development of brownfield land in the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and benefit in terms of townscape and landscape. Where development is to be provided in the urban area away from Priority Regeneration Centres it should explore the potential for an enhanced landscape. The approach would not allow for the strategic release of Green Belt land thereby limiting impact on openness at this location. Where development is to come forward within the smaller villages landscaping is to be sensitively designed which should help to protect the existing character of these areas. As such a mixed minor positive and minor negative effect is expected in relation to this SA objective.

B. Development delivery and housing location criteria

Preferred Option B1: Local Strategy and Aims (797-865 homes per year)

Option B2: An alternative upper figure

SA objective	Likely effect		Justification
	Option B1	Option B2	
SA 1: Housing	++	++?	<p>Option B1 states that the Local Plan Review will set a clear housing target in line with Dartford Borough's needs, whilst also recognising the relatively high level of extant planning permissions. It also references the spatial strategy principles in Option A, which are expected to meet the national Local Housing Need level (currently set at 797 homes a year) for at least 10 years, although delivery rates are projected to reduce over time. Homes in excess of the government's Local Housing Need figure will only be built to assist delivery of plan objectives, particularly at the two Priority Regeneration Centres or where proposals elsewhere provide particular benefits. Similarly, unplanned 'windfall' housing sites may be acceptable unless certain circumstances apply. According to Option B1, a limit on average housing growth levels will be maintained in line with the Core Strategy, at 865 homes per year. Lastly, a mix of housing tenures and sizes will be provided. Therefore, overall, a significant positive effect is likely.</p> <p>Option B2 proposes a higher Local Plan Review housing target that could, for instance, represent a 25% increase over the government's current Local Housing Need calculation. This would deliver a significant number of new homes, therefore, a significant positive effect is likely. However, this option may result in use of brownfield land, including in more rural parts of the Borough, which could lead to higher costs for developers and therefore reduced provision of affordable housing.</p>
SA 2: Services and facilities	++/-	++/--?	<p>With regard to both options, sites allocated for residential development within the Local Plan Review will be selected if they are shown to be deliverable in bringing forward essential infrastructure, such as new healthcare and schools, as well as meeting commercial or community needs. Some facilities, particularly health, are at present lagging behind in some locations. However, an increase in housing and population numbers will result in more pressure being placed on existing services and facilities, with adverse effects against this objective. Both options could result in a proportion of development occurring at unplanned 'windfall' sites. Development may therefore take place in areas with a reduced level of access to services and facilities. For Option B1, most development would likely take place in urban areas, which generally have better access to services and facilities. However, the higher level of development included in Option B2 would require a higher level of development outside of urban areas, therefore a higher proportion of development would be provided away from areas with good access to existing services and facilities and away from existing sustainable transport links. Therefore, Option B1 is likely to have a mixed significant positive and minor negative effect against this objective, whereas Option B2 is likely to have a mixed significant positive and significant negative effect. This effect is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.</p>

SA objective	Likely effect		Justification
	Option B1	Option B2	
SA 3: Community cohesion	++/-	++/--?	With regard to both options, sites allocated for residential development within the Local Plan Review will be selected if they are shown to be deliverable in bringing forward essential infrastructure, such as new healthcare and schools, as well as meeting commercial or community needs. These services could provide a focal point for community life, with positive effects on Community cohesion. Furthermore, it is assumed that larger housing developments would incorporate areas of open space, which could potentially encourage spontaneous interaction between residents with positive effects on cohesion. However, an increase in housing and population numbers will result in more pressure being placed on existing services and facilities. This would especially be the case for Option B2, due to the higher level of development included in this option. In addition, Option B2 is more likely to lead to development away from existing centres and facilities, and therefore may reduce opportunities for residents to interact with the existing community. Therefore, Option B1 is likely to have a mixed significant positive and minor negative effect on this objective, whereas Option B2 is likely to have a mixed significant positive and significant negative effect. This effect is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.
SA 4: Health and inequalities	++/-?	++/--?	With regard to both options, sites allocated for residential development within the Local Plan Review will be selected if they are shown to be deliverable in bringing forward essential infrastructure, such as new healthcare. Some facilities, particularly health, are at present lagging behind in some locations. It is assumed that larger housing sites would incorporate footpaths and possibly cycle routes that would help promote more active modes of transport and thus a healthier lifestyle. However, an increase in housing and population numbers will result in more pressure being placed on existing health services, which could have adverse effects on this objective. Furthermore, it's likely that an increase in population would also result in an increase in cars on the road, which could have negative effects on air pollution and people's health. The higher level of development included in Option B2 would require a higher level of development outside of urban areas, therefore a higher proportion of development would be provided away from areas with good access to existing services and facilities and away from existing sustainable transport links. Option B1 is likely to have a mixed significant positive and minor negative effect on this objective, whereas Option B2 is likely to have a mixed significant positive and significant negative effect. These effects are recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.
SA 5: Economy	++	++/-?	Option B1 states that existing town/local centres and employment areas will be maintained, and commercial and other uses that are well served by public transport will be intensified. This, combined with an increase in population, will have a positive effect on the economy in that there will be more employment opportunities available to people, as well as a larger pool of workers. Furthermore, Option B1 states that opportunities exist for mixed-use development at Priority Regeneration Centres, which will also contribute to the amount of employment land available within the Borough. Therefore, Option B1 is likely to have a significant positive effect on this objective.

SA objective	Likely effect		Justification
	Option B1	Option B2	
			With regard to Option B2, it is likely that the above suggestions set out in Option B1 will also apply to B2 in that existing town/local centres and employment areas will be maintained and commercial and other uses that are well served by public transport will be intensified. However, this option could lead to loss of employment land to residential uses, therefore a mixed significant positive and minor negative effect with uncertainty is expected.
SA 6: Sustainable travel	+?	+/-?	With regard to both options, it is assumed that larger housing sites would incorporate footpaths and possibly cycle routes and would also be located within close proximity to at least one means of public transport. Option B1 states that new transport infrastructure has come forward in the Borough and that looking to the future, transport infrastructure should be front loaded and materialise early on in regeneration areas, which it is assumed will also apply to Option B2. Option B1 also states that some facilities, in particular transport, are at present lagging behind in some locations. Both options could result in a proportion of development occurring at unplanned 'windfall' sites. Development may therefore take place in areas with a reduced level of access to sustainable transport links and services and facilities. For Option B1, most development would likely take place in urban areas, which generally have better access to services and facilities, including public transport. However, the higher level of development included in Option B2 would require a higher level of development outside of urban areas, which may mean a higher proportion of development takes place in areas without strong public transport links and levels of car use will be higher. Therefore, Option B1 is likely to have a minor positive effect on this objective, whereas for Option B2 this is mixed with a minor negative effect. The effect is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.
SA 7: Mineral resources	-?	-?	There are a number of Minerals Safeguarding Areas across the Borough. As such, there is potential for both Options B1 and B2 to result in development which could have an adverse impact on access to finite Mineral resources in the Borough. Therefore, uncertain minor negative effects are likely.
SA 8: Soils	++/-	++/--	Both options are expected to help promote the use of brownfield land in the Borough. For example, the Preferred Options document states that a target shall be set for a high proportion of homes to be built on brownfield land. However, considering the high number of homes to be delivered and the fact that brownfield land is finite, it is likely that a proportion of homes would have to be located on greenfield land. Furthermore, considering that Option B2 proposes a higher housing target than Option B1, it would require greater use of greenfield land. Overall, Option B1 is likely to have a mixed significant positive and minor negative effect and Option B2 is likely to have a mixed significant positive and significant negative effect on this objective.
SA 9: Water quality	-?	-?	Much of the Borough falls within various Source Protection Zones (SPZs), including Zones 1, 2 and 3. It is expected that both options would result in some level of development within the identified SPZs, which could result in risk of contamination from construction activities. A minor negative effect is therefore expected for both options. The effect for each option is uncertain given that impacts in terms of potential for new development to overburden wastewater treatment facilities are unknown.

SA objective	Likely effect		Justification
	Option B1	Option B2	
SA 10: Air pollution	+/--?	+/--?	With regard to both options, it is assumed that larger housing sites would incorporate footpaths and possibly cycle routes and would also be located within close proximity to at least one means of public transport. However, both options support the delivery of a level of growth that would have implications in terms of travel in Dartford. A proportion of trips generated from new development are likely to be made by petrol and diesel vehicles. There are a number of AQMAs within and adjacent to the Borough including along the A226, A282 and A2026, which includes Dartford town centre and its radial routes. Development which would result in increased levels of traffic along these routes is likely to exacerbate existing air quality issues. Both options could result in a proportion of development occurring at unplanned 'windfall' sites. Development may therefore take place in areas with a reduced level of access to sustainable transport links and services and facilities, which could increase use of the private car with adverse effects on air pollution. However, for Option B1, most development would likely take place in urban areas, where services and facilities are located, as well as more sustainable modes of transport. The higher level of development included in Option B2 would require a higher level of development outside of urban areas, therefore a higher proportion of development would be provided away from areas with good access to existing services and facilities. Option B2 could also lead to higher density development in Dartford town centre, therefore exacerbating issues at AQMAs. Overall, a mixed minor positive and significant negative effect is expected. The effect is uncertain considering that there is a high degree of uncertainty regarding the location of new development sites.
SA 11: Flood risk	--?	--?	Areas of the north of the Borough, towards the Thames, and from its north western corner to the south along the River Darent, fall within Flood Zones 2 and 3. Many of the northern areas of the Borough also benefit from flood defences. Both options could result in development in areas at risk of flooding, whilst also increasing the area of impermeable surfaces across the Borough. This is likely to be more pronounced for Option B2, as this option will require greater greenfield land take. Overall, a significant negative but uncertain effect is expected for Options B1 and B2.
SA 12: Climate change	+/-	+/--	Both options support the delivery of a level of growth that would have implications in terms of travel in Dartford Borough and the production of CO ₂ emissions. Furthermore, both options could result in a proportion of development occurring at unplanned 'windfall' sites despite the specific circumstances set out in the Preferred Options document. Development may therefore take place in areas with a reduced level of access to sustainable transport links and services and facilities, which could increase use of the private car and CO ₂ emissions – contributing towards climate change. This is likely to be significant for Option B2, which will require a greater proportion of development outside of existing urban areas and is therefore likely to result in greater levels of car use. Therefore, Option B1 is likely to have a mixed minor positive and minor negative effect on this objective, whereas Option B2 is likely to have a mixed minor positive and significant negative effect.
SA 13: Biodiversity	+/--?	+/--?	Option B1 would limit the potential for development of greenfield land in the Borough, which forms part of the more 'natural' ecological network. Both options focus a high proportion of growth on brownfield land, although

SA objective	Likely effect		Justification
	Option B1	Option B2	
			Option B2 would lead to greater greenfield land take, as this level of development cannot be accommodated entirely on brownfield land. It is noted that brownfield land can also have potential value for biodiversity, particularly in terms of invertebrates. Both options propose development in locations that are unknown, and which may also comprise greenfield land, particularly for Option B2. Therefore, Option B1 is likely to have a mixed minor positive and minor negative effect with uncertainty, whereas Option B2 is likely to have a mixed minor positive and significant negative effect with uncertainty.
SA 14: Historic environment	+/-?	+/--?	Options B1 and B2 would prioritise the development of brownfield land within the Borough (although greater greenfield land take would be required for Option B2), which may present opportunities to bring disused sites back into use and improve aesthetic quality and character. It is also likely that a number of homes would be located within close proximity to historic assets. Option B may also lead to higher density development in Dartford town centre, which contains a number of heritage assets, including listed buildings, a Conservation Area and an Area of Archaeological Potential. Therefore, Option B1 is likely to have a mixed minor positive and minor negative effect, whereas Option B2 is expected to have a mixed minor positive and significant positive effect. The effects are recorded as uncertain because the actual effect will depend, in part, on the design of new development which is unknown at this stage.
SA 15: Landscape	+/-?	+/--?	Options B1 and B2 would prioritise the development of brownfield land within the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and benefit in terms of townscape and landscape. However, considering the high number of homes to be delivered and the fact that brownfield land is finite, it is likely that a proportion of homes would have to be located on greenfield land and could have an adverse effect on landscape. This is likely to be significant for Option B2, as the higher level of development included in this option would require a higher level of development outside of urban areas, on greenfield land and would also likely result in higher density development in the town centre. Overall, the residential development proposed is likely to result in changes to the townscape and landscape. Therefore, Option B1 is expected to have a mixed minor positive and minor negative effect, whereas Option B2 is expected to have a minor positive and significant negative effect. The effects are recorded as uncertain because the actual effects will depend, in part, on the design of new development which is unknown at this stage.

C. Infrastructure

SA objective	Likely effect	Justification
SA 1: Housing	+/-?	It is considered likely that delivery of new infrastructure alongside development will have implications in terms of the viability of housing delivery in the plan area. It is likely that the plan could address this issue by requiring issues of viability to be considered where development is needed to make financial contributions to local infrastructure. The Preferred Policy approach states that new modelling of the economic viability of bringing forward different types of development on different types of land is to be undertaken alongside the update of CIL Charging Schedule, which should help to address this issue. It also states that an Infrastructure Funding Statement will reflect priorities on affordable housing. As such a mixed minor positive and minor negative effect is expected in relation to this SA objective. The effect is uncertain given that the potential for issues of viability to slow housing delivery will be dependent in part of the decision making of developers which is currently unknown.
SA 2: Services and facilities	++	The Preferred Policy approach would seek to allocate essential community use provision as required. Well-connected mixed-use development is to be supported to reduce the need to travel, as well as the co-location of facilities in accessible locations. Walking and cycling and securing public transport upgrades are to be supported over the plan period to achieve improved accessibility. The Preferred Policy approach also states that Community Infrastructure Levy (CIL) will be used to help support the services and infrastructure development provided in the Borough. Overall it is expected that the approach outlined would help to improve service provision and accessibility by foot and public transport as new development is delivered. This will be of particular benefit where current service provision is recognised as being relatively weak in Dartford. As such a significant positive effect is expected in relation to this SA objective.
SA 3: Community cohesion	+	The Preferred Policy approach would result in development being delivered at walkable locations, through the co-location of facilities and well-connected mixed-use development. It is likely that this approach could directly help to promote modal shift (particularly travel by active modes of transport) and encourage informal interactions between residents on a regular basis. A minor positive effect is therefore expected.
SA 4: Health and inequalities	++	The Preferred Policy approach would result in development being delivered at walkable locations, through the co-location of facilities and well-connected mixed-use development. It would also support the allocation of essential community use provision as required. Furthermore, the Local Plan is to be used to push through detailed discussions for securing the land and funding necessary for delivery of new healthcare services. CIL is to be used by the Council to help support the services and infrastructure which are required as a result of development in the Borough. It is expected that the approach outlined would help provide a high number of residents with access to existing and new services and facilities (including healthcare) and also

SA objective	Likely effect	Justification
		help to promote levels of active transport among residents. A significant positive effect is therefore expected in relation to this SA objective.
SA 5: Economy	++	A high-quality transport network is essential to support economic productivity. The Preferred Policy approach would contribute to the local partnership exploring the potential of an extension of Crossrail (the Elizabeth Line) with the aim of supporting regeneration and the creation of new jobs and increased productivity. It is likely that a high number of residents would be provided with access to employment opportunities and the town centre by sustainable modes of transport. This approach is not only likely to provide many residents with improved access to jobs in Dartford but is also likely to help improve expenditure at the town centre as residents benefit from improved access to this location. A significant positive effect is therefore expected in relation to this SA objective.
SA 6: Sustainable travel	++/-	The Preferred Policy approach would seek to allocate essential community use provision as required. Well-connected mixed-use development is to be supported to reduce the need to travel, as well as the co-location of facilities in accessible locations. Walking and cycling and securing public transport upgrades are to be supported over the plan period to achieve improved accessibility. There is support for exploring the potential of the Crossrail (the Elizabeth Line) extension to the Borough. The Preferred Policy approach also states that Community Infrastructure Levy (CIL) will be used to help support the services and infrastructure development provided in the Borough. Overall it is expected that the approach outlined would help to improve accessibility by foot and public transport as new development is delivered, thereby encouraging modal shift. The junction improvements on strategic highways and upgrades to on the local road network will help to alleviate traffic congestion, but on the other hand will facilitate car use. As such a mixed significant positive and minor negative effect is expected in relation to this SA objective.
SA 7: Mineral resources	-?	There are a number of Mineral Safeguarding Areas (MSA) across the Borough. There is potential for the provision of new services and facilities and infrastructure improvements, as supported by the Preferred Policy approach, to adversely impact access to these finite resources. A minor negative effect is therefore expected in relation to this SA objective. The negative effect is uncertain dependent upon the precise location of new development and considering that development may be provided in a manner to allow for some access to Mineral resources to remain.
SA 8: Soils	+	The Preferred Policy approach would allow for support for mixed-use development, as well as the co-location of facilities in accessible locations and the provision of multipurpose spaces. As such there is potential for the approach to reduce the need for a high amount of greenfield land to be developed in the Borough. A minor positive effect is therefore expected in relation to this SA objective.
SA 9: Water quality	-?	Much of the Borough falls within various Source Protection Zones (SPZ), including Zones 1, 2 and 3. It is expected that development for service provision and the delivery of new infrastructure at many locations in the Borough could result in risk of contamination from construction activities and activities once development is functional. A minor negative effect is therefore expected in relation to this SA objective. The negative effect is uncertain given that impacts in terms of potential for new development to overburden wastewater treatment facilities are unknown.

SA objective	Likely effect	Justification
SA 10: Air pollution	++/-	The Preferred Policy approach would seek to allocate essential community use provision as required. Well-connected mixed-use development is to be supported to reduce the need to travel, as well as the co-location of facilities in accessible locations. Walking and cycling and securing public transport upgrades are to be supported over the plan period to achieve improved accessibility. There is support for exploring the potential of the Crossrail (the Elizabeth Line) extension to the Borough. The Preferred Policy approach also states that Community Infrastructure Levy (CIL) will be used to help support the services and infrastructure development provided in the Borough. Overall it is expected that the approach outlined would help to improve accessibility by foot and public transport as new development is delivered, thereby encouraging modal shift. However, the Preferred Policy approach also supports some infrastructure which could accommodate a larger number of private vehicles journeys in the plan area. Measures such as local road network improvements and new highway schemes including the Lower Thames Crossing (which is outside the Borough, but is intended to relieve congestion associated with the Dartford Crossing) and upgrades to the A2 could help alleviate congestion but could also reduce the potential for achieving modal shift. As such a mixed significant positive and minor negative effect is expected in relation to this SA objective.
SA 11: Flood risk	++	The Preferred Policy approach would require that new development is designed to realise the flood defence strategy for the Borough. Furthermore, in order to accommodate the TE2100 plan for Flood risk the plan would protect the Dartford Marshes development through Green Belt policy as well as land at Long Reach, which may be needed for a new Thames Barrier. The Preferred Policy approach is also to consider riparian design principles to safeguard areas around the existing flood defences for future improvements. As such a significant positive effect is expected in relation to this SA objective.
SA 12: Climate change	++/-	The Preferred Policy approach would seek to allocate essential community use provision as required. Well-connected mixed-use development is to be supported to reduce the need to travel, as well as the co-location of facilities in accessible locations. Walking and cycling and securing public transport upgrades are to be supported over the plan period to achieve improved accessibility. The extension of Crossrail (the Elizabeth Line) is continued to be explored through the support of the Local Plan. The Preferred Policy approach states that Community Infrastructure Levy (CIL) will be used to help support the services and infrastructure development provided in the Borough. It would also support the incorporation of electric vehicle charging infrastructure at new development. Overall it is expected that the approach outlined would help to improve accessibility by sustainable transport options as new development is delivered. However, the Preferred Policy approach also supports some infrastructure which could accommodate a larger number of private vehicles journeys in the plan area. These measures include local road network improvements and new highway schemes including the Lower Thames Crossing (which is outside the Borough, but is intended to relieve congestion associated with the Dartford Crossing) and upgrades to the A2 which could reduce the potential for achieving modal shift. As such a mixed significant positive and minor negative effect is expected in relation to this SA objective.
SA 13: Biodiversity	+/--	The approach outlined would result in the continued protection of the Dartford Marshes through Green Belt policy. Policy is also to be considered for riparian design principles to safeguard areas around the existing flood defences. These areas provide opportunities for habitat space, with the Dartford Marshes, for example, already designated as a Designated Local Wildlife Site. It is expected that the delivery of new services and facilities as well as transport infrastructure has the potential to disrupt habitat connectivity as well as causing disturbance as a result of increased noise and light. More significant schemes

SA objective	Likely effect	Justification
		to be supported through the plan could include the Lower Thames Crossing (which is outside the Borough, but is intended to relieve congestion associated with the Dartford Crossing) and upgrades to the A2, as well as the potential for the extension of Crossrail. As such a mix minor positive and significant negative effect is expected in relation to this SA objective.
SA 14: Historic environment	--?	Considering that impacts on the historic environment will be dependent in part on the design of new development which is unknown at this stage the effect recorded for this SA objective is uncertain. Infrastructure improvements in the Borough have the potential to adversely impact upon the existing character of the Dartford as well as the setting of specific heritage assets. More significant schemes to be supported through the plan could include upgrades to the A2, as well as the potential for the extension of Crossrail. These have the potential to affect historic assets such as the listed Swanscombe Cutting Footbridge, Springhead Roman site Scheduled Monument (adjacent to the A2 at Ebbsfleet) and areas of archaeological potential. As such a negative effect is expected in relation to this SA objective.
SA 15: Landscape	+/-?	Impacts on the landscape and townscape in the Borough will be dependent in part on the design of new development, which is unknown at this stage. As such the effect recorded is uncertain. The Preferred Policy approach would support large scale infrastructure improvements such as upgrades to the A2, as well as the potential for the extension of Crossrail. There is potential for infrastructure of this type to impact upon landscape setting and the established character of Dartford. The Preferred Policy approach would however support the protection of areas such as the Dartford Marshes from new development through Green Belt policy, thereby preserving the existing character of this mostly undeveloped area. A mixed minor positive and minor negative effect with uncertainty is therefore expected.

D. Town Centres and Retailing

Preferred Approach D1: Dartford Town Centre and Town Centre Regeneration Locations

Preferred Approach D2: Borough-wide and Bluewater

For clarification, these are two parts of a single Preferred Approach, rather than alternative options.

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
SA 1: Housing	++	+	Preferred Approach D1 is a mixed-use redevelopment that includes new residential development, increasing local expenditure. Dartford Town Centre includes two purpose built indoor shopping centres – the Orchards Shopping Centre and the Priory Shopping Centre. These have both been assessed in the draft SHLAA and found to be suitable for mixed use including significant new residential. Additionally, the Hythe Street and

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			<p>Kent Road site within the Town Centre has been identified for residential development. Therefore, a significant positive effect is expected.</p> <p>With regard to Preferred Approach D2, it is stated that it is anticipated that the retail centres shall retain shop uses and appropriate leisure and cultural uses, with flexibility to secure additional residential spaces and there may be opportunities for other types of development within Bluewater, i.e. residential, sports/ outdoor recreation and small-scale employment. Therefore, minor positive uncertain effects are expected.</p>
SA 2: Services and facilities	++/-?	+/-	<p>For the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to provide new business premises and retail, leisure and cultural services to complement the attractions of the Town Centre and encourage uses which improve the evening economy. Preferred Approach D1 states that it will seek to secure an appropriate mix of uses, set policy for the future management of change in order to enhance movement and linkages between Dartford Town Centre and adjoining areas, particularly across the railway line and along the River Darent. The River Darent provides opportunities for walking, supporting the achievement of the movement objectives in the Dartford Town Centre Framework SPD. Additionally, Dartford Town Centre includes two purpose built indoor shopping centres – the Orchards Shopping Centre and the Priory Shopping Centre. They can continue town centre regeneration by following on from and integrating with current redevelopments e.g. Priory Centre and the under construction Lowfield Street scheme. A new network of streets and routes for pedestrians linking new and recent developments will be encouraged and will feature public spaces and focal points for the Town Centre. This could integrate both recent development and new communities with the Town Centre, and neighbourhoods in Temple Hill and Newtown with the Town Centre. Network Rail indicated that there may be an opportunity to build a new Dartford station. No details have emerged as of yet, but this could provide significant opportunities for development, especially at the Station Quarter site and at Prospect Place. However, delivering additional growth, including a hotel, food and drink premises and homes may result in the overburdening of existing services and facilities particularly in the short term. As such, it is assumed that this site would have a mixed significant positive effect and minor negative effect with uncertainty on this objective.</p> <p>With regard to Preferred Approach D2, an appropriate type and level of new retail and leisure floorspace, guided by the Dartford Retail & Leisure Study, will be achieved through mixed use, repurposing of premises or other development within the centres, increasing the amount of services and facilities within the Borough. Additionally, existing Bluewater policy is to maintain a distinct role from nearby Town Centres, and to continue to promote its physical integration with growing communities. Connections with surrounding areas will be significantly enhanced with the opening of the Fastrack and pedestrian/cycling direct link to Ebbsfleet/ Eastern Quarry in 2021. Building on this, a shift in transport modes, away from private car use, will be sought at Bluewater through further measures. However, in the short term it is likely that residents</p>

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			will continue to travel by private car intensifying congestion problems. As such, mixed minor positive and minor negative effects are expected against Preferred Approach D2.
SA 3: Community cohesion	++/-?	+/-	<p>Preferred Approach D1 aims to create new spaces and places, including open streets and squares, integrated within the town's historic fabric, to generate a high-quality environment attractive and safe for pedestrians, and a town that is clear and easy to move around. By providing a mixed-use redevelopment as part of Preferred Approach D1, it is likely that new residents would be provided with access to a wide range of existing and new, services and facilities including a new primary care health-hub, cultural floorspace, leisure uses and a public square, as well as good public transport links. For the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to enhance movement and linkages between Dartford Town Centre and adjoining areas, particularly across the railway line and along the River Darent. The River Darent provides opportunities for walking, supporting the achievement of the movement objectives in the Dartford Town Centre Framework SPD. A new network of streets and routes for pedestrians linking new and recent developments should result and feature public spaces and focal points for the Town Centre. This could integrate both recent development and new communities with the Town Centre, and neighbourhoods in Temple Hill and Newtown with the Town Centre. However, delivering additional growth, including a hotel, food and drink premises and homes may result in the overburdening of existing services and facilities particularly in the short term. As such, it is assumed that this site would have a mixed significant positive effect and minor negative effect with uncertainty on this objective.</p> <p>With regard to Preferred Approach D2, it states that the 'town centres first' approach will continue when retail is proposed in harmful locations, i.e. outside Dartford Town Centre and Bluewater and other applicable centres in the shopping network which could increase public transport use as Dartford Town Centre is well located. An appropriate type and level of new retail and leisure floorspace, guided by the Dartford Retail & Leisure Study, will be achieved through mixed use, repurposing of premises or other development within the centres which could become focal points of the Borough and increase Community cohesion. Existing Bluewater policy is to maintain a distinct role from nearby Town Centres, and to continue to promote its physical integration with growing communities. Connections with surrounding areas will be significantly enhanced on opening of the Fastrack and pedestrian/cycling direct link to Ebbsfleet/ Eastern Quarry in 2021. Building on this, a shift in transport modes, away from private car use, will be sought at Bluewater through further measures. However, in the short term it is likely that residents will continue to travel by private car intensifying congestion problems. As such, mixed minor positive and minor negative effects are expected against Preferred Approach D2.</p>

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
SA 4: Health and inequalities	++/-	+/-	<p>The Town Centre lies within the 10 to 30% most deprived areas nationally. As such, regeneration of this area, through Preferred Approach D1, aims to provide new residents with access to a wide range of existing and new, services and facilities, including a new primary care health-hub, cultural floorspace, leisure uses and a public square. Additionally, there are open spaces within close proximity to the Town Centre, which may provide opportunities for outdoor recreation and social interaction. Being in close proximity to existing services and facilities could also encourage residents to travel by foot or bike, therefore encouraging active lifestyles. For the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to enhance movement and linkages between Dartford Town Centre and adjoining areas, particularly across the railway line and along the River Darent. The River Darent provides opportunities for walking, supporting the achievement of the movement objectives in the Dartford Town Centre Framework SPD. Additionally, Dartford Town Centre includes two purpose built indoor shopping centres – the Orchards Shopping Centre and the Priory Shopping Centre. They can continue town centre regeneration by following on from and integrating with current redevelopments e.g. Priory Centre and the under construction Lowfield Street scheme. A new network of streets and routes for pedestrians linking new and recent developments will be encouraged and will feature public spaces and focal points for the Town Centre. This could integrate both recent development and new communities with the Town Centre, and neighbourhoods in Temple Hill and Newtown with the Town Centre. However, delivering additional growth, including a hotel, food and drink premises and homes may result in the overburdening of existing services and facilities particularly in the short term. As such, Preferred Approach D1 is assumed to have a mixed significant positive and minor negative effect.</p> <p>With regard to Preferred Approach D2, it states that the ‘town centres first’ approach will continue when retail is proposed in harmful locations, i.e. outside Dartford Town Centre and Bluewater and other applicable centres in the shopping network which could increase public transport use as Dartford Town Centre is well located. Existing Bluewater policy is to maintain a distinct role from nearby Town Centres, and to continue to promote its physical integration with growing communities. Connections with surrounding areas will be significantly enhanced on opening of the Fastrack and pedestrian/cycling direct link to Ebbsfleet/ Eastern Quarry in 2021. Building on this, a shift in transport modes, away from private car use, will be sought at Bluewater through further measures. However, in the short term it is likely that residents will continue to travel by private car intensifying congestion problems. As such, mixed minor positive and minor negative effects are expected against Preferred Approach D2.</p>
SA 5: Economy	++/-?	++/-?	By allowing for mixed use redevelopment in Dartford Town Centre, Preferred Approach D1 provides new business premises and retail, leisure and cultural services to complement the attractions of the Town Centre

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			<p>and encourages uses which improve the evening economy and a boost to local expenditure on shops and services through injecting new residents into an area with a limited resident population. As such the vitality and viability of the Town Centre is likely to be supported. Preferred Approach D1 encourages the delivery of suitable transformative proposals to update or remodel retail and leisure at Priory and Orchards Shopping Centres and Prospect Place, particularly to fulfil shopping, mixed use and movement / transport aims. It also seeks the provision of buildings which are flexible in order to meet the rapidly changing needs of the retail sector. Additionally, the Hythe Street and Kent Road site will be central to transforming Dartford Town Centre's evening economy by providing leisure uses, a new primary health hub and a new public square.</p> <p>It is recognised however that the additional growth supported in the Town Centre could have adverse impacts in terms of disruption to local character and transport which could have negative implications in terms of the Town Centre economy. However, Preferred Approach D1 states Town Centre development should create places where the town's heritage (and traditional activities such as the street market) are respected whilst responding to modern day needs and lifestyles. Preferred Approach D1 aims to create mixed redevelopment which could adversely impact current businesses that may be evicted to accommodate regeneration and diversification. As such, mixed significant positive and minor negative effects with uncertainty are expected.</p> <p>Preferred Approach D2 is likely to have a significant positive effect on this objective as it aims to make Bluewater Shopping Centre into a typical Town Centre with a mix of activities. This approach would increase visitors to the area and provide additional jobs within the area. Also, an appropriate type and level of new retail and leisure floorspace, guided by the Dartford Retail & Leisure Study, will be achieved through mixed use, repurposing of premises or other development within the centres. It is anticipated the centres shall retain shop uses and accommodate further eating out and appropriate leisure and cultural uses, with flexibility to secure additional residential, community services and business spaces. It is recognised however that the additional growth could have adverse impacts in terms of disruption to transport which could have negative implications in terms of the local economy. Therefore, a minor negative effect is also expected with uncertainty.</p>
SA 6: Sustainable travel	++/-?	+/-?	By allowing for a redevelopment in Dartford Town Centre through Preferred Approach D1, it is likely that new and existing residents would be provided with access to a wide range of existing services and facilities, such as leisure facilities and a new primary care health hub, as well as employment opportunities, as well as good public transport links. A high level of growth in the Town Centre is likely to encourage journeys to be made by more sustainable modes of transport considering the shorter travel times involved. For the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to enhance movement and linkages between Dartford Town Centre and

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			<p>adjoining areas, particularly across the railway line and along the River Darent. The River Darent provides opportunities for walking, supporting the achievement of the movement objectives in the Dartford Town Centre Framework SPD. A new network of streets and routes for pedestrians linking new and recent developments should result and feature public spaces and focal points for the Town Centre. This could integrate both recent development and new communities with the Town Centre, and neighbourhoods in Temple Hill and Newtown with the Town Centre. Network Rail indicated that there may be an opportunity to build a new Dartford station. No details have emerged as of yet, but this could provide significant opportunities for development, especially at the Station Quarter site and at Prospect Place. Additionally, it is stated in Preferred Approach D1 that it aims to accommodate new development in a highly sustainable location, with direct benefits to local transport, generate a high-quality environment attractive and safe for pedestrians and a town that is clear and easy to move around in. However, allowing for additional growth could result in issues of over capacity of existing public transport services, particularly in the short term as well as congestion problems as some new resident will continue to travel by private car. Additionally, as the Town Centre already has limited facilities, new residents may need to drive to facilities outside of the town increasing the use of private vehicle in the short term. As such, mixed significant positive and minor negative effects with uncertainty is expected against Preferred Approach D1.</p> <p>With regard to Preferred Approach D2, it states that the 'town centres first' approach will continue when retail is proposed in harmful locations, i.e. outside Dartford Town Centre and Bluewater and other applicable centres in the shopping network which could increase public transport use as Dartford Town Centre is well located. Existing Bluewater policy is to maintain a distinct role from nearby Town Centres, and to continue to promote its physical integration with growing communities. Connections with surrounding areas will be significantly enhanced on opening of the Fastrack and pedestrian/cycling direct link to Ebbsfleet/ Eastern Quarry in 2021. Building on this, a shift in transport modes, away from private car use, will be sought at Bluewater through further measures. However, in the short term it is likely that residents will continue to travel by private car intensifying congestion problems. As such, mixed minor positive and minor negative effects are expected with uncertainty.</p>
SA 7: Mineral resources	-?	-?	Preferred Approaches D1 and D2 proposes residential and employment development within the Town Centre of Dartford and Borough-wide, Mineral Safeguarding Areas exist throughout the Borough and part of the southern section of the Town Centre lies within a Mineral Safeguarding Area (MSA), as such there is potential for these approaches to result in development that could have an adverse impact on access to finite Mineral resources. Overall, a minor negative but uncertain effect is expected.
SA 8: Soils	++	-	Preferred Approach D1 aims to create major mixed-use brownfield regeneration within Dartford Town Centre which could have a significant positive effect on Preferred Approach D1.

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			With regard to Preferred Approach D2, Bluewater contains mostly previously developed land, however there are patches of greenfield and greenspace that are scattered throughout the site. If additional development is to come forward at Bluewater or throughout the Borough it is possible for it to use greenfield land. Therefore, a minor negative effect is expected.
SA 9: Water quality	-	-	Much of the Borough (including parts of the Town Centre) falls within various Source Protection Zones (SPZ), including Zone 1, Zone 2 and Zone 3. The Town Centre falls within Zones 1 and 2. It is expected that development at this location could result in risk of contamination from construction activities. A minor negative effect is expected. Bluewater does not lie within a Source Protection Zone, however as Preferred Approach D2 also includes Borough wide locations a minor negative effect is expected as much of the Borough falls within various Source Protection Zones. As such, minor negative effects are expected.
SA 10: Air pollution	++/-?	+/-?	Dartford Town Centre lies within the Dartford Town Centre AQMA. It is likely that new and existing residents and workers, through Preferred Approach D1, would be provided with access to a wide range of existing and new, services and facilities, including a new primary care health-hub, cultural floorspace, leisure uses and a public square. For the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to enhance movement and linkages between Dartford Town Centre and adjoining areas, particularly across the railway line and along the River Darent. The River Darent provides opportunities for walking, supporting the achievement of the movement objectives in the Dartford Town Centre Framework SPD. A new network of streets and routes for pedestrians linking new and recent developments should result and feature public spaces and focal points for the Town Centre. Additionally, it is stated in Preferred Approach D1 that it aims to accommodate new development in a highly sustainable location, with direct benefits to local transport, generate a high-quality environment attractive and safe for pedestrians and a town that is clear and easy to move around in. However, allowing for additional growth could result in issues of over capacity of existing public transport services, particularly in the short term as well as congestion problems within the AQMA as some residents and workers will continue to travel by private car. Therefore, mixed significant positive and minor negative effects are expected with uncertainty for Preferred Approach D1. With regard to Preferred Approach D2, it states that the 'town centres first' approach will continue when retail is proposed in harmful locations, i.e. outside Dartford Town Centre and Bluewater and other applicable centres in the shopping network which could increase public transport use as Dartford Town Centre is well located. Existing Bluewater policy is to maintain a distinct role from nearby Town Centres, and to continue to promote its physical integration with growing communities. Connections with surrounding areas will be significantly enhanced on opening of the Fastrack and pedestrian/cycling direct link to Ebbsfleet/ Eastern

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			Quarry in 2021. Building on this, a shift in transport modes, away from private car use, will be sought at Bluewater through further measures. However, in the short term it is likely that residents will continue to travel by private car intensifying congestion problems. To access the site, it is likely that residents and workers will take London Road which is part of the Dartford Town Centre AQMA. Additionally, A296 may be used to access the site and it leads into the AQMA. As such, mixed minor positive and minor negative effects are expected with uncertainty against Preferred Approach D2.
SA 11: Flood risk	--?	?	<p>Sections of Dartford Town Centre lie within Flood Zones 2 and 3. However, Preferred Approach D1 will ensure that development takes into account Flood risk and the area benefits from flooding defences. As Flood risk is likely to increase due to climate related effects the redevelopment of the Town Centre will need to be carefully designed to ensure residents and businesses are not adversely affected. As such, a significant negative effect with uncertainty is expected.</p> <p>Preferred Approach D2 notes that changes at Bluewater will need to consider further assessment of to transport impacts and the local environment, including the maintenance of all key aspects Bluewater's landscape setting, cliff faces and water features. Bluewater currently lies within Flood Zone 1, however parts of the Borough along the River Darent lie within Flood Zones 2 and 3 and could become developed through this Preferred Approach , therefore an uncertain significant negative effect is expected.</p>
SA 12: Climate change	++/-?	+/-?	By allowing for a redevelopment in Dartford Town Centre through Preferred Approach D1, it is likely that new and existing residents would be provided with access to a wide range of existing services and facilities, such as leisure facilities and a new primary care health hub, as well as employment opportunities, as well as good public transport links. A high level of growth in the Town Centre is likely to encourage journeys to be made by more sustainable modes of transport considering the shorter travel times involved. For the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to enhance movement and linkages between Dartford Town Centre and adjoining areas, particularly across the railway line and along the River Darent. The River Darent provides opportunities for walking, supporting the achievement of the movement objectives in the Dartford Town Centre Framework SPD. A new network of streets and routes for pedestrians linking new and recent developments should result and feature public spaces and focal points for the Town Centre. Additionally, it is stated in Preferred Approach D1 that it aims to accommodate new development in a highly sustainable location, with direct benefits to local transport, generate a high-quality environment attractive and safe for pedestrians and a town that is clear and easy to move around in. Network Rail indicated that there may be an opportunity to build a new Dartford station. No details have emerged as of yet, but this could provide significant opportunities for development, especially at the Station Quarter site and at Prospect Place. However, allowing for additional growth could result in issues of over capacity of existing public transport

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			<p>services, particularly in the short term as well as congestion problems as some new resident will continue to travel by private car. Additionally, as the Town Centre already has limited facilities, new residents may need to drive to facilities outside of the town increasing the use of private vehicle in the short term. As such, mixed significant positive and minor negative effects with uncertainty is expected against Preferred Approach D1.</p> <p>With regard to Preferred Approach D2, it states that the 'town centres first' approach will continue when retail is proposed in harmful locations, i.e. outside Dartford Town Centre and Bluewater and other applicable centres in the shopping network which could increase public transport use as Dartford Town Centre is well located. Existing Bluewater policy is to maintain a distinct role from nearby Town Centres, and to continue to promote its physical integration with growing communities. Connections with surrounding areas will be significantly enhanced on opening of the Fastrack and pedestrian/cycling direct link to Ebbsfleet/ Eastern Quarry in 2021. Building on this, a shift in transport modes, away from private car use, will be sought at Bluewater through further measures. However, in the short term it is likely that residents will continue to travel by private car intensifying congestion problems. As such, mixed minor positive and minor negative effects are expected with uncertainty.</p>
SA 13: Biodiversity	+/-	-?	<p>With regard to Preferred Approach D1, for the Town Centre, the Local Plan Review will build on existing proposals and investment to set policy for the future management of change in order to secure rejuvenation of land and spaces not fulfilling its potential as part of the Town Centre; taking advantage of the ability of the area to accommodate new development in a very highly sustainable location, with direct and significant benefits to the Town Centre, transport and local environment. This includes creating a new public square which could provide greenspace within the Town Centre creating new habitats for local biodiversity. Additionally, the River Darent provides significant opportunities for environmental enhancements.</p> <p>The Town Centre lies partially within the Biodiversity Opportunity Area – Thames-side Green Corridor. As such, construction in the Town Centre could adversely affect the aims of the opportunity area. Most of the regeneration is expected to provide major mixed-use brownfield regeneration. Whilst brownfield sites can have high biodiversity value, brownfield Town Centre sites are considered less likely to have biodiversity value than more rural sites, effects are uncertain at this stage until more information is known about the potential for the brownfield land to support habitats and species of biodiversity importance. As such, mixed minor positive and minor negative effects are expected against both Preferred Approaches.</p> <p>Preferred Approach D2 could have adverse effects on local biodiversity through the creation of Town Centre mix of activities if greenspace and green infrastructure are not considered within the design and layout, especially if greenfield land is developed on. It is noted that changes at Bluewater, will need to consider further assessment of the local environment, including maintaining all key aspects of Bluewater's landscape</p>

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			setting, which includes cliff faces and water features. As such, minor negative effects with uncertainty are expected.
SA 14: Historic environment	+/--?	+/--?	The Local Plan Review will set out that the approach to the Town Centre, Preferred Approach D1, is a key part of the positive strategy for the conservation and enjoyment of the historic environment in the Borough. The Town Centre lies within Dartford Town Centre Conservation Area, which contains multiple Grade II Listed Buildings as well as two Grade II* and one Grade I Listed Building. The site areas of archaeological significance. There is therefore the potential for significant negative effects to occur through with respect to these historic assets, including their setting. Preferred Approach D1 states that heritage assets are an irreplaceable resource and proposals will need to be justified with an assessment of the impacts of proposals affecting heritage assets or their setting and need to take into account the significance of the assets. It states that it will ensure that development is sensitively designed in reflecting the town's unique historic character. Development, if carefully, designed, could enhance the setting of existing historic assets. As such, uncertain significant negative with minor positive effects are expected against Preferred Approach D1. With regard to Preferred Approach D2, Bluewater is unlikely to affect the historic environment as it is located on an isolated area of land. There is a Grade II Listed Building within 300m of the site, so construction could adversely affect the heritage asset, although Bluewater is within a quarry, set down from the listed building. Development of the area, if carefully, designed, could enhance the setting. Additionally, as a 'town centres first' approach is being accepted it is likely that heritage assets could be adversely affected. Although most district and neighbourhood centres do not include conservation areas or listed buildings, in some areas development could affect designated and non-designated heritage assets. Development, if carefully, designed, could enhance the setting of existing historic assets. Therefore, mixed uncertain significant negative and minor positive effects are expected.
SA 15: Landscape	+/-?	+/-?	<p>Redevelopment has the potential to have an adverse impact in terms of the established character of the Town Centre. The area does not contain any designated landscapes, but there is potential for the established character of the Dartford Town Centre Conservation Area to be adversely affected. However, redevelopment could have positive effects if green infrastructure is employed and is sensitively designed, especially as the redevelopment aims to be on brownfield land, however uncertainty is attached depending on the specific design of the redevelopment through Preferred Approach D1. As such, minor positive and minor negative effects with uncertainty are expected against Preferred Approach D1.</p> <p>It is noted that changes at Bluewater under Preferred Approach D2 will need to consider further assessment of the local environment, including maintaining all key aspects of Bluewater's landscape setting, which includes cliff faces and water features. Additionally, as a 'town centres first' approach is being accepted it is likely that landscapes will not be harmed, however this is a Borough-wide Preferred Approach therefore</p>

SA objective	Likely effect		Justification
	Preferred Approach D1	Preferred Approach D2	
			development could have an adverse impact on the established character of the townscape and landscape within the Borough. As such, mixed minor positive and minor negative effects with uncertainty are expected.

E. Ebbsfleet Garden City

SA objective	Likely Effect	Justification
SA 1: Housing	++?	<p>Ebbsfleet Central is expected to develop over 3,000 dwellings over time, therefore the Preferred Policy Approach would help address Dartford Borough's housing need through the provision of residential units, as part of the proposed mixed-use development scheme adjacent to Ebbsfleet International Station. It would help address Dartford Borough's housing need through the provision of residential units at Ebbsfleet Central, which is a new mixed-use site. A significant positive effect is therefore expected for this SA objective for this Preferred Policy Approach as it is not solely focused on residential development. The effect is recorded as uncertain because it is unknown how much housing would actually be delivered.</p>
SA 2: Services and facilities	++	<p>The Preferred Policy approach will support neighbourhoods that are efficiently designed to make best use of land for quality homes and greenspaces. Also, a network of waterscapes and green corridors and major new public open spaces and parks will be provided as a defining feature for the Ebbsfleet area. Additionally, the approach will make best use, or contribute to the extension, of investment in public transport, particularly Fastrack and rail services; with a well-designed walking and cycling network. At Eastern Quarry, it will support the delivery of the Fastrack link to Bluewater which must be a central part of all proposals. At Ebbsfleet Central, the approach will aim to create a dynamic city centre mix of uses including employment, health, leisure, education, residential, restaurants/bars, and retail; with the potential for a centre of excellence for medical, education and learning purposes. A significant positive effect is therefore expected for this SA objective as the approach aims to provide a level of services and facilities to help support new and growing communities.</p>
SA 3: Community cohesion	++?	<p>The Preferred Policy approach is that all development should contribute towards the sustainable development themes of quality neighbourhoods, healthy environments, a civic community, connected people and places and an enterprising economy. Development for high quality new communities and open space provision and supporting infrastructure will be supported in Ebbsfleet Garden City, in line with The Ebbsfleet Implementation Framework. At Ebbsfleet Central, the Preferred Policy approach aims to create a dynamic city centre mix of uses including employment, health, leisure, education, residential, restaurants/bars, and retail; with the potential for a centre of excellence for medical, education and learning purposes. This will include approximately 30,000sqm of community uses. As such, the area could act as a focal point for the community and increase interaction between residents. Overall, a significant positive effect is expected for this SA objective. However, it is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development.</p>

SA objective	Likely Effect	Justification
SA 4: Health and inequalities	++?	<p>The approach is to support neighbourhoods that are efficiently designed to make best use of land for quality homes and greenspaces. Also, a network of waterscapes and green corridors and major new public open spaces and parks will be provided as a defining feature for the Ebbsfleet area. It will make best use, or contribute to the extension, of investment in public transport, particularly Fastrack and rail services; with a well-designed walking and cycling network, which have positive implications on health and wellbeing. At Ebbsfleet Central, the Preferred Policy approach aims to create a dynamic city centre mix of uses including employment, health, leisure, education, residential, restaurants/bars, and retail; with the potential for a centre of excellence for medical, education and learning purposes which would have beneficial effects on people’s health and wellbeing – either through the provision of primary care services or the facilitation of physical exercise. With regard to Swanscombe Peninsula, the approach aims to direct development away from, and help to facilitate, the proposed estuarine ecological park (expected to be from Black Duck Marsh north-eastwards to the tip of the peninsula and adjoining land). The ecological park would promote outdoor recreation and connecting with nature and help contribute towards a healthy lifestyle. A significant positive effect is expected for this SA objective. However, it is recorded as uncertain because the actual effect will depend on the design, scale and layout of the final development, and successful delivery of the aspiration regarding the centre of excellence and ecological park.</p>
SA 5: Economy	++	<p>The Preferred Policy approach supports a focus on mixed use provision and new services and jobs at identified local centres and (particularly) Ebbsfleet Central. At Ebbsfleet Central, the Preferred Policy approach aims to create a dynamic city centre mix of uses including employment, health, leisure, education, residential, restaurants/bars, and retail; with the potential for a centre of excellence for medical, education and learning purposes. This will include approximately 30,000sqm of community uses; and 12,500 sqm of retail and approximately 100,000sqm of business, principally office development. It aims to be a focal centre of community and activity complimentary to the offer provided at Dartford and Gravesend Town Centres and Bluewater. Additionally, the Preferred Policy approach will make best use, or contribute to the extension, of investment in public transport, particularly Fastrack and rail services; with a well-designed walking and cycling network, all which would increase connectivity and accessibility for workers to get to their jobs. The aims of the Preferred Policy approach regarding the Swanscombe Peninsula are to retain local jobs and enhance local employment opportunities, including the ecological park which would incorporate employment uses and therefore generate a high number of jobs. A significant positive effect is expected for this SA objective.</p>

SA objective	Likely Effect	Justification
SA 6: Sustainable travel	++/-?	<p>The location of this Preferred Policy Approach next to Ebbsfleet International Station would have a beneficial effect on this SA objective because it would encourage use of the train, which is a sustainable mode of transport. The Preferred Policy approach will make best use, or contribute to the extension, of investment in public transport, particularly Fastrack and rail services; with a well-designed walking and cycling network, which is likely to reduce the number of journeys made by car. At Eastern Quarry, it will support the delivery of the Fastrack link to Bluewater which must be a central part of all proposals. At Ebbsfleet Central, the Preferred Policy approach aims to create a transport hub, providing ease of interchange between services at Ebbsfleet International and Northfleet stations, and Fastrack and local buses, with major enhancements to walking and cycling connections. Development would be designed and phased not to preclude a Crossrail (Elizabeth Line) extension terminus. Additionally, proposals within Swanscombe Peninsula should achieve major Fastrack and/ or Swanscombe rail station upgrades, and regeneration of and high-quality linkages with Swanscombe town. Despite this, it's likely that this large-scale development would result in an increase in use of the private car for those wanting to travel to places other than those served by the bus and train routes, especially in the short term. A mixed significant positive and minor negative effect is therefore expected for this SA objective; however, uncertainty is attached until such a time that site layout and design is known.</p>
SA 7: Mineral resources	--?	<p>The easternmost part of the Ebbsfleet Central site, along the river, is within a number of Minerals Safeguarding Areas. As such, there is potential for this Preferred Policy Approach to result in development which could have an adverse effect on access to finite Mineral resources within the Borough. Additionally, Swanscombe Peninsula falls within a Minerals Safeguarding Area. As such, a significant negative is expected, but this is uncertain as there is a possibility that development could avoid this area or that the minerals could be worked prior to development of the site.</p>

SA objective	Likely Effect	Justification
SA 8: Soils	+/-?	Most of the Ebbsfleet Central site is classed as urban land in the agricultural land classification. In addition, the site includes car parking and other previously developed land around Ebbsfleet station, although it is uncertain whether these would be subject to a change of use. There is a small area in the south of the site that is designated as Grade 2 agricultural land; therefore, it is possible that development proposed could result in a loss of Dartford Borough's Best and Most Versatile Agricultural Land. As set out in the Agricultural Land Classification, Swanscombe Peninsula is comprised of 'Urban' land. However, although the Peninsula contains a small number of industrial estates and quarried land, a large proportion of the site remains undeveloped. Whilst development would lead to loss of some greenfield land, it would also enable contaminated land to be remediated. Development on Swanscombe Peninsula is expected to be focused on brownfield land in the south/ centre of the Peninsula (predominantly west of High-Speed rail/ tunnel) and to the north of Swanscombe Town/ Ebbsfleet Central area. The Preferred Policy approach states that development will only be located on brownfield land or, if necessary, on the least sensitive locations. Therefore, a mixed minor positive and minor negative effect with uncertainty is expected as the exact location, design and scale are unknown.
SA 9: Water quality	-	Ebbsfleet central area falls within Source Protection Zones (SPZs) 1, 2 and 3 and a large proportion of Swanscombe Peninsula falls within Source Protection Zone (SPZ) 3. It is therefore likely that this approach would result in some level of development in an SPZ. A minor negative effect is expected.
SA 10: Air pollution	++/-?	The location of this area next to Ebbsfleet International Station would have a beneficial effect on this SA objective because it would encourage use of the train, which is a sustainable mode of transport. The approach will make best use, or contribute to the extension, of investment in public transport, particularly Fastrack and rail services; with a well-designed walking and cycling network, which is likely to reduce the number of journeys made by car. At Eastern Quarry, it will support the delivery of the Fastrack link to Bluewater which must be a central part of all proposals. At Ebbsfleet Central, the aim is to create a transport hub, providing ease of interchange between services at Ebbsfleet International and Northfleet stations, and Fastrack and local buses, with major enhancements to walking and cycling connections. Development would be designed and phased not to preclude a Crossrail (Elizabeth Line) extension terminus. Additionally, proposals within Swanscombe Peninsula should achieve major Fastrack and/ or Swanscombe rail station upgrades, and regeneration of and high-quality linkages with Swanscombe town. Despite this, it's likely that this large-scale development would result in an increase in use of the private car for those wanting to travel to places other than those served by the bus and train routes. Also, the large-scale development proposed

SA objective	Likely Effect	Justification
		<p>would encourage in-commuting and there is potential for this Preferred Policy Approach to generate traffic along AQMA corridors, particularly the London Road AQMA, which would exacerbate air pollution issues. The Preferred Policy approach also supports development that is unified with the existing environment, planned around Ebbsfleet's unique landscapes, lakes, riverside and topography and cultural heritage. It will support neighbourhoods that are efficiently designed to make best use of land for quality homes and greenspaces. Also, a network of waterscapes and green corridors will be provided, which act as carbon sinks.</p> <p>A mixed significant positive and minor negative effect is therefore expected for this SA objective; however, uncertainty is attached until such a time that site layout and design is known.</p>
SA 11: Flood risk	+/-?	<p>A small area around Ebbsfleet International Station and along the river falls within Flood Zones 2 and 3 and Swanscombe Peninsula falls within Flood Zones 2 and 3 and includes some marshland. However, most of the area at risk of flooding benefits from flood defences. As such, delivering a high level of growth at this location could have a significant negative effect on this SA objective, however this effect is uncertain as most of the area benefits from existing flood defences. A minor positive effect is also expected because the ecological park on Swanscombe Peninsula could be used to coincide with and help manage, Flood risk.</p>
SA 12: Climate change	++/-?	<p>The location of this area next to Ebbsfleet International Station would have a beneficial effect on this SA objective because it would encourage use of the train, which is a sustainable mode of transport. The approach will make best use, or contribute to the extension, of investment in public transport, particularly Fastrack and rail services; with a well-designed walking and cycling network, which is likely to reduce the number of journeys made by car. At Eastern Quarry, it will support the delivery of the Fastrack link to Bluewater which must be a central part of all proposals. At Ebbsfleet Central, the aim is to create a transport hub, providing ease of interchange between services at Ebbsfleet International and Northfleet stations, and Fastrack and local buses, with major enhancements to walking and cycling connections. Development would be designed and phased not to preclude a Crossrail (Elizabeth Line) extension terminus. Additionally, proposals within Swanscombe Peninsula should achieve major Fastrack and/ or Swanscombe rail station upgrades, and regeneration of and high-quality linkages with Swanscombe town. An improved public transport network would reduce the amount of car users and therefore the amount of CO₂ emitted from these cars. However, considering the site is currently underused, the proposed development would result in an</p>

SA objective	Likely Effect	Justification
		<p>overall increase in people coming to the area, some of which may come via private car, which would contribute towards CO₂ emissions, especially in the short term.</p> <p>The Preferred Policy approach also supports development that is unified with the existing environment, planned around Ebbsfleet's unique landscapes, lakes, riverside and topography and cultural heritage. It will support neighbourhoods that are efficiently designed to make best use of land for quality homes and greenspaces. Also, a network of waterscapes and green corridors will be provided, which act as carbon sinks.</p> <p>A mixed significant positive and minor negative effect is therefore expected for this SA objective; however, uncertainty is attached until such a time that site layout and design is known.</p>
SA 13: Biodiversity	++/-?	<p>Ebbsfleet Central contains a number of biodiversity assets, including a Local Wildlife site, as well as a geodiversity asset (Bakers Hole SSSI). As such, development could result in negative effects on these assets. Even if the assets are not lost, negative impacts could occur through urban edge effects. However, the Preferred Policy approach supports development that is unified with the existing environment, planned around Ebbsfleet's unique landscapes, lakes, riverside and topography and cultural heritage. The Preferred Policy approach will support neighbourhoods that are efficiently designed to make best use of land for quality homes and greenspaces. Also, a network of waterscapes and green corridors and major new public open spaces and parks will be provided expanding the ecological network within the Borough.</p> <p>The mixed-use development scheme, which includes an ecological park proposed for Swanscombe Peninsula, could provide some further opportunities for biodiversity enhancement. At present, the Swanscombe Peninsula does not contain any designated biodiversity assets. Therefore, this Preferred Policy Approach would likely enhance biodiversity in the area whilst also helping contribute to the objectives of the Biodiversity Opportunity Area. The aim is to direct development away from, and help to facilitate, the proposed estuarine ecological park (expected to be from Black Duck Marsh north-eastwards to the tip of the peninsula and adjoining land). Also, the Preferred Policy approach would require development proposals that are located outside the ecological estuarine park (for example located on brownfield or unique opportunities at former quarry land south of London Road) to demonstrate compliance with detailed environmental risk and ecological assessments. As such, the potential of this policy approach to deliver a high level of growth at these locations could have a mixed significant positive and minor negative but uncertain effect on this SA objective. This is because the actual effect will depend on the final design, scale and layout of development.</p>
SA 14: Historic environment	--?	<p>The area around Ebbsfleet International Station contains a number of areas of archaeological potential, as well as listed buildings and scheduled monuments, in particular the Palaeolithic sites near Baker's Hole and Neolithic sites near Ebbsfleet and lie within Ebbsfleet Central strategic site, and the Swanscombe Peninsula comprises a Site of Archaeological Significance and is located within close proximity to a number of Grade II listed buildings.</p>

SA objective	Likely Effect	Justification
		<p>The Preferred Policy approach supports development that is unified with the existing environment, planned around Ebbsfleet's unique landscapes, lakes, riverside and topography and cultural heritage. However, as the Preferred Policy Approach delivers a high level of growth at this location it could have a significant negative but uncertain effect on this SA objective. This is because the actual effect will depend on the final design, scale and layout of development.</p>
SA 15: Landscape	+/-?	<p>This site is within a fairly urbanised area, as it contains Ebbsfleet International Station, the train line and associated car parks. It is bordered to the west by development, including the growing Ebbsfleet Garden City. However, the site includes attractive areas of green space and water, as well as shrubland and regenerated woodland that might help to buffer existing development from the trainline, especially in the northern part of the site. The 'parkway' type landscape and approach to the station are also positive features. Additionally, around Swanscombe Peninsula, substantial development is proposed which could have a significant landscape impact. However, the Preferred Policy Approach also proposes the delivery of an ecological park which could provide an opportunity to restore a more estuarine character to the area, in line with its natural character. The Preferred Policy approach also supports development that is unified with the existing environment, planned around Ebbsfleet's unique landscapes, lakes, riverside and topography and cultural heritage. Preferred Policy Approach will support neighbourhoods that are efficiently designed to make best use of land for quality homes and greenspaces. Also, a network of waterscapes and green corridors will be provided as a defining feature for Ebbsfleet's streets, parks and neighbourhoods. Therefore, a mixed minor positive and minor negative effect is likely. The effect is recorded as uncertain because the actual effect will depend on the final design, scale and layout of development.</p>

F. Business Premises and Employment

Preferred Option F1: Development of industrial, warehousing and private offices: premises providing significant jobs within existing identified employment areas, at strategic sites at Ebbsfleet Central and at the former Littlebrook Power Station and within selected sustainable locations.

Option F2: Not intensifying employment sites

Option F3: Releasing employment land for other uses

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
SA 1: Housing	0	0	?	<p>Option F1 would have a negligible effect on this objective because it is principally concerned with employment development.</p> <p>Option F2 would also have a negligible effect on this objective because it suggests a 'do nothing' approach in that employment sites should remain as they are.</p> <p>Option F3 proposes the release of employment land for 'other uses'. Therefore, depending on the chosen use of a site, could have a positive, negative or negligible effect on this objective. As such, Option F3 is recorded as having an uncertain effect against this objective.</p>
SA 2: Services and facilities	+	0	?	<p>Option F1 promotes job growth across the Borough, particularly in the north where the local labour force and transport connections are concentrated. It states that applicable developments will be expected to contribute to local training and apprenticeship objectives. Furthermore, it proposes the development of a strategic employment site at the former Littlebrook Power Station, which would contain greenspace with useable open space. Small-scale services (e.g. a café) would also be provided for the benefit of workers and visitors to the site. Therefore, Option F1 is likely to have a minor positive effect on this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p> <p>Option F3 proposes the release of employment land for 'other uses'. Therefore, depending on the chosen use of a site, could have a positive, negative or negligible effect on this objective. As such, Option F3 is recorded as having an uncertain effect against this objective.</p>
SA 3: Community cohesion	+	0	?	<p>Option F1 promotes job growth across the Borough, particularly in the north where the local labour force and transport connections are concentrated. Furthermore, it states that applicable developments will be expected to contribute to local training and apprenticeship objectives. Opportunities such as this could help retain residents within the area, whilst also having a positive effect on their wellbeing, which would help contribute towards better Community cohesion. Therefore, Option F1 is likely to have a minor positive effect on this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p>

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
				Option F3 proposes the release of employment land for 'other uses'. Therefore, depending on the chosen use of a site, could have a positive, negative or negligible effect on this objective. As such, Option F3 is recorded as having an uncertain effect against this objective.
SA 4: Health and inequalities	+	-	?	<p>Option F1 promotes job growth across the Borough, particularly in the north where the local labour force and transport connections are concentrated. Indeed, locating employment development near residents will reduce the distance they must travel to get to work, whilst also encouraging more active and sustainable modes of transport, such as walking and cycling. Furthermore, Option F1 suggests that major new employment proposals should be well served by public transport and that innovative travel plans could be required to minimise the need to travel. Improvements will also be made to pedestrian and cycle routes. An increase in the number of people working from home or walking, cycling and using public transport to get to work, would have positive effects on air quality and health. In addition, Option F1 states that applicable developments will be expected to contribute to local training and apprenticeship objectives. Opportunities such as this would reduce inequality of opportunity with positive effects on people's mental health and wellbeing. Lastly, Option F1 states that any adverse impact that employment development might have on neighbours, will be minimised. Therefore, overall, Option F1 is likely to have a minor positive effect on this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This could have an adverse effect on this objective because a lack of future job opportunities would result in an increase in unemployment levels, which could have negative consequences on people's mental health and wellbeing. Therefore, a minor negative effect is likely.</p> <p>Option F3 proposes the release of employment land for 'other uses'. Therefore, depending on the chosen use of a site, could have a positive, negative or negligible effect on this objective. As such, Option F3 is recorded as having an uncertain effect against this objective.</p>
SA 5: Economy	++	-	--	Option F1 promotes job growth across the Borough through the provision of a mix of premises, including different sized units to accommodate small and medium sized enterprises and 'move on' premises for growing or starter businesses. These premises will be delivered through build out at existing large employment areas and strategic allocations at Ebbsfleet Central and the former Littlebrook Power Station, as well as the intensification of job provision at selected sustainable locations. A Borough-wide network of identified employment sites will also be retained, where loss of commercial uses are restricted. Option F1 states that priority may be given to certain proposals, such as knowledge-based, creation or high technology industries, but that it will also support a prosperous rural economy. Further to the above, Option F1 states that to maximise benefits of economic development to Dartford, applicable developments will be expected to contribute to local

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
				<p>training and apprenticeship objectives. The latter would help retain residents within the area, with positive effects on the economy. Therefore, overall, Option F1 is likely to have a significant positive effect on this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This could have an adverse effect on this objective because provision would not be made future employment needs. Therefore, a minor negative effect is likely.</p> <p>Option F3 proposes the release of employment land for 'other uses'. As such, there will be a reduction in the number of employment sites in the Borough, with adverse effects on the economy. Therefore, Option F3 is likely to have a significant negative effect on this objective.</p>
SA 6: Sustainable travel	+/-	0	0	<p>Option F1 promotes job growth across the Borough, particularly in the north where the local labour force and transport connections are concentrated. Indeed, locating employment development near residents will reduce the distance they must travel to get to work, whilst also encouraging more sustainable modes of transport, such as walking and cycling. Furthermore, Option F1 suggests that major new employment proposals should be well served by public transport and that innovative travel plans could be required to minimise the need to travel. Improvements will also be made to pedestrian and cycle routes. Overall, these measures could increase the number of people working from home or walking, cycling and using public transport to get to work. However, it's likely that an overall increase in the number of employment sites across the Borough would increase the number of people travelling within the Borough to get to work, which could increase use of the private car. Therefore, Option F1 is likely to have a mixed minor positive and minor negative effect against this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p> <p>Option F3 proposes the release of employment land for 'other uses', which are unknown at this stage and unlikely to influence Sustainable travel. As such, Option F3 is likely to have a negligible effect against this objective.</p>
SA 7: Mineral resources	-?	0	0	<p>Option F1 proposes employment development across the Borough, although some of these locations are unknown. There are a number of Minerals Safeguarding Areas within the Borough so there is potential for this option to result in development that could have an adverse impact on access to finite Mineral resources. Option F1 proposes the development of a strategic employment site at the former Littlebrook Power Station site, as well as employment provision at Ebbsfleet Central, both of which partially fall within a Minerals Safeguarding Area. However, the former is a brownfield site and unlikely to be subject to minerals extraction in the future. Furthermore, there is</p>

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
				<p>potential for land contamination due to the fact it was originally used to contain a power station. Overall, a minor negative but uncertain effect is expected.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p> <p>Option F3 proposes the release of employment land for 'other uses'. The land that would be released is already developed and would therefore have a negligible effect on access to finite Mineral resources within the Borough.</p>
SA 8: Soils	++/-?	0	++	<p>Options F1 and F3 are expected to help promote the use of brownfield land in the Borough, as such limiting the potential for loss of high value agricultural soils and resulting in a more efficient use of land in the area. For example, Option F1 proposes a strategic employment site at the former Littlebrook Power Station, as well as the intensification of existing employment sites. Likewise, Option F3 proposes the release of employment land for 'other uses' and therefore the redevelopment of brownfield land. However, Option F1 also proposes employment development elsewhere within the Borough, the location of which is yet unknown. As such, Option F1 may also result in the development of greenfield land that forms part of the Borough's best and most versatile agricultural land, but this is uncertain. Therefore, Option F1 is likely to have a mixed significant positive and minor negative but uncertain effect on this objective, whilst Option F3 is likely to have a significant positive effect.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p>
SA 9: Water quality	-	0	-?	<p>Option F1 proposes employment development across the Borough, although some of these locations are unknown. Much of the Borough falls within various Source Protection Zones (SPZs), including Zones 1, 2 and 3, and it is therefore expected that development under Option F1 could result in risk of contamination from construction activities. Option F1 specifically proposes the development of a strategic employment site at the former Littlebrook Power Station, as well as employment provision at Ebbsfleet Central. The Littlebrook site falls partially within SPZ 3 and the Ebbsfleet Central site falls within SPZs 1, 2 and 3. Therefore, overall, Option F1 is likely to have a minor negative effect on this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p> <p>Option F3 proposes the release of employment land for 'other uses' which are unknown at this stage. Due to the fact much of the Borough falls within various SPZs, it's likely that this Option could result in risk of contamination from construction activities. Therefore, a minor negative but uncertain effect is likely.</p>

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
SA 10: Air pollution	+/-?	0	0	<p>Option F1 promotes job growth across the Borough, particularly in the north where the local labour force and transport connections are concentrated. Indeed, locating employment development near residents will reduce the distance they must travel to get to work and their subsequent reliance on the private car in that it'll be easier for them to walk and cycle to work. Furthermore, Option F1 proposes improvements to pedestrian and cycle routes. These measures will help reduce the amount of CO₂ emissions generated by the private car, with positive effects on air quality. Option F1 suggests that innovative travel plans could be required to minimise the need to travel (e.g. working from home), which would also help reduce vehicular emissions. Despite this, it's likely that an overall increase in the number of employment sites across the Borough would increase the number of people travelling within the Borough to get to work, which could have an adverse effect on air quality. This is especially the case when there are a number of AQMAs within and adjacent to the Borough, including along the A226, A282 and A2026, which includes Dartford town centre and its radial routes. Development which would result in increased levels of traffic along these routes could exacerbate existing air quality issues. However, Option F1 acknowledges the fact that Junction 1a of the A282 by Dartford Town Centre experiences traffic congestion and suggests ways forward in relation to this. Therefore, Option F1 is likely to have a mixed minor positive and minor negative but uncertain effect against this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p> <p>Option F3 proposes the release of employment land for 'other uses', which are unknown at this stage and unlikely to influence more environmentally sustainable modes of transport. As such, Option F3 is likely to have a negligible effect against this objective.</p>
SA 11: Flood risk	--	0	?	<p>Option F1 proposes employment development across the Borough, although some of these locations are unknown. It specifically proposes the development of a strategic employment site at the former Littlebrook Power Station, as well as employment provision at Ebbsfleet Central, yet the Littlebrook site falls entirely within Flood Zone 3 and Ebbsfleet Central falls partially within Flood Zone 3. However, Option F1 states that development at the Littlebrook site should provide flood defences in agreement with the Environment Agency and shall also leave open a riparian area in the northwest of the site sufficient for long-term Thames Barrier intervention under the TF2100/EA2070 project. Overall, Option F1 is likely to have a significant negative effect on this objective as there is still risk of flooding at the Ebbsfleet Central site.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p>

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
				Option F3 proposes the release of employment land for 'other uses', which are unknown at this stage but depending on their chosen use, could be more susceptible to flooding than say employment development. Therefore, an uncertain effect is likely.
SA 12: Climate change	+/-	0	0	<p>Option F1 promotes job growth across the Borough, particularly in the north where the local labour force and transport connections are concentrated. Indeed, locating employment development near residents will reduce the distance they must travel to get to work and their subsequent reliance on the private car in that it'll be easier for them to walk and cycle to work. Furthermore, Option F1 proposes improvements to pedestrian and cycle routes. These measures will help reduce the amount of CO₂ emissions generated by the private car and the area's subsequent contribution towards climate change. Furthermore, Option F1 suggests that innovative travel plans could be required to minimise the need to travel (e.g. working from home), which would also help reduce vehicle emissions. Despite this, it's likely that an overall increase in the number of employment sites across the Borough would increase the number of people travelling within the Borough to get to work, which could increase CO₂ emissions and the area's subsequent contribution towards climate change. Therefore, Option F1 is likely to have a mixed minor positive and minor negative effect against this objective.</p> <p>Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.</p> <p>Option F3 proposes the release of employment land for 'other uses', which are unknown at this stage and unlikely to influence more environmentally sustainable transport modes. As such, Option F3 is likely to have a negligible effect against this objective.</p>
SA 13: Biodiversity	++/--?	0	+/-	Options F1 and F3 would limit the potential for development of greenfield land in the Borough, which forms part of the more 'natural' ecological network. They both focus a high proportion of growth on brownfield land; however, brownfield land can also have potential value for biodiversity, particularly in terms of invertebrates. Option F1 proposes employment development in some locations that are unknown, and which may also comprise greenfield land. The Option specifically proposes the development of a strategic employment site at the former Littlebrook Power Station, as well as employment provision at Ebbsfleet Central, yet both sites fall within Biodiversity Opportunity Areas and Ebbsfleet Central partially contains a Local Wildlife Site and Site of Special Scientific Interest (SSSI). However, Option F1 states that the development of the former Littlebrook Power Station will comprise 30% greenspace with 10% net biodiversity gain delivered, which would have a beneficial effect on biodiversity. Therefore, Option F1 is likely to have a mixed significant positive and uncertain significant negative effect and Option F3 is likely to have a mixed minor positive and minor negative effect.

SA objective	Likely effect			Justification
	Option F1	Option F2	Option F3	
				Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.
SA 14: Historic environment	+/-?	0	+?	Options F1 and F3 would prioritise the development of brownfield land within the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and character. For example, Option F1 proposes the development of a strategic employment site at the former Littlebrook Power Station, which has been closed and is currently undergoing demolition. The site falls within a Site of Archaeological Significance but is not located within close proximity to other historic assets. However, Option F1 also proposes employment development in some locations that are unknown, and which may comprise greenfield land, whilst also being located within close proximity to historic assets. Therefore, overall, Option F1 is likely to have a mixed minor positive and minor negative effect and Option F3 is likely to have a minor positive effect. However, these effects are recorded as uncertain because the actual effects will depend, in part, on the design of new development which is unknown at this stage. Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.
SA 15: Landscape	+/-?	0	+?	Options F1 and F3 would prioritise the development of brownfield land within the Borough which may present opportunities to bring disused sites back into use and improve aesthetic quality and benefit in terms of townscape and landscape. For example, Option F1 proposes the development of a strategic employment site at the former Littlebrook Power Station, which has been closed and is currently undergoing demolition. Option F1 also proposes employment development in some locations that are unknown, and which may comprise greenfield. It specifically proposes employment provision at Ebbsfleet Central, which is, at present, a very open and undeveloped area. Overall, employment development over the plan period is likely to result in changes to the townscape and landscape, but Option F3 is likely to provide more certainty in terms of limiting the significance of these changes due to the fact it concerns existing employment sites. Therefore, overall, Option F1 is likely to have a mixed minor positive and minor negative effect and Option F3 is likely to have a minor positive effect. The effects are recorded as uncertain because the actual effects will depend, in part, on the design of new development which is unknown at this stage. Option F2 suggests a 'do nothing' approach in that employment sites should remain as they are. This would have a negligible effect on this objective.

G. Natural Environment and Open Space

SA objective	Likely effect	Justification
SA 1: Housing	0	It is not expected that the Preferred Policy Approach considered would directly impact housing delivery in the Borough and therefore negligible effects are expected in relation to this SA objective.
SA 2: Services and facilities	+	The Preferred Policy approach would maintain existing open spaces and ensure that new development makes provision for sufficient new open space, therefore a minor positive effect is expected for this SA objective.
SA 3: Community cohesion	+	The Preferred Policy approach promotes the preservation and enhancement of existing green space and the requirement of new development to provide sufficient new open space, with larger sites providing a higher proportion of provision. This may allow for increased opportunities for residents within communities to meet within attractive places. As such, minor positive effects are expected in relation to this SA objective.
SA 4: Health and inequalities	++	The requirement for the preservation of existing open space and the provision of new open space in new developments is likely to ensure that there are sufficient recreational opportunities for existing and future residents in Dartford. The protection and enhancement of biodiversity, including the requirement of 10% biodiversity net gain, will help people to have contact with nature. This has the potential to bring about positive impacts on the mental and physical health as well as general wellbeing of residents in Dartford. As such, significant positive effects are expected in relation to this SA objective.
SA 5: Economy	+	The provision of adequate public open space is likely to be vital in improving the overall attractiveness of the Borough, which may attract more people to live and work in the area as well as improve the potential for tourism. As such, due to the preservation of existing open space and the provision of new open space in development, minor positive effects are expected in relation to this SA objective.
SA 6: Sustainable travel	+	There is potential for pedestrian and cycle routes to be incorporated into open space in the Borough through the policy, both in existing open space and in new developments. This may result in an increased uptake of active travel amongst residents as a means of travelling to work or to access services and facilities. Therefore, minor positive effects are expected in relation to this SA objective.
SA 7: Mineral resources	0	It is not expected that the Preferred Policy approach would affect mineral resources in the Borough.
SA 8: Soils	+	The Preferred Policy approach includes the potential provision of tree planting, which has the potential to contribute to maintaining soil stability and therefore minor positive effects are expected in relation to this SA objective.
SA 9: Water quality	+	Green space can act as a filter for water, which may yield positive impacts on Water quality. By maintaining current greenspace and requiring new green space in new developments, the Preferred Policy approach is

SA objective	Likely effect	Justification
		increasing the potential for positive impacts on Water quality in the Borough. As such, minor positive effects are expected in relation to this SA objective.
SA 10: Air pollution	+?	Minor positive effects are expected for the Preferred Policy approach in relation to this SA objective as the provision of new open space as part of new developments has the potential to reduce the amount of air pollution due to the filtering properties that vegetation has. In addition, the Preferred Policy approach also promotes tree planting which could potentially increase the filtering of pollutants from the air. As such, minor positive effects are expected in relation to air quality. The effects are uncertain as the exact locations of open space provision and tree planting in relation to sources of air pollution are unknown and therefore the potential of these provisions to filter out pollutants is unknown at this stage.
SA 11: Flood risk	+	The Preferred Policy approach promotes the retention of existing open space and the provision of new open space in new developments. This has the potential to result in positive impacts on Flood risk as a greater proportion of permeable surfaces within communities may contribute to absorbing flood water. As such, minor positive effects are expected in relation to this SA objective.
SA 12: Climate change	+	The Preferred Policy approach promotes the delivery of open space as part of new developments and also tree planting, both of which have the potential to contribute to carbon sequestration in the area. As such, minor positive effects are expected in relation to this SA objective.
SA 13: Biodiversity	++	The Preferred Policy approach includes provisions that natural environment designations should be protected and enhanced, which may minimise the disturbance and loss of habitats as a result of new development. In addition, the Preferred Policy approach suggests that new developments will be required to demonstrate biodiversity net gains. Therefore, significant positive effects are expected in relation to this SA objective.
SA 14: Historic environment	0	It is not expected that the Preferred Policy Approach would directly affect the historic environment within the Borough. Therefore, negligible effects are expected in relation this SA objective.
SA 15: Landscape	+	There is potential for the Preferred Policy approach to enhance Dartford's landscape character and quality through the preservation of existing open space and the delivery of new open space at part of new residential developments. In addition, the strength of the Preferred Policy approach in this regard is increased by specific requirements for landscaping in new developments to respond to local setting, which may enhance existing landscapes/townscapes and minimise the potential for adverse impacts. As such, minor positive effects are expected in relation to this SA objective.

H. Renewable Energy and Water Management

SA objective	Likely effect	Justification
SA 1: Housing	+	The Preferred Policy approach requires that developments should be constructed to be as energy and water efficient as possible. This is to be achieved through near zero standards in national building regulations, which could yield a 25% improvement in energy performance in new homes. The Preferred Policy approach promotes the use of de-centralised energy, heating facilities and renewable and low carbon energy schemes to contribute to meeting these building standards. Additionally, the Preferred Policy approach also requires that Flood risk is given due consideration in residential development proposals. As such, a minor positive effect is expected in relation to this SA objective due to the potential it offers for residents in the Borough to live in a sustainable home that is future proof.
SA 2: Services and facilities	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 3: Community cohesion	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 4: Health and inequalities	+	There is potential for this Preferred Policy approach to promote climate change resilience and safeguard human health. This is due to the requirements of the Preferred Policy approach to avoid areas of Flood risk and construct homes in a manner that will make them flood resilient. Sustainable siting and construction of residential development is likely to be vital in the coming decades due to the potential for increased Flood risk as a result of climate change. As such, minor positive effects are expected in relation to this SA objective
SA 5: Economy	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 6: Sustainable travel	+	Whilst the focus of the Preferred Policy approach is water management and renewable energy, its overarching strategy includes locating development where it will reduce greenhouse emissions, contributing to mitigation of climate change. The Preferred Policy approach promotes a reduction in the need to travel and good access to sustainable transport options in new residential development. As such, minor positive effects are expected in relation to this SA objective.
SA 7: Mineral resources	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 8: Soils	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 9: Water quality	+	There is potential for the Preferred Policy approach to have positive impacts on this objective as it includes a requirement that the Environment along the Thames and Darent Rivers should be enhanced, which reduce the

SA objective	Likely effect	Justification
		potential for negative impacts on Water quality. In addition, the Preferred Policy approach requires that well designed and wall managed SuDS are given due consideration at an early stage of planning a site layout, which may also result in reduced adverse impacts on Water quality. As such, a minor positive effect is expected in relation to this SA objective.
SA 10: Air pollution	+	The promotion of reducing the need to travel and access to sustainable travel options as part of the overarching strategy of the Preferred Policy approach has the potential to result in a reduced need to use private car trips and therefore potentially reduced adverse impacts on air quality. As such, minor positive effects are expected in relation to this SA objective.
SA 11: Flood risk	++	Significant positive effects are expected for the Preferred Policy approach in relation to Flood risk due to one of its key focusses being protecting the Borough from risks of flooding and achieving flood resilience from the future impacts of climate change. This includes seeking sequentially preferable locations for residential development that have been informed by a Strategic Flood Assessment and ensuring that all development is designed and constructed to minimise Flood risk. Specifically, the Preferred Policy approach protects the Dartford marshes from development and also seeks land at Littlebrook to be safeguarded due to potential Flood risk (contingent on whether it is shown this area will not be needed for a new barrier at Long Reach). Further to the location of development, the Preferred Policy approach also requires that SuDS are considered as in the early stages of site planning.
SA 12: Climate change	++	The Preferred Policy approach promotes energy efficient design in new developments, encourages the provision of low carbon and renewable energy and seeks to minimise GHG emissions from transport. This comprehensive approach has the potential to minimise the overall plan's contribution to climate change. In particular, the Preferred Policy approach requires that the Local Plan should go beyond national changes to Building Regulations by installing electric vehicle charging points in all new residential development that includes shared parking spaces. As such, significant positive effects are expected for relation to this SA objective.
SA 13: Biodiversity	+	Whilst the Preferred Policy approach does not include specific biodiversity objectives, the safeguarding of the Dartford marshes and the enhancement of the environment along the Thames and Darent Rivers has the potential to result in positive impacts on the natural environment through the protection of existing habitats. As such, minor positive effects are expected in relation to this SA objective.
SA 14: Historic environment	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 15: Landscape	+	Minor positive effects are expected in relation to this SA objective due to the requirement that the environment along the Thames and Darent Rivers should be improved. There is potential for the character of these areas to be strengthened, which will contribute to the overall distinctiveness of the Borough.

I. Affordable housing

Preferred Option I1: Requirement for residential proposals in the urban area of 15 dwellings or more to contribute to affordable housing provision. South of the A2, threshold of 10 dwellings for affordable housing provision. 35% affordable housing target on qualifying sites (subject to viability) with 20% social/affordable rent and 15% affordable home ownership products (majority shared ownership).

Option I2: Borough-wide threshold of 10 dwellings

Option I3: Retain current overall target for affordable housing of 30% on qualifying sites.

SA objective	Likely effect			Justification
	Option I1	Option I2	Option I3	
SA 1: Housing	++/-?	++/-?	++/-	It is expected that all three options would contribute strongly towards the local housing need of the Borough and therefore they are all expected to result in significant positive effects on this objective. In the case of Option I1, the higher overall affordable housing provision has the potential to meet a wider variety of housing needs through a range of types and tenures, contributing to the overall vitality of the Borough. This includes Starter Homes at below market levels and a greater proportion of shared ownership (part buy, part rent) accommodation to fully reflect the projected needs of Dartford Borough. The positive effects of Option I1 are mixed with minor negative effects as there is a possibility that the higher overall affordable housing target will impact upon the viability of residential developments, potentially slowing the rate of housing delivery. This is uncertain as the rate of housing delivery will likely be contingent on developer decisions, which are unknown at this stage. For Option I2, there is potential for the lower threshold for developments to include affordable housing to result in social housing and affordable home ownership products to be incorporated into a wider range of developments in the Borough, possibly meeting a wider range of housing needs. However, minor negative effects are also expected as the viability of smaller residential developments may be negatively impacted by the lower threshold for affordable housing inclusion. This may impact on the rate of housing delivery, but this is uncertain at this stage. For Option I3, uncertain minor negative effects are expected in combination as there is less potential for the 30% affordable housing target to meet the full range of housing needs in the Borough.
SA 2: Services and facilities	-?	-?	-?	There is potential for infrastructure contributions from developers to be negatively impacted under all options, which may impact the delivery of new services and facilities. This is because delivery of this level of affordable housing may reduce developer finances available for infrastructure contributions. As such, minor negative effects are expected for Options I1 and I2 in relation to this SA objective. The effects are uncertain at this stage as the provision of affordable housing is subject to viability considerations.
SA 3: Community cohesion	+	+	+	Minor positive effects are expected for all options considered in relation to this SA objective as the delivery of affordable housing, through a mix of types and tenures, has the potential to contribute to mixed communities. In particular, the suggestion that design layouts should be tenure blind to ensure that communities do not become segregated is likely to foster greater levels of Community cohesion.

SA objective	Likely effect			Justification
	Option I1	Option I2	Option I3	
SA 4: Health and inequalities	++/-?	++/-?	++/-	Access to housing is an important determinant of health and wellbeing, and in particular affordable housing particularly for more deprived members of the community and those on low incomes. The scores for this objective mirror the scores for SA objective 1 (Housing).
SA 5: Economy	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 6: Sustainable travel	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 7: Mineral resources	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 8: Soils	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 9: Water quality	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 10: Air pollution	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 11: Flood risk	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 12: Climate change	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 13: Biodiversity	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 14: Historic environment	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.
SA 15: Landscape	0	0	0	All options considered are expected to have negligible effects in relation to this SA objective due to the focus on housing delivery.

J. Housing type and size

SA objective	Likely effect	Justification
SA 1: Housing	++	It is likely that the Preferred Policy approach would result in significant positive effects on this objective due to the potential contribution it is likely to make to Dartford Borough's identified housing need. Specifically, the Preferred Policy approach will deliver a range of dwelling types and sizes to suit the future needs of Dartford's population, which will include homes for families, professionals and elderly/disabled people with specific needs. To achieve this diverse mix, the Preferred Policy approach includes a requirement that developments of 100 units or more should include a specific amount of each type of housing, possibly subject to meeting local socio-economic needs. Further to the requirements for a specific mix of housing types, the Preferred Policy approach also requires that residential density is based on a design-led approach, whereby specific local context is considered from the outset, which is likely to reduce the potential for inappropriate residential development.
SA 2: Services and facilities	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 3: Community cohesion	+	The Preferred Policy approach would deliver a mix of housing types, which may result in greater potential for mixed and diverse communities catering for all stages of life.
SA 4: Health and inequalities	++	The Preferred Policy approach would help to deliver the needs of an elderly population, and those with disabilities, resulting in significant positive effects.
SA 5: Economy	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 6: Sustainable travel	+	Minor positive effects are expected in relation to this objective as the design-led approach to residential density proposes to include consideration of infrastructure and services availability, particularly the quality of public transport, which is likely to contribute to creating communities with good access to sustainable transport links.
SA 7: Mineral resources	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 8: Soils	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 9: Water quality	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.

SA objective	Likely effect	Justification
SA 10: Air pollution	+	The Preferred Policy approach may result in reduced adverse impacts on air pollution in new developments. It is suggested that residential density will be considered in conjunction with infrastructure and services availability, with a particular focus on public transport. This may result in a reduced need for private car trips. Minor positive effects are expected in relation to this objective.
SA 11: Flood risk	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 12: Climate change	+	The Preferred Policy approach is expected to result in minor positive effects in relation to this objective. The Preferred Policy approach suggests that consideration of residential density will include infrastructure and services availability, with a particular focus on public transport. This may result in development layouts that are conducive to reducing CO ₂ emissions, potentially through a reduced need to travel by private car trips.
SA 13: Biodiversity	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 14: Historic environment	0	The Preferred Policy approach would have negligible effects on this objective as it is principally focussed on housing delivery.
SA 15: Landscape	+	Minor positive effects are expected in relation to this objective as there is potential for the design-led approach to residential density to result in positive impacts on the character of the Borough's existing settlements and countryside. In particular, the Preferred Policy approach suggests that criteria will be introduced to secure healthy and attractive places, which may also include the efficient use of brownfield land.

K. Gypsies, Travellers and Travelling Showpeople

SA objective	Likely effect	Justification
SA 1: Housing	++	Significant positive effects are expected in relation to this SA objective as it will contribute to ensuring the residential needs of Gypsies, Travellers and Travelling Showpeople are met within Dartford Borough. The Preferred Policy approach suggests that there is significant potential to provide suitable accommodation within existing sites, but also includes measures to conduct a Borough-wide search for new sites if it is found that sufficient accommodation cannot not be found within existing sites.
SA 2: Services and facilities	+?	The majority of the considered sites for expansion (Sauleskalns, Tennis Courts, Cob Tree, Hillside and Ebbsfleet Garden City) are within 1km of primary education facilities and a health care centre. The site at Brakefield Road in the south-east of the Borough is the least well connected to existing services, as it falls within 1km of an education facility, but is over 2km from a health care centre. All sites are located in the southern half of the Borough over 2km from the centre of Dartford and therefore do not have immediate access to a full range of services and facilities within close proximity. Uncertain minor positive effects are expected for the Preferred Policy approach in relation to this SA objective. The effects are uncertain as it is not clear if there will be sufficient capacity at existing services to accommodate the expansion of these sites. In addition, it has not been confirmed if these sites will be expanded or the scale to which they would be expanded.
SA 3: Community cohesion	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 4: Health and inequalities	+?	All sites are located within 500m of areas of open space that could be used for recreational purposes, potentially resulting in improved health amongst residents. As such, uncertain minor positive effects are expected for the Preferred Policy approach in relation to this SA objective. The uncertainty is identified as the sites have not been confirmed for expansion, which includes the scale to which they would be expanded.
SA 5: Economy	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 6: Sustainable travel	+?	All the potential sites for expansion are located within 800m of bus stops, which could increase the potential for residents to avoid private car trips in favour of sustainable modes of travel. However, only two of the sites are within 1km of railway stations (Ebbsfleet Garden City and Sauleskalns). Minor positive effects are expected for the Preferred Policy approach in relation to this SA objective. The effects are uncertain as it is not confirmed whether the sites will be expanded or the scale to which they would be expanded.
SA 7: Mineral resources	-?	The majority of the proposed sites (Sauleskalns, Hillside, Ebbsfleet Garden City and Brakefield Road) for expansion are not located within Mineral Safeguarding Areas (MSAs). However, two sites to the south of Dartford (Tennis Courts and Cob Tree Farm) are located within MSAs. Cob Tree farm has been identified for potential expansion outside of the existing site boundary and therefore this could result in the sterilisation of

SA objective	Likely effect	Justification
		Mineral resources. As such, uncertain minor negative effects are expected in relation to this SA objective. The uncertainty is identified as it has not been confirmed which sites would be expanded or the scale to which they would be expanded.
SA 8: Soils	-?	Four of the sites lie within Grades 2 and 4 classified agricultural land while the others lie within urban land. As such, this Preferred Policy Approach may result in the development of greenfield land that forms part of the Borough's best and most versatile agricultural land, but this is uncertain. Minor negative effects are expected.
SA 9: Water quality	0	It is expected that the Preferred Policy approach would have negligible effects in relation to this SA objective.
SA 10: Air pollution	+/-?	All the sites are located within 800m of bus stops, which may offer opportunities for residents to avoid private car trips, potentially resulting in reduced adverse impacts on air quality. However, two of the sites are located within close proximity to the A225, which connect directly to an AQMA to the north in Dartford. There is potential for expansion at these sites to result in increased traffic through this AQMA. Overall, mixed minor positive and minor negative effects are expected for the Preferred Policy approach in relation to this SA objective. The effects are uncertain as it is not clear if these sites will be expanded or the scale to which they would be expanded.
SA 11: Flood risk	0	None of the potential sites for expansion are located within areas of Flood risk (flood zone 2 or 3). As such, negligible effects are expected for the Preferred Policy approach in relation to this SA objective.
SA 12: Climate change	+?	The proximity of all sites to bus stops (<800m) may offer opportunities for residents to avoid private trips, potentially resulting in reduced CO ₂ emissions. As such, uncertain minor positive effects are expected for the Preferred Policy approach in relation to this SA objective. The effects are uncertain as it is not clear which sites will be expanded or the extent to which they would be expanded.
SA 13: Biodiversity	-?	The potential for sites within Ebbsfleet Garden City are being considered. Ebbsfleet Garden City is located adjacent to Bakers Hole SSSI and therefore the delivery of sites at this location may result in adverse impacts on the SSSI. The sites at Cob Tree Farm and Hillside are within 500m of Darenth Wood SSSI and therefore expansion at these locations could also give rise to adverse impacts. In addition, the site adjacent to the A225 (Tennis Courts) is within 200m of Sutton at Hone Local Wildlife Site. Overall, uncertain minor negative effects are expected due to the proximity of some sites to national and local designations. The effects are uncertain as it is not clear which sites will be confirmed for expansion or the extent to which they will be expanded.
SA 14: Historic environment	-?	All of the six potential sites are located within 1km of multiple designated heritage assets, with two of these sites (Ebbsfleet Garden City and Tennis Courts) being located within 500m of Scheduled Monuments. There is potential for expansion of the sites through the Preferred Policy approach to result in negative impacts on the setting of heritage assets. As such, uncertain minor negative effects are expected for the Preferred Policy approach in relation to this SA objective. The effects are uncertain as it is not clear which sites will be confirmed for expansion or the extent to which they will be expanded.

SA objective	Likely effect	Justification
SA 15: Landscape	-?	<p>The Preferred Policy approach includes a need to consider landscape, visual and Green Belt impacts for potential new Gypsy, Traveller and Travelling Showpeople sites that may come forward to meet identified needs. This is likely to ensure that adverse impacts on the existing landscape character are minimised. However, the potential expansion of existing sites within or outside site boundaries still has the potential to interrupt the existing landscape character through interruption to key views and setting. As such, mixed minor positive and minor negative effects are expected in relation to this SA objective. The effects are uncertain as it is not clear which sites will be confirmed for expansion of the extent to which they will be expanded.</p>