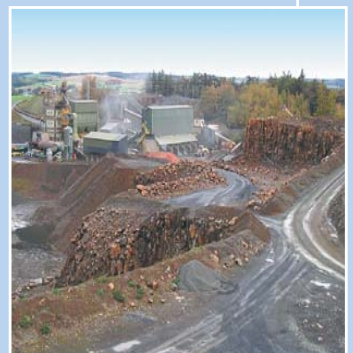
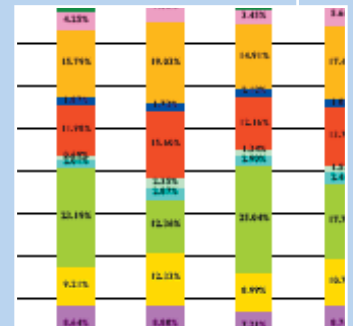
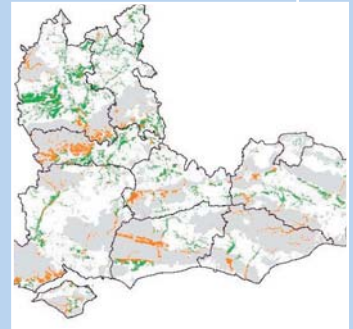


Partial Review of Draft South East Plan: Policy M3 Sustainability Appraisal Report

Final Report



Prepared for SEERA
by Land Use Consultants



**Partial Review of
Draft South East Plan Policy M3
SUSTAINABILITY APPRAISAL
REPORT**

**Prepared for
South East England Regional
Assembly**

**by
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November 2007

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CONTENTS

Glossary of acronyms used in the SA Report	v
Non-Technical Summary	7
1. Introduction	19
Primary land-won aggregates apportionment.....	19
Purpose of the Sustainability Appraisal	20
Aim and Structure of the Report	20
How to comment on the Report.....	22
2. Partial Review of draft South East Plan Policy M3	23
Background.....	23
The Current Sub-regional Apportionment and the Target Regional Supply Figure (RPG9 and Policy M3)	23
Sub-regional Apportionment Options.....	24
Potential sustainability impacts of Policy M3.....	26
3. Appraisal Methodology	29
Stages and Tasks in SA.....	29
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope	31
Consultation on the Scoping Report and how comments have been addressed by the SA....	31
Stage B: Developing and refining options and assessing effects	31
Reasons for selecting the alternatives dealt with in the RSS revision	33
Assessing Sustainability Effects	33
Stage C: Preparing the Sustainability Appraisal Report	37
Stage D: Consulting on the Partial Review of the South East Plan: Policy M3 and SA Report	37
Stage E: Monitoring Implementation of the Partial Review	37
4. Sustainability Requirements of Relevant Plans.....	39
5. The SA Framework and Key Sustainability Issues	43
The SA Framework and Key Sustainability Issues	43
Data Gaps	46
6. Appraisal of the Sub-regional Apportionment options.....	49
Factors taken into account during the SA.....	49
Determining significance.....	49
Sustainability Appraisal Findings.....	50
Sand and Gravel Options	51
Summary of impacts of sand and gravel options against SA Objectives	53
Summary of impacts of sand and gravel apportionment options	56
Crushed Rock Options.....	57
Summary of impacts of crushed rock options against SA Objectives.....	59

Summary of impacts of crushed rock apportionment options.....	61
Conclusions.....	62
Sand and gravel options.....	62
Crushed rock options.....	63
Implementation.....	64
7. Monitoring.....	67
Proposals for monitoring.....	67

TABLES

Table 1.1 Summary of the requirements of the SEA Directive and where these have been addressed in this SA Report (after Appendix I, SA Guidance, ODPM, 2005).....	21
Table 2.1 Current apportionment for sand and gravel resources.....	23
Table 2.2 Current apportionment for crushed rock.....	24
Table 3.1 Corresponding stages in RSS revision and SA (from SA Guidance, ODPM 2005)..	29
Table 3.2: First component of significance definitions: the difference between apportionment options and the current baseline.....	36
Table 4.1: List of National Plans.....	39
Table 4.2: List of Regional Plans.....	40
Table 5.1: SA Framework for the Partial Review and key sustainability issues.....	44
Table 6.1: Overview of the potential sustainability effects (significant/minor, positive/negative, short term [ST]/long term [LT]) of the six options for sand and gravel sub-regional apportionment.....	51
Table 6.2: Overview of the potential sustainability effects significant/minor, positive/negative, short term [ST]/long term [LT]) of the six options for crushed rock sub-regional apportionment.....	57

FIGURES

Figure 2.1: Illustrative comparison of combined sand and gravel sub-regional apportionment options.....	26
Figure 2.2: Illustrative comparison of crushed rock sub-regional apportionment options.....	26

APPENDICES

- Appendix 1: Summary of Consultation Responses on SA Scoping Report
- Appendix 2: Detailed SA Papers
- Appendix 3: Maps showing baseline data used in SA Papers

GLOSSARY OF ACRONYMS USED IN THE SA REPORT

BAP	Biodiversity Action Plan
BMV	Best and Most Versatile (agricultural land)
DEFRA	Department of Environment, Food and Rural Affairs
DPD	Development Plan Document
CLG	Communities and Local Government
EH	English Heritage
LDD	Local Development Document
LNR	Local Nature Reserve
LUC	Land Use Consultants
MDF	Minerals Development Framework
MPG	Minerals Planning Guidance
MPS	Minerals Policy Statement
NE	Natural England (formerly English Nature)
NNR	National Nature Reserve
ODPM	Office of the Deputy Prime Minister (now CLG)
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
RIGS	Regionally Important Geological and Geomorphological Site
RSS	Regional Spatial Strategy
SA	Sustainability Appraisal
SAM	Scheduled Ancient Monument
SEA	Strategic Environmental Assessment
SEERA	South East England Regional Assembly
SPD	Supplementary Planning Document
SSSI	Site of Special Scientific Interest

NON-TECHNICAL SUMMARY

BACKGROUND

1. The South East of England Regional Assembly is undertaking a partial review of Policy M3 (Primary Aggregates) in the draft South East Plan. Policy M3 sets out the volume of primary aggregates (i.e. extracted from naturally-occurring mineral deposits) that each Minerals Planning Authority in the South East region will need to provide to meet the regional aggregate supply figure set out in the National and Regional Aggregates Guidelines¹. These volumes of supply are for land-won sand and gravel (i.e. not marine-dredged) and crushed rock.
2. The partial review of Policy M3 is being undertaken in response to a recommendation made in the Panel Report from the 2004 Examination in Public for the review of Regional Planning Guidance 9 for Waste and Minerals. The Panel Report recommended that work should be done to revise the methodology for deciding how much aggregate each Minerals Planning Authority should make provision for. The Panel Report noted there was a need for more consideration of where the demand for aggregates is located and where the aggregates can be supplied from, as well as environmental constraints to extracting the aggregates.
3. To inform the partial review of Policy M3, Land Use Consultants was appointed to develop a methodology to calculate how to share the regional targets for primary land-won sand and gravel and crushed rock between the Mineral Planning Authorities of the South East Region, taking in to consideration to sustainability and practical factors. This 'sharing' of the regional targets between the Mineral Planning Authorities is referred to as the 'sub-regional apportionment', and will allocate an amount of aggregate in tonnes that each authority needs to make provision for. The Minerals Planning Authorities do this by allocating specific sites and areas where sand and gravel or crushed rock extraction will be permitted, within their Minerals Development Frameworks.
4. The methodology developed to calculate the sub-regional apportionment was informed by consultation with the Minerals Review Group of the South East England Regional Aggregates Working Party, which includes representatives from the minerals industry, minerals planning authorities within the region, English Heritage, Environment Agency and Natural England. The methodology is described in a separate report² and resulted in six different options for the sub-regional apportionment.
5. In carrying out the partial review, the South East of England Regional Assembly is required to undertake a Strategic Environmental Assessment (SEA) and Sustainability Appraisal (SA), in accordance with the requirements of European Directive

¹ National and Regional Guidelines for Aggregates Provision in England, 2001-2016. Published by the former Office of the Deputy Prime Minister (now DCLG) June 2003.

² *Primary Aggregates Sub-Regional Apportionment in South East England*. Final Report. Prepared for SEERA by Land Use Consultants, November 2007.

2001/42/EC (the 'SEA Directive')³, the Planning and Compulsory Purchase Act 2004 and Planning Policy Statement 12 (PPS 12). In line with Government guidance, both of these requirements will be satisfied through a single appraisal process referred to as a Sustainability Appraisal⁴. This is the non-technical summary for the full SA Report, which can be found following the end of this summary.

6. The South East of England Regional Assembly published a SA Scoping Report⁵ (the first stage in the SA) for consultation in February 2007 alongside the partial review Draft Project Plan. That Scoping Report notes that subsequent stages of the SA will be undertaken by independent consultants. To this end, SEERA commissioned LUC to undertake the SA in March 2007.
7. The SA Scoping Report for the partial review also noted that 'Appropriate Assessment' (AA) screening under the Habitats Regulations is also required for the review of the sub-regional apportionment, and LUC was commissioned to undertake the AA screening as well as the SA. A separate report⁶ describing the Screening stage of the HRA has also been prepared.

PURPOSE OF THE SUSTAINABILITY APPRAISAL

8. The purpose of sustainability appraisal is to promote sustainable development by integrating sustainability considerations in to the preparation and adoption of policies, plans and programmes.
9. The objective of Strategic Environmental Assessment, as defined in Article 1 of the SEA Directive is '*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans....with a view to promoting sustainable development*'.
10. The Government SA Guidance⁷ on sustainability appraisal explains the difference between SEA and sustainability appraisal of development plans. Sustainability appraisal includes a wider range of considerations, extending to social and economic impacts of plans, whereas SEA is more focussed on environmental impacts.

STAGES IN THE SUSTAINABILITY APPRAISAL

11. The Government SA Guidance explains how to carry out SA as an integral part of development plan preparation, or in this case, the partial review of a policy within the draft South East Plan. The five stages (A to E) are summarised below.

³ Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment, 27 June 2001

⁴ From this point on, references to the Sustainability Appraisal (SA) shall be taken as meaning the SA incorporating SEA.

⁵ Partial Review of Draft South East Plan: Revised Apportionment of Primary Land-Won Aggregates. Scoping Report. SEERA, February 2007.

⁶ Partial Review of the Draft South East Plan: Policy M3. Habitats Regulations Assessment Screening Report. Prepared for SEERA by Land Use Consultants, November 2007.

⁷ Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents, Office of the Deputy Prime Minister (ODPM), November 2005.

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope

12. As stated above, the South East of England Regional Assembly undertook this 'Scoping' stage of the SA for the partial review of Policy M3 and consulted on a Scoping Report, which set out the 'tools' for undertaking the SA. The Scoping Report followed the structure of the original SA Scoping Report for the draft South East Plan and drew on the work undertaken as part of that wider SA process (such as the baseline information, review of relevant plans and programmes, and the SA framework (i.e. objectives and criteria used to predict and assess effects). The full SA Report for the partial review in turn incorporates these same elements from the Scoping Report as set out in Chapters 4 and 5.

Consultation on the Scoping Report and how comments have been addressed by the SA

13. The Scoping Report was consulted upon for five weeks in February-March 2007 alongside the draft Project Plan for the partial review of Policy M3. The consultation responses were collated by the South East of England Regional Assembly and provided to Land Use Consultants. A table of the responses relating specifically to the SA, and how these have been addressed during the SA is set out in **Appendix I** of the full SA Report.

Stage B: Developing and refining options and assessing effects

14. As stated above, the 'options' for the sub-regional apportionment within Policy M3 were developed in a separate study by Land Use Consultants in association with the project Steering Group. Some members of that project Steering Group representing the statutory environmental bodies (English Heritage, Environment Agency and Natural England) were also closely involved in helping to develop the SA method, through a series of meetings and written correspondence. The SA team also provided input into the methodology for and development of the six options, seeking to ensure the integration of sustainability considerations at all stages in the process of identifying a revised sub-regional primary aggregate apportionment.
15. In developing the options for sub-regional apportionment, key considerations that might influence the supply and use of primary aggregates were identified, and these included a number of sustainability factors (e.g. sustainable transport, biodiversity, landscape and heritage). These considerations were developed into a number of criteria and refined through a process of draft reports and meetings with the Steering Group. The original set of factors considered by the Steering Group and the reasons why some were discounted are documented fully in the *Primary Aggregates Sub-regional Apportionment in South East England* report⁸, and summarised in Chapter 2 of the full SA Report.
16. The final criteria included in the method for calculating the sub-regional apportionment options were:
 - Criterion 1: Construction Demand (i.e. where the aggregate is needed)

⁸ *Primary Aggregates Sub-regional Apportionment in South East England*. Land Use Consultants, November 2007.

- Criterion 1a: Future (Housing provision)
 - Criterion 1b: Current (Existing population)
 - Criterion 2: Past Sales of aggregates
 - Criterion 3: Unsterilised⁹ mineral resource outside of international designations (Special Protection Areas, Special Areas of Conservation, Ramsar and World Heritage sites, +250m buffer around each)
 - Criterion 4: Unsterilised mineral resource outside of international designations (+250m buffer) and outside of national designations
17. The data used to represent the criteria within the apportionment method were from a combination of numerical datasets (e.g. Criterion 1b used existing population figures, and Criterion 2 used past sales figures from the minerals industry) and spatial datasets (e.g. Criteria 3 and 4 used the mapped extent of the unsterilised resource and boundaries of international and national designations).
18. The sub-regional apportionment options were developed by applying different weighting to the criteria to strengthen (or reduce) the influence of particular criteria on the portion of the regional supply figure that each Minerals Planning Authority will have to provide. The detailed percentages applied are described in Chapter 2 of the full SA Report. With the involvement of the whole Steering Group, the following options were agreed:
- **Option A:** weighted highest on Criterion 2 Past sales – referred to as ‘**Past sales**’
 - **Option B:** weighted highest on Criterion 3 Unsterilised resources outside of international designations (+250m buffer) – referred to as ‘**Resource**’
 - **Option C:** weighted highest on Criterion 1 Construction demand – referred to as ‘**Demand**’
 - **Option D:** weighted highest on Criteria 3 and 4 Unsterilised resource outside of international designations (+250m buffer) and outside of national designations – referred to as ‘**Environmental**’
 - **Option E:** evenly weighted between Criteria 1, 3 and 4, but with more emphasis on demand arising from existing population – referred to as ‘**Demand and resource**’
 - **Option F:** evenly weighted between all 4 criteria – referred to as ‘**Equal weighting**’

⁹ The ‘unsterilised’ resource refers to the area of a mineral reserve that is not overlain by urban areas or roads (and therefore assumed to be ‘sterilised’ as it would be unlikely to be extracted).

Assessing sustainability effects of the options for sub-regional apportionment

19. Minerals extraction can have a number of potential sustainability impacts (e.g. habitat loss, visual impact, supply of construction materials for planned development, pollution via air and water from dust or transport emissions). While Policy M3 will set out the preferred sub-regional apportionment option, and therefore the annual tonnages of sand and gravel or crushed rock that each Minerals Planning Authority will have to make provision for within their Minerals Development Frameworks, it **will not identify where extraction should take place**. It is the role of the Minerals Planning Authorities to allocate sufficient sites in their Development Plan Documents for sand and gravel or crushed rock extraction to meet the annual tonnages set out in Policy M3. Policy M3 therefore has no spatial definition, which makes it very difficult to identify where significant impacts might occur due to the extraction of sand and gravel or crushed rock to meet the sub-regional apportionment. As a result, the SA of the sub-regional apportionment options was unable to predict actual sustainability effects on specific receptors (e.g. particular habitats, landscapes or communities within the South East).
20. In order to provide some clarity on the significance of impacts judged for the apportionment options through the appraisal process, definitions of significance were developed. These definitions were based on two things: firstly, the difference between the apportionment options and the current apportionment, and secondly, the percentages of resource within or nearby to potentially constrained areas e.g. an environmental, landscape or heritage designation or particular land use. The definitions of significance are described in more detail in **Chapter 3**.

Appraisal Assumptions and Limitations

21. A large number of assumptions were therefore necessary in the SA in order to identify potential impacts of the different sub-regional apportionment options and how they might affect each Minerals Planning Authority in the South East. The approach taken to the SA and the assumptions used are described in **Chapter 3** of the full SA Report and the detailed 'SA Papers' in **Appendix 2**.
22. As well as the assumptions, a number of limitations of the SA were also noted, both of which must be taken into account when reading the SA conclusions. A brief summary of the key assumptions and limitations are:
 - The scoring given to each apportionment option reflects the potential impact of that option **compared to** the current apportionment (referred to as the baseline). The scoring is **not** an indication of the actual impact of the apportionment option on the sustainability issue being considered e.g. landscape or heritage.
 - The judgements made during the SA assume that exploitation of all the areas of resource is equally possible in economic terms and equally attractive to the minerals industry. However, in reality, some areas may not be considered by the industry for extraction. The appraisal process has not been able to take this into account.

- Definitions of the significance of an impact (negligible, minor or significant), that were developed for the appraisal process, are not based on scientific data. They are instead the result of professional judgement, which considered the raw data used to assess the impact of the apportionment options against the sustainability issues.
23. Finally, throughout the appraisal process, it was noted that the greater use of recycled and secondary aggregates would be strategically a more sustainable option to extracting primary minerals. However, the purpose of this SA is to assess the potential sub-regional primary aggregate apportionment options, linked to the partial review of Policy M3 of the draft South East Plan only. A separate policy (M2) addresses the use of recycled and secondary aggregate within the South East Plan. As such, although noted as a key sustainability issue, the promotion of recycled and secondary aggregates is not within the scope of this SA, and so has not been considered in the assessment of effects.

Stage C: Preparing the Sustainability Appraisal Report

24. This is the non-technical summary of the full SA Report (which follows after this summary). It sets out the likely significant environmental, social and economic effects of the options for the sub-regional apportionment of sand and gravel and crushed rock in the South East. The appraisal considers the existing legislative safeguards in place, which often act as mitigation measures to reduce potential significant adverse effects. Other methods of preventing, reducing and as fully as possible offsetting any significant adverse effects of the RSS revision are identified where possible. It has been written to meet all the requirements of the SEA Directive for an environmental report (see **Table I.1** in the full SA Report), and the Planning and Compulsory Purchase Act requirement to prepare a report of the findings of the Sustainability Appraisal.

Stage D: Consulting on the Partial Review of the South East Plan: Policy M3 and SA Report

25. This SA Report has been produced for consultation alongside the partial review of the draft South East Plan: Policy M3 Consultation Document. The details of consultations are set out at the end of **Chapter I**. Any responses received from consultees on the content of this SA Report will be considered and addressed in further iterations of the SA that will be produced to accompany the final partial review adoption in 2008.

Stage E: Monitoring Implementation of the Plan

26. Stage E will follow adoption of the revised Policy M3. LUC has not been commissioned to undertake the SA monitoring. However, the SEA Directive and SA guidance require that the Sustainability Report includes a description of measures envisaged concerning monitoring. This is discussed in **Chapter 7** of this SA Report.

SUSTAINABILITY CONTEXT FOR THE PARTIAL REVIEW

27. The original Scoping Report for the SA of the draft South East Plan set out a summary of key environmental, social and economic issues relevant to the Plan. These issues were identified by the analysis of baseline data and extensive consultation. As part of the scoping process, which the South East of England Regional Assembly undertook, these issues were revisited in the light of the review of relevant plans and strategies and the baseline. New issues relating specifically to the Partial Review were identified. Sustainability issues relating to the Partial Review have been reproduced in **Table 5.1** in the full SA Report, together with the Integrated Regional Framework (IRF) Objectives that form the SA Framework.
28. During production of the Scoping Report for the Partial Review, the Assembly considered that a number of the IRF Objectives were not relevant to a review of the sub-regional primary aggregate apportionment, in addition, Land Use Consultants also identified two objectives that were not relevant to the partial review SA. The reasons for this are discussed within **Chapter 5**. The sustainability objectives or group of objectives that were considered to be relevant to the partial review of the sub-regional apportionment are:
- **Proximity**
 - IRF Objective 1 (sustainably constructed homes)
 - IRF Objective 12 (climate change/greenhouse gas emissions)
 - IRF Objective 15 (road congestion/pollution levels)
 - IRF Objective 16 (sustainable consumption /use of local products)
 - IRF Objective 21 (economic growth/competitiveness)
 - **Flooding**
 - IRF Objective 2 (flood risk)
 - **Health and Air Quality**
 - IRF Objective 3 (health and well being)
 - IRF Objective 11 (air quality)
 - **Previously Developed Land**
 - IRF Objective 10 (land use)
 - **Biodiversity and Air Quality**
 - IRF Objective 13 (biodiversity)
 - IRF Objective 11 (air quality)
 - **Historic Environment, Landscape and Green Belt**
 - IRF Objective 14 (countryside and historic environment)
 - **Water Quality and Resources**
 - IRF Objective 18 (water quality and sustainable water resource management)
 - **Employment**

IRF Objective 20 (employment levels)

- **Tourism**

IRF Objective 24 (sustainable tourism)

29. The review of relevant plans and programmes, policy guidance and strategies at national and regional level which should inform / have a bearing on the partial review was also carried out by the Assembly during the scoping stage, and a full review of the plans, strategies and objectives is set out in Annex A to the Scoping Report, which is available on the South East England Regional Assembly website (http://www.southeast-ra.gov.uk/southeastplan/consultation/minerals_review.html).

APPRAISAL FINDINGS

30. Land Use Consultants undertook a sustainability appraisal of the six potential sub-regional apportionment options for both sand and gravel and crushed rock provision in the South East of England. Taking the overarching assumptions and limitations (summarised above) into account, each apportionment option was appraised against the relevant SA Objectives, or groups of related SA Objectives, to determine the potential impacts of the options, on each Minerals Planning Authority, compared to the current apportionment
31. It is also important to note that the SA was a desk-based exercise carried out to report the potential sustainability effects of the apportionment options. It was undertaken at the regional level to inform the partial review of Policy M3 and therefore does not in any way replace an assessment of the sustainability effects of mineral extraction on specific receptors within each Minerals Planning Authority, which will need to be undertaken during the development of local level Minerals Development Plan Documents.

Sand and gravel options

32. With the SA assumptions and limitations in mind, the overarching themes from the findings of the appraisal of the sand and gravel apportionment options are:
- None of the apportionment options could potentially result in significant impacts on the sustainability issues of proximity, health, the efficient use of land, the historic environment, water quality, employment or tourism.
 - Only significant positive impacts on flooding are possible. This is because rigorous legislation already in place prevents mineral extraction from occurring on a floodplain where it would result in a significant negative impact.
 - The apportionment options could potentially lead to significant positive and significant negative impacts on international and national biodiversity designations, depending on the proportion of resource within 2,500m of a designation and the increase or decrease in apportionment allocated to that Minerals Planning Authority by the options. All options allocate a significantly greater apportionment to East Sussex, a Minerals Planning Authority with over 60% of its sand and gravel resource within 2,500m of a designation; therefore all options

could potentially result in a significant negative impact on an international or national biodiversity designation in this Minerals Planning Authority.

- Options B, D and F could potentially result in significant negative impacts on biodiversity designations in Oxfordshire. In contrast, Options B and D could potentially lead to significant positive impacts on biodiversity designations in Surrey.
 - The potential significant impacts of the options on biodiversity designations are reversed when considering their potential long term impacts on habitat creation. All options could potentially result in significant positive impacts in East Sussex due to the large proportion of sand and gravel resource within a Strategic Opportunity Area for habitat creation, which could encourage the restoration of mineral extraction sites to specific target habitats. Options B, D and F could potentially have significant positive impacts on habitat creation in Oxfordshire, but (with the exception of Option F) a significant negative impact in Surrey.
 - Similar to the biodiversity designations, significantly greater apportionments to East Sussex (as given by all apportionment options) could also potentially result in significant negative impacts on landscape, due to the large proportion of sand and gravel resource within a landscape designation in East Sussex.
 - Significantly lower apportionments provided to Surrey by Options B and D could potentially result in significant positive impacts on Green Belt, the only significant impacts of the apportionment options against this sustainability issue.
33. The conclusion from these findings is that there is little to differentiate between the sand and gravel apportionment options with regards to the majority of sustainability issues. The Minerals Planning Authorities significantly affected by the options are East Sussex, Oxfordshire and Surrey, with the impacts on East Sussex the same regardless of apportionment option. Options B and D could potentially result in both significant positive or significant negative impacts on biodiversity depending upon the location of extraction in either close proximity to an existing biodiversity designation or within a Strategic Opportunity Area for habitat creation.

Crushed rock options

34. Again, with the overarching assumptions and limitations in mind, the themes from the findings of the SA of the crushed rock apportionment options are:
- All apportionment options provided an allocation of crushed rock to Buckinghamshire, the Isle of Wight and Milton Keynes, which are Minerals Planning Authorities that do not have an allocation under the current apportionment in the draft South East Plan. As such, all options have the potential to impact upon sustainability issues in these Minerals Planning Authorities (due to the potential for crushed rock operations to be required where they have not previously been needed).

- None of the apportionment options could potentially result in significant impacts on the sustainability issues of flooding, the efficient use of land, the historic environment, landscape, water quality or employment.
 - Option A is the only apportionment option unlikely to result in any significant impacts on the sustainability issues.
 - With the exception of Option A, all apportionment options could potentially result in: significant positive impacts with regard to Green Belt in Kent and health and air quality in Buckinghamshire; and a significant negative impact on tourism in Milton Keynes. As such, these impacts do not help to differentiate between options B-F.
 - With regards to the sustainability issues of biodiversity and proximity, the impacts of Options B to F are the same in all Minerals Planning Authorities except Oxfordshire. This reflects the fact that the only significant difference between the apportionments provided to Minerals Planning Authorities by these five options (compared to the current apportionment) is the amount allocated to Oxfordshire. Options E and F would most likely result in a negligible impact on biodiversity and proximity in Oxfordshire. Option D could potentially result in only minor impacts on biodiversity and proximity in Oxfordshire (four negative, two positive). This is in contrast to Option B, which could potentially result in three significant negative impacts and one significant positive impact with regards to biodiversity and proximity in Oxfordshire; and Option C could result in the opposite, with three significant positive impacts and one negative.
35. Similar to the apportionment options for sand and gravel, and with the exception of Option A, there is little to differentiate between the apportionment options for crushed rock. Option A does not differ significantly from the baseline (current apportionment), despite some crushed rock allocation to those Minerals Planning Authorities previously with none, therefore it would most likely not result in a significant alteration of the impact of the current apportionment on the sustainability issues.
36. Options B-F provide similar apportionments to all Minerals Planning Authorities, with the exception of Oxfordshire, when compared to each other, therefore the impacts on the sustainability issues are similar. Oxfordshire is the only Minerals Planning Authority that could experience a significantly different impact on biodiversity (through impacts on international or national designations or the potential for habitat creation) and the proximity of the industry to demand depending upon the apportionment option selected.

Implementation

37. The Minerals Planning Authorities have a key role to play in the implementation of revised Policy M3, as they will need to identify and allocate sufficient sites for sand and gravel and crushed rock operations within their Minerals Development Frameworks. Many of the potential sustainability effects identified within this SA and the uncertainties relating to the nature and scale of those effects will need to be explored through the lower-tier SAs undertaken by the Minerals Planning Authorities

for the Development Plan Documents within their Minerals Development Frameworks.

38. Specific sustainability issues for consideration by the Minerals Planning Authorities have been highlighted within the individual SA Papers in **Appendix 2** for each SA objective or group of related objectives. These should be used as a reference for those undertaking the lower-tier SAs of Minerals Development Frameworks. In addition, the mapped baseline data which accompanies the SA Papers in **Appendix 3** should also provide a useful resource for the Minerals Planning Authorities.

PROPOSALS FOR MONITORING SUSTAINABILITY EFFECTS OF THE PARTIAL REVIEW

39. The Government's SA Guidance states that it is not necessary to monitor everything. Instead, monitoring should be focussed on the significant sustainability effects that may give rise to irreversible damage (with a view to identifying trends before such damage is caused) and the significant effects where there is uncertainty in the SA and where monitoring would enable preventative or mitigation measures to be taken.
40. The potential significant effects of the sub-regional apportionment options for sand and gravel or crushed rock compared to the current apportionment have been summarised above. However, it will be the significant effects of the final preferred sub-regional apportionment option that is incorporated into the revised Policy M3 that need to be monitored. Therefore, more detailed proposals will need to be developed in subsequent stages of the SA and partial review, once the preferred option has been assessed.
41. Monitoring the sustainability effects of implementing Policy M3 should be conducted as part of an overall approach to monitoring the sustainability effects of the South East Plan as a whole, as well as taking account of broader social, economic and environmental trends. This will be done through the production of the Annual Monitoring Report, which the Regional Assembly is required to prepare to assess the extent to which policies in the RSS are being implemented.

I. INTRODUCTION

- I.1. The South East of England Regional Assembly (SEERA) is undertaking a partial review of Policy M3 (Primary Aggregates) in the South East Plan to find ‘*a more rounded and forward looking methodology on which to base a revised sub-regional apportionment policy for primary land-won aggregates*’. This is in response to a recommendation made in the 2004 Examination in Public Panel report¹⁰.

PRIMARY LAND-WON AGGREGATES APPORTIONMENT

- I.2. The National and Regional Guidelines for Aggregates Provision in England, 2001-2016 includes a guideline requirement for primary aggregates in the South East of England of 247mt. For the period 2001 to 2016 it is assumed that 212mt will be from land-won sand and gravel and 35mt from crushed rock. To inform the partial review of Policy M3 in the draft South East Plan, Land Use Consultants (LUC) was appointed to develop a methodology to calculate how to share the regional targets for primary land-won sand and gravel and crushed rock between the mineral planning authorities of the South East Region, having regard to sustainability and practical factors.
- I.3. The methodology developed is described in a separate report¹¹ and considered the debate on the issue at the Examination in Public in October 2004 and the Report of the Panel. The Report of the Panel makes reference in its Preface to future work on the methodologies for sub-regional apportionment for primary land-won aggregates. It also notes the need for more emphasis on the main factors that should influence the sub-regional apportionment, being the geography of demand and supply issues and environmental constraints. The methodology was also informed by consultation with Minerals Review Group of the South East England Regional Aggregates Working Party (SEERAWP), which includes representatives from the minerals industry, minerals planning authorities within the region, English Heritage, Environment Agency and Natural England.
- I.4. In carrying out the partial review, SEERA is required to undertake a Strategic Environmental Assessment (SEA) and Sustainability Appraisal (SA), in accordance with the requirements of European Directive 2001/42/EC (the SEA Directive)¹², the Planning and Compulsory Purchase Act 2004 and Planning Policy Statement 12 (PPS 12). In line with Government guidance, both of these requirements will be satisfied through a single appraisal process referred to as a Sustainability Appraisal¹³. SEERA

¹⁰ The Panel report on the Examination in Public of the review of RPG9 for waste and minerals (December 2004) recommended that the Minerals Review Group of the South East England Regional Aggregates Working Party (SEERAWP) should maintain its momentum to find a more rounded and forward looking methodology on which to base a revised sub-regional apportionment for inclusion in the next review of minerals policies.

¹¹ *Primary Aggregates Sub-Regional Apportionment in South East England*. Final Report. Prepared for SEERA by Land Use Consultants, November 2007.

¹² *Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment*, 27 June 2001

¹³ From this point on, references to the Sustainability Appraisal (SA) shall be taken as meaning the SA incorporating SEA.

published a SA Scoping Report¹⁴ for consultation in February 2007 alongside the partial review Draft Project Plan. That Scoping Report, which utilises the SA framework and methodology detailed in the Scoping Report for the South East Plan, describes the process for undertaking the SA of the partial review, and notes that subsequent stages of the SA will be undertaken by independent consultants. To this end, SEERA commissioned LUC to undertake the SA in March 2007.

- I.5. The SA Scoping Report for the partial review also noted that ‘Appropriate Assessment’ (AA) screening under the Habitats Regulations is also required for the review of the sub-regional apportionment, and LUC was commissioned to undertake the AA screening as well as the SA. A separate report¹⁵ describing the Screening stage of the HRA has also been prepared.

PURPOSE OF THE SUSTAINABILITY APPRAISAL

- I.6. The purpose of sustainability appraisal is to promote sustainable development by integrating sustainability considerations in to the preparation and adoption of policies, plans and programmes.
- I.7. The objective of Strategic Environmental Assessment, as defined in Article 1 of the SEA Directive is ‘*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans....with a view to promoting sustainable development*’.
- I.8. The 2005 Office of the Deputy Prime Minister (ODPM) guidance on sustainability appraisal explains the difference between environmental assessments required under the SEA Directive and sustainability appraisal of development plans as required by the UK Government.¹⁶ There are many parallels but also some differences, and the guidance clearly shows how assessment to comply with the SEA Directive can be integrated with current practice on sustainability appraisal. Sustainability appraisal includes a wider range of considerations, extending to social and economic impacts of plans, whereas SEA is more focussed on environmental impacts.

AIM AND STRUCTURE OF THE REPORT

- I.9. This report constitutes the SA Report for the partial review of Policy M3 (Primary Aggregates) in the South East Plan, which describes what elements of the Partial Review have been appraised and how, and the likely significant sustainability effects of implementation of the revised Policy M3. The SA has been produced for consultation alongside the sub-regional apportionment options being considered in the partial review, to provide the public and statutory bodies with an opportunity to express their opinions on the SA Report and to use it as a reference point in commenting on the partial review of Policy M3.

¹⁴ *Partial Review of Draft South East Plan: Revised Apportionment of Primary Land-Won Aggregates. Scoping Report.* SEERA, February 2007.

¹⁵ *Partial Review of the Draft South East Plan: Policy M3. Habitats Regulations Assessment Screening Report.* Prepared for SEERA by Land Use Consultants, November 2007.

¹⁶ *Sustainability Appraisal of Regional Spatial Strategies and Local Development Framework: Guidance for Regional Planning Bodies and Local Planning Authorities.* Office of the Deputy Prime Minister, November 2005.

I.10. The SA of the partial review has been undertaken in line with the SA guidance, and seeks to meet the requirements of both the Planning and Compulsory Purchase Act 2004 and the SEA Directive (European Directive 2001/42/EC). This SA Report therefore includes the required elements of an 'Environmental Report' (the output required by the SEA Directive) and **Table I.1** sign-posts the relevant sections of the SA Report that are considered to meet the SEA Directive requirements.

Table I.1 Summary of the requirements of the SEA Directive and where these have been addressed in this SA Report (after Appendix I, SA Guidance, ODPM, 2005)

SEA Directive Requirements	Where covered in SA Report
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapter 2
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Chapter 5
c) The environmental characteristics of areas likely to be significantly affected;	Chapter 5
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.;	Chapter 5
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Chapter 5
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	Chapter 6 Appendix I
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Chapter 6 Appendix I
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapters 3, 5 and 6
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	Chapter 7
j) a non-technical summary of the information provided under the above headings	Non-technical Summary
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Chapters 3, 5, 6
Consultation:	Scoping Report (February 2007)
<ul style="list-style-type: none"> authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Art. 5.4) 	
<ul style="list-style-type: none"> authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2) 	Consultation on this SA Report and subsequent stages
<ul style="list-style-type: none"> other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7). 	Not applicable
Taking the environmental report and the results of the consultations into account in decision-making (Art. 8)	To be addressed at a later stage
Provision of information on the decision:	To be addressed at a later stage
When the plan or programme is adopted, the public and any countries consulted under Art.7 must be informed and the following made available to those so informed:	
<ul style="list-style-type: none"> the plan or programme as adopted a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report of Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Art. 7 have been taken into account in accordance with Art. 8, and the reasons for choosing the plan or programme as adopted, 	

SEA Directive Requirements	Where covered in SA Report
in the light of the other reasonable alternatives dealt with; and <ul style="list-style-type: none"> the measures decided concerning monitoring (Art. 9) 	
Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10)	Chapter 7
Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12)	To be addressed at a later stage

I.11. In preparing this report, account has been taken of the previous work conducted as part of the full SA of the draft South East Plan and the Scoping Report prepared for the partial review of Policy M3, and much of the contextual material has been drawn from the Scoping Report and the consultation responses received.

I.12. This chapter provides the background to the SA of the partial review. The remainder of this report is structured into the following chapters:

Chapter 2 – Partial Review of the Draft South East Plan: Policy M3, this chapter provides background to the partial review and a summary of the method developed to determine the options for the sub-regional apportionment.

Chapter 3 – Appraisal Methodology, describes the SA process, the approach and assumptions used and the specific SA tasks undertaken.

Chapter 4 – Sustainability Requirements of Relevant Plans, discusses the relationship with other relevant plans, policy guidance and strategies, and highlights key sustainability objectives.

Chapter 5 – SA Framework and Sustainability Context for the partial review, lists the SA Objectives used for assessing the sub-regional apportionment options, and the key sustainability issues related to minerals development identified from SEERA's Scoping Report.

Chapter 6 – Appraisal of the sub-regional apportionment options, sets out the main findings from the appraisals of each of the options, and draws conclusions from the findings of the appraisals.

Chapter 7 makes initial recommendations for the approach for monitoring the sustainability effects of implementing the revised Policy M3.

HOW TO COMMENT ON THE REPORT

I.13. This Sustainability Appraisal Report is being published for consultation alongside the draft options for the Partial Review of Policy M3 in the draft South East Plan in March 2008. This consultation is to provide the statutory environmental bodies¹⁷ and stakeholders with an opportunity to express their opinions on the SA Report and to use it as a reference point in commenting on the partial review.

¹⁷ The statutory environmental bodies that are required to be consulted on the SA are the Countryside Agency, English Nature (now combined into Natural England), English Heritage and the Environment Agency.

2. PARTIAL REVIEW OF DRAFT SOUTH EAST PLAN POLICY M3

BACKGROUND

The Current Sub-regional Apportionment and the Target Regional Supply Figure (RPG9 and Policy M3)

- 2.1. The draft South East Plan includes a policy (M3) setting out the volume of land-won sand and gravel and crushed rock that each Minerals Planning Authority (MPA) in the South East region will need to provide to meet the regional aggregate supply figure set out in the National and Regional Aggregates Guidelines¹⁸. These Guidelines updated Mineral Planning Guidance 6 (MPG6) and set a total aggregate supply figure for the South East Region of 570 million tonnes (mt) over the period 2001-2016. This includes 212mt of land-won sand and gravel and 35mt of crushed rock.
- 2.2. Currently, Policy M3 of the draft South East Plan has apportioned 13.25 million tonnes per annum (mtpa) of sand and gravel and 2.2mtpa of crushed rock primary aggregates sub-regionally by MPA or group of MPAs (unitaries) based on average sales from 1995 to 2001. The current apportionment is shown in **Tables 2.1** and **2.2**.

Table 2.1 Current apportionment for sand and gravel resources

Minerals Planning Authorities	Current apportionment (million tonnes per annum)	Percentage of regional total (%)
Berkshire	1.57	11.8
Buckinghamshire	0.99	7.5
East Sussex/Brighton and Hove	0.01	0.1
Hampshire/Portsmouth/Southampton/ New Forest	2.63	19.8
Isle of Wight	0.05	0.4
Kent / Medway	2.53	19.1
Milton Keynes	0.12	0.9
Oxfordshire	1.82	13.7
Surrey	2.62	19.8
West Sussex	0.91	6.9
Total	13.25	100

Source: RPG 9 – Waste and Minerals. Government Office for the South East June 2006

¹⁸ National and Regional Guidelines for Aggregates Provision in England, 2001-2016. Published by the former Office of the Deputy Prime Minister (now DCLG) June 2003.

Table 2.2 Current apportionment for crushed rock

Minerals Planning Authorities	Current apportionment (million tonnes per annum)	Percentage of regional total (%)
Kent	1.2	54.5
Oxfordshire	1.0	45.5
Total	2.2	100

Source: RPG 9 – Waste and Minerals. Government Office for the South East June 2006

- 2.3. As stated in the draft South East Plan (paragraph 24.6, Section D6) although this apportionment in Policy M3 is based on a logical and reasonably robust analysis, it is recognised that the apportionment is essentially derived from past rates of production, rather than an appraisal of future needs, likely availability of materials and a more detailed analysis of environmental and other constraints. The Panel Report on the EIP of the Partial Review of RPG9 for Minerals and Waste (December 2004) also recommended a more rounded and forward-looking methodology on which to base a revised sub-regional apportionment for inclusion in the review of minerals policies (R11.3). Thus, SEERA is undertaking a partial review of the sub-regional apportionment of land-won primary aggregates set out in Policy M3.
- 2.4. The revised sub-regional apportionment will enable the regional supply figure for sand and gravel and crushed rock to be apportioned between all the MPAs (as shown in Table 2.1) and will be applicable if overall national and regional guideline figures change in future following review.

Sub-regional Apportionment Options

- 2.5. SEERA commissioned Land Use Consultants (LUC) to develop the new apportionment method, which was required to identify options for sub-regionally apportioning sand and gravel and crushed rock. The development of the options is described in detail in a separate report¹⁹ and how sustainability considerations were incorporated is described in the next chapter of this report under Stage B of the SA method. The work was overseen by a steering group including representatives from the MPAs in the South East, minerals industry, SEERA, Communities & Local Government (CLG), Natural England, Environment Agency and English Heritage.
- 2.6. LUC proposed a number of key considerations that might influence the supply and use of primary aggregates, and the final criteria included in the method were discussed and agreed by the steering group:
- Criterion I: Construction Demand
 - Criterion Ia: Future (Housing provision)
 - Criterion Ib: Current (Existing population)

¹⁹ *Primary Aggregates Sub-Regional Apportionment in South East England*. Prepared for SEERA by Land Use Consultants, November 2007.

- Criterion 2: Past Sales
 - Criterion 3: Unsterilised resource outside of international designations (Special Protection Areas, Special Areas of Conservation, Ramsar and World Heritage sites, +250m buffer around each)
 - Criterion 4: Unsterilised resource outside of international designations (+250m buffer) and outside of national designations
- 2.7. The data used to represent the criteria within the apportionment method were a combination of numerical datasets (e.g. Criterion 1b used existing population figures) and spatial datasets (e.g. Criteria 3 and 4 used the mapped extent of the unsterilised resource and international and national designations).
- 2.8. The sub-regional apportionment options were developed by applying different weighting to the criteria to strengthen (or reduce) the influence of particular criteria on the portion of the regional supply figure that each MPA will have to provide. With the involvement of the whole Steering Group, the following options were agreed:
- **Option A:** weighted 70% on sales, and 10% each for other criteria – referred to as **'Past sales'**
 - **Option B:** weighted 70% on supply i.e. unsterilised resources outside of international designations (+250m buffer), and 10% each for other criteria – referred to as **'Resource'**
 - **Option C:** weighted 70% on construction demand, and 10% each for other criteria – referred to as **'Demand'**
 - **Option D:** weighted 70% on the unsterilised resource outside of international designations (+250m buffer) and outside of national designations and 10% on each other criteria – referred to as **'Environmental'**
 - **Option E:** evenly weighted between demand and resources, but with more emphasis on demand arising from existing population. 50% on demand (40% construction demand; and 10% on sales) and 50% on supply (40% on unsterilised resources outside of international designations (+250m buffer) and 10% on the unsterilised resource outside of international designations (+250m buffer) and outside of national designations) – referred to as **'Demand and resource'**
 - **Option F:** evenly weighted between all 4 criteria (25% each) – referred to as **'Equal weighting'**
- 2.9. **Figures 2.1 and 2.2** illustrate each MPA's percentage of the regional supply figure under the six options for sand and gravel, and crushed rock respectively. The current apportionment is also shown and has been used in the SA to represent the 'business as usual' option.

Figure 2.1: Illustrative comparison of combined sand and gravel sub-regional apportionment options

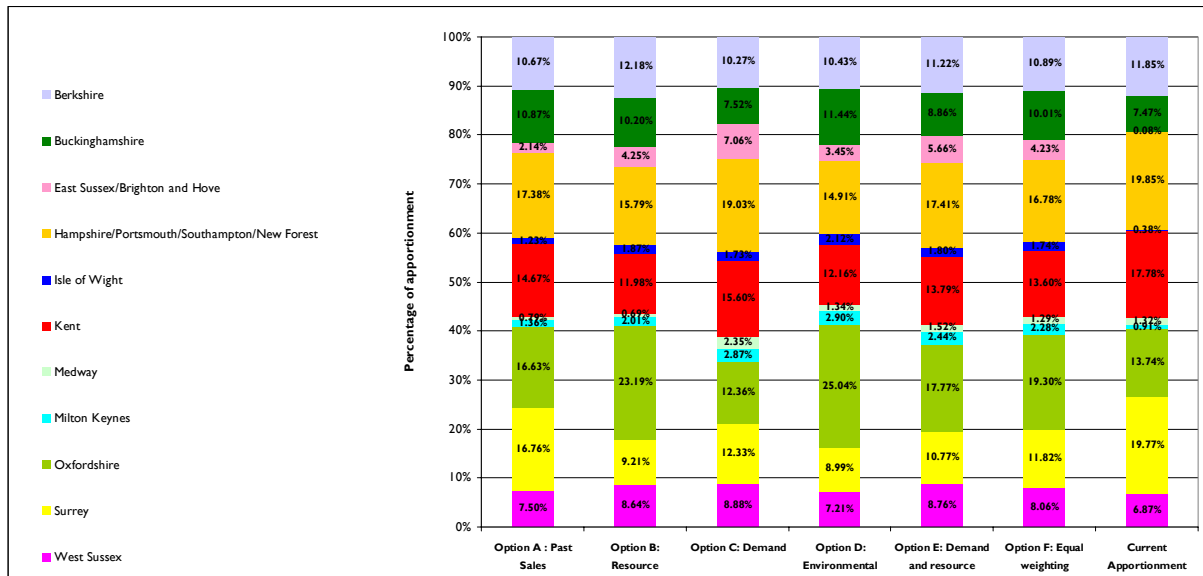
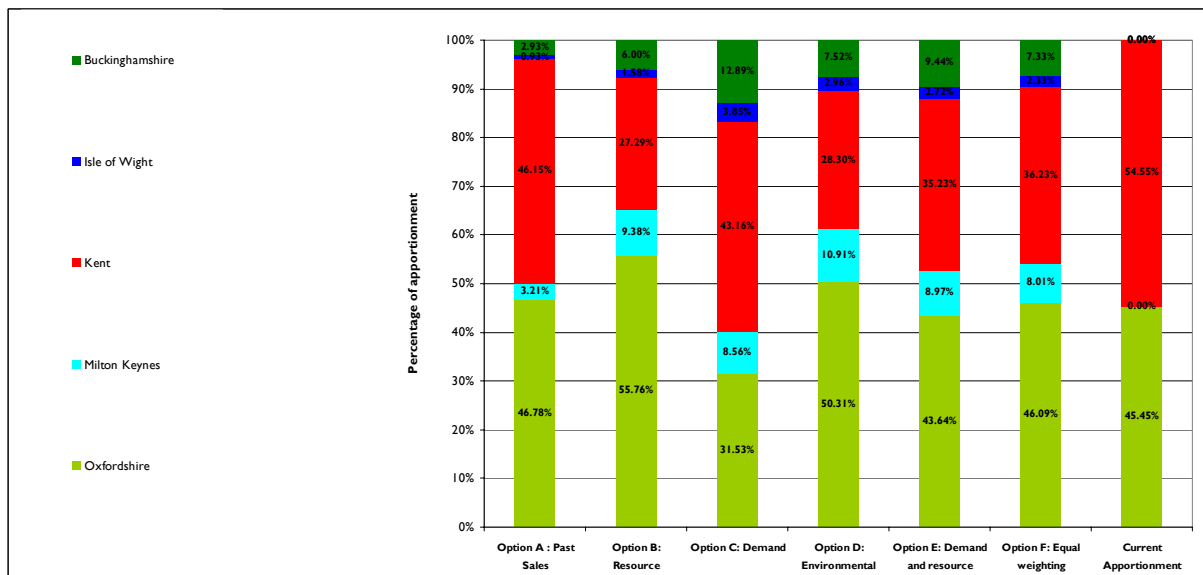


Figure 2.2: Illustrative comparison of crushed rock sub-regional apportionment options



Potential sustainability impacts of Policy M3

2.10. Minerals extraction can have a number of potential sustainability impacts (e.g. habitat loss, visual impact, supply of construction materials for planned development, pollution via air and water from dust or transport emissions). While Policy M3 will set out the preferred sub-regional apportionment option, and therefore the annual tonnages of sand and gravel or crushed rock that each MPA will have to make

provision for within their Minerals Development Frameworks, it will not identify where extraction should take place within each. It is the role of the MPAs to allocate sufficient sites in their Development Plan Documents (DPDs) for sand and gravel or crushed rock extraction to meet the annual tonnages set out in Policy M3. Policy M3 therefore has no spatial definition, which makes it very difficult to identify where significant impacts might occur due to the extraction of sand and gravel or crushed rock to meet the sub-regional apportionment. A large number of assumptions have had to be made in the SA in order to identify potential impacts of the different sub-regional apportionment options and how they might affect each MPA in the South East. The approach taken to the SA and the assumptions used are described in the next chapter.

3. APPRAISAL METHODOLOGY

- 3.1. The Sustainability Appraisal of the partial review of the draft South East Plan: Policy M3 has been undertaken in line with the SA guidance, and seeks to meet the requirements of both the Planning and Compulsory Purchase Act 2004 and the SEA Directive (European Directive 2001/42/EC).

STAGES AND TASKS IN SA

- 3.2. The Governments SA Guidance²⁰ introduces the SA process and explains how to carry out SA as an integral part of the Plan preparation. **Table 3.1** sets out the main stages of the RSS revision process and shows how these link to the SA process.

Table 3.1 Corresponding stages in RSS revision and SA (from SA Guidance, ODPM 2005)

Generic stages of RSS Revision	Stages and tasks	Purpose
Stage 1: Identify the issues for a RSS revision and prepare a project plan, including a statement of public participation	Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope	
	A1: Identifying other relevant policies, plans and programmes, and sustainability objectives	To document how the RSS revision relates to outside factors and suggest ideas for how potential synergies can be exploited and/or any inconsistencies and constraints addressed.
	A2: Collecting baseline information	To provide an evidence base for sustainability issues, effects prediction and monitoring.
	A3: Identifying sustainability issues and problems	To define key issues for the RSS revision, help focus the SA and streamline the subsequent stages, including baseline information analysis, setting of the SA Framework, prediction of effects and monitoring
	A4: Developing the SA Framework	To provide a means by which the sustainability of the RSS revision can be appraised
	A5: Consulting on the scope of the SA	To consult with statutory bodies with social, environmental, or economic responsibilities to ensure the appraisal covers the key sustainability issues
Stage 2: Develop options and policies, taking account of assessed effects and developing the draft RSS revision	Stage B: Developing and refining options and assessing effects	
	B1: Testing the RSS revision objectives against the SA Framework	To ensure that the overall objectives of the RSS revision are in accordance with sustainability principles and provide a suitable framework for developing options
	B2: Developing the RSS revision options	To assist in the development and refinement of the options, by identifying potential sustainability effects of options for achieving the RSS revision objectives
	B3: Predicting the effects of the RSS revision	To predict the significant effects of the RSS revision

²⁰ Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents, Office of the Deputy Prime Minister (ODPM), November 2005.

Generic stages of RSS Revision	Stages and tasks	Purpose
	B4: Evaluating the effects of the RSS revision	To assess the significance of the predicted effects of the RSS revision and assist in the refinement of the RSS revision
	B5: Considering ways of mitigating adverse effects and maximising beneficial effects	To ensure all potential mitigation measures and measures for maximising beneficial effects are considered and as a result residual effects identified
	B6: Proposing measures to monitor the significant effects of implementing the RSS revision	To detail the means by which the sustainability performance of the RSS revision can be assessed
	Stage C: Preparing the Sustainability Appraisal Report	
	C1: Preparing the SA Report	To provide a detailed account of the SA process, including the findings of the appraisal and how it influenced the development of the RSS revision, in a format suitable for public consultation and decision-makers
Stages 3, 4 and 5: Submission of the draft RSS revision to the Secretary of State, Examination-in-Public and the Panel Report	Stage D: Consulting on the draft RSS revision and SA Report	
	D1: Consulting on the draft RSS revision and SA Report	To provide the public and statutory bodies with an effective opportunity to express their opinions on the SA Report, including representation at the Examination-in-Public, and to use it as a reference point in commenting on the RSS revision
Stages 6 and 7: Publication of proposed changes and issue of revised RSS	D2(i): Appraising any significant changes proposed by the Secretary of State	To ensure that any significant changes to the RSS revision proposed by the Secretary of State are assessed for their sustainability implications and influence the modification of the RSS revision. This is then made available to the public for comment
	D2(ii): Appraising significant changes resulting from representations	To ensure that any significant changes to the RSS revision resulting from representations are assessed for their sustainability implications and influence the modification of the RSS revision
	D3: Making decisions and providing information	To provide information on how the SA Report and consultees' opinions were taken into account in preparing the RSS revision
Stage 8: Implementation, monitoring and review	Stage E: Monitoring the significant effects of implementing the RSS revision	
	E1: Finalising aims and methods for monitoring	To measure the sustainability performance of the RSS revision in order to determine whether its effects are as anticipated, and thereby inform future revisions
	E2: Responding to adverse effects	To ensure that the adverse effects can be identified and appropriate responses developed

STAGE A: SETTING THE CONTEXT AND OBJECTIVES, ESTABLISHING THE BASELINE AND DECIDING ON THE SCOPE

- 3.3. The South East England Regional Assembly undertook Stage A (Scoping) of the SA for the partial review, and consulted on the Scoping Report, which set out the 'tools' for undertaking the SA. As stated in the Scoping Report, it followed the structure of the original SA Scoping Report for the draft South East Plan and drew on the work undertaken as part of that wider SA process (such as the baseline information, review of relevant plans and programmes, and the SA framework). This SA Report in turn incorporates these same elements from the Scoping Report as set out in Chapters 4 and 5.

Consultation on the Scoping Report and how comments have been addressed by the SA

- 3.4. The Scoping Report was consulted upon for five weeks in February-March 2007 alongside the draft Project Plan for the Partial Review. A questionnaire accompanied the reports, and question 5 related specifically to the SA Scoping Report. It asked whether the consultees thought the proposed SA framework (i.e. the SA objectives) was fit for the purpose of carrying out the SA and whether any additional baseline data should be included. The responses were collated by SEERA and provided to LUC. A table of the responses relating specifically to the SA, and how these have been addressed during the SA is set out in **Appendix I**.

STAGE B: DEVELOPING AND REFINING OPTIONS AND ASSESSING EFFECTS

- 3.5. SEERA produced the SA Scoping Report for the revision to Policy M3, and then commissioned LUC to carry out the subsequent stages of the SA process (Stages B to E). In addition, LUC is undertaking a Habitats Regulations Assessment (HRA) to inform the RSS revision, which will be presented in a separate HRA Report.
- 3.6. In parallel to the SA process, sustainability considerations have been taken into account throughout the development of the RSS revision options. Alongside the stages B to E of the SA process, LUC was commissioned by SEERA in late March 2007 to develop a revised methodology for the sub-regional apportionment of land-won primary aggregates. The specific objective of this work was to prepare a methodology for the sub-regional apportionment of primary aggregates (including crushed rock), having regard to sustainability and practical factors.
- 3.7. As described in Chapter 2, the sub-regional apportionment method was developed in association with the project Steering Group. Initially, key considerations that might influence the supply and use of primary aggregates were identified. These were developed into a number of criteria and refined through a process of iterations with the Steering Group.

Consideration of sustainability factors within apportionment method

- 3.8. Chapter 2 lists the final criteria used in the apportionment method. The original set of factors considered by the Steering Group and the reasons why some were discounted are documented fully in the *Primary Aggregates Sub-regional Apportionment in South East England* report²¹. This section summarises briefly how sustainability factors were considered during development of the sub-regional apportionment options.
- 3.9. Sustainable transport was considered for inclusion, potentially by assessing the location of wharves, road and rail (including depots) provision in the Region, and expressing this in terms of density of provision by mineral planning sub region. However, after much discussion the Steering Group agreed that it should not be included, as apportioning primary aggregate provision on the basis of density of sustainable transport links would have to be treated with some caution. For example, existing sustainable transport modes do not necessarily link source with demand. In addition, an area could have lots of depots but no resource because material is imported. There is at present very little transport of aggregates by water or rail from internal sources of aggregate within the South East. Thus, any apportionment which relies heavily on sustainable transport may signal the need for significant investment in new and / or upgraded transport facilities. However, it was recognised that the construction demand criteria should help to encourage supplies of aggregate in close proximity to demand.
- 3.10. The final Criteria 3 and 4 within the apportionment method included a very broad assumption agreed by the steering group that extraction of sand and gravel or crushed rock resource would not occur within 250m of an international nature conservation or heritage designation. It should be noted that this 'buffer' distance is not a policy within the draft South East Plan, nor will it form part of the revised Policy M3. It was used within the apportionment method as an acknowledgement of the sensitivity of those sites to minerals development, and to reduce the amount of unsterilised resource assumed to be available within MPAs containing internationally designated sites. The reasoning behind this assumption was that this would help to reduce the portion of the regional supply figure MPAs would have to provide, and therefore help to avoid impacts on the designated sites.
- 3.11. The nine national designations considered for criterion 4 are:
- Sites of Special Scientific Interest;
 - Areas of Outstanding Natural Beauty;
 - National Nature Reserves;
 - National and proposed National Parks – consultation on a revision to the Proposed South Downs National Park is currently underway, so the unrevised (existing) boundary has been used for the purposes of this study. The revised boundary could be substituted in this criterion at a later stage if needed;

²¹ *Primary Aggregates Sub-regional Apportionment in South East England*. Land Use Consultants, November 2007.

- Heritage Coasts;
 - Scheduled Ancient Monuments;
 - Historic Parks and Gardens;
 - Registered Battlefields; and
 - Listed Buildings.
- 3.12. Other issues such as floodplains, Groundwater Source Protection Zones, and Green Belt and safeguarding around aerodromes were also considered during the development of the criteria, but were discounted in discussion with the Steering Group. This was generally because these were considered to be better applied to the identification of prospective mineral working areas and preferred sites allocations at the sub-regional level through the Minerals Development Framework process and at individual site level. In addition, it was anticipated that these issues would be covered as part of the SA.
- 3.13. Some members of the apportionment methodology Steering Group were also closely involved in helping to develop the SA method, again through a series of meetings and written correspondence. The Steering Group members involved were:

Name	Organisation
Chris Catling	Environment Agency
Kate Potter	Environment Agency
Steve Williams	English Heritage
Mark Chessell	Natural England
Claire Kerr	Natural England

Reasons for selecting the alternatives dealt with in the RSS revision

- 3.14. During development of the sub-regional apportionment methodology, a number of potential alternative criteria and options were produced and discussed. These alternatives were discounted through discussion with the Steering Group; the reasons for which have been documented fully in the *Primary Aggregates Sub-regional Apportionment in South East England Report*.
- 3.15. The remaining six options for sub-regional apportionment for sand and gravel and crushed rock were agreed by the Steering Group to represent a reasonable mix of the factors most affecting the ability of a MPA to provide primary aggregates.

Assessing Sustainability Effects

Appraisal Assumptions and Limitations

- 3.16. In order to undertake an appraisal of apportionment options at the regional scale, it was necessary to make a number of general assumptions. These assumptions are

highlighted in boxes in appropriate locations throughout this section in order to aid reference to them in the remainder of this SA Report. In addition, as a result of the strategic nature of the project, there are overarching limitations to the appraisal process; these too are highlighted in boxes below.

- 3.17. Where assumptions and limitations specific to a particular SA Objective became apparent during the appraisal process, they were documented in the individual SA Papers produced for each SA Objective or group of related SA Objectives (described below).

Box 1: Assumption

The sustainability appraisal process compares each apportionment option against the current baseline apportionment. As a result, the scoring provided for an apportionment option against a SA Objective can seem incorrect at first glance. For example: If the current baseline were to provide a high apportionment to an area with a large proportion of its resource within a biodiversity designation, it could result in a significant negative impact on biodiversity. As such, should an apportionment option provide the same area with a lower apportionment, it could have a reduced impact on biodiversity and therefore result in a positive impact **compared to the baseline** i.e. less of the designated area would be affected. However, it does not follow that the option would have a positive impact on biodiversity overall (such as enhancement or creation), just a smaller negative impact compared to the baseline.

Box 2: Limitation

Linked to the assumption in Box 1, an absolute assessment of the impact of apportionment options against the baseline is difficult as there is limited data on the performance of the current apportionment against the issues covered by the SA Objectives. For example, with regard to the proximity principle, it is unknown as to whether each MPA is currently meeting its demand from within its own area or not, which therefore makes it difficult to judge the impact of a different apportionment. This is noted as both a limitation of the SA and a data gap.

Box 3: Assumption

The judgements made during the SA with regard to the potential impacts of options are in part founded on the assumption that all areas of resource are equally economically viable and attractive to exploit. However, in reality, some areas may not be considered by the industry for extraction. The appraisal process has not been able to take this into account.

Box 4: Limitation

Linked to the limitation in Box 2, the accuracy of the SA findings is restricted by the lack of information on the ability of MPAs to meet demand under both the current apportionment and under each of the apportionment options. This can affect whether the apportionment options are realistic and therefore whether the sustainability impacts identified are pragmatic.

3.18. Throughout the appraisal process, it has been noted that the greater use of recycled and secondary aggregates would be strategically a more sustainable option to extracting primary minerals. However, the purpose of this SA is to assess the potential sub-regional primary aggregate apportionment options, linked to the partial review of only Policy M3 of the draft South East Plan (Policy M2 addresses the use of recycled and secondary aggregate). As such, although noted as a key sustainability issue, the promotion of recycled and secondary aggregates is not within the scope of this SA, and so has not been considered in the assessment of effects.

SA Papers

3.19. Taking the overarching assumptions and limitations into account, each apportionment option was appraised against each SA Objective, or group of related SA Objectives, to determine the potential impacts of the options compared to the current apportionment as the baseline. A set of SA Papers was created for each SA Objective or group of Objectives, which describes in detail the approach and findings of the SA for each SA Objective(s). The SA Papers are structured as follows:

- SA (IRF) Objectives and associated key sustainability issues.
- Discussion of the appraisal process, including sustainability issues for consideration by MPAs.
- Assumptions and limitations specific to the SA Objective, including the definition of significance used for predicting the scale of impacts.
- Caveats.
- Evidence and data used during the appraisal.
- Appraisal of apportionment options with regard to sand and gravel, including conclusions.
- Appraisal of apportionment options with regard to crushed rock, including conclusions.

3.20. The latter two sections of the SA Papers include overall comments on the findings of the appraisal and a table of the likely sustainability effects of each option on MPAs, plus a brief summary table. Where the explanation column of the appraisal table is left blank, the explanation is provided within the overall comments and has not been reproduced to avoid repetition.

3.21. The completed SA Papers can be found in **Appendix 2**, with the findings summarised in **Chapter 6**.

Definitions of significant effects and the differences between apportionment options and the baseline

3.22. Taking into account the assumptions, limitations and therefore uncertainties involved in this SA, our appraisal has attempted to differentiate between significant effects and other more minor effects through the use of symbols and associated definitions. The

dividing line in making such a decision is often quite small. Where we have used either ++ or -- to distinguish significant effects from more minor effects (+ or -), this is because, in our judgement, the effect of the proposal on the SA Objective will be of such magnitude that it will have a noticeable and measurable effect compared with other factors that may influence the achievement of that SA Objective.

- 3.23. In order to provide some clarity on the significance of impacts judged for the apportionment options through the appraisal process, definitions of significance have been developed. These definitions are based on two things: firstly, the difference between the apportionment options and the current apportionment, as shown in **Table 3.2**. Different scales of negligible to significant have been used to reflect the large range in percentages between MPAs within the apportionment options. For example, Option B for sand and gravel (see **Figure 2.1**) apportions around 23% of the regional supply figure to Oxfordshire and only 0.69% to Medway, thus a negligible or significant shift from the current apportionment will not be in the same range for either of these MPAs.

Table 3.2: First component of significance definitions: the difference between apportionment options and the current baseline

Sand and Gravel	Crushed Rock
The difference in apportionment option compared to MPAs with a current apportionment of...	The difference in apportionment option compared to the current apportionment within the MPAs of...
...less than 5%:	...Milton Keynes, the Isle of Wight and Buckinghamshire:
Negligible: 0 to 0.49%	Negligible: 0 to 1.49%
Minor: 0.5 to 2%	Minor: 1.5 to 5%
Significant: Above 2%	Significant: Above 5%
...between 5% and 15%:	...Oxfordshire and Kent are:
Negligible: 0 to 1.49%	Negligible: 0 to 2.49%
Minor: 1.5 to 5%	Minor: 2.5 to 10%
Significant: Above 5%	Significant: Above 10%
...above 15%:	
Negligible: 0 to 2.49%	
Minor: 2.5 to 10%	
Significant: Above 10%	

- 3.24. Secondly, definitions of significance are based on the percentages of resource within or nearby the mapped information relating to each SA Objective e.g. an environmental designation or a land use. For example, in relation to the historic environment: Where less than 10% of the resource is located within a national or

international cultural heritage designation, and/or the apportionment is negligibly different than the baseline, it is judged that the option would most likely have a negligible impact on the sustainability issue of cultural heritage under this Objective (0).

Box 5 Assumption

The percentages of resource used to define significance (that within or nearby the mapped information relating to each SA Objective) are not based on scientific data. They are instead the result of consideration of the proportions of the datasets that has been mapped.

STAGE C: PREPARING THE SUSTAINABILITY APPRAISAL REPORT

- 3.25. This document is the SA Report. It sets out the likely significant environmental, social and economic effects of the options for the sub-regional apportionment of sand and gravel and crushed rock in the South East. The appraisal considers the existing legislative safeguards in place, which often act as mitigation measures to reduce potential significant adverse effects. Other methods of preventing, reducing and as fully as possible offsetting any significant adverse effects of the RSS revision are identified where possible. It has been written to meet all the requirements of the SEA Directive for an environmental report (see **Table I.1**), and the Planning and Compulsory Purchase Act requirement to prepare a report of the findings of the Sustainability Appraisal.

STAGE D: CONSULTING ON THE PARTIAL REVIEW OF THE SOUTH EAST PLAN: POLICY M3 AND SA REPORT

- 3.26. This SA Report has been produced for consultation alongside the partial review of the draft South East Plan: Policy M3 Consultation Document. The details of consultations are set out at the end of **Chapter I**. Any responses received from consultees on the content of this SA Report will be considered and addressed in further iterations of the SA that will be produced to accompany the final partial review adoption in 2008.

STAGE E: MONITORING IMPLEMENTATION OF THE PARTIAL REVIEW

- 3.27. Stage E will follow adoption of the revised Policy M3. LUC has not been commissioned to undertake the SA monitoring. However, the SEA Directive and SA guidance require that the Sustainability Report includes a description of measures envisaged concerning monitoring. This is discussed in **Chapter 7** of this SA Report.

4. SUSTAINABILITY REQUIREMENTS OF RELEVANT PLANS

- 4.1. This section discusses the review of plans and programmes, policy guidance and strategies at national and regional level which should inform / have a bearing on the RSS revision.
- 4.2. Annex I of the SEA Directive requires:
- (a) “an outline of the...relationship with other relevant plans or programmes”; and
 - (e) “the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation”.
- 4.3. This task was carried out by SEERA during the scoping stage; the relevant national plans and strategies reviewed as part of this process are listed in **Table 4.1**. It should be noted that no international plans and programmes, policy guidance and strategies were included in this review, as it was assumed that the national plans have been developed in line with the relevant international strategies and plans, thereby precluding the need for their inclusion here.
- 4.4. There are potentially a large number of plans and programmes relevant to the RSS revision. However, not all national plans and policies have been included within the appraisal, as it was assumed that the regional plans listed in **Table 4.2** have been developed in line with relevant national strategies and plans, and therefore the repetition of national level documents is not necessary.
- 4.5. Given the limited scope of the Partial Review this SA Report focuses on the relevant national and regional plans and strategies pertinent to the planning of minerals. A full review of the plans, strategies and objectives is set out in Annex A to the Scoping Report, which is available on the South East England Regional Assembly website (http://www.southeast-ra.gov.uk/southeastplan/consultation/minerals_review.html). It is not possible for the Partial Review to address all of the relevant objectives contained within the national and regional plans and strategies, due to its non-spatial nature. Therefore, it is assumed that the MPAs will also need to take into account these objectives when preparing their Minerals Development Frameworks and SAs.

Table 4.1: List of National Plans

Specific Relevance to Minerals
Circular 11/05: The Town and Country Planning (Green Belt) Direction 2005
Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and their impact within the planning system
Circular 02/99: Environmental impact assessment
Good Practice Guidance on the Environmental Appraisal of the Provision of Aggregates (ODPM, 2006)
Planning Policy Guidance documents and Statements

MPS1: Planning and Minerals (2006)
MPS2: Controlling and mitigating the environmental effects of mineral extraction in England (2005)
MPG2: Applications, permissions and conditions (1998)
MPG4: Revocation, modification, discontinuance, prohibition and suspension orders (1997)
MPG5: Stability in surface mineral workings and tips (2000)
National and regional guidelines for aggregates provision in England (2003)
MPG7: Reclamation of mineral workings (1996)
MPG9: Planning and Compensation Act 1991 (1992)
MPG11: The control of noise at surface mineral workings (1993)
MPG14: Environment Act 1995: review of mineral planning permissions (1995)
PPS1: Delivering sustainable development (2005)
PPG2: Green belts (1995)
PPS7: Sustainable development in rural areas (2004)
PPS9: Biodiversity and geological conservation (2005)
PPS11: Regional Spatial Strategies (2004)
PPG13: Transport (2001)
PPG15: Planning and the historic environment (1994)
PPS23: Planning and pollution control (2004)
PPG24: Planning and noise (1994)
PPS25: Development and flood risk (2006)
Other relevant national policies
Securing the Future: Delivering UK Sustainable Development Strategy, 2005
The Future of Transport (the Transport White Paper, 2004)
Our Energy Future - creating a low carbon economy (the Energy White Paper, 2003)
Waste Strategy 2000 (including amendments)
Working with the grain of nature: a biodiversity strategy for England (2002)

Table 4.2: List of Regional Plans

Economic Plans
Regional Economic Strategy 2006-2016 (SEEDA, 2006)
Regional Economic Strategy 2002-2012 (SEEDA , December 2002)
Integrated Regional Framework for the South East (Regional Assembly, 2004)
European Strategy for South East England 2001-2006 (Regional Assembly, February 2001)
South East Social Enterprise Strategy (SEEDA 2005)
Farming and Food: Our Healthy Future Delivery Plan for Sustainable Farming and Food Delivery Plan in the South East and London (GOSE, December 2003)
English Rural Development Programme 2000-2006: Appendix A7 South East Region (MAFF, October 2000)

Environmental Plans
Meeting the Challenge of Climate Change (SEEDA/SECCP, July 2004)
Seeing the Wood for the Trees: Regional Forestry Framework (The Forestry Framework Steering Group/Partners from Regional Government and Woodland Sector/SEEDA, March 2004)
Action for Biodiversity in South East England (South East England Biodiversity Forum, 2001)
Water Resources for the Future, A Strategy for Southern Region/ A Strategy for Thames Region (EA, Southern Region/Thames Region, March 2001)
Spatial Plans
Regional Planning Guidance for the South East (RPG9, 2001)
Draft South East Plan (Regional Assembly, 2006)
Regional Transport Strategy (Adopted Alterations to RPG9) (ODPM, 2004)
Regional Minerals Strategy (Adopted Alterations to RPG9) (ODPM, 2006)
Regional Waste Strategy (Adopted Alterations to RPG9) (ODPM, June 2006)
Ashford Growth Area (Alterations to RPG9) (ODPM July 2004)
Milton Keynes and South Midlands Sub-Regional Strategy (Adopted Alterations to RPG9) (ODPM, March 2005)
Sustainable Communities in the South East (GOSE/ODPM, February 2003)
The London Plan: Spatial Development Strategy for Greater London (Greater London Authority, September 2004) and Alterations.
East of England Plan: Secretary of State's proposed changes to the draft revision of the RSS (GOE (December 2006)
Draft Regional Spatial Strategy for the South West (South West Regional Assembly, June 2006)

5. THE SA FRAMEWORK AND KEY SUSTAINABILITY ISSUES

THE SA FRAMEWORK AND KEY SUSTAINABILITY ISSUES

- 5.1. The requirement of the SEA Directive Annex I is to provide information on:
- (b) *the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan;*
 - (c) *the environmental characteristics of areas likely to be significantly affected;*
 - (d) *any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC [the ‘Birds Directive’] and 92/43/EEC [the ‘Habitats Directive’].*
- 5.2. The original Scoping Report for the SA of the draft South East Plan set out a summary of key environmental, social and economic issues relevant to the Plan. These issues were identified by the analysis of baseline data and extensive consultation. As part of the scoping process, which SEERA undertook for the Partial Review of Policy M3, these issues were revisited in the light of the review of relevant plans and strategies and the baseline. New issues relating specifically to the Partial Review were identified. Sustainability issues relating to the Partial Review have been reproduced in **Table 5.1**, together with the IRF Objectives that form the SA Framework.
- 5.3. During production of the Scoping Report for the Partial Review, SEERA considered that a number of the IRF Objectives were not relevant to a review of the sub-regional primary aggregate apportionment; these Objectives have been greyed out in Table 5.1. In addition, IRF Objectives 19 and 21, have also been greyed out, as they were considered not to be relevant by LUC during the initial stages of undertaking the SA of the Partial Review. The reasons for this are discussed below.
- 5.4. Although energy efficiency is a very important topic, Objective 19 (to increase energy efficiency and the proportion of energy generated from renewable sources in the region) was considered not to be relevant in order to prevent double counting of potential sustainability effects. The main energy use within the minerals industry is related to transport distances, a subject that is already addressed through IRF Objectives 12, 15 and 16. The potential for energy efficiency and generation measures to be employed on an aggregates site is considered to be a local level issue that would be addressed at the planning application stage with the MPAs and therefore not one relevant to the Partial Review of the draft South East Plan.
- 5.5. Objective 21, to sustain economic growth and competitiveness across the region, is considered to be a function of meeting the demand for aggregates in the region as set

out in the National and Regional Aggregates Guidelines²². As the sub-regional aggregate apportionment methodology that produced the six options to be assessed by the SA was developed to ensure that all options would enable the region to meet its supply figure in the Guidelines, this IRF Objective was not considered to be relevant as there would be no difference between the options.

Table 5.1: SA Framework for the Partial Review and key sustainability issues

IRF Objective	Key Sustainability Issues relating to the Partial Review
1. To ensure that everyone has the opportunity to live in a decent, sustainably constructed and affordable home	Largely not relevant apart from sourcing of construction materials close to sources of demand
2. To reduce the risk of flooding and the resulting detriment to public wellbeing, the economy and the environment	Addressing the impact of aggregate extraction on water storage capacity, riverine and floodplain processes (e.g. changes to flow regime through minerals development can modify river channels, and change erosion and deposition rates upstream and downstream of development site).
3. To improve the health and well-being of the population and reduce inequalities in health	Largely not relevant apart from impacts of noise and dust. See also IRF Objective 11
4. To reduce poverty and social exclusion and close the gap between the most deprived areas in the South East and the rest of the region	Unlikely to be relevant for the Partial Review
5. To raise educational achievement levels across the region and develop the opportunities for everyone to acquire the skills needed to find and remain in work	Unlikely to be relevant for the Partial Review
6. To reduce crime and the fear of crime	Unlikely to be relevant for the Partial Review
7. To create and sustain vibrant communities	Unlikely to be relevant for the Partial Review
8. To improve accessibility to all services and facilities	Unlikely to be relevant for the Partial Review
9. To encourage increased engagement in cultural activity across all sections of the community in the South East	Unlikely to be relevant for the Partial Review
10. To improve efficiency in land use through the re-use of previously developed land	Not relevant except for the re-use of Construction and Demolition (C&D) waste.

²² National and Regional Guidelines for Aggregates Provision in England, 2001-2016. Published by the former Office of the Deputy Prime Minister (now CLG) June 2003.

IRF Objective	Key Sustainability Issues relating to the Partial Review
and existing buildings, including re-use of materials from buildings, and encourage urban renaissance	Re-use and recycling of C&D waste was addressed in the apportionment exercise used to develop Policy M2 of the draft South East Plan.
11. To reduce air pollution and ensure air quality continues to improve	Potential to cause air pollution through dust and vehicle emissions from mineral extraction activities and associated Heavy Goods Vehicles (HGV) movements especially in rural areas where most extraction is likely to occur.
12. To address the causes of climate change through reducing emissions of greenhouse gases and ensure that the South East is prepared for its impacts	Potential for traffic generation and carbon emissions.
13. To conserve and enhance the region's biodiversity	Minerals can only be worked where they occur. As such, habitats may be lost due to mineral extraction as aggregates may exist beneath or in proximity to sites protected for their wildlife interest, important for their conservation, or for protected species. However, there is also the opportunity to create new habitat and biodiversity assets during restoration of mineral working.
14. To protect, enhance and make accessible for enjoyment, the region's countryside and historic environment	Minerals can only be worked where they occur. As such, aggregates may exist in undeveloped countryside locations including areas designated for landscape interest or Green Belt.
15. To reduce road congestion and pollution levels by improving travel choice, and reducing the need for travel by car/lorry	There is the potential for minerals extraction activities to generate increased traffic on highway networks.
16. To reduce the global social and environmental impact of consumption of resources by using sustainably produced and local products	Provision of the mineral needs of the region from within the region will help reduce impact elsewhere and also reduce associated long distance transport distances. Survey data from the South East Aggregates Monitoring Report, 2005, indicate that the production of land-won sand and gravel and crushed rock within the region has consistently declined over the past 10 years (1995-2005) and is now 25% below the regional guideline figure for extraction. The relative increase in the proportion of recycled aggregates and secondary materials indicates more sustainable consumption of minerals resources within the region.
17. To reduce waste generation and disposal, and achieve the sustainable management	Unlikely to be relevant for the Partial Review

IRF Objective	Key Sustainability Issues relating to the Partial Review
of waste	
18. To maintain and improve the water quality of the region's rivers and coasts, and to achieve sustainable water resources management	Minerals extraction activities have the potential to affect hydrology, and the quality of the surface and ground water.
19. To increase energy efficiency, and the proportion of energy generated from renewable sources in the region	Unlikely to be relevant for the Partial Review
20. To ensure high and stable levels of employment so everyone can benefit from the economic growth of the region	No key sustainability issues specific to the Partial Review were identified in the Scoping Report with regard to this Objective
21. To sustain economic growth and competitiveness across the region	Unlikely to be relevant for the Partial Review
22. To stimulate economic revival in priority regeneration areas	Unlikely to be relevant for the Partial Review
23. To develop a dynamic, diverse and knowledge -based economy that excels in innovation with higher value, lower impact activities	Unlikely to be relevant for the Partial Review
24. To encourage the development of a buoyant, sustainable tourism sector	No key sustainability issues specific to the Partial Review were identified in the Scoping Report with regard to this Objective, as it was considered unlikely to be relevant for the Partial Review. However, LUC considered that minerals development has the potential to have an aesthetic impact on regional priority areas for tourism (listed in the draft South East Plan).
25. To develop and maintain a skilled workforce to support long-term competitiveness of the region	Unlikely to be relevant for the Partial Review

DATA GAPS

- 5.6. A number of data gaps were identified during development of the appraisal methodology. The main area where information was unavailable or missing related to establishing the effects of meeting the current apportionment within MPAs. It was therefore not possible to provide an indication of the absolute impact of the options. For example, the impact on the historic environment due to providing sufficient aggregate to meet the current apportionment is unknown. Therefore, the SA of the sub-regional apportionment options has only been able to predict the impact of an increase or decrease against the current apportionment and not the actual impacts on the historic environment.

5.7. Other data gaps include:

- Whether each MPA is meeting its demand from within its own area or not under the current apportionment.
- Actual road travel distances between the resource and areas of demand, rather than reliance on distances 'as the crow flies'.
- The location of sensitive surface water courses to complement the location of groundwater source protection zones.
- Information on the impact of mineral workings on the tourism industry.
- The depth and therefore the volume of the resource at a scale appropriate to the sub-regional apportionment.

6. APPRAISAL OF THE SUB-REGIONAL APPORTIONMENT OPTIONS

- 6.1. The primary aggregate sub-regional apportionment options were appraised against the 13 relevant IRF Headline Objectives taken from the SA Framework (set out in **Chapter 5**). The detailed SA Papers describing the key issues, assumptions used and SA findings for each Objective or group of related Objectives can be found in **Appendix 2**. This chapter sets out the main findings of the sustainability appraisal.

FACTORS TAKEN INTO ACCOUNT DURING THE SA

- 6.2. Sustainability appraisal inevitably relies on an element of subjective judgement. In predicting and assessing the sustainability effects of the apportionment options we have drawn on the sustainability issues and baseline information outlined in the Scoping Report, relevant data sources, and professional experience. As discussed in **Chapter 3** of this Report, members of the SA team contributed to the incorporation of sustainability issues into the apportionment methodology and associated criteria selection to ensure that all sustainability topics were considered.
- 6.3. It is important to note that the SA was a desktop exercise carried out to report the potential sustainability effects for the MPAs of six sub-regional apportionment options for both sand and gravel (sharp and soft sand) and crushed rock, compared with the current apportionment. It is a strategic level exercise to inform the RSS revision and does therefore not contain as much detail as a local level SA that might accompany a Local Development Plan Document (e.g. that allocates sites for minerals development within a County), or a site-specific environmental impact assessment that might accompany a specific development proposal. As the Partial Review will result in a non-spatial policy, the assessment of sustainability effects on specific receptors within each MPA will need to be addressed during the local level SAs of emerging Minerals Development Plan Documents.
- 6.4. The apportionment options provide allocations to a number of sub-regions within the South East. Most of these coincide with individual MPAs; others incorporate more than one MPA. To avoid lengthy sentences within this chapter, those sub-regions containing more than one MPA are referred to by the name of the largest component MPA. For example, the East Sussex / Brighton and Hove sub-region is referred to throughout the SA as East Sussex, and the Hampshire / Portsmouth / Southampton / New Forest sub-region is referred to as Hampshire.

Determining significance

- 6.5. Annex II of the SEA Directive sets out criteria for determining the likely significance of effects. These criteria relate to:
- The characteristics of the plan or programme (in this case Policy M3 of the draft South East Plan).

- The characteristics of the effects and of the area likely to be affected (in this case all areas in the South East containing an unconstrained sand and gravel or crushed rock resource).

6.6. In determining the significance of the effects of the RSS revision, it is important to bear in mind its relationship with the other documents such as national planning policy (e.g. MPS1, MPS2, PPS9, PPS25 etc). However, the likely effects of the apportionment options themselves need to be determined in order that their significance can be assessed. This inevitably requires a series of judgements to be made. To provide clarity, an explanation of the definitions of significant effects has been provided in Chapter 3, which includes a description of the symbols used during the appraisal:

Symbol	Impact
++	Significant positive
+	Minor positive
0	Negligible
-	Minor negative
--	Significant negative

6.7. Our assumptions regarding the appraisal and the significance of impacts are set out in Chapter 3 and within each SA Paper.

SUSTAINABILITY APPRAISAL FINDINGS

6.8. This section summarises the assessment of potential sustainability effects against each of the sustainability objectives or group of objectives that are relevant to the partial review of the sub-regional apportionment (see Chapter 5 for those IRF Objectives considered to be not relevant):

- **Proximity**

- IRF Objective 1 (sustainably constructed homes)
- IRF Objective 12 (climate change/greenhouse gas emissions)
- IRF Objective 15 (road congestion/pollution levels)
- IRF Objective 16 (sustainable consumption /use of local products)
- IRF Objective 21 (economic growth/competitiveness)

- **Flooding**

- IRF Objective 2 (flood risk)

- **Health and Air Quality**

- IRF Objective 3 (health and well being)
- IRF Objective 11 (air quality)

- **Previously Developed Land**

- IRF Objective 10 (land use)

- **Biodiversity and Air Quality**
IRF Objective 13 (biodiversity)
IRF Objective 11 (air quality)
- **Historic Environment, Landscape and Green Belt**
IRF Objective 14 (countryside and historic environment)
- **Water Quality and Resources**
IRF Objective 18 (water quality and sustainable water resource management)
- **Employment**
IRF Objective 20 (employment levels)
- **Tourism**
IRF Objective 24 (sustainable tourism)

SAND AND GRAVEL OPTIONS

6.9. **Table 6.1** provides a graphic summary of the potential sustainability effects (significant and minor, positive and negative) of the six options for sand and gravel sub-regional apportionment, in relation to each of the sustainability objectives for each MPA. These are discussed further below.

Table 6.1: Overview of the potential sustainability effects (significant/minor, positive/negative, short term [ST]/long term [LT]) of the six options for sand and gravel sub-regional apportionment

Sustainability Objective(s)	Berkshire	Bucks	East Sussex	Hampshire	Isle of Wight	Kent	Medway	Milton Keynes	Oxfordshire	Surrey	West Sussex
Option A – Sales											
Proximity and transport	0	+	+	0	+	+	-	0	+	-	0
Flooding	0	0	ST - LT++	0	0	ST + LT -	0	0	ST - LT +	0	0
Health and air pollution	0	+	+	0	+	-	-	0	+	+	0
Previously Developed Land	0	0	0	0	0	-	0	0	0	0	0
Biodiversity and air pollution	0	-	--	0	-	+	+	0	-	+	0
Biodiversity (Strategic Opportunity Areas [SOA])	0	+ -	++	0	+ -	+ -	+ -	0	+ -	+ -	0
Heritage	0	0	0	0	0	0	0	0	0	0	0
Landscape	0	0	--	0	-	0	0	0	-	0	0
Green Belt	0	-				+			-	+	
Water quality	0	-	0	0	-	+	0	0	0	+	0
Employment	0	0	+	0	0	-	-	0	0	0	0
Tourism	0	-	-	0	-	+	+	0	0	0	0
Option B – Resource											
Proximity and transport	0	+	+	+	+	+	-	+	+	-	0

Sustainability Objective(s)	Berkshire	Bucks	East Sussex	Hampshire	Isle of Wight	Kent	Medway	Milton Keynes	Oxfordshire	Surrey	West Sussex
Flooding	0	0	ST - LT++	0	0	ST + LT -	0	ST - LT+	ST - LT+	0	0
Health and air pollution	0	+	+	-	+	-	-	-	+	+	0
Previously Developed Land	0	0	0	0	0	-	0	0	0	0	0
Biodiversity and air pollution	0	-	--	+	-	+	+	0	--	++	0
Biodiversity (SOA)	0	+ -	++	-	+ -	+ -	+ -	-	++ + -	- - + -	0
Heritage	0	0	0	0	0	0	0	0	0	0	0
Landscape	0	0	--	+	-	+	0	0	-	+	0
Green Belt	0	-				+			-	++	
Water quality	0	-	0	+	-	+	0	-	0	+	0
Employment	0	0	+	0	0	-	-	+	0	0	0
Tourism	0	-	-	+	-	+	+	-	0	0	0
Option C – Demand											
Proximity and transport	-	0	+	0	+	0	+	+	0	-	-
Flooding	0	0	ST - LT++	0	0	0	0	ST - LT+	0	0	0
Health and air pollution	-	0	+	0	+	-	+	-	0	+	+
Previously Developed Land	-	0	0	0	0	0	0	0	0	0	0
Biodiversity and air pollution	+	0	--	0	-	0	-	0	0	+	-
Biodiversity (SOA)	+ -	0	++	0	+ -	0	+ -	-	0	+ -	+
Heritage	0	0	0	0	0	0	0	0	0	0	0
Landscape	0	0	--	0	-	0	0	0	0	+	-
Green Belt	+	0				0			0	+	
Water quality	+	0	0	0	-	0	0	-	0	+	-
Employment	0	0	+	0	0	0	+	+	0	0	0
Tourism	+	0	-	0	-	0	-	-	0	0	-
Option D – Environmental											
Proximity and transport	0	+	+	+	+	+	0	+	+	-	0
Flooding	0	0	ST - LT++	0	0	ST + LT -	0	ST - LT+	ST - LT+	0	0
Health and air pollution	0	+	+	-	+	-	0	-	+	+	0
Previously Developed Land	0	0	0	0	0	-	0	0	0	0	0
Biodiversity and air pollution	0	-	--	+	-	+	0	0	--	++	0
Biodiversity (SOA)	0	+ -	++	-	+ -	+ -	0	-	++ + -	- - + -	0
Heritage	0	0	0	0	0	0	0	0	0	0	0
Landscape	0	0	--	+	-	+	0	0	-	+	0
Green Belt	0	-				+			-	++	
Water quality	0	-	0	+	-	+	0	-	0	+	0
Employment	0	0	+	0	0	-	0	+	0	0	0
Tourism	0	-	-	+	-	+	0	-	0	0	0
Option E – Demand and resource											
Proximity and transport	0	+	+	+	+	+	0	+	+	-	0
Flooding	0	0	ST - LT++	0	0	ST + LT -	0	ST - LT+	ST - LT+	0	0
Health and air pollution	0	0	+	0	+	-	0	-	+	+	0
Previously Developed Land	0	0	0	0	0	-	0	0	0	0	0
Biodiversity and air pollution	0	0	--	0	-	+	0	0	-	+	0
Biodiversity (SOA)	0	0	++	0	+ -	+ -	0	-	+ -	+ -	0

Sustainability Objective(s)	Berkshire	Bucks	East Sussex	Hampshire	Isle of Wight	Kent	Medway	Milton Keynes	Oxfordshire	Surrey	West Sussex
Heritage	0	0	0	0	0	0	0	0	0	0	0
Landscape	0	0	- -	0	-	0	0	0	-	+	0
Green Belt	0	0				+			-	+	
Water quality	0	0	0	0	-	+	0	-	0	+	0
Employment	0	0	+	0	0	-	0	+	0	0	0
Tourism	0	-	-	0	-	+	0	-	0	0	0
Option F – Even weight											
Proximity and transport	0	+	+	+	+	+	0	+	+	-	0
Flooding	0	0	ST -	0	0	ST +	0	ST -	ST -	0	0
			LT++			LT -		LT +	LT +		
Health and air pollution	0	+	+	-	+	-	0	-	+	+	0
Previously Developed Land	0	0	0	0	0	-	0	0	0	0	0
Biodiversity and air pollution	0	-	- -	+	-	+	0	0	- -	+	0
Biodiversity (SOA)	0	+ -	++	-	+ -	+ -	0	-	++ + -	+ -	0
Heritage	0	0	0	0	0	0	0	0	0	0	0
Landscape	0	0	- -	0	-	0	0	0	-	+	0
Green Belt	0	-				+			-	+	
Water quality	0	-	0	+	-	+	0	-	0	+	0
Employment	0	0	+	0	0	-	0	+	0	0	0
Tourism	0	-	-	+	-	+	0	-	0	0	0

Summary of impacts of sand and gravel options against SA Objectives

- 6.10. None of the options for the sub-regional apportionment of sand and gravel could potentially result in a significant positive or significant negative impact on the objectives relating to the **proximity principle**. This is because none of the apportionment options provide MPAs that have a significantly high or low proportion of their resource within a growth area or sub-region, with a significantly altered apportionment compared to the baseline (i.e. the current apportionment).
- 6.11. All apportionment options could potentially lead to minor positive impacts with regard to the proximity principle. This reflects the generally large proportion of sand and gravel resource within a growth area or sub-region throughout the South East and therefore the provision of resources closer to demand (thereby reducing transport distances). Options D, E and F perform similarly against the proximity principle objectives, and the best with regard to this issue compared to the other options, with the most potential for minor positive impacts across the MPAs and only a single minor negative impact (in Surrey).
- 6.12. All apportionment options could potentially lead to short-term minor negative impacts and long-term minor or significant positive impacts on **flooding** in one or more of the MPAs. This is the case in MPAs with a high proportion of resources within the floodplain and a higher apportionment in the options (than their current apportionment). This could potentially lead to a negative impact during operation

from reducing floodplain capacity, but long-term positive impact should sites be restored to land uses incorporating flood storage capacity.

- 6.13. The opposite is true within Kent (with just over 40% of its resource within floodzone 3), as all options provided this MPA with a lower apportionment, thereby reducing the potential for extraction in the floodplain and increasing floodplain capacity in the short-term in comparison to the current apportionment: a minor positive impact. All options could potentially have a significant positive impact on flooding in East Sussex due to the high potential for flood storage capacity resulting from a combination of a large proportion of resource within floodzone 3 and a significantly greater apportionment to this MPA under all apportionment options.
- 6.14. Due to the legislative safeguards in place to prevent adverse impacts on floodplain capacity (e.g. requirements for Strategic Flood Risk Assessments for Minerals Development Plan Documents and site-specific flood risk assessments at planning application stage), it was considered that mineral extraction, for the purpose of the appraisal at this regional scale, could not result in a significant negative impact on the risk of flooding.
- 6.15. It is considered unlikely that any of the apportionment options could potentially result in significant positive or significant negative impacts with regards to **human health and air quality** in MPAs. This is due to the controls and safeguards in place at mineral extraction sites that prevent harmful effects on humans as a result of dust, noise or air pollution. However, in response to the proportion of resources in close proximity to urban areas, some minor positive and negative impacts have been identified as a result of decreased or increased apportionment (respectively), in comparison with the baseline.
- 6.16. The impact of apportionment options on **biodiversity and air quality** varies widely between MPAs, but to a lesser extent between options. The potential for impacts on biodiversity has been assessed by two methods: firstly, through the proportion of resource within, or in close proximity to, an international and national biodiversity designation coupled with an increase or decrease in apportionment compared to the baseline; and secondly, through consideration of the potential for current habitat loss within MPAs and the potential for habitat creation within the regionally identified **Strategic Opportunity Areas (SOAs)**, in association with the increase or decrease in apportionment compared to the baseline. Note that this relied on the assumption that MPAs would require restoration to enhance biodiversity as the primary objective if the minerals extraction takes place within an SOA.
- 6.17. With regard to the first biodiversity assessment, all apportionment options could potentially result in a significant negative impact on international and national biodiversity designations within East Sussex due in part to the proportion of the MPA that is within 2,500m of a designation, but mainly relating to the significant increase in apportionment provided to East Sussex under all options compared to the baseline. The significantly greater apportionment in all options could potentially increase the likelihood of extraction near to a designation, compared to meeting the current apportionment within East Sussex. The reasoning is the same for the potential significant impacts of Options B, D and F within Oxfordshire.

- 6.18. Similar reasoning has led to the opposite impact in Surrey with regard to apportionment Options B and D, where significantly lower apportionments could potentially decrease the likelihood of extraction near to a designation, compared to the baseline, and therefore potentially lead to a significant positive impact on biodiversity. Beyond these highlighted differences in potential significant impacts for East Sussex, Oxfordshire and Surrey, there is little variation between the apportionment options with regard to their impact on international and national biodiversity designations. Note that the potential effects of the Partial Review on internationally designated nature conservation sites (Special Areas of Conservation, Special Protection Areas and Ramsar sites) has also been addressed through the Habitats Regulations Assessment, which is set out in a separate report.
- 6.19. With regard to the second biodiversity assessment, Options B and D could result in a significant negative impact on woodland and lowland heathland and acid grassland habitats in Surrey (compared to the baseline) by significantly lowering the apportionment to this MPA and thereby reducing the potential for the creation of these habitats as part of mineral site restoration. Significantly greater apportionments from all options to East Sussex, and from Options B, D and F to Oxfordshire, could potentially have the reverse effect (a significant positive impact) by increasing the potential for the creation of habitats as part of mineral site restoration.
- 6.20. However, in general the impact of the apportionment options on the loss and creation of target habitats does not vary greatly across MPA or habitat type, therefore there is little to distinguish between the options.
- 6.21. A large proportion of **previously developed land** in the South East is within urban areas; therefore the opportunity for any positive or negative impacts resulting from the apportionment options on the efficient use of land is limited as mineral extraction sites are unlikely to be within urban areas. Berkshire has a notable proportion of sand and gravel resource under previously developed land outside urban areas (21.07%) and Kent has 5.47%. All the apportionment options could potentially result in a single minor negative impact in either Berkshire or Kent, due to the lower apportionments provided to these MPAs, which could lead to a reduced opportunity to contribute to the efficient use of land.
- 6.22. No MPA has over 10% of its sand and gravel resource within a heritage designation (i.e. over 90% of each MPA's resource is unconstrained by heritage designations). As such, it was judged that all apportionment options would most likely have a negligible impact on the sustainability issue of the **historic environment** at the strategic level. In addition, the density of Listed Buildings on the sand and gravel resource per MPA has a very small range: from 0.01 to 0.04 per ha. It was judged that given the low densities and small range between the MPAs it was not appropriate to appraise the regional apportionment options against their impact on Listed Buildings.
- 6.23. In general, all apportionment options perform similarly against the issue of impacts on the **landscape**, which is assessed through the proportion of resource outside an international or national landscape designation, alongside an increase or decrease in apportionment compared to the baseline. All options could potentially lead to a significant negative impact on landscape in East Sussex; resulting from all options

significantly increasing the apportionment given to this MPA, which has a high proportion of its resource within an international or national landscape designation.

- 6.24. However, the apportionment options do differ in the number of potential minor positive and negative impacts on landscape designations. For example, Option A is judged to have no minor positive impacts on landscape designations, whereas Options B and D could potentially have the most minor positive impacts (with three MPAs each).
- 6.25. A number of MPAs have no sand and gravel resource within the **Green Belt**, therefore, changes to their apportionment are not relevant to this issue. Of the remaining MPAs, Surrey has the greatest proportion of sand and gravel resource within the Green Belt at 88.75%. Options B and D could potentially have significant positive impacts on Green Belt through giving a significantly lower apportionment to Surrey.
- 6.26. The apportionment options have no potential significant impacts on **water quality** in the region, but numerous minor positive and negative impacts could potentially occur due to a combination of the proportion of resource within groundwater source protection zones and the apportionment allocations. All of the options would most likely result in negligible impacts on water quality in East Sussex, Medway and Oxfordshire. Generally, there is little to distinguish between the options in terms of their potential impact on groundwater source protection zones.
- 6.27. All apportionment options could potentially have a similar impact on **employment** in the region, with no potential significant impacts identified. With the exception of Option C, all options could potentially lead to a minor negative impact on employment in Kent as a result of the MPA's relatively high unemployment levels compared to the rest of the region, and decreased apportionments under these options potentially resulting in fewer jobs within the industry. Option C performs best against the issue of employment as it is the only apportionment option that is judged not to result in any minor negative impacts, and also could potentially lead to the most minor positive impacts.
- 6.28. **Tourism** in MPAs could be affected through close proximity of mineral extraction to regional priority areas for tourism (as identified in the draft South East Plan). However, only minor negative or positive impacts have been identified as a result of higher or lower apportionments compared to the baseline and the proportion of resource in close proximity to a regional priority area for tourism. The majority of apportionment options follow a similar pattern of impacts across the MPAs. Option C provides the greatest variation from this pattern, and has the most minor negative impacts of all the options (by one).

Summary of impacts of sand and gravel apportionment options

- 6.29. Apportionment Options A (Sales), C (Demand) and E (Demand and Resource) could potentially result in the least number of significant positive or negative impacts on MPAs of all the options; two of each. In addition, the potential significant impacts of these three options are exactly the same, and would all occur in East Sussex. The significant positive impacts relate to flooding in the long-term and habitat creation in

Strategic Opportunity Areas; the significant negative impacts relate to impacts on international and national biodiversity designations and the landscape.

- 6.30. Options B (Resource) and D (Environmental) could potentially result in the same significant positive and significant negative impacts (five positive and four negative). Four of these impacts are the same as those for Options A, C and E, the remainder are significant negative impacts on biodiversity designations in Oxfordshire and habitat creation in Surrey, and significant positive impacts on biodiversity designations and Green Belt in Surrey and habitat creation in Oxfordshire.
- 6.31. The remaining apportionment option, F (Even weighting), could potentially result in three significant positive and three significant negative impacts. These impacts are the same as those described above for East Sussex (Options A, C and E) and Oxfordshire (Options B and D).

CRUSHED ROCK OPTIONS

- 6.32. **Table 6.2** provides a graphic summary of the potential sustainability effects (significant and minor, positive and negative) of the six options for crushed rock sub-regional apportionment, in relation to each of the sustainability objectives for each MPA. These are discussed further below.

Table 6.2: Overview of the potential sustainability effects significant/minor, positive/negative, short term [ST]/long term [LT]) of the six options for crushed rock sub-regional apportionment

Sustainability Objective	Bucks	Isle of Wight	Kent	Milton Keynes	Oxfordshire
Option A – Sales					
Proximity and transport	+	0	+	+	0
Flooding					
Health and air pollution	+	0	+	+	0
Previously Developed Land					
Biodiversity and air pollution	-	0	+	-	0
Biodiversity (SOA)	-	0	- +	- 0	0
Heritage	0	0	0	0	0
Landscape	0	0	0	0	0
Green Belt	0	0	+	0	0
Water quality					
Employment	0	0	-	+	0
Tourism	-	0	+	-	0
Option B – Resource					
Proximity and transport	++	+	++	++	--
Flooding					
Health and air pollution	++	+	+	+	+
Previously Developed Land					
Biodiversity and air pollution	-	-	+	-	--
Biodiversity (SOA)	--	+ 0	-- ++	-- 0	++ --
Heritage	0	0	0	0	0

Sustainability Objective	Bucks	Isle of Wight	Kent	Milton Keynes	Oxfordshire
Landscape	0	0	0	0	-
Green Belt	0	0	++	0	0
Water quality					
Employment	0	0	-	+	0
Tourism	-	-	+	--	0
Option C – Demand					
Proximity and transport	++	+	++	++	++
Flooding					
Health and air pollution	++	+	+	+	-
Previously Developed Land					
Biodiversity and air pollution	-	-	+	-	++
Biodiversity (SOA)	--	+ 0	--	++	-- 0
Heritage	0	0	0	0	0
Landscape	0	0	0	0	+
Green Belt	0	0	++	0	0
Water quality					
Employment	0	0	-	+	0
Tourism	-	-	+	--	0
Option D – Environmental					
Proximity and transport	++	+	++	++	-
Flooding					
Health and air pollution	++	+	+	+	+
Previously Developed Land					
Biodiversity and air pollution	-	-	+	-	-
Biodiversity (SOA)	--	+ 0	--	++	-- 0
Heritage	0	0	0	0	0
Landscape	0	0	0	0	-
Green Belt	0	0	++	0	0
Water quality					
Employment	0	0	-	+	0
Tourism	-	-	+	--	0
Option E – Demand and resource					
Proximity and transport	++	+	++	++	0
Flooding					
Health and air pollution	++	+	+	+	0
Previously Developed Land					
Biodiversity and air pollution	-	-	+	-	0
Biodiversity (SOA)	--	+ 0	--	++	-- 0
Heritage	0	0	0	0	0
Landscape	0	0	0	0	0
Green Belt	0	0	++	0	0
Water quality					
Employment	0	0	-	+	0
Tourism	-	-	+	--	0
Option F – Even weight					
Proximity and transport	++	+	++	++	0
Flooding					
Health and air pollution	++	+	+	+	0
Previously Developed Land					

Sustainability Objective	Bucks	Isle of Wight	Kent	Milton Keynes	Oxfordshire
Biodiversity and air pollution	-	-	+	-	0
Biodiversity (SOA)	--	+ 0	-- ++	-- 0	0
Heritage	0	0	0	0	0
Landscape	0	0	0	0	0
Green Belt	0	0	++	0	0
Water quality					
Employment	0	0	-	+	0
Tourism	-	-	+	--	0

Summary of impacts of crushed rock options against SA Objectives

- 6.33. The majority of apportionment options perform significantly better compared to the current apportionment with regard to the **proximity principle**. This is due to the allocation of crushed rock provision to five MPAs under all apportionment options rather than the two MPAs under the current apportionment, thereby ensuring a more even spread of extraction throughout the South East and a reduction in distance between crushed rock source and demand.
- 6.34. Options B to F provide significantly greater apportionments to Buckinghamshire and Milton Keynes, resulting in significant positive impacts on reducing greenhouse gas emissions, reducing traffic, increasing consumption of locally sourced products and improving the economic competitiveness of the industry via reducing transportation costs. Option A is the only option not to perform significantly better compared to the baseline, this is a result of only minor differences between the percentages apportioned to the MPAs in Option A and their current apportionment.
- 6.35. Option B is the only apportionment option that could potentially result in a significant negative impact with regard to the proximity principle; which is the result of a significantly high apportionment to Oxfordshire, an MPA with less than 20% of its crushed rock resource within a demand area.
- 6.36. All MPAs have less than 30% of their crushed rock resource within flood zone 3; as such, it is judged that all apportionment options would most likely result in a negligible impact on **flooding** in the South East.
- 6.37. All apportionment options perform similarly with regard to impacts on **human health and air quality**. The only notable differences occur for Oxfordshire where the crushed rock apportionment varies widely between options and compared with the baseline. Oxfordshire has a high proportion of its crushed rock resource further than 1000m from an urban area; therefore a greater apportionment can potentially lead to a minor positive impact (Option C) by increasing the likelihood that extraction would occur away from an urban area. Conversely, a lower apportionment could potentially lead to a minor negative impact (Option B).
- 6.38. All options could potentially lead to a significant positive impact on human health and air quality in Buckinghamshire, with the exception of Option A. Option A provides

the MPA with a greater apportionment (as opposed to a significantly greater apportionment as provided by the other options), which could potentially result in a minor positive impact.

- 6.39. The area of crushed rock resource under **previously developed land** is predominantly within urban areas. The proportion of crushed rock resource outside an urban area in any MPA is less than 3%; therefore it is most likely that all apportionment options would have a negligible impact on the efficient use of land through the re-use of previously developed land.
- 6.40. The impacts of the apportionment options on international and national **biodiversity designations** are similar in all MPAs except Oxfordshire. These similarities are mainly a function of the likeness between the apportionments provided by the options.
- 6.41. Option B could potentially result in a significant negative impact on biodiversity designations in Oxfordshire due to the high proportion of the crushed rock resource within 2,500m of a designation and the significantly greater apportionment provided to this MPA. In combination, these factors increase the likelihood that the extraction of crushed rock could occur close to a biodiversity designation. Conversely, Option C could potentially result in a significant positive impact on biodiversity designations in Oxfordshire due to a significantly lower apportionment reducing the likelihood of extraction close to a biodiversity designation.
- 6.42. Option A is the only apportionment option that is unlikely to result in any significant positive or significant negative impacts concerning the balance of habitats lost in each MPA and habitats created within **Strategic Opportunity Areas** in each MPA. This is because the apportionment provided by Option A does not vary significantly from the current apportionment.
- 6.43. The impacts of the remaining options on habitat loss and creation in all MPAs except Oxfordshire are the same. This is because each option provides a similar scale of change in apportionment compared to the baseline. The allocation given to Oxfordshire varies the most between options and hence has the most varied impact on the target habitats within MPAs and the Strategic Opportunity Areas. Options B and C, with significantly greater and significantly lower apportionments to Oxfordshire (respectively), could potentially lead to both significant positive and significant negative impacts on one or more of the target habitats.
- 6.44. None of the MPAs have over 10% of their crushed rock resource within a heritage designation. As such, it is judged that all options would most likely have a negligible impact on the sustainability issue of the **historic environment**. In addition, the density of Listed Buildings on the resource per MPA has a very small range: from 0.02 to 0.06 per ha. It was judged that given the low densities and small range between the MPAs it was not appropriate to appraise the regional apportionment options against their impact on Listed Buildings.
- 6.45. Buckinghamshire and Milton Keynes crushed rock resource is completely unconstrained by international or national **landscape designation**, and Kent and the Isle of Wight have over 90% of their crushed rock resource unconstrained by an

international or national landscape designation; therefore the apportionment options will not have a direct impact on the landscape in these MPAs. Although Oxfordshire has the highest proportion of crushed rock resource that is constrained by an international or national landscape designation (21.65%), none of the apportionment options have the potential to lead to a significant impact on landscape in this MPA.

- 6.46. None of the crushed rock resources within Buckinghamshire, the Isle of Wight or Milton Keynes, and less than 10% of the crushed rock resource in Oxfordshire, is located within **Green Belt**. As such, any apportionment increase or decrease provided to these MPAs, regardless of significance, is most likely to have a negligible impact on Green Belt.
- 6.47. Kent has the highest proportion of resource within Green Belt at 27.75%. All apportionment options except one (Option A) provide a significant decrease in apportionment to Kent, which could potentially have a significant positive impact on Green Belt in this MPA. Option A provides Kent with only a slightly lower apportionment, which could potentially have a minor positive impact.
- 6.48. None of the crushed rock resource within Buckinghamshire, the Isle of Wight or Milton Keynes, and less than 10% of the crushed rock resource within Kent and Oxfordshire, is within **groundwater source protection zones (GWSPZ) 1-3**. As such, it is most likely that the impact of the apportionment options on groundwater quality would be negligible.
- 6.49. All apportionment options perform identically with regard to their impacts on **employment** in the South East. Negligible impacts are most likely in three of the five MPAs (Buckinghamshire, the Isle of Wight and Oxfordshire), with no significant impacts identified in the remaining two. The apportionment of crushed rock given to Kent (the MPA with the highest levels of unemployment in the region by area) is reduced under all options; therefore, all options could potentially result in a minor negative impact on employment in Kent. In addition, all options could potentially lead to a minor positive impact on employment in Milton Keynes, due to increases in the allocation to this MPA under all options.
- 6.50. Apportionment options B to F perform equally in all MPAs with regard to their impact on the **tourism** industry, each potentially leading to a significant negative impact in Milton Keynes. The whole of the crushed rock resource in Milton Keynes is within a tourism hotspot growth area and all options provide this MPA with a significant increase in apportionment. This combination could potentially result in crushed rock extraction having a negative impact on the tourism industry by increasing the likelihood that mineral and tourist sites are in close proximity. Option A has the least potential negative impacts, including a minor negative impact in Milton Keynes.

Summary of impacts of crushed rock apportionment options

- 6.51. Apportionment Option A stands out as the only option unlikely to result in a significant impact, positive or negative, on the issues covered by the SA Objectives. This is a consequence of Option A providing only minor changes to the current apportionment, where other options vary significantly from the baseline.

- 6.52. Option C has the potential to lead to the most significant positive impacts of all the apportionment options, performing particularly well against the proximity principle. The majority of significant negative impacts of all options occur against the potential for habitat creation in Strategic Opportunity Areas compared to habitat loss in the whole MPA. This is a consequence of the balance between the potential for loss compared to opportunities for creation, and a change in apportionment that could improve the situation, or make it worse, compared to the baseline.
- 6.53. Options B and C have the most significant negative impacts in relation to habitat creation in Strategic Opportunity Areas (four), but these Options also have the most significant positive impacts (two). Options E and F have the least number of both significant positive and significant negative impacts with regards to this issue (one positive, three negative).
- 6.54. A significant positive impact on Green Belt in Kent, a significant positive impact on health and air quality in Buckinghamshire and a significant negative impact on tourism in Milton Keynes, occur under all apportionment options except Option A. As such, these impacts can not be used to distinguish between Options B to F. The only significant impacts that differ between these five options are those relating to the proximity principle in Oxfordshire and biodiversity throughout the MPAs.

CONCLUSIONS

- 6.55. LUC undertook a sustainability appraisal of six potential sub-regional apportionment options for both sand and gravel and crushed rock provision in the South East of England. The SA team also provided input into the methodology for and development of the six options, seeking to ensure the integration of sustainability considerations at all stages in the process of identifying a revised sub-regional primary aggregate apportionment for the Partial Review of the draft South East Plan (Policy M3).
- 6.56. A large number of assumptions had to be made to undertake the appraisal of apportionment options. This was due in part to the strategic level at which the appraisal was being undertaken, and the often local level impacts of the minerals industry. There were also a number of limitations of the SA that must be noted when reading these conclusions. For example, the scoring given to each option is a reflection of the potential impact of that options when compared to the baseline (current apportionment), not an indication of the actual impact of the apportionment option on a key issue, such as the landscape.

Sand and gravel options

- 6.57. With these assumptions and limitations in mind, the overarching themes from the findings of the SA of the sand and gravel apportionment options are:
- None of the apportionment options could potentially result in significant impacts on the key issues of proximity, health, the efficient use of land, the historic environment, water quality, employment or tourism.

- Only significant positive impacts on flooding are possible due to the rigorous legislation already in place preventing mineral extraction on the floodplain that would result in a significant negative impact.
- There is potential for significant positive and significant negative impacts on international and national biodiversity designations as a function of the proportion of resource within close proximity of a designation within a MPA, coupled with the increase or decrease in apportionment provided to that MPA by the options. All options provide a significantly greater apportionment to East Sussex, an MPA with over 60% of its sand and gravel resource within 2,500m of an international and national biodiversity designation; therefore all options could potentially result in a significant negative impact on an international or national biodiversity designation in this MPA.
- Options B, D and F could potentially result in significant negative impacts on biodiversity designations in Oxfordshire. In contrast, Options B and D could potentially lead to significant positive impacts biodiversity designations in Surrey.
- The potential significant impacts of the options on biodiversity designations are reversed with regards to their potential long term impacts on habitat creation. All options could potentially result in significant positive impacts in East Sussex due to the high proportion of resource within a Strategic Opportunity Area, which could encourage the restoration of mineral extraction sites to specific target habitats. Options B, D and F could potentially have significant positive impacts on habitat creation in Oxfordshire, but (with the exception of Option F) a significant negative impact in Surrey.
- Akin to biodiversity designations, significantly greater apportionments to East Sussex could also potentially result in significant negative impacts on landscape, due to the proportion of sand and gravel resource within a landscape designation.
- Significantly lower apportionments provided to Surrey by Options B and D could potentially result in significant positive impacts on Green Belt, the only significant impacts of the apportionment options against this sustainability issue.

6.58. The conclusion from these findings is that there is little to differentiate between the sand and gravel apportionment options with regards to the majority of key sustainability issues. The MPAs significantly affected by the options are East Sussex, Oxfordshire and Surrey, with the impacts on East Sussex the same regardless of apportionment option. Options B and D could potentially result in both significant positive or significant negative impacts on biodiversity depending upon the location of extraction in either close proximity to an existing biodiversity designation or within a Strategic Opportunity Area.

Crushed rock options

6.59. Again, with the overarching assumptions and limitations in mind, the themes from the findings of the SA of the crushed rock apportionment options are:

- All apportionment options provided an allocation of crushed rock to Buckinghamshire, the Isle of Wight and Milton Keynes – MPAs that do not have an allocation under the current apportionment. As such, all options have the potential to impact upon key sustainability issues in these MPAs.
 - None of the apportionment options could potentially result in significant impacts on the key issues of flooding, the efficient use of land, the historic environment, landscape, water quality or employment.
 - Option A is the only apportionment option unlikely to result in any significant impacts on the sustainability issues.
 - With the exception of Option A, all apportionment options could potentially result in: significant positive impacts with regard to Green Belt in Kent and health and air quality in Buckinghamshire; and a significant negative impact on tourism in Milton Keynes. As such, these impacts do not help to differentiate between these five options.
 - With regards to the sustainability issues of biodiversity and proximity, the impacts of Options B to F are the same in all MPAs except Oxfordshire. This reflects the fact that the only significant difference between the apportionments provided to MPAs by these five options are the amounts allocated to Oxfordshire. Options E and F join Option A with most likely a negligible impact in this MPA; Option D could potentially result in only minor impacts (four negative, two positive). Option B could potentially result in three significant negative impacts and one significant positive with regards to biodiversity and proximity; Option C could result in the opposite, with three significant positive impacts and one negative.
- 6.60. Similar to the apportionment options for sand and gravel, and with the exception of Option A, there is little to differentiate between the apportionment options for crushed rock. Option A does not differ significantly from the baseline, despite some allocation to those MPAs previously with none, therefore it would most likely not result in a significant alteration of the impact of the current apportionment on the key sustainability issues.
- 6.61. Options B to F provide similar apportionments to all MPAs, with the exception of Oxfordshire, when compared to each other, therefore the impacts on the sustainability issues are similar. Oxfordshire is the only MPA that could experience a significantly different impact on biodiversity (through impacts on international or national designations or the potential for habitat creation) and the proximity of the industry to demand depending upon the apportionment option selected.

Implementation

- 6.62. The MPAs have a key role to play in the implementation of revised Policy M3, as they will need to identify and allocate sufficient sites for sand and gravel and crushed rock operations within their Minerals Development Frameworks. Many of the potential sustainability effects identified within this SA and the uncertainties relating to the nature and scale of those effects will need to be explored through the lower-tier SAs

undertaken by the MPAs for the Development Plan Documents within their Minerals Development Frameworks.

- 6.63. Specific sustainability issues for consideration by the MPAs have been highlighted within the individual SA Papers in **Appendix 2** for each SA objective or group of related objectives. These should be used as a reference for those undertaking the lower-tier SAs of Minerals Development Frameworks. In addition, the mapped baseline data which accompanies the SA Papers in **Appendix 3** should also provide a useful resource for the MPAs, for example the areas of mineral resource which overlap with Strategic Opportunity Areas for habitat creation (**Figures A11 to A18**). It is within these areas that BAP priority habitats can best be created during restoration of minerals sites, and MPAs should use their local BAPs and other ecological sources to help to mitigate effects of implementing their apportionment.

7. MONITORING

PROPOSALS FOR MONITORING

- 7.1. The SEA Directive requires that “*member states shall monitor the significant environmental effects of the implementation of plans or programmes... in order, inter alia, to identify at an early stage, unforeseen adverse effects, and be able to undertake appropriate remedial action*” (Article 10.1) and that the environmental report should provide information on “*a description of the measures envisaged concerning monitoring*” (Annex I (i)). The ODPM’s SA Guidance states that monitoring proposals should be designed to provide information that can be used to highlight specific issues and significant effects, and which could help decision-making. This represents Task E1 in the ODPM’s SA Guidance.
- 7.2. The ODPM’s SA Guidance states that it is not necessary to monitor everything. Instead, monitoring should be focussed on the significant sustainability effects that may give rise to irreversible damage (with a view to identifying trends before such damage is caused) and the significant effects where there is uncertainty in the SA and where monitoring would enable preventative or mitigation measures to be taken. The monitoring measures proposed in this SA Report therefore focus on the predicted significant effects only.
- 7.3. The potential significant effects of the sub-regional apportionment options compared to the current apportionment have been summarised in the Conclusions section of **Chapter 6**. However, it will be the significant effects of the preferred sub-regional apportionment option that is incorporated into the revised Policy M3 that need to be monitored. Therefore, we have only discussed potential mechanisms for this monitoring at this stage in the SA, and more detailed proposals will need to be developed in subsequent stages once the preferred option has been assessed.
- 7.4. Policy M3 will be delivered in the context of the draft South East Plan as a whole, and the wider policy framework which sits alongside the planning system. This means that the effects of the implementation of Policy M3 will be influenced by the degree to which other policies forming the South East Plan are successfully implemented. For this reason, monitoring the sustainability effects of implementing Policy M3 should be conducted as part of an overall approach to monitoring the sustainability effects of the South East Plan as a whole, as well as taking account of broader social, economic and environmental trends.
- 7.5. The Regional Assembly is required under the Planning and Compulsory Purchase Act to prepare an Annual Monitoring Report (AMR) to assess the extent to which policies in the RSS are being implemented. The draft South East Plan sets out a framework for the AMR, and identifies some targets and indicators that will be used to monitor the effectiveness of the minerals policies, including the provision by the MPAs of a landbank of planning permissions for sand and gravel and crushed rock to meet their apportionment. In addition, other factors potentially affected by minerals extraction will also be monitored as part of the AMR for the whole South East Plan,

such as changes in areas of biodiversity importance, including Priority habitats and species.

- 7.6. As stated in the SA Guidance, the data used for monitoring will, in many cases, be provided by outside bodies. It is therefore recommended that SEERA continue the dialogue with statutory environmental consultees and other stakeholders commenced as part of the SA process and Partial Review, and work with them to agree the relevant sustainability effects to be monitored and to obtain information that is appropriate, up to date and reliable. It should be noted that the sustainability effects to be monitored may need to be revised at subsequent stages of the Partial Review, in response to consultation comments and revisions.

Land Use Consultants
23rd November 2007

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