

West Sussex and South Downs National Park Joint Minerals Local Plan Issues and Options (Regulation 18) SA Report

Sustainability Appraisal including Strategic Environmental Assessment Main Report

Prepared by South Downs National Park Authority

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I Introduction

- 1.1. This Sustainability Appraisal Report has been prepared by the South Downs National Park Authority (SDNPA) as part of the integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) of the Soft Sand Single Issue Review (SIR), which will form part of the West Sussex and South Downs National Park Joint Minerals Local Plan (hereafter referred to as the JMLP).
- 1.2. This report relates to the Single Issue Review Issues and Options Document published January 2019 (SIR I&O) and it should be read in conjunction with that document. This SA partially updates the SA for the JMLP and both documents should be read together.
- 1.3. The National Planning Policy Framework (NPPF) advises that planning authorities should produce Local Plans and that a series of separate Development Plan Documents should only be produced where justified. The Planning Inspector for the JMLP required the SIR to be carried out on adoption of the JMLP and the SIR I&O will be the first stage in that process.
- 1.4. The preparation of the JMLP (2018) was subject to a full Sustainability Appraisal (SA), in line with the Planning and Compulsory Purchase Act 2004 and current Government planning policy (the NPPF). The preparation of the JMLP was also be in accordance with the requirements of European Directive 2001/42/EC (known as the Strategic Environment Assessment, or SEA Directive). The SIR will follow the same processes and procedures although ultimately the SIR will form a new chapter of the JMLP and will not exist as a standalone document.

I.1 Sustainability Appraisal and Strategic Environmental Assessment

- 1.5. This SA Report has been prepared to provide key stakeholders and members of the public with information on the process and the findings of the SA undertaken in preparing the Proposed Submission Draft JMLP. In particular, this report documents the likely significant sustainability effects of the early stages of the SIR I&O.
- 1.6. The purpose of SA is to promote sustainable development by integrating sustainability considerations in to the preparation and adoption of plans.
- 1.7. The SA is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the Development Plan Document (DPD) preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process appraises the likely social, environmental and economic effects of the strategies and policies within a DPD (in this case the JMLP) from the outset of its development
- 1.8. Strategic Environmental Assessment (SEA) is also a statutory assessment process, required under the SEA Directive, transposed in the UK by the SEA Regulations (Statutory Instrument 2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment, and set the framework for future consent of projects requiring Environmental Impact Assessment (EIA). The purpose of SEA, as defined in Article 1 of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans....with a view to promoting sustainable development'.
- 1.9. SEA and SA are separate processes but have similar aims and objectives. Simply put, SEA focuses only on the likely environmental effects of a plan whilst SA includes a wider range of considerations, extending to social and economic impacts. The Government's Sustainability Appraisal guidance outlines how it is possible to satisfy both requirements by undertaking a joint SA/SEA process, and to present an SA report that incorporates the requirements of the SEA Regulations.

1.10. West Sussex County Council (WSSCC) and the South Downs National Park Authority (SDNPA) ('the Authorities') are required to plan for a steady and adequate supply of minerals. The West Sussex Joint Minerals Local Plan (JMLP), adopted in July 2018, sets out policies to ensure that a steady and adequate supply can be maintained.

1.11. Policy M2 of the JMLP requires the Authorities to undertake a review to address the shortfall in soft sand to the end of the JMLP plan period (2033). This Single Issue Review (SIR) must consider the strategy for how the shortfall will be met and, as required, the potential need for allocating sites for soft sand extraction. The main purpose of the SIR document is to set out the key Issues and Options concerned with planning for the supply of soft sand. It sets out the three main issues for consideration and seeks views of all stakeholders and interested parties on these. The main issues are:

- the need for soft sand;
- the strategy for soft sand supply; and
- potential sites and site selection.

1.12. Once adopted, the SIR will integrate into the JMLP to provide an up-to-date and robust policy for Soft Sand.

1.2 Scope of the JMLP and the SIR

1.13. As mineral planning authorities, West Sussex County Council (WSSCC) and the South Downs National Park Authority (SDNPA) (the Authorities) are required to plan for a steady and adequate supply of minerals in accordance with paragraph 207 of the National Planning Policy Framework 2018 (NPPF).

1.14. The West Sussex Joint Minerals Local Plan (JMLP) was jointly prepared and adopted by the Authorities in July 2018. The Plan sets out strategic policies for a number of different types of mineral for the period to 2033.

Soft Sand Review

1.15. During the examination hearings of the JMLP in September 2017, the Planning Inspector raised concerns about the soft sand strategy. The Inspector suggested modifications prior to adoption of the JMLP: to delete references to planning for a declining amount of sand extraction from within the National Park; to replace Policy M2 with new wording; and to remove the proposed Ham Farm allocation from Policy M11.

1.16. Accordingly, Policy M2 of the JMLP requires the Authorities to undertake a Single Issue Soft Sand Review (SIR). This must commence within six months of adoption of the JMLP and be submitted to the Secretary of State within two years from the commencement of the review.

1.17. Preparation of the Review must be undertaken in accordance with the relevant legislation (including the Planning and Compulsory Purchase Act 2004 and Regulations) to ensure procedural and legal compliance. The Review must also be consistent with the National Planning Policy Framework (2018).

1.18. The timetable for the Review is set out in the statutory management plan, the West Sussex Minerals and Waste Development Scheme.

1.19. The Review considers the following three key issues

- Issue 1: the identified need for soft sand during the period to 2033;
- Issue 2: the supply strategy, that is, the options that can, either singularly or in combination, be used to meet any identified shortfall; and
- Issue 3: the identification of potential sites and, if required, the selection of one or more of those sites to meet identified need.

2 Sustainability Appraisal and Strategic Environmental Assessment

Table 2.1 signposts how the requirements of the SEA Directive have been met within this SA report.

Table 2.1 SEA Directive Requirements

SEA Directive Requirements	Where covered in this SA report
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes	Chapters 1,2 and 3
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	Baseline is in Appendix 3 of the main SA report for the JMLP.
c) The environmental characteristics of areas likely to be significantly affected	Section 3 of this document sets out the Key Sustainability issues.
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.	Appendix 3 of the SA of the JMLP and Section 3 of this document
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	Appendix 3 of the SA of the JMLP and Section 3 of this document
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)	This is considered throughout this report and at future stages of the SIR.

SEA Directive Requirements	Where covered in this SA report
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;	
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;	Alternatives will be considered at the next stages of the SIR.
i) A description of measures envisaged concerning monitoring in accordance with Art. 10;	Section 8 of this document and the adopted JMLP
j) a non-technical summary of the information provided under the above headings	A separate non-technical summary document has been produced to accompany this SA report.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Addressed throughout this SA report.
Consultation: authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Art. 5.4)	Consultation on the SA Scoping Report for the SIR was undertaken in 2018.
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)	An SA Report was available for consultation alongside the Draft West Sussex JMLP (Regulation 18 version) from 14th April to 17th June 2016. the SA Report for the Proposed Submission Draft JMLP was made available for consultation between January and March 2017. This SA Report will be made available for consultation alongside the Reg18 I&O Plan in January 2019.
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).	The SIR of the JMLP is unlikely to have a significant effect on another EU Member State.

Taking the environmental report and the results of the consultations into account in decision-making (Art. 8)

SEA Directive Requirements	Where covered in this SA report
<p>Provision of information on the decision:</p> <p>When the plan or programme is adopted, the public and any countries consulted under Art.7 must be informed and the following made available to those so informed:</p> <p>the plan or programme as adopted</p> <p>a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report of Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Art. 7 have been taken into account in accordance with Art. 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and</p> <p>the measures decided concerning monitoring (Art. 9)</p>	<p>This was carried out in July 2018 for the JMLP and will be carried out again on adoption of the SIR into the JMLP.</p>
<p>Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10)</p>	<p>This is ongoing and will be monitored through the JMLP monitoring framework.</p>
<p>Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).</p>	<p>This report has been produced in line with current guidance and good practice for SEA/SA and this table demonstrates where the requirements of the SEA Directive have been met.</p>

2.1 Aim and structure of the report

- 2.1. This report is the SA/SEA report for SIR I&O January 2019. It has been prepared in the spirit of the integrated approach to SEA and SA, and throughout the report, the abbreviation 'SA' should therefore be taken to refer to 'SA incorporating the requirements of SEA'.
- 2.2. This chapter provides an introduction to the SA of the SIR of the JMLP. The remainder of this report is structured into the following chapters:

Chapter 3 – Methodology, describes the stages of the SA process and the approach used for the specific SA tasks, including how reasonable alternatives have been identified and appraised.

Chapter 4, 5 and 6 – Sustainability Context for Minerals Development in West Sussex, summarise the SIR of the JMLP's relationship with other relevant plans, policy and strategies, summarise the social, economic and environmental characteristics of West Sussex, and identify the key sustainability issues relating to mineral development within West Sussex.

Chapter 4 – Sustainability Appraisal Framework and Assumptions, describes the SA Framework and the assumptions used for assessing the potential sustainability effects of the SIR of the JMLP.

Chapter 5 – Sustainability Appraisal- Options, sets out the SA of the issues and options for the SIR in the context of the JMLP, i.e. the Councils' first draft of the Issues and Options consultation document.

Chapter 6 – Sustainability Appraisal– Sites, sets out the SA of the long list of sites for the SIR in the context of the JMLP, i.e. the Authorities' first draft of the Issues and Options consultation document.

Chapter 7 - Sustainability Appraisal Findings sets out the main findings from the SA of the Issues and Options consultation. It draws conclusions from the findings of the appraisals.

Chapter 8 – Monitoring, sets out how the monitoring of the SIR will be taken forward and Next Steps, sets out how the SIR and SA will progress.

2.3 The main body of the report is supported by a number of appendices:

Appendix 1 sets out the review of relevant plans, policies and programmes (this was originally presented in the SA Scoping Report and has been updated to reflect the consultation comments received).

Appendix 2 presents the assessment of the Options put forward for consultation as Issue 2 as part of the Issues and Options document.

Appendix 3 sets out the assumptions used in appraisal of the options and sites

2.2 Methodology

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

Table 2.1 Corresponding stages in plan making and SA

Local Plan Step 1: Evidence Gathering and engagement
SA stages and tasks

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

2.2.2. The following sections describe the approach that has been taken to the SA of the JMLP to date and provide information on the subsequent stages of the process.

- 2.2.3. The SA process for the JMLP began in 2014 with the production of a Scoping Report for which was prepared by LUC on behalf of WSCC and SDNPA.
- 2.2.4. The Scoping stage of SA involves collating information about the social, economic and environmental baseline for the plan area and the key sustainability issues facing it, as well as information about the policy context for the preparation of the plan. The SA Scoping Report presented the outputs of the following tasks.
- 2.2.5. Policies, plans and programmes of relevance to the JMLP were identified and the relationships between them were considered, enabling any potential synergies to be exploited and any potential inconsistencies and incompatibilities to be identified and addressed.
- 2.2.6. In line with the requirements of the SEA Regulations, baseline information was collected on the following 'SEA topics': biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage and the landscape. Data on social and economic issues were also taken in to consideration. This baseline information provides the basis for predicting and monitoring the likely effects of the JMLP and helps to identify alternative ways of dealing with any adverse effects identified. As with the review of plans, policies and programmes, baseline information that was collated in relation to the SA of the West Sussex Waste Local Plan was drawn upon. The baseline information for the SA of the Waste Local Plan was last updated in March 2013, therefore, where relevant, it was updated and revised further to provide an appropriate focus in relation to the JMLP.
- 2.2.7. Drawing on the review of relevant plans, policies and programmes and the baseline information, key sustainability issues for West Sussex were identified (including environmental problems, as required by the SEA Regulations). Consideration was given to the likely evolution of each issue, if the Local Plan were not to be implemented.
- 2.2.8. A Sustainability Appraisal 'framework' was then presented, setting out the SA objectives against which options and subsequently policies, and sites in the JMLP would be appraised. The SA framework provides a way in which the sustainability impacts of implementing a plan can be described, analysed and compared. The SA framework comprises a series of sustainability objectives and subsidiary questions that can be used to 'interrogate' options and draft policies, and sites during the plan-making process. These SA objectives define the long-term aspirations of WSCC and SDNPA with regard to social, economic and environmental issues in relation to minerals development in the plan area. During the SA, the performance of the policy and site options (and subsequently draft policies and site allocations) is assessed against these SA objectives and sub-questions.
- 2.2.9. The review of relevant plans, policies and programmes and the baseline information will be updated as necessary during each stage of the SA process to ensure that they reflect the current situation in West Sussex and continue to provide an accurate basis for assessing the likely effects of the JMLP. As such, Chapter 3 and Appendices 2 and 3 include updated versions of the review of relevant plans, policies and programmes and baseline information.
- 2.2.10. Public and stakeholder participation is an important element of the SA and wider plan-making processes. It helps to ensure that the SA report is robust and has due regard for all appropriate information that will support the plan in making a contribution to sustainable development. The SA Scoping Report for the JMLP was published in June 2014 for a five week consultation period with the statutory consultees (Natural England, the Environment Agency and Historic England). The comments received during the consultation were then reviewed and addressed as appropriate and a

final version of the Scoping Report was published in January 2015. A further consultation on the SA Scoping Report was undertaken in September 2018 in preparation for the SIR I&O Consultation in January 2019.

Stage B: Developing and Refining Options and Assessing Effects

- 2.2.11. Developing options for a plan is an iterative process undertaken by the local planning authority usually involving a number of consultations with public and stakeholders. Consultation responses and the SA can help to identify where there may be other ‘reasonable alternatives’ to the options being considered for a plan, for example, additional sites that may be suitable for development. The SA can also help decision makers by identifying the potential positive and negative sustainability effects of each option.
- 2.2.12. Regulation 12 (2) of the SEA Regulations requires that:
- “The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of —
- implementing the plan or programme; and
- reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme”
- 2.2.13. It should be noted that any alternatives considered to the plan need to be “reasonable”. This implies that alternatives that are “not reasonable” do not need to be subject to appraisal. Examples include alternatives that do not meet the objectives of the plan or national policy, for example the NPPF, or are not within the geographical scope of the plan.
- 2.2.14. It also needs to be recognised that the SEA and SA findings are not the only factors taken into account when determining a preferred option to take forward in a plan. There will often be an equal number of positive or negative effects identified for each option, such that it is not possible to ‘rank’ them based on sustainability performance in order to select a preferred option. Factors such as public opinion, deliverability, conformity with national policy will also be taken into account by plan-makers when selecting preferred options for their plan.

Alternatives considered in the preparation of the JMLP to date

Draft JMLP (April 2016)

The options or reasonable alternatives that have been considered during development of the Draft JMLP April 2016 comprised the following:

Proposed Vision and Strategic Objectives.

Policy Options (covering Minerals Supply, Minerals Resource Safeguarding and Minerals Infrastructure Safeguarding).

Potential Minerals Site Options.

- 2.2.15. WSCC and SDNPA have prepared a Background Document which describes in detail how the options were identified and their evolution into policies within the JMLP. Table A4.1 in Appendix 4 of the SA for the JMLP summarises the audit trail of the reasonable alternatives considered by WSCC and the SDNPA for each policy area in the MLP at each stage in its development, and explains which alternatives were taken forward into the final JMLP or discounted.
- 2.2.16. The reasonable site options were presented in Appendix 7 (which also includes the appraisal findings for all of the site options). The Minerals Sites Selection Report prepared by WSCC and SDNPA explains how the site options were identified, and the assessment undertaken by the authorities to help determine which sites to allocate within the JMLP. Twenty-five sites were initially identified, and these sites were reduced from 25 to 16 due to some further landscape assessment carried out by the SDNPA prior to the technical assessment stage (that included this SA), and due to deliverability issues which were identified following further discussions with landowners and operators. Therefore, only 16 of the site options were considered as reasonable alternatives and subject to SA along with other technical assessments: Habitats Regulations Assessment, Transport Assessment, Flood Risk Assessment and Landscape Assessment. All of these technical assessments have been referred to in the previous SA, as well as the authorities' own assessment, as described in Chapter 4.
- 2.2.17. The draft policy and site options were provided to the SA team in advance of the complete Draft JMLP. The potential site options were provided to LUC for appraisal in July 2015, with the draft policy options provided later in October 2015. The SA team sent draft SA matrices and summaries of findings to WSCC and SDNPA regarding the site options at the end of July 2015, and draft SA matrices and summaries of findings for the policy options in mid-November 2015. WSCC and SDNPA made some revisions in the final version of the Draft JMLP based on some of the SA recommendations (as explained in Chapter 5). In this way, the SA process was able to inform and influence the Councils' decisions regarding the proposed site allocations and draft policies to be included in the final Draft JMLP. The final version of the policy option appraisal matrices are presented in Appendices 5 and 6, and for the site options in Appendix 7. The findings of the options appraisal stage are presented in Chapter 5.
- 2.2.18. The SA findings for the final versions of the draft policies (including the two selected site allocations in the Draft JMLP) were presented in Appendices 8 and 9 of the April 2016 SA Report, and summarised in Chapter 6.
- 2.2.19. Consultation responses received on the SA Report for the Draft JMLP (April 2016) have been considered and addressed where relevant within the JMLP SA Report, as summarised in Table A1.2 in Appendix 1.

Proposed Submission Draft JMLP (January 2017)

- 2.2.20. As a result of consultation responses received, the Authorities made a number of amendments to the Vision, Strategic Objectives and Policies following the consultation on the Regulation 18 Draft JMLP in April-June 2016. In addition the boundary of one of the site allocations, Ham Farm, was reduced. The changes to the Vision, Strategic Objectives and Policies that have been made in the Proposed Submission Draft JMLP and the reasons for the changes are shown in Table A4.2 in Appendix 4.
- 2.2.21. Most of the changes to the Proposed Submission Draft JMLP were minor clarifications to wording, and did not result in any revisions to the SA findings already identified at the Draft JMLP stage. However, the justification text for the appraisal of policies in Appendices 8 and 9 has been updated where relevant to reflect the current wording of the policies. In addition, the SA findings

for the Ham Farm site allocation in Appendix 7 have been updated as required to reflect the revised boundary of Ham Farm.

Stage C: Preparing the Sustainability Appraisal report

2.2.22. The JMLP SA Report describes the process undertaken to date in carrying out the SA of the JMLP. It sets out the findings of the appraisal, highlighting any likely significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects), making recommendations for improvements and clarifications that may help to mitigate negative effects and maximise the benefits of the plan, and outlining proposed monitoring measures.

2.2.23. Each policy option and site was assessed against each SA objective, and a judgement was made with regards to the likely effect that they would have on that objective. These judgements were recorded as a colour coded symbol, as shown below in Figure 2.1. (This is the same colour coding and symbol table carried forward to the SIR SA).

Figure 2.1 Key to symbols and colour coding used in the SA of the JMLP (and SIR)

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

Stage D: Consultation on the Proposed Submission Draft JMLP (January 2017) and this SA Report

2.2.24 WSCC and SDNPA consulted on the SA and JMLP between January and March 2017.

Stage E: Monitoring Implementation of the Plan

- 2.2.25. Stage E will follow adoption of the SIR. However, the SEA Regulations and the Government's SA Guidance require that the Sustainability Report includes a description of measures envisaged concerning monitoring. This is discussed in Chapter 7 of the JMLP SA and will be expanded at subsequent stages in the SA process, as the monitoring framework for the JMLP is established, and the likely significant effects of the SIR are identified.

3 Summary of review of Plans, Policies and Programmes

3.1 Review of Plans, Policies and Programmes

- 3.1.1 This section addresses the SEA Directive requirements in Annex I:
1. an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes; and
 2. (e) the environmental protection objectives, established at international, Community or Member State level which are relevant to the plan or programme and the way those objectives and any environmental considerations have been take account during its preparation.

Outline of the SIR Issues and Options document (Regulation 18)

- 3.1.2 This document sets out the three main issues for the SIR and proposes a set of spatial options to meet the need and supply for soft sand, as well as considering a long list of sites.

- 3.1.3 The option within the I&O document includes:

Strategy and Policy Context – describes the European and National policy, legislation and guidance as well as considering local strategies and plans which inform the Plan.

List for Site Allocations – includes a list of sites that may be considered for allocation. However, site allocation does not necessarily mean that the site will be developed – a planning application will determine this.

Relationship between JMLP and other relevant plans and programmes, including their environmental protection objectives

- 3.1.4 The JMLP and SIR are not prepared in isolation, being greatly influenced by other plans, policies and programmes and by broader sustainability objectives. It needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and plans, such as the National Park Management Plan and emerging Local Plan and those relating to social policy, culture and heritage. It must also conform to environmental protection legislation and the sustainability objectives established at an international, national and regional level.
- 3.1.5 A review has been undertaken of the other plans, policies and programmes that are relevant to the JMLP. The purpose of the review of other plans and strategies is to understand how they will influence the preparation of the JMLP and the SA. Table 3.1 below lists relevant plans, programmes and strategies. The list is not and cannot be exhaustive. The review has only sought to identify key documents which reflect local, national and international social, economic and environmental issues. In line with the SEA Directive requirements, Appendix I identifies the relationship that the plans and policies have with the development of the JMLP, and also shows how the environmental, social and economic objectives contained within those plans and policies have been taken into account during preparation of the JMLP and also the SA.
- 3.1.6 The most significant developments in terms of the policy context for the SIR are the adoption of the JMLP in 2018 which will provide a set of up to date development management policies for minerals development, the forthcoming adoption of the South Downs Local Plan and the 2018 update to the NPPF.
- 3.1.7 The JMLP and SIR must be consistent with the requirements of the NPPF, which sets out information about the purposes of local plan-making. It states that:

“11. Plans and decisions should apply a presumption in favour of sustainable development.

For **plan-making** this means that:

- a) plans should positively seek opportunities to meet the development needs of their area, and be sufficiently flexible to adapt to rapid change;
- b) strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas⁵, unless:
 - i. the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area⁶; or
 - ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole”.

3.1.8 However, with respect to the SDNP, the NPPF acknowledges that specific policies in the Framework, including National Park designation, may indicate development should be restricted. Mineral extraction is considered to be ‘major development’ as defined in the Glossary of the NPPF and the Town and County Planning (Development Management Procedure) (England) Order 2015. Paragraph 172 of the NPPF states that planning permission should be refused for major development in national parks other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Footnote 55 of the NPPF says that the question of whether a development proposal is ‘major’ in a national park is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

3.1.9 While the NPPF 2012 replaced a number of former Minerals Policy Statements, the principles for minerals planning were retained and included in the NPPF 2018, most notably:

3. The maintenance of landbanks for crushed rock and sand and gravel.
4. Designation of Mineral Safeguarding Areas.
5. Safeguarding existing, planned and potential rail heads, rail links to quarries, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways or minerals.
6. Providing for restoration and aftercare at the earliest opportunity and to high environmental standards.
7. Setting out environmental criteria against which planning applications will be assessed.

3.1.10 A full list of the Plans, Policies and Programmes is contained in Appendix I.

3.2 Baseline Information

3.2.1 This section addresses the SEA Directive requirements in Annex I:

- the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme; and the environmental characteristics of areas likely to be significantly affected.
- 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’].

3.2.3 Baseline information provides the context for assessing the sustainability of proposals in the JMLP and it provides the basis for identifying trends, predicting the likely effects of the plan and monitoring its outcomes. The requirements for baseline data vary widely, but it must be relevant to environmental, social and economic issues, be sensitive to change and should ideally relate to records which are sufficient to identify trends.

- 3.2.4 The baseline data focuses on key indicators which are readily available and can be updated to illustrate the environmental, social and economic issues. The choice of baseline data has been informed by the previous stages in the SA process. Potentially a key limitation of the SA process is gaps in baseline data. Appendix 3 of the overarching report SA report for the JMLP provides an extensive discussion on the relevant baseline information for West Sussex and in particular the role of minerals development.
- 3.2.5 Annex I(f) of the SEA Directive requires data to be gathered on biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors (these are often referred to as ‘SEA Topics’). As an integrated SA and SEA is being carried out, baseline information relating to other ‘sustainability’ topics has also been included; for example information about housing, social inclusiveness, transport, energy, minerals and economic growth.

3.3 Key Sustainability Issues

- 3.3.1 Identification of the key sustainability issues, and consideration of how these issues might develop over time if the JMLP is not prepared, help to meet the requirements of Annex I of the SEA Directive 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; and
 - Any existing environmental problems which are relevant to the plan.
- 3.3.2 An up-to-date set of key sustainability issues facing West Sussex was identified during the Scoping stage of the SA and was presented in the Scoping Report. Table 3.2 describes the likely evolution of each key sustainability issue if the SIR of the JMLP were not to be adopted.

Table 3.2: Key sustainability issues for West Sussex and the likely evolution of the environment in the absence of the JMLP and its SIR

No.	Key Sustainability Issues	The likely evolution of the environment in the absence of the JMLP and SIR
1	Poor health in some areas There are some communities in West Sussex that are relatively deprived, mainly in the towns along the coastal strip and in Crawley. Deprivation has a strong direct association with poorer health as well as other aspects of life that influence wellbeing, such as employment.	In the absence of the JMLP, there may be negative impacts on human health in some areas of West Sussex as a result of less stringent mitigation or poorly planned minerals development. However, there are fewer minerals sites in and around the towns along the coastal strip, and the minerals sector also contributes to employment levels, particularly in Adur District. Therefore, in the absence of the JMLP, employment in the minerals sector may decrease and have indirect effects on health and well-being due to unemployment.

No.	Key Sustainability Issues	The likely evolution of the environment in the absence of the JMLP and SIR
2	<p>Lower employment levels</p> <p>In 2015, 82.6% of residents that were of working age were employed, with 4.3% of residents unemployed¹⁶. Unemployment rates were lower in 2015 than the average for the South East and Great Britain.</p> <p>Also, a 2011 study to inform the West Sussex Local Economic Assessment showed that employment in the mining and quarrying sector grew from 2001 to 2008 by 0.2%, but employment in the sector is projected to decrease from 2008 to 2026 by 0.1%.</p>	<p>In the absence of the JMLP, employment in the minerals sector within West Sussex may further decrease.</p>
3	<p>Difficulties in terms of protecting West Sussex's environment whilst providing minerals needed by society</p> <p>Minerals can only be worked where they are found, and due to the close correlation between the location of mineral resources and areas of high quality and designated landscapes, which are considered to be sensitive environments, the need for mineral working should be balanced against the impact on protected landscapes.</p>	<p>In the absence of the JMLP, and appropriate policies, there may be damage to valued landscapes and sensitive environments within West Sussex as a result of less stringent mitigation or poorly planned minerals development. However, there is a high level of protection afforded to internationally and nationally designated landscapes, nature conservation sites and cultural heritage sites within the NPPF.</p>
4	<p>Declines in condition status of West Sussex's biodiversity</p> <p>Overall the county has lost 28% of the semi-natural habitat that existed in 1971.</p> <p>77% of SSSI were in favourable condition in 2012 compared to 85% in 2008. Only 46.31% were in 'favourable' condition in 2014, and 51.78% were in an 'unfavourable recovering' condition¹⁷.</p>	<p>The provision of minerals for society's needs may cause adverse effects to the natural environment. However, JMLPs contain policies which aim to protect and enhance the environment. Despite the high level of protection afforded to internationally and nationally designated nature conservation sites within the NPPF, without the JMLP it is more likely that environmental designations in the County could be adversely affected by poorly planned minerals development or with less stringent mitigation measures applied. In addition to designated nature conservation sites, wider habitat networks (including BAP habitats) and land used by protected species could be adversely affected. The opportunity to protect and enhance the environment and achieve net biodiversity gains (e.g. through restoration) could be limited.</p>

No.	Key Sustainability Issues	The likely evolution of the environment in the absence of the JMLP and SIR
5	<p>Changes in landscape character and tranquillity</p> <p>There are two Areas of Outstanding Natural Beauty (AONB) in the County, South Downs National Park (SDNP) and other important Landscape Character Areas. There is the potential for minerals development to contribute to detrimental</p> <p>changes in landscape character in the County and plans should endeavour to avoid or minimise impacts as much as possible.</p> <p>The percentage of landscape classified as tranquil has reduced since 1960 when it was 69%, to 35% in 2007.</p>	<p>Despite the high level of protection afforded to nationally designated landscapes, within the NPPF, in the absence of the JMLP and appropriate policies there may be inappropriate mineral development within valued landscapes within West Sussex or adverse effects to them as a result of less stringent mitigation or poorly planned minerals development.</p>
6	<p>Potential for damage to the historic environment</p> <p>In West Sussex there are 235 Conservation Areas, 7,532 Listed Buildings (including 176 Grade I, and 300 Grade II* listed buildings), 34 Registered Park and Gardens, and 346 Scheduled Monuments.</p>	<p>Despite the high level of protection afforded to nationally designated cultural heritage sites within the NPPF, in the absence of the JMLP and appropriate policies there may be adverse effects to West Sussex's cultural heritage (including architecture and archaeology) as a result of less stringent mitigation or poorly planned minerals development.</p>
7	<p>Climate change: warmer, wetter winters; drier summers, increase in flash flooding.</p> <p>134 extreme weather events between 1998 and 2008 in West Sussex.</p> <p>In the south east, it is estimated that in 205018, the winter mean temperature will rise by 2.5°C and the summer mean</p>	<p>Despite policies in the NPPF, in the absence of the JMLP and specific policies aimed at combating climate change and reducing the impacts, it is likely that contributions to climate change from minerals development in West Sussex will not be appropriately controlled and mitigated.</p>
8	<p>Increases in greenhouse gas emissions</p> <p>UK Greenhouse gas emissions: 22.9 million tonnes (mt) from HGVs (2012 data).</p>	<p>Despite policies in the NPPF, in the absence of the JMLP and specific policies aimed at combating greenhouse gas emissions and therefore climate change and reducing the impacts, it is likely that greenhouse gas emissions from minerals development in West Sussex will not be appropriately controlled and mitigated.</p>

No.	Key Sustainability Issues	The likely evolution of the environment in the absence of the JMLP and SIR
9	<p>Potential for flooding</p> <p>Certain areas in West Sussex are becoming more vulnerable and prone to coastal, fluvial, groundwater and surface water flooding.</p> <p>Currently 12.6% of West Sussex is within a flood plain.</p>	<p>In the absence of the JMLP the potential for flooding is unlikely to be affected due to national policy included in the NPPF.</p> <p>Although, in the absence of the JMLP there is unlikely to be the opportunity to increase flood storage capacity, as some mineral developments (e.g. sand and gravel sites) are compatible with all flood risk zones and therefore once restored can be used as a means of flood storage.</p>
10	<p>Water Quality</p> <p>The water quality within the County is not yet meeting 'good' ecological status in regards to the EU Water Framework Directive. Only 19% of water bodies within the County have good ecological status.</p> <p>In West Sussex there are 30 groundwater bodies and 33% are classified as good overall. The chalk resource in particular acts as an important aquifer in the South East and provides the principle source of water supply in West Sussex.</p>	<p>In the absence of the JMLP and policies aimed at the protection of the water environment, water bodies and hydrological regimes in West Sussex are more likely to be adversely affected as a result of less stringent mitigation or poorly planned minerals development.</p>
11	<p>Air Quality</p> <p>The number of Air Quality Management Areas has increased from 5 in 2008 to 10 in July 2015.</p>	<p>In the absence of the JMLP and policies aimed at reducing emissions from transport of minerals, air quality in West Sussex is more likely to be adversely affected as a result of less stringent mitigation or poorly planned minerals development.</p>
12	<p>Traffic Growth</p> <p>Current forecasts estimate that the amount of traffic on the roads within West Sussex will increase during 2011-2026.</p> <p>Traffic growth will continue to affect the transport network and has exceeded planned capacity in some places²⁰.</p> <p>Increased traffic could have a detrimental effect on quality of life within the County.</p>	<p>In the absence of the JMLP and policies aimed at reducing emissions from transport of minerals, traffic growth in West Sussex may continue in certain areas and along particular routes. However, other non-minerals related road traffic is likely to contribute more to overall traffic growth in the County.</p>

4 SA Framework

5.1 This section helps to address the SEA Directive requirements in Annex I:

(e) The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.

5.2 Development of an SA Framework is not a requirement of the SEA Directive. However, it provides a recognised way in which the likely sustainability effects of a plan can be predicted, described, analysed and compared in a consistent way. Once SA Objectives are developed they provide the basis for testing options and policy formulation of relevant aspects of the JMLP. The objectives derived from this process are the basis for identifying appropriate indicators and targets against which the success of adopted strategies and policies may be judged.

5.3 The SA Framework contains a number of objectives and was developed by LUC, SDNPA and WSCC’s Minerals and Waste Planning Policy officers for the SA of the JMLP. The objectives have been informed by the objectives previously identified in the March 2013 SA Report for the West Sussex Waste Local Plan, reviewed to be relevant to the Minerals Local Plan, reflect the review of relevant plans and programmes (as set out in Appendix I) and baseline situation/key issues described in Chapter 5 of this report and Appendix 3 of the SA Report of the JMLP. The SA objectives developed for the SDNP Local Plan have also been taken into consideration.

5.4 The policies and sites allocations included in issues and Options document for the SIR (2019) have been appraised against the SA Objectives, which are included in Table 5.1 below. Each SA Objective has a number of subsidiary questions, which help to provide decision-making criteria to use during the identification of potential effects from the JMLP

Table 5.1: Sustainability Appraisal Framework for the JMLP and SIR

Sustainability Appraisal Objectives and Subsidiary questions
<p>Social</p> <p>To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.</p> <p>Would the option/policy/site:</p> <p>Have harmful effects on human health and be sited close to sensitive receptor(s)?</p> <p>Affect amenity through dust and noise (e.g. through blasting/traffic) or vibration?</p> <p>Affect road safety?</p> <p>Have the potential to create land use conflict issues?</p>
<p>2. To protect and, where possible, enhance recreation opportunities for all, including access to and enjoyment of the countryside, open spaces and Public Rights of Way (PROW).</p> <p>Would the option/policy/site:</p> <p>Be likely to affect the amenity of users on PROW, recreation areas/open spaces or other users of the countryside in the area, or affect views and/or tranquillity of these areas?</p>

Provide restoration opportunities for recreation?

Economic

To protect, sustain, and where possible, enhance the vitality and viability of the local economy.

Would the option/policy/site:

Help the local economy, for example by generating new jobs, and how might implementing the policy impact on local businesses?

Encourage the provision of more locally based skills and facilities?

Affect tourists' decisions to visit an area?

~~Compromise safe operating of commercial aerodromes (i.e. be near to an airfield and through~~
To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.

Would the option/policy/site:

Reduce the extraction of virgin materials?

Avoid sterilising mineral resources by preventing unnecessary development on or near to mineral resources?

Environmental

To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.

Would the option/policy/site:

Help enable the protection of landscape (particularly AONBs and SDNP) and townscape character?

Contribute to the restoration of minerals sites, maximising after-use potential for beneficial use (e.g. agriculture, nature conservation, recreation, amenity, water storage, flood management) as appropriate?

Facilitate the supply and use of local building materials to protect local character?

Affect dark skies from light pollution?

6. To protect, conserve and enhance biodiversity including natural habitats and protected species.

Would the option/policy/site:

Have an adverse effect on biodiversity, including the protection of designated sites (e.g. Special Protection Areas, Special Areas of Conservation, Ramsars, Sites of Special Scientific Interest, National Nature Reserves and Ancient Woodland)?

Have an adverse effect on locally designated sites which form part of a network of ecosystems?

Have an adverse effect on wider habitat networks (including BAP habitats) and land used by protected species?

Provide opportunities for enhancing biodiversity and achieving net gains as part of the development or restoration?

To protect and conserve geodiversity.

Would the option/policy/site:

8. To conserve, and where possible, enhance the historic environment.

Would the option/policy/site:

To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.

Would the option/policy/site:

Minimise the loss of the best and most versatile agricultural land?

To reduce air pollution and to protect and, where possible, enhance air quality.

Would the option/policy/site:

Lead to a change in local air quality?

Cause further deterioration of air quality in Air Quality Management Areas?

To protect and, where possible, enhance water resources, water quality and the function of the water environment.

Would the option/policy/site:

Affect the quality of surface and/or groundwater bodies?

To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.

Would the option/policy/site:

Affect the likelihood of flooding or lead to inappropriate development in a flood risk zone (e.g. Flood Zones 2 or 3) contrary to national policy on flooding?

<p>Impact on flood defences?</p> <ul style="list-style-type: none"> o Provide opportunities for flood alleviation/mitigation?
<p>To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the Lorry Route Network.</p> <p>Would the option/policy/site:</p> <p>Have the potential for rail or water-based access to and from mineral sites?</p> <p>Lead to the production of traffic-derived pollutants, including CO₂, NO₂ and PM₁₀ due to road transport to and from mineral sites?</p> <p>To reduce the emissions of greenhouse gases.</p>
<p>Would the policy/option/site:</p> <p>Lead to the production of carbon dioxide or other greenhouse gases from on-site vehicles and machinery?</p> <p>Reductions in transport distances by supporting the location of mineral extraction sites in proximity to surrounding markets for minerals and to serve local needs?</p>

In addition to showing how the proposed SA Objectives address the required SEA Directive Topics, Table 5.2 also identifies which of the four main ecosystem services groups are relevant to each SA objective, and therefore shows how benefits for or impacts on the relevant ecosystems services are considered as part of the SA at the same time as predicting the sustainability effects of the JMLP

Table 5.2: SEA Directive Topics and Ecosystem Services Categories supported by the SA Objectives

Proposed SA Objective for JMLP	SEA Directive Topic addressed by SA Objective	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?
1. To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.	Population Human Health	N/A. Protection of health and well-being would be supported by all four of the categories of ecosystem services, but is unlikely to have a particular impact or benefit on the ecosystem services.
2. To protect and, where possible, enhance recreation opportunities for all, including access to and enjoyment of the countryside, open spaces and Public Rights of Way (PROW).	Population Human Health Material Assets	Protection of recreational assets would benefit the Cultural ecosystem services.

3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.	Population Material Assets	N/A. Protection of the local economy would be supported in particular by Provisioning ecosystem services, but is unlikely to have a particular impact or benefit on the ecosystem service.
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and	Material Assets	Conserving minerals from inappropriate development to ensure sufficient minerals supply could have a negative impact on the Supporting
5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West	Landscape	Protection of landscape character would benefit the Cultural ecosystem services.
6. To protect, conserve and enhance biodiversity including natural habitats and protected species.	Biodiversity Flora Fauna	Protection of biodiversity would benefit the Provisioning, Regulating and Cultural ecosystem services.
7. To protect and conserve geodiversity.	Population Soil Material Assets	Protection of geodiversity would benefit the Cultural ecosystem services.
8. To conserve, and where possible, enhance the historic environment.	Cultural Heritage Material Assets	Protection of the historic environment would benefit the Cultural ecosystem services.
9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.	Soil	Protection of soil quality would benefit the Regulating ecosystem services.
10. To reduce air pollution and to protect and, where possible, enhance air quality.	Air	Protection of air quality would benefit the Regulating ecosystem services.
11. To protect and, where possible, enhance water resources, water quality and the function of the water	Water	Protection of water quality would benefit the Regulating ecosystem services.
12. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.	Human Health Water Material Assets	Reducing vulnerability to flooding would benefit the Regulating ecosystem services.
13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the	Population Human Health	Minimising road traffic would benefit the Regulating ecosystem services.
14. To reduce the emissions of greenhouse gases.	Climatic Factors	Reducing greenhouse gas emissions benefit the Regulating ecosystem services.

4.1 Assumptions used in applying the SA Framework

5.1.1 SA inevitably relies on an element of subjective judgement. In predicting and assessing the likely sustainability effects of the JMLP and SIR, the SA team's analysis of the characteristics of West Sussex and the sustainability issues it faces has been drawn upon as well as the professional experience of the SA team of having undertaken numerous SAs of minerals local plans and site allocations.

5.1.2 In making SA judgements for the appraisal of each issue, option and site the SA builds on the the extensive data collated and the assessments produced by WSCC and SDNPA for each site and the JMLP.

5.1.3 To support the appraisal of potential mineral site options a series of decision-making criteria for each SA headline objective was developed (this can be seen in Appendix 3) with the purpose of providing a consistent approach to the prediction and assessment of effects. The decision-making criteria relates specifically to the assessment of the potential sites being considered at this stage for allocation in the SIR, and set out assumptions and justifications for the level of significance of the potential effects that mineral sites developed at those sites may have. These assumptions were developed so that, where possible, quantitative data could be used to appraise the sites, and in particular, will provide a framework to draw on the updated technical assessments that will be carried out for the sites including the WSCC and SDNPA assessments, Habitats Regulations Assessment, Transport Assessment, Flood Risk Assessment and Landscape Assessment. For some of the assumptions in Appendix 3, evidence included in former planning policy statements and planning practice guidance has been referred to in support of some of the assumptions made, in addition to relevant sections of the Planning Policy Guidance.

5.1.4 It should be noted that distances from specific assets (e.g. biodiversity, heritage, recreational) used within relevant SA Objectives to predict the magnitude of potential effects of allocating the sites are for a guide only and do not mean that mineral sites within a certain distance would definitely have an effect in every instance. The potential effect depends significantly on the type and design of mineral sites eventually developed on the site, which will need to be assessed if prescribed within policies of the Minerals Local Plan and the relevant Local Plans at the planning application stage.

5 Assessment of Issues and Options

5.1 Issue 1: the identified need for soft sand during the period to 2033

6.1.1 Mineral planning authorities (MPAs) are required to prepare a Local Aggregates Assessment (LAA) that identifies future demand for aggregates, including soft sand, based on historic sales and other relevant local information. Therefore, the LAA provides the basis for making provision for land-won aggregates through Local Plans.

6.1.2 There were no soundness or legal compliance issues raised through the examination of the JMLP with regards to the forecast for aggregates. As the approach taken within the LAA was considered to be sound, the Authorities have prepared an updated version of the LAA to continue to monitor the situation with regards to aggregate supply and the performance of the JMLP, and to provide information about the amount of soft sand that is required to 2033.

6.1.3 The LAA sets out the demand for soft sand to 2033, taking account of the previous 10 years sales (2008–2017), and the following assumptions;

- Assumption 1: the construction of new residential dwellings in West Sussex is projected to grow by 26.8%
- Assumption 2: Up to 91% of sand and gravel may be used in the construction of residential dwellings

6.1.4 Policy M2 of the JMLP identifies a shortfall of soft sand of 2.36 million tonnes (mt) at the time of the examination hearings. The level of need has been reassessed by the Authorities as the first part of this Review and, as set out in page 10 of the Issues and Options consultation document

6.1.5 Using the 10 year sales average and a combination of the assumptions above, it is calculated that there is a shortfall of between 1.66 and 2.83 million tonnes (mt) to 2033. When preparing the JMLP, the Authorities approach was to plan for the highest demand scenario, to ensure that sufficient provision is made for a steady and adequate supply of soft sand.

SA Summary:

6.1.6 The issue of supply has not changed substantially from that set out in the JMLP (2018) and therefore the SA has been carried forward from the JMLP. The assessment of Issue 1 is set out in Appendix 3 of the Main SA Report.

5.2 Issue 2: the supply strategy, that is, the options that can, either singularly or in combination, be used to meet any identified shortfall

6.2.1 The only source of land-won soft sand within West Sussex is within the Folkstone Formation, which is largely contained within the South Downs National Park. Paragraph 172 of the NPPF states “that great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks ... which have the highest status of protection in relation to these issues”.

- 6.2.2 The statutory purposes and duty for national parks are set out in the National Park and Access to the Countryside Act 1949 as amended by the Environment Act 1995.
- 6.2.3 The National Park purposes are:
1. To conserve and enhance the natural beauty, wildlife and cultural heritage of the area
 2. To promote opportunities for the understanding and enjoyment of the special qualities of the National Park by the public
- 6.2.4 The National Park Authority also has a duty when carrying out the purposes, to seek to foster the economic and social well-being of the local communities within the National Park.
- 6.2.5 In addition, Section 62 of the Environment Act 1995 requires all relevant authorities, including statutory undertakers and other public bodies, to have regard to these purposes; this includes West Sussex County Council. For the SIR, this means that assessment of the potential sites outside of the SDNP boundary will also be considered for their potential impact on the National Park.
- 6.2.6 Mineral extraction is considered to be ‘major development’ as defined in the Glossary of the NPPF and the Town and County Planning (Development Management Procedure) (England) Order 2015. Paragraph 172 of the NPPF states that planning permission should be refused for major development in national parks other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Footnote 55 of the NPPF says that the question of whether a development proposal is ‘major’ in a national park is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.
- 6.2.7 Paragraph 172 of the NPPF relates primarily to the determination of planning applications. However, to ensure that all local plan allocations are deliverable, it is also necessary to consider the issue of major development at the plan making stage. All potential allocations for soft sand in the National Park will need to address paragraph 172 of the NPPF and draft policy SD3 of the emerging South Downs Local Plan.
- 6.2.8 With regard to plan-making, paragraph 207 of the NPPF requires that MPAs make provision for land-won aggregates in “the form of specific sites, preferred areas and/or areas of search and locational criteria as appropriate”.
- 6.2.9 Against this national legislative and policy context, the Authorities have to consider all ‘reasonable alternatives’ for soft sand supply to meet the identified shortfall. ‘Reasonable alternatives’ are the available options to promote sustainable development, the likely significant effects of which are assessed through SA. The ‘reasonable alternatives’ should be identified at an early stage, in order to help develop the preferred strategy. The options below are considered to be the reasonable alternatives.

The Options

- 6.2.10 At this stage, the Authorities have identified the following options that could be used to meet the identified shortfall for soft sand:
- Option A: Supply from sites within West Sussex but outside of the National Park;
 - Option B: Supply from sites within West Sussex, including within the National Park;
 - Option C: Supply from areas outside West Sussex;
 - Option D: Supply from alternative sources including marine-dredged material; and.
 - Option E: A combination of the above options.

6.2.11 The options and summary of the SA assessment are set out in Table 6.1 below. The full assessment of Options A-D are set out in Appendix 2. Issue 3 'The identification of potential sites and, if required, the selection of one or more of those sites to meet identified need' is considered in Section 7 Assessment of Sites.

Table 6.2 below summarises the assessments of each of the spatial options.

Option	Summary of Option	Summary of SA Assessment
Option A: Supply from sites within West Sussex but outside of the National Park	There are a number of currently active soft sand sites within West Sussex that fall outside the boundary of the SDNP. The Authorities also undertook a full desk based assessment to assess whether there were any other potential sites that had not been promoted by landowners or operators when work on the JMLP was underway. In assessing Option A, the Authorities will consider the potential to identify sites outside the SDNP boundary within West Sussex the cumulative impact of any potential allocations with active sites in close proximity, and whether this option is able to meet the full supply requirement.	This option is unlikely to meet the supply requirements of the LAA. There would be a number of negative impacts including landscape and residential amenity. The location of potential sites outside of the SDNP are adjacent to the SDNP boundary as well as existing and historic mineral workings. Further assessment on the impact of this option on the SDNP is required. This option has the most cumulative impacts due to the location of current mineral workings. It should be noted that sites outside but in close proximity to, or experienced (for example, via views) from, the National Park have the potential to adversely impact on the landscape, including the setting and experiential qualities, of the National Park
Option B: Supply from sites within West Sussex, including within the National Park	This option will consider the potential of each site on the 'shortlist' (see Issue 3, below) on its merits. Landscape assessments will consider the potential impact on the special qualities of the South Downs National Park regardless of whether the site is within or outside the National Park	This option may meet the supply requirements set out in the LAA. There would be a number of negative impacts including landscape and residential amenity. The location of potential within and adjacent to the SDNP boundary means that further assessment on the impact of this option on the SDNP is required. It should be noted that sites outside but in close proximity to, or experienced (for example, via views) from, the National Park have the potential to adversely impact on the landscape, including the setting and experiential qualities, of the National Park
Option C: Supply from areas outside West Sussex	Option C considers the potential of other Plan Areas to supply the wider market in the South East to compensate for any shortfall in supply from West Sussex, due to the constrained nature of the resource. Outside of this Plan Area, there are a number of counties that already supply soft sand to the wider market from the Folkestone Formation, as well as the Corallian Group (in Oxfordshire), and the 'Reading Beds'.	Seeking supply solely from areas outside of West Sussex increases uncertainty of the potential impacts and reduces control on impacts such as air quality. The nature of the minerals market means that soft sand will currently be transported through the Plan Area so some impacts may be neutral, depending on the origin of the material.
Option D: Supply from alternative sources	This option seeks to meet supply from alternative materials to land-won resources within the Plan Area. There are currently no known viable	The SA considers that Option D is the most uncertain, particularly in the early stages of the Plan. It is unclear

Option	Summary of Option	Summary of SA Assessment
including marine dredged material	equivalents to land-won building sand in the South East. Marine dredged material is increasingly supplied to the market but is not known to be directly substitutable for land won resource at this time. There is evidence that some marine dredged material is being landed at wharves in West Sussex and sold as soft sand, but it is not known if this material is being blended with other, land-won sand, or is a direct substitute. The SIR will consider this Option in the context that this type of material may become more accessible and available over time, and an economically viable alternative to land-won soft sand extraction. However, this would be entirely dependent on the industry and market.	at present what amount of alternative material could be provided and where it would be sourced from. Although there could be less direct impacts on the landscape and biodiversity within West Sussex including the South Downs National Park, it is difficult to quantify likely that the transport impacts and also therefore impacts on climate change. It is unlikely that this option on its own could meet the supply required for the Plan period.
Option E: Combination of options A-D	Option E will be worked through as part of the next stage of development of the SIR. It will be difficult for any single option to meet the supply requirements set out in the most recently adopted LAA. Unless the Authorities decide not to meet the supply requirements, a combination of the options may be the most sustainable way to meet the requirements of national policy. The combination of options will be assessed at the next stage of the SA.	

6 Assessment of Sites

- 7.1.1 Issue 3 concerns the identification of sites to meet the supply identified in Issue 1 and the strategy identified in Issue 2. As two of the supply options relate to the allocation of sites within the Plan Area, the Authorities have undertaken work to identify potential sites to meet identified supply requirements to 2033.
- 7.1.2 In total, 21 possible sites for extraction were identified at ‘Stage 1’ of the Site Selection Report. The sites on this ‘long list’ have all been considered in the past, with the exception of one new site that was promoted via a ‘Call for Sites’ process that took place during August–September 2018. The sites on the long list were reviewed and 12 of them were considered to be unsuitable for further consideration (see Appendix 3 of the 4SR).
- 7.1.3 The remaining nine sites have been shortlisted and have been subject of a ‘Stage 2’ assessment, taking account of all previous evidence and any new evidence that has been submitted as part of the ‘Call for Sites’. Table 7.1 identifies the nine potential sites, including specific information about their location, size, yield and nature and whether they are new sites or extensions to existing sites.

Table 7.1 Summary of Sites

Site Name	Parish	Site (Ha)	Yield (tonnes)	In SDNP?	Extension to existing site?
Bunton Manor Farm (new site)	Washington	23	1,000,000	No	No
Chantry Lane (Extension)	Storrington and Sullington	2.5	1,000,000	Yes	Yes
Coopers Moor (Extension)	Duncton	6	500,000	Yes	Yes
Duncton Common (Extension)	Duncton and Petworth	28	1,800,000	Yes	Yes
East of West Heath Common (Extension)	Harting and Rogate	16	1,000,000	Yes	Yes
Ham Farm (new site)	Steyning and Wiston	8.2	725,000	No	No
Minsted West (Extension)	Stedham with iping	10	2,000,000	Yes	Yes

Severals East (new site)	Wiston	20	1,000,000	Yes	No
Severals West (new site)	Wiston	50	1-3 million	Yes	No

Table 7.2 summarises the SA assessment for each site. Further information on each site can be found in the Soft Sand Site Selection Report 2019.

Table 7.2 Summary of SA of Sites

SA Objective	Bunton Manor Farm	Chantr y Lane	Coopers Moor	Duncton Common	East of West Heath	Ham Farm	Minsted West	Severals East	Severals West
1. To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.	0/-?	0/-?	0/-?	0/-?	0/-?	0/-?	0/-?	0/-?	0/-?
2. To protect and, where possible, enhance recreation opportunities for all, including access to the countryside, open spaces and Public Rights of Way (PROW).	-	0	0	-	+?	-?	-	+++?	+++?
3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.	+	+	+	+	+	+	+	+	+
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.	+	+	+	+	+	+	+	+	+
5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.	--	--	--	--	-	--	--	--	--
6. To protect, conserve and enhance biodiversity including natural habitats and protected species.	-?	0	-?	--?	-?	-?	--?	--?	--?

7. To protect and conserve geodiversity.	0	-?	0	0	0	0	-?	0	0
8. To conserve, and where possible, enhance the historic environment.	-?	-?	--?	--?	-?	-?	--?	-?	-?
9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.	-	0	0	0	0	--	-	0	0
10. To reduce air pollution and to protect and, where possible, enhance air quality.	-?	-?	-?	-?	-?	-?	-?	-?	-?
11. To protect and, where possible, enhance water resources, water quality and the function of the water environment.	?	?	-	--?	?	?	-	?	-
12. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.	-?	0?	-?	-?	-?	0?	-?	-?	-?
13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the Lorry Route Network.	-	--	-	-	0	-	-	--	--
14. To reduce the emissions of greenhouse gases.	-?	-?	-?	-?	-?	-?	-?	-?	-?

Table 7.3 SA Commentary for Sites

Site Name	New (N)/ Extension (E)	Site Summary	Key constraints	SA Summary
Bunton Manor Farm	N	The site is currently in agricultural use and would yield approximately 1m tonnes of soft sand. It would be worked over a period of 10-15 years. There are a number of restoration options available.	High landscape sensitivity Impact on ancient woodland and listed buildings Impact on aquifer but SFRA carried out Impact on AQMA Loss of agriculture Access Adjacent to landfill and nearby residential Cumulative impact	Bunton Manor is one of the sites likely to have the most severe cumulative impact, including transportation. It is highly visible within the landscape, although outside of the SDNP. There is potential for negative impact on PROW and soils.
Chantry Lane	E	The site would be an extension to existing workings and could yield approximately 1m tonnes of soft sand. There are a number of restoration options available that were considered in the West Sussex Landscape Capacity Study 2011.	Medium/high landscape sensitivity Adjacent to SSSI and RIGS Uncertain archaeological impacts Minimal impact on water environment AQMA Agricultural land Moderate transport impact	Chantry Lane may be slightly less sensitive in terms of landscape but there are a number of designations and known heritage assets that may be impacted on without sensitive working of the site. As an extension to an existing quarry some of the impacts may be easier to minimise.
Coopers Moor	E	Extension to Heath End sandpit which could yield 500,000 tonnes of soft sand. The site is currently woodland (birch regeneration and chestnut coppice). Restoration to wetland or woodland/agriculture.	Unacceptable landscape impact Adjacent to SNCIs and within 2km of SAC/SSS Major harm to listed buildings Potential impact on groundwater AQMA Low impact on soil and transport Residential Amenity	Although development of this site may have minimal impact on soils and transport, there would be unacceptable harm to the landscape, designated areas and heritage assets.
Duncton Common	E	The site would be an extension to Heath End quarry and is currently formed of forestry and heathland. Restoration options include a mix of dry heath and wetland habitats.	Unacceptable landscape impact Severe harm to wet heathland, SNCI, BAP and SPA/Ramsar Potential major harm to SAM	Development of this site could not avoid an unacceptable landscape impact or severe harm to designated areas, heritage assets or the water environment.

Site Name	New (N)/ Extension (E)	Site Summary	Key constraints	SA Summary
			<p>Potential impact on the water environment protection zone 2/3</p> <p>AQMA</p> <p>Residential amenity</p> <p>Cumulative impact</p>	
East of West Heath Common	E	<p>Extension to existing quarry (would be worked after existing extraction site is worked out). This site could yield 950,000 tonnes of soft sand. It is currently in agricultural use and could be restored for informal recreation uses.</p>	<p>Medium landscape sensitivity</p> <p>Nearby to a number of local and national designations</p> <p>Visual impact on SAM</p> <p>Major aquifer</p> <p>No AQMA impact</p> <p>No highway concerns</p> <p>Amenity impacts</p> <p>Cumulative impact</p>	<p>This site has a lower landscape sensitivity than some of the other sites. It would require careful consideration of the designated areas, heritage assets, water environment and cumulative impact. As an extension to an existing quarry the impacts may be easier to minimise.</p>
Ham Far m	N	<p>The site is currently in arable use with a number of isolated residential properties in the surrounding area. The site could yield approximately 725,000 tonnes of soft sand and could be restored to agricultural use.</p>	<p>Medium high landscape sensitivity</p> <p>Minor harm to ancient semi-natural woodland</p> <p>Moderate harm to listed buildings</p> <p>Compatible with the water environment</p> <p>Medium AQMA impact</p> <p>Grade 3 soils</p> <p>Minimal transport impact</p> <p>Residential amenity</p>	<p>This site has a lower landscape sensitivity than some of the other sites. It would require careful consideration of the designated areas, heritage assets, amenity and cumulative impacts. This site was considered acceptable for allocation in the Submission JMLP.</p>
Minsted West	E	<p>The site is currently in agricultural use and could yield 2 million tonnes of soft sand. Potential restoration to nature conservation and heathland.</p>	<p>Medium/High landscape sensitivity</p> <p>National designations and potential hydrogeological impacts</p> <p>Within 200m of SAM</p> <p>Proximity to listed buildings and registered parks</p> <p>Impact on Iping Common SSSI</p> <p>Chichester AQMA</p> <p>Impact on residential amenity</p>	<p>This site has a slightly lower landscape sensitivity than some of the other sites. It would require careful consideration of the designated areas, heritage assets, water environment and cumulative impact. As an extension to an existing quarry</p>

Site Name	New (N)/ Extension (E)	Site Summary	Key constraints	SA Summary
			Cumulative impact (Severals E&W)	the impacts may be easier to minimise.
Severals East	N	The site is currently used for commercial forestry and could yield 1m tonnes of soft sand. Potential for restoration includes linking with Midhurst Common/the Serpent Trail.	Medium-High landscape sensitivity Priority habitat and ancient woodland Potential minor harm to listed buildings Lidar/Moderate mitigation levels Vulnerable water impacts AQMA Moderate transport impact Sensitive amenity receptors High cumulative impact	Although development of this site may have a lower impact on soils and transport, there would potentially be unacceptable harm to the landscape, designated areas and heritage assets.
Severals West	N	The site is currently used for commercial forestry and could yield 1m tonnes of soft sand. Potential for restoration includes linking with Midhurst Common/the Serpent Trail.	Medium-High landscape sensitivity Severals Bog SINC Potential minor harm to listed buildings Vulnerable water impacts AQMA Moderate transport impact Sensitive amenity receptors High cumulative impact	Although development of this site may have a lower impact on soils and transport, there would potentially be unacceptable harm to the landscape, designated areas and heritage asset

7 Initial Findings

7.1 Options

- 7.1.1 The new policy options A and B support the maintenance of supply from permitted reserves and allow for potential new sites that may come forward, and option B considers the use of additional sites or extensions to existing sites within the South Downs National Park. Consideration of major development within the SDNP and the implications for the SIR will be assessed over the future stages of the SIR process in line with the NPPF and draft Policy SD3 of the South Downs Local Plan. At this stage, the policy options A and B are also expected to have mixed minor positive and minor negative effects on SA objectives 2 (recreation), and 4 – 8. For example, for SA objective 5 (landscape) there could be negative effects through the continued operation of existing sites in the SDNP and potential sites coming forward outside of the SDNP but there are potentially positive effects from restoration schemes and landscape or biodiversity enhancements.
- 7.1.2 As the JMLP was adopted in 2018, development management policies in the JMLP (covering public amenity and health, character, landscape, biodiversity and geodiversity) will provide mitigation which should help to avoid potential negative effects associated with any new proposals coming forward. All development proposals within the SDNP will also be assessed against the SDNP Local Plan which is due to be adopted in 2019.
- 7.1.3 Minor negative but uncertain effects are identified for SA objectives 1 (health and amenity) and 9 (soil quality) due to impacts such as dust, noise, vibration and traffic associated with new soft sand workings that may come forward, and the potential for loss of best and most versatile land. Conversely, uncertain minor positive effects might occur on SA objectives 3 (local economy) and 12 (flooding) because providing support for the maintenance of supplies from existing permitted reserves and permitting new sites that could come forward is likely to help sustain and enhance the local economy as well as opportunities for flood attenuation and improvement scheme

7.1.4 The original Policy M2 (most closely aligned with new policy options C and D) was expected to have significant negative effects for SA objectives 10 (air quality), 13 (transport) and 14 (greenhouse gases), due to the increased dependence on imports to meet requirements which cannot be met from indigenous supplies, which was thought likely to result in increases in lorry traffic transporting soft sand into West Sussex by road. However, this is uncertain as soft sand supplies could potentially be replaced by a shift in the wider market with material being supplied from sites close by or from within the West Sussex borders. Marine won sand landed in West Sussex may play a part towards the end of the Plan Period.

7.2 Site Assessments

7.2.1 Sites from the updated Soft Sand Site Selection Report 2019 were considered against the criteria for the SA of the JMLP. Due to the close alignment of the soft sand geology with the SDNP there was a high potential for negative impacts on SA Objective 5 (landscape) for sites within and outside of the SDNP. There are variable impacts on SA objectives 10 (Air quality) and 13 (transport) depending on the spatial distribution of the sites and whether new allocations would only be worked on completion of activity on existing sites. Most sites will have potentially negative or negative impacts on designated areas, heritage assets or the water environment, although mineral development is considered to be compatible with the water environment with appropriate planning.

7.2.2 Impacts on amenity will require further consideration but under normal operational circumstances impacts can be controlled through the application of planning policy and environmental regulations.

8 Monitoring

8.1 Background

- 9.1.1 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)). 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.
- 9.1.2 The NPPG relating to SA states that it is not necessary to monitor everything. Instead, monitoring should be focused 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. Because of the early stage of the SIR and the uncertainty attached to many of the potential effects identified, the SA continues to use the previous monitoring framework prepared for the JMLP. As the SIR is progressed and the likely significant effects are identified with more certainty, it may be appropriate to revise or propose additional indicators for monitoring the soft sand policies.
- 9.1.3 The main SA report for the JMLP and the adopted JMLP set out a number of suggested indicators for monitoring the potential effects of implementing the JMLP. At this stage it is not proposed to update the indicators put forward as part of the adopted JMLP. However the indicators included in the main SA Report may change at subsequent stages of the SIR preparation as the Authorities finalise the monitoring framework for the JMLP.

8.2 Next Steps

- 9.2.1 This SA Report will be available for consultation alongside the Proposed Submission Draft SIR JMLP between January and March 2019.
- 9.2.2 Comments on this SA will be used to inform the Regulation 19 Draft Soft Sand Single Issue Review document and the accompanying SA report. Following this stage any comments on the SA will be submitted to the Secretary of State along with the Proposed Submission JMLP. The SA and any comments will then be considered by an independent planning inspector who will examine the SIR and check that the SA has been undertaken in accordance with the regulations and that the SIR has taken account of the SA as appropriate. The SA Report will be updated to reflect any changes the Authorities make to the SIR or changes that are made through the examination process.

Appendix I : Review of relevant plans, policies and programmes

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
INTERNATIONAL				
EU Directives				
SEA Directive 2001 Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment	Provides for a high level of protection of the environment and contributes to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.	The Directive must be applied to plans or programmes whose formal preparation begins after 21 July 2004 and to those already in preparation by that date.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive at the national level.	Requirements of the SEA Directive must be met in Sustainability Appraisals.
The Birds Directive 2009 Directive 2009/147/EC is a codified version of Directive 79/409/EEC as amended	Requires the preservation, maintenance, and re- establishment of biotopes and habitats to include the following measures: Creation of protected areas. Upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones.	No targets or indicators.	Policies should make sure that the upkeep of recognised habitats is maintained and not damaged from development. Should also avoid pollution or deterioration	Include sustainability objectives for the protection of birds.
The Waste Framework Directive 2008 Directive 2008/98/EC on waste	Aims to reduce landfill and associated greenhouse gas emissions through increasing waste prevention and recycling rates and encouraging use of waste as a secondary resource. Applies a 5-step hierarchy of waste: prevention reuse recycling recovery	Sets targets for recycling rates; 50% recycling rates for household waste and 70% for C&D waste by 2020.	Plan should reflect the waste hierarchy. Plan should make provision for sufficient recycling facilities to ensure targets can be met and encourage the	Consider objectives to provide an adequate supply of suitable waste facilities, to reduce waste, and to reduce waste sent to landfill.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
The Water Framework Directive 2000 Directive 2000/60/EC establishing a framework for	Protection of inland surface waters, transitional waters, coastal waters and groundwaters.	No targets or indicators.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive	Include sustainability objectives to protect and minimise the impact on water quality.
The Bathing Water Quality Directive 2006 Directive 2006/7/EC on protection of public health in bathing waters	The revised Bathing Water Directive entered into force in March 2006. The overall objective of the revised Directive remains the protection of public health whilst bathing.	There is a requirement for all bathing waters to be classed as 'sufficient' by 2015.	Plan must adhere to the requirements of the Directive, as appropriate.	Sustainability objectives should reflect the Directive requirements and protect the quality of bathing waters.
The Drinking Water Directive 1998 Directive 98/83/EC on the quality of water intended for human	Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.	Member States must set values for water intended for human consumption.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive	Include sustainability objectives to protect and enhance water quality.
The Air Quality Framework Directive 2008 Directive 2008/50/EC on ambient air quality assessment and	Avoid, prevent and reduce harmful effects of ambient noise pollution on human health and the environment.	No targets or indicators.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objectives to maintain and enhance air quality.
The Habitats Directive 1992 Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	Promote the maintenance of biodiversity taking account of economic, social, cultural and regional requirements. Conservation of natural habitats and maintain landscape features of importance to wildlife and fauna.	No targets or indicators.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objectives to protect and maintain the natural environment and important landscape features.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
EU Management of Waste from Extractive Industries (2006/21/EC)	<p>The purpose of the Directive is to prevent water and soil pollution from the deposition of waste into heaps or ponds and puts emphasis on the long-term stability of waste facilities to help avoid major accidents.</p> <p>The main elements of the Directive are:</p> <p>Conditions for operating permits.</p>	No targets or indicators.	Plans should clearly recognise that some minerals development can cause pollution and harm human health where they produce dangerous substances.	Include sustainability objectives that encourage recycling and the prudent use of natural resources and the protection of the environment. Also promote a reduction in water and soil pollution.
European plans, policies and programmes				
EU Seventh Environmental Action Plan to 2020	<p>The EU's objectives in implementing the programme are:</p> <p>To protect, conserve and enhance the Union's natural capital;</p> <p>To turn the Union into a resource-efficient, green and competitive low-carbon economy;</p> <p>To safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing;</p> <p>To maximise the benefits of the Union's environment legislation;</p> <p>To improve the evidence base for environment policy;</p> <p>To secure investment for environment and climate policy and get the prices right;</p>	No targets or indicators.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objectives to protect and enhance the natural environment and promote energy efficiency.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
Closing the Loop - An EU action plan for the Circular Economy 2015 (European Commission)	This Circular Economy Package aims to maximise product lifecycles through greater recycling and re-use.	No targets or indicators.	Develop policies that support the use of recycling and re-use of materials over the use of virgin extraction.	Include sustainability objectives to conserve minerals resources.
European Landscape Convention 2000	To promote landscape protection, management and planning, and to organise European co- operation on landscape issues.	No targets or indicators.	Plan should support the protection, management and planning of landscape, recognising landscape as an essential component	Include sustainability objectives to protect, manage and plan for landscape provision.
Other international plans, policies and programmes				
IPCC's Fourth Assessment Report on Climate Change (IPCC, 2007)	To limit and/or reduce all greenhouse gas emissions which contribute to climate change.	None	Plan should support reduction in emissions of greenhouse gases.	Consider inclusion of objectives to support reduction in emissions of greenhouse gases.
Johannesburg Declaration on Sustainable Development (2002)	Commitment to building a humane, equitable and caring global society aware of the need for human dignity for all. Areas of focus include: Sustainable consumption and production patterns. Accelerate shift towards sustainable consumption and production – 10 year framework of programmes of action. Reverse trend in loss of natural Resources.	To promote greater resource efficiency and increase energy efficiency.	Develop policies that take account of the Declaration.	Include sustainability objectives to enhance the natural environment and promote renewable energy and energy/resource efficiency.
Aarhus Convention (1998)	Established a number of rights of the public with regard to the environment. Local authorities should provide for: The right of everyone to receive environmental information	No targets or indicators.	Develop policies that take account of the Convention.	Ensure that the public are involved and consulted at all relevant stages of SA production.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
	<p>environmental decision making</p> <p>The right to challenge in a court of law public decisions that have been made without respecting the two rights above or environmental law in general.</p>			
Ramsar Convention-Convention on Wetlands of International Importance (1971)	To promote the conservation and wise use of all wetlands through local, regional and national actions and international co-operation, as a contribution towards achieving sustainable development	The number of Ramsar sites being designated in the UK.	Plan should promote the conservation and make wise use of all wetland areas.	Consider inclusion of objectives which aim to promote conservation and wise use of wetland areas.
NATIONAL				
White Papers				
Natural Environment White Paper, 2011 The Natural Choice: securing the value of nature (note that there are a number of implementation updates from 2011-2014 which explain government	The White paper contains 92 commitments related to the natural environment under several themes including the following: Protecting and improving our natural environment; Growing a green economy; and Reconnecting people and nature.	No targets or indicators.	Protect the intrinsic value of nature and recognise the multiple benefits it could have for communities.	Include a sustainability objective relating to the enhancement of the natural environment.
Water White Paper, 2011 Water for Life	Objectives of the White Paper are to: Paint a clear vision of the future and create the conditions which enable the water sector and water users to prepare for it; Deliver benefits across society through an ambitious agenda for improving water quality, working with local communities to make early improvements in the health of	No targets or indicators.	Ensure that site allocations and policies will support the wise use of water, and improvement of water quality.	Include sustainability objectives that relate to water quality and quantity.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
	<p>Keep short and longer term affordability for customers at the centre of decision making in the water sector;</p> <p>Work with water companies, regulators and other stakeholders to build understanding of the impact personal choices have on the water environment, water resources and costs; and</p>			
<p>Rural White Paper 2000, Our Countryside: The Future – a fair deal for rural England</p>	<p>Facilitate the development of dynamic, competitive and sustainable economies in the countryside.</p> <p>Conserve and enhance rural landscapes. Increase opportunities for people to get enjoyment from the countryside.</p>	<p>No targets or indicators.</p>	<p>Set out clear economic visions and objectives.</p> <p>Ensure the protection of the landscape and support recreation and access to the countryside</p>	<p>Include a sustainability objective relating to strengthening the economy, and objectives relating to landscape and recreation/access to the countryside.</p>
<p>Policies and Strategies</p>				

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
<p>DCLG (2012) National Planning Policy Framework</p> <p>The NPPG Guidance published in March 2014 contains more detailed guidance on mineral planning issues and can be found at http://planningguidance.planningportal.gov.uk/blog/guidance/minerals/</p>	Presumption in favour of sustainable development.	No targets or indicators.	Development plan has a statutory status as the starting point for decision making.	Sustainability appraisal should be an integral part of the plan preparation process, and should consider all the likely significant effects on the environment, economic and social factors.
	Building a strong, competitive economy.	No targets or indicators.	Set out clear economic visions for that particular area.	Include a sustainability objective relating to strengthening the economy.
	Meeting the challenge of climate change, flooding, and coastal change.	No targets or indicators.	Use opportunities offered by new development to reduce causes/impacts of flooding.	Include a sustainability objective relating to climate change mitigation and adaptation.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
	Conserving and enhancing the natural environment.	No targets or indicators.	Recognise the wider benefits of biodiversity.	Include a sustainability objective relating to the conservation and enhancement of the natural environment.
	Conserving and enhancing the historic environment	No targets or indicators.	Sustain and enhance heritage assets and put them to viable uses consistent with their conservation.	Include a sustainability objective relating to the conservation of historic features.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
	Facilitating the use of sustainable materials.	No targets or indicators.	<p>Ensure that there a sufficient supply of material for the country's needs.</p> <p>Encourage prior extraction of minerals where practicable and environmentally feasible. Plan must not identify new site of extensions of sites for peat extraction.</p> <p>Take account of the contribution that substitute, secondary or recycled materials and minerals waste can make to the supply before considering primary extraction.</p> <p>Set out environmental criteria in line with other NPPF policies.</p>	Include a sustainability objective relating to sustainable mineral extraction.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services	The strategy aims to guide conservation efforts in England up to 2020, and move from a net biodiversity loss to gain. The strategy includes 22 priorities which include actions for the following sectors: Planning and Development; Water Management;	The strategy develops goals for 2020 and 2050, based on Aichi Targets set at the Nagoya UN Biodiversity Summit in October 2010.	Develop policies that promote conservation and enhancements of biodiversity.	Include sustainability objective that relates to biodiversity.
DEFRA (2011) Securing the Future: Delivering UK Sustainable Development Strategy	Enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life for future generations. There are 4 shared priorities: Sustainable consumption and production; Climate change and energy;	Sets out indicators to give an overview of sustainable development and priority areas in the UK. They include 20 of the UK Framework indicators and a further 48 indicators related to the priority areas.	Develop policies that meet the aims of the Sustainable Development Strategy.	Include sustainability objectives to cover the shared priorities of sustainable development.
DEFRA (2007) The Air Quality Strategy for England, Scotland, Wales and Northern	Make sure that everyone can enjoy a level of ambient air quality in public spaces, which poses no significant risk to health or quality of life.	Sets air quality standards for 13 air pollutants.	Develop policies that aim to meet the standards.	Include sustainability objectives to reduce pollution and protect and improve air quality.
DEFRA (2006) Natural Environments and Rural Communities Act – Section 41: List of Habitats and Species of Principal Importance in England 2008.	The lists have been prepared by the Secretary of State for Environment, Food and Rural Affairs as required under section 41(1) of the Natural Environment and Rural Communities (NERC) Act 2006. They identify the living organisms (species) and types of habitat which the Secretary of State considers are of principal importance for the	The extensive lists of habitats and species are available on the DEFRA website at: http://www.defra.gov.uk/wildlife-countryside/biodiversity/sect41-nerc.htm	The plan should further the conservation of the habitats and species on the list. Consider how the plan can contribute to meeting the regulations.	The SA Framework and particularly the SA Objectives and sub- objectives focusing on biodiversity should reflect the requirements of the NERC Act. Include sustainability objectives relating to protection of European sites.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
<p>The Conservation of Habitats and Species Regulations (2010) (as amended)</p>	<p>purpose of conserving biodiversity in England. In accordance with section 41(2) of the NERC Act, the Secretary of State has consulted Natural England on the species and habitats to be included on the list. Under section 41(3) of the NERC Act the Secretary of State must take steps (where they are reasonably practicable), and promote the taking of steps by others, to further the conservation of the habitats and species on the list. In light of this duty, seven sectors have been identified where actions taken by public bodies and other stakeholders could deliver significant conservation benefits for habitats and species on the list.</p> <p>The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.</p>	<p>No targets or indicators specifically, or directly relevant to minerals plans.</p>		

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
<p>English Heritage (2008): Minerals Extraction and the Historic Environment</p>	<p>The document sets out English Heritage’s position on mineral extraction and the high-level policies that will form the basis for responses and views put forward by English Heritage on any matter relating to the winning, working and safeguarding of minerals. Although it was produced before the NPPF English Heritage consider the document and a majority of the contents are still relevant. Its principal purpose is to guide the work of English Heritage, but it will also be of interest to the wider historic environment sector, government, local authorities, the minerals industry and other organisations that care for the environment. The document sets out English Heritage’s formal policy on mineral extraction, including:</p> <ul style="list-style-type: none"> Sustainability and supply Safeguarding the industry’s heritage Impacts and mitigating of current and future extraction Maintaining historic fabric and local distinctiveness 	<p>No key targets (as yet).</p>	<p>Ensure English Heritage’s formal policy on mineral extraction is taken into account in the development of the MLP.</p>	<p>Include sustainability objectives that consider the impacts upon the historic environment.</p>

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
English Heritage (2008): Mineral Extraction and Archaeology: A Practice Guide	<p>The document provides guidance specifically for dealing with archaeological remains as part of mineral development through the planning process. Although it was produced before the NPPF English Heritage consider the document and a majority of the contents are still relevant. The principal purpose of this Practice Guide is to provide clear and practical guidance on the archaeological evaluation of mineral development sites. The guide seeks to ensure that:</p> <p>The best-informed decisions are made regarding the level of archaeological knowledge needed at each stage of the planning process</p> <p>The use of the full range of up to date and</p>	No key targets (as yet).	Ensure the best practice is taken into account in the development of the LDF.	Include sustainability objectives that consider the impacts upon archaeology.
DCLG (2012): Guidance on the Managed Aggregate Supply System	<p>The Managed Aggregate Supply System has provided the mechanism to deliver long term</p> <p>planning for the supply of aggregates, based on sound evidence. It has also served to proactively manage the rate of primary extraction, by placing added emphasis on the need to meet demand from other sources – including secondary and recycled materials and marine dredged aggregates.</p>	None	<p>There is a requirement to produce a Local Aggregate Assessment. This will contribute towards figures within the MLP.</p>	<p>Include a sustainability objective that considers the impacts of the plan on the mineral resource.</p>

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Collation of the Results of the 2009 Aggregate Mineral Survey for England and Wales.	<p>The report provides comprehensive information for monitoring and facilitating aggregates provision at local, regional and national level. Aggregate Minerals (AM) surveys, based at four- yearly intervals since 1973, provide an in depth and up-to-date understanding of regional and national sales, inter-regional flows, transportation, consumption and permitted reserves of primary aggregates. The Aggregate Minerals 2009 survey report also presents data on the movement and consumption of primary aggregates by sub region. Information is also presented on the quantity of aggregate minerals granted and refused planning permission and, for the first time, planning</p>	<p>No targets, but indicates that the South East is the largest producer of sand and gravel.</p>	<p>Develop appropriate and sustainable policies in the light of the survey results.</p>	<p>Include a sustainability objective that ensures sufficient mineral provision for the County.</p>
DEFRA (2011): Marine Policy Statement	<p>The Marine Policy Statement (MPS) is the framework for preparing Marine Plans and taking decisions affecting the marine environment. It will contribute to the achievement of sustainable development in the United Kingdom marine area.</p> <p>The MPS will facilitate and support the formulation of Marine Plans, ensuring that marine resources are used in a sustainable way</p> <p>in line with the high level marine objectives and thereby:</p> <p>Promote sustainable economic development;</p>	<p>None. The MPS refers mainly to what Marine Plans will need to address, which includes the need to make provision within Marine Plans for a level of supply of marine sand and gravel that ensures that marine aggregates (along with other sources of aggregates, including recycled)</p> <p>contribute to the overarching Government objective of securing an adequate and</p>	<p>While the MLP will not contain any policies relating to where and how marine aggregates will be extracted, it will include policies relating to safeguarding infrastructure such as wharves where marine aggregates will be landed. Therefore, the MLP will need to have regard to any policies in the relevant Marine Plan making provision for</p>	<p>Include a sustainability objective that enables consideration of indirect effects on coastal hydrology and biodiversity associated with landing of marine-won aggregates.</p>

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	<p>Enable the UK's move towards a low-carbon economy, in order to mitigate the causes of climate change and ocean acidification and adapt to their effects;</p> <p>Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our heritage assets; and</p> <p>Contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues.</p> <p>The MPS states that marine plans will need to be integrated with terrestrial</p>	<p>continuing supply to the UK market for various uses.</p> <p>West Sussex falls into marine plan area 6 out of 11 Marine Plan Areas in the UK. All marine plan areas are scheduled to have a plan by 2021. However, only the Draft Vision and Objectives for the South marine plan areas (including Area 6) have to date been published (see below).</p>	<p>supply of marine aggregates, and any indirect effects that could arise from operation of wharves the receive imports of marine-won aggregates.</p>	
	<p>development plans (such as the MLP), and states that integration of marine and terrestrial planning will be achieved through:</p> <p>Consistency between marine and terrestrial policy documents and guidance. Terrestrial planning policy and development plan documents already include policies addressing coastal and estuarine planning. Marine policy guidance and plans will seek to complement rather than replace these, recognising that both systems may adapt and evolve over time;</p> <p>Liaison between respective responsible authorities for terrestrial and marine</p>			

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	<p>planning, including in plan development, implementation and review stages. This will help ensure, for example, that developments in the marine environment are supported by the appropriate</p> <p>infrastructure on land and reflected in terrestrial development plans, and vice versa; and</p> <p>Sharing the evidence base and data where relevant and appropriate so as to achieve consistency in the data used in plan making and decisions.</p>			

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<p>Marine Management Organisation (2014): Draft Vision and Objectives for the South Inshore and South Offshore Marine Plan Areas</p>	<p>The South marine plan contributes to the UKs vision for its marine area to be 'clean, healthy, safe, productive and biologically diverse oceans and seas'. This draft vision requires the South Inshore and South Offshore Marine areas to be sustainably used and continue to contribute to economic and social development by 2036.</p>	<p>In order to achieve its vision, this plan sets out 14 draft objectives which includes:</p> <p>Objective 3 - To safeguard space for the natural marine environment to enable continued provision of ecosystem goods and services, and adaption to climate change.</p> <p>Objective 4 - To support achievement of good environmental status through improving the evidence base and reducing the impacts of proposals, development and activities on mobile species.</p> <p>These objectives address issues</p>	<p>Plan should include policies that support marine mineral works that consider other marine activities and mitigate any environmental and/or ecological adverse impacts.</p>	<p>Objectives should reflect the draft vision and objectives and seek to protect the marine environment.</p>
<p>HM Government (2009): The UK Low Carbon Transition Plan</p>	<p>Plan plots how the UK will meet the 34 percent cut in emissions on 1990 levels by 2020. The Plan shows how reductions in the power sector and heavy industry; transport; homes and communities; workplaces and jobs; and farming, land and waste sectors could enable carbon budgets to 2022 to be met.</p>	<p>The plan includes a 5-point Action Plan covering the following areas:</p> <p>Protecting the public from immediate risk;</p> <p>Preparing for the future;</p> <p>Limiting the severity of future climate change through a new international climate agreement;</p>	<p>Plan should include policies that contribute towards achieving lower carbon emissions.</p>	<p>Objectives should reflect the aims set in the UK Low Carbon Transition Plan to reduce carbon emissions.</p>

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		<p>Building a low carbon UK;</p> <p>Supporting individuals, communities and businesses to play their part.</p>		
HM Government (2011): Carbon Plan: Delivering our low carbon future	The Carbon Plan is a Government wide plan of action on climate change, including domestic and international activity.	The plan includes a range of sectorial plans and targets including low carbon industry.	Plan should include policies that contribute towards achieving lower carbon emissions	Objectives should reflect the aims set in the Plan.
DEFRA (2010): English National Parks and the Broads UK Government Vision and Circular.	<p>The purpose of this circular, which applies only in England, is to provide updated policy guidance on the English National Parks (including the South Downs in West Sussex) and the Broads ('the Parks').</p> <p>This circular has been produced to create a vision to 2030 for National Parks.</p>	None	<p>Plan should support the vision for the South Downs National Park.</p> <p>Key considerations include: conservation and enhancement of the natural beauty, wildlife and cultural heritage of the SDNP and promotion of opportunities for the understanding and enjoyment of the special</p>	Objectives should reflect the aims for the SDNP set out in the Strategy and Action Plan.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
<p>Natural England (2010): England's statutory landscape designations: a practical guide to your duty of regard</p>	<p>Conservation and enhancement of the natural beauty, wildlife and cultural heritage of the SDNP and promotion of opportunities for the understanding and enjoyment of the special qualities of the SDNP by the public.</p>	<p>None</p>	<p>Plan should have regard to the duties of the relevant authorities of the purposes of National parks and AONB.</p> <p>Plan should support the vision for the South Downs National Park.</p> <p>Key considerations include conservation and enhancement of the natural beauty, wildlife and cultural heritage of the SDNP and promotion of opportunities for the understanding and enjoyment of the special qualities of the SDNP by the public.</p>	<p>Objectives should reflect the vision and objectives of the SDNP and AONB.</p>
<p>DEFRA(2007): A Strategy for England's Trees, Woods and Forests</p>	<p>To provide, in England, a resource of trees, woods and forests in places where they can contribute most in terms of environmental, economic and social benefit now and for future generations;</p> <p>Ensure that existing and newly planted trees, woods and forests are resilient to the impacts of climate change and also contribute to the way in which biodiversity</p>	<p>The strategy identifies some possible indicators including: Proportion of woodland Sites of Special Scientific Interest (SSSIs) in favourable condition; Woodland bird indicator – bird population associated with woodland;</p> <p>Access to and use of</p>	<p>Plan should to promote the sustainable management of our existing woods and forests.</p> <p>Plan should, where appropriate, seek a steady expansion of</p>	<p>Consider inclusion of objectives to promote sustainable management of our existing woods and forests.</p> <p>Consider inclusion of objectives which aim to promote the expansion, enjoyment and understanding of woodland areas.</p>

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	<p>and natural resources adjust to a changing climate.</p> <p>Protect and enhance the environmental resources of water, soil, air, biodiversity and landscapes (both woodland and non-woodland), and the cultural and amenity values of trees and woodland.</p> <p>Increase the contribution that trees, woods and forests make to the quality of life for those living in, working in or visiting England.</p> <p>Improve the competitiveness of woodland businesses and promote the development of new or improved markets for sustainable woodland products and ecosystem services</p> <p>where this will deliver identifiable public</p>			
<p>DEFRA (GP3):</p> <p>Underground, Under threat – Groundwater Protection: Policy and Practice</p>	<p>To prevent pollution of groundwater.</p>	<p>To meet Water Framework Directive requirements for groundwater quality.</p>	<p>Plan should recognise the importance and vulnerability of groundwater resources and ensure that they are not detrimentally affected</p>	<p>Include an objective to protect groundwater quality.</p>

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JNCC (2011) The Geological Conservation Review in the Context of the Wider Earth Heritage Conservation Effort	To identify and describe the most important geological sites in Britain by: Maintaining geological SSSIs Expanding the RIGS network Developing conservation techniques Improving documentation	None	Plan should take account of the importance of both designated and non-designated notable geological sites and features.	Objectives should protect and conserve sites of geological conservation importance.
Legislation				
Flood and Water Management Act 2010	To improve the management of flood risk for people, homes and businesses. To protect water supplies.	Local Authorities to prepare flood risk assessments, flood maps and plans. Lead Local Flood Authorities to prepare Local flood risk	Plan should take account of flooding and water management issues and strategies.	Consider inclusion of objective to reduce flood risk and other impacts on the water environment.
Climate Change Act 2008	The Climate Change Act 2008 introduced a statutory target of reducing carbon emissions.	Target of reducing carbon emissions by 80 per cent below 1990 levels by 2050, with an interim target of 34% by 2020.	Planning makes a significant contribution to both mitigating and adapting to climate change through its ability to influence the location, development. The plan should include policies that contribute towards achieving lower carbon emissions and greater resilience to the impacts	Objectives should reflect the aims set in the Climate Change Act to reduce carbon emissions.
LOCAL				

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
West Sussex County Council (2012): An Economic Strategy for West Sussex 2012-2020	<p>Sets out seven strategic priorities for the economy of West Sussex, including the following which may be relevant to the mineral plan:</p> <p>Make the best use of land and property to support a robust and sustainable economy</p>	None of the strategic outcomes are relevant to the MLP	Plan should take account of the fact the minerals developments need to make a contribution to a sustainable economy in West Sussex	Include an SA objective that promotes a resilient and sustainable local economy.
Environment Agency (2009): Water for Life and Livelihoods: River Basin Management Plan, South East River Basin District	Improved water quality within the South East River Basin District.	<p>To meet the requirements of the WFD:</p> <p>Prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters;</p> <p>Aim to achieve at least good status for all water bodies by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027;</p>	Increasing percentage of river length to achieve good environmental status by target dates of 2015, 2021 and 2027.	Consider inclusion of objective to protect and enhance water quality.

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		<p>Meet the requirements of Water Framework Directive protected areas;</p> <p>Promote sustainable use of water as a natural resource;</p> <p>Conserve habitats and species that depend directly on water;</p> <p>Progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;</p> <p>Progressively reduce the</p>		

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<p>Environment Agency (2009): Water for Life and Livelihoods: River Basin Management Plan, Thames River Basin District</p>	<p>Focuses on the protection, improvement and sustainable use of the water environment.</p>	<p>To meet the requirements of the WFD:</p> <p>Prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters;</p> <p>Aim to achieve at least good status for all water bodies by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027;</p> <p>Meet the requirements of Water Framework Directive protected areas;</p> <p>Promote sustainable use of water as a natural resource;</p> <p>Conserve habitats and species that depend directly on water;</p> <p>Progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;</p>	<p>Increasing percentage of river length to achieve good environmental status by target dates of 2015, 2021 and 2027.</p>	<p>Consider inclusion of objective to protect and enhance water quality.</p>

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
		<p>Progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants;</p> <p>Contribute to mitigating the effects of floods and droughts.</p>		

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West Sussex County Council (2011): West Sussex Transport Plan 2011-2026	The main objective of this Plan is to improve quality of life for the people of West Sussex through four key strategies to maintain, manage and invest in transport: promoting economic growth tackling climate change	The West Sussex Transport Plan 2011-2026 contains a range of monitoring indicators. Issues covered include the following: Congestion, accessibility, road traffic accidents, road and footway maintenance, conditions of highway structures, road flooding,	Plan should include policies which should assist in the promotion of an efficient economy and the achievement of sustainable economic growth Plan should include policies which should aim to reduce traffic growth, pollution and congestion in order to protect and	Consider objectives aiming to minimise use of rural roads and maximise use of the strategic road network and lorry route networks Consider objectives to sustain economic growth through the provision of an adequate supply of construction and other materials. Consider objectives to reduce the emission of greenhouse gases
West Sussex County Council (2014): West Sussex Waste Local Plan	Policy W9 permits the depositing of non-inert and inert waste to land including the restoration of mineral workings, and providing that any important mineral resources would not be sterilised	None	As this issue is covered in the West Sussex Waste Local Plan, it will not need to be included in the MLP	Consider inclusion of objective to avoid mineral reserve sterilisation.
West Sussex County Council (2013): Building A Sustainable Future: A strategy for delivering the corporate priority	This Strategy focuses on four key priority areas that address the main challenges facing West Sussex County Council as an authority. The four priorities for action are to: Reduce carbon emissions;	The Strategy contains information about the challenges of these areas and points of action, including clear and challenging targets against each priority.	Plan to include policies which support reductions in carbon emissions, and consider adaptation to a changing climate.	Consider inclusion of objectives to support the: reduction in carbon emissions, adaptation to a changing climate and efficient use of resources.

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West Sussex Environment and Climate Change Board (2015): Using Less, Living Better Action Plan	<p>The Board is made up of representatives across all sectors and aims to ensure that shared environment and climate change objectives and priorities, both now and in the future, are fully understood, effectively communicated and embedded in the development and delivery of policy and proposals across the County.</p> <p>In 2010, four thematic subgroups were set up to work on:</p> <p>Low carbon and energy;</p>	Board partners have signed up to the commitment to help reduce emissions in West Sussex by at least 80% by 2050, use natural resources wisely and ensure that people, landscape and wildlife are able to adapt to climate change.	Plan to include policies which support the vision and the commitments of the Board.	To include objectives which encourage waste minimisation and increase recycling and recovery.
West Sussex County Council (2008): Sustainable Community Strategy for West Sussex 2008-2020	<p>Reduce the carbon footprint of West Sussex</p> <p>Improving waste management to reduce waste generation and increase recycling.</p> <p>Making best appropriate use of innovation and new technology to reduce harmful emissions</p>	None	<p>Promote the reduction of harmful emissions and waste creation.</p> <p>Policies should protect the natural and historic environment.</p>	<p>Consider objective to reduce harmful emissions.</p> <p>Consider objective to protect the natural and historic environment</p>
<p>Sussex Biodiversity Partnership (2014)</p> <p>Sussex Biodiversity Action Plan</p> <p>Can be found online at</p>	<p>To maintain and, where practicable, enhance the wildlife and habitats that give Sussex its character and natural diversity</p> <p>To identify priority habitats and species that which are important in Sussex and/or where</p>	<p>Monitoring of Biodiversity Opportunity Areas.</p> <p>Sussex Biodiversity Record Centre inventory statistics for species and habitats e.g.</p>	Plan should include policies to enhance, where possible, the wildlife and habitats that give West Sussex its	Consider inclusion of objectives to protect and, enhance biodiversity and natural character.

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Capita Symonds (2010): West Sussex Strategic Flood Risk Assessment (SFRA)	<p>The main objective of the SFRA is to provide flood information:</p> <p>So that an evidence based and risk based sequential approach can be adopted when making planning decisions, in line with Planning Policy Statement 25 (Development and Flood Risk) – PPS25;</p> <p>That it is strategic in that it covers a wide spatial area and looks at flood risk today and in the future;</p> <p>That supports sustainability appraisals of the</p>	The assessment investigates flood risk issues for each specific site and makes recommendations.	The Plan must take into account the SFRA's sequential testing and guidance for selecting suitable sites for minerals development.	Consider inclusion of objectives related to flood risk.
South Downs National Park (2013). Partnership Management Plan: Shaping the future of your South Downs National Park 2014-2019.	<p>The Management Plan breaks down the Vision of the plan into 11 outcomes that describe how the vision is being achieved. These include:</p> <p>Outcome 1: The landscape character of the National Park, its special qualities and local distinctiveness have been conserved and enhanced by effectively managing land and the negative impacts of development and Cumulative change.</p> <p>Outcome 2: There is increased capacity within the landscape for its natural resources, habitats and species to adapt to</p>	<p>Indicators are included for the 11 outcomes. The key indicators relevant to the Minerals Local Plan and SA are included below:</p> <p>Outcome 1: Character of the landscape, including historic elements, is maintained.</p>	Plan should include policies to protect and, where possible, enhance the character, special qualities, condition, distinctiveness and environmental quality of the South Downs National Park.	Consider inclusion of objectives to protect and enhance biodiversity, geodiversity, landscape character, amenity and cultural heritage.

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	<p>the impacts of climate change and other pressures.</p> <p>Outcome 3: A well-managed and better connected network of habitats and increased population and distribution of priority species now exist in the National Park.</p> <p>Outcome 4: The condition and status of cultural heritage assets and their settings is significantly enhanced, many more have been discovered and they contribute positively to local distinctiveness and sense of place.</p> <p>Outcome 5: Outstanding visitor experiences are underpinned by a high quality access and sustainable transport network providing benefits such as improved health and wellbeing.</p> <p>Outcome 6: There is widespread understanding of the special qualities of the National Park and the benefits it provides.</p>	<p>Percentage of the National Park that is relatively tranquil for its area.</p> <p>Percentage area considered to have a dark night sky.</p> <p>Percentage of designated or notified Geological / Geomorphological Sites managed in better condition.</p> <p>Outcome 2: Percentage of rivers and groundwater bodies with water available for Abstraction.</p> <p>Total greenhouse gas emissions in the National Park.</p> <p>Outcome 3:</p>		

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	<p>Outcome 7: The range and diversity of traditional culture and skills has been protected and there is an increase in contemporary arts and crafts that are inspired by the special qualities of the National Park.</p> <p>Outcome 8: More responsibility and action is taken by visitors, residents and businesses to conserve and enhance the special qualities and use resources more wisely.</p> <p>Outcome 9: Communities and businesses in the National Park are more sustainable with an appropriate provision of housing to meet local needs and improved access to essential services and facilities.</p> <p>Outcome 10: A diverse and sustainable economy has developed which provides a range of business and employment opportunities, many of which are positively linked with the special qualities of the National Park.</p>	<p>Area, condition and connectivity of target priority habitats.</p> <p>Population and distribution of target priority species.</p> <p>Distributions of target non-native invasive species.</p> <p>Percentage of water bodies achieving 'good' or 'high' status or potential.</p> <p>Outcome 4: Percentage of heritage assets 'at risk'.</p> <p>Number of new heritage assets in the National Park added to Historic Environment Record.</p> <p>Outcome 5:</p>		

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	<p>Outcome 11: Local people have access to skilled employment and training opportunities.</p> <p>Policy 27: Protect and Enhance the National Park's special qualities through the management and restoration of minerals sites.</p>	<p>Percentage of Public Rights of Way (PRoW) that is 'easy to use' or in good condition.</p> <p>Number of routes promoted as accessible.</p>		
		<p>Percentage of visitors who felt very satisfied with the visitor experience.</p> <p>Outcome 6: Percentage of people who are aware of why the National Park is a special place.</p> <p>Percentage of schools within a 5km radius of the boundary using the National Park for learning outside of the classroom experiences at least once a year.</p> <p>Outcome 7:</p>		

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		<p>Number of courses in traditional crafts</p> <p>Outcome 8:</p> <p>Average public water supply consumption for areas supplied by sources within the National Park.</p> <p>Average annual daily traffic flows on National Park roads.</p> <p>Outcome 9:</p> <p>Percentage of communities with access to natural green space.</p> <p>Outcome 10:</p> <p>Number and diversity of business types that exist within the National Park.</p> <p>Outcome 11:</p>		

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		Skills levels of employees in the National Park.		
South Downs National Park. South Downs National Park Local Plan	The SDNPA is preparing its Local Plan, which will replace all existing planning policies across the National Park. Until this is adopted, the 'Development Plan' for the SDNPA consists of the saved policies of 11 inherited Local Plans and 1 adopted Core Strategy.	None.	Plan should include policies to protect and, where possible, enhance the character, special qualities, condition, distinctiveness and environmental quality of	Consider inclusion of objectives to protect and enhance biodiversity, geodiversity, landscape character, amenity and cultural heritage.
South Downs National Park. South Downs Way Ahead Nature Improvement Area ³³	In February 2012, the SDNPA was awarded £608,000 by the Secretary of State for the Environment towards a £3 million plan to protect, restore and reconnect endangered chalk downland in the National Park. The South Downs Way Ahead Project	None	Plan should include policies to protect and, where possible, restore and connect chalk downland in the South Downs National Park.	Consider inclusion of objectives to protect and enhance biodiversity, in particular the chalk downland of the South Downs National Park.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
<p>Brighton & Lewes Downs Biosphere Partnership. Brighton and Lewes Downs Biosphere Project³⁴</p>	<p>The Brighton & Lewes Downs Biosphere covers almost 400 square kilometres of land and sea between the River Adur and the River Ouse, bringing together the three environments of countryside, coast, and city and towns under one united approach.</p> <p>The Brighton & Lewes Downs Biosphere aims to serve as a world-class demonstration area of</p> <p>how we might live better in the future, in greater harmony with our local environment by bringing people and nature closer together.</p> <p>The Biosphere objectives are “to look after and improve the local environment, whilst at the same time developing local communities in a sustainable way, and promoting better understanding and engagement by people with the world on our doorstep”.</p>	<p>None</p>	<p>Plan should include policies that take account of and seek to protect the habitats and species within the biosphere area.</p>	<p>Consider inclusion of objectives to protect and enhance biodiversity, in particular the habitats and species within the biosphere area.</p>

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
Environment Agency (2013): Groundwater protection: Principles and practice (GP3)	<p>Encourage practices to prevent or mitigate impacts on groundwaters (pollutants and over abstraction).</p> <p>Encourage cooperation between bodies with responsibilities for protecting groundwaters. Provide information and background on groundwater protection in England and Wales.</p>	<p>Indicators relate to the Water Framework Directive's (WFD) requirement that all groundwater bodies (GWBs) are of 'good' status in terms of water quality. This status is based on thresholds for the chemical constituents of groundwater and their impact on ecosystems.</p> <p>Good pollution prevention practice can involve influencing</p>	<p>Plan should include policies consistent with protecting all groundwater resources from pollution and long-term depletion</p> <p>Plan should include policies that should where feasible, remediate historic groundwater pollution; and have due regard to the needs of the public water supply</p>	<p>Consider inclusion of objectives to protect and, enhance water quality and the function of the water environment.</p>
Environment Agency (2006): Shoreline Management Plans for Beachy Head to Selsey	<p>To define, in general terms, the flooding and erosion risks to people and the developed, historic and natural environment in the SMP area over the next century</p> <p>To identify the preferred policies of managing those risks</p> <p>To identify the consequences of implementing the preferred policies</p> <p>To set out procedures for monitoring the effectiveness of the SMP policies</p> <p>To ensure that developers and planners take due account of the risks identified in the SMP and the preferred SMP policies</p>	<p>Indicators include: Coastal and fluvial flood frequency;</p> <p>Environment Agency annual indicative flood zone updates</p> <p>Environment Agency quarterly indicative flood plain mapping</p>	<p>Plan should include policies that are consistent with managing the risks of flooding and erosion to people and the developed, historic and natural environment in the Shoreline Management Plan area over the next century</p> <p>Plan should include policies that take the risks of development in the SMP into account</p>	<p>Consider inclusion of objectives to reduce the risk of flooding and the impact on society, the economy and the environment.</p>

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
Environment Agency (2010): Rivers Arun to Adur flood and erosion management strategy 2010-2020	The River Arun to Adur Flood and Erosion Management Strategy sets out our plan to manage flood and erosion risks along this coastline. The final strategy was approved (April 2010) by the Environment Agency and Arun District, Worthing Borough and Adur District Councils. Through this management strategy, the partnership has identified ways to protect 9,800 properties that are at risk of flooding and erosion over the next 100 years. The plan is to sustain or improve all of the defences between the River Arun and the River Adur, except for a small section of	The strategy sets out a work programme to be undertaken for stretches of coastline, subject to funding coming forward.	Plan should include policies that are as consistent, as far as practicably possible, with the sustainable management of coastal defences between the rivers Arun and Adur	Consider inclusion of objectives to reduce the risk of flooding and the impact on society, the economy and the environment.
Environment Agency (2009): Pagham to East Head Coastal Defence Strategy	Ensure a sustainable form of coastal defence which does not burden future generations with defences which are too costly to maintain.	The strategy includes recommended options and work cost estimates for different sections of seafront, which are subject to funding coming forward.	Policies within the plan should not contribute to flooding and should be consistent with the sustainable management of coastal defences at	Consider inclusion of objectives to reduce the risk of flooding and its impact on society, the economy and the environment
Environment Agency (2009): Catchment Flood Management Plans for River Adur, Arun and Western Streams Catchment	To identify and develop policies for sustainable flood risk management Policies must take into account the likely impacts of climate change, the effects of land use and land management, as well as delivering multiple benefits and contributing to	Indicators include: Coastal and fluvial flood frequency; Environment Agency annual indicative flood zone updates Environment Agency quarterly indicative flood plain mapping	Plan should include policies consistent with sustainable flood risk management.	Consider inclusion of objectives to reduce the risk of flooding and the impact on society, the economy and the environment.
Environment Agency (2013): Abstraction licensing strategies (CAMS process) Arun and Western Streams	The Water Framework Directive's (WFD) main objectives are to protect and enhance the water environment and ensure the sustainable use of water resources for economic and social development. CAMS contribute to achieving environmental	The main components of this assessment that help us to understand the availability of water resources are: a resource allocation for the environment defined as a	Plan should be consistent with the vision to ensure sustainable management of water resources.	Consider inclusion of objectives to ensure sustainable management of water resources.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
Environment Agency (2013): Abstraction licensing strategies (CAMS process) Adur and Ouse	The same objectives are set out as described above for the Abstraction licensing strategies (CAMS process) Arun and Western Streams.	The same components of assessment are used as described above.	Plan should be consistent with the vision to ensure sustainable management of water resources.	SA should consider objectives to ensure sustainable management of water resources.
Environment Agency (2013): Abstraction licensing strategies (CAMS process) Mole	The same objectives are set out as described above for the Abstraction licensing strategies (CAMS process) Arun and Western Streams.	The same components of assessment are used as described above.	Plan should be consistent with the vision to ensure sustainable management of water resources.	SA should consider objectives to ensure sustainable management of water resources.
Environment Agency (2012): Lower Tidal River Arun Strategy	<p>The overall Strategy objectives are:</p> <p>To develop a strategic approach to sustainably manage flood risk to people, property and other assets over the next 100 years.</p> <p>To involve and consult with communities, organisations and interested parties to ensure that all views are considered as the strategy is developed.</p> <p>To raise awareness of the flood risk management works recommended with the strategy area and the external contributions required allowing these works to proceed.</p> <p>To secure continued compliance with International Environmental Legislation in relation to the Arun Valley Special Protection Area, Ramsar site and candidate</p>	<p>The Strategy considered the following indicators in relation to options to addressing flood risk management over 100 year timeframe:</p> <p>Whether it will have an adverse or beneficial impact on the environment and whether it could provide opportunities to protect or improve the built or natural environment.</p> <p>How it would address the specific flood risk to people and property in the catchment, now and in the future.</p>	Plan should include policies consistent with sustainable flood risk management.	Consider inclusion of objectives to reduce the risk of flooding and the impact on society, the economy and the environment.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
	<p>Special Area of Conservation (Arun Valley SPA/Ramsar/cSAC).</p> <p>To comply with our statutory obligations under the Water Framework Directive (WFD) and national and local conservation designations relevant to the Strategy.</p>	<p>Whether it is technically feasible.</p> <p>What the economic costs are versus the benefit in terms of reducing damages to property and the risk to the population.</p>		
<p>Environment Agency (yet to be published): Aldingbourne Rife Integrated Flood Risk Management Plan and Works (ARIFRM)</p>	<p>This will deliver a package of schemes and flood alleviation works to reduce flood risk to people and properties in the Aldingbourne Rife catchment. The Environment Agency will look at a holistic, catchment wide approach to flood risk management, as well as deliver environmental benefits and enhancements. Addressing flood risk in one area without addressing wider issues and looking at the interactions will not address the problems fully and could pass it on elsewhere. Looking at the catchment holistically is also more likely to identify efficiencies and better ways of managing risk, without simply building expensive “hard” engineering solutions like walls, banks and pumps.</p>	<p>To be checked when ARIFRM is published.</p>	<p>Plan should include policies consistent with sustainable flood risk management.</p>	<p>Consider inclusion of objectives to reduce the risk of flooding and the impact on society, the economy and the environment.</p>

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
Southern Water (2013): Draft Water Resources Management Plan 2015-2040	Ensuring there will be adequate water resources in the catchment area for the next 25 years.	None.	Plan should consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers.	The SA should contain objectives protecting water supply and water bodies from pollution.
Thames Water: Draft Water Resources Management Plan 2015-2020	Maintain drinking water quality at 99.95 per cent compliance with the relevant drinking water standards; Maintain security of water supply;	Reduce leakage by 10 per cent by 2020 (from the current target of 673 MI/d to 606 MI/d)	Plan should consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers.	The SA should contain objectives protecting water supply and water bodies from pollution.
Portsmouth Water (2014): Final Water Resources Management Plan	The Strategy set out the following objectives: Adopting to and mitigating against climate change Creating a better water environment Sustainable planning and management of water resources	The Final Water Resources Management Plan was prepared to meet the following levels of service: Temporary Bans I in 20 years Ordinary Drought Orders I in 80 years	Plan should consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers.	The SA should contain objectives protecting water supply and water bodies from pollution.
Portsmouth Water (2013): Final Drought Plan	To ensure that Portsmouth Water does not breach its legal obligations to maintain a supply of water.	None.	Plan should consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers.	The SA should contain objectives protecting water supply and water bodies from pollution.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
High Weald AONB Unit (2014): High Weald AONB Management Plan 2014-2019	<p>The Management Plan contains a range of objectives related to the protection of:</p> <ul style="list-style-type: none"> Geology, landform, water systems and climate Settlements Route ways Woodland 	The Plan contains targets for each objective from 2014-2019.	Plan should include policies to protect and, where possible, enhance the character and environmental quality of the West Sussex landscape	Consider inclusion of objectives to protect and enhance biodiversity and landscape character
Chichester Harbour Conservancy (2014): Chichester Harbour AONB Management Plan 2014-2019.	<p>To strike a balance between the needs of those who live, work and enjoy the harbour, with the integrity of the protected habitats and species which make up the rich and diverse land and seascape of Chichester Harbour AONB.</p> <p>To encourage sustainable and safe enjoyment of the harbour and AONB, through education and awareness-raising, to safeguard its special qualities for future generations.</p>	The management plan contains objectives meet and improve the standards of relevant European and national directives and regulations.	<p>Plan should be consistent with conserving and enhancing the natural beauty of Chichester Harbour AONB</p> <p>Plan should be consistent, as far as possible, with supporting landscape and nature conservation designations of Chichester Harbour AONB.</p>	Consider inclusion of objectives to protect and enhance biodiversity and landscape character

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
West Sussex County Council (2005): A Strategy for the West Sussex Landscape	<p>Objective 1: ensure high quality new development which contributes to and reinforces landscape character</p> <p>Objective 2: conserve and enhance historic landscape character</p> <p>Objective 3: ensure the maintenance and renewal of the agricultural landscape</p> <p>Objective 4: conserve and enhance semi-natural habitats including securing the future of woodlands, hedgerows and trees as distinctive landscape features</p> <p>Objective 5: promote and celebrate the value and variety of the West Sussex landscape.</p>	None	Plan should be consistent with supporting the objectives in the strategy.	SA should be consistent with supporting the objectives for protecting and enhancing the West Sussex landscape.
East Sussex Country Council (2013): East Sussex Waste and Minerals Plan	<p>The Plan sets out that cooperation with neighbouring local authorities, including West Sussex, is necessary to overcome certain issues regarding minerals.</p> <p>Such as:</p> <p>Soft sand reserves primarily occurring in the SDNP.</p>	Policies are monitored thorough the annual monitoring report	Any cross-boundary issues will need to be addressed during preparation of the MLP	Consider inclusion of objectives to encourage sustainable transport of minerals and protection of important landscapes.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
Hampshire County Council (2013): Hampshire Minerals and Waste Plan	The Plan recognises the potential for cross-boundary impacts of minerals development although there is no reference to any specific issues with West Sussex.	Policies are monitored thorough the annual monitoring report	Any cross-boundary issues will need to be addressed during preparation of the MLP	Consider inclusion of objectives to encourage sustainable transport of minerals and reducing cumulative impacts of mineral development.
Surrey County Council (2011): Surrey Minerals Plan	The spatial strategy of the minerals plan identifies areas where there are potential cross boundary issues with West Sussex, in particular an issue which concerns an area of clay extraction in West Sussex that abuts the southern boundary of Surrey. Permitted reserves are declining in West Sussex and an area of search has been identified for a	Policies are monitored thorough the annual monitoring report.	The cross-boundary issues will need to be addressed during preparation of the MLP	Consider inclusion of objectives to encourage sustainable transport of minerals and reducing cumulative impacts of mineral development.
Surrey County Council (2015): Landscape Character Assessment	The Surrey Landscape Character Assessment (LCA) is a comprehensive assessment of the landscape character of the county and describes the different variations of landscape in a county context.	Policies are monitored thorough the annual monitoring report.	The cross-boundary issues will need to be addressed during preparation of the MLP	Consider inclusion of objectives to reduce cumulative impacts of mineral development.

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA
<p>South Downs National Park Water Cycle Study and SFRA Level I – Scoping and Outline Report (2015)</p>	<p>The specific objectives are to:</p> <p>Assess the capacity of current water infrastructure to accommodate required growth without adversely affecting the environment by considering:</p> <p>the environmental capacity of receiving watercourses to receive wastewater; and</p> <p>the potential of development to increase flood risk.</p> <p>Determine the potential impact of proposed development in the context of</p>	<p>The assessment investigates flood risk issues and makes recommendations.</p>	<p>The Plan must take into account the SFRA's sequential testing and guidance for selecting suitable sites for minerals development.</p>	<p>Consider inclusion of objectives related to flood risk.</p>
<p>Kent County Council: Minerals and Waste Local Plan 2013 – 2030</p>	<p>Planning for Minerals in Kent will:</p> <p>Seek to deliver a sustainable, steady and adequate supply of land-won minerals including aggregates, silica sand, crushed rock, brickearth, chalk and clay, building stone and minerals for cement manufacture.</p> <p>Facilitate the processing and use of secondary and recycled aggregates and become less reliant on land-won construction aggregates.</p> <p>Safeguard economic mineral resources for</p>	<p>Policies are monitored thorough the annual monitoring report.</p>	<p>The cross-boundary issues will need to be addressed during preparation of the MLP</p>	<p>Consider inclusion of objectives to encourage sustainable transport of minerals and reducing cumulative impacts of mineral development.</p>

Strategy / Plan / Programme	Key objectives relevant to the Minerals Local Plan and SA	Key targets and indicators relevant to the Minerals Local Plan and SA	Implications for the Minerals Local Plan	Implications for SA

Appendix 2 Option Appraisals

Option A: Sites within West Sussex and outside of the SDNPA

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
<p>1. To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.</p>	<p>-?</p>	<p>N/A</p>	<p>The policy option supports both the maintenance of supplies from permitted reserves of soft sand, the identification of allocations and/or areas of search in West Sussex beyond the SDNP, and the allowance of imports to meet requirements. This may therefore affect the local amenity and the wellbeing of residents, neighbouring land uses and visitors to West Sussex due to impacts such as dust, noise, vibration and traffic associated with mineral workings. However, effects will be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Protection of health and well-being would be supported by all four of the categories of ecosystem services, but these options are unlikely to have a particular impact or benefit on the</p>

<p>2. To protect and, where possible, enhance recreation opportunities for all, including access to the countryside, open spaces and Public Rights of Way (PROW).</p>	<p>+/-?</p>	<p>C +/-?</p>	<p>The policy option could have minor negative effects on this SA objective as site allocations that could come forward under this policy option or increases in imports could impact upon the amenity of users of PROW or others users of the countryside in the area. Conversely, recreational areas could be enhanced in the long term through the restoration of new mineral sites and so a minor positive effect is also identified. It is unlikely that sites containing existing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts on recreation, or result in the potential to enhance further recreation opportunities. Therefore, this option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>This policy option could have mixed minor positive and minor negative uncertain effects on Cultural ecosystem services.</p>
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SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.	+?	N/A	<p>The policy option is likely to have minor positive effects on this SA objective, as providing support for the maintenance of supplies from existing permitted reserves and identifying sites allocations and/or areas of search that could come forward is likely to have positive effects, as minerals are essential to sustain and enhance the vitality and viability of the local economy. However, these positive effects are uncertain as the policy option also allows for imports to meet requirements which cannot be met from indigenous supplies due to the fact the option is unlikely to ensure a 7 year landbank will be maintained during the plan period. Therefore, the local economy may not directly benefit from the extraction of material that is imported into West Sussex.</p> <p>Protection of the local economy would be supported in particular by Provisioning ecosystem</p>
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.	+/-	S -	<p>This policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and identification of allocations and /or areas of search that could come forward will not be classed as inappropriate development, as this will contribute to the extraction and supply of mineral resources for the needs of society, not limiting the ability to extract resources. However, minor negative effects are also likely as continued extraction from existing permitted reserves or from permitted site allocations/areas of search will not reduce the extraction of virgin materials. Therefore, the policy option is likely to have mixed, minor positive and minor negative effects on this SA objective.</p> <p>It is understood that this policy option primarily seeks to address the issue of the supply of soft sand. However, the option and supporting text included in the policy options document for the policy option (i.e. “this option involves the safeguarding of existing permitted reserves of soft sand”) also relates to minerals safeguarding. It is recommended that this policy option and any resulting policy does not refer to minerals safeguarding and focuses on minerals supply, as minerals safeguarding is addressed in separate policy options.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			Conserving minerals from inappropriate development to ensure sufficient minerals supply could have a negative impact on the Supporting ecosystem services, as minerals contribute to soil formation and nutrient cycling.
5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.	+/-?	C +/-?	<p>This policy option is likely to have minor positive effects on this SA objective as it seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations in West Sussex. Furthermore, in the long term the restoration of sites containing permitted reserves and site allocations and/or areas of search that come forward could lead to positive effects for the landscape. However, minor negative effects are also likely as continued extraction in the short term/long term at exiting sites and future allocated sites/areas of search could result in continued and new impacts on the landscape. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are likely for this policy option in</p>
6. To protect, conserve and enhance biodiversity including natural habitats and protected species.	+/-?	P +/-? R +/-? C +/-?	<p>The policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and working of any allocated sites/areas of search that may come forward may have the potential to achieve net gains for biodiversity during working or restoration via biodiversity enhancement opportunities that may exist. However, the allocation of sites for minerals working and mineral exploration may also have adverse effects on designated sites, protected species or habitats during operation of those sites. The policy option is therefore likely to have mixed, minor positive and minor negative effects on this SA objective. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			policy option in relation to Provisioning, Regulatory and Cultural ecosystem services.
7. To protect and conserve geodiversity.	+/-?	C +/-?	<p>This policy option may lead to minor negative effects as the continued extraction of existing permitted reserves and/or working of permitted allocated sites/areas of search may uncover and harm geological interests. However, sites may also potentially contribute to geodiversity by preserving and conserving geological features or making them visible and available for learning opportunities. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this policy option in relation to Cultural ecosystem services.</p>
8. To conserve, and where possible, enhance the historic environment.	+/-?	C +/-?	<p>This policy option is likely to have minor negative effects on this SA objective, as the maintenance of supply from permitted reserves and/or working of permitted allocated sites/areas of search could negatively affect the historic environment (e.g. archaeology), heritage assets and their setting as a result of associated mineral activities. However, sites may be able to preserve any uncovered findings and therefore benefit our understanding of the local archaeology or contribute towards the local vernacular. Furthermore, the policy options seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations and their historic character and setting in West Sussex. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are considered likely this policy</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			option in relation to Cultural ecosystem services.
9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.	-?	R -?	<p>It is unlikely that sites containing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts as the permitted reserves are located within the active sites and therefore any affects or potential enhancements on soil quality would have already been appropriately dealt during the determination of the relevant planning application, as would the aim of minimising the loss of best and most versatile land. However, via support to additional allocations and/or areas of search in West Sussex, this policy option may result in the loss of best and most versatile land. However, the exact location and grade of agricultural land that might be lost and whether improvements to soil quality through site restoration are possible, will not be known until the planning application stage, therefore effects on this SA Objective are likely to be minor negative uncertain.</p> <p>Minor negative uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
10. To reduce air pollution and to protect and, where possible, enhance air quality.	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, this policy option is likely to have negative impacts on this SA objective due to activities (e.g. lorry traffic) that may negatively affect air quality due to the proximity of sensitive receptors and the distance mineral related traffic has to travel before reaching the Advisory Lorry Route.</p> <p>Furthermore, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex, and increases in air pollution. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			relation to Regulating ecosystem services.
11. To protect and, where possible, enhance water resources, water quality and the function of the water environment.	?	R ?	<p>While this policy option seeks to maintain supplies from permitted reserves and may lead to allocation sites and/or areas of search coming forward which may affect the water resources, water quality or the function of the water environment in West Sussex, at this stage in the planning process it is not possible to determine the impacts of policy options such as this on water quality (surface or groundwater) or water use and efficiency as it will very much depend on sites proposals (location, design, method of working etc.), which would be assessed at the planning application stage.</p> <p>Effects of this policy option on Regulating ecosystem services are uncertain at this stage.</p>
12. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.	+?	R +?	<p>This policy option relates to soft sand extraction and is therefore not expected to have an effect on this SA objective, as sand and gravel workings are classed as water-compatible development and are potentially suitable for all flood zones including 3b, the functional floodplain. However, this also means any sites may have the potential to increase flood capacity and have minor positive effects on this SA objective, although effects would be uncertain as the potential for effects will depend on the exact nature and design, and location of any site allocations/areas of search that come forward, which would not be known until the planning application stage. Therefore, a minor positive uncertain affect is likely on this SA objective.</p> <p>Minor positive uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, existing primary extraction sites will continue to operate, transporting extracted material by road, and any allocated sites/areas of search that come forward will be likely to increase lorry traffic especially given that within West Sussex, materials are mainly transported by road, and to a lesser extent rail. Furthermore, the increased dependence on imports to meet requirements</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
Lorry Route Network.			<p>which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p> <p>This policy option is considered likely to have significant negative effects in relation to Regulating ecosystem services</p>
14. To reduce the emissions of greenhouse gases.	+/-?	R +/-?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward, which will therefore have minor positive effects on reducing the emission of greenhouse gases as it supports the maintenance of existing supplies. This therefore potentially reduces the need for additional importation of soft sand into West Sussex. However, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, minor negative effects are also expected due to increases in the emission of greenhouse gases.</p> <p>However, at this stage in the planning process it is not possible to determine the impacts of policy options on their ability to help reduce emissions of greenhouse gases as it will depend on the proposals that come forward and how successfully they are implemented, which would not be known until the planning application stage.</p>

Option B: Sites within West Sussex including the SDNPA

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
<p>1. To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.</p>	-?	N/A	<p>The policy option supports both the maintenance of supplies from permitted reserves of soft sand, the identification of allocations and/or areas of search in West Sussex beyond the SDNP, and the allowance of imports to meet requirements. This may therefore affect the local amenity and the wellbeing of residents, neighbouring land uses and visitors to West Sussex due to impacts such as dust, noise, vibration and traffic associated with mineral workings. However, effects will be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Protection of health and well-being would be supported by all four of the categories of ecosystem services, but these options are unlikely to have a particular impact or benefit on the</p>
<p>2. To protect and, where possible, enhance recreation opportunities for all, including access to the countryside, open spaces and Public Rights of Way (PROW).</p>	+/-?	C +/-?	<p>The policy option could have minor negative effects on this SA objective as site allocations that could come forward under this policy option or increases in imports could impact upon the amenity of users of PROW or others users of the countryside in the area. Conversely, recreational areas could be enhanced in the long term through the restoration of new mineral sites and so a minor positive effect is also identified. It is unlikely that sites containing existing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts on recreation, or result in the potential to enhance further recreation opportunities. Therefore, this option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>This policy option could have mixed minor positive and minor negative uncertain effects on Cultural ecosystem services.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.	+?	N/A	<p>The policy option is likely to have minor positive effects on this SA objective, as providing support for the maintenance of supplies from existing permitted reserves and identifying sites allocations and/or areas of search that could come forward is likely to have positive effects, as minerals are essential to sustain and enhance the vitality and viability of the local economy. However, these positive effects are uncertain as the policy option also allows for imports to meet requirements which cannot be met from indigenous supplies due to the fact the option is unlikely to ensure a 7 year landbank will be maintained during the plan period. Therefore, the local economy may not directly benefit from the extraction of material that is imported into West Sussex.</p> <p>Protection of the local economy would be supported in particular by Provisioning ecosystem</p>
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.	+/-	S -	<p>This policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and identification of allocations and /or areas of search that could come forward will not be classed as inappropriate development, as this will contribute to the extraction and supply of mineral resources for the needs of society, not limiting the ability to extract resources. However, minor negative effects are also likely as continued extraction from existing permitted reserves or from permitted site allocations/areas of search will not reduce the extraction of virgin materials. Therefore, the policy option is likely to have mixed, minor positive and minor negative effects on this SA objective.</p> <p>It is understood that this policy option primarily seeks to address the issue of the supply of soft sand. However, the option and supporting text included in the policy options document for the policy option (i.e. “this option involves the safeguarding of existing permitted reserves of soft sand”) also relates to minerals safeguarding. It is recommended that this policy option and any resulting policy does not refer to minerals safeguarding and focuses on minerals supply, as minerals safeguarding is addressed in separate policy options.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			Conserving minerals from inappropriate development to ensure sufficient minerals supply could have a negative impact on the Supporting ecosystem services, as minerals contribute to soil formation and nutrient cycling.
5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.	+/-?	C +/-?	<p>This policy option is likely to have minor positive effects on this SA objective as it seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations in West Sussex. Furthermore, in the long term the restoration of sites containing permitted reserves and site allocations and/or areas of search that come forward could lead to positive effects for the landscape. However, minor negative effects are also likely as continued extraction in the short term/long term at exiting sites and future allocated sites/areas of search could result in continued and new impacts on the landscape. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are likely for this policy option in</p>
6. To protect, conserve and enhance biodiversity including natural habitats and protected species.	+/-?	P +/-? R +/-? C +/-?	<p>The policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and working of any allocated sites/areas of search that may come forward may have the potential to achieve net gains for biodiversity during working or restoration via biodiversity enhancement opportunities that may exist. However, the allocation of sites for minerals working and mineral exploration may also have adverse effects on designated sites, protected species or habitats during operation of those sites. The policy option is therefore likely to have mixed, minor positive and minor negative effects on this SA objective. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			policy option in relation to Provisioning, Regulatory and Cultural ecosystem services.
7. To protect and conserve geodiversity.	+/-?	C +/-?	<p>This policy option may lead to minor negative effects as the continued extraction of existing permitted reserves and/or working of permitted allocated sites/areas of search may uncover and harm geological interests. However, sites may also potentially contribute to geodiversity by preserving and conserving geological features or making them visible and available for learning opportunities. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this policy option in relation to Cultural ecosystem services.</p>
8. To conserve, and where possible, enhance the historic environment.	+/-?	C +/-?	<p>This policy option is likely to have minor negative effects on this SA objective, as the maintenance of supply from permitted reserves and/or working of permitted allocated sites/areas of search could negatively affect the historic environment (e.g. archaeology), heritage assets and their setting as a result of associated mineral activities. However, sites may be able to preserve any uncovered findings and therefore benefit our understanding of the local archaeology or contribute towards the local vernacular. Furthermore, the policy options seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations and their historic character and setting in West Sussex. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are considered likely this policy</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			option in relation to Cultural ecosystem services.
9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.	-?	R -?	<p>It is unlikely that sites containing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts as the permitted reserves are located within the active sites and therefore any affects or potential enhancements on soil quality would have already been appropriately dealt during the determination of the relevant planning application, as would the aim of minimising the loss of best and most versatile land. However, via support to additional allocations and/or areas of search in West Sussex, this policy option may result in the loss of best and most versatile land. However, the exact location and grade of agricultural land that might be lost and whether improvements to soil quality through site restoration are possible, will not be known until the planning application stage, therefore effects on this SA Objective are likely to be minor negative uncertain.</p> <p>Minor negative uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
10. To reduce air pollution and to protect and, where possible, enhance air quality.	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, this policy option is likely to have negative impacts on this SA objective due to activities (e.g. lorry traffic) that may negatively affect air quality due to the proximity of sensitive receptors and the distance mineral related traffic has to travel before reaching the Advisory Lorry Route.</p> <p>Furthermore, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex, and increases in air pollution. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			relation to Regulating ecosystem services.
11. To protect and, where possible, enhance water resources, water quality and the function of the water environment.	?	R ?	<p>While this policy option seeks to maintain supplies from permitted reserves and may lead to allocation sites and/or areas of search coming forward which may affect the water resources, water quality or the function of the water environment in West Sussex, at this stage in the planning process it is not possible to determine the impacts of policy options such as this on water quality (surface or groundwater) or water use and efficiency as it will very much depend on sites proposals (location, design, method of working etc.), which would be assessed at the planning application stage.</p> <p>Effects of this policy option on Regulating ecosystem services are uncertain at this stage.</p>
12. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.	+?	R +?	<p>This policy option relates to soft sand extraction and is therefore not expected to have an effect on this SA objective, as sand and gravel workings are classed as water-compatible development and are potentially suitable for all flood zones including 3b, the functional floodplain. However, this also means any sites may have the potential to increase flood capacity and have minor positive effects on this SA objective, although effects would be uncertain as the potential for effects will depend on the exact nature and design, and location of any site allocations/areas of search that come forward, which would not be known until the planning application stage. Therefore, a minor positive uncertain affect is likely on this SA objective.</p> <p>Minor positive uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, existing primary extraction sites will continue to operate, transporting extracted material by road, and any allocated sites/areas of search that come forward will be likely to increase lorry traffic especially given that within West Sussex, materials are mainly transported by road, and to a lesser extent rail. Furthermore, the increased dependence on imports to meet requirements</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
Lorry Route Network.			<p>which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p> <p>This policy option is considered likely to have significant negative effects in relation to Regulating ecosystem services</p>
14. To reduce the emissions of greenhouse gases.	+/-?	R +/-?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward, which will therefore have minor positive effects on reducing the emission of greenhouse gases as it supports the maintenance of existing supplies. This therefore potentially reduces the need for additional importation of soft sand into West Sussex. However, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, minor negative effects are also expected due to increases in the emission of greenhouse gases.</p> <p>However, at this stage in the planning process it is not possible to determine the impacts of policy options on their ability to help reduce emissions of greenhouse gases as it will depend on the proposals that come forward and how successfully they are implemented, which would not be known until the planning application stage.</p>

Option C: Supply from areas outside West Sussex

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
1. To protect and, where possible, enhance health, well- being and amenity of residents, neighbouring land uses and visitors to West Sussex.	-?	N/A	<p>The policy option supports both the maintenance of supplies from permitted reserves of soft sand, the identification of allocations and/or areas of search in West Sussex beyond the SDNP, and the allowance of imports to meet requirements. This may therefore affect the local amenity and the wellbeing of residents, neighbouring land uses and visitors to West Sussex due to impacts such as dust, noise, vibration and traffic associated with mineral workings. However, effects will be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Protection of health and well-being would be supported by all four of the categories of ecosystem services, but these options are unlikely to have a particular impact or benefit on the</p>
2. To protect and, where possible, enhance recreation opportunities for all, including access to the countryside, open spaces and Public Rights of Way (PROW).	+/-?	C +/-?	<p>The policy option could have minor negative effects on this SA objective as site allocations that could come forward under this policy option or increases in imports could impact upon the amenity of users of PROW or others users of the countryside in the area. Conversely, recreational areas could be enhanced in the long term through the restoration of new mineral sites and so a minor positive effect is also identified. It is unlikely that sites containing existing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts on recreation, or result in the potential to enhance further recreation opportunities. Therefore, this option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>This policy option could have mixed minor positive and minor negative uncertain effects on Cultural ecosystem services.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.	+?	N/A	<p>The policy option is likely to have minor positive effects on this SA objective, as providing support for the maintenance of supplies from existing permitted reserves and identifying sites allocations and/or areas of search that could come forward is likely to have positive effects, as minerals are essential to sustain and enhance the vitality and viability of the local economy. However, these positive effects are uncertain as the policy option also allows for imports to meet requirements which cannot be met from indigenous supplies due to the fact the option is unlikely to ensure a 7 year landbank will be maintained during the plan period. Therefore, the local economy may not directly benefit from the extraction of material that is imported into West Sussex.</p> <p>Protection of the local economy would be supported in particular by Provisioning ecosystem</p>
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.	+/-	S -	<p>This policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and identification of allocations and /or areas of search that could come forward will not be classed as inappropriate development, as this will contribute to the extraction and supply of mineral resources for the needs of society, not limiting the ability to extract resources. However, minor negative effects are also likely as continued extraction from existing permitted reserves or from permitted site allocations/areas of search will not reduce the extraction of virgin materials. Therefore, the policy option is likely to have mixed, minor positive and minor negative effects on this SA objective.</p> <p>It is understood that this policy option primarily seeks to address the issue of the supply of soft sand. However, the option and supporting text included in the policy options document for the policy option (i.e. “this option involves the safeguarding of existing permitted reserves of soft sand”) also relates to minerals safeguarding. It is recommended that this policy option and any resulting policy does not refer to minerals safeguarding and focuses on minerals supply, as minerals safeguarding is addressed in separate policy options.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			Conserving minerals from inappropriate development to ensure sufficient minerals supply could have a negative impact on the Supporting ecosystem services, as minerals contribute to soil formation and nutrient cycling.
5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.	+/-?	C +/-?	<p>This policy option is likely to have minor positive effects on this SA objective as it seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations in West Sussex. Furthermore, in the long term the restoration of sites containing permitted reserves and site allocations and/or areas of search that come forward could lead to positive effects for the landscape. However, minor negative effects are also likely as continued extraction in the short term/long term at exiting sites and future allocated sites/areas of search could result in continued and new impacts on the landscape. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are likely for this policy option in</p>
6. To protect, conserve and enhance biodiversity including natural habitats and protected species.	+/-?	P +/-? R +/-? C +/-?	<p>The policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and working of any allocated sites/areas of search that may come forward may have the potential to achieve net gains for biodiversity during working or restoration via biodiversity enhancement opportunities that may exist. However, the allocation of sites for minerals working and mineral exploration may also have adverse effects on designated sites, protected species or habitats during operation of those sites. The policy option is therefore likely to have mixed, minor positive and minor negative effects on this SA objective. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			policy option in relation to Provisioning, Regulatory and Cultural ecosystem services.
7. To protect and conserve geodiversity.	+/-?	C +/-?	<p>This policy option may lead to minor negative effects as the continued extraction of existing permitted reserves and/or working of permitted allocated sites/areas of search may uncover and harm geological interests. However, sites may also potentially contribute to geodiversity by preserving and conserving geological features or making them visible and available for learning opportunities. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this policy option in relation to Cultural ecosystem services.</p>
8. To conserve, and where possible, enhance the historic environment.	+/-?	C +/-?	<p>This policy option is likely to have minor negative effects on this SA objective, as the maintenance of supply from permitted reserves and/or working of permitted allocated sites/areas of search could negatively affect the historic environment (e.g. archaeology), heritage assets and their setting as a result of associated mineral activities. However, sites may be able to preserve any uncovered findings and therefore benefit our understanding of the local archaeology or contribute towards the local vernacular. Furthermore, the policy options seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations and their historic character and setting in West Sussex. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are considered likely this policy</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			option in relation to Cultural ecosystem services.
9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.	-?	R -?	<p>It is unlikely that sites containing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts as the permitted reserves are located within the active sites and therefore any affects or potential enhancements on soil quality would have already been appropriately dealt during the determination of the relevant planning application, as would the aim of minimising the loss of best and most versatile land. However, via support to additional allocations and/or areas of search in West Sussex, this policy option may result in the loss of best and most versatile land. However, the exact location and grade of agricultural land that might be lost and whether improvements to soil quality through site restoration are possible, will not be known until the planning application stage, therefore effects on this SA Objective are likely to be minor negative uncertain.</p> <p>Minor negative uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
10. To reduce air pollution and to protect and, where possible, enhance air quality.	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, this policy option is likely to have negative impacts on this SA objective due to activities (e.g. lorry traffic) that may negatively affect air quality due to the proximity of sensitive receptors and the distance mineral related traffic has to travel before reaching the Advisory Lorry Route.</p> <p>Furthermore, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex, and increases in air pollution. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			relation to Regulating ecosystem services.
11. To protect and, where possible, enhance water resources, water quality and the function of the water environment.	?	R ?	<p>While this policy option seeks to maintain supplies from permitted reserves and may lead to allocation sites and/or areas of search coming forward which may affect the water resources, water quality or the function of the water environment in West Sussex, at this stage in the planning process it is not possible to determine the impacts of policy options such as this on water quality (surface or groundwater) or water use and efficiency as it will very much depend on sites proposals (location, design, method of working etc.), which would be assessed at the planning application stage.</p> <p>Effects of this policy option on Regulating ecosystem services are uncertain at this stage.</p>
12. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.	+?	R +?	<p>This policy option relates to soft sand extraction and is therefore not expected to have an effect on this SA objective, as sand and gravel workings are classed as water-compatible development and are potentially suitable for all flood zones including 3b, the functional floodplain. However, this also means any sites may have the potential to increase flood capacity and have minor positive effects on this SA objective, although effects would be uncertain as the potential for effects will depend on the exact nature and design, and location of any site allocations/areas of search that come forward, which would not be known until the planning application stage. Therefore, a minor positive uncertain affect is likely on this SA objective.</p> <p>Minor positive uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, existing primary extraction sites will continue to operate, transporting extracted material by road, and any allocated sites/areas of search that come forward will be likely to increase lorry traffic especially given that within West Sussex, materials are mainly transported by road, and to a lesser extent rail. Furthermore, the increased dependence on imports to meet requirements</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
Lorry Route Network.			<p>which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p> <p>This policy option is considered likely to have significant negative effects in relation to Regulating ecosystem services.</p>
I4. To reduce the emissions of greenhouse gases.	+/-?	R +/-?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward, which will therefore have minor positive effects on reducing the emission of greenhouse gases as it supports the maintenance of existing supplies. This therefore potentially reduces the need for additional importation of soft sand into West Sussex. However, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, minor negative effects are also expected due to increases in the emission of greenhouse gases.</p> <p>However, at this stage in the planning process it is not possible to determine the impacts of policy options on their ability to help reduce emissions of greenhouse gases as it will depend on the proposals that come forward and how successfully they are implemented, which would not be known until the planning application stage.</p>

Option D: Supply from alternative sources including marine-dredged material

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
1. To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.	-?	N/A	<p>The policy option supports both the maintenance of supplies from permitted reserves of soft sand, the identification of allocations and/or areas of search in West Sussex beyond the SDNP, and the allowance of imports to meet requirements. This may therefore affect the local amenity and the wellbeing of residents, neighbouring land uses and visitors to West Sussex due to impacts such as dust, noise, vibration and traffic associated with mineral workings. However, effects will be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Protection of health and well-being would be supported by all four of the categories of ecosystem services, but these options are unlikely to have a particular impact or benefit on the</p>
2. To protect and, where possible, enhance recreation opportunities for all, including access to the countryside, open spaces and Public Rights of Way (PROW).	+/-?	C +/-?	<p>The policy option could have minor negative effects on this SA objective as site allocations that could come forward under this policy option or increases in imports could impact upon the amenity of users of PROW or others users of the countryside in the area. Conversely, recreational areas could be enhanced in the long term through the restoration of new mineral sites and so a minor positive effect is also identified. It is unlikely that sites containing existing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts on recreation, or result in the potential to enhance further recreation opportunities. Therefore, this option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>This policy option could have mixed minor positive and minor negative uncertain effects on Cultural ecosystem services.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.	+?	N/A	<p>The policy option is likely to have minor positive effects on this SA objective, as providing support for the maintenance of supplies from existing permitted reserves and identifying sites allocations and/or areas of search that could come forward is likely to have positive effects, as minerals are essential to sustain and enhance the vitality and viability of the local economy. However, these positive effects are uncertain as the policy option also allows for imports to meet requirements which cannot be met from indigenous supplies due to the fact the option is unlikely to ensure a 7 year landbank will be maintained during the plan period. Therefore, the local economy may not directly benefit from the extraction of material that is imported into West Sussex.</p> <p>Protection of the local economy would be supported in particular by Provisioning ecosystem</p>
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.	+/-	S -	<p>This policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and identification of allocations and /or areas of search that could come forward will not be classed as inappropriate development, as this will contribute to the extraction and supply of mineral resources for the needs of society, not limiting the ability to extract resources. However, minor negative effects are also likely as continued extraction from existing permitted reserves or from permitted site allocations/areas of search will not reduce the extraction of virgin materials. Therefore, the policy option is likely to have mixed, minor positive and minor negative effects on this SA objective.</p> <p>It is understood that this policy option primarily seeks to address the issue of the supply of soft sand. However, the option and supporting text included in the policy options document for the policy option (i.e. “this option involves the safeguarding of existing permitted reserves of soft sand”) also relates to minerals safeguarding. It is recommended that this policy option and any resulting policy does not refer to minerals safeguarding and focuses on minerals supply, as minerals safeguarding is addressed in separate policy options.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			Conserving minerals from inappropriate development to ensure sufficient minerals supply could have a negative impact on the Supporting ecosystem services, as minerals contribute to soil formation and nutrient cycling.
5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.	+/-?	C +/-?	<p>This policy option is likely to have minor positive effects on this SA objective as it seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations in West Sussex. Furthermore, in the long term the restoration of sites containing permitted reserves and site allocations and/or areas of search that come forward could lead to positive effects for the landscape. However, minor negative effects are also likely as continued extraction in the short term/long term at exiting sites and future allocated sites/areas of search could result in continued and new impacts on the landscape. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are likely for this policy option in</p>
6. To protect, conserve and enhance biodiversity including natural habitats and protected species.	+/-?	P +/-? R +/-? C +/-?	<p>The policy option is likely to have minor positive effects on this SA objective as the maintenance of supply from existing permitted reserves and working of any allocated sites/areas of search that may come forward may have the potential to achieve net gains for biodiversity during working or restoration via biodiversity enhancement opportunities that may exist. However, the allocation of sites for minerals working and mineral exploration may also have adverse effects on designated sites, protected species or habitats during operation of those sites. The policy option is therefore likely to have mixed, minor positive and minor negative effects on this SA objective. The effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			policy option in relation to Provisioning, Regulatory and Cultural ecosystem services.
7. To protect and conserve geodiversity.	+/-?	C +/-?	<p>This policy option may lead to minor negative effects as the continued extraction of existing permitted reserves and/or working of permitted allocated sites/areas of search may uncover and harm geological interests. However, sites may also potentially contribute to geodiversity by preserving and conserving geological features or making them visible and available for learning opportunities. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor negative and minor positive uncertain effects are considered likely for this policy option in relation to Cultural ecosystem services.</p>
8. To conserve, and where possible, enhance the historic environment.	+/-?	C +/-?	<p>This policy option is likely to have minor negative effects on this SA objective, as the maintenance of supply from permitted reserves and/or working of permitted allocated sites/areas of search could negatively affect the historic environment (e.g. archaeology), heritage assets and their setting as a result of associated mineral activities. However, sites may be able to preserve any uncovered findings and therefore benefit our understanding of the local archaeology or contribute towards the local vernacular. Furthermore, the policy options seeks to prevent the allocation of additional sites or extensions to existing sites within the SDNP, thereby giving protection to key landscape designations and their historic character and setting in West Sussex. The policy option is likely to have mixed, minor positive and minor negative effects on this SA objective. However, the effects would be uncertain as the potential for effects will depend on the exact nature and design of any site allocations/areas of search that come forward, which would not be known until the planning application stage.</p> <p>Mixed minor positive and minor negative uncertain effects are considered likely this policy</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			option in relation to Cultural ecosystem services.
9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile land.	-?	R -?	<p>It is unlikely that sites containing permitted reserves would affect this SA objective as they are unlikely to result in any additional negative impacts as the permitted reserves are located within the active sites and therefore any affects or potential enhancements on soil quality would have already been appropriately dealt during the determination of the relevant planning application, as would the aim of minimising the loss of best and most versatile land. However, via support to additional allocations and/or areas of search in West Sussex, this policy option may result in the loss of best and most versatile land. However, the exact location and grade of agricultural land that might be lost and whether improvements to soil quality through site restoration are possible, will not be known until the planning application stage, therefore effects on this SA Objective are likely to be minor negative uncertain.</p> <p>Minor negative uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
10. To reduce air pollution and to protect and, where possible, enhance air quality.	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, this policy option is likely to have negative impacts on this SA objective due to activities (e.g. lorry traffic) that may negatively affect air quality due to the proximity of sensitive receptors and the distance mineral related traffic has to travel before reaching the Advisory Lorry Route.</p> <p>Furthermore, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex, and increases in air pollution. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification
			relation to Regulating ecosystem services.
11. To protect and, where possible, enhance water resources, water quality and the function of the water environment.	?	R ?	<p>While this policy option seeks to maintain supplies from permitted reserves and may lead to allocation sites and/or areas of search coming forward which may affect the water resources, water quality or the function of the water environment in West Sussex, at this stage in the planning process it is not possible to determine the impacts of policy options such as this on water quality (surface or groundwater) or water use and efficiency as it will very much depend on sites proposals (location, design, method of working etc.), which would be assessed at the planning application stage.</p> <p>Effects of this policy option on Regulating ecosystem services are uncertain at this stage.</p>
12. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.	+?	R +?	<p>This policy option relates to soft sand extraction and is therefore not expected to have an effect on this SA objective, as sand and gravel workings are classed as water-compatible development and are potentially suitable for all flood zones including 3b, the functional floodplain. However, this also means any sites may have the potential to increase flood capacity and have minor positive effects on this SA objective, although effects would be uncertain as the potential for effects will depend on the exact nature and design, and location of any site allocations/areas of search that come forward, which would not be known until the planning application stage. Therefore, a minor positive uncertain affect is likely on this SA objective.</p> <p>Minor positive uncertain effects are considered likely for this policy option in relation to Regulating ecosystem services.</p>
13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the	--?	R --?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward. Therefore, existing primary extraction sites will continue to operate, transporting extracted material by road, and any allocated sites/areas of search that come forward will be likely to increase lorry traffic especially given that within West Sussex, materials are mainly transported by road, and to a lesser extent rail. Furthermore, the increased dependence on imports to meet requirements</p>

SA Objective	SA Score	Will achievement of the SA objective have a benefit or impact on particular ecosystem services?	Justification for Option D
Lorry Route Network.			<p>which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, overall, a significant negative effect is anticipated. However this is uncertain as it will depend on the level of imports that are required to meet the demand in West Sussex, which will not be known until more certainty is gained on the identified site allocations/areas of search for soft sand supply.</p> <p>This policy option is considered likely to have significant negative effects in relation to Regulating ecosystem services.</p>
14. To reduce the emissions of greenhouse gases.	+/-?	R +/-?	<p>This policy option supports the supply of soft sand from permitted reserves and potential site allocations and/or areas of search that may come forward, which will therefore have minor positive effects on reducing the emission of greenhouse gases as it supports the maintenance of existing supplies. This therefore potentially reduces the need for additional importation of soft sand into West Sussex. However, the increased dependence on imports to meet requirements which cannot be met from indigenous supplies is likely to result in increases in lorry traffic transporting material into West Sussex by road. Therefore, minor negative effects are also expected due to increases in the emission of greenhouse gases.</p> <p>However, at this stage in the planning process it is not possible to determine the impacts of policy options on their ability to help reduce emissions of greenhouse gases as it will depend on the proposals that come forward and how successfully they are implemented, which would not be known until the planning application stage.</p>

SA Framework and Assumptions for judging significance of effects of the West Sussex Minerals Local Plan Site Options (taken from the final version of the JMLP SA Report)

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
Social			
<p>I. To protect and, where possible, enhance health, well-being and amenity of residents, neighbouring land uses and visitors to West Sussex.</p> <p>Would the site/policy:</p> <p>Have harmful effects on human health and be sited close to sensitive receptor(s)?</p> <p>Affect amenity through dust and noise (e.g. through blasting/traffic) or vibration?</p> <p>Affect road safety?</p>		<p>Background information affecting assumptions</p> <p>Some minerals sites could have a minor negative effect on protecting the health of local residents, communities and visitors to the County. Dust¹²⁵ from blasting/ drilling and other sources within the site (e.g. haul roads, crushers, stockpiles etc.) may cause concern to residents and communities near to mineral extraction sites. However, research undertaken for the government in 1995¹²⁶ excluded any health effects of dust generated by surface mineral operations (i.e. sand and gravel extraction and crushed rock quarries, as opposed to underground mines). Therefore, it is not considered likely that mineral extraction in West Sussex would give rise to a significant negative effect on health, but minor negative effects may be experienced or perceived by some residents' etc. living or working close to sites.</p> <p>National Planning Practice Guidance for Minerals¹²⁷ states that the relationship of the activities within mineral workings to surrounding land uses, in regards to dust emissions, will vary from site to site. Since the nature of those land uses varies, so will their sensitivity to dust. Additional measures to control fine particles (PM10) to address any impacts of dust might be necessary if, within a site, the actual source of emission (e.g. haul roads, crushers etc.) is in close proximity to a residential property or other sensitive use. Evidence included in the former Annex I: Dust of Minerals Policy Statement 2. and National Planning</p>	<p>Visual analysis of Ordnance Survey (OS) base maps for residential areas, hospitals and faith centres.</p> <p>WSCC data showing location of schools, location of existing minerals and waste sites, and allocated waste sites in the West Sussex Local Plan.</p> <p>Visual analysis of relevant Local Plan maps for areas</p>

¹²⁵ Office of the Deputy Prime Minister (by Air Pollution Group, Q & A guidance for minerals). The Environmental Effects of Dust from Surface Minerals Workings, 1995/.

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>wellbeing and amenity through enhancements?</p> <p>o Create cumulative effects in terms of adverse impacts on environmental quality, social cohesion and inclusion or economic potential?</p>		<p>are controlled and mitigated or removed at source. Therefore it is assumed that mineral extraction at any of the potential sites will be well operated and that mitigation measures implemented should be sufficient to avoid any potential health effects.</p> <p>Mineral sites could also have a minor negative effect on safeguarding the amenity of local residents and communities. This is because all minerals development would result in some level of noise, vibration and light pollution during site preparation, operation and restoration and associated with transport of minerals from the site. Potential impacts on amenity and safety of local residents associated with minerals transport have been considered under SA objective 13 below. Noise and vibration from blasting/drilling and other sources within the site (e.g. haul roads, crushers, stockpiles etc.) may cause concern to residents and communities near to mineral extraction sites. Evidence from Annex 2: Noise of Minerals Policy Statement 2 stated that noise from surface mineral operations can have a noticeable environmental impact and is a common cause of complaint. However, research for the former Department for the Environment, Transport and the Regions (DETR) found that practice on the assessment and control of noise at surface mineral workings had improved since the publication of the earlier Minerals Planning Guidance 11 in 1993. Furthermore, National Planning Practice Guidance for Minerals¹²⁸ states that activities such as soil-stripping, the construction and removal of baffle mounds, soil storage mounds and soil heaps, construction of new permanent landforms and aspects of site road construction and maintenance may give rise to particularly noisy short-term activities. However, increased temporary daytime noise limits should be considered to facilitate essential site preparation and restoration work, and construction of baffle mounds where it is clear that this will bring longer-term environmental benefits to the site or its environs.</p> <p>The extent of noise and vibration effects on local amenity will depend on the type of mineral extracted on the site, the scale of the operations and the type of activities undertaken within the site. For example, noise and vibration may be greater near hard rock sites (e.g. crushed rock) due to the need for blasting prior to excavation, which is rarely needed at sand and gravel or clay operations such as the sites in WSCC.</p>	<p>to Adoption it is (the date and stage of each Local Plan will be referred to in the SA matrices).</p> <p>GIS analysis of a number of existing and potential mineral sites within 1km of existing settlement boundaries.</p> <p>Any relevant information from the WSCC site assessment process.</p>

Accessible at: <http://planningguidance.planningportal.gov.uk/blog/guidance/minerals/assessing-environmental-impacts-from-minerals-extraction/noise-emissions/>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
		<p>Therefore it is assumed that mineral extraction at any of the potential sites will be well operated and that mitigation measures implemented should be sufficient to avoid any potential long term amenity effects.</p> <p>There could be potential for land use conflict where minerals sites are in close proximity to areas planned for future residential development.</p> <p>The NPPF states that local planning authorities should take into account the cumulative effect of multiple</p> <p>++ N/A</p> <p>+ N/A</p> <p>Potential minerals sites which are:</p> <p>Over 100m from sensitive receptors (i.e. residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples) including areas identified or allocated for residential development in Local Plans</p> <p>are considered unlikely to have effects on health and local amenity.</p> <p>Potential sites which are greater than 100m from an existing mineral or waste site, or an allocated waste site in the West Sussex Waste Local Plan are considered unlikely to have a cumulative effect on the local community.</p> <p>0</p> <p>Potential mineral sites which are adjacent to or within 100m of an existing mineral or waste site, or an allocated waste site in the West Sussex Waste Local Plan but over 100m from sensitive</p> <p>Potential minerals sites which are:</p> <p>Within 100m of sensitive receptors (i.e. residential areas, schools, hospitals, faith centres (e.g. churches, mosques, temples) including areas identified or allocated for residential development in Local Plans</p> <p>-?</p>	

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
		<p>are considered likely to have minor negative effects on health due to the potential for dust (PM10) to have a negative effect on the health of local residents, communities and visitors to the County, and minor negative effects on amenity. Although, this is dependent on local circumstances (such as the topography, the nature of the landscape, the respective location of the site and the nearest residential property or other sensitive use in relation to the prevailing wind direction and visibility), and the type of mineral site, the scale of the operations and the type of activities undertaken within the site and potential mitigation measures proposed, which would be assessed at the planning application stage. Therefore, in all cases these effects are minor negative uncertain (-?).</p> <p>In addition, potential sites which are:</p> <p>Within 1km from a settlement, and</p>	
<p>2. To protect and, where possible, enhance recreation opportunities for all, including access to and enjoyment of the countryside, open spaces and Public Rights of Way (PROW).</p> <p>Would the site/policy:</p> <p>Be likely to affect the</p>	<p>--</p>	<p>Background information affecting assumptions</p> <p>All of the potential minerals sites could have negative effects on the amenity of users of Public Rights of Way (PROW), including long distance trails (e.g. South Downs Way, and the Serpent Trail), and other users of the countryside, open spaces and recreational facilities if they are in close proximity to the potential site, by making them less attractive for users or in some cases removing the access (e.g. PROW and cycle routes). This could therefore indirectly affect tourism in the County, particularly in the South Downs National Park. The potential negative effects would arise because all minerals development would result in some level of noise, traffic, and light pollution during site preparation, operations and potentially during restoration as well.</p> <p>There may be some opportunities for enhancement to footpaths/ PROW during development of particular mineral sites. In addition, there may be opportunities to create new recreation areas/open spaces during</p>	<p>GIS data from WSCC for PROW, plus analysis of OS base map for other types of leisure/recreational facilities and open spaces. Analysis of Sustrans Maps 129 will be completed for cycle routes.</p> <p>Any relevant information from the WSCC site</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
amenity of users on PRow, recreation areas/open spaces or other users of the countryside in the area, or affect views and/or tranquillity of these areas? o Provide restoration opportunities for recreation?	<p>Effects on the tranquillity of the area are considered under SA objective 5.</p> <p>++?</p> <p>+</p> <p>0</p>	<p>Potential minerals sites which are:</p> <p>Assessed as having an opportunity for major enhancement of PRow, including long distance trails, or other recreational facilities and/or additional routes to be constructed, as identified by WSCC/SDNPA in the site assessment process for the site</p> <p>could have a significant positive effect on the amenity of users of PRow and other users of the countryside in the County. However, if it is not possible for WSCC/SDNPA to identify opportunities for major enhancement and/or additional routes to be constructed through the site assessment process, it will not be possible to determine this until the planning application stage.</p> <p>Potential minerals sites which have no PRow, including long distance trails, within the site or are:</p> <p>Assessed by WSCC/SDNPA as having a PRow network, including long distance trails, where there is an opportunity for the existing route to be enhanced.</p> <p>could have a minor positive effect on the amenity of users of PRow and other users of the countryside in the County. However, if it is not possible for WSCC/SDNPA to identify opportunities for enhancement through the site assessment process, it will not be possible to determine this until the planning application stage.</p> <p>The restoration of minerals sites is increasingly adopting innovative practice and this could have positive effects on providing recreation opportunities. However, this would be very dependent on the exact nature and proposed design of the restoration of the minerals site, which would</p> <p>Potential minerals sites which are:</p> <p>More than 250m from a leisure or recreational facility or open space, including PRow and long distance trails, or</p> <p>Identified by WSCC/SDNPA in the site assessment process as being a PRow, including long distance trails, but not requiring diversion or enhancement.</p>	<p>assessment process.</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
	-	<p>Potential minerals sites which are:</p> <p>Within 250m of a leisure or recreational facility or open space, including PRow and long distance trails, or</p> <p>Identified by WSCC/SDNPA in the site assessment process as having an impact on the PRow network, including long distance trails, with potential diversion required,</p> <p>Within the SDNPA or AONBs</p>	
	--	<p>Potential minerals sites which:</p> <p>Include a leisure or recreational facility or open space, including PRow and long distance trails, or</p> <p>Are identified by WSCC/SDNPA in the site assessment process as having a major adverse impact on the network with potential closure required.</p> <p>could have a significant negative effect on the amenity of users of PRow and long distance trails, and other users of the countryside in the County, as development of the sites would either</p>	
Economic			
<p>3. To protect, sustain, and where possible, enhance the vitality and viability of the local economy.</p> <p>Would the site/policy: Help the local economy, for example by generating new jobs, and how might implementing the policy impact on local businesses?</p>	<p>++</p>	<p>Background information affecting assumptions</p> <p>The location of mineral sites is unlikely to directly affect local businesses in West Sussex, as it is unlikely that new sites will encourage further investment and growth in the industry. Also, the location of mineral sites is unlikely to be the determining factor in directly affecting tourists' decisions to visit an area, as this will be determined by individual views which will vary. Although, all of the sites could have a direct and indirect positive effect on increasing employment levels during site preparation, operation and restoration, as they are likely to result in a small amount of job creation for local people in both rural and urban areas, thereby encouraging the provision of more local based skills. However, job creation is not expected to be significant within the West Sussex economy; and given that the overall number of mineral sites likely to be developed in the County will not be a large number each year, the total numbers of new employment opportunities likely to be provided within the County is not considered to be significant.</p> <p>N/A</p>	<p>No data needed.</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
more locally based skills and facilities?	+	All sites are considered likely to have a minor positive effect on increasing employment levels.	
Affect tourists' decisions to visit an area?	0	N/A	
Compromise safe operating of commercial aerodromes (i.e. be near to an airfield and through restoration likely to attract large numbers of birds and increase the chance of bird strike)?	-?	Potential minerals sites which are: Within an aerodrome safeguarding area could have minor negative effects on the safe operating of commercial aerodromes/airports if restored to a water-based use that is likely to attract large numbers of birds and increase the risk of bird strike. A ? will be used to denote uncertainty about this effect as it is dependent on the type of restoration proposed and eventually developed on a site, which will not be known until a later stage in the Minerals Local Plan preparation or even at the planning application	
	--	N/A	
4. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.		Background information affecting assumptions New potential mineral sites would not be inappropriate development as they are contributing to the extraction of mineral resources, not limiting the ability to extract resources, and would therefore have a positive effect on this objective, which primarily relates to conserving minerals resources from inappropriate non-minerals development. This is supported by designating resources as Mineral Safeguarding and Consultation areas to safeguard from sterilisation by non-mineral development.	
Would the site/policy:	++	N/A	No data needed.
Reduce the extraction of virgin materials?	+	New potential mineral sites are not classed as inappropriate development, however, these allocations would have a positive effect on this objective as they provide a degree of protection to minerals resources from inappropriate non-mineral development	
Avoid sterilising mineral resources by preventing unnecessary development on or near to mineral resources?	0	N/A	
Require prior extraction if development that would sterilise	-	N/A	
	--	N/A	

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
Environmental			
<p>5. To protect, and where possible, enhance the landscape, local distinctiveness and landscape character in West Sussex.</p> <p>Would the site/policy: Help enable the protection of landscape (particularly AONB and SDNP) and townscape character? Contribute to the restoration of minerals sites, maximising after-use potential for beneficial use (e.g. agriculture, nature conservation, recreation, amenity, water storage, flood management) as appropriate? Facilitate the supply and use of local building materials to protect local character? Affect dark skies from light pollution? Protect and enhance the</p>		<p>Background information affecting assumptions</p> <p>National Parks have statutory protection through the National Parks and Access to the Countryside Act (1949) and the Environment Act (1995). Areas of Outstanding Natural Beauty (AONB) have statutory protection through the Countryside and Rights of Way Act (2000). More than half the County has been designated for landscape conservation, including South Downs National Park, High Weald AONB and Chichester Harbour AONB, which are both partly within West Sussex. The SDNPA is also currently seeking Dark Skies Reserve status for the South Downs.</p> <p>Areas of high landscape quality and the setting of settlements may be affected by the development of minerals sites. In addition, areas with poor landscape character could be enhanced through the creation of high quality restored minerals sites. However, this will not be able to be determined in detail until the planning application stage, when specific proposals about what sort of extraction practices and mitigation measures might be implemented will be available, and judgements will depend upon factors such as: how prominent sites are in the landscape; the level of screening; and the character of the surrounding landscape.</p> <p>All minerals development would result in some level of noise and light pollution during site preparation, operations and potentially during restoration as well (noise impacts are covered under SA Objective 1). Light pollution would be more likely to affect dark skies during winter months when shorter day lengths mean extraction sites may still be operating when it is dark (e.g. late afternoon).</p> <p>The NPPF states that local planning authorities should take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality. This includes the potential for cumulative noise/light effects if more than one site is located within or near the National Park or AONBs.</p>	<p>GIS national datasets from Natural England's MAGIC database.</p> <p>Overall sensitivity and capacity judgements from the WSCC and SDNPA Landscape Capacity and Sensitivity studies.</p>

West Sussex Landscape Sensitivity and Capacity Study for Potential Mineral and Waste Sites (LUC, October 2011); and the Minerals Addendum (LUC, May 2015).

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>tranquillity of West Sussex (e.g. by minimising noise arising from minerals facilities and transport)?</p> <p>o Encourage landscape improvement?</p>		<p>lying within the National Park to take account of more up to date evidence (and any changes in boundary that have been proposed)131. The SDNPA Landscape Architect’s assessment was largely based on the methodology used by the consultants. In determining the landscape sensitivity of each potential mineral site, the consultants’ methodology considered a number of factors which contribute to landscape sensitivity, including: tranquillity (including noise and lighting); remoteness; views and landmarks; visual receptors; landscape designations; natural heritage; historic environment and settings and recreational use of the site. These factors reflect a number of the sub-objectives for SA objective 5, therefore, the Landscape Sensitivity Reports have been used to inform the SA judgement regarding potential effects on this SA objective. These factors also reflect key aspects of West Sussex’s Landscape that indirectly contribute to tourism in the area, therefore, using the landscape sensitivity reports to inform the SA judgment ensures that effects on tourism are considered in the SA. Where recommendations for type of restoration have been made in the Landscape Sensitivity Reports these will also be noted.</p> <p>Aggregate extraction sites are not likely to contribute to providing local building materials to protect local character (due to the nature and use of aggregates). However, building stone sites are likely to contribute to protecting the local character of West Sussex through the supply of local building materials, due to their methods of working and the traditional stones worked at these sites.</p>	
	++	N/A	
		The restoration of minerals sites is increasingly adopting innovative practice and this could have positive effects on landscape character. However, this would be very dependent on the exact nature and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.	
	+?	In addition, building stone extraction sites are likely to have a positive effect on this objective as they will contribute to protecting the local character of West Sussex through the supply of local building materials, due to their methods of working and the traditional stones worked at	
		Potential minerals sites which:	
	0	Have an overall landscape sensitivity judgement of ‘low’	
	-	Potential minerals sites which:	

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
		<p>Have an overall landscape sensitivity judgement of 'medium' or 'low-medium' are considered likely to have a minor negative effect on designated landscapes, local landscape character or tranquillity.</p> <p>Potential minerals sites which:</p>	
<p>To protect, conserve and enhance biodiversity including natural habitats and protected species.</p> <p>Would the site/policy:</p> <p>Have an adverse effect on biodiversity, including the protection of designated sites (e.g. Special Protection Areas, Special Areas of Conservation, Ramsars, Sites of Special Scientific Interest, National Nature Reserves and Ancient Woodland)?</p> <p>Have an adverse effect on locally designated sites which form part of a network of ecosystems?</p> <p>Have an adverse effect on wider habitat networks</p>	<p>--</p>	<p>Have an overall landscape sensitivity judgement of 'high' or 'medium-high'</p> <p>Background information affecting assumptions</p> <p>International and national sites have statutory protection through international and EU conventions (Ramsar, 1971; Bern, 1979; Bonn, 1979), directives (92/43/EC; 2009/147/EC) and national law (Wildlife and Countryside Act, 1981 as amended) and should be conserved and enhanced as outlined in the NPPF.</p> <p>Locally important sites of nature conservation should also be protected under the NPPF, and it will be necessary to consider those sites that are not afforded statutory protection but are of local importance; especially those that provide ecological connectivity (including BAP habitats). In addition, previously developed land will not be assumed to have no biodiversity value. Previously developed land that has been undisturbed for a significant period of time can in some instances have greater ecological value than 'greenfield sites'.</p> <p>Operation of mineral extraction sites can have a number of different impacts on habitats and species either within the boundary of the extraction site or in proximity to the site. Physical loss or damage to habitats can occur within the boundary of the extraction site. Operations within the mineral extraction site that affect water levels and water courses (e.g. through dewatering, diverting water courses or creation of siltation ponds) can affect ground and surface waterbodies downstream of the site. There may also be potential for water pollution e.g. through addition of dust and silts to waterbodies or through accidental spills or run-off of oil from machinery for example.</p> <p>Species can be affected through disturbance such as from noise, light, vibration and human presence. Disturbance effects are generally more likely within or in close proximity to the extraction site. Light pollution would only affect nocturnal species (e.g. bats and some birds), and would be more likely during the winter months when shorter day lengths mean extraction sites may still be operating when it is dark (e.g. late afternoon). Noise and vibration arising from sand and gravel extraction within waterbodies could affect aquatic species, however, it should be possible to avoid or mitigate adverse impacts, for example by</p>	<p>GIS national datasets from Natural England's MAGIC database.</p> <p>Any relevant information from the WSCC site assessment process and HRA.</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>(including BAP habitats) and land used by protected species?</p> <p>o Provide opportunities for enhancing biodiversity and achieving net gains as part of the development or restoration?</p>	<p>++?</p>	<p>It is difficult to assess the potential for significant effects on habitats and species when selecting sites for allocation in the Joint MLP, as this is a strategic decision-making stage, and the level of detailed understanding of presence of habitats and species on a site (e.g. through Phase I habitat surveys) is unavailable (as this would be undertaken at the planning application stage, potentially through a site-specific Environmental Impact Assessment (EIA)). In addition, detailed proposals about what sort of extraction practices and mitigation measures might be implemented will not be available until the planning application stage.</p> <p>Therefore, as an indication of the likelihood of significant negative effects, proximity of designated nature conservation sites to potential mineral sites has been used. As more detailed information from the Habitats Regulations Assessment¹³² is available in relation to potential effects on international nature conservation sites, this has also been drawn upon. Uncertainty will be attached to all effects on this SA objective as effects will very much depend on the design and operation of extraction activities as well as implementation of mitigation measures which would not be determined until planning applications come forward.</p> <p>Note that sites of geological interest are considered under SA Objective 7.</p> <p>The design of and restoration of mineral sites is increasingly adopting innovative practice to contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible. There may be opportunities for sites to contribute towards national</p> <p>N/A – unless significant biodiversity enhancement opportunities through restoration of the minerals extraction site are identified by WSCC in the site assessment process, it is not considered likely that significant positive effects would occur from minerals development at any of the sites. Any likelihood of this occurring would not be known until the planning application stage, when developers have a better understanding of the enhancement</p>	

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
	+?	<p>Potential minerals sites for which:</p> <p>The WSCC/SDNPA site assessment process considers the overall impact on biodiversity is potentially positive because there is unlikely to be any priority habitats or species affected, but good biodiversity enhancement opportunities may exist through restoration of the site</p> <p>could have a minor positive effect on this objective, however these effects would be uncertain as the potential for effects will depend on the exact nature and design of new sites. However, if it is not possible for WSCC/SDNPA to identify positive impacts on biodiversity or</p>	
	0	<p>Potential minerals sites which are:</p> <p>More than 1km from any national or local designated nature conservation site or BAP priority habitat and the Habitats Regulations Assessment concluded no significant effects are likely on international nature conservation sites</p>	
	-?	<p>Potential minerals sites which are:</p> <p>Between 250m and 1km of one or more national or local designated nature conservation sites or include BAP priority habitat and the Habitats Regulations Assessment concluded significant effects are likely on international nature conservation sites</p> <p>are considered more likely to have a minor negative effect on this objective, however these effects would be uncertain as the potential for effects will depend on the exact nature and design of new sites. If the Habitats Regulations Assessment was then able to rule out adverse</p>	
	--?	<p>Potential minerals sites which are:</p> <p>Within 250m of one or more national or local designated nature conservation sites and/or the Habitats Regulations Assessment could not rule out adverse effects on integrity on international nature conservation sites</p> <p>are considered more likely to have significant negative effects on this objective, however these</p>	
<p>7. To protect and conserve geodiversity.</p> <p>Would the site/policy:</p>		<p>Background information affecting assumptions</p> <p>National and locally important sites of geological/geomorphological interest (SSSIs or Local Geological Sites, formerly RIGS) should also be protected under the NPPF. The NPPF states that proposals for any development on or affecting geodiversity sites or landscape areas will be judged. The NPPF also states</p>	<p>The Local Geological Sites dataset provided by the Sussex Biodiversity Record Centre.</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>geodiversity, including the protection of geological features or sites (e.g. Sites of Special Scientific Interest, and Local Geological Sites, formerly RIGS)?</p> <p>Create new geological exposures of education interest?</p> <p>Provide opportunities for geodiversity as part of the development or restoration?</p>	<p>geological interests; and local planning authorities should put in place policies so that high quality restoration and aftercare of mineral sites take place, including for geodiversity.</p> <p>Mineral sites can potentially contribute to geodiversity by preserving and conserving geological features/landscapes that contribute towards the link between people, landscape and their culture. However, due to the methods of extraction and processing, this is more likely at less intensive sites (e.g. building stone) than aggregate sites.</p> <p>++</p> <p>N/A</p> <p>+?</p> <p>0</p> <p>-?</p> <p>--?</p>	<p>The working of and restoration of minerals sites is increasingly adopting innovative practice and there may be opportunities to incorporate and preserve important geological features within the site. However, this would be very dependent on the exact nature, working and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.</p> <p>Potential minerals sites which are:</p> <p>More than 500m from a national site of geological interest (SSSI) or Local Geological Site</p> <p>Potential minerals sites which are:</p> <p>Within 500m of a national site of geological interest (SSSI) or Local Geological Site could have a minor negative effect on this objective. However, this would be very dependent on the exact nature, working and proposed design of the restoration of the minerals site, which would not be known until the planning application stage.</p> <p>Potential minerals sites which are:</p> <p>Within the boundary of a national site of geological interest (SSSI) or Local Geological Site could have significant negative effects on this objective. However, this would be very dependent on the exact nature, working and proposed design of the restoration of the</p>	<p>Any relevant information from the WSCC site assessment process.</p>
<p>8. To conserve, and where possible, enhance the historic environment.</p> <p>Would the site/policy:</p>		<p>Background information affecting assumptions</p> <p>Listed buildings have statutory protection through the Planning (Listed Buildings and Conservation Areas) Act 1990.</p>	<p>GIS national datasets from Natural England's MAGIC database.</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>conservation of features of archaeological and other historic interest in the county, such as conservation areas, listed buildings, scheduled ancient monuments and areas of archaeological potential?</p>		<p>The NPPF requires local authorities to conserve and enhance the historic environment and states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation.</p> <p>The development of minerals sites in proximity to heritage assets could have a negative effect on the setting of these assets. However, as with the landscape and biodiversity SA objectives above, it is difficult to predict the scale of potential negative effects when selecting sites for allocation in the Joint MLP, as this is a strategic decision-making stage, and the level of detailed understanding of the character and sensitivity of heritage assets is unavailable (as this would be undertaken at the planning application stage, potentially through a site-specific Environmental Impact Assessment (EIA)). Detailed proposals about what sort of extraction practices and mitigation measures might be implemented will not be available until the planning application stage.</p> <p>Therefore, as an indication of the likelihood of significant negative effects, proximity of heritage assets to potential mineral sites has been used. Where more detailed information from Authorities' assessment is available this will be drawn upon, including the judgements regarding cultural heritage sensitivity in the Landscape Sensitivity and Capacity studies¹³³ ¹³⁴. Uncertainty will be attached to all effects on this SA</p>	<p>Conservation Areas from WSCC.</p> <p>Any relevant information from the WSCC site assessment process.</p>
	++	N/A	
	+	N/A	
	0	<p>Potential minerals sites which are:</p> <ul style="list-style-type: none"> More than 1km from a Historic Park or Garden or Registered Battlefield More than 1km from a Scheduled Ancient Monument or Listed Building More than 1km from a Conservation Area, or 	

West Sussex Landscape Sensitivity and Capacity Study for Potential Mineral and Waste Sites (LUC, October 2011); and the Minerals Addendum (LUC, May 2015).
Supplement to WSCC Sensitivity Study 2011 (SDNP Landscape Architect 2015).

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
	-?	<p>Potential minerals sites which are:</p> <ul style="list-style-type: none"> Within 1km of a Historic Park or Garden or Registered Battlefield Within 1km of a Scheduled Ancient Monument or Listed Building Within 1km of a Conservation Area, or Have an cultural heritage sensitivity judgement of 'low-medium' or 'medium' in the Landscape Sensitivity and Capacity studies <p>are considered more likely to have a minor negative effect on these assets.</p>	
	--?	<p>Potential minerals sites which:</p> <ul style="list-style-type: none"> Are within or adjacent to a Historic Park or Garden or Registered Battlefield Have Listed Buildings or Scheduled Ancient Monuments present on site Are located within or adjacent to a Conservation Area, or Have an cultural heritage sensitivity judgement of 'medium-high' or 'high' in the Landscape Sensitivity and Capacity studies 	
<p>9. To protect and, where possible, enhance soil quality, and minimise the loss of best and most versatile agricultural land.</p> <p>Would the site/policy:</p> <ul style="list-style-type: none"> o Minimise the loss of the best and most versatile agricultural land? 	++	<p>Background information affecting assumptions</p> <p>The NPPF states that where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land (4 and 5) in preference to that of a higher quality (1, 2 and 3). Furthermore, the NPPF states that local planning authorities should put in place policies to ensure that high quality restoration and aftercare of mineral sites takes place, including for agriculture (safeguarding the long term potential of best and most versatile agricultural land and conserving soil resources). In some instances, depending on the proposed restoration process agreed for sites, soils could be reused during restoration.</p> <p>N/A</p>	<p>GIS national datasets from Natural England's MAGIC database.</p> <p>Any relevant information from the WSCC site assessment process.</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
o Improve the soil quality?	+	N/A	
	0	Potential minerals sites which are: Not within grade 1, 2 or 3 agricultural land	
	-	Potential minerals sites which are: Large (i.e. over 20 ha) and partially within grade 1, 2 or within grade 3 BMV agricultural land; or Small to medium (i.e. less than 20 ha) and entirely within grade 1, 2 or within grade 3 BMV agricultural land	
	--	Potential sites which are: Large (i.e. over 20 ha) and located entirely within grade 1 or 2 BMV agricultural land	
<p>I0. To reduce air pollution and to protect and, where possible, enhance air quality.</p> <p>Would the site/policy: Lead to a change in local air quality? Cause further deterioration of air quality in Air Quality Management Areas? Cause an increase in deposition of pollutants on sensitive designated nature conservation sites?</p>	<p>Background information affecting assumptions</p> <p>Proposals for all types of minerals sites could contribute to increasing air pollution in the County with regards to minerals transportation by road, as well as any air pollution associated with the operation of the sites and processes used such as dust from blasting, crushing and processing. The type and extent of air pollution (e.g. from dust or other emissions) will depend on the type of mineral extracted on the site, the scale of the operations and the type of activities undertaken within the site. For example, intensive handling of hard rocks such as crushed rock (e.g. limestone and crystalline rocks) may produce large amounts of dust due to drilling and blasting. However, softer minerals, such as sand and gravel, can crumble more easily during handling and may produce a greater number of dust particles. Furthermore, the effects of traffic related pollutants (e.g. Nitrogen Dioxide, Carbon Dioxide and Particulate Matter) may differ depending on the mineral worked at sites and the level of output. For example, crushed rock quarries typically have larger annual outputs than sand and gravel sites and may therefore involve more traffic movements within and outside of the sites.</p> <p>However, it is recognised that the mineral sites in West Sussex are predominantly sand and gravel or clay operations.</p>	<p>Analysis of OS data, plus WSCC's list of AQMA locations and the West Sussex Lorry Route Network dataset.</p> <p>Any relevant information from the Minerals Local Plan Transport Assessment (Paul Basham Associates, November 2015) and HRA.</p>	

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
		<p>potentially significant effects on human health and the environment. In addition, many sites will meet the criteria that require a site-specific environmental impact assessment to be undertaken to accompany the planning application, which would look at the potential impacts and mitigation measures in more detail, and influence the conditions placed on the planning permission.</p> <p>Air quality impacts on human sensitive receptors due to dust emissions from the sites themselves are already covered under the assumptions for SA Objective 1 above. The assumptions discussed below for potential effects on this objective therefore relate to air emissions from road transport of mineral only and consider the proximity of sites to the strategic highway network and Air Quality Management Areas (AQMAs) identified by local authorities as areas where existing air pollution is already an issue.</p> <p>Any increases in road transport of minerals will lead to increases in local air pollution and emissions of CO₂. The further vehicles transporting minerals have to travel along local roads (i.e. not on the primary road network), the higher the potential for more localised air pollution as they are likely to travel more slowly on local roads. In addition, if the mineral site is within, or vehicles are travelling through, AQMAs where existing air pollution issues have been identified, there is more potential for negative effects on air quality. Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Volume 11, Section 3, Part 1135 (which was produced to provide advice regarding the design, assessment and operation of trunk roads (including motorways)), a significant effect on air quality would only occur if the annual average daily traffic (AADT) heavy duty vehicle (HDV) flows along particular routes were likely to increase by 200 AADT or more. Therefore, the likely number of HDV movements resulting from an operational mineral site will need to be taken into account.</p> <p>In addition to the impacts on air quality for humans, air pollution is most likely to affect designated nature conservation sites where plant, soil and water habitats are the qualifying features, but some qualifying</p>	

Design Manual for Road and Bridges. Highways Agency. <http://dft.gov.uk/ha/standards/dmr/index.htm>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
		<p>or adjacent to designated nature conservation sites is unlikely to be significant beyond 200m from the road itself. As the specific routes that minerals transport take will not be known until planning applications come forward, the Highways Agency guideline measure of 200 metres from a road beyond which air pollution effects are unlikely to be significant will be applied to those roads likely to be used for minerals transport to and from potential mineral sites, i.e. the primary road network of motorways and A roads that form the West Sussex Lorry Route Network. However, a significant effect would only occur within 200m of the road if the AADT heavy duty vehicle flows along that route were likely to increase by 200 AADT or more. Therefore, the likely number of HDV movements resulting from an operational mineral site will also need to be taken into account. This information has been identified through the Transport Assessment.</p> <p>The potential of each site to reduce the distance minerals travel by road (through the use of more</p>	
	++	N/A	
	+	N/A	
	0	<p>Potential minerals sites which are:</p> <p>Not within 1km of an AQMA or where site traffic is not likely to travel through an AQMA (for human sensitive receptors); and/or</p> <p>Unlikely to result in HDV flows of greater than 200 AADT; and/or</p> <p>the HRA concludes sites will not have an adverse effect on the integrity of international nature conservation sites</p>	
	-?	<p>Potential minerals sites which are:</p> <p>Within 1km of an Air Quality Management Area (AQMA) or where site traffic is likely to travel through an AQMA</p> <p>are considered likely to have a minor negative impact on protecting air quality for human sensitive receptors, although this impact is very dependent on the type of mineral site, likely</p>	

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
	--?	<p>Potential minerals sites which are:</p> <p>Likely to result in HDV flows of greater than 200 AADT; and</p> <p>(For effects on international nature conservation sites only): HDV transport to or from the site along the West Sussex Lorry Route Network is likely to pass within 200m of an international designated nature conservation site sensitive to air pollution</p> <p>have the potential to have a significant negative impact on the nature conservation site through increased deposition of air pollutants, although this impact is dependent on the likely increase in HDV annual average daily traffic flows along the road passing within 200m of the nature conservation site (in combination with HDV movements from other existing and potential mineral sites). However, if the HDV flows are reduced, this will have a significant effect on the nature conservation site.</p>	
<p>11. To protect and, where possible, enhance water resources, water quality and the function of the water environment.</p> <p>Would the site/policy:</p> <ul style="list-style-type: none"> o Affect the quality of water bodies and/or interfere with the flows of these waters, including the potential risk to, and impacts on, the quality of aquifers and groundwater? 		<p>Background information affecting assumptions</p> <p>The Water Framework Directive 136 applies to all surface freshwater bodies (including lakes, streams and rivers), groundwater, groundwater dependent ecosystems, estuaries and coastal waters out to one mile from low-water. It aims to improve inland and coastal waters and protect them from diffuse pollution in urban and rural areas; increase the sustainable use of water as a natural resource and create better habitats for wildlife that lives in and around water.</p> <p>The extent to which a minerals extraction site will affect ground and surface water on a potential site depends on the type of mineral worked, site design and characteristics, and the geological conditions. Mineral sites that are in Source Protection Zone (SPZ) 1 or adjacent to a water body could potentially lead to loss of contaminants or accidental pollution incidents. However, the NPPF states that local planning authorities should set out environmental criteria against which planning applications will be assessed so as to ensure that permitted operations do not have unacceptable adverse impacts on the natural environment, including from impacts on the flow and quantity of surface and groundwater and migration of contamination from sites. Furthermore, potential for adverse effects on water quality will</p>	<p>Analysis of OS base maps for surface water bodies.</p> <p>Relevant water datasets (e.g. SPZs) provided by WSCC from the EA.</p> <p>Any relevant information from the WSCC site assessment process.</p>

The European Water Framework Directive into force in December 2000, and was transposed into UK law by December 2003.

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
	<p>impacts on water supply and quality from minerals operations. Therefore, it is assumed that any minerals extraction operation that might occur in future on a site allocated in the Joint MLP will be undertaken in line with the Environmental Permit, which should help to minimise potential effects on water supply and quality.</p> <p>It will not be possible to assess water use and efficiency at this stage in the planning process, as it will very much depend on the proposal (mineral type, design, method of working etc.), which would be assessed at the planning application stage</p> <p>++ N/A</p> <p>+ N/A</p> <p>0 N/A</p> <p>? At this stage in the planning process it is not possible to determine the impacts of minerals sites on water quality (surface or groundwater) or water use and efficiency as it will very much depend on the proposal (mineral type, design, method of working etc.), which would be assessed at the planning application stage</p> <p>- Sites not within SPZI, but the WSCC/SDNPA site assessment identifies the potential for a minor negative effect due to either surface water bodies, or the site being on a major aquifer.</p> <p>--? Sites within SPZI and/or within/adjacent to a water body have the potential to have a significant negative effect. However, this effect would be uncertain as it would be very dependent on the exact nature, working and proposed design of the site.</p>		
<p>I2. To reduce vulnerability to flooding, in particular preventing inappropriate development in the floodplain.</p>		<p>Background information affecting assumptions</p> <p>Paragraphs 100-105 of the NPPF describe how Local Authorities should apply a sequential, risk based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk by: applying the Sequential Test; if necessary, applying the Exception Test; and using opportunities offered by new development to reduce the causes and impact of flooding. As stated in the National Planning Practice Guidance 137 local authorities should take a sequential approach to</p>	<p>EA Flood Zone maps and WSCC SFRA.</p> <p>Any relevant information from the WSCC site</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>Would the site/policy: Affect the likelihood of flooding or lead to inappropriate development in a flood risk zone (e.g. Flood Zones 2 or 3) contrary to national policy on flooding? Impact on flood defences? Provide opportunities for alleviation/mitigation?</p>		<p>development in Flood Zone 1, followed by Flood Zone 2 then Flood Zone 3. WSCC has undertaken a Strategic Flood Risk Assessment I 38 (SFRA), which includes the Sequential Test for the potential mineral sites, and aims to steer new development to areas with the lowest probability of flooding.</p> <p>Notwithstanding the need to undertake the Sequential Test to inform the selection of sites, site specific Flood Risk Assessments (FRAs) will also be required to be produced by developers/applicants I 39 at the planning application stage to demonstrate how flood risk from all sources of flooding to the development itself and flood risk to other will be managed now and taking climate change into account.</p> <p>Table 2 (Flood Risk Vulnerability Classification) in the National Planning Practice Guidance I 40 outlines the flood risk vulnerability classification. Minerals working and processing (except sand & gravel working) are classed as less vulnerable, which means that they are potentially compatible with all flood zones except for Flood Zone 3b, the functional floodplain I 41. Sand and gravel workings are classed as water-compatible development and are potentially suitable for all flood zones including 3b, the functional floodplain. However, National Planning Practice Guidance I 42 also states that mineral workings should not increase flood risk elsewhere and need to be designed, worked and restored accordingly.</p> <p>Some sites, which may dewater, may hold the potential to store excess water in times of heavy rain, which would be seen as a positive in terms of preventing flood risk. However, this would not be known until the planning application stage. Similarly, whether a site was likely to impact on flood defences would not be known until the planning application stage, as it will very much depend on the proposal (mineral type, design, method of working etc.), location and surrounding environment (e.g. topography) which</p>	

Joint West Sussex Minerals Local Plan, Draft Strategic Flood Risk Assessment Update and Sequential Test of Mineral Sites (WSCC, July 2015).

Available at: <http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/addressing-flood-risk-in-individual-planning-applications/>

Available at: <http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-2-flood-risk-vulnerability-classification/> |41 Available at: <http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-3-flood-risk-vulnerability-and-flood-zone-compatibility/>

Available at: <http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/the-sequential-risk-based-approach-to-the-location-of-development/>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
		<p>for each site and the conclusion from the Sequential Test process carried out in accordance with the NPPF and the PPG. This information has informed the SA judgements for this objective as described below.</p> <p>++</p> <p>+?</p> <p>0?</p> <p>-?</p> <p>--</p>	
<p>13. To minimise transport of minerals by roads. Where road use is necessary, to reduce the impact by promoting use of the Lorry Route</p>		<p>Background information affecting assumptions</p> <p>All mineral sites will involve road transportation of minerals with some involving more movements than others. For example, crushed rock quarries typically have larger annual outputs than sand and gravel sites and may therefore involve more traffic movements within and outside of the sites.</p> <p>However, proximity to rail lines/depots/sidings, rivers/canals or wharves could provide opportunities to</p>	<p>National datasets and OS base map.</p> <p>Lorry Route Network dataset provided by</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
<p>Network.</p> <p>Would the site/policy:</p> <p>Have the potential for rail or water-based access to and from mineral sites?</p> <p>Lead to the production of traffic-derived pollutants, including CO₂, NO₂ and PM₁₀ due to road transport to and from mineral sites?</p> <p>Optimise the use of the Lorry Route Network and reduce the use of rural roads thus reducing the disruption and pollutants caused by HGVs?</p>		<p>transporting minerals within the County.</p> <p>The NPPF states that plans and decisions should ensure developments that generate significant movements can maximise the use of sustainable transport modes; and that plans should protect and exploit opportunities for the use of sustainable transport modes for the movements of goods. As discussed above under SA Objective 10, air emissions from transport of minerals are likely to have more of an effect on the environment and communities than air emissions from the facility itself, therefore, opportunities to reduce road transport of minerals would have positive effects on this objective. The potential for increase in traffic-derived air pollutants due to road transport to and from the potential mineral sites has been assessed under SA objective 10.</p> <p>Direct impacts of lorry traffic (i.e. noise, nuisance, safety, congestion, as opposed to air pollution) on communities relates to how much access is reliant on local roads. Preferred routing strategies for each of the potential mineral sites have been described in the Transport Assessment report undertaken for the MLP143. The MLP Transport Assessment provides an overall conclusion in relation to each site's acceptability in highways terms. The acceptability rating considers the Access and Highway Impact for each site separately to reflect that it may be possible to have an unacceptable access arrangement but a highly acceptable development in terms of traffic impact. The criteria used to determine the overall acceptability of each site are set out in the methodology section of the Transport Assessment. Of relevance to determining the potential impact on this SA objective, and in particular optimising the use of the Lorry Route Network, reducing the use of rural roads and thus reducing the disruption and pollutants caused by HGVs, sites judged as having 'low' acceptability in the Transport Assessment are more likely to have negative effects. This is because these sites have been found to have uncertainties with regards to whether a safe and achievable access into the site can be provided and/or the site location and/or traffic routing may be routed through sensitive receptors, without the possibility of mitigation. Sites with 'medium' acceptability can access the highway network and may have traffic routed through sensitive receptors, but it may be possible to mitigate some of the development traffic through appropriate routing</p>	<p>Any relevant information from the WSCC site assessment process.</p>

West Sussex Minerals Local Plan, Transport Assessment. Paul Basham Associates Ltd, November, 2015.

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
	++	N/A – unless significant rail or water-based access opportunities to and from minerals extraction sites are identified by WSCC/SDNPA in the site assessment process, it is not considered likely that significant positive effects would occur from minerals development at any of the sites. The likelihood of this occurring would not be known until the planning application stage	
	+	N/A	
	0	<p>Potential sites which are:</p> <p>Assessed as having a ‘high’ acceptability rating in the Transport Assessment</p> <p>would have no effect on reducing the impacts of lorry traffic on the environment and</p>	
	-	<p>All sites that do not have opportunities for non-road based transport could have a minor negative effect on this objective.</p> <p>Potential sites which are:</p> <p>Assessed as having a ‘medium’ acceptability rating in the Transport Assessment</p>	
	--	<p>Potential sites which are:</p> <p>Assessed as having a ‘low’ acceptability rating in the Transport Assessment</p>	
<p>I4. To reduce the emissions of greenhouse gases.</p> <p>Would the site/policy:</p> <ul style="list-style-type: none"> o Lead to the production of carbon dioxide or other greenhouse gases from on-site vehicles and 		<p>Background information affecting assumptions</p> <p>The mineral industry (particularly aggregate quarrying) is energy intensive and consequently reducing greenhouse gas emissions and energy consumption, and the industry’s overall carbon footprint in relation to minerals production are important matters. Mineral sites should and do aim to be as energy efficient as possible and implement measures to offset or reduce the size of their carbon footprint, whereby some sites calculate their carbon output per tonne of product. However, it is very difficult to take carbon footprint and therefore potential contributions to and adaptations to climate change into account at this stage in the planning process; as it will depend on the information that proposed developments can</p>	<p>Visual analysis of relevant Local Plan maps for areas planned for future residential development, however, the certainty of these development locations depends on the status of the Local Plan in question, i.e. how close</p>

SA Objectives and sub questions	Score	Justification/reasons for score	Data sources (and limitations)
machinery?	++	N/A	to Adoption it is (the date and stage of each Local Plan will be referred to in the SA matrices). Any relevant information from the WSCC site assessment process.
Reductions in transport distances by supporting the location of mineral extraction sites in proximity to surrounding markets for minerals and to serve local needs?	+	If minerals site is within close proximity (e.g. 10 km) of a strategic development location within the County, it could contribute to reducing transport distances of aggregates for construction.	
	0	N/A	
	?	There are opportunities to use small-scale on-site renewable energy sources to machinery used in the extraction process and/or on-site infrastructure (e.g. buildings/offices), however, this will depend on the proposal, which would be assessed at the planning application stage.	
Encourage the use of renewable or lower carbon energy sources on-site (e.g. through the use of small on-site renewable energy sources, i.e. wind turbines, solar panels)?	-	All sites could lead to the production of carbon dioxide or other greenhouse gases from on-site vehicles and machinery, although crushed rock sites are likely to be more intensive thus having greater effects. Therefore, all sites are likely to have minor negative effects on the production of greenhouse gases from on-site vehicles and machinery.	
	--	N/A	