Sustainability Appraisal
Of
The Medway Core Strategy Pre-Publication Draft
October 2010

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Contents

Introduction

This is the second interim Sustainability Appraisal carried out in relation to Medway's emerging Core Strategy. The Core Strategy is the most important of a suite of reports or 'development plan documents' that will form the Local Development Framework for Medway.

The Sustainability Appraisal process is an iterative one, assessing the Core Strategy at key stages as it evolves. In this way it also informs the policies in the Core Strategy. This report is the fourth in a series:

- In December 2008 a draft Scoping Report was published as a consultation draft. Specific input was sought from three statutory agencies – Environment Agency, Natural England and English Heritage – and from the public at large. See: http://www.medway.gov.uk/sustainability_appraisal_scoping_report.pdf

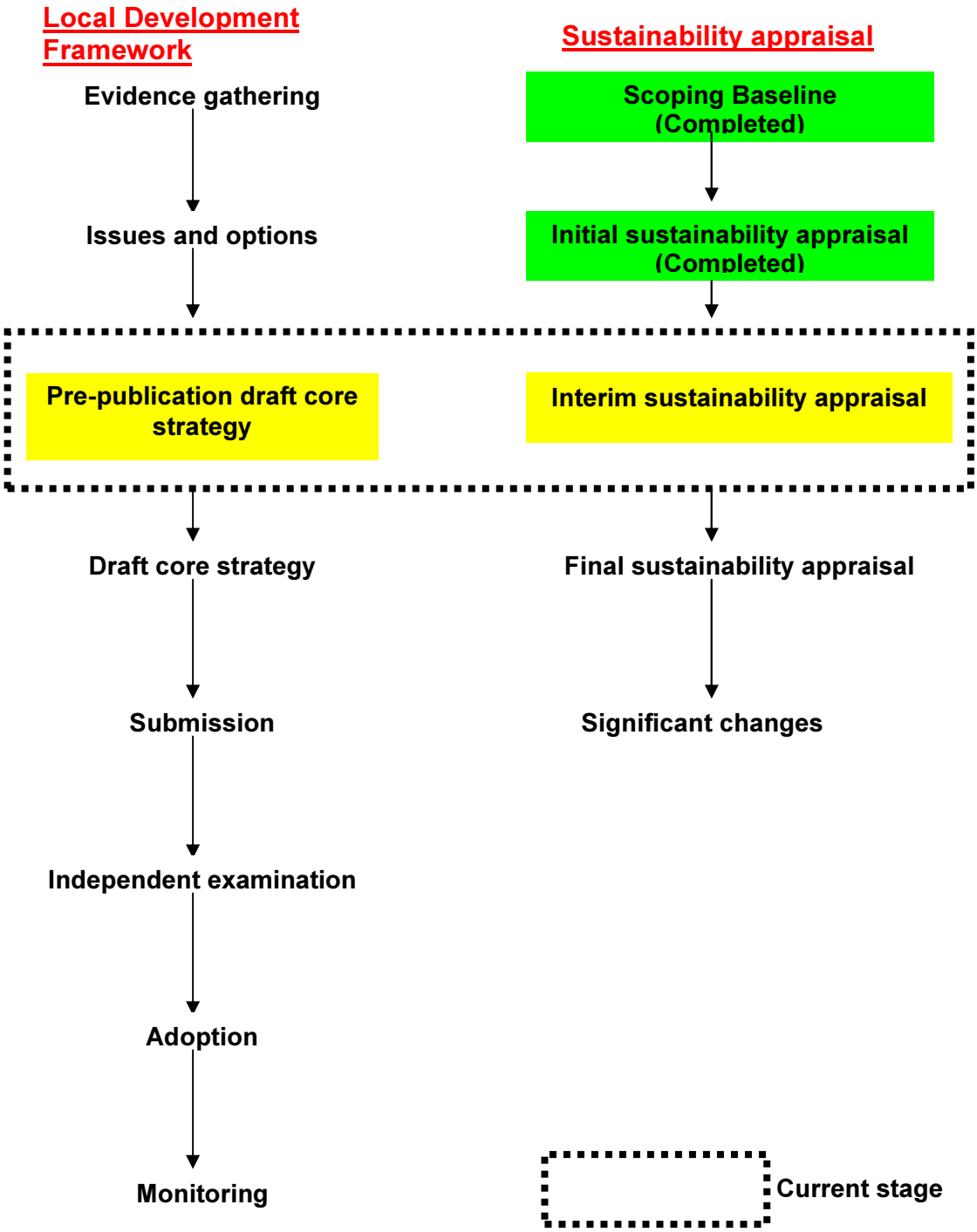
- Taking account of all the responses received, a Final Scoping Report was published in April 2009. See: http://www.medway.gov.uk/final_scoping_report.pdf

- A first interim appraisal was published in July 2009. This assessed the Issues and Options report published at the same time and which considered the matters that should be covered in the Core Strategy. See: http://www.medway.gov.uk/medway_initial_sustainability_appraisal.pdf

- This report appraises the first full draft of the Core Strategy – referred to as the Pre-Publication Draft.

One further interim appraisal will be carried out of the subsequent Publication Draft and then a final appraisal of the document submitted for an independent Examination.

This is illustrated in the diagram overleaf.



This report is structured as follows:

- A short background section summarises the process and is included for ease of reference. Further detail is available in the Final Scoping Report

- The methodology used is then explained and how this has been refined in relation to an updated baseline and revised assumptions
- A section then comments on further possible development alternatives covered in chapter 3 of the Pre-Publication Draft Core Strategy
- The remainder of the Pre-Publication Draft is then appraised. This is done against a standard set of environmental social and economic indicators. This begins, where applicable in terms of updating the situation with information not available at the scoping stage or the inclusion of newer legislation that will affect it. In each case the likely effects without the Core Strategy are assessed. The expected effect of the Core Strategy is then considered against this non-intervention option. Finally, recommendations are made, where appropriate, suggesting how the intended policy approach might be amended to reduce any negative impacts.

Background

Medway is located 30 miles outside London along the North Kent coast, formed of the 5 main town centres of Rainham, Gillingham, Chatham, Rochester and Strood, along with the rural Hoo Peninsula and Isle of Grain. It is located within the growth area of the Thames Gateway and also has a number of sites of nature conservation importance, as well as having sites of strategic importance for aggregate importation and power generation.

The Vision for the area is for Medway to have/be

- *A thriving, diverse and sustainable economy matched by an appropriately skilled workforce and supported by a Higher Education Centre of Excellence*
- *Every child to have a good start in life*
- *Residents to enjoy good health, well being and care*
- *A safe and high quality environment*
- *A place where people value one another, play an active part and have pride in their community and Medway as a whole*
- *To be recognised as a Destination for Culture, Heritage, Sport and Tourism*

The Local Development Framework (LDF) will be a suite of documents that will form the planning framework against which development applications will be assessed and other important decisions made. Medway's Core Strategy will be the spatial expression of these aims by helping to bring together the various strategies to achieve this.

This report accompanies the 'Pre-Publication Draft Core Strategy' (PPDCS) version of the Core Strategy. It goes through the process that has been followed to date, outlines the methodology, the results in summary and then appraises the strategic objectives and policies contained in the document against the objectives of the Sustainability Appraisal Framework. It does this by looking at the indicators and expected impacts on them.

Under the requirements of the Planning and Compulsory Purchase Act 2004 and Planning Policy Statement 12, the Local Planning Authority is required to carry out a Sustainability Appraisal of it's LDF to fulfil the aim of contributing towards the achievement of sustainable development through preparation of its plans.

The work on each appraisal runs simultaneously to the development of the LDD so it becomes integrated into the plan-making process as a way of improving the document as it develops and producing sustainable policies on the ground. By involving stakeholders and experts along the way, a robust and fully integrated appraisal should develop.

This integration will ensure that future development meets the needs of people living and working in an area, whilst at the same time ensuring that it is sited in such a way as to protect the environment.

The SEA Directive and Environmental Assessment of Plans & Programmes Regulations set out the statutory process that must be followed. To show compliance with this, checklists are used.

Draft objectives were refined through consultation with council officers before a scoping document was issued for consultation with both the public and statutory agencies.

This scoping report was sent to the Environment Agency, English Heritage and Natural England, as well as being published on the Council's website and sent separately to the following stakeholders:

- Neighbouring Authorities – Kent County Council, Gravesham, Swale, Maidstone and Tonbridge and Malling Borough Councils
- Regional Assembly – SEERA
- Government Office for the South East (GOSE)

In addition, to the above consultations there was also a presentation to the Local Strategic Partnership in December 2008.

Alongside the Issues and Options Report, which was consulted on last summer, there was an Initial Sustainability Appraisal that went through and discussed the advantages of 5 strategic options in terms of their contribution to accommodating 4 specific elements of the plan where options could still be considered.

This latest document supports the Pre-Publication Draft Core Strategy and contains an appraisal of how much the proposed policies in the document would be expected to contribute or hinder the achievements of the sustainability objectives laid out within the SA Framework.

The Council is consulting on this report alongside the 'Pre-Publication Draft Core Strategy' that it relates to.

Formal consultation periods will also occur on reports produced to accompany the Draft and Submission versions of the Core Strategy, which follow this stage.

Appraisal Methodology, Assumptions and Issues

The Final Scoping Report documents the SA process, as set out within 'A Practical Guide to the Strategic Environmental Assessment Directive' published by the ODPM in 2005. Stage A consists of a number of tasks, which include:

- Task A1: Identifying other relevant plans, programmes and sustainability objectives;
- Task A2: Collecting baseline information;
- Task A3: Identifying sustainability issues;
- Task A4: Developing the SA framework; and
- Task A5: Consulting on the scope of the SA.

The list of "other relevant plans and programmes" that need to be taken into account through the Local Development Framework and considered through the SA process has been updated since the initial scoping report - see Appendix 1.

The Sustainability Appraisal Framework provides a way in which sustainability effects can be described, analysed and compared. The starting point for determining the objectives for the sustainability framework came from those within the Regional Sustainability Framework for the South East, adopted in June 2008.

To make the process more manageable the aim was to limit the number of objectives to no more than 18. These were identified by reviewing relevant policy documents, those in the SEA Guidance and from the baseline information. The draft objectives were refined through subsequent consultation with council officers and others. These included officers responsible for monitoring and those with relevant knowledge of equalities legislation.

The Medway Council objectives were tested for internal compatibility. This highlighted where there may be the potential for conflicts with what they aim to achieve. For example, the objectives associated with providing housing and those aiming to conserve biodiversity and the natural and cultural environment may not be compatible. There is also potential conflict between ensuring high and stable economic growth and the issues associated with traffic, specifically air quality, health and climate change.

The objectives should not be removed because of this potential conflict but highlighting this at an early stage allows the framework to be aware of and therefore balance these issues. Simply because the objectives are compatible or incompatible, does not mean that the outcomes also have to be.

This exercise therefore identified the areas where the objectives needed to be carefully balanced to ensure the outcomes are consistent and where possible achieve a win-win situation.

The SEA Directive requires that *"the relevant aspects of the state of the environment and the likely evolution thereof without implementation of the plan or programme"* and *"the environmental characteristics of the areas likely to be significantly affected*" be included in the Environmental Report.

Government guidance on Sustainability Appraisals of Local Development Documents[1] states *"baseline information provides the basis for predicting and monitoring effects and helps to identify sustainability problems and alternative ways of dealing with them"*.

Collection of baseline information formed an essential part of the SA process. It was important that sufficient baseline information on the current and likely future state of the area was obtained in order to enable the LDF's effects to be adequately predicted and evaluated.

For each indicator, quantified baseline data was collected which was applicable to the issues to be assessed by the Sustainability Appraisal and at a relevant geographical scale. The main sources used were official websites on the Internet, Medway Council reports and data, Kent County Council Reports and the Census.

The baseline situation and identified sustainability issues are covered later in this report but were originally separated into the topic areas below at the scoping stage.

- Community (population, crime, deprivation, health)
- Economy and employment
- Cultural Heritage and Material Assets
- Housing
- Biodiversity and open space
- Air quality
- Water and Soil
- Waste
- Transport and accessibility
- Climate adaptation and mitigation

Section 5 of the Final Scoping Report lays out the baseline information in relation to the identified topic areas and highlights the sustainability issues that arise from these. Additional information collected since then and an explanation of how development in the area would progress without the Core Strategy are laid out in this report.

Officers within the Development Plans & Research team at Medway Council are drawing up the Core Strategy. The Senior Planner (Environmental Policy) completed this SA, incorporating the SEA, independently from the team.

[1] Sustainability Appraisals of Regional Spatial Strategies and Local Development Documents (2005), ODPM

The Initial Sustainability Appraisal assessment corresponds to Stage 2 within the guidance "developing and refining options", particularly Tasks B1 and B2, described as follows:

B1: Testing the DPD objectives against the SA framework; and
B2: Developing the DPD options.

This stage (B) of the appraisal process highlighted the sustainability implications of each option, and where necessary, suggested recommendations for improvement. The results of the appraisal informed the decision making process on the options, but it did not, by itself, determine which should be chosen.

Given the strategic nature of the Core Strategy, the assessment is inevitably broad brush.

As discussed later in this report, the location of certain forms of development was already determined. Therefore the options appraised within the previous document were those aspects where the location had not been fully determined.

As the guidance was written back in 2005 it relates to the system before changes brought in by the Planning Act 2008. As such the current stage would equate to the old Preferred Options stage of the process, where it was expected that there would be a second round of consultation on the SA and the first appraisal of any significant changes.

Assumptions

General assumptions have been applied to both the baseline and to the following assessment of the plan policies. It has been assumed in both instances that there will be some impacts from climate change, both on the area directly and more generally, as follows:

- An increase in annual average temperatures
- A 30-40% reduction in summer precipitation
- A 15-20% increase in winter precipitation
- Sea level rise

The assessment of the suggested plan policies has been done on the basis that all are fully implemented and will have the maximum impact/effect.

The Draft Medway Strategic Land Availability Assessment has been used to gain information as to how much and where new housing is likely to be constructed over the plan period.

The Pre-Publication Draft Core Strategy considers a range of possibilities in terms of future job numbers based on different scenarios or assumptions. The higher end of this range has been used to assess impacts in this appraisal.

Environment Agency flood maps show where flooding would occur in the natural floodplain, but take no account of any flood defences. It is known by the Agency that these are partly out of date and need to be updated to take account of works that have been done around St Mary's Island and Rochester Riverside. A wider range of information sources has therefore been used to assess possible flooding impacts.

It has been assumed that, in the absence of the Core Strategy regeneration will still occur but at a slower pace. It has also been assumed that due to Southern Water's plans for introducing universal metering across the area water use will, on average, reduce to some degree.

Some elements of the evidence base supporting the Core Strategy are still being completed or revised. As a result some of the conclusions reached are not necessarily definitive but this is to be expected at this stage of the process.

Definitions Used in Appraisal Matrices

In terms of the definitions used to categorise the impacts that were expected during the appraisal, the following steps were applied.

1. Is there going to be a substantial impact? Yes Q2 or No Q4
2. Will this be positive or negative?
3. If it falls into either of these categories then the relevant mark is made
4. If the impact is not going to be substantial, then is the expected impact going to be positive or negative?
5. If it falls within either of these second categories then it would be marked with the less substantial mark
6. If it is considered that the impact could not fall into any of these categories then it was considered to be neutral and marked with the relevant symbol.

In addition it was considered whether the potential impacts were likely to occur in the short, medium or long term. Due to the length of the plan period, at 15 years, these correlated to the following 5 year bandings:

Short-term	0-5 years
Medium term	5-10 years
Long term	10-15 years

As a result the marks below have been used in the matrices.

√	Significant benefits
-	Potentially harmful; cannot be balanced
0	No effect; benefits/harm will be balanced
+	Potentially some benefits
×	Not compatible

Discussion Categories

Many of the sustainability issues identified are cross-cutting in nature. To take account of this they have been grouped under the following categories:

- Air quality
- Water and Soil
- Waste
- Biodiversity and open space
- Climate adaptation and mitigation
- Community (population, crime, deprivation, health)
- Cultural Heritage and Material Assets
- Transport and accessibility
- Housing
- Economy and employment

Significant Issues

As a result of the baseline information and new information referred to above, the following issues are considered to be of particular significance in terms of the sustainability of the area as a whole into the future.

Air –changes made to the Air Quality Management Areas (AQMAs) mean that many town centre areas and main urban routes are now covered. Given the focus for development in the town centres in future, potentially there could be a higher proportion of the population resident within areas of poor air quality. As such all development will need to take this fully into account to avoid a worsening situation.

Water and soil –water supply will be a crucial sustainability issue in the future. This will be partially due to impacts of climate change but also the expected level of growth across the area. As Medway is classified as a 'stressed' area in water supply terms and the South East is also the most stressed region in the country it is critical that as many water efficiency measures as possible are implemented and that there is a supportive environment for innovative ways of increasing supplies.

Waste – good progress is being made with recycling but it will be important to continue the momentum into the future and to ensure that there is sufficient waste treatment and disposal capacity to deal with the areas needs.

Housing – in terms of housing affordability is an issue with prices having increased faster than wages, meaning a larger proportion of affordable homes may be required if the price to earnings ratio does not improve. Should future house building not be sufficient to meet local needs, stress on families would increase. Housing will also need to be resilient to climate change and adaptable for different occupants and uses.

Economy and employment – the existing low average income level in Medway and the number of deprived areas means that increasing skills and providing more jobs across the area is important to the future sustainability of the area. Account also needs to be taken of the fact that the workforce is ageing, albeit more slowly than in many other areas.

A proportion of the existing stock of buildings used for employment purposes is not flexible or adaptable enough to meet changing requirements, pointing to the need for reinvestment.

Biodiversity, open space and landscape – between designated sites and other land there is a significant proportion of the area, especially on the riverfront and the Hoo Peninsula, that is important for biodiversity and human health. Ensuring that these areas are preserved and appropriately managed is therefore of obvious importance.

Climate change adaptation and mitigation – climate change is expected to have significant effects across the area. Appropriate strategies for both managing and minimising these impacts will therefore be important. These will need to include more adaptable built environments, resilience to flooding and adaptation strategies for biodiversity.

Transport and accessibility – the use of public transport in Medway is higher than the regional average and further improvements are being made in the short term. However a continued effort to manage car use will be required to offset the effects of high levels of development.

Cultural and material assets – this section of the baseline highlights the range of important cultural assets in the area and also covers the importance of townscape. As the existing physical townscape can seem unwelcoming in some areas in and around the town centres, improving this so that people want to interact more with their surroundings is key to the economic vitality of the town centres.

Community – there will be an increase in population of around 25,000 over the plan period, of which a significant proportion are likely to be in the older age groups. This in turn emphasises the need for services to be accessible.

Compatibility of the Core Strategy and SA Objectives

The following strategic objectives are proposed in the Pre-Publication Draft Core Strategy:

- To effectively realise Medway's role within the Thames Gateway and associated growth requirements primarily through effective physical regeneration, the reuse of previously developed land and the protection and enhancement of the area's many natural and heritage assets.

- To develop Chatham as a city centre of regional significance with its role complemented by thriving and attractive traditional town centres in Strood, Rochester, Gillingham and Rainham together with a network of strong neighbourhood centres serving local communities.

- To substantially improve the performance of the local economy, in particular by nurturing higher value activities and reducing the current reliance on out commuting.

- To focus employment growth in Chatham Centre, within the major mixed use regeneration sites, through re-investment within the established employment areas and at Rochester Airport, Lodge Hill, Kingsnorth and Grain.

- To maximise the development opportunities associated with the four universities and Further Education College to create a centre of excellence of national significance.

- To radically improve the quality of the townscape and public realm within the central urban area and along the urban waterfront.

- To significantly reduce deprivation in Medway, including through the implementation of tailored strategies for target neighbourhoods and the development of a network of strong neighbourhood centres, providing a range of local services and acting as community hubs.

- To ensure that there is sufficient housing to meet people's needs by providing for a range, mix, type and affordability of housing in locations that contribute to the regeneration and sustainability of the area.

- To provide for transport needs of the population through the provision of enhanced public transport facilities, proactive management of the highway network and improved facilities for walking and cycling.

- To enhance the quality of life of local people through the promotion of healthier lifestyles and the provision of improved cultural, leisure and tourism facilities, including along the river Medway.

- To nurture Medway's rural areas and economy, including through village improvement projects, enhanced land management and local access strategies.

- To make the new settlement at Lodge Hill a model for modern living, exhibiting the highest standards of design and sustainability and complementing existing villages on the Hoo Peninsula.

- To work proactively to minimise the effects of climate change through efficient resource use, high quality buildings, improved

biodiversity, the effective management of open land and other mechanisms.

- To ensure that there is sufficient minerals and waste management/disposal capacity to meet local requirements and contribute to regional and national needs.

The Sustainability Framework was finalised in the Final Scoping Report and the objectives of the SA are described in that and laid out in the following table.

1	Biodiversity, Flora and fauna	Conserve and enhance the diversity and abundance of habitats and species
2	Air	Reduce air pollution and improve air quality, including reduction of greenhouse gas emissions
3	Water and Soil	Maintain and improve quality of ground and surface waters and security of supply
4	Climatic factors	Reduce risk of flooding and ensure flood resilience of buildings and minimise the effect on public services and infrastructure
5	Climatic factors	Reduce ecological footprint through prudent use of natural resources, reduction in waste and use of sustainable waste management practices
6		Provide opportunity for everyone to live in a decent, sustainably constructed, affordable home suitable to their needs
7		Maximise land use efficiency through appropriate use of previously developed land and existing buildings
8	Human Health	Improve the health and well-being of the population and reduce health inequalities
9	Population	Reduce inequalities in poverty and social exclusion
10	Population	Reduce crime and the perception of crime
11	Material assets	Improve accessibility to key services and facilities (inc. countryside, leisure/recreation and historic env)
12	Cultural Heritage & Landscape	Conserve and enhance historic buildings, archeological site and culturally important features and increase engagement by all sections of community
13	Material assets & climatic factors	Increase energy efficiency; the proportion of energy generated from renewable sources and the diversity and security of energy supplies
14		Reduce traffic and congestion by reducing need to travel and improving travel choice
15		Raise educational achievements through developing opportunities to acquire skills, to develop and maintain workforce
16		Support and improve employment and economic competitiveness in town centres and deprived areas

The table below shows the compatibility matrices between the objectives of the Core Strategy and the SA framework. It shows that there are a number of areas where the the Core Strategy objectives and the SA objectives are incompatible. However, these tend to be due to the consequences of growth. At this stage they are simply considered in terms of whether they would be compatible with the aim or not, rather than considering anything specific in terms of how they may be implemented. It is however important to outline where potential conflicts occur and need to be considered.

Compatibility Matrix of the Strategic and Sustainability Objectives

	SA Objectives	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Strategic Objectives		environment	air	water	flooding	Environmental footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable Energy	transport	Education and workforce	Employment and competitiveness of deprived areas
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Key to matrix

	Compatible
	Slightly compatible, expected more benefits
	No effect; benefits may balance harm
	Slightly compatible, but expected more harm
	Not compatible

As can be seen from the matrix there are few immediate clashes between the Core Strategy's strategic objectives and the objectives of the SA framework. It can also been seen that none of the strategic objectives are currently entirely complimentary in terms of the SA objectives. However, a lot of this is due to the fact that no consideration has been given, as yet, to the exact implementation possibilities. Nevertheless it usefully highlights where greater consideration needs to be given to the exact policy wording to ensure the most effective implementation, to ensure the maximum linkage occurs.

Appraisal of the Alternatives

This short section of the report provides some further commentary on how development alternatives have been considered. It expands on certain elements of the initial appraisal of the Issues & Options report.

The main bulk of the appraisal of alternatives was done within the Initial Appraisal of the Issues & Options document in July 2009. This focused on the potential for 5 broad locations to accommodate growth outside the existing urban boundaries. This incorporated considerations of how much additional infrastructure may be needed to serve each option and the impact of each on the natural environment.

Consideration of options beyond this was limited due to the number of decisions on the location of development that have already been made. This reflects the area's location within the Thames Gateway and its associated regeneration strategy.

There were a number of areas where the way forward has also been established through other plans and strategies.

One example relates to the hierarchy of retail centres coming from the conclusions of the Retail Needs Study carried out by Nathaniel Litchfield & Partners. This emphasised the potential of Chatham over the other town centres for accommodating new retail development. It concluded that there was substantial headroom within Chatham town centre and that a minimum of 30,000 sq m of new comparison floorspace was necessary to have the 'critical mass' to effect change. This reinforced the expectation that Chatham would in future be the focus for growth in town centre uses, although change at a lesser scale was still expected in the other centres. Accordingly other options were not appraised.

Another example is in relation to potential relocation options for a new football stadium. Over a number of years Gillingham Football Club have sought a new ground but all the options identified have not proved to be viable. No new proposal has been put forward in connection with the draft Core Strategy.

Similarly, a significant upgrading of facilities at Medway Maritime Hospital is justified and there was some speculation as to whether this could be better achieved by relocating to a new site. However the Foundation Trust have now determined that the current site will be progressively redeveloped, removing the need to evaluate alternatives.

A new long-term contract for the disposal of Medway's municipal waste has been let and, as a result, material will continue to be taken out of the area. However, it is recognised that treatment and processing is needed for other waste streams in the area. At present the majority of treatment is centred in two hubs situated on the Medway City Estate and at Kingsnorth. There are no active landfill operations (inert and non-inert) in Medway. As such the

appraisal in relation to waste development in the Initial Sustainability Appraisal was done in terms of adding provision to the treatment and processing of the other waste streams in the area.

The options appraised for tackling the issue were a continuing and supportive focus on reuse and recycling/processing facilities in and around Kingsnorth; an extension to the existing Viridor site at Medway City Estate; use of unused land at Chatham Port; providing a facility at Halling Coal Yard and Wharf; the creation of a void within the London Clay on the Hoo Peninsula or land raising on the Peninsula.

In forming the options to be appraised for any waste treatment/processing there were two approaches, the first being to reduce the overall level being produced and increasing capacity of the waste hierarchy and the second being in terms of the need and potential ways of addressing the issue of final disposal. Overall 6 options were considered, 4 of which followed the first approach and 2 the second approach.

In terms of the four options to increase treatment/processing through the area two of these would result in locations to the north east of the urban area, one centrally located and one to the south west of the urban area. The two remaining options in terms of final disposal would both be located on the Peninsula and again to the north of the urban area.

As a result of the type of development this scores highest in terms of sustainability against reducing the ecological footprint of the area and increasing sustainable waste management practices. However, the introduction of a technological hub at Kingsnorth and extending the Viridor site at Medway City, due to their location and resultant proximity to an available workforce is believed to give the greatest benefit against the economic objectives of the framework. Linked to these it was considered that as a result there could also be some benefit to addressing inequalities in poverty and social exclusion.

Overall, it was not considered that any of the proposed options would have either a positive or negative effect on the social objectives of the framework. It was considered the two proposals related to final disposal capacity on the Peninsula could potentially introduce an element of antisocial behaviour during construction, due to anecdotal evidence in relation to similar types of development.

No assessment could accurately be made of the potential impacts of the developments, especially those at Kingsnorth and Medway City Estate, on public health as many of the technologies are still evolving.

The conclusion of the appraisal was that an extension to Viridor's existing site on Medway City Estate would be the most sustainable for a number of reasons. Little additional work would be needed to ensure its operation as there is good access to the existing road network, there are existing permits and permissions, as well as there being benefits to both the local economy

and community. In addition it was considered to have the least impact on the environment. However, it was recognised that, on a locational basis, this was only slightly better than the increased focus on a treatment/processing hub at Kingsnorth.

In the Initial Sustainability Appraisal there was a section covering aggregates but this only looked at how the area would be able to provide the amounts that were being suggested under the Partial Review of Policy M3 of the South East Plan. This did not consider any other elements related to mineral production, such as importation as there are no known plans for this to change beyond the existing sites. The potential impacts of any intensification of the existing sites would need to be assessed through the appropriate assessment stage of the Habitats Regulation Assessment.

The 3 options considered for providing the required amount of land-won aggregates were the exploitation of deep channel deposits at Cliffe; continued exploitation of the terraces at Hoo or those located at Grain.

As expected due to the nature of the development type all of the proposed options for addressing this have low sustainability ratings. The most significant sustainability benefits of the land won aggregate provision is to the objective of providing the opportunity for everyone to live in a decent, sustainably constructed, affordable home.

The appraisal explained that the air quality in the area and water quality could be affected through these processes due to being water intensive and currently the air being relatively pristine. It would also be expected that all of the options would increase pressure on the transport network, although alternatives would lessen this over the plan period and again due to its existing proximity to the network this would be neutral in the case of extending the permissions around Hoo.

The option of extensions to the existing permission around Hoo were considered to have the least detrimental impacts, with the potential of contributing to economic opportunities and also in the long term being able to provide a new natural feature that could integrate with the existing Special Protection Areas and after operations have finished give greater access to the countryside.

The conclusion of the appraisal was that of the 3, continued exploitation of the terraces located near to Hoo was the most sustainable. It was expected that this would have a neutral impact on the environment considering the conditions that have been applied to permissions granted. It was also considered that this could result in an improvement in the environment over the longer term. Furthermore the proximity of this location to the existing road network would mean that there would be less impact both to make any site accessible and in terms of its operation.

In terms of the location of housing there is an established focus on the main urban area. Taking account of the large number of smaller sites that

contribute to supply in the area and for overall sustainability reasons, this approach has wide support. As such the main emphasis in terms of any potential alternative locations is their ability to meet additional requirements, not to replace urban sites.

A 'Call for sites' was carried out from December 2008 till January 2009, as part of the Medway Strategic Land Availability Assessment (SLAA) and as a result of this a number of sites were put forward. These tended to fall within a number of broad locations and were considered accordingly. This also allowed an objective assessment to be made by comparison with the proposed settlement at Lodge Hill, Chattenden. This was both to see whether another location may be more suitable than Lodge Hill and also to test whether the same scale of development could be achieved elsewhere.

All of the options apart from Capstone were considered to make a reasonable contribution towards achieving the sustainability objectives at least in the short term. However over the longer term Lodge Hill would make the greatest contribution overall. The harmful impacts that could be anticipated from the Lodge Hill development would be to air quality through elements, such as biomass boilers and the increased demand on water supplies.

Though all of the options to some degree would be anticipated to have at least some impact on the natural environment through increased demand and indirect impacts, such as increased recreational opportunities and interactions with designated habitats. Though there were similarities in terms of those objectives that could be harmfully affected, these are generally greatest and more acute within the Capstone option. This is due to the fact that currently though there is some human interactions at the site these are limited, however by including a large amount of development at the site, it would need a substantial amount of infrastructure which would raise their own significant impacts, as well as creating a number of subsequent impacts. A primary example of this would be new roads and then resultant traffic affecting air quality.

The two options near Rainham score reasonably well in terms of the social and economic objectives but would not give the significant benefits that either Extended Hoo or Lodge Hill would. Furthermore these would have more detrimental impacts than either of the other two.

In terms of sustainability both the Chattenden and Extended Hoo options were considered to have benefits on social, economic and environmental objectives. Though there may be a greater level of work to be done for construction to occur at Chattenden in comparison to an Extended Hoo, this could potentially, be easier due to it being a blank canvas whereas it would be likely to be more problematic trying to mesh with the existing services around the villages.

Similar to the situation with housing, employment at the existing sites is important to the area, as has been confirmed by conversations that the Economic Development Team have had with business owners. Furthermore

there is a concern over the gradual degradation of smaller sites. As a result the options that were appraised in the Initial Sustainability Appraisal were in combination with the numerous smaller sites and the established estates mainly located in the urban area. These followed the same locational alternatives as the housing ones.

One of the crucial elements of this section of the appraisal was the information that was available on countryside related employment. This mainly affected appraising the options around Rainham and especially any contribution that Capstone could make. On this basis general trends and message could only be made, as much would be dependent on how they were implemented, of which no information was available at this stage. Therefore more weighting was given to those elements such as what was needed in terms of additional physical infrastructure and the impact of employment in these locations.

In relation to employment floorspace the appraisal again resulted in Chattenden or Extended Hoo being the most sustainable. This is due to the fact that the level of existing infrastructure is greater, as well as the opportunity to tie into a wider range of employment. The solutions around Rainham if properly integrated with the town centre would have benefits but it not well located in terms of either existing transport or infrastructure links.

The overall result of the appraisals if carried forward would mean that development in the future will end up being focused to the north of the existing urban area.

Appraisal Summary

As mentioned within the earlier section on methodology the following symbols have been used within the matrices.

√	Significant benefits
-	Potentially harmful; cannot be balanced
0	No effect; benefits/harm will be balanced
+	Potentially some benefits
×	Not compatible

The following matrices on the following pages are summaries of the Chapters.

Cross-cutting Matrix

	SA Objective	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		environment	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	transport	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS1:Regenerating Medway		0	0	-	0		✓	✓	+	+	0	+	0	0	-	✓	✓
CS2: Quality and Sustainable Design		0	0	+	0	+	✓	✓	0	+	0	0	+	0	+	✓	✓
CS3: Mitigation and Adaptation to Climate Change		✓	0	✓	0	✓	+	0	0	0	0	✓	0	0	0	0	0
CS4: Energy Efficiency and Renewable Energy		0	0	0	0	✓	0	0	0	+	0	+	0	✓	0	✓	✓
CS5: Development and Flood Risk		✓	0	0	✓	✓	+	0	0	+	0	+	0	+	0	0	0
CS6: Preservation and enhancement of Natural Assets		✓	0	0	+	✓	0	0	+	0	0	0	✓	0	0	0	0
CS7: Countryside and Landscape		+	0	0	0	0	0	0	+	0	0	+	+	0	+	0	0
CS8: Open Space, Green Grid and Public Realm		0	0	0	0	0	0	0	✓	✓	✓	✓	+	0	+	0	0
CS9: Health and Social Infrastructure		0	0	0	0	0	0	+	✓	✓	0	✓	✓	0	0	0	+
CS10: Sport and Recreation		-	0	0	0	0	0	✓	✓	0	0	✓	✓	0	0	+	+
CS11: Culture and Leisure		0	0	0	0	0	+	✓	0	+	0	0	✓	0	0	✓	✓
CS12: Heritage Assets		0	0	0	0	0	+	✓	0	+	0	0	✓	0	0	✓	✓
Summary																	

Housing Chapter Matrix

	SA Objective	biodiversity	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	traffic	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS13: Housing Provision and Distribution		-	0	-	0	-	✓	✓	+	✓	+	✓	0	+	-	+	+
CS14: Affordable Housing		0	0	-	0	-	✓	✓	+	✓	+	✓	0	0	0	+	+
CS15: Housing and Other Housing Requirements		0	0	-	0	-	✓	✓	✓	✓	+	✓	0	✓	0	+	+
CS16: Gypsies, Travellers and Travelling Showpeople		0	0	-	0	-	✓	✓	0	✓	0	✓	0	0	0	+	+
Summary																	

Economy Chapter Matrix

	SA Objective	biodiversity	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	traffic	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS17: Economic Strategy		-	0	-	0	-	+	✓	✓	✓	0	✓	+	✓	-	✓	✓
CS18:Tourism		0	0	0	0	0	+	✓	0	+	0	0	+	+	-	✓	✓
CS19:Retail and Town Centres		0	0	0	0	0	+	✓	0	✓	0	✓	0	0	-	✓	✓
CS20: Education and Personal Development		+	0	0	0	0	+	✓	+	✓	0	0	+	+	-	✓	✓
Summary																	

Energy, Waste and Minerals Chapter Matrix

	SA Objective	biodiversity	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	traffic	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS21: Conventional Energy		0	-	0	0	0	0	✓	0	✓	0	✓	0	✓	-	✓	✓
CS22: Minerals Provision		-	0	-	0	0	+	0	0	✓	0	0	0	+	-	✓	✓
CS23: Waste Management		0	0	0	0	0	+	✓	0	+	0	+	0	✓	-	✓	✓
Summary																	

River Medway Chapter Matrix

	SA Objective	biodiversity	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	traffic	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS25: The River Medway		✓	0	✓	0	✓	0	0	+	0	0	+	✓	0	+	+	+
Summary																	

Area Policies Chapter Matrix

	SA Objective	biodiversity	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	traffic	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS26: Strood		-	0	-	0	-	✓	✓	0	+	+	0	0	0	0	✓	✓
CS 27: Rochester		0	0	0	0	0	+	✓	0	0	0	0	+	0	0	✓	✓
CS28: Chatham		+	+	+	0	+	+	✓	0	✓	✓	✓	0	0	0	✓	✓
CS29: Gillingham		+	0	0	0	+	0	✓	0	+	0	0	0	0	0	✓	✓
CS30: Rainham		+	0	0	0	+	0	✓	+	+	0	+	0	0	0	0	✓
CS31: Lodge Hill		✓	0	+	+	+	✓	✓	0	✓	0	+	✓	✓	+	✓	✓
CS32: Hoo Peninsula and the Isle of Grain		0	0	0	0	0	+		+	+	+	✓	0	0	0	✓	✓
CS33: Medway Valley		0	0	0	0	0	+		+	+	0	✓	0	0	0	+	✓
Summary																	

Monitoring, Implementation and Review Chapter Matrix

	SA Objective	biodiversity	air	water	flooding	Ecological footprint	housing	Previously developed land	health	Poverty/social exclusion	crime	accessibility	Material assets and culture	Renewable energy	traffic	Education and workforce	Employment and competitiveness of deprived areas
Policy																	
CS34: Developer Contributions		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Summary																	

Appraisal of the Pre-Publication Draft Core Strategy Policies Against the Environmental Indicators

There are a significant number of policies in the draft Core Strategy that seek to ensure some protection and proper account is taken of the natural environment. These are policies CS2 - CS8; CS21 – CS26 as well as some mention within the last three spatial areas, CS31: Hoo Peninsula and the Isle of Grain; CS32: Medway Valley and CS33: Lodge Hill.

The appraisal has considered the contribution the policies would make to the development of the area, based on full and effective implementation and the topic areas listed earlier. Under each topic an outline description is given of how the area might look if the existing trends were to continue, although with the assumptions mentioned earlier applied. For the main appraisal this is then used as a comparator for the situation with the core strategy implemented.

Air Quality

Updated context

On the basis of a slower rate of regeneration occurring and a number of transport measures being completed in the short term, it may be anticipated that there will be a neutral impact on local air quality. However, predicted trends in vehicle pollution emissions are not being realised in ambient concentrations across Europe and any judgements on the future situation in Medway should be treated with caution as a result.

It may be that there could be a slight improvement if future transport improvements are introduced at the same time or in combination with the development of major regeneration sites. However there would be no change to air quality outside the area.

Situation without the Core Strategy

It may be anticipated that air quality in the town centres will improve due to the number of transport changes that are expected and the intended consolidation and relocation of car parks resulting in more efficient traffic movements. In addition, there are a number of initiatives in the third Local Transport Plan (LTP3), which the Core Strategy will help implement. These will also encourage a modal shift away from the private car. This should in turn help to improve air quality.

As one of the main air quality hot spots is along the M2 corridor, there will be shared impacts between Medway and its neighbouring authorities. If a significant modal shift can be achieved, there could be a reduction in the number of vehicles using the route and so benefits to the neighbouring authorities, especially to the west in Gravesham but this could be offset by traffic growth in the wider area.

Situation with the Core Strategy

Growth will be concentrated within the main urban area and at the new settlement at Lodge Hill. There will be a particular focus along the urban waterfront and in and around the town centres. Therefore it would be expected that there could be an impact on air quality focused in these areas. It is considered unlikely that the employment opportunities that are supported through the Core Strategy would make substantial impacts on air quality, unless dominated by heavy goods vehicle movements as opposed to the higher value activities sought. They could lead to an improvement due to the fact that environmental technologies will be encouraged and the resultant scope for reducing the energy loading across the area.

The greatest change in air quality is most likely to occur on the Hoo Peninsula, as this is an area identified for a hub of environmental technologies and other economic development, in addition to the proposed development of Lodge Hill. Though Lodge Hill is intended as an exemplar of sustainability, it will intensify the use of the existing site and will increase substantially the number of people and cars located on and attracted to the Peninsula.

Proposed policy appraisal

The crucial sustainability issue in terms of air is:

- To prevent any additional AQMAs being created

The largest contributor to reduced air quality in Medway is transport. In this respect policy CS24: Transport and Movement is key. The sustainability aspects and links to air quality do feature heavily within the policy wording and explanatory text, therefore it would be expected that this would make a significant positive contribution to this objective.

Air quality hotspots are stated as forming part of the proactive management of the highway network, along with elements that are expected to be delivered to encourage a modal shift from the private car towards more sustainable modes of transport, such as through the development of four park and ride sites over the plan period. In addition, there is also mention in the policy about reducing car parking and parking standards, as well as further actions to improve further shifts in travel modes, such as the expectation for transport assessments to include assessments away from the private car.

Two policies that may also have a more direct impact on air quality are CS4: Energy Efficiency and Renewable Energy and CS21: Conventional Energy Generation. Policy CS4 both through the principle being applied and the wording would be expected to improve air quality and policy CS21, on the basis of being applied and implemented fully, would also help.

In policy CS4 it is stated that developments will be subject to them having no adverse affect on the natural environment and positively promoting the

installation of renewable technologies. In policy CS21 air quality could be improved by the fact it states applications will be assessed in terms of "*their impact on the natural environment and for the potential to re-use waste heat*".

Recommendations to be taken into account

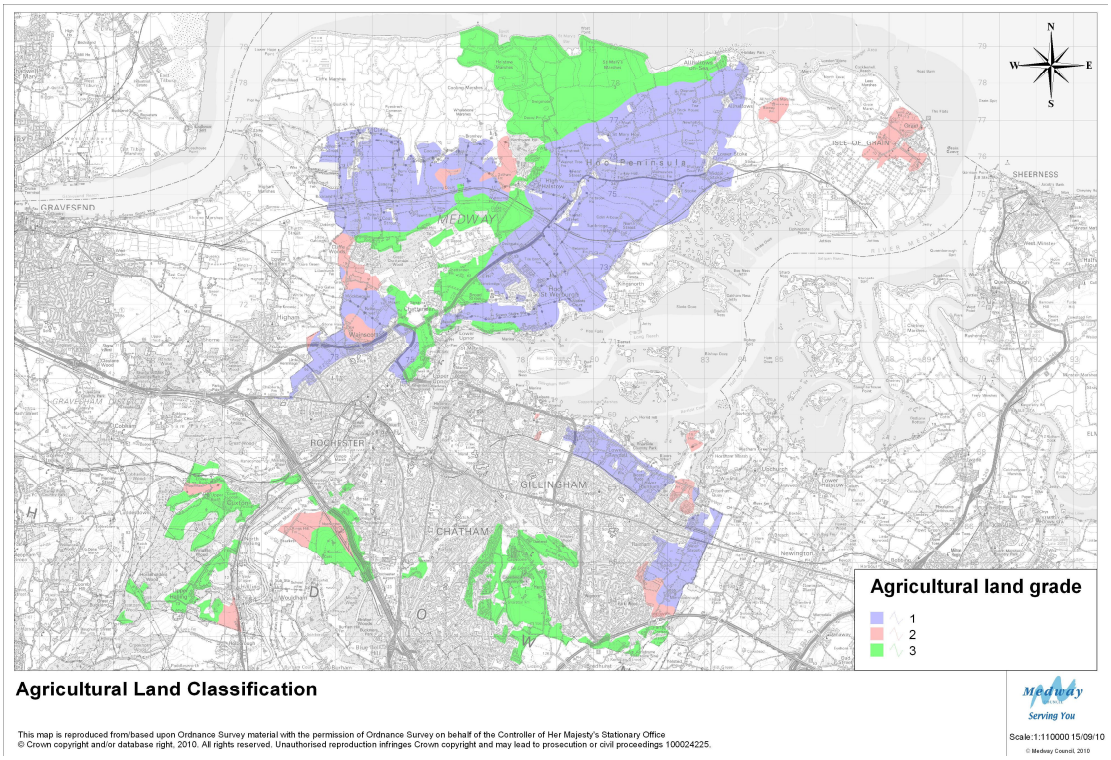
A reference to improving or not harming air quality could usefully be added within the town centre policies, to help to implement strategies to address air quality in or near the AQMAs. Consideration should be given to a category within the Annual Monitoring Report that allows some reporting back on the number of AQMAs.

Water and soil

Updated context

As mentioned within the Final Scoping Report, soil quality varies widely across the Medway area. Most importantly there are large sections that are classified as Grade 1 agricultural land on parts of the Peninsula and some more selected parts to the North and East of Rainham, which are shown on Figure 1 below.

Figure 1: Map showing the Agricultural Land Classification within Medway



The council has identified over 1000 sites which could potentially meet the definition of contaminated land. It is currently in the process of prioritising these sites. To date most of the remediation of brownfield sites which has been undertaken within the Borough has been through development management (planning process by the imposition of suitable conditions and S106 agreements), such as Rochester Riverside and the Akzo Nobel site, where remediation has occurred.

As outlined in the Water Supply State of Medway (SOM) Report it is expected that there will be a water deficit in the area early within the plan period and then later go into a surplus, however Southern Water consider that the supply of water can be maintained overall. At least some of this would be through a regional balancing of supplies.

Plans to increase the level of the Bewl Water Reservoir (located at Lamberhurst, Kent) and for a new reservoir to be located at Broad Oak (nr Canterbury), to be constructed in the middle of the plan period and come on line towards the end of the Plan period have been suggested within the South East Water Resources Management Plan.

If these were to be implemented they would cumulatively have a significant impact in terms of water supplies to the area. The greatest of these would be an increase in supplies as the current amount that is piped across to Thanet would not be needed and so could be retained to serve the area. Additionally, there may be a benefit to designated sites, as well as the nutritional quality of the agricultural land mentioned above.

Currently, wastewater is dealt with by two treatment plants – at Motney Hill, Rainham and near Whitewall Creek, Frindsbury.

Situation without the Core Strategy

Southern Water's introduction of universal metering across the area is expected to be finished by 2012, meaning that there should be a reduction in demand, as suggested in the Appendices of the Water Resource Strategy Action Plan for the Southern Region. This and the national timescale for implementation of the Code for Sustainable Homes are expected to help in terms of counteracting the potential increase in demand that would result from regeneration.

Though the wastewater treatment works at Whitewall Creek does not currently have capacity for dealing with Lodge Hill, it is not constrained and so when necessary Southern Water would expect to be able to extend it to the required capacity. It is also intended that once the planning certainty is gained Southern Water will confirm adoption of water pipes at the Lodge Hill site.

However it should be noted that one of the expected effects of climate change will be a combination of a drier climate, higher temperatures and a greater

number of flash flooding events. Therefore the extreme water stress experienced is unlikely to go away even with the expected reductions, and supplies and infrastructure will continue to be stretched.

Situation with the Core Strategy

In terms of soil it would be expected that though there will be some detrimental impact as a result of mineral extraction being needed and use of materials from this. The high level of regeneration in the area could also create an increased need for a soil treatment site in the area, due to the large amount of contaminated soil being reused. However, development on greenfield land would be more limited as protection has been afforded to the highest quality agricultural land through a number of the area policies. If water supplies are protected and expected schemes implemented then there should be no detrimental impact on sensitive designated habitat sites.

Initially, the situation in terms of water quality and supply would not be expected to be significantly different from that explained in the baseline earlier in this report. As explained Southern Water has specific plans which are expected to ensure supplies for the area over the plan period and based on the expected growth in housing. However, the proposed development of a large multi use cultural facility and employment could well put additional pressure on these.

Proposed policy appraisal

The crucial sustainability issues in terms of water and soil are the following. In terms of water:

- The dependence of supplies on schemes outside the area to ensure adequate supplies in the future with current and expected water stress

- The quality, amount and distribution of water supplies and the physical water environments, such as rivers, inland waterways and seas.

Policy CS30:Rainham gives protection to the important areas of agricultural land on the edges of Rainham and gives particular reference to its location on the urban/rural fringe, as well as the important challenge of balancing access to the countryside and supporting the role of agriculture. Policy CS31: Hoo Peninsula and the Isle of Grain also gives specific cover to ensure that high grade agricultural land is not lost within its last paragraph.

Though these are the only areas where soil is specifically referenced, a number of policies could still impact on the soil environment. Policy CS22: Provision For Minerals that along with the aforementioned policies will be crucial in terms of soil, as this states that "*the Council will make provision for the extraction of at least 0.18 million tonnes per annum land won aggregates*". However, this is also specific in terms of the location this would come from. As a result this would represent full utilisation of the existing permission that

exists and not initially beyond this. On balance, this would be considered to represent the most significant detrimental direct impact on soil within the area. This would be due to the comparative time that the site would be operational against that which it would be in terms of restoration.

In general the other policies that would have, at least, a tangential effect on soil are related to materials and their usage. Policy CS2: Quality and Sustainable Design lays out the main points in relation to materials from the CfSH and Policy CS15: Housing Design and Other Housing Requirements that land should be used effectively. Additionally, there is a degree of protection afforded through the policies mentioned above and policy CS7: Countryside and Landscape as there are also references to the Landscape Character Assessment.

Two policies specifically address the interaction between development and the water environments. These are CS5: Development and Flood Risk and CS25: The River Medway.

Policy CS3:Mitigation and Adaptation to Climate Change makes a contribution towards ensuring that the demand for water is reduced through the imposition of specific standards to be met from the Code for Sustainable Homes and BREEAM. Additionally this policy also aims to help ensure future supplies by mentioning *"support for the proposals in the Final Water Resource Management Plan 2010-2035"*.

Towards the end of a line in policy CS33: Lodge Hill there is mention of water strategies specifically for addressing a reduction in the ecological footprint of the development.

Therefore the Core Strategy will ensure that a reduction of demand occurs from physical building that would not occur otherwise. However, there is no mention in any of the policies or accompanying text to advise about other crucial factors for water quality, such as a reference to Nitrate Protection Zones.

Policy CS5 is the only policy directly involving the water environment, the location of development and future proofing. It does importantly include a number of significant points to address expected impacts from and to water environments due to climate change, such as including the following paragraph. *"All developments which have the potential to affect the ability of land to absorb rainwater will be required to incorporate and obtain approval for sustainable urban drainage systems (SUDS) in line with national standards"*

As with the soil environment, there are a number of other policies that could either have direct impacts on the water environment or link to designated habitats and water quality. Though the link to habitats is established the exact impacts are generally of a more indirect nature, such as a reduced flow due to increased abstraction.

As understood through Southern Water's Business Plan and Water Resource Management Plan, the level of housing provision and growth is planned for but will increase demand. Unless this is carefully managed then it will undoubtedly increase pressure on supplies.

Recommendations to be taken into account

It would be advisable for remediation of contaminated sites to be referred to within the Core Strategy due to the number of sites that potentially meet the definition of contaminated land, with further detail in the following Land Allocations and Development Management Policies DPD.

Consideration of how to monitor the impact of policies on water demand and supply should be considered due to the importance of the issue in terms of sustainability.

Waste

Updated context

The new municipal waste contract mean that no provision will be required for treatment/processing of household municipal solid waste within the area, as it will be dealt with elsewhere. There is capacity to deal with most other waste streams at established facilities, at least in the short term.

Both the use of recycled materials and the points for addressing waste as part of the CfSH would be expected to help in reducing the amount of waste that treatment and disposal capacity is needed for. It would also be expected to help towards creating a behavioural change and so help reduce the ecological footprint of the area.

Situation without the Core Strategy

Growth in the area will mean that there will be an increase in the amount of waste generated. However, a large proportion of this will be going out of the area due to the recent waste contract that will apply throughout the whole of the plan period. In addition, fiscal and national policy measures are strongly encouraging the reuse and recycling of materials, notably in construction. This will help to offset increases generated by growth in the area.

There is already significant capacity to deal with certain types, notably industrial and commercial materials but a complete lack of landfill capacity would be likely to cause increasing quantities of materials to be diverted elsewhere, contrary to the proximity principle that is intended to apply to waste. If this occurred there would be increasing negative impacts both within and beyond Medway as a result of the need to transport materials.

Situation with the Core Strategy

Areas of search have been identified within the London Clay on the Hoo Peninsula and Isle of Grain where there is potential for land raising or void creation for the disposal of residues that cannot be disposed of in any other way. Support is also given to additional treatment capacity, particularly at Medway City Estate and Kingsnorth.

This would mean that Medway should be able to manage wastes other than that it creates over the plan period. Due to the high level of regeneration in the area there may be an increased need for a soil treatment site in the area, due to the large amount of contaminated soil needing to be treated. However constantly improving techniques mean that in many cases this can be done on the site where treatment is required.

With potentially decreasing proportions of waste that can only be disposed of through landfill, a new facility catering only for Medway's needs might not be viable. This may result in material being imported from further a field with associated negative impacts on the environment.

Proposed policy appraisal

The crucial sustainability issues in terms of waste are the following.

- Ensuring that there is a reduction in the amount of waste being produced
- Increasing the provision for treatment/processing of waste in the area
- Aiming towards being self sufficient in the future

Policy CS23: Waste Management is the only one that directly addresses waste. The policy is proactive in dealing with the disposal and treatment of the expected waste to be generated in the area. It suggests that treatment facilities should be focused in the existing industrial areas, as well as applying the proximity principle. It also sets a clear set of parameters for standards that will apply to any proposals for a void creation or land raising scheme, in one of the identified areas of search.

A number of the other policies address waste reduction and particularly reuse. Policy CS3 mentions limiting the embodied energy of materials in construction and policy CS2 refers to "*waste reduction in use and construction*". Though not explicit waste treatment or sustainable waste management facilities would be supported under policy CS17, under the banner of "*energy and environmental technologies*".

Overall it would be expected that the policies in the Core Strategy would result in a number of benefits in terms of reducing, reusing and treating waste.

Recommendations to be taken into account

Consider whether more detailed policies should be included the Land Allocations and Development Management DPD to complement the overall approach set out in the Core Strategy.

Biodiversity, Open Space and Landscape

Updated context

Nothing significant has occurred further to the original position mentioned in the Final Scoping Report.

Situation without the Core Strategy

Over the plan period the compensatory habitats that were agreed near High Halstow in relation to the new port at Shell Haven in Essex will be established and so add to the existing amount of designated and non-designated sites. This will be one of the major changes to the area in terms of biodiversity and landscape. As a result of climate change it is expected that the composition of some of the designated sites is likely to change due to coastal squeeze and rises in temperatures.

A number of countryside and access projects are being implemented and further initiatives could reasonably be anticipated without the Core Strategy. These include the Valley of Visions project in the Medway Valley and various High Level Stewardship schemes.

Situation with the Core Strategy

With the core strategy there is a high degree of protection afforded to biodiversity, landscape and open space. This is particularly the case in relation to landscape through references to the Landscape Character Assessment in a number of policies and their accompanying text.

It would be expected that through the plan period there will be increased provision of open spaces within the urban area in conjunction with built developments. There will be some development occurring on the Peninsula but focused in specific locations and so should be in keeping with the landscape character of the area.

It would be expected that the Lodge Hill development would be substantially complete by the end of the plan period, placing some pressure on biodiversity. However its location in a natural bowl should limit its impact on the wider landscape of the Peninsula. It is expected that although there will be a high number of measures in place to ensure that the development has a low

ecological and carbon footprint, recreational pressures from the new population will have an effect on biodiversity.

Policies CS3, CS6 and CS7 all allow for some new habitats to be created and the later spatial policies also mention the Landscape character Assessment and protecting rural settlements. CS7 also promotes a comprehensive Green Grid, again increasing connections and pressures on biodiversity and the wider countryside and green infrastructure.

Proposed policy appraisal

The crucial sustainability issues in terms of biodiversity, open space and landscape are the following.

- Protecting and conserving existing designated sites
- Protecting smaller green sites in the urban area to create corridors for both wildlife and human enjoyment
- Protecting the landscape character of the area
- Allowing controlled increase in access to the countryside

There are a number of policies that cover this topic with Policies CS6, CS7 and CS8 being the most direct. CS6: Preservation and Enhancement of Natural Assets specifically covers existing sites and also where necessary sets out that "*compensation will normally be sought on more than a like-for-like basis*". As such it both deals with preservation; enhancement and compensation of existing designated sites at all levels.

Policy CS7: Countryside and Landscape covers a number of areas related to designated areas, such as the Kent Downs AONB as well as habitats and a number of wider landscape strategies. Policy CS8: Open Space, Green Grid and Public Realm is proactive in trying to ensure that a level of green infrastructure is provided across the area, as well as a coherent network of green spaces that link into a wider network across the Thames Gateway. Furthermore the policy proposes that this should link into the urban area and there should be improved access to them and from the riverfront.

Policy CS22: Provision for Minerals will impact on the landscape through the activity that it is promoting. However extraction is only proposed in one location, part of which already has planning permission, so no new significant land take would occur. Protection is afforded to the landscape through policy CS23: Waste Management in terms of ensuring permission is only permitted where extremely strong cases and evidence have been provided.

Policy CS16: Gypsies, Travellers and Travelling Showpeople does not deal with specific sites but states that these will be looked at through the future

DPD for specific site allocations. It does provide protection to existing features by saying that there should be limited impact "*as assessed in the context of the Medway Landscape Character Assessment*". Policy CS13 is not likely to have much impact in this context, as it does not propose land releases beyond those that have been recognised for some time.

As mentioned within the proceeding section on water and soil, protection is also given to the agricultural land and landscape. This is further extended through the various Area policies.

Though the proposed level of growth is bound to have an impact on open space, landscape and biodiversity, it is not believed this would be as great as initially thought. The reason for this is the level of preservation and protection afforded to the natural environment through the policies discussed above.

Given the overall scale of growth expected there will be associated impacts, such as noise through traffic and so associated impacts on biodiversity and other factors. Policy CS25:The River Medway also gives protection to the water habitats along the river, stating that support will be given where *"measures to protect and enhance the river as a valuable resource for wildlife and biodiversity, including wildlife corridors and habitat enhancement"*. And that *"Opportunities will be taken , in consultation with partner agencies…., to create replacement inter-tidal habitat"*

There is no strong evidence to suggest that there will be significantly greater recreational pressures on the area but it is considered that this will occur due to the level of development and be slightly detrimental. However this is only considered to be a slight overall impact as high level of protection that will be applied through the policies as proposed. It should be noted that within policies CS7; CS30; CS32 and CS33 there is mention of the fact that relevant schemes with partners will only be allowed if they show that a balance will be reached between access and the other uses of the countryside.

Recommendations to be taken into account

None recommended

Climate change mitigation and adaptation

Updated context

Changing climate patterns have the potential to increase incidences of flooding, increase coastal squeeze and will increase the importance of wildlife corridors and buffers to allow species to migrate and adapt.

The gradual introduction of zero carbon buildings and increasing use of renewables has the potential to offset these effects but not at the scale necessary without wider scale interventions.

Situation without the Core Strategy

The impacts of climate change will be more marked as growth continues but local strategies are not in place to augment national initiatives such as the Code for Sustainable Homes.

It is unlikely that the threat from flooding would be addressed in a comprehensive way leaving areas at increasing risk.

A similar situation is likely to exist with mitigation strategies for the natural environment. Some Green Infrastructure (GI) projects would be likely to proceed but without a clear overall guiding strategy in place. There will be a continuation near the beginning of the plan period to teach people about climate change and how they can help to reduce their impact and help businesses to be more green thinking.

Situation with the Core Strategy

The national timescales for the Code for Sustainable Homes will mean that there will be a resultant reduction in some sectors of waste and also that there will be some elements of mitigation to climate change. The area will have a larger proportion of dwellings that are sustainable either as a direct result of their build design or due to retrofitting properties with renewable technologies. These will also be supported by a greater proportion of energy coming from renewable technologies.

There will be a greater scale of habitats and increased access to the countryside. There will be stronger flood defences on vital sites along the river. There will also be a greater number of solutions throughout the area to mitigate against the effects of climate change. There will be more green roofs, greater efficiency of water use and other measures to reduce urban heat island and other effects.

Development on identified regeneration sites along the riverfront have been put through sequential testing both when they were included within the Chatham Regeneration Framework and then individual SPDs. These have shown that as long as there is no extension of the urban area, there is sufficient evidence of their importance to overcome part (a) of the exemption test. In essence these also tend to fulfil part (b). More detail needed to appraise the strategic sites will be available in the Medway Urban Strategic Flood Defence Strategy.

Proposed policy appraisal

The crucial sustainability issues in terms of climate change mitigation and adaptation are the:

- Ensuring buildings are resilient to the expected impacts
- Increasing protection of the waterfront from flooding

- Reducing the ecological footprint of the area

Mitigation is important throughout the Core Strategy, with a few themes, retrofitting; reducing the ecological footprint; renewable energy and landscape and habitat protection, repeated in a number of different policy areas. Adaptation to climate change is also important but this is only specifically referred to in one policy. One issue, which has a specific policy, incorporating both mitigation and adaptation, is flooding.

Policy CS5 is the only policy directly involving the water environment, the location of development and which tries to incorporate future proofing. In addition, to this policy there is also specific mention in policy CS25 that "*development will not be permitted which encroaches onto the natural floodplain beyond the current urban boundaries or threatens the stability or continuity of flood defences*." The last part of this is the element that gives some element of future proofing.

More overarching is policy CS3: Mitigation and Adaptation to Climate Change, which is directed to ensuring that there are contributions from all developments to reducing the ecological footprint of the area.

Policy CS4: Energy Efficiency and Renewable Energy encourages renewable technologies in both residential and commercial developments. It also states that the principles of passive design should be used first to reduce energy loading. It applies a target of 20% to be achieved through these means. It also mentions that where this is not economical compensation will be applied by requiring improvements to existing buildings in the locality. This element is also mentioned within some of the housing and design policies. It also directs developers and others to the Renewable Energy Capacity Study. This can also be looked at in terms of potential ways of achieving the different code levels.

Policy CS33: Lodge Hill has very clear points within it for ensuring that the development is adaptable for the impacts of climate change. There is also an element of this within policies CS2 and CS15

Recommendations to be taken into account

Potentially tightening up some of the wording on some policies so that firmer weight is given to these elements when they are applied.

Appraisal of the Pre-Publication Draft Core Strategy Policies Against the Social Indicators

Community (crime, income and deprivation)

Updated context

The only change since the Final Scoping Report has been in terms of the population, which has been slightly under that predicted. In the middle of 2009 the population estimate was 254,800.

Situation without the Core Strategy

Population growth in Medway has grown at a slower rate than England & Wales since 2001. It is expected that under existing population growth estimations of growth would continue so it would reach 275,200 by 2026 and potentially reach a rounded figure of 280,000 in 2028. This is based on a greater level of housing growth being needed to accommodate current populations, due to the declining household size that has been seen. It is anticipated that the majority of this growth would remain in the urban area through an increase in densities, with some much more minor increase also occurring in the rural area.

It would be expected without the Core Strategy that although the population of the area is younger than a number both regional and national rates, there would be a growth in the older population through the plan period. This has been identified both through work nationally by the Office of National Statistics (ONS), regional work and most recently area profiles published in 2010.

Currently the aging population has been on the periphery of the area, with concentrations around Rainham; adjoining parts of Gillingham; Rochester town centre and parts of Cuxton and Halling. In the future it would be expected that this distribution would mean that this would be where the greatest pressure will be on services.

It would however also be expected that populations in Twydall, would be likely to stay proportionately young. Therefore, it could be possible that the aging population profile might also be lessened or balanced if regeneration resulted in a reasonable proportion of the younger aged population also increasing.

The largest proportion of population change has occurred in those areas where there has been significant regeneration and this would be expected to continue over the plan period. The changes in the demographic make up of the area are crucial to ensuring that the right services are accommodated in the right places, as well as being a key role in ensuring sustainable communities both in the present and future.

The recent trend to a falling average age in Rochester and Gillingham town centres would be expected to continue, as well as the reduced number of dependents as a result of the increased number of the working age population across the central arc of the towns from Chatham to Gillingham.

Situation with the Core Strategy

The area will be expected to be more prosperous with more people working locally and enjoying average earnings closer to the regional average of £33,500 in 2009. The town centres will have better quality open spaces and services and feel safer to transit through, particularly at night. There will be more cultural facilities and people will have greater access to a number of historic assets. The changes to the transport system and the town centres will allow greater access to services and facilities for the population as a whole.

There will be a greater number of multi-functional green spaces in a network across the area, especially connecting across the urban area. These will improve quality of life, as well as the cultural offering and provide greater access to the wider countryside.

Proposed policy appraisal

The crucial sustainability issues in terms of community are:

- Improving access to service for the whole population
- Ensuring safe, clean environments
- Addressing crime issue while improving the night time economy of town centres

Spread throughout the document and policies there are mentions of sustainable communities and community cohesion.

Crime is not directly mentioned in any policies, however there are a number of references to elements that relate to crime. At the end of policy CS8 it mentions, "*easily and comfortably move through and into developments…should maintain attractive and safe streets and public spaces*"

In terms of deprivation there are again no dedicated policies, although there are a number of policies that will affect this, in terms of employment and income. The majority of these are those involving an economic element, which are discussed in the last section against the economic objectives, but there are also other important elements covered such as health inequalities.

Policy CS9: Health and Social Infrastructure is key to this and it contains a commitment to working with Medway Maritime Hospital and the PCT to ensure that their needs are met. It also makes a connection to the

Neighbourhood Action plans. In addition policy CS11: Culture and Leisure is important to the overall feeling and enjoyment people have for an area. It will be important with regard to getting buildings back into use and contributing to the vitality of the area, either directly with community facilities or by creating jobs and income.

The Area policies covering the 5 towns (CS26, CS27, CS28, CS29 and CS30) all identify Local Centres at the end of them and give them added protection. However, where it is known that these may well not be suited towards a traditional use, such as retail, then where the case can be shown for other elements they will be considered. The importance of these is for access to services within the population.

Recommendations to be taken into account

None.

Cultural Heritage and Material Assets

Updated context

There are currently a number of festivals that are held across the area each year forming a large part of the cultural offering in the area. However the formal venues are less high profile and cater for more local than sub-regional or regional audiences. Nevertheless there is a vibrant, if slightly underground, creative scene that exists in Medway. This can, in part, be linked to the University of the Creative Arts. The cultural offering of the area would therefore not be expected to be a significant issue.

Currently the townscape in certain areas, especially of Chatham is poor. There are few sitting or meeting places of a good standard, although there have been signs of improvement with the construction of Waterfront Way.

Higher standards are apparent around Chatham Maritime and specifically the area around Dickens World, which now has a vibrant feel.

There are many fine heritage assets but often these lack visibility or neighbouring uses of much lower visual quality detract from them. Similarly the town centres are not as vibrant or welcoming as they should be and, other than Rochester, have poorly developed nighttime economies.

Situation without the Core Strategy

Without the Core Strategy, it is not expected that there would be any substantial change to the cultural assets that have been identified previously.

Some reinvestment could be expected in the town centres but not on the scale envisaged in the Core Strategy.

Situation with the Core Strategy

The Core Strategy will give a high level of protection to important assets and seek to expand the cultural offer, specifically along the waterfront. There may also be a slight improvement over the plan period to some features if as expected the World Heritage Site Bid is successful.

A key part of this would be the implementation of a number of management plans that would allow greater access to a number of cultural features that currently are limited in terms of their accessibility. This will mean that there is an increase in accessibility through the plan period.

Proposed policy appraisal

The crucial sustainability issues in terms of culture and material assets are:

- Protecting existing assets
- Increasing knowledge of existing assets
- Increasing participation in cultural activities

There is one specific policy on Culture, which is policy CS11:Culture and Leisure and one that is specifically about historic assets, which is CS12: Heritage Assets. As would be expected these policies give a high level of protection to these elements. Additionally, policy CS12 gives support to the area forming the Tentative Bid for World Heritage Status. Policy CS11 gives added weight to a cultural facility located on the waterfront that is also proposed in the Medway Cultural Strategy.

There are of course a number of others that will be of relevance though, such as CS18:Tourism and CS10:Sport and Recreation. Policy CS18 gives support to improving the cultural offer of the area by stating that *"a waterfront theatre and cultural hub which would help to link the tourist offer in Rochester with the Dockyard and Chatham Maritime"*.

Policy CS10 again has an emphasis not just in terms of protecting existing facilities but also in terms of supporting new facilities. It also refers to using the legacy of the Olympics in order for it "to be best used to meet local needs".

In all, the Core Strategy both protects and gives additional weight to providing a number of different cultural elements.

Recommendations to be taken into account

Maybe there should be additional wording to help in terms of giving a more locational basis or importance to the specifically relevant policies.

Transport and accessibility

Updated context

A combination of changes are being made to the road system in and around Chatham and construction of a new dynamic bus interchange will mean an improvement to the traffic flow and bus services through Chatham. This combined with the Urban Traffic Management Control (UTMC) system will reduce the levels of congestion and journey times in the urban area in the short term at least.

Furthermore, with better positioning and a greater mix of car parks located at the edge of Chatham town centre and the associated bus improvements it would be expected there would be opportunities to encourage a modal shift away from the private car.

Situation without the Core Strategy

Through the mechanism of the third Local Transport Plan it would be expected that most of the schemes and measures planned would be implemented. However this might not apply to schemes requiring third party land or improvements associated with new built developments.

In this case planned improvements to rail/bus interchanges, the introduction of park & ride sites and the development of a quality bus network should result in a shift to bus use for urban journeys. Schemes dealing with congestion 'hotspots' should also result in freer flowing traffic, with associated air quality benefits.

Situation with the Core Strategy

This should make it more likely that significant rail station improvements take place, that park & ride sites are provided, parking provision in the town centres is rationalised and necessary junction improvements implemented. It should also improve the prospects of river taxi and other marine services being introduced.

Benefits may however be offset by increased economic activity within the urban area, including more successful town centres.

Proposed policy appraisal

The crucial sustainability issues in terms of transport are:

- Creating a modal shift away from the private car
- Reducing congestion and shortening journey times

Policy CS24 is specific to transport. This in essence lays out requirements for helping to achieve a number of elements in the third Local Transport Plan. There are also references to the strategic road network in a number of other policies.

The wording of policy CS24: Transport and Movement has a clear focus on achieving a modal shift from the private car to other travel modes, such as walking and cycling. It also covers all types of travel modes for both residents and businesses, through preservation of the wharves and jetties. However, parts of this policy would need to be carefully balanced with others, such as policy CS17: Economic Development.

Recommendations to be taken into account

There is no mention of electric vehicles and whether it is expected that there will be any contribution from them or how any associated infrastructure would be provided.

Housing

Updated context

Demographic trends point to a gradually ageing population and a continuing decline in the average size of households, plus a move towards net in migration (out migration has offset positive natural change over recent years). Though the recession has reduced house prices slightly, due to a similar drop in jobs prices are still for many unaffordable. For the year 2008/9 the housing completion figure was 914.

Situation without the Core Strategy

If regeneration is continuing at a slower rate but in locations that are already known, there will be a reasonable amount of new housing constructed. However this would be likely to fall short of meeting local needs from new and smaller households over time and would not reflect Medway's location within the Thames Gateway growth area.

Production would fall without the development of a new settlement at the MoD land at Chattenden Barracks (Lodge Hill).

Situation with the Core Strategy

Housing development in general would continue to be driven by developers and the market. The general standards of housing would be expected to improve both in terms of flexibility and overall sustainability.

Sites in and around the town centres and along the urban waterfront are likely to have a high proportion of smaller units, with family sized units being located in the more suburban locations. Provision would be expected for students and people needing various forms of supported accommodation.

Beyond the urban area the new settlement at Lodge Hill would be expected to have a broad range of house types and tenures but with an overall bias towards family sized accommodation. The use of previously developed land and sustainable forms of construction should limit its impact and its good relationship with other settlements on the Hoo Peninsula should improve the sustainability of these rural settlements.

As such it would be expected that it will be easier for all sections of the community to find a suitable, affordable and sustainable home.

The Core Strategy would allow for some more provision to be made for smaller sections of the community, such as Gypsy and traveller communities.

Proposed policy appraisal

The crucial sustainability issue in terms of housing is:

- Ensuring that an adequate mix, size and tenure of housing is provided at an affordable price

There are a number of chapters within the Core Strategy that contain policies relevant to the social development of the area. These are Chapter 6: Housing; Chapter 7:Economy; Chapter 9: Transport and Movement, as well as some policies towards the end of Chapter 5 and the policies covering the spatial areas. As with the rest of the appraisal the assumption has been made that all policies are fully and effectively implemented.

Chapter 6 solely relates to housing developments. The text at the beginning of the chapter suggests that the housing trajectory will not be even over the plan period and, instead, will peak during the middle part and lessen significantly during the last three years.

It may be that build rates will be more even than indicated in the trajectory but it will be important to monitor progress to ensure supply continues to match need.

Policy CS13: Housing Provision and Distribution mentions general locations within it although the exact specifics are in the supporting evidence base and not explicitly laid out in the Core Strategy. There is however slightly more specifics on types expected in different locations within policy CS14: Affordable Housing.

A large proportion of the expected housing delivery will come from the Lodge Hill development. Given its importance there would be substantial concerns if there were any hindrances to it coming forward. However a delivery schedule is referred to in the spatial chapter.

The proposed policies would not seem to help in terms of evening out any spatial imbalances or significant deficits where they exist. The main difference that will be created by the Core Strategy will be in creating the policy framework for the development of a settlement at Lodge Hill to come forward. It will be expected that this would have a mix of housing types and tenures, as well as a number of other facilities required to keep a market town operational, through community facilities. This will also make up the single greatest proportion of the expected housing of the area in the future.

Policy CS15: Housing Design and Other Housing Requirements is actually the one that would contribute most substantially to ensuring that future housing developments are as sustainable as possible. This is due to the fact that it mentions that housing should be both adaptable in terms of future occupants and the Lifetime Homes Standards and then to address the existing stock in terms of *"its fitness for purpose and raise overall sustainability standards"*.

Recommendations to be taken into account

Confirmation should be sought as early as possible as to the number of dwellings that will be delivered on the Lodge Hill, Chattenden site during the whole Plan period.

Appraisal of the Pre-Publication Draft Core Strategy Policies Against the Economic Indicators

Economy and employment

Updated context

There is great variation across Medway in the proportional working age population, with Chatham town centre and Rochester Riverside having the least economically dependent population. However in contrast Twydall and 'Wainscott, Frindsbury and part of the Peninsula' have relatively low proportional working-age populations, with Twydall's situation being worsened by a relatively high level of benefit dependency.

However, despite being a comparatively sizable business sector in Medway, associated employment in construction is not to the same scale, due to the notably small firms in terms of employee numbers in the sector.

The greatest number of jobs per working age population is in direct correlation to the highest concentration of businesses in the secondary and service sectors, which are centrally focused in the town centres. Furthermore, the main commercial area with the greatest job densities is in the main urban area.

There appears to be a direct correlation between a high number of jobs per working-age resident and a high concentration of businesses in the secondary and service sectors. This is most evident in the main central urban area.

A large proportion of regeneration is focused in the town centres, of which all involve elements of employment. In general these are in the retail and service sectors, but also contributing to other sectors such as B1.

It would be expected that implementation of the Economic Development Strategy (EDS), adopted by the Council in December 2009 would mean that there would be an intensification of uses in the established employment areas. The largest of these are Medway City Estate and Gillingham Business Park but there a number of smaller industrial estates throughout the area. These are in addition to the very large areas at Kingsnorth, Thamesport, Chatham Docks and the Isle of Grain.

There is also a focus in the strategy to encourage growth in the creative industries sector, although there is no suggestion of how or where this should be focused. It is likely however that this would be linked to graduate retention and therefore most likely to be centred on Chatham.

In the Employment Land Review (ELR) that was done by Baker Associates during the summer of 2010, it concluded that future employment proposals could provide 20.78ha of future requirements. However based on projected demand this would still be an under provision, as shown in the table below, although this has been converted to square metres for comparison.

Figure 2:Table showing the Employment Floorspace Supply by Sub Areas

Location	Floorspace Required	Floorspace Supply	Surplus/Deficit
	Sq m	Sq m	Sq m
Town Centre/Waterfront	93,493	73,836	-19,657
M2 Access	193,570	88,605	-104,965
Peninsula	36,604	666,290	+629,686
Other Urban Areas	25,296	4,827	-20,469
Total	**348,963**	**838,487**	**+484,595**

Situation without the Core Strategy

It is expected that through the plan period, there will be considerable improvement in economic opportunities, resulting from regeneration activities, due to a natural increase in the proportional working age population. The activity rate is 'driven up' amongst the local population as economic activity increases and this is strengthened in combination with local initiatives. However as the ELR has identified there is the potential for future employment proposals to supply 20.78ha, although this would still leave a deficit, especially around the M2 corridor.

Situation with the Core Strategy

It is expected that there will be a significant improvement in overall economic performance and much more activity in and around the town centres. The full unmet provision in the town centres would be addressed and Chatham would be the focus for new retail development, with support from the other centres. Chatham would also begin developing as a recognised office location. Strood and Gillingham town centres would also have developing local office markets.

With the progress of the Lodge Hill development there will be additional employment space for higher value jobs to be accommodated along with some small convenience and district centre scale possibilities.

Reinvestment in the established employment areas should ensure that they continue to provide high numbers of jobs. It would be expected that these areas would also attract higher value activities.

Grain and Kingsnorth would become distinctive employment locations but probably featuring lower employment densities and lower average wages than elsewhere.

Rochester Airfield would be expected to be a noted location for higher value activities based on its development as a technology and knowledge based cluster.

Agriculture might be expected to have increased significance as issues around food security intensify.

Proposed policy appraisal

The crucial sustainability issues in terms of economy are:

- Increasing the literacy and numeracy of the population, specifically those gaining Level 2 qualifications or above
- Reducing the proportion of the working age population on benefits
- Increasing the average salary

- Increasing the proportion of people living and working in the area, so reducing the level of outcommuting.

Policy CS17: Economic Development is the key economic policy and then there are a number of others covering different elements. In addition, there are also a few mentions within other policies as well.

Policy CS17 gives added support to certain sectors, as well as within the accompanying text laying out the amount of each use class expected to be delivered over the plan period, though this does not currently have a specific breakdown showing where this is going to be provided. The explanatory text also talks of the Council's partners who will help to implement this. One of the main keys of this policy is to attract higher value activities. Therefore as well as its economic contribution it will also make a positive contribution to tackling deprivation, specifically income deprivation.

Policies CS18-21 all discuss specific sectors of the job market. In addition, policies CS31-33 refer to strong vibrant economies for local people being supported on the Peninsula and in the Medway Valley. These would be expected to be in the rural-based sectors, such as agriculture, horticulture and woodland management or farm diversification. Policy CS21 specifically says that one of the criteria an application will be assessed against will include the use of local labour.

The explanatory text for policy CS19 outlines some specific proposals, such as two smaller scale food stores and a retail park and where they will be located.

Policy CS20: Education and Personal Development discusses the further and higher education focus, but it also mentions a *"distributed adult learning service to ensure reskilling matched to the identified needs of local employers"*. This should help to address deprivation and jobs in some of the more deprived areas, as well as town centres.

As such this range of policies is considered to have significant benefits and positively contribute to the objective of jobs for a range of people in deprived areas. It will also have a positive contribution in helping ensure skills are upgraded and deprivation and social inequalities are tackled.

Through the number of specific policies in the economy chapter and a number of others, such as CS31: Hoo Peninsula and the Isle of Grain and CS32: Medway Valley, there is a very supportive proactive framework for a wide variety of sectors to be accommodated, creating a strong, vibrant economy that would be highly sustainable.

Recommendations to be taken into account

To ensure that the core strategy gives the highest level of potential for the economy, it is felt that there needs to be a greater emphasis on existing smaller business sites located in the urban area, with some allowance for adaptability (possibly applying it to all new developments, including conversions).

The employment provision at Lodge Hill should be carefully considered in terms of its linkages to existing businesses and to ensure that it does not draw people from the other nearby settlements on the Peninsula, that would be harmful to their vitality.

Appraisal of cross-boundary issues

It is considered that the Core Strategy will have limited direct impact upon neighbouring areas due to the fact that no significant developments are proposed close to or straddling administrative boundaries.

The main impacts will to a greater and lesser extent, mainly affect Gravesham, due to the location of Lodge Hill nearer to its administrative boundary. A noticeable impact will be an increased level of traffic across the Peninsula, especially the known use of Higham station by commuters to London. Furthermore there is a coach service that is also heavily used from Grain that would also use the route across the Gravesham area. Even with a mix of residents it is expected that even a small proportion will increase the traffic and congestion from this direction. Partially as a result from this there may be a slight effect on air quality.

The other noticeable impact will be a draw of people from nearby settlements travelling to the shops at Lodge Hill. Especially for those located in Gravesham but closer to Medway, it may be a shorter distance to travel to Lodge Hill than into Gravesend or any of the other nearby settlements. Though the level of employment provision will only be expected to be to deal with that in the settlement and immediate locality, it could similarly draw people for the employment opportunities. This may be exacerbated if there are higher value jobs created resulting in competition to existing employment centres, from Grain; Cliffe; Hoo and as far as Strood and parts of Gravesham.

Below is a written outline of the way that these impacts may be minimised and lessened.

A more prosperous local economy and investment in significant new retail capacity would be liable to ‘claw back’ trade currently being ‘lost’ to nearby centres and reduce out commuting. This could have a negative economic impact on these areas while making Medway more sustainable in economic terms.

The development of Lodge Hill as a settlement is likely to impact most directly on Gravesend as currently many residents on the Hoo Peninsula shop there. This should reduce if Lodge Hill develops as a new service centre for the Peninsula.

There is close cross boundary working on issues such as landscape character and the development of sub regional green infrastructure networks and this should positively benefit from the approach set out in the draft Core Strategy.

Greater economic activity could impact on traffic movements over a wide area but the Core Strategy proposes a number of actions to minimise these. These include a reduction in out commuting, enhanced retail and cultural facilities and the use of rail for the movement of freight. It is considered that, in combination, these should minimise potential increases in traffic on the strategic highway network.

Monitoring of the Core Strategy

The aim of the monitoring system of the SA is to try and set a framework to show whether progress is being made towards sustainable development through the use and time of the Core Strategy's plan period.

The SA framework that was established through the Scoping Report as well as setting a number of objectives also set a number of indicators to be used to help in terms of assessing trends and most importantly to then form the basis for a monitoring framework.

The majority of the indicators within this come from recognised and established organisations that report on a consistent basis. However the timescales between the reporting periods can vary. There are also a relative number that are not currently reported at a local level at present.

Within the last chapter on Implementation, Monitoring and Review a table has been included that proposes a monitoring framework for the Core Strategy. As a result the monitoring proposed here tries to marry up those elements in the LDF that are reported through the Annual Monitoring Report and those included in the SA, which are not.

Due to these issues of differences between the reporting timescales and the fact that the length of the Core Strategy's plan period is 15 years, the first decision that has been taken is over the length of time that it shall cover. It has been decided that the 'Sustainability Reports' will be produced every 5 years. This is also convenient as it will be very easy to see what has been achieved within the different stages of the plan period. Furthermore, it will also link to the same timescales as a number of the other evidence base documents, so if necessary changes to legislation could also be included, when pertinent.

It would therefore be through these 'Sustainability Reports' that progress towards the objectives set out in the SA framework could be seen and compared. Further discussions are needed in terms of evolving exactly how the two systems might progress, however it is initially considered that it may be as follows. The Annual Monitoring Report (AMR) through core indicators and a set of contextual indicators, reports on the LDF annually. Then due to the large number of elements from the AMR that would also be included in the Sustainability Reports, these would replace them every 5 years.

Number	SA Objective	Framework Indicators	Overall progress	Summary
1	Conserve and enhance the diversity and abundance of habitats and species	• Extent and condition of key habitats • Condition of SSSIs • Reported levels of damage to designated sites • Achievement of Biodiversity Action Plan targets • Number/area of Local Nature Reserves • Population of wild birds and farmland birds • Area of land covered by agri-environment schemes	O	
2	Reduce air pollution and improve air quality, including reduction of greenhouse gas emissions	• Achievement of Emission Limit Values • Population living in Air Quality Management Areas • Number of days of air pollution accedances • Emission of greenhouse gases from energy consumption, transport, and land and sea waste management	O	
3	Maintain an improve quality of ground water and surface waters and security of supply	• Quality (biology and chemistry) of rivers, canals and freshwater bodies • Rivers of good or fair chemical and biological water quality • Compliance with EC Bathing Waters Directive • Water use (by sector, including leakage) and availability • Per capita consumption of water • Incidents of major and significant water pollution	O	
4	Reduce risk of flooding and ensure resilience of buildings and minimise the effect on public services and infrastructure	• Properties at risk from flooding • Number of additional houses where flood risk has been reduced • New development with sustainable drainage	O	

		installed		
5	Reduce ecological footprint through prudent use of natural resources, reduction in waste management and sustainable waste management practices	• Waste disposal in landfill. • Percentage of the total tonnage of all types of waste that has been recycled; composted; used to recover heat, power and other energy solutions; and landfilled • Number of new buildings reaching Code for Sustainable Homes Level 4 or above by 2013.	O	
6	Provide opportunity for everyone to live in a decent, sustainably constructed, affordable home suitable to their needs	• Percentage of new and retrofit homes reaching Sustainable Homes Level 4 or above • Housing completions compared with regional guidance. • Affordable homes within the total housing stock. • Homelessness. • Number of unfit homes per 1,000 dwellings.	O	
7	Maximise land use efficiency through appropriate use of previously developed land and existing buildings	• Housing density • Percentage of development on previously developed land	O	
8	Improve the health and well-being of the population and reduce health inequalities	• Death rates from circulatory disease, cancer, and accidents, and suicide. • Infant mortality rates. • Conceptions among girls under 18. • Life expectancy. • Obesity	O	
9	Reduce inequalities in poverty and social exclusion	• Proportion of children under 16 who live in low income households. • Percentage of population of working age who are claiming key benefits.	O	

		• Number of households in fuel poverty • Proportion of population who live in wards that rank within the most deprived 10% and/or 25% of wards in the country. • Access to services for disabled people		
10	Reduce crime and the perception of crime	• Recorded crimes per 1,000 population • Fear of crime surveys • Number of transport accidents • Level of domestic burglaries, violent offences and vehicle crimes per 1,000 population	O	
11	Improve accessibility to key services and facilities (inc. countryside, leisure/recreation and historic environment)	• Percentage of development within 10 minutes or 500m walk of a frequent bus route/rail service. • Access to services for disabled people • Distance to nearest leisure or cultural facility • Percentage of land designated for particular quality or amenity value, including publicly accessible land and greenways. • Proportion of population within 200m of parks and open space • The proportion of Medway residents meeting the Accessible Greenspace Standards: - live no further than 300m away from nearest area of natural green space of 2ha in size - at least one accessible 20ha site within 2km of home - one accessible 100ha site within 5km of home - one accessible 500ha site within 10km of home • Participation in sports, outdoor and volunteer activities	O	
12	Conserve and enhance historic buildings, archaeological sites and	• Percentage of Listed Buildings and archaeological sites 'at risk.'		

	culturally important features and increase engagement by all sections of community	• Buildings of Grade I and Grade II* at risk of decay. • Additional listed building or conservation area designations per annum • Participation in Cultural activities	O	
13	Increase energy efficiency; the proportion of energy generated from renewable sources and the diversity and security of energy supplies	• Electricity generated from renewable energy sources and CHP located in the area. • Energy consumption per building and per occupant. • CO^2 emissions. • Number of households in fuel poverty	O	
14	Reduce traffic and congestion by reducing need to travel and improving travel choice	• Distances travelled per person per year by mode of transport. • Traffic volumes. • Growth in road traffic. • Average vehicle speeds. • Proportion of travel by car. • Investment in public transport, walking and cycling	O	
15	Raise educational achievements through developing opportunities to acquire skills, to develop and maintain workforce	• Proportion of 19 year olds with Level 2 qualifications (% GCSEs A*-C or NVQ equivalent) • Percentage of population of working age qualified to NVQ Level 3 or equivalent. • Proportion of adults with above or below average literacy and numeracy skills.	O	
16	Support and improve employment and economic competitiveness in town centres and deprived areas	• Business start-ups net of closures. • Inward investment. • Social and community enterprises. • GVA per capita	O	

It should be noted in the table above that there are a number of indicators, especially in relation to the economic objectives that are in purple font. These are where more investigation needs to done to find out the exact level of data available. These will then be reviewed and the table amended accordingly as it evolves in any subsequent reports, during the final stages of the Local Development Document production.

Conclusion and summary

As can be seen throughout this document there are variations in terms of the amount the different elements of the Core Strategy will have an effect. In the main it shows that the Pre-Publication Draft Core Strategy has a deep thread of sustainability running through it. This is seen especially strongly in terms of water and soil related elements as well as the landscape, wildlife, biodiversity and countryside elements. It is very interesting that there is also a large amount that has been added into a number of policies that would not necessarily at first hand be considered sustainable.

A clear example of this would be policy CS21: Conventional Energy, which though initially seeming against many of the sustainability principles, once looked at and considered in more detail will make a substantial contribution to a number of sustainability indicators. In relation to this policy it is the mention of showing links to the local labour force and proposals being assessed for their potential to reuse waste heat.

The Core Strategy will ensure that a reduction of demand occurs from physical building that would not occur otherwise. However, there is no mention in any of the policies or accompanying text to advise about other crucial factors for water quality, such as a reference to Nitrate Protection Zones. It also clearly provides a means for comprehensive flood protection to be taken account of as well as including it on a more individual basis through stating the need for SUDS that meet the National Standards.

Overall it would be expected that the policies in the Core Strategy would result in a number of benefits in terms of reducing, reusing and treating waste. In terms of biodiversity, open space and landscape there is a large amount of protection afforded through the Core Strategy, which is vitally important with the growth that would be expected to continue occurring even without it. However, these need to be carefully implemented to manage the increase in recreational pressure that will occur due to growth and also other policies within the document.

There are also elements through a number of policies that will contribute towards future proofing for the impacts of climate change for residents, such as the requirement to meet specific CfSH levels, potentially strong emphasis on the requirement to have investigated the potential for new technologies such as district heating and also to help ensure the retrofitting of existing buildings.

In all the Core Strategy both protects and gives additional weight to providing a number of different cultural elements.

There is a clear focus in terms of Transport and Movement on achieving a modal shift from the private car to other travel modes, such as walking and cycling. It also covers all types of travel modes for both residents and businesses, through preservation of the wharves and jetties. However, parts

of this policy would need to be carefully balanced with others, such as policy CS17: Economic Development.

As such this range of policies is considered to have significant benefits and positively contribute to the objective of jobs for a range of people in deprived areas. It will also have a positive contribution in helping ensure skills are upgraded and deprivation and social inequalities are tackled.

Through the number of specific policies in the economy chapter and a number of others, such as CS31: Hoo Peninsula and the Isle of Grain and CS32: Medway Valley, there is a very supportive proactive framework for a wide variety of sectors to be accommodated and create a strong, vibrant economy that would be highly sustainable.

The monitoring proposed here is a result of trying to marry up those elements in the LDF that are reported through the Annual Monitoring Report and those within the SA framework which are not.