Wiltshire and Swindon Minerals Core Strategy
Sustainability Appraisal Report for the Submission Draft Document

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Centre for Sustainability (C4S) in association with
Enfusion
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Non Technical Summary

Background

This Non-Technical Summary accompanies the Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) Report\(^1\) of the Wiltshire and Swindon Minerals Development Framework Core Strategy, as required by planning legislation and Government guidance.

SA and SEA assist planning authorities by aiding integration of sustainability considerations into their plans. The purpose of the Core Strategy is to set out the long-term spatial vision for minerals activities in Wiltshire and Swindon and the strategic policies to deliver that vision. It also sets a framework for other development planning documents that will follow at a later date, including the Development Control Policies Document and Site Allocations Document.

During 2005 a scoping process was carried out to identify the key sustainability issues relevant to minerals development in Wiltshire and Swindon. Other plans and programmes were reviewed to develop an understanding of the issues and priorities for Wiltshire and Swindon. Information on the current and future social, environmental and economic characteristics of the County and Unitary Authority Areas was also compiled.

A Framework setting out Sustainability Objectives for the SA/SEA was developed. A Scoping Report, outlining all the information compiled through the scoping process, was sent to a wide range of organisations and also made available on the Wiltshire County Council website. Comments were invited and helping to enhance the Framework.

The Framework of objectives was used to test the sustainability at each stage during the preparation of the Core Strategy. This included a comparative appraisal of Core Strategy Options (as represented in the document Wiltshire and Swindon Minerals Core Strategy Issues and Options Report), and a detailed appraisal of the Core Strategy Preferred Options (June 2006) and the Revised Core Strategy Preferred Options (May 2007).

Where there were opportunities to enhance the sustainability of the emerging policies, recommendations were made. Continued discussions between the planning and sustainability teams led to other recommendations to improve the sustainability of the Core Strategy. Some of these recommendations have been integrated into the

\(^1\) Wiltshire County Council and Swindon Borough Council commissioned the Centre for Sustainability at TRL and Enfusion to progress the SA and SEA work in 2005
The emerging Core Strategy is judged to make a positive contribution to the progression of Sustainable Development Objectives for minerals planning in Wiltshire and Swindon.

The SA/SEA assessment process that has been undertaken is summarised in Figure NTS 1.

Figure NTS 1: Summary of the SA/SEA Process


The Minerals Core Strategy has been prepared jointly by officers from Wiltshire County Council and Swindon Borough Council. It sets out the strategy, vision and implementation programme for minerals developments in the plan area over the period 2006-2026. It has been produced in accordance with the most recent minerals planning guidance that requires plan-makers to focus on developing a sustainable plan that meets economic, social and environmental needs.
Development of the Minerals Core Strategy has been informed by a consultation process involving all key stakeholders and the general public. The final Minerals Core Strategy will be submitted to Government in March 2008.

The Minerals Core Strategy DPD Submission Draft contains a strategic vision and objectives and a series of policies covering the following themes:

- Meeting the need for minerals in Wiltshire and Swindon;
- Secondary and recycled aggregates;
- Non aggregate minerals;
- Collaborative working;
- Safeguarding minerals resources, rail-head facilities and minerals recycling facilities; and
- Managing the impacts of minerals development in Wiltshire and Swindon.

Environmental Issues

The SEA Regulations² require that the Environmental Report describes any existing environmental problems that are relevant to the plan. Examples of those identified for the area include:

- 8% of the areas of all Sites of Special Scientific Interest in Wiltshire are in unfavourable condition and are declining;
- Seven Air Quality Management Areas have been declared in Wiltshire due to high levels of pollutants;
- Overall Wiltshire has high levels of tranquillity, however loss of tranquillity and increased light pollution are areas of concern;
- Recycled highway materials are not currently being used due to lack of storage;

The 2001 census shows a 10% increase in population compared with 1991 in Wiltshire leading to increased need for housing and infrastructure; and

Between 1993/2002 road traffic increased in the South West by 20% leading to slow journey times during peak periods.

**Sustainability Appraisal Framework**

A Sustainability Appraisal Framework was compiled setting out sustainability objectives that aim to focus the assessment on key sustainability issues. The high level objectives are provided below:

- Help make suitable housing available and affordable for everyone;
- Promote stronger more vibrant communities;
- To foster a vibrant, varied economy, with particular emphasis on supporting regeneration projects in market towns;
- Encourage a switch from transporting freight by road to rail or water;
- Protect habitats and species;
- Promote the conservation and wise use of land;
- Protect and enhance landscape and townscape;
- Value and protect diversity and local distinctiveness including rural ways of life;
- Maintain and enhance cultural and historical assets;
- Reduce vulnerability to flooding;
- Keep water consumption within local carrying capacity limits (taking account of climate change);
- Reduce waste produced by mineral development;
- Minimise the use of non-renewable resources and where possible promote the use of renewable resources;
- Minimise land, water, air, light, noise, and generic pollution; and
- Minimise the impacts on climate change.

**Minerals Core Strategy Alternatives**

Alternative approaches to achieving the objectives of the plan have been assessed. Officers from the County and Borough Councils have considered a variety of different strategies and these have been subject to assessment to see how they fit against the sustainability objectives. The assessment has also looked at an extra alternative (the ‘without the plan option’) which has been used as a comparison to show the effect on the SEA objectives that could result if the new plan were not to be implemented.

**Options Considered**

An iterative process was used to identify alternative options. Initial Options were assessed before a set of preferred options were developed in June 2006. These were assessed by C4S on behalf of Wiltshire County Council and Swindon Borough Council. Further work was then undertaken resulting in a revised set of preferred options being developed in April 2007 which were more focused on the specific needs and opportunities that related to the plan area. These revised preferred options were also assessed by C4S. These revised preferred options have since been amended and now make up the policies contained in the final Core Strategy.
Significant Effects Assessment

Each of the plan elements, including the vision, objectives and policies have been evaluated against the sustainability objectives. An assessment of whether the plan element would have a significant positive, a positive, a neutral, an uncertain, a negative or a significant negative effect on each sustainability objective has been made. The assessment also considered:

- Whether the impact will be in the short, medium or long term;
- How likely the effect is to occur i.e. a high, medium or low likelihood of the effect happening;
- At what scale the effect is likely to occur, i.e. within Wiltshire and Swindon, within the South-West region or within the UK and a wider global area; and
- Whether the effect will be temporary or permanent.

The findings of the assessment are as follows:

- **No significant negative** effects have been identified in the assessment of the Core Strategy Submission Draft.
- **Negative effects** (not considered significant) have been identified for the following policies:
  - MCS1 (Meeting the need for Primary Aggregate Minerals): negative effect on minimising resource-use;
  - MCS1 A B C (Strategic Approach to Identifying Future Supplies of Aggregate Minerals, Generic Criteria for Guiding the Location of Minerals Development, Creating a Link Between the Strategy, Site Allocation DPDs and Community Involvement): negative effects against land conservation, landscape, pollution and climate change objectives;
  - MCS3 (The Supply of Cement Raw Materials): negative effects against land conservation, landscape, rural ways of life, cultural assets, water consumption, minimising resource-use and climate change objectives; and
  - MCS4 (The Supply of Building Stones): negative effects on switching to freight transportation, land conservation, water consumption, waste, minimising resource-use and climate change objectives.
- **No significant positive** effects have been identified in the assessment of the Core Strategy Submission Draft.
- **Positive effects** (not considered significant) have been identified for the following policies:
  - Spatial Vision: positive effects on housing communities, switching to freight transportation, habitats and species, land conservation, landscape, rural ways of life, cultural assets, flooding, water consumption, waste and minimising resource use;
  - Strategic Objectives: positive effects on housing, communities, economy, switching to freight transportation, habitats and species, land conservation, landscape, flooding, waste and minimising resource-use;
  - MCS1 (Meeting the need for Primary Aggregate Minerals): positive effects on: housing and pollution;
• MCS1 A B C (Strategic Approach to Identifying Future Supplies of Aggregate Minerals, Generic Criteria for Guiding the Location of Minerals Development, Creating a Link Between the Strategy, Site Allocation DPDs and Community Involvement): positive effects on communities, switching to freight transportation and habitats and species;

• MCS2 (Maximising the Use of Secondary and Recycled Aggregates): positive effects on switching to freight transportation, land conservation, landscape, cultural assets, waste and minimising resource use;

• MCS4 (Supply of Building Stones): positive effect on cultural assets;

• MCS5 (Collaborative Working in the Upper Thames Valley): positive effects on communities, switching to freight transportation, habitats and species, landscape, land conservation, rural ways of life, cultural assets, flooding, water consumption, waste, minimising resource-use and pollution;

• MCS6 (Safeguarding Minerals Resources, Rail Head Facilities and Minerals Recycling Facilities): positive effects on switching to freight transportation and landscape;

• MCS7 (Protection and Enhancement of the Environment in Wiltshire and Swindon): positive effects on communities, habitats and species, landscape, rural ways of life, cultural assets, flooding and pollution;

• MCS8 (Living with Minerals Developments – Protecting Residential Amenity): positive effects on communities, economy, land conservation, landscape and pollution;

• MCS9 (Strategic Approach to Minerals Transportation): positive effects on switching to freight transportation, rural ways of life, waste, minimising resource-use, pollution and climate change;

• MCS10 (Strategic Approach to Restoration and After-use of Minerals Developments): positive effects on communities, economy, habitats and species, landscape, land conservation, rural ways of life and water consumption; and

• MCS11 (Strategy for the Policy Implementation, Monitoring and Review): positive effects on housing, communities, economy, habitats and species, landscape, water consumption and pollution.

- All but two of the Core Strategy Policies has been identified as having uncertain effects on one or more of the SA Objectives. MCS5 (Collaborative Working in the Upper Thames Valley) and MCS11 (Strategy for the Policy Implementation, Monitoring and Review) have been assessed as having no uncertain impacts upon the sustainability objectives.

**Mitigation Measures**

No significant negative effects have been identified in the plan but a range of mitigation measures have been identified to ensure that the plan maximises its positive effects. Some of these measures are appropriate at the strategic level of the Core Strategy, whereas others are more appropriate for lower level planning documents and for the mineral operations themselves.
Measures have also been identified to enhance some of the neutral and positive effects.

The measures include:

- Requiring best practice techniques to minimise greenhouse gas emissions;
- Encouraging a switch to more sustainable transport modes;
- Using natural vegetation for screening purposes;
- Restricting the hours of site operation;
- Monitor water consumption and implement measures to help limit water use; and
- Encouraging phased restoration.

**Monitoring**

There is a requirement in the SEA Regulations to monitor significant environmental effects from the implementation of plans and programmes. This should identify unforeseen adverse effects at an early stage and the need for appropriate remedial action. No significant negative effects have been identified. Measures are being proposed to monitor uncertain and minor negative effects.

Monitoring will make use of existing monitoring arrangements and link with minerals management monitoring regimes where appropriate.

**Next Steps**

When the Core Strategy is adopted, it will be accompanied by an SEA Statement which will explain how the environmental assessment and consultation have influenced the plan making process. The monitoring programme will be also be presented at this stage.

**Further Details**

The main SA Report and technical appendices will be available along with the Minerals Development Framework documents on the Wiltshire County Council website at [www.wiltshire.gov.uk](http://www.wiltshire.gov.uk/).

The County Council, at County Hall, Trowbridge, Swindon Borough Unitary Authority Council Office, Libraries and District Councils will hold copies of the main report and non-technical summary along with the provisional Minerals Development Plan. Hard copies of any of the documents are available on request from Wiltshire County Council.
1 Introduction

1.1 Background to Sustainability Appraisal/Strategic Environmental Assessment

New regulations require planning authorities to replace their local minerals plans with local minerals development frameworks (MDF). Wiltshire County Council (WCC) and Swindon Borough Council’s (SBC) Minerals Core Strategy forms part of the MDF. The document must be subject to both Sustainability Appraisal and Strategic Environmental Assessment under the Planning and Compulsory Purchase Act (2004) and The Environmental Assessment of Plans and Programmes Regulations (2004) which implement European Directive 2001/42/EC, known as the Strategic Environmental Assessment (SEA) Directive.

Both the SA and the SEA processes help planning authorities to fulfil the objective of contributing to the achievement of sustainable development in preparing their plans. This is achieved through a structured assessment of the plan objectives and strategies against key sustainability issues.

Although the requirement to carry out both an SA and SEA is mandatory, it is possible to satisfy the requirements of both pieces of legislation through a single assessment process.

Government guidance for undertaking SEA and for SA of Development Plan Documents details how the SA and SEA should be integrated into one process. The final output of the process is a combined Sustainability Appraisal/Environmental Report published alongside the plan. This report is referred to as the SA Report.

1.2 Wiltshire and Swindon Minerals Development Documents

The purpose of the Core Strategy is to set the long term spatial vision for minerals planning in Wiltshire and Swindon and strategic policies to deliver the vision. The Minerals Local Development Documents (MLDDs) will form part of the County and Borough’s Minerals and Waste Development Framework (MWDF). The Councils will be producing:

- A Minerals Core Strategy DPD;
- A Minerals Development Control Policies DPD;
- An Aggregate Minerals Site Specific Allocations DPD; and
- An Adopted Proposals Map.

This SA Report should be read in conjunction with the Core Strategy Submission Draft Document, referred to as the Submission Draft in this report. The Submission Draft provides the Core Strategy content, including the spatial planning context to minerals planning in Wiltshire and Swindon and the policies that make up the Core Strategy. The Core Strategy will be submitted in March 2008 to Government via the Government Office for the South West and the Planning Inspectorate.

The Spatial Vision for minerals development in Wiltshire and Swindon is shown below.

<table>
<thead>
<tr>
<th>Spatial Vision for Minerals Development in Wiltshire and Swindon 2006-2016</th>
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<tbody>
<tr>
<td>Throughout the period to 2026 minerals development in Wiltshire and Swindon will make a positive and sustainable contribution to the local area. A restoration led approach will result in the implementation of well-designed operations and aftercare provisions that afford protection and enhancement of the environment whilst ensuring that communities are engaged in resolving environmental issues and are active in creating local solutions.</td>
</tr>
</tbody>
</table>


4 “Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents” (ODPM 2005)
All minerals development proposals will be designed to the highest environmental standards and will apply clear objectives to:

- Wherever practicable minimise vehicular movements and promote alternative modes of transport;
- Safeguard and enhance the landscape character and setting of settlements in mineral working areas;
- Robustly protect and enhance sites designated for historic, cultural or environmental importance; and
- Restore land in a phased and timely manner so as to maximise the potential for afteruses.

Recycling and reuse of construction, demolition and excavation waste associated with the use of previously developed land will be maximised, particularly in the Strategically Significant Cities and Towns of Swindon, Chippenham, Trowbridge and Salisbury. In addition, the Councils will actively encourage sustainable construction techniques and the use of alternative building materials in accordance with national, regional and local policies.

A collaborative working arrangement with stakeholders and local planning authorities will ensure that minerals development makes a positive contribution to biodiversity and the local economy, through the creation of high quality habitats and landscapes that can attract a variety of locally and regionally renowned recreational uses. In addition, collaborative working will encompass the forging of stronger links with neighbouring planning authorities with the aim of collectively addressing issues such as the long-term supply of primary aggregates and the management of flood-risk.

As the availability of primary resources in current production areas decline, the Councils will work with the minerals industry and key stakeholders to identify and examine new resources across the Plan area. Consequently, the presence of minerals operations in areas such as the Upper Thames Valley will have been significantly reduced by 2026.

With regard to non-aggregate minerals, the existing chalk and clay quarries near Westbury will have maintained a local supply of essential raw materials for the nearby strategically significant cement plant. During the period up to 2026, the Councils will have worked with the operators of the Westbury facility to determine and assess locational options for the future supply of raw materials to maintain landbanks in accordance with National policy.

The plan will have also ensured that local sources of building stone are available to contribute towards the maintenance and enhancement of locally distinct built environment.

The five strategic themed objectives that have been developed to provide direction towards delivering the vision are as follows:

1. **Managing Mineral Resources**
   To make a sustainable contribution to meeting the need for minerals. The reliance on primary mineral resources in Wiltshire and Swindon will be reduced, firstly through more efficient use of the primary resource and reducing the amount of mineral waste; then the use of recycled and secondary aggregates. Proven mineral deposits which are, or may become, of economic importance will be safeguarded from non-mineral development.

2. **Economy**
   To support opportunities that assist in the economic growth of Wiltshire and Swindon, recognising the important contribution that minerals development can make to the local economy.

3. **Communities and Local Amenity**
   To provide clear guidance to the communities of Wiltshire and Swindon on minerals planning policy and proposals through the pursuit of a collaborative public involvement approach, which contributes to maintaining and/or enhancing the quality of life of people living in proximity to minerals development. The restoration of mineral workings will deliver tangible benefits to the communities of Wiltshire and Swindon.

4. **Environment**
   To protect and enhance the diverse and highly valued natural and historical environment of Wiltshire.
and Swindon, incorporating the landscape character, the setting of local settlements, biodiversity and geological conservation interests, the water environment including flood-risk, and cultural heritage. To reduce and buffer the impacts of climate change, particularly on vulnerable habitats and species. A restoration-led approach to mineral workings will make a positive contribution to Biodiversity Action Plan targets and the implementation of the South West Nature Map. This approach will need to consider the potential for open water restoration to increase the risk of bird strike within Aerodrome Safeguarding Areas and the threat to military and civilian aircraft. Options for sustainable transportation will be encouraged and pursued in order to reduce the environmental impacts of transporting minerals by road across Wiltshire and Swindon.

5. Collaborative Working

To identify, develop and implement opportunities to work with all those with an interest in sustainable minerals planning in Wiltshire, Swindon and the surrounding areas. To address long-term supply issues and environmental concerns, the preparation of joint Local Development Documents will be advocated, where necessary, particularly in the Cotswold Water Park / Upper Thames Valley.

The Core Strategy Submission Draft contains 11 policies covering the following themes:

- Meeting the need for minerals in Wiltshire and Swindon;
- Secondary and recycled aggregates;
- Non aggregate minerals;
- Collaborative working;
- Safeguarding minerals resources, rail-head facilities and minerals recycling facilities; and
- Managing the impacts of minerals development in Wiltshire and Swindon.

1.3 SA/SEA Methodology

The stages of the SA/SEA and Minerals Development Framework are shown in Table 1 below, which take into account ODPM guidance5. This SA Report addresses stages B and C.

<table>
<thead>
<tr>
<th>Minerals Core Strategy DPD Stage</th>
<th>SA / SEA Stages</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Begin document preparation</td>
<td>Stage A: Setting the context, establishing the baseline and deciding on the scope.</td>
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<tr>
<td></td>
<td>- A1: Identify other relevant policies, plans and programmes, and sustainability objectives.</td>
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<tr>
<td></td>
<td>- A2: Collecting baseline information.</td>
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<td></td>
<td>- A3: Identifying sustainability issues and problems.</td>
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</tr>
<tr>
<td></td>
<td>- A4: Developing the SA framework.</td>
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<tr>
<td></td>
<td>- A5: Consulting on the scope of the SA (Scoping Report).</td>
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5 Now the Department for Communities and Local Government (CLG)
### Preparation of Issues and Options (I&O)

**Paper and consultation**

Preparation of preferred options, including consultation on possible preferred option

<table>
<thead>
<tr>
<th>Stage B: Developing and refining options and assessing effects.</th>
</tr>
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<tbody>
<tr>
<td>• B1: Testing the DPD objectives against the SA framework.</td>
</tr>
<tr>
<td>• B2: Developing the DPD options.</td>
</tr>
<tr>
<td>• B3: Predicting the effects of the DPD.</td>
</tr>
<tr>
<td>• B4: Evaluating the effects of the DPD.</td>
</tr>
<tr>
<td>• B5: Considering ways of mitigating adverse effects and maximising beneficial effects.</td>
</tr>
<tr>
<td>• B6: Proposing measures to monitor the significant effects of implementing the DPDs.</td>
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</tbody>
</table>

Consultation on Issues & Options (I&O) paper

November 2005 to January 2006.

Preparation of SA Working Note on I&O

April 2006.

<table>
<thead>
<tr>
<th>Stage C: Preparing the Sustainability Appraisal Report.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• C1 Preparing the <strong>SA Report</strong>.</td>
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<tr>
<th>Stage D: Consulting on the preferred options of the DPD and SA Report.</th>
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<tbody>
<tr>
<td>• D1: Public participation on the preferred options of the DPD and the SA Report</td>
</tr>
<tr>
<td>• D2(i): Appraising significant changes</td>
</tr>
<tr>
<td>• D2(ii): Appraising significant changes resulting from representations</td>
</tr>
<tr>
<td>• D3: Making decisions and providing information</td>
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Formal consultation on Revised Preferred Options and Updated SA Report May/June 2007.

<table>
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<tr>
<th>Stage E: Monitoring the significant effects of implementing the DPD.</th>
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<tbody>
<tr>
<td>• E1: Finalising aims and methods for monitoring.</td>
</tr>
<tr>
<td>• E2: Responding to adverse effects.</td>
</tr>
<tr>
<td>• Preparing the <strong>SEA Statement</strong>.</td>
</tr>
</tbody>
</table>

Submission Draft: March 2008 (this report).


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The documents produced (see Table 1) are available to download on Wiltshire County Council’s website at [http://www.wiltshire.go.uk](http://www.wiltshire.go.uk).

The SA/SEA of the Wiltshire and Swindon MLDDs is being carried out by the Centre for Sustainability (C4S) at TRL and Enfusion to provide an independent assessment of the significant effects of the plan on environmental and sustainability issues.

### 1.4 Compliance with the SEA Directive/ Regulations

The SEA Regulations set out certain requirements for reporting the SEA process, and specify that *“The Environmental Report required by the SEA Directive can be included in an assessment report on the wider effects of the plan or programme, such as a Sustainability Appraisal Report. However it must clearly show that the Directive has been complied with, for example by signposting to enable the components that meet the requirements for the Environmental Report to be readily identified.”* Consequently, the requirements for reporting the SEA process are set out below, and the section of the report that includes each requirement is indicated.

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6 This output is not required by the SEA Regulations but was produced to assist in selecting the preferred options.

7 The SEA Statement is required by the SEA Regulations.
An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes:

- Section 1.2 of this report sets out the contents and main objectives of the Core Strategy document. The relationship with other relevant plans is summarised in Section 2.2 and detail is provided in Appendix A.

The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme:

- Section 2.3 of this report summarises the relevant baseline conditions for sustainability and minerals planning for Wiltshire and Swindon. Appendix B sets out this information in more detail. The likely evolution of current conditions is also summarised in Section 2 and detail provided in Appendix B.

The environmental characteristics of areas likely to be significantly affected:

- Where relevant and available, information regarding particular areas has been included in Section 2. Good practice guidance specifies that the contents and level of detail of information required should be relevant to the particular plan being assessed. The role of Mineral LDDs is to set out a spatial strategy for minerals planning across the whole County. Site specific issues will be relevant during the site allocations process. Accordingly, baseline information is provided at a range of different scales where available and appropriate.

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 (Conservation of Wild Birds) and 92/43/EEC (Habitats Directive):

- Section 3 of this report summarises existing sustainability problems for Wiltshire and Swindon. Issues relating to Natura 2000 sites (designated by the above directives) are outlined in Section 1.7.

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:

- Section 2 outlines the environmental protection objectives relevant for sustainability in Wiltshire and Swindon, and the implications of these objectives for the MLDDs.

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. These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects:

- The SA Framework of objectives presented in Section 4 of this report covers all of the topics in the SEA Regulations, and progresses them through SA objectives. This assures that all of the issues are considered during the assessment of the Core Strategy Policies. The likely effects of the Core Strategy Submission Draft Policies (including environmental effects, as well as an indication of the nature of that effect) are summarised in Section 8 of this report and detailed in Appendix D.

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:

- No significant adverse effects have been forecast. However measures have been outlined to mitigate other adverse effects (see Section 9).

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:

- Sections 5, 6 and 7 summarise the assessments conducted on options considered at earlier stages of the Core Strategy’s development. The detailed assessment of these

- Section 8 provides a summary of the assessment of the Submission Draft Policies. The detailed assessment matrices are presented in Appendix D.
- The difficulties encountered in compiling information are summarised in Section 2.5 and Section 8 of this report.

A description of measures envisaged concerning monitoring in accordance with Article 10:

- Measures envisaged for the monitoring of the sustainability effects (including environmental effects) arising from implementing the Core Strategy Policies are provided in Section 10 of this report.

A non-technical summary of the information provided under the above headings:

- The non-technical summary is set out at the beginning of this report.

Consultation:

- The results of the consultation of the previous SA Report for the MLDDs, and appropriate modifications made, can be found in Appendix C.

1.5 Consultation

Consultation is a mandatory requirement for SEA and is required at more than one stage. To date three consultation exercises have been undertaken.

The SEA Regulations and SA Guidance require that consultation on the scope of the SA/SEA should be undertaken with the four statutory environmental consultees (Countryside Agency, English Nature, English Heritage and the Environment Agency). However, WCC and SBC decided to consult with stakeholders more widely than that statutorily required, to ensure that a wide range of stakeholders were aware of the SA/SEA and could contribute to the development of the Minerals Development Plans. Further information on the consultation process is provided in Appendix C.

**Scoping Report Consultation**

The first round of consultation was undertaken on the Scoping Report for the SA/SEA and took place in August to September 2005. The aim of this consultation was to ensure that all the relevant issues were identified and discussed at an early stage of the process so that they could be addressed during the SA and plan making. The list of those who were consulted and those who responded is included in Appendix C.

**SA Report Consultation**

The second round of consultation was undertaken on the SA Report that accompanied the original Preferred Options Report and took place in June to August 2006. The list of those who were consulted and those who responded are included in Appendix C. At this stage of consultation there was a requirement to consult more widely and to include the public in the consultation process. A Non-Technical Summary was produced in order to present the findings of the SA/SEA in a more accessible format.

**Revised SA Report Consultation**

The third round of consultation was undertaken on the SA Report that accompanied the Revised Preferred Options Report and took place in May to June 2007. The list of those who were consulted, those who responded, along with a summary of the comments received and how they have been addressed are included in Appendix C.

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8 NB: Natural England replaced the Countryside Agency and English Nature in October 2006.
In all three cases amendments to the SA were made as a direct result of the comments received.

1.6 How the SA has influenced the Core Strategy

The interaction between the plan making and sustainability teams at several key stages during the development of the Core Strategy has helped to incorporate sustainability and environmental considerations into the plan. At each stage, recommendations have been made, including suggestions for new policies or revisions to options and objectives. An example is Policy MCS7 which covers the protection and enhancement of the environment. Other changes include additions made to the supporting text of the Core Strategy to provide more clarity on how some issues would be dealt with in other MWDF document. Recommendations have also been adopted to provide a clearer context to the supporting text that accompanies the policies.

1.7 Habitat Regulations Assessment

A Habitat Regulations Assessment (HRA) has been undertaken to determine whether the Minerals Core Strategy is likely to affect the integrity of the Natura 2000 (N2K)\(^9\) and Ramsar\(^{10}\) sites located within and in the vicinity of Wiltshire and Swindon. Through this process it has been determined whether the implementation of the DPD (either alone or in combination with other plans and projects) will be likely to significantly affect N2K and Ramsar sites.

There are 12 N2K and Ramsar sites within the boundary of Wiltshire and Swindon:

SPAs (Special Protection Areas)
- Salisbury Plain
- Porton Down

SACs (Special Areas of Conservation)
- Bath and Bradford on Avon Bats
- Chilmark Quarries
- Great Yews
- Kennet and Lambourn Floodplain
- New Forest
- North Meadow and Clattinger Farm
- Pewsey Downs
- Prescombe Down
- River Avon
- Salisbury Plain

In addition, there are 12 Natura 2000 sites within a 10km radius of the Wiltshire and Swindon border:

SPAs (Special Protection Areas)
- Avon Valley
- Dorset Heathlands
- New Forest
- Solent and Southampton Water

SACs (Special Areas of Conservation)
- Dorset Heathlands
- Fontmell and Melbury Downs
- Hackpen Hill
- Kenney Valley Alderwoods
- Mendip Woodlands
- Mottisfont Bats
- River Lambourne
- Solent Maritime

\(^9\) These are sites which are designated by the EC Directive on the Conservation of Wild Birds 79/409/EEC and the EC Directive on the Conservation of Natural Habitats of Wild Fauna and Flora 92/43/EC.

\(^{10}\) Government guidance also requires that Ramsar sites (which support internally important wetland habitats) and are listed under the Convention on Wetlands of International Importance (Ramsar Convention 1971) are included within HRA/AA.
A HRA Screening Report was completed for the Minerals Core Strategy\(^{11}\) in April 2007 and the statutory consultee Natural England was consulted on the findings. The HRA Screening Report was also placed on wider public consultation alongside the DPDs\(^{12}\). The report considered the impacts of the strategies, whether these impacts were likely to have significant effects on the N2K sites and the possibility of in-combination effects from other plans and programmes.

The screening identified that significant effects were possible at nine N2K sites due to the Minerals Core Strategy. These potential effects were primarily due to the anticipated proximity of the minerals activities to N2K sites and the known sensitivities/ vulnerabilities of the receiving environment. In summary, the key impacts identified in the screening process were:

- Air quality issues – potentially impacting Salisbury Plain SAC, Porton Down SPA, North Meadow and Clattinger Farm SAC and the New Forest SAC/SPA/Ramsar;
- Water quality issues and impacts on hydrology - potentially impacting the River Avon SAC, North Meadow and Clattinger Farm SAC, the Avon Valley SPA;
- Land take and the disturbance to foraging and flightpaths – potentially impacting the Bath and Bradford on Avon Bats SAC, Chilmark Quarries SAC and Mottisfont Bats SAC; and
- Habitat loss and fragmentation – potentially impacting the North Meadow and Clattinger Farm SAC and Chilmark Quarries SAC.

The nine sites identified during the screening process were then taken forward into a full Appropriate Assessment. These sites include:

- Avon Valley SPA/ Ramsar
- Bath and Bradford on Avon Bats SAC
- Chilmark Quarries SAC
- Mottisfont Bats SAC
- New Forest SAC/SPA/Ramsar
- North Meadow and Clattinger Farm SAC
- Porton Down SPA
- River Avon SAC
- Salisbury Plain SAC/SPA

The Appropriate Assessment shows that the Minerals Core Strategy provides strong policy protection for designated sites and the spatial intent for minerals sites, as directed by the strategy, will lead to no significant effect on the integrity of 7 N2K sites considered (Avon Valley SAC, Bath and Bradford on Avon Bats SAC, Chilmark Quarries SAC, Mottisfont Bats SAC, New Forest SPA/Ramsar, Porton Down SAC, Salisbury Plain SAC/SPA). Recommendations for these sites, where necessary, focus on the need for lower level DPDS and site level design, construction and operation to be cognisant of the sensitivities of the designated site interest features.

Where potential for significant effect exists, this relates primarily to site specific hydrological connectivity and the recommendations for these sites (North Meadow and Clattinger Farm SAC and the River Avon SAC) note the need for policy wording to be robust, and also

\(^{11}\) A joint HRA was undertaken for Wiltshire and Swindon’s Minerals and Waste Core Strategies.

suggest mitigation measures to be incorporated into subsequent DPDs and planning consents as appropriate.

1.8 Geographic and Temporal Scope

The spatial scope for the assessment is the County of Wiltshire and the Unitary Authority of Swindon. However, the assessment has also taken into account the potential impacts that could affect the environment outside the immediate area (i.e. impacts on Hampshire, Somerset, Bath and North East Somerset, the New Forest, South Gloucestershire and Gloucestershire).

The SA/SEA has examined three temporal scales:

- Short term effects: effects expected in the next 1-10 years;
- Medium term effects: effects expected in the next 10-20 years; and
- Long term effects: effects expected in the next 20+ years (after the life of the plan).
2 Environmental and Sustainability Planning Context

2.1 Introduction
This section summarises the findings from the SA scoping stage. The scoping process seeks to ensure that the Sustainability Appraisal encompasses the key sustainability issues relevant to Wiltshire and Swindon in the context of the development planning system, especially with regard to minerals planning.

The section provides the environmental and sustainability context by:

- Examining the relationship of the development plan documents with other plans and programmes, to identify all relevant environmental protection objectives and identify potential conflicts to be addressed within the plan making process;
- Assembling data on the current and future state of the environment (baseline) for the environmental and sustainability topics which may be affected by the plan. The analysis of data can later be used for establishing the effects of the development plan documents; and
- Identifying the present and future environmental problems and opportunities in order that development plan documents can address these issues as far as possible.

2.2 Relationship of the MDF with other Plans and Programmes
The SEA Regulations (see Schedule 2) state that an Environmental Report should outline:

- The plan’s relationship with other relevant plans and programmes; and
- 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.

To fulfil this requirement, a review of the relevant plans, policies and programmes has been carried out to identify environmental objectives which may provide constraints or synergies with the plan being formulated. This review has covered international conventions and EU policies through to local plans and strategies. This chapter provides a summary of the main outcomes of the review, with the full review appearing in Appendix A.

2.2.1 Summary of the Review
The MLDDs have many direct and indirect relationships with other plans, programmes and policies at an international, national, regional and local level. At an international level there are several conventions and EU policies which the MLDDs need to consider. These include the Convention for the Protection of Architectural Heritage of Europe and the European Convention on the Protection of Archaeological Heritage, which set common policies for the protection and conservation of architectural and archaeological heritage. The European Landscape Convention and the EU Thematic Soil Strategy need to be considered as both may have implications for the MLDDs.

The Habitats Directive is a major European law that aims to protect biodiversity through the conservation of natural habitats and wild plants and animals. The Directive provides for the creation of a network of protected areas across the European Union known as ‘Natura 2000’ sites (comprising of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)). Articles 6 (3) and 6 (4) of the Directive require an Appropriate Assessment to be undertaken on proposed plans or projects which are not necessary for the management of the site, but which are likely to have a significant effect on one or more Natura 2000 sites. MLDDs will need to determine whether an Appropriate Assessment is required in relation to their plans.

The Water Framework Directive is another major European law which requires all Member States to achieve ‘good ecological status’ of inland water bodies by 2015. The Directive also requires the development of River Basin Management Plans. MLDDs will need to consider
what the implications of these plans will be, and importantly be flexible enough to take account of them once they are adopted.

As a result of the Water Act 2003, dewatering of mines and quarries which is currently exempt will need a transfer licence (as of October 2008) for the abstraction of water. This is to ensure that they are managed appropriately and that any impacts on the environment are taken into account.

At a national level, minerals development is guided by Mineral Policy Guidance Notes (MPGs) and their replacements Mineral Policy Statements (MPSs). In terms of aggregate minerals, (mainly sand and gravel in Wiltshire and Swindon’s case) development is guided by MPS1. In policy terms the forecast provision of aggregate is governed through a process of regional apportionment (both hard rock and sand and gravel). Revised “National and Regional Guidelines for Aggregates Provision in England, for the period 2001-2016” was published by ODPM in June 2003.

In June 2003, Government asked the South West Regional Assembly (SWRA), advised by the Regional Aggregates Working Party (RAWP) and Mineral Planning Authorities (MPA) to carry out a new sub-regional apportionment to 2016. This sub-regional apportionment essentially divides the regional apportionment between MPAs in the region on the basis of past production. An initial sub-regional apportionment for the South West Region (‘Scenario 1’) was completed by the South West RAWP in October 2003. However, this sub-regional apportionment process has been subject to a debate with recognition that the sub regional apportionment submitted to Government in October 2003 is not considered sustainable in the long term by the South West RAWP (see Box 1).

Box 1: Letter of advice to SWRA from the South West RAWP

“SWRAWP considers that initially the apportionment of primary land won aggregates should be based on a scenario which maintains the status quo. This scenario (Scenario 1) represents a pragmatic approach because it is based on the existing pattern of supplies and recognises the extent of existing planning commitments to extraction (planning permissions and preferred area resources). At the same time SWRAWP has recognised the need to consider a shift in this supply pattern because of the potential environmental implications of maintaining the present pattern of production which will require the release of further land for extraction in the identified shortfall areas. At present, however, the information necessary to set out an alternative approach is not in place”.

(October 2003 letter from Mark Jones to Peter Brown)

This approach is consistent with the MPS1. This guidance note states that it might be appropriate to carry out an initial sub-regional apportionment on the basis of recent production. It then notes that alternatives can be examined before deciding on a preferred option. This decision should take account of the likely environmental impact of the alternative especially on areas of international and national landscape or conservation designations, and the impacts on local population.

In recognition of the above approach the SWRA commissioned a review of the sub-regional apportionment for the Region13. This study addressed the shortfalls within the South West and examined ways to mitigate unacceptable environmental aspects of future workings.

The review established a hybrid scenario which consists of the following changes, compared to Scenario 1 (where there was an identified shortfall in Wiltshire and Swindon of 18.4m tonnes of sand and gravel):

- Further increasing the use of construction and demolition waste arisings as aggregates, especially in higher value applications such as concrete;

Increasing the use of marine dredged aggregates, particularly from existing South Coast licence areas to replace land-won sand and gravel, especially in Dorset;

- Minimising the necessity to substitute natural sand and gravel with crushed rock, because of the transport impacts and increased cement requirements involved, and also because of the potential conflict with water resources in limestone aquifers;

- Minimising the necessity for sand and gravel extraction within the most sensitive areas - i.e. those within or adjacent to national and international designations;

- Anticipating major objections (particularly on the grounds of bird-strike risks to MOD facilities) to future sand and gravel extraction in the Cotswold Water Park area;

- Avoiding further permissions for Carboniferous Limestone extraction within the Forest of Dean (with a resulting increased output from such quarries in South Gloucestershire and perhaps in South Wales to substitute for the shortfall); and

- Exploring the use of fiscal measures to stimulate the increased use of china clay aggregates within the Region (but not to implement this immediately).

Further work is needed before this review can be adopted. This should include a review of known and potential sand and gravel resources within Wiltshire and Swindon, Dorset and Gloucestershire (the so called ‘sand and gravel shortfall areas’). It should also include a detailed assessment of the extent to which these resources could be worked recognising the following:

- Using best practice mitigation techniques;

- Without adverse effects on environmental designations;

- Other major planning restrictions; and

- The risk of bird-strike to MOD facilities.

There are other plans and programmes that the MLDDs have an indirect relationship. These include local action plans such as the Wiltshire Biodiversity Action Plan and the Cotswold Water Park Biodiversity Action Plan which the MLDDs can contribute positively to in terms of after use of minerals sites. Other examples include Local Development Frameworks (LDFs); the Regional Spatial Strategy (RSS) which should provide an integrated, strategic approach, with regional and sub-regional priorities for housing and other development that are formulated alongside those for environmental protection and minerals. The RSS should lead to a concentration of development in Swindon and other Principal Urban Areas (PUAs) within the Region and this would also have implications for the transport of minerals.

Table 2 provides a list of all the other planning documents that were reviewed during the initial stages of the SA/SEA process, and which has been updated as new documents have been published.

**Table 2: Other Plans and Programmes Reviewed**

<table>
<thead>
<tr>
<th>International</th>
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<tbody>
<tr>
<td>EU Habitats Directive (92/43/EC)</td>
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<tr>
<td>Kyoto Protocol on Climate Change</td>
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<tr>
<td>The Convention on Biological Diversity, Rio de Janeiro 1992</td>
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<tr>
<td>Ambient Air Quality and Management Directive (66/62/EC)</td>
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<tr>
<td>The Johannesburg Declaration of Sustainable Development 2002</td>
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<td>European Spatial Development Perspective 1999</td>
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<tr>
<td>Århus Convention (Decision 2005/370/EC)</td>
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<tr>
<td>Nitrates Directive (91/676/EEC)</td>
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<tr>
<td>Waste to Landfill Directive (99/31/EC)</td>
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<tr>
<td>European Landscape Convention 2004</td>
</tr>
</tbody>
</table>
- Convention for the Protection of the Architectural Heritage of Europe 1985
- EU Directive relating to the assessment and management of environmental noise (2002/49/EC)
- Environment 2010: Our Future, Our Choice (EU Sixth Environment Action Programme)

**National**

- PPS1 – Delivering Sustainable Development (ODPM, 2005)
- Planning and Climate Change – Supplement to PPS1 (CLG, 2007)
- PPG 2 – Green Belts (as amended, ODPM, 2001)
- PPS 3 – Housing (as updated, ODPM, 2005)
- PPS 7 – Sustainable Development in Rural Areas (ODPM, 2004)
- PPS 9 – Biodiversity and Geological Conservation (ODPM, 2005)
- PPS 10 – Planning for Sustainable Waste Management (ODPM, 2005)
- PPS 11 – Regional Spatial Strategies (ODPM, 2004)
- PPS 12 – Local Development Frameworks (ODPM, 2004)
- PPG 13 – Transport (ODPM, 2001)
- PPG 14 – Development of Unstable Land (DoE, 1990)
- PPG 15 – Planning and the Historic Environment (DoE, 1994)
- PPG 16 – Archaeology and Planning (DoE, 1990)
- PPG 17 – Planning for Open Space, Sport, and Recreation (ODPM, 2002)
- PPS 23 – Planning and Pollution Control (ODPM, 2006)
- PPG 24 – Planning and Noise (DoE, 1994)
- MPS 1 – Planning and Minerals and associated Good Practice Guidance (ODPM, 2006)
- MPG 2 – Applications, Permissions and Conditions (ODPM, 1998)
- MPS 2 – Controlling and Mitigating the environmental effects of mineral extraction in England (ODPM, 2005) (supersedes MPG11)
- MPG 7 – Reclamation of Mineral Workings (ODPM, 1996)
- MPG 10 – Provision of raw material for the cement industry
- National and Regional Guidelines for Aggregates Provision in England, for the period 2001-2016 (ODPM 2003)
- Securing the Future: The Government’s Sustainable Development Strategy (DEFRA, 2005)
- Wildlife and Countryside Act 1981 (as amended)
- Countryside and Rights of Way Act 2000 (CRoW)
- The Urban Waste Water Treatment (England and Wales) (Amendment) Regulations 2003
- Good Practice Guide on Planning for Tourism (ODPM, 2006) (supersedes PPG21)
- UK Biodiversity Action Plan (1992)
- Climate Change: The UK Programme (DEFRA, 2000)
- The Historic Environment: A Force for Our Future (DCMS, 2001)
- Communities Plan (Sustainable Communities: Building for the Future) (ODPM, 2003)
Table 3 provides information on how the plan should address issues raised by these other plans and programmes.
<table>
<thead>
<tr>
<th>Issue</th>
<th>How the MLDDs should address the issue</th>
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</thead>
<tbody>
<tr>
<td>Air quality and noise</td>
<td>MLDDs should include consideration of how site management can positively contribute to air quality and noise especially through heavy goods vehicles (HGV) management policies. The plan should have regard for PPG24 when developing policies, particularly with regard to site selection, design, site management and monitoring. Site selection should also take into account air quality impacts where possible. The MLDD needs to include air quality policies for instance with regard to dust, and emissions from machinery and vehicles.</td>
</tr>
<tr>
<td>Climatic factors</td>
<td>The plan should have regard to climate change when developing policy options. The SA of the plan should contain objectives for reducing emissions and coping with the effects of climate change. The MLDDs could contribute to UK greenhouse gas reduction targets, for instance through encouraging industrial efficiency, procurement of renewable energy, and more sustainable transport of materials and personnel. The proximity principle in particular needs to be built into site selection for the MLDDs. Climate change also has the potential to lead to increased flood risk.</td>
</tr>
<tr>
<td>Human health and safety</td>
<td>The plan should take account of the need to conserve green areas for informal and formal recreation, and to site development away from communities, where possible, to minimise those affected by air (inc. dust), noise, and vibration. The plan should consider how restoration and after-uses could be designed to contribute to improved levels of physical fitness for local communities. Green and/or open space has been found to have positive benefits for health(^{14}), including an increase in life expectancy and a decrease in health complaints.</td>
</tr>
<tr>
<td>Population</td>
<td>The plan should pay due regard to the targets set for housing by the South West Regional Spatial Strategy. It should help provide and contribute towards making Swindon an economically prosperous place, without detracting from its environment.</td>
</tr>
<tr>
<td>Landscape, open space and</td>
<td>The MLDDs should take into account PPG 17 and the Good Practice Guide on Planning for Tourism in preserving the quality of open space and hence avoiding the adverse impacts on areas like the Cotswold AONB. Proposed new mineral sites must take account of the CRoW Act and should not, where possible, hinder accessibility to open country and common land. The plan should aim to reduce the impacts on agricultural land of mineral developments and take into account the objectives of the North Wessex Downs and Cotswold AONBs particularly relating to landscape and natural resources.</td>
</tr>
<tr>
<td>recreation</td>
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<tr>
<td>Cultural heritage</td>
<td>The MLDDs should be committed to PPG 15 and PPG 16 objectives for the effective protection of the historic environment and archaeological remains through site selection. It should also take into account the strategic aims of the South West Cultural Strategy, including encouraging access and participation, improving the quality and relevance of the region's cultural facilities and activities and celebrating the regional identity and rich diversity of the South West's cultural life and traditions.</td>
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<thead>
<tr>
<th>Issue</th>
<th>How the MLDDs should address the issue</th>
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<tbody>
<tr>
<td><strong>Biodiversity, fauna, flora and soil</strong></td>
<td>The MLDDs should accept the primacy of nature conservation objectives and pay particular regard to international, national and locally designated sites habitats and linear habitat structures. If developments that impact upon protected species or designated sites are necessary, then compensation measures and mitigation is required. Mitigation should be pro-active through site selection, timing, and consideration of alternatives. In particular, attention should be paid to the Biodiversity Action Plans and Geodiversity Action Plans for Swindon, Wiltshire (as it stands, there are no GAPs in Wiltshire and Swindon), and the Cotswold Water Park as well as the UK and South West Biodiversity Action Plan, with minerals operations encouraged to adopt their own Biodiversity Action Plans. The River Avon SAC Conservation Strategy should be consulted if mineral developments fall within the SAC boundaries. A Habitats Regulation Assessment should be undertaken to assess whether the MLDDs will have a significant effect on any Natura 2000 sites. The restoration of old mineral working sites provides an opportunity to create habitats prioritised in local Biodiversity/Habitat Action Plans. The MLDDs should be developed bearing in mind the objectives, targets, and indicators contained within the South West Biodiversity Implementation Plan.</td>
</tr>
<tr>
<td><strong>Water pollution and flooding</strong></td>
<td>The MLDDs should ensure that potential contaminated runoff from mineral working sites and associated developments are considered, along with the impacts of mineral developments on groundwater in their vicinity. The MLDDs should have regard to PPS 25, through ensuring minerals operations do not increase flood risk in sensitive areas, and through ensuring minerals operations (for instance in riverbed gravel areas) are not threatened by flooding. Liaison with the Environment Agency is recommended. Plans should also require efficiency in water use by mineral extraction operations. A Level 1 Strategic Flood Risk Assessment (SFRA) has been prepared.</td>
</tr>
<tr>
<td><strong>Material assets</strong></td>
<td>The MLDDs should take into account the waste reduction, recovery and recycling targets contained with the Council Directive 1999/31/EC on the Landfill of Waste and Waste Framework Directive, when considering waste from minerals developments. Alternative options need to be tested as part of the MLDDs considering efficient resource use and use of recycled / secondary materials. The Plan needs to consider the potential minerals resource requirements needed to pursue the objectives of the Regional Economic Strategy and Regional Sustainable Development Framework for the South West.</td>
</tr>
<tr>
<td><strong>Sustainable development / environmental policy</strong></td>
<td>Local Authorities should consider how their plans are addressing the four pillars of sustainable development by including relevant sustainability objectives both for the plan and the SA. This is expected to be a challenge in the case of the MLDDs due to exacting regional requirements and environmental constraints including the three Areas of Outstanding Natural Beauty (AONBs). Strategies that planners need to be aware of when developing the Plan include: The South West Regional Environmental Strategy, The Governments Sustainable Development Strategy, PPS1, the EU Sixth Environment Action Programme, and the Johannesburg Declaration of Sustainable Development (2002).</td>
</tr>
<tr>
<td><strong>Minerals policy</strong></td>
<td>The MLDDs must make allowance for the principles of MPS1 and MPS2 through local development policy in particular through the selection of suitable plan objectives and through site selection. The MLDDs will need to include policies that require a consideration of detailed matters such as the economic, environmental, nature conservation, agricultural, landscape, traffic, site restoration and other effects of the proposal that</td>
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<tr>
<td>Issue</td>
<td>How the MLDDs should address the issue</td>
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<td>are relevant to the planning decision.</td>
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<td></td>
<td>The sub-regional apportionments of mineral provision as relevant to the Revised MPG6 and its sustainability as examined in the SA, should be taken into account within the MLDDs, as should the provisions for reclamation of mineral workings as covered by MPG7.</td>
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<tr>
<td></td>
<td>The plan may need to include a review of known and potential sand and gravel resources within Wiltshire and a detailed assessment of the extent to which these could be worked, using best practice mitigation techniques, without significant adverse effects on environmental designations, other major planning restrictions, and the risk of bird-strike to MOD facilities.</td>
</tr>
<tr>
<td>Spatial policy</td>
<td>The MLDDs must take into account various Planning Policy Guidance Notes, ensuring wherever possible that mineral developments do not compromise the openness of green belt land, take into consideration its impacts on traffic through transportation of materials and personnel, and avoiding adverse impacts on rural and urban communities (for example through maintaining a high-quality environment and providing local economic benefits). The Plan should encourage the use of renewable energy and the use of secondary and recycled aggregates. Potential pollution risks from mineral developments should be tackled in line with PPS23.</td>
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<td></td>
<td>At a regional and local level, the Plan will need to consider the resource requirements imposed by the Wiltshire Structure Plan and Swindon Borough Local Plan. These spatial plans may also have implications for possible resource sterilisation which will need to be considered within the MLDDs.</td>
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<td></td>
<td>Environmental Objectives within Local Plans to do with specific designated areas must also be taken into account. These include the New Forest National Park, AONBs, SACs, and Cotswold Water Park.</td>
</tr>
<tr>
<td>Other policy</td>
<td>In line with the Aarhus Convention, public consultation and access to information supporting the decision-making process must be introduced in the procedures for the drawing up of the Plan in respects of matters covered by the legislation and Directives mentioned. The SEA Directive requires that public consultation is carried out on the Draft Plan and its accompanying Environmental Report.</td>
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<td></td>
<td>The South West Regional Assembly believes that local level appraisals may be more efficiently and effectively carried out if LPAs adopt a similar framework of sustainability objectives as used in the SSA Appraisal Framework document, when undertaking their appraisals.</td>
</tr>
</tbody>
</table>

### 2.2.2 Relevant Environmental Objectives

A set of SA/SEA objectives and indicators were developed to help determine the significant effects of the plan. The review of plans and programmes was used to help identify the following topic areas where objectives were needed (see Table 4).

<table>
<thead>
<tr>
<th>Issue</th>
<th>Relevant objectives</th>
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<tbody>
<tr>
<td>Air quality and noise</td>
<td>* Minimise emissions to air; and</td>
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<tr>
<td></td>
<td>* Minimise nuisance from minerals working and HGV traffic (including the effects of noise).</td>
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<tr>
<td>Climatic factors</td>
<td>* Encourage the use of sustainable transport options for minerals;</td>
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<td></td>
<td>* Where possible, adopt the proximity principle when siting facilities;</td>
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<tr>
<td></td>
<td>* Minimise the impact of mineral workings through implementing effective measures to control emissions to air; and</td>
</tr>
<tr>
<td>Issue</td>
<td>Relevant objectives</td>
</tr>
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</tbody>
</table>
| Human health and safety | • Maintain or where possible enhance the quality of life for people affected by mineral working and/or ancillary development;  
• Ensure robust consideration is given to the proximity of mineral workings and/or ancillary development to developments and individual properties; and  
• Protect rights of way, open space and common land. |
| Population | • Ensure that sub regional aggregate apportionment is met to ensure adequate materials for house building. |
| Landscape, open space and recreation | • Ensure that future quarrying proposals within AONBs are only permitted for cases of overriding national need and when alternative sources outside the AONBs have been fully considered;  
• Reduce visual intrusion from mineral working and/or ancillary development;  
• Ensure effective restoration of all mineral sites and areas affected by mineral working;  
• Protect and improve the quality of the countryside in proximity to mineral working and/or ancillary development; and  
• Maintain and enhance access to the countryside for residents and visitors. |
| Cultural heritage | • Protect designated and, where possible, non-designated sites and monuments of cultural/archaeological importance. |
| Biodiversity, fauna, flora and soil | • Avoid minerals development which would impact on sites of international or national importance;  
• Avoid minerals development on identified sites of county/local importance, BAP habitats and other habitats of notable ecological value;  
• Avoid the effects of minerals development on populations of protected or notable species; and  
• To enhance biodiversity through the restoration and creation of habitat to contribute to BAP targets for restoration and creation. |
| Water pollution and flooding | • Reduce risk of flooding (of mineral developments and as a consequence of mineral developments);  
• Minimise adverse impacts on water resources at all stages of mineral working through effective site design and management; and  
• Protect and where possible improve surface, groundwater and drinking water quality. |
| Material assets | • Minimise the amount of waste produced per tonne of saleable mineral; and  
• To reduce reliance upon primary, land-won minerals in favour of increasing the contribution made by secondary and/or recycled materials. |
| Sustainable development / environmental policy | • None (already covered by other objectives). |
| Minerals policy | • Make a sustainable contribution to meeting Wiltshire and Swindon's sub-regional apportionment. |
| Spatial policy | • None (already covered by other objectives). |
| Other policy | • None (already covered by other objectives). |

Further details are provided in Section 4 on how the SA/SEA objectives were selected.
2.3  Current and Future State of the Environment

The Regulations require that the SA Report includes an examination of the current state of environment and its likely evolution without implementation of the plan.

SA Guidance suggests a practical approach to data collection, recognising that information gaps for future improvements should be reported as well as the need to consider uncertainties in the data. The collection of baseline information is continuous throughout the plan making process, and the baseline has been added to as new information has become available. The aim is to only collect relevant and sufficient data to allow the potential effects of the plan to be adequately forecast.

The baseline data provides an evidence base for identifying sustainability issues in Wiltshire and Swindon, as well as a mechanism for identifying alternative ways of dealing with the issues. The information has helped the development of the SA Framework, and has provided a basis for predicting and monitoring the effects of the Plan. In order to assess how the MLDDs will contribute to sustainable development, it is essential to understand the present economic, environmental and social circumstances in the County, and how they may progress without implementation of the Plan. Forecasting of future trends can be highly uncertain, however key trends identified from the available baseline data are outlined within the summaries below.

Alongside the baseline data collated to inform the SA/SEA process an Evidence Base and Monitoring Framework Report has been developed by Wiltshire County Council and Swindon Borough Council to support the main Development Plan Documents. This report provides information on the spatial context of the plan area, including detail on spatial planning and sustainable development, population, housing, the economy, transport, landscape, cultural heritage, habitats and biodiversity and the environment. The second and third sections of the report provide information on the need for waste management and the need for minerals resources in Wiltshire and Swindon. The Evidence Base has been drawn on by the SA/SEA team to help inform their assessment work. The Evidence Base is available on the Wiltshire County Council website.

2.3.1 Methodology

Information was compiled from a variety of sources including the relevant national, regional, county and local datasets and resources. The tables in Appendix B set out the information under the topics listed in the SEA Directive (Schedule 2), to demonstrate legislative compliance. The tables contain the following information:

- The type of information, i.e. the subject;
- Data source - indication of source reliability;
- The current local situation - to assess against comparators or targets, where available;
- Comparators or thresholds and targets - a point of reference to which local data may be compared, how far is the current situation from established thresholds and targets;
- Local trends - to assist in the prediction of the likely future state of the plan area and whether a particular situation is improving or worsening;
- Issues - identification of potential positive/negative issues for sustainability, including sensitivity/ importance; reversibility/ performance; ability to offset/remedy; cumulative/ synergistic effects; and
- Any comments about the data itself.

2.3.2  Air Quality

There are no Air Quality Management Areas (AQMAs) declared in Swindon, but in Wiltshire there are seven AQMAs. Five of these cover sections of roads in Salisbury whilst the remaining two are in Westbury and Bradford on Avon (West Wiltshire). In Salisbury there have been recent changes to the locations of the AQMAs, with the Wilton Road AQMA being
revoked, and an additional central Salisbury AQMA being declared in Exeter Street. The AQMAs are:

West Wiltshire DC
- Westbury (NO₂) (Sections of Haynes Rd and Warminster Rd); and
- Bradford on Avon (NO₂ & PM₁₀) (Masons Lane, Market St, Silver St, St Margaret’s St).

Salisbury DC
- Brown St/Winchester St (NO₂);
- Fisherton St (NO₂);
- Milford St (NO₂);
- Minister St (NO₂); and
- Exeter St (NO₂).

Whereas the Salisbury and Westbury AQMAs have been notified on the basis of high NO₂, the Bradford on Avon AQMA has also been notified for particulates (PM₁₀). This is largely due to the canyon effect caused by the presence of tall buildings at the bottom of the valley which trap the pollution created by the heavy traffic passing through the town.

No AQMAs have been declared in either Kennet or North Wiltshire Districts. There are no automatic air monitoring sites within the county, the nearest sites being at Bath, Bristol, Somerton and Bournemouth.

2.3.3 Biodiversity, Flora and Fauna

European Designations

Wiltshire and Swindon cover an important area of biodiversity interest, containing either in full or part, 10 Special Areas of Conservation (SAC) and 2 Special Protection Areas (SPA), these being areas of European designation. The location of these sites is shown in Figure 1. The primary reasons for the selection of these sites as being of European importance are shown in Appendix B.

National and Local Designations

There are 136 Sites of Special Scientific Interest (SSSIs) and 7 National Nature Reserves (NNRs) in Wiltshire and Swindon, and the area also has 12 Local Nature Reserves (LNRs). In addition there are 60 Regionally Important Geological or Geomorphological Sites (RIGS) (Wiltshire only) and approximately 1,500 County Wildlife Sites (CWS) (Wiltshire & Swindon).

Natural England reports on the condition of SSSIs, grading them into six categories. The Government has set a Public Service Agreement for 95% of SSSI to be in the top two categories by 2010. The figure for Wiltshire in 2008 was 87.83% which shows an improvement over the 86.89% reported on the Natural England website, prior to some of the site condition information being updated. Table 7 indicates the condition of SSSIs in Wiltshire.

<table>
<thead>
<tr>
<th>% Area meeting PSA target</th>
<th>% Area favourable</th>
<th>% Area unfavourable recovering</th>
<th>% Area unfavourable no change</th>
<th>% Area unfavourable declining</th>
<th>% Area destroyed / part destroyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>87.83%</td>
<td>54.22%</td>
<td>33.61%</td>
<td>4.47%</td>
<td>7.71%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Table 5: Condition of SSSIs within Wiltshire

Source: Natural England, complied in 2008

Other Biodiversity

The Wiltshire Biodiversity Action Plan (BAP) includes nine habitat action plans and one species action plan (bats). Of the habitats within Wiltshire, chalk grassland is one of the most important, with the county holding over 50% of the UK’s resource of flower rich chalk grassland.

The Swindon BAP includes 14 habitat action plans and one species action plan, whilst the Cotswold Water Park BAP includes action plans for eight habitats and nine species.

Despite the dominance of chalk downland in certain areas of the county, Wiltshire has a wide variety of habitat types, and it encompasses parts of nine of the English Nature Natural Areas. Natural Areas are bio-geographic zones which reflect the geological foundation, natural systems and processes, and wildlife.

In Swindon and Wiltshire, 3.6% of the area is covered by ancient woodland, compared to over 2% of the land area in Great Britain.

A Regional Nature Map has been developed by the South West Regional Biodiversity Partnership which identifies areas of opportunity for habitat creation. For the Minerals
Development Framework SA/SEA this map provides context to help guide potential habitat enhancement and creation opportunities\(^\text{16}\).

### 2.3.4 Climatic Factors

The UK Climate Impacts Programme (UKCIP, 2002) has identified that global temperature has risen by 0.6°C since the beginning of the twentieth century, and that over the last 30 years winters have been getting warmer and summers drier. In the South-West, 8 of the 10 warmest years since 1855 have occurred since 1990. This trend is set to continue and on current trends average global temperatures will rise by 2-3°C within the next 50 years (UKCIP, 2002). Annual average precipitation across the UK may decrease slightly by between 0-15% by the 2080s and the seasonal distribution of precipitation will change, with winters becoming wetter and summers becoming drier (UKCIP, 2002).

The transport system is now the largest source of greenhouse gas emissions in the UK, and has shown a steady increase since 1990, unlike the industrial and domestic sectors which now have emissions lower than the 1990 base year (Sustainable Development Indicators, 2007). The plan will need to consider how the transportation of minerals could be made more sustainable to reduce greenhouse gas emissions.

To help improve Wiltshire’s performance with regard to reducing its impact on climate change, Wiltshire County Council has joined the Local Authority Carbon Management Programme being run by the Carbon Trust. This programme provides councils with support and guidance to help them achieve carbon emissions savings from assets such as buildings, vehicle fleets, street lighting and landfill sites. As WCC develops actions to implement the programme, these may feed into future monitoring arrangements for the Minerals Sustainability Appraisal.

### 2.3.5 Cultural Heritage

Wiltshire contains nearly 20,000 archaeological sites, including the combined World Heritage Sites of Stonehenge and Avebury, Salisbury Cathedral, and the more recent industrial archaeological features such as Box Tunnel and the Kennet and Avon Canal. The county has 12 National Trust properties which attract large numbers of visitors.

The Stonehenge World Heritage Site covers 2,600 hectares, and includes over 400 scheduled ancient monuments. The Avebury site includes the remains of the largest stone circle in the British Isles, as well as the largest prehistoric mound in Europe (Silbury Hill), whilst the stone circle at Stonehenge is the most sophisticated in the world and was erected between circa 3000BC and 1500BC. The county contains nearly 20,000 archaeological sites of interest ranging from prehistoric through to Roman and medieval times. Wiltshire also contains one of England’s 43 Registered Historic Battlefields at Roundway Down, where the Royalists defeated the Parliamentarians during the Civil War in 1643.

Figure 2 indicates the locations of the designated heritage assets within Wiltshire and Swindon, excluding listed buildings.

\[^{16}\text{http://www.swenvo.org.uk/nature_map/Wiltshire.asp}\]
The Wiltshire Structure Plan 2011 gives priority for preserving and enhancing the special character of 22 settlements. There are also approximately 14,000 listed buildings, 10 Historic Parks and Gardens and more than 250 Conservation Areas.

### 2.3.6 Human Health

One objective of the Sustainable Community Strategy (2007) is to actively promote the health of residents, and seek to reduce local health inequalities. Currently Wiltshire has a lower Standardised Mortality Ratio (SMR) than the national average for six of the seven major causes of death, although for road traffic accidents (which is reported separately) Wiltshire is significantly higher than average.

The 2001 census recorded that 6.6% of Wiltshire residents described their health as ‘not good’ (South-West 8.5%), with Wiltshire also recording a lower proportion of ‘people experiencing a limiting long-term illness’ than the South-West. However the trend for this second indicator has shown an increase in both Wiltshire and the South-West.
The NHS Health Profile for Wiltshire\(^7\) describes that on average people in the County live longer than the average in England, with life expectancy for males and females higher than the national average. A lower proportion of people feel ‘in poor health’ than the England average (5.1% in Wiltshire compared to 7.8% in England).

### 2.3.7 Landscape

Wiltshire’s landscape is of great importance on a national scale. There are three Areas of Outstanding Natural Beauty (AONBs) that cover 43% of the county (Cotswolds, North Wessex Downs, and Cranborne Chase and West Wiltshire Downs), with the south-east tip of the county also being part of the New Forest National Park. Wiltshire has also designated Special Landscape Areas. Figure 3 shows the locations and extent of these areas.

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\(^7\) NHS Health Profiles (2007) [http://www.communityhealthprofiles.info/](http://www.communityhealthprofiles.info/)
Landscape Character

The landscape character of the area is anything but uniform, with 11 of the Countryside Agency Landscape Character Areas featuring to a greater or lesser extent within the county border. Figure 4 shows the location and extent of these areas. This national classification takes a broad brush approach to defining landscape character within England, and local studies have also been undertaken to classify the landscape in more detail.

The three most dominant national Character Areas within Wiltshire are:

**Avon Vale:** This is an undulating clay vale cut through by numerous westward flowing tributaries of the River Avon. The area contains a wide range of wildlife, historic and landscape features. Gravels and other alluvial deposits occur along the wide river corridor and calcareous grassland and stone walls occur on higher land in the east. Westwards, the landscape is open and generally arable with few hedgerows or hedgerow trees.

**Berkshire and Malborough Downs:** This is an extensive area of chalk extending from the edge of Salisbury Plain and Devizes in the west, across a band of chalk to Wantage in the north and the River Thames in the east. The dominant landscape is large-scale open rolling chalk downland characterised by intensive arable farming, sparse woodland cover and few hedgerows and hedgerow trees.

**Salisbury Plain and West Wiltshire Downs:** This is an elevated, open and extensive chalk plateau dissected by the tributaries of the Hampshire River Avon. The area includes parts of the Cranborne Chase and West Wiltshire Downs AONB and the Wessex Downs AONB. The core area of Salisbury Plain has expansive tracts of calcareous grassland with scattered scrub and large arable fields bounded by very sparse hedgerows at the fringes.

Information on trends relating to changes in landscape is summarised for each of the landscape character areas in Appendix B. This information has been generated through the Countryside Agency’s ‘Countryside Quality Counts’ programme.
Tranquillity and Light Pollution

Part of the appeal of the rural nature of Wiltshire, particularly within the AONBs, is the tranquillity provided in these locations. The results of the 2006 tranquillity study published by the Campaign to Protect Rural England (CPRE) showed Wiltshire to be in country’s top ten most peaceful areas\(^{18}\). Figure 5 shows how tranquillity decreased from the early 1960s through to the early 1990s (darker areas – more tranquil) with Figure 6 showing the results from the 2006 study.

\(^{18}\) [http://www.swenvo.org.uk/environment/tranquillity.asp#new_map](http://www.swenvo.org.uk/environment/tranquillity.asp#new_map)
2.3.8 Material Assets including Waste
Overall waste production in Wiltshire and Swindon has shown a steady increase in recent years. Although there was a small decrease in the amount of municipal waste arising in 2005/06 than 2004/05 mainly due to increased recycling initiatives throughout the County and
Borough Levels are, however, expected to grow at a rate of 4% for Wiltshire, and 3% for Swindon per annum. Trends in household recycling have shown improvement, reaching approximately 31.6% in Wiltshire and 28% in Swindon in 2005/06. This implies a need for new waste management facilities in order to meet future requirements for waste recovery rates as well as disposal capacity.

Of the construction, demolition and excavation wastes produced in the south west region, 51% were recovered through recycling in 2003 (ODPM/ Wiltshire and Swindon Minerals Development Framework Forum 2004). This compares favourably to the figure of 28% for 200119.

2.3.9 Population

Demographics

At the 2001 Census the population of Wiltshire was 432,793, this showing a 10% increase from the previous census in 1991. Swindon’s population was 180,051 (10.5% increase), whilst in comparison the South-West region showed a 6.9% increase over the same period.

Wiltshire’s population currently stands at 451,300 and is estimated to rise to 516,100 by 2026 (WCC and SBC, 2007). The State of the Countryside in the South-West 2004 (Countryside Agency) reports that between 1992 and 2002 each of the region’s 31 rural local authority areas showed a rise in their population. North Wiltshire and West Wiltshire showed the largest increases of over ten percent. Future population growth to 2026 is predicted to be unevenly distributed within the plan area, with most growth to be in West Wiltshire and Swindon (WCC and SBC, 2007).

Social Exclusion

Of the 149 county and unitary authorities in England, Wiltshire is ranked as the 139th least deprived in the 2004 Index of Multiple Deprivation (IMD), whilst Swindon is ranked at 102. At a district level the indices show that between 2000 and 2004 the Wiltshire Districts have all become less deprived in relation to other districts and unitary authorities in England. North Wiltshire is the least deprived district in the county, featuring in the top 10 least deprived districts in England based on the average score for all the wards. However there are pockets of deprivation in the county which are masked by the overall prosperity of the districts, and both Trowbridge and Salisbury contain areas which are in the 20% most deprived in England.

Swindon has higher levels of deprivation than all the Wiltshire districts, however trends in the deprivation indices are generally positive.

Employment

In 2004, there were 427 employed in mining and quarrying, representing 0.15% of the working population of Wiltshire and Swindon. There has been a decline in manufacturing employment in Wiltshire from 20% in 1998 to 15.5% in 2001. The two largest employment sectors are ‘public administration, education and health’ (25.0%) and ‘distribution, hotels and restaurants’ (24.8%). Wiltshire County Council is the largest civilian employer with approximately 7,000 staff across the county, and the military also have a large presence, particularly in the south of the county.

Unemployment rates showed a decline from the 2001 census (1.97%) to June 2003 when the figure stood at 2.790 (1.1%). This compares favourably to regional and national comparators (2001 census – South West 2.57%, England 3.35%).

Unemployment levels in Swindon are higher than those for Wiltshire, but remain lower than the regional and national averages.

19 Further baseline information for waste can be found in the Minerals and Waste Development Framework Evidence Base (2008) available at www.wiltshire.gov.uk
2.3.10 Soils and Minerals

Chalk dominates the geology in the south and east of Wiltshire, whilst in the north of the county the sand and gravel deposits in the Cotswold Water Park area are subject to the highest levels of mineral extraction.

The highest concentration of extraction is in the Cotswold Water Park where the main aggregates sites are located. The Cotswold Water Park has been quarried for sand and gravel for over sixty years with varying ecological impacts. Despite this, the Water Park is still of national nature conservation importance for wintering & breeding wetland birds and must be protected.

There are currently 23 active mineral workings in Wiltshire, and of these, 9 produce sand and gravel, 3 produce chalk, 4 extract clay and 7 produce building stone (limestone and small amounts of sandstone). The highest concentration of current extraction is concentrated in the Cotswold Water Park where the main aggregates sites are located. Among the impacts are those from HGV traffic (mud on roads in winter), dust (summer) and noise.

Figure 7 shows the main sand and gravel producing quarries in and around Wiltshire and Swindon.

![Figure 7: Main Sand and Gravel Producing Quarries in and around Wiltshire and Swindon](Source: WCC and SBC, 2007)
The County also has 10 dormant (sand and gravel / building sand / crushed rock) and 5 temporarily inactive (sand and gravel / building sand / crushed rock / chalk) quarries. The majority of these are surface mined but some take the form of extensive underground mine complexes\(^{20}\).

### 2.3.11 Transport

In the period 1993 to 2002 road traffic in the South-West increased by 20%. Whilst traffic levels continue to rise, the rate of increase in 2002/03 (1.3%) was lower than in the previous two years, although it was still higher than that recorded across England as a whole (0.8\%)\(^{21}\). In Wiltshire the car remains the major mode of transport, with the number of cars increasing by 92\% between 1981 and 2001.

In Wiltshire the Freight Action Plan has been reviewed and updated by the Freight Quality Partnership for Wiltshire as part of the development of the Local Transport Plan 2006/7 - 2010/11. This will have an affect on how HGVs, including those associated with mineral workings, will use the highway network.

Minerals operators within Wiltshire are heavily reliant on HGVs for the transportation of minerals due to the lack of viable alternative options (WCC and SBC, 2007). Within the Cotswold Water Park, the Western Spine Road has been opened to remove freight from the local settlements. Development of an Eastern Spine Road to serve the new minerals sites to the east of the A419T has been discussed but has not proceeded (WCC and SBC, 2007).

The Wiltshire and Swindon Rail Aggregate Depot (RAD) Study (2003) highlighted that there is limited capacity at the Wootton Bassett RAD and reported that there was a potential need for an additional facility within the plan area. Since the RAD study the development of a second depot has begun at Key Point in South Marston (WCC and SBC, 2007).

### 2.3.12 Water Resources

Similar to the South-West as a whole the chemical and biological river water quality in Wiltshire has shown a gradual improvement between 1995 and 2003, although there are some variations (e.g. biological quality in Kennet has declined). The trends are also similar for the level of nitrates and phosphates. Once again there are exceptions. Salisbury District, which is dominated by the catchment of the Hampshire Avon, has the best results for biological and chemical river water quality of all the Wiltshire Districts, whereas for nitrates and phosphates the results are mixed. Ogbourne in Wiltshire has been designated as a Nitrate Sensitive Area.

Within Wiltshire, there are 6 Catchments Abstraction Management Strategies of varying status. Two areas are over abstracted meaning that at recent abstraction levels there may be environmental impacts on the environment during low river flows. Another two have no water available i.e. conditions on the licences issued restrict abstraction during low flows. Abstraction for public water supply is contributing to low river flows within four catchments in the Wessex Water region. This is affecting the fishery, appearance and biodiversity interest of the rivers concerned, with the Wyley and Malmesbury Avon being those affected within Wiltshire. As a result, the Low Flow Solutions Project has been set up, with Wessex Water, English Nature, the Environment Agency and Ofwat. These measures include maximising the use of water supply from Bristol Water and seeking additional water from Wimbleball reservoir in Somerset, so that the low flow rivers are used as sources for abstraction only as a last resort. It is likely that climate change will exacerbate problems with water resources in the area.

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\(^{20}\) Further baseline information for minerals can be found in the Minerals and Waste Development Framework Evidence Base (2008) available at [www.wiltshire.gov.uk](http://www.wiltshire.gov.uk)

\(^{21}\) South West Barometer (South West Observatory, May 2005)
Environment Agency maps summarising the assessments of water availability for winter and summer both show that the majority of areas in the South-West region where there is an unacceptable flow regime\textsuperscript{22} are in Wiltshire.

A Level 1 Strategic Flood Risk Assessment (SFRA) has been completed for the M\&WDF\textsuperscript{23} in accordance with Planning Policy Statement 25: Development and Flood Risk. As the Minerals Core Strategy identifies broad locations where development may be considered in principle, the SFRA reviewed the potential sites allocations to date.

The assessment of the potential minerals allocations sites within the M\&WDF study area identified that the majority of the sand and gravel sites have a high percentage of the site area located within areas at risk of flooding (Flood Zones 2 and 3\textsuperscript{24}). However, sand and gravel workings are classified as ‘Water Compatible’ and therefore development is acceptable in principle. WCC and SBC will still be required to undertake the Sequential Test, outlined in PPS 25, to ensure the impact on floodplain storage capacity and flow pathway is maintained throughout the life cycle of the mineral allocation site.

### 2.4 Evolution of the Baseline without the Plan

Where trend data was available for the baseline information it has been included in the tables in Appendix B and summarised under each topic in the previous sections. This trend data shows how the baseline could evolve in the absence of introducing a new Minerals Development Framework.

Wiltshire has a growing population, a trend that is likely to increase under all likely future growth scenarios, with growth especially in the four Strategically Significant Cities and Towns of Swindon, Chippenham, Trowbridge and Salisbury (Draft SW Regional Spatial Strategy\textsuperscript{25}). This growing population will put increasing pressure on building materials, especially aggregates such as sand and gravel. The pressure on development in the region and the county is reflected in the sub regional sand and gravel apportionment for Wiltshire which was published by the SW Regional Assembly and RAWP in 2003. Table 6 shows that over the period 2001 – 2016, unless Wiltshire produces more sand and gravel extraction sites, there is likely to be a shortfall of 18.4 million tonnes (in the plan period).

#### Table 6: Sand and Gravel Shortfall

<table>
<thead>
<tr>
<th>MPA</th>
<th>5 Yr. average production expressed as a % of overall regional production (97-01)</th>
<th>Amount (million tonnes)</th>
<th>Annual Expression (million tonnes/yr)</th>
<th>Permitted Reserves 2001 (million tonnes)</th>
<th>Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devon/Somerset/Cornwall</td>
<td>20.57</td>
<td>21.8</td>
<td>1.36</td>
<td>15.39</td>
<td>6.41</td>
</tr>
<tr>
<td>Dorset</td>
<td>34.29</td>
<td>36.35</td>
<td>2.27</td>
<td>27.2</td>
<td>9.15</td>
</tr>
<tr>
<td>Gloucestershire</td>
<td>17.15</td>
<td>18.18</td>
<td>1.13</td>
<td>11.8</td>
<td>6.38</td>
</tr>
<tr>
<td>Wiltshire and Swindon</td>
<td>27.98</td>
<td>29.66</td>
<td>1.85</td>
<td>11.26</td>
<td>18.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>99.99 (100)</strong></td>
<td><strong>105.99</strong></td>
<td><strong>-</strong></td>
<td><strong>65.65</strong></td>
<td></td>
</tr>
</tbody>
</table>

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\textsuperscript{22} [http://www.environment-agency.gov.uk/commondata/acrobat/wr_sw.pdf](http://www.environment-agency.gov.uk/commondata/acrobat/wr_sw.pdf)

\textsuperscript{23} Minerals and Waste Framework Level 1: Strategic Flood Risk Assessment (Scott Wilson, 2007)

\textsuperscript{24} As defined in Table D.1 of PPS25: Development and Flood Risk available at: [http://www.communities.gov.uk](http://www.communities.gov.uk)

\textsuperscript{25} [http://www.southwest-ra.gov.uk/nqcontent.cfm?a_id=836](http://www.southwest-ra.gov.uk/nqcontent.cfm?a_id=836)
2.5 Difficulties Encountered

Unavoidably there are gaps within the information provided due to the scale and availability of data. In some cases information was not available for the Wiltshire area, for example, climate change data was only available at the regional level. Information on past or predicted future trends was often not readily available and therefore has not been included.
3 Environmental and Sustainability Issues, Opportunities and Priorities

3.1 Introduction
The SEA Regulations state that the environmental problems experienced in the area under study should be reported. ODPM guidance extends this requirement to sustainability issues (including both problems and opportunities). This section describes sustainability problems, opportunities and issues that the plan needs to address. These have been identified through:

- Discussions with Wiltshire County Council and Swindon Borough Council officers;
- Review of the baseline data, especially where targets are not on track to be met or trends are negative;
- Tensions/inconsistencies with other plans, programmes and sustainability objectives; and
- A review of the potential sustainability effects of mineral extraction (especially sand and gravel extraction). The majority of information in this section was taken from the Good Quarry Website (http://www.quarry.leeds.ac.uk/goodquarry/).

3.2 Key Sustainability Issues
The baseline review in Section 2.3 highlighted several key sustainability issues within the plan area:

- 8% of the areas of all Sites of Special Scientific Interest in Wiltshire are in unfavourable condition and are declining;
- Seven Air Quality Management Areas have been declared in Wiltshire due to high levels of pollutants;
- Overall Wiltshire has high levels of tranquillity, however loss of tranquillity and increased light pollution are areas of concern;
- Recycled highway materials are not currently being used due to lack of storage;
- The 2001 census shows a 10% increase in population compared with 1991 in Wiltshire leading to increased need for housing and infrastructure; and
- Between 1993/2002 road traffic increased in the South West by 20% leading to slow journey times during peak periods.

The following sections highlight key sustainability issues relating specifically to minerals extraction.

Wiltshire produces a range of minerals including sand and gravel for the construction industry, chalk and clay for cement manufacturing and natural building stone. This means that the issues that require consideration are slightly different from an area that produces mainly hard rock, for example. The environmental impacts associated with different minerals are shown in Table 7 and this has been used as a guide to the types of sustainability issue that the plan and the SA/SEA need to address.

<table>
<thead>
<tr>
<th>Material</th>
<th>Activities associated with extraction</th>
<th>Environmental impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land won sand and gravel</td>
<td>Extracted by hydraulic elevators following the stripping of soil. Crushed, screened and washed.</td>
<td>Noise levels relatively low (compared to hard rock quarries).</td>
</tr>
</tbody>
</table>

Now the Department for Communities and Local Government (CLG)
<table>
<thead>
<tr>
<th>Material</th>
<th>Activities associated with extraction</th>
<th>Environmental impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Silt is disposed of.</td>
<td>• Silt disposal capacity is important – water impacts.</td>
</tr>
<tr>
<td></td>
<td>Transport is often by road because of the small amounts being transported and the fact that the material is relatively low value, bulk materials, for which transport costs make up a large proportion of the market price.</td>
<td>• Soil stripping in summer can cause dust problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Higher land take than crushed rock production per tonne.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Road transport impacts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dewatering may affect water quality and water quantity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Impacts on flood risk.</td>
</tr>
<tr>
<td>Limestone –</td>
<td>Underground mining. Use of mechanical stoncutters.</td>
<td>• Vibration and occasional noise during underground excavation (dependent on the depth of working).</td>
</tr>
<tr>
<td>Building Stone</td>
<td>Above ground extraction using rock breakers and excavators.</td>
<td>• Noise and dust impacts during above ground excavation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Road transport impacts.</td>
</tr>
<tr>
<td>Limestone –</td>
<td>Extracted using rock breakers and excavators.</td>
<td>• Noise and dust impacts during excavation and crushing.</td>
</tr>
<tr>
<td>Crushed Rock</td>
<td>Crushing and screening / washing.</td>
<td>• Working can be below the water surface so can have water pollution impacts and other hydrological consequences.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Road transport impacts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Landscape and visual impacts.</td>
</tr>
<tr>
<td>Sandstone</td>
<td>Extracted using rock breakers and excavators.</td>
<td>• Noise, dust and vibration as a result of pneumatic rock breakers and bulk excavators.</td>
</tr>
<tr>
<td></td>
<td>Crushing and screening / washing.</td>
<td>• Quarries are often located in areas of landscape value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• This can generate large volumes of associated waste material.</td>
</tr>
<tr>
<td>Chalk</td>
<td>Extracted using rock breakers and excavators.</td>
<td>• Noise and dust impacts during excavation and crushing.</td>
</tr>
<tr>
<td></td>
<td>Crushed and turned into slurry. The slurry can then be transported by pipeline to its point of use.</td>
<td>• Landscape and visual impact.</td>
</tr>
<tr>
<td>Clay</td>
<td>Mechanical stripping and excavation.</td>
<td>• Noise associated with extraction plant and transport.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dust can be an issue if clay stockpiles are left to dry out.</td>
</tr>
</tbody>
</table>

Table 8 shows the results of the review of sustainability issues. The table outlines the potential sustainability effects for each SEA topic and identifies what implications these have for both the plan and the sustainability appraisal.
<table>
<thead>
<tr>
<th>SEA Regulation Topic</th>
<th>Potential sustainability effects</th>
<th>Issues for the plan and the SA</th>
</tr>
</thead>
</table>
| Biodiversity, Flora and Fauna and Soil | Wiltshire has over 150 internationally and nationally designated ecological sites which need to be protected and where possible enhanced. Biodiversity outside these areas should not be forgotten and it is often undesignated linking habitats that are vital. The potential negative effects are:  
  - Land take and associated habitat loss including fragmentation of habitats;  
  - Changes in air quality, water quality, noise, vibration, light emissions, dust deposition as a result of construction and operation;  
  - Changes in pattern of human activity and associated disturbance or damage;  
  - Creation of barriers or other obstacles affecting the movement of animals;  
  - Changes in habitat management;  
  - Changes in soil conditions;  
  - Changes in number of predators and/or prey; and  
  - Introduction of new habitats and/or species.  
However, mineral operations have potential to enhance existing and create new habitats, particularly as part of their restoration schemes. |  
  - There is a lack of phase 1 habitat data in most of the county and a county wide phase 1 ecological survey may be needed. An ALSF bid has been submitted in order to collect this data for the SA / SEA. If this is unsuccessful, some data collection may be necessary for the site selection and assessment and WCC / SBC will need to consider this at the appropriate time.  
  - The SA needs to address effects on both designated and non-designated sites and species.  
  - The SA needs to consider the conflict between the potential need to extract sand and gravel from the Cotswolds Water Park and North Meadow and Clattinger Farm SAC and the CWP BAP that includes action plans for eight habitats and nine species. There is also further potential spatial conflict, including the potential need to extract from the Avon Valley and the Avon Valley SPA. |
<table>
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<tr>
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</tr>
</thead>
</table>
| Air quality          | One of the most important aspects of air pollution in relation to quarries is the generation of dust. Without appropriate mitigation, residents can potentially be affected by dust up to 1km from the source, although concerns about dust are most likely to be experienced near to dust sources, generally within 100 metres depending on site characteristics. The finest particles of between 1 and 10\(\mu\)m in diameter (known as PM\(_{10}\)) will be respirable and are associated with health effects. Particles greater than 10\(\mu\)m are associated with public perception and nuisance. Certain locations are more sensitive to dust emission than others and those considered highly sensitive are: hospitals and clinics, retirement homes, hi-tech industries, painting and furnishing and food processing. Residential areas are considered of medium sensitivity.\(^{27}\) Changes to air quality can also be caused by mineral transport by road. | ▪ Site selection and assessment should consider the location of sensitive receptors for dust.  
▪ The proximity principle (proximity to markets) should be adopted to reduce emissions from transport.  
▪ There is a tension between the above issues which will need to be taken into account, as it is likely that close to market will also mean close to sensitive receptors.  
▪ Consideration needs to be given to dust generation from potential minerals sites near to Bradford on Avon where there is an Air Quality Management Area designated for PM\(_{10}\). |
| Other: Transport     | The majority of sand & gravel use takes place within a few miles of its point of origin, and at any given location, is required in quantities that are too small to be movement by rail. Similar factors apply to the transportation of higher value products such as ready-mixed concrete and asphalt. Limitations (including planning restrictions) on the life expectancy of individual quarries (especially sand & gravel workings) also deter investment in new railhead facilities at these locations. The effects of road traffic include 'intimidation' by large vehicles. | ▪ The future of the Eastern Spine Road improvements in the Cotswolds Water Park is uncertain and the SA will need to take into account the impact of sites if the new spine road doesn't go ahead.  
▪ There has been a lack of progress on more sustainable transport for minerals for the reasons mentioned in the left hand column of this table. Wooton Basset is the only suitable rail freight location (although a second depot is being developed at Keypoint in South Marston). As a result most minerals are |

<table>
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</table>
|                      | danger, use of roads unsuitable for the size of vehicle, damage to verges, dust, spillage, mud from wheels and body (although this should be removed through wheel washing), noise from early starts and early arrival at sites, vibration, and congestion. | transported by road within the County.  
- There are localised problems from lorry traffic from waste and minerals working. For example, the borders of West Wiltshire-traffic from Mendips (B3092, B3093). One cause of the problem is the lack of weight restrictions on Wiltshire roads as compared to Somerset roads. Consideration is needed on how this can be addressed in the MLDDs potentially through joint working with Somerset County Council. However, the County Council has just gone out to consultation on proposed weight restrictions on the A362, A3098 and B3092. |
| Climatic Factors     | Site operation and transportation of minerals (by road) generates CO₂. There is limited opportunity to consider renewable energy sources for minerals development through the strategic planning process. This is a matter for site management. Restoration, after-use and aftercare could have positive effects on adaptation to climate change, for example due to the creation of new habitats, creation of additional water storage, |  
- The proximity principle should be adopted to reduce emissions from transport.  
- The SA should consider how the plan can contribute positively to climate change adaptation. |
| Material Assets (mineral resources) | The use of recycled and secondary aggregates can help to reduce the environmental effects of the extraction of primary materials. However, in construction, recycled and secondary aggregates can in many cases only substitute for bulk fill whereas secondary aggregates can substitute for a number of building sand applications. At present Wiltshire and Swindon do not have any sites or facilities handling secondary aggregates. |  
- The plan will need to be realistic in terms of the amount of recycled and secondary substitution that can occur. |
| Other: Waste         | The main effects of any waste which is not immediately used are:  
- The take up of space within or outside the working area;  
- Visual impacts;  
- It can be a source of dust, sediment and other contamination in run-off; and  
- It can affect the surface water regime, e.g. by changing surface |  
- It may be useful to encourage recycling facilities at extraction sites to reduce the amount of waste.  
- The SA / SEA needs to examine the effect of the plan on waste production and recycling.  
- The amount of waste produced at the extraction site will have implications for transport and waste disposal off site.  
- The MLDD will need to consider the potential for identifying |
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>water flow in a flood plain.</td>
<td>permanent CDE waste recovery and recycling facilities in the vicinity of growth areas (an issue raised by the Minerals Forum).</td>
</tr>
<tr>
<td></td>
<td>Waste can be classified as temporary or permanent. The main issue is that excess waste means that a process is unsustainable in the long term.</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>As the sand and gravel resources coincide the local aquifer as soon as quarrying occurs the resultant void fills with water. To counter this quarry operators tend to pump workings dry. Pumping can cause environmental effects (issues relating to localised cones of depression within the water-table leading to low flows in the Thames for example). Dewatering can also cause drying up of abstraction wells, reduction of water in surface features (including streams, lakes and wetland areas), changes in groundwater flow paths causing possible contamination from external sources, and possible subsidence and settlement. Minerals development could also have a negative effect on water quality, i.e. run-off from quarry waste tips and quarry fines stockpiles could contaminate local watercourses or transfer of dust from air to water could result in contamination. Minerals extraction in the floodplain may reduce the level of flood risk by providing additional storage capacity during its operational phase for flood waters. Alternatively, stockpiles and ancillary buildings could reduce the storage capacity of the floodplain. Stockpiles and ancillary buildings could alter the natural flow of flood water increasing flood risk to adjacent land. The use of heavy machinery could increase the potential for surface run-off by reducing the sites permeability.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The SA / SEA needs to examine the plan’s impact on the water environment (quantity and quality) and links to biodiversity effects.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The SA/SEA needs to consider the plan’s impact on flood risk.</td>
</tr>
</tbody>
</table>

28 Minerals and Waste Framework Level 1: Strategic Flood Risk Assessment (Scott Wilson, 2007)
<table>
<thead>
<tr>
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</table>
| Other: Land Use and Restoration | If properly planned, minerals development can contribute to sustainability objectives mainly by providing valuable habitat or recreational resources. However, in the Cotswold Water Park for example, there has been some examples of poor restoration which has resulted in large areas of habitat that are relatively poor for wildlife despite the fact that the Water Park is of national nature conservation importance for wintering & breeding wetland birds. Restoration, after-use and aftercare could have positive effects on adaptation to climate change, for example due to the creation of new habitats and the creation of additional water storage. | ▪ The long term contribution of minerals development to sustainability should be assessed. There may be a problem with wetland restoration in the Cotswolds Water Park because of the potential of air strike on MOD land (CAA Guidance CAP680).  
▪ There are opportunities in the Cotswolds Water Park to develop a major new habitat and recreational resource. SWERDA are currently developing a masterplan for the water park. The minerals planning team need to track development of this plan and assess what implications it may have on future site selection.  
▪ The creation of wetland habitats could have positive implications for climate change adaptation. |
| Material Assets (economic factors) | In 2004, 427 people in Wiltshire and Swindon were directly employed in mining and quarrying. This is only 0.14% of the working population. Figures on direct employment do not provide the full picture of the importance of minerals to the economy. Mineral production contributes to wealth creation and sustainable economic development by providing:  
▪ Employment, both directly and indirectly;  
▪ Markets for other goods and services thereby stimulating activity elsewhere in the economy and importantly; and  
▪ Basic raw materials for downstream industries in construction, manufacturing and power generation. Here the minerals, or derived products, may be key components of specific manufactured goods or essential to a particular industrial process, thereby adding value that may be several times the cost of the mineral\(^{29}\). | ▪ The SA/SEA needs to examine the plan’s impact on the economy. |

<table>
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</table>
| Population / Human Health (noise) | In fact the UK National Accounts for 2001 showed that the UK Gross Value Added per employee for non energy mineral extraction was over £50,000.                                                                                           | - Noise needs to be examined as part of the site selection process and the SA/SEA.  
- The SA will need to consider the implications of the EU Environmental Noise Directive; in particular consideration will need to be given to Noise Maps that will be published by DEFRA in summer 2007 and subsequently any Action Plans which are developed as a result of the maps. |
<p>| Human Health and Population (other community effects) | Noise is an inevitable consequence of the working of minerals and can affect the health of local communities. The extraction process for any material will contain a number of noise generating processes. In most cases, there will be a need to remove soil and overburden to expose the mineral. The mineral will need to be excavated (maybe by blasting) and then transported from the quarry face to a processing area. The mineral will then be transported from the quarry site for further processing or direct use. These activities involve the use of powered machinery for excavation and transport of materials within the site. Processing plant on site can often include the use of crushing and grading plant, prior to the mineral being transported off site by road or rail vehicles. All of these operations could generate noise levels which may negatively affect local communities. | - Community effects (and their physical causes) need to be considered as part of the SA. |
| Cultural heritage including architectural and archaeological heritage | Minerals development can impact on communities in a number of ways. Physically, minerals development can cause congestion, noise, impacts on air quality and visual impacts (most of which are covered elsewhere in this report). This can have a variety of psychological and community effects from stress caused to individuals through to changing the nature of a community through impacts associated with transport and blasting. | - There is potential for Roman remains to be found in Cotswolds Water Park if further mineral extraction sites are located here. Advice should be sought from the County Archaeologist and English Heritage. |</p>
<table>
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<tr>
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<th>Potential sustainability effects</th>
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</table>
|                      | - caused by the interruption of features that extend beyond the extraction area;  
  - Dewatering and the disruption to drainage regimes may affect the preservation of waterlogged archaeological deposits and destroy a site's palaeo-environmental potential, often far beyond the actual extraction 'footprint';  
  - Subsidence or ground settlement on upstanding monuments and historic buildings due to sub-surface mining;  
  - Dust arising from workings can have a detrimental impact on historic buildings, especially if dust particles are chemically active; and  
  - The long-term setting and character of an historic monument, archaeological landscape or listed building might be affected by the extraction. Apart from visual aspects, this may detract from amenity uses resulting from the disruption of rights of way and access, increased noise and heavy traffic. Site setting may also be affected in different ways by the secondary use of mineral workings for waste recycling. | Future minerals development may have to be accommodated within AONBs.  
The SA needs to consider the implications of the plan on landscape within Wiltshire and Swindon. |
| Landscape            | Changes to topography or changes to or the removal of elements in the landscape (e.g. trees, slopes, and field boundary vegetation) may give rise to changes in the character of the landscape and how it is experienced.  
Visual effects arise where a development causes changes in the composition and extent of available views, as a result of changes to the landscape.  
Potential landscape / visual effects during extraction include:  
- Introduction of potentially discordant feature into the landscape resulting in visual intrusion and changes to landscape character, e.g. quarry face, soil stockpile, plant, lighting, signage; and  
- Excavation and associated working resulting in loss of |
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</table>
|                      | landscape feature e.g. topographical changes, loss of vegetation (woodland, hedges), interruption of field patterns (hedge/wall removal) which causes changes in landscape character. Potential effects of post restoration include:  
  ▪ Introduction of new landscape features;  
  ▪ Creation of landscape with different character to that which existed prior to mineral working (correlates with introduction of new features; and  
  ▪ Changes in character of views associated with different landscape character. |
4 SA/SEA Objectives and Framework

4.1 Introduction
Current guidance on SA/SEA of mineral plans advocates the use of objectives in the assessment process. This appraisal framework includes broad sustainability objectives, sub-objectives and assessment questions.

To facilitate legibility and ease of understanding and use, the sustainability objectives have been set out in the form of an Appraisal Framework. This approach is recommended in Government good practice guidance on carrying out environmental and sustainability appraisals.

4.1.1 SA/SEA Topic
The sustainability objectives outlined in the Appraisal Framework have been arranged under SA/SEA topics. The topics that have been selected relate to the topics listed in:

- Annex I of Directive 2001/42/EC of the European Parliament on ‘the assessment of the effects of certain plans and programmes’ (the SEA Directive); and

4.2 SA/SEA Framework
Table 9 shows the SA/SEA Appraisal Framework that has been developed. It includes a series of high level objectives which are supported by more detailed sub-objectives and assessment questions. These have been used to focus the assessment process on the key sustainability issues.
Table 9: Sustainability Appraisal Framework

<table>
<thead>
<tr>
<th>Scoped in Appraisal questions. SA/SEA objectives. Does the policy...</th>
<th>SA/SEA sub-objectives</th>
<th>SA/SEA Assessment Questions. Would the plan in association with other plans and programmes...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Help make suitable housing available and affordable for everyone</td>
<td>Make a positive sustainable contribution by minimising negative impacts to meet Wiltshire and Swindon's sub-regional apportionment</td>
<td>Help ensure that a sustainable contribution is made to the sub regional aggregate apportionment?</td>
</tr>
<tr>
<td>2 Promote stronger more vibrant communities</td>
<td>Maintain or where possible enhance the quality of life for people affected by mineral working and/or ancillary development Ensure that both the positive and negative impacts are identified for the proximity of mineral workings and/or ancillary development to settlements and individual properties Minimise nuisance and health impacts (noise, dust, fumes and vibration) from mineral workings and HGV site traffic Encourage high standards of restoration using progressive techniques to bring benefits to local communities</td>
<td>Cause a change in the number of people directly affected by mineral working (living in close proximity to a mineral site or an access route) whose impact cannot be mitigated? Cause a cumulative beneficial or adverse impact on certain communities (either through permitting more reserves affecting the same community or by lengthening the time period of permission)? Provide incentives and opportunities for operators to use alternative transport modes to transport minerals? Cause changes in traffic flows or the nature of traffic (an increase in HGVs for example) in any part of Wiltshire and Swindon that could alter the character of the landscape or townscape? Ensure appropriate standards of restoration, including progressive restoration techniques in order to bring benefits to local communities and the environment?</td>
</tr>
<tr>
<td>3 To foster a vibrant, varied economy, with particular emphasis on supporting regeneration projects in market towns</td>
<td>Promote methods for protecting valuable mineral reserves Promote dialogue between all local authorities to ensure valuable mineral resources are not sterilised by non minerals development</td>
<td>Help to protect mineral reserves (i.e. through the establishment of Mineral Consultation Areas or Mineral Safeguarding Areas)? Help to promote dialogue between all local authorities to ensure valuable mineral resources are not sterilised by non minerals development?</td>
</tr>
<tr>
<td>Scoped in Appraisal questions. SA/SEA objectives. Does the policy...</td>
<td>SA/SEA sub-objectives</td>
<td>SA/SEA Assessment Questions. Would the plan in association with other plans and programmes...</td>
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<tr>
<td><strong>4</strong></td>
<td>Encourage a switch from transporting freight by road to rail or water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Encourage the best use of existing transport mode options for mineral supply</td>
<td>Help to protect important existing distribution network nodes (e.g. rail facilities)?</td>
</tr>
<tr>
<td></td>
<td>Protect important distribution network nodes (e.g. rail facilities)</td>
<td>Encourage, wherever possible the identification of new facilities close to major centres of growth?</td>
</tr>
<tr>
<td></td>
<td>Enhance and promote opportunities for sustainable transport options for mineral supply</td>
<td>Identify and provide incentives to use sustainable transport options?</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Protect habitats and species</td>
<td>Adversely affect the integrity of designated sites?</td>
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<tr>
<td></td>
<td>To enhance the biodiversity resource and if possible prevent damage to geodiversity. Avoid key biodiversity and geodiversity features. Actively seek to protect and enhance biodiversity and geodiversity in each development. Encourage the restoration and the creation of habitats and geodiversity features</td>
<td>Include actions that cause changes in habitat fragmentation or habitat loss (including those that affect affecting important/rare species) especially those affecting sites of international or national importance?</td>
</tr>
<tr>
<td></td>
<td>Avoid minerals development that would impact directly and indirectly on designated sites and species of international, national, county, or local importance, BAP habitats and species and other habitats of notable ecological value (e.g. brownfield sites)</td>
<td>Include actions that improve or remove geodiversity?</td>
</tr>
<tr>
<td></td>
<td>Consider alternatives to mineral extraction in resource areas of high ecological value</td>
<td>Include actions that affect an area in a way that could have long term effects in relation to species lifestyles or irreversible effects where there are no known mitigation techniques?</td>
</tr>
<tr>
<td></td>
<td>To explore, encourage and promote alternatives to mineral extraction in resource areas that fall within Strategic Nature Areas identified in the SW Regional Nature Map.</td>
<td>Include actions that affect areas where biodiversity is already exposed to significant threat, e.g. through habitat loss or fragmentation?</td>
</tr>
<tr>
<td></td>
<td>Maximise the potential for habitat creation through positive restoration of mineral workings</td>
<td>Include actions that help to reach targets or compromise targets of BAPs and / or Geodiversity Action Plans (GAPs) where produced?</td>
</tr>
<tr>
<td></td>
<td>Ensure that the risk of bird-strike is kept to an absolute minimum through implementing appropriate mitigation and site management measures</td>
<td>Include actions that affect Natura 2000 sites, SSSIs or other designated site?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Include actions that could increase the risk of bird strike?</td>
</tr>
<tr>
<td>Scoped in Appraisal questions. SA/SEA objectives. Does the policy...</td>
<td>SA/SEA sub-objectives</td>
<td>SA/SEA Assessment Questions. Would the plan in association with other plans and programmes...</td>
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<tr>
<td></td>
<td></td>
<td>Provide a major opportunity for habitat creation and enhancement?</td>
</tr>
<tr>
<td>6 Promote the conservation and wise use of land</td>
<td>Minimise the area of land take per tonne of mineral (aggregate) produced if appropriate. Assess and evaluate early in the development phase the ability to restore the land use for mineral working and ancillary development to a high standard and ensure restored sites are properly managed in the long term future To minimise the loss of soil resources and to encourage the re-use of soils locally</td>
<td>Change the area of land take per tonne of mineral produced? Improve the planning of site restoration by considering restoration and mitigation throughout the life of the site not just at the end? Consider the long term aftercare and after-use of mineral sites? Cause significant loss of soils due to site development and usage?</td>
</tr>
<tr>
<td>7 Protect and enhance landscape and townscape</td>
<td>Protect designated and non designated areas of landscape or other amenity value Reduce visual intrusion from mineral workings and / or ancillary development Ensure all mineral sites and areas affected by mineral working are restored to a high standard Consider alternatives to mineral working in resource areas of high landscape value or areas of tranquillity Maintain and wherever possible enhance access and overall amenity of the countryside to residents and visitors (NB: Townscape objectives are covered under the community section.)</td>
<td>Cause changes to designated areas which threatens the reason for their designation? Cause changes to the landscape / townscape that are completely at variance with the character of the area? Change the number of people that are affected by the visual impact of minerals development? Cause changes in traffic flows or the nature of traffic (an increase in HGVs for example) in any part of Wiltshire and Swindon or Swindon that could alter the character of the landscape? (Note: no methodology currently exists to adequately model this)</td>
</tr>
<tr>
<td>8 Value and protect diversity and local distinctiveness including rural ways of life</td>
<td>Minimise significant impacts on the countryside from all stages of mineral working and / or ancillary development</td>
<td>Change the ease with which people can access the countryside, rights of way, open space and common land?</td>
</tr>
<tr>
<td>Scoped in Appraisal questions. SA/SEA objectives. Does the policy...</td>
<td>SA/SEA sub-objectives</td>
<td>SA/SEA Assessment Questions. Would the plan in association with other plans and programmes...</td>
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</tbody>
</table>
| | Protect local rural communities and rural ways of life  
Protect and improve the quality of countryside in proximity to mineral working and / or ancillary development  
Protect and enhance rights of way, open space and common land and maintain access to the countryside  
Protect the best and most versatile agricultural land | Cause development in areas which are valued for their tranquillity?  
Cause the best and most versatile agricultural land to be lost either temporarily or permanently? |
| 9 | Maintain and enhance cultural and historical assets | Preserve and enhance archaeological sites, historic building, Conservation Areas, historic parks and gardens and other locally important features and areas and their settings | Include actions that could impact upon sites and monuments valued for their cultural heritage?  
Cause a change in traffic flows or the nature of traffic (an increase in HGVs for example) that affects sites and monuments valued for their cultural heritage or changes the number of sites at risk? |
| 10 | Reduce vulnerability to flooding | Reduce risk of flooding  
Minimise risk of flood pollution from minerals workings | Improve flood management and reduce flood risk? |
| 11 | Keep water consumption within local carrying capacity limits (taking account of climate change) | Minimise any adverse impacts on water resources at all stages of mineral working through effective site design and management  
Protect and where possible improve surface, groundwater and drinking water quality | Include measures that could increase or decrease the potential for water pollution?  
Include actions that could increase / reduce the risk of effects on groundwater and surface water quality and quantity? |
<p>| 12 | Reduce waste produced by mineral development | Minimise the amount of waste produced per tonne of saleable mineral | Increase or decrease the amount of waste produced including uneconomic quarry fines per tonne of mineral? |
| 13 | Minimise the use of non-renewable resources and where possible promote the use of renewable resources | To reduce reliance upon primary, land-won minerals in favour of increasing the contribution made by secondary and / or recycled materials | Include actions that change the mix of aggregates produced between primary materials and secondary / recycled materials? |</p>
<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>SA/SEA sub-objectives</th>
<th>SA/SEA Assessment Questions. Would the plan in association with other plans and programmes...</th>
</tr>
</thead>
</table>
| 14 | Minimise land, water, air, light, noise, and generic pollution | Minimise the impact of mineral workings through implementing effective measures to control emissions to air (including particulates), dust, noise, groundwater, surface water and soils  
To protect and improve the quality of water resources | Change the amount of pollution caused by mineral working?  
Encourage suitable mitigation measures (e.g. the establishment of Dust Management Plans for all mineral sites)? |
| 15 | Minimise the impacts on climate change | Reduce greenhouse gas emissions from site operations and transportation  
Minimise the vulnerability of minerals extraction operations to climate change | Reduce the amount of greenhouse gas emissions? |
4.3 Compatibility between SA/SEA Objectives and Strategic Objectives

The Core Strategy Strategic Objectives that have been developed (see Section 1.2) have been tested for compatibility against the SA/SEA objectives. The purpose of the compatibility assessment is to clarify potential conflicts and to identify any inconsistencies and incompatibilities between the two sets of objectives.

Table 10 overleaf presents the results of the compatibility assessment of the SEA objectives against the set of five Strategic Objectives. The result of the compatibility review has been reviewed and the results are included below.

4.3.1 Summary of the Compatibility Review for the Strategic Objectives

A number of positive and negative interactions were identified between the Strategic Objectives and the SA/SEA objectives when undertaking the compatibility review. The following section briefly discusses these interactions and recommends a way forward for reducing negative interactions.

Objective 1: Managing Mineral Resources

To make a sustainable contribution to meeting the need for minerals. The reliance on primary mineral resources in Wiltshire and Swindon will be reduced, firstly through more efficient use of the primary resource and reducing the amount of mineral waste; then the use of recycled and secondary aggregates. Proven mineral deposits which are, or may become, of economic importance will be safeguarded from non-mineral development.

Positive interactions were identified between this objective and five of the SA/SEA objectives. This objective was seen as positive for the objective on housing as it could provide the needed minerals resource to maintain the necessary housing developments. The objective was seen as positive for local communities as a reduction in primary extraction could reduce impacts of minerals extraction, such nuisance and health impacts, on local residents. The objective should also protect minerals from sterilisation which may help to support and develop the local economy. Positive interactions have been identified with the SA/SEA objectives on waste and resources. Reducing the reliance on primary resources could reduce the amount of minerals waste produced and encourage the use of renewable resources.

Negative interactions were identified between this objective and four of the SA/SEA objectives. Although primary extraction may be reduced, continued minerals workings could have a negative impact on habitats and species, the landscape and land conservation. Direct and indirect impacts on habitats and species may occur due to habitat loss and fragmentation, disturbance and air or water pollution. Impacts on landscape may result from the visual intrusion of minerals working, ancillary infrastructure and/or minerals traffic. Both of these negative interactions could be reduced by ensuring minerals workings avoid impacts on areas designated for their international, national, or local importance. It is important to note that minerals workings could have a positive impact on habitats as a result of potential habitat creation during site restoration.

Continued minerals workings could have a negative impact on land conservation due to the continued loss of soils. Finally continued minerals extraction will contribute negatively to climate change due to greenhouse gas emissions from on-site operations and transportation.

A restoration led approach to identifying sites for minerals working, along with a high standard of on-site operations and phased restoration should help to mitigate most of these impacts. Best practice techniques should be encouraged to reduce greenhouse gas emissions from operations. Consideration of the use of more sustainable modes for the transportation of minerals could reduce impacts on climate change.
### Table 10: Preferred Plan Objectives vs. Sustainability Objectives Review Tables

<table>
<thead>
<tr>
<th>Key</th>
<th>Plan Objectives vs. Sustainability Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>Positive Interaction</td>
</tr>
<tr>
<td>✗</td>
<td>Negative Interaction</td>
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<tr>
<td></td>
<td>No Interaction</td>
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<table>
<thead>
<tr>
<th>Plan Objectives</th>
<th>SA Objectives</th>
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<tr>
<td></td>
<td>Housing</td>
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<td>-----------------</td>
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</tr>
<tr>
<td>Objective 1: Managing Mineral Resources</td>
<td>✓</td>
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<tr>
<td>Objective 2: Economy</td>
<td>✓</td>
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<tr>
<td>Objective 3: Communities and Local Amenity</td>
<td>✓</td>
</tr>
<tr>
<td>Objective 4: Environment</td>
<td>✓</td>
</tr>
<tr>
<td>Objective 5: Collaborative Working</td>
<td>✓</td>
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Objective 2: Economy

To support opportunities that assist in the economic growth of Wiltshire and Swindon, recognising the important contribution that minerals development can make to the local economy.

Positive interactions were identified between this objective and three of the SA/SEA objectives. The objective was seen as positive for the economy and communities as it should help support local economies. The objective was also seen as positive for housing.

Negative interactions were identified between this objective and four of the SA/SEA objectives. Supporting economic growth has the potential to negatively impact on habitats and species, the landscape, land conservation and climate change as this objective is likely to mean supporting the continuation of minerals extraction. The negative interactions could be reduced ensuring that economic growth is balanced with the needs of the environment.

A restoration led approach to identifying sites for minerals working, along with a high standard of on-site operations and phased restoration should help to mitigate these impacts. Consideration of the use of more sustainable modes for the transportation of minerals could reduce impacts on climate change.

Objective 3: Communities and Local Amenity

To provide clear guidance to the communities of Wiltshire and Swindon on minerals planning policy and proposals through the pursuit of a collaborative public involvement approach, which contributes to maintaining and/or enhancing the quality of life of people living in proximity to minerals development. The restoration of mineral workings will deliver tangible benefits to the communities of Wiltshire and Swindon.

Positive interactions were identified between this objective and seven of the SA/SEA objectives. This objective was seen as beneficial to the communities as public involvement should help minimise impacts on local residents. In addition, the objective aims to enhance the quality of life for local people living close to minerals sites and allows for restoration to deliver benefits to communities, all of which may support community vibrancy. This objective was seen as positive for the economy as restoration that benefits the local community may also support the local economy. Community involvement in minerals planning may also reduce impacts on habitats and species, the landscape, land conservation, rural of life and cultural assets.

No negative interactions were identified.

Objective 4: Environment

To protect and enhance the diverse and highly valued natural and historical environment of Wiltshire and Swindon, incorporating the landscape character, the setting of local settlements, biodiversity and geological conservation interests, the water environment including flood risk, and cultural heritage. To reduce and buffer the impacts of climate change, particularly on vulnerable habitats and species. A restoration-led approach to mineral workings will make a positive contribution to Biodiversity Action Plan targets and the implementation of the South West Nature Map. This approach will need to address the potential for open water restoration to increase the risk of bird strike within Aerodrome Safeguarding Areas and the threat to military and civilian aircraft. Options for sustainable transportation will be encouraged and pursued in order to reduce the environmental impacts of transporting minerals by road across Wiltshire and Swindon.

Positive interactions were identified between this objective and ten of the SA/SEA objectives. This objective was seen as beneficial to local communities as it may help to protect and improve their local environment. Positive interactions have also been identified for habitats
and species, the landscape, land conservation, rural ways of life, cultural assets, flooding, water, pollution and climate change. The objective may also encourage the switching to more sustainable modes of freight transport.

No negative interactions were identified.

**Objective 5: Collaborative Working**

To identify, develop and implement opportunities to work with all those with an interest in sustainable minerals planning in Wiltshire, Swindon and the surrounding areas. To address long-term supply issues and environmental concerns, the preparation of joint Local Development Documents will be advocated, where necessary, particularly in the Cotswold Water Park/Upper Thames Valley.

Positive interactions were identified between this objective and all of the 14 SA/SEA objectives. This objective was seen as allowing for an inclusive approach which should minimise impacts of minerals planning on the environment, society and the economy.
5 Core Strategy Issues and Options – November 2005

5.1 Introduction
In November 2005, a Core Strategy Issues and Options report, jointly prepared by Wiltshire County Council and Swindon Borough Council, was placed on public consultation, alongside an Issues and Options Paper for the Development Control Policies DPD. The report set out the key ‘Issues and Options’ that the County and Borough Councils considered would influence land use planning for minerals over the plan period. It provided a basis for initial consultations on the issues to be addressed by the Minerals Core Strategy Policy framework in Wiltshire and Swindon, and included draft policies to address those issues.

A response form was produced alongside the Issues and Option report inviting the public and other stakeholders to participate in the process. The form included a range of questions relating to the key issues presented in the document, and included additional space and a question inviting respondents to identify any additional issues that they felt should be addressed in the preparation of the Core Strategy for the Minerals Development Framework.

The details of this initial Sustainability Appraisal, with comments regarding the sustainability effect for each draft policy provided, are presented in the appendices of the SA Report produced in June 2006.

The level of the assessment undertaken was dependent on the nature of the policy options. For those options of a strategic nature it was not considered appropriate to undertake a detailed assessment and a simple strategic overview assessment of the sustainability implications was undertaken. However, for those policies with more specific options the likely effect of each policy option on the sustainability objectives outlined in the SA Framework was appraised. A summary of the findings and recommendations is presented below.

5.2 Comparison of Issues and Options
The Government SA Guidance recommends consideration of the ‘do nothing’ or business-as-usual approach as part of strategic options assessment. In this instance, the ‘do nothing’ scenario equates to not preparing a new Minerals Development Framework. Instead the existing Adopted Wiltshire and Swindon Minerals Local Plan (MLP) was assumed to continue to apply.

Individual elements of the MLP have been carried over to the new Preferred Options, the ‘do nothing’ option has been rejected outright. This is because a number of key policy, practice, regulatory and planning changes have occurred since this MLP’s adoption, which necessitate a complete re-write of the document. The production of the new Minerals Local Development Framework is also a statutory requirement, and consequently to not go ahead with its production is not considered a viable option.

However, by taking into account the current baseline trends that have been identified earlier in the SA/SEA (see Section 2.4), the assessment process has examined how the new plan options would perform compared to the ‘business as usual’ scenario of carrying on with the status-quo.

5.2.1 Vision and Objectives
Given the strategic nature of the two policies in this theme, it was not considered appropriate to undertake a detailed assessment against each SA objective. Consequently, a strategic overview assessment of the sustainability implications was undertaken. Policy CS1 was concerned with how long the minerals core strategy should plan for. The assessment concluded that several of the policy options had a potential negative effect on sustainability. Policy option CS1D was identified as the most sustainable option, extending the plans life to the 2026 to tie into the horizon for the RSS and this option should be taken forward.

30 This SA Report can be accessed at URL: http://www.wiltshire.gov.uk/environment-and-planning/planning-home/planning-strategic-environment-assessment.htm
Policy CS2 involves setting the strategic vision and objectives for sustainable minerals development in Wiltshire. Two of the options assessed were considered to be unsustainable. In particular option CS2A, which would see the aims and objectives of the existing plan taken forward was considered unsustainable as they were based on policy and guidance which has now been updated. Policy option CS2C, to draft a new vision and objectives, will have a positive effect on sustainability and was therefore recommended to be taken forward. The option should ensure the creation of a vision and objectives that meet the Governments new objectives for minerals planning and take account of current sustainability issues.

5.2.2 Safeguarding Sites
The assessment of Policy CS3, safeguarding mineral resources, railhead facilities and minerals recycling facilities, was undertaken using the same approach as for the vision and objectives, i.e. a strategic overview assessment of the sustainability implications. The assessment identified policy option CS3A as having a significant adverse impact as rolling forward existing MCAs/MSAs is unlikely to meet the need of the new mineral apportionment. Policy option CS3B was identified as having an adverse effect on sustainability due to its policy of preserving just one site for railhead opportunities.

Policy option CS3C was recommended to be taken forward, as a new and wider policy to safeguard existing and proposed minerals resources, railhead facilities and minerals recycling facilities would take account of new minerals and sustainability policy and guidance.

5.2.3 Minerals Supply
The assessment of the policy options for the minerals supply theme consisted of an assessment of the likely effect of each policy upon each of the sustainability objectives. The assessment of CS4 Minerals Supply Aggregates highlighted several of the policy options as having significant negative effects on a number of the sustainability objectives. CS4F in particular was appraised as having significant negative effects on housing, communities, habitats and species, cultural assets, flooding, water consumption, resources and pollution. Policy options CS4D and CS4E were considered to be the most sustainable options, as they should both allow for a reduction in the need for/use of primary resources. This was seen as having positive effects for housing, the economy, freight transportation, waste, resources and pollution.

The assessment of CS4 Mineral Supply Recycled and Aggregate Materials identified policy option CS4H as the more sustainable option. CS4G was not considered sustainable as without policy assistance it was unlikely there would be an increase in the use of secondary and recycled materials. Option CS4H was therefore recommended to be taken forward as it allowed for a potential reduction in the sustainability impacts from primary extraction. For example, impacts on waste creation, impacts on landscape and land take. It remained unclear however as to what the actual percentage of secondary and recycled aggregates used would be. Also, there is a need to ensure the development of minerals recycling facilities does not cause any significant sustainability, in particular on the environment.

The policy options included for CS4 Minerals Supply Non Aggregate Minerals could not be appraised at this stage as they were solely procedural. CS4J has the potential to be more sustainable as it considers the supply on non-aggregates in one policy and this will make consideration of cumulative effects more achievable.

5.2.4 Identifying Sites
Due to the strategic nature of CS5, the assessment consisted of a strategic overview assessment of the sustainability implications. The assessment identified policy option CS5A as having a significant negative impact on sustainability, as the current approach to identifying future minerals sites is not entirely clear in the current plan. Policy Option CS5B was identified as having some negative effects, due to dispersal of sites which could increase transportation problems and minimise levels of mitigation and enhancement resources.

Policy option CS5C was considered to be more sustainable than option CS5A and CS5B. Providing minerals sites and recycling facilities at a local level where they are required was considered to be the most sustainable option. For example, the impact of minerals transportation will be reduced. Therefore, option CS5C should be taken forward.
5.2.5 Environmental and Social Considerations

The assessment of the policy options for the environmental and social considerations theme consisted of an appraisal of the likely effect of each policy upon each of the sustainability objectives. The appraisal of the policy options for protecting residential amenity highlighted option CS6B, to develop a new flexible approach through early and effective community involvement, as the most sustainable option. Community involvement should lead to improvements as environmental issues are discussed. Option CSC6C was identified as having several significant negative effects, on the economy, transportation and resources. This is because developing a more stringent buffer zone could potentially constrain the development of mineral extraction, ancillary developments and the required infrastructure. Option CS6B should be taken forward.

The appraisal of CS7 for sustainable transport of minerals found policy option CS7A to have negative effects on several of the sustainability objectives. This option was considered less sustainable than CS7B and CS7C as it only considered the protection of one rail aggregate depot and therefore, did not encourage improvements in sustainable transportation elsewhere in the Plan area. Assessment of options CS7B and CS6C identified that while both options allow for positive effects on sustainability, option CSC6C was potentially more sustainable due to its consideration of the proximity principle. Option CSC6C should therefore be taken forward.

Two policy options were considered for CS8 the restoration and after-use of minerals workings. Policy option CS8B was considered the less sustainable option, as three significant negative impacts were identified on habitats and species, land conservation and landscape. Policy option CS8A should be taken forward. A restoration-led approach to the identification on new minerals workings should allow for the early and phased restoration of sites which will have sustainability benefits, including reducing the visual impact for local communities and reducing impacts on habitats and species.

5.2.6 Minerals Policy Direction

At this stage of the process no strategic minerals policies were available to appraise. New policies will be assessed at the preferred options stage.

5.2.7 Policy Monitoring, Implementation and Review

The assessment of CS10, policy monitoring, implementation and review, consisted of a strategic overview of the sustainability implications. Policy option CS10A was identified as having a negative impact on sustainability as it did not allow for the monitoring of sustainability issues as required now by government policy and guidance. Option CS10B was considered to have a positive effect on sustainability as it should provide for monitoring of the Sustainability Appraisal to be integrated with monitoring of the Minerals Local Development Documents through the Annual Monitoring Process. Option CS10B was recommended to be taken forward.
6 Core Strategy Preferred Options Stage 1 – June 2006

6.1 Introduction
The Issues and Options discussed in Section 5 of this report were progressed to take into account the consultation results from the Issues and Options public consultation. They were also subject to internal consultation within the County and Borough Councils, in particular the County Ecologist and Development Control Officers. During the development of the Core Strategy, WCC and SBC have continued to consider various options and in May 2006 a version of the Core Strategy (Preferred Options) at a relatively advanced stage of development was appraised in detail.

The likely effect of each policy upon each of the sustainability objectives was considered and mitigation measures were suggested where feasible. Discussions between WCC and C4S in late May led to minor changes to the preferred policies based on the results of the assessment.

6.2 Summary of the Assessment and Recommendations
The details of the Preferred Options Sustainability Appraisal – June 2006 are available on the Wiltshire County Council website. This section summarises the assessment, focusing on the identification and assessment of significant effects. The findings of the SA suggested that these emerging Core Strategy policies (Preferred Options) would make significant contributions to the progression of SA objectives.

Where conflicts were identified, possible measures to offset adverse effects were considered, with recommendations provided in the final column of the matrices. The majority of C4S’s recommendations have been adopted through continuous improvement of the policies, and consequently remaining recommendations relate mostly to mitigation and monitoring.

6.2.1 Vision and Objectives
The first policy, which sets the plan horizon for minerals to extend to 2026, was considered to have a positive impact on sustainability. The assessment of the policy against the sustainability objectives identified that there would be positive effects on housing. The alignment of the minerals planning horizon with the Regional Spatial Strategy should allow for a consistent approach to planning and sustainability issues in the Wiltshire and Swindon. Overall, however the policy would have a neutral effect on sustainability issues.

The assessment of the second policy, which set the overall strategic spatial vision for minerals planning, was identified in the short term as having negative effects on land conservation, landscape, rural ways of life, cultural assets and pollution. This was due to the potential for new minerals development. In the medium and long term, however the policy was identified as having positive effects on sustainability. The policy discussed the aim to reduce the overall rate of primary extraction beyond 2016. This would reduce the negative effects of minerals workings.

The policy which set the primary aim for minerals planning in Wiltshire and Swindon was supported as it should have a positive impact on sustainability. No negative impacts on the sustainability objectives were identified.

6.2.2 Safeguarding Sites
The fourth preferred policy allowed for the safeguarding of minerals related sites. The assessment identified negative impacts on land conservation and landscape. In addition, positive impacts were envisaged for the economy, suitable housing, transportation, waste,

resources and pollution levels. The policy was amended to read ‘Safeguarding Minerals Resources, Rail-head Facilities, Wharfs and Minerals Recycling Facilities’. This was beneficial as it would help to allow for the transportation of minerals by water.

As a result of ongoing discussions over whether to include this policy in the Development Control Document instead of the Core Strategy Document, WCC and SBC outlined an alternative policy option for potential inclusion in the Development Control Document. The assessment of the alternative option was similar to that of the preferred option. Negative impacts were identified on land conservation and landscape and positive impacts were identified on the economy, suitable housing, transportation, waste, resources and pollution levels.

6.2.3 Minerals Supply

The policies in this section outlined the strategy for minerals supply in Wiltshire and Swindon. The first policy set was for meeting the need for aggregates. Assessment of the preferred policy option identified several negative impacts of the policy, including on habitats and species, land conservation, landscape, waste and resources. Encouragement of phased restoration and the use of secondary and recycled materials should help to mitigate these effects. Positive impacts were identified on suitable housing, communities and pollution. Assessment of the alternative policy option also identified several negative impacts. The sustainability objectives which may be negatively impacted include habitats and species, landscape, rural ways of life, cultural assets and water consumption. Several positive impacts on sustainability were also identified and these included waste resources and pollution.

The Preferred Options Report outlined a preferred and an alternative policy option for maximising the use of secondary and recycled aggregates. The assessment of both policies highlighted that they would have a positive effect on sustainability. No negative impacts were identified; however uncertainty remained over how the policies would impact on habitats and species.

The Preferred Options Report set both preferred and alternative policy options for meeting the need for non-aggregate minerals. The preferred option included separate policies for the supply of cement, chalk and clay and building stones. An assessment of each of these separate policies was completed.

The assessment of the policy for the supply of cement raw materials identified negative impacts on several of the sustainability objectives. Mitigation measures were outlined to help to reduce these effects, including the use of phased restoration, the monitoring of water consumption and implementation of measures such as regular pipe maintenance. It was recommended that this policy be altered to include consideration of the environmental and sustainability issues. Assessment of the policy for the supply of chalk and clay for non-cement uses was supported as this policy would overall have a positive impact on sustainability. The assessment identified no negative impacts; however some uncertainty remained about the policy’s impact on habitats and species, land conservation, landscape and flooding.

The preferred policy for the supply of building stones was identified as having a mixed impact on sustainability. Specifically, the assessment identified five positive impacts and four negative impacts on the sustainability objectives. However, the negative impacts could be reduced by mitigation measures, such as the optimisation of road transport, implementing measures to limit water use and encouraging the use of secondary and recycled materials. The Preferred Options Report also outlined an alternative policy for the supply of building stones and the assessment of this alternative option was similar to that for the preferred option.

WCC and SBC had in addition to the preferred separate policies for the supply of non-aggregate minerals outlined an alternative generic policy option to cover the supply of all non-aggregate minerals. Assessment of this option identified a negative impact due to the potential for increased and continued minerals workings and therefore the alternative policy was not supported.
6.2.4 Identifying Sites
The policy in this section outlined the preferred option for identifying minerals resources and minerals recycling facilities. Assessment of this policy concluded that overall the policy was consistent with the majority of sustainability objectives and was therefore supported. Some negative impacts were identified on land conservation, landscape, water consumption and pollution. However, these impacts could be reduced by encouragement of phased restoration, implementing measures to limit the use of water and development and implementation of Environmental Management Systems.

6.2.5 Environmental and Social Considerations
Three preferred policies were assessed in this section. The first policy would provide for the protection of residential amenity by considering phasing, traffic arrangements, screening and restoration. Assessment of the option highlighted that overall this policy would have a positive effect. No negative impacts were identified, although some uncertainty remained about the impact of the policy on the habitats and species and flooding.

The policy outlined for sustainable transportation could allow for a move towards more sustainable methods, such as rail, being used for the transportation of minerals. The policy was appraised as having a positive impact on many of the sustainability objectives.

The final policy in this section would provide for restoration, aftercare and after-use to be considered at any early stage in the planning process. Overall this policy was appraised as having a positive effect on the sustainability objectives. It was recommended that this policy should be altered to read ‘Strategic Approach to the Management, Restoration, Aftercare and After-use of Minerals Development’. The inclusion of ‘Management’ would further reduce the impacts of minerals workings during operations. All of the three policies in this section were supported.

6.2.6 Minerals Policy Direction
This policy was included to introduce the notion of requiring developers to prepare applications for new minerals developments that seek to implement the ‘vision’, ‘primary aim’ and ‘strategic vision’ for minerals planning. The policy was appraised as having a positive effect on all of the sustainability objectives. This policy was therefore supported.

6.2.7 Policy Monitoring, Implementation and Review
The final core strategy policy should allow for policy implementation, monitoring and review. Overall this policy was identified as having a positive effect on housing, communities, the economy, resources and pollution. No negative effects were identified, although some uncertainty remained about the impact of the policy on landscape. This policy was supported.
7 Core Strategy Revised Preferred Options – April 2007

7.1 Introduction
The preferred options discussed in Section 6 of this report were progressed into revised preferred options in April 2007. These preferred options were revised as a result of further work by WCC and further SA work. These revised preferred options also took into account the consultation comments on preferred options.

The likely effect of each policy upon each of the sustainability objectives was considered and mitigation measures were suggested where suggested were feasible.

7.2 Summary of the Assessment and Recommendations
Details of the Revised Preferred Options Sustainability Appraisal – April 2007 are available on the Wiltshire County Council website. The findings of the SA suggested that the emerging Core Strategy policies (Preferred Options) would make contributions to the progression of SA objectives, with improvements having been made over the previous Preferred Options approach.

Where conflicts were identified, possible measures to offset adverse effects were considered, with recommendations provided in the final column of the matrices. The majority of the recommendations from the SA work have been a part of the ongoing plan making process and have been adopted through continuous improvement of the policies. Consequently remaining recommendations provided in this report relate mostly to mitigation and monitoring.

7.2.1 Vision
The Core Strategy included both a preferred (see Box above) and an alternative vision for minerals planning in Wiltshire and Swindon. An assessment was undertaken of both of these visions.

The preferred vision was considered to have both positive and negative effects on sustainability. No significant negative effects were identified.

The vision included a restoration-led approach to minerals development which should have positive effects upon local communities, due the implementation of well-designed operations and a high standard of aftercare. Additionally, by ensuring that local communities were informed of the environmental issues of minerals developments and that they were actively involved in the creating the local solutions could reduce the number of local residents negatively affected by minerals workings.

There were considered to be other positive effects of the preferred vision:

- Positive effects on land conservation due to the restoration led approach allowing for a high standard of restoration and good long term site management.
- A restoration-led approach may allow for the opportunity to develop water storage facilities which in some areas could reduce flood risk; and
- Positive effects on minimising resource-use as the vision encourages the maximisation of recycling and the reuse of construction, demolition and excavation waste. This could lead to a reduction in the need for primary aggregates.

It was assessed that continued minerals development in the short and medium term may have had adverse effects on several of the sustainability objectives, including landscape, rural ways of life, cultural assets and pollution. Forecast effects included:

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The effects on landscape and rural ways of life are associated with potentially unsightly minerals sites and ancillary infrastructure, although ensuring the provision of locally sourced building stone will contribute to maintaining the locally distinct built environment;

- Known and unknown archaeological features are potentially at risk during extraction; and

- Site operations and transportation of minerals have the potential to have negative effects on pollution levels.

It was predicted that in the longer term the negative effects may have been reduced due to the high standard of aftercare provisions and restoration. Minerals development may also have had a negative effect on climate change due to greenhouse gas emissions from site operations and transportation.

It was recommended that phased restoration of minerals sites should be encouraged as this may mitigate the negative effects on habitats and species, landscape and rural ways of life as well as further benefit land conservation. To reduce the effects of the vision on pollution and climate change best practice techniques in relation to minimising pollution and emissions was also encouraged.

There remained much uncertainty over the impact that the vision would have on habitats and species. It was recommended that a restoration-led approach should protect and could potentially enhance habitat quality and species diversity. Additionally, collaborative working in the Cotswold Water Park and Upper Thames Valley has the potential to have a positive impact on the after-care and restoration that takes place. This is due to the ability to consider the enhancements to biodiversity over a larger area and the potential for larger scale restoration projects. However due to the location of some of the proposed minerals developments there is the potential for significant adverse effects on Natura 2000 sites. The need to assess the effect of the vision as part of the Habitats Regulations Assessment (HRA) of the Core Strategy was highlighted.

**Alternative Vision**

The alternative vision included all the elements of the preferred vision with the additional element which envisages dispersal of mineral development into areas not currently worked. (See box below for additional alternative vision paragraph.)

As with the preferred vision the alternative vision was considered to have both positive and negative effects on sustainability and no significant effects have been identified. All of the comments above for the preferred vision remained the same for the alternative vision.

The main implication of this dispersal is that the effects of minerals developments will be extended into new areas, for example new local communities and different areas of habitats and species may be affected. To mitigate the effects on local communities, it was recommended that early consultation should be undertaken with the new communities likely to be affected. As with the preferred vision there remains much uncertainty over the impact that the vision will have on habitats and species. Due to the location of some of the proposed minerals developments, in particular those in the Salisbury Avon area, there is the potential for significant adverse effects on Natura 2000 sites. Again, the need to assess the effect of the vision as part of the HRA of the Core Strategy was highlighted.

Additional effects of the alternative vision identified in the assessment, which are in addition to those already described for the preferred vision were as follows:

- Uncertainty over the effect on the economy as developing new minerals sites in new areas may provide new jobs in these areas. However, there may be implications of jobs lost in the older more established minerals areas;

- A potential opportunity for using the Kennet and Avon Canal to transport aggregates which have been extracted from the new resource zone to the west of Devizes. This could have a positive effect on freight transportation; and

- Extending minerals developments into areas on and around the River Avon could potentially have an adverse effect on the water environment.
7.2.2 Objectives

The Core Strategy included both a preferred set of objectives (see Box above) and an alternative set of objectives. An assessment was undertaken of both of these sets of objectives.

The five preferred objectives were considered to have either positive or uncertain effects on the sustainability objectives. No negative effects were identified. Positive effects included:

- Housing as the objectives should allow for the sustainable provision of the required minerals resource to maintain the necessary housing developments;
- Local communities should benefit from reduction in primary extraction which should minimise the impacts of minerals workings. Public involvement in minerals planning could also minimise impacts on local communities;
- Support economic growth and support local rural economies;
- Encourage a switch to more sustainable modes of transport and this should have a positive effect on freight transportation; and
- Waste and minimising resource use due to the reduction in primary extraction.

There was some uncertainty over the effects of the objectives on habitats and species, land conservation, landscape, cultural assets, water consumption, pollution and climate change. Continued extraction could have negative impacts on habitats and species, land conservation, landscape and cultural assets. However a restoration led approach may minimise these impacts.

The objectives were assessed to have the potential to protect the local water environment. However continued extraction may require abstraction of water which could have a negative impact on the quantity and quality of water resources available. Pollution levels could potentially be reduced through the objectives to protect the environment and local communities.

Finally, there was some uncertainty over the effect of these objectives on climate change. Less extraction of primary aggregates may reduce greenhouse gas emissions from this source. However emissions will be produced during the processing and distribution of recycled and secondary aggregates.

Alternative Objectives

While there are more specific objectives in the alternative option there are very few differences between the assessments of the two sets of objectives. The main difference is that the alternative objectives could have a positive effect on flooding due to the objective to ensure flood risk is not increased and where possible is reduced.

Encouraging phased restoration could help to mitigate the negative effects of both the preferred and the alternative objectives on habitats and species, land conservation and landscape. To reduce the effects of the objectives on pollution and climate change, it was recommended that best practice techniques in relation to minimising pollution and emissions should be encouraged and a switch to more sustainable modes of transportation should be encouraged.

7.2.3 Meeting the Need for Primary Aggregates

The Core Strategy set out Policy MCS1a as the preferred policy for meeting the need for primary aggregates (see Box above). The Strategy also included MCS1b and MCS1c (Part 1 and Part 2) which are alternative options for meeting the need for primary aggregates. An assessment was completed for all of these policy options.

The preferred option was identified as having negative effects on several sustainability objectives, though no significant negative effects were identified. Predicted negative effects included:

- On communities and rural ways of life due to increased nuisance and potential health impacts from noise, dust fumes and vibration;
- On pollution, e.g. water, air, light and or noise pollution from on-site operations and transportation of minerals.
- Increased land take from further extraction and development of ancillary infrastructure may have a negative effect on land conservation;
- On landscape due to visual impact from extraction sites and ancillary infrastructure;
- Continued minerals development may affect both known and unknown archaeological features during the extraction process; and
- Increased greenhouse gas emissions may have an impact on climate change.

This preferred option focused on the extraction of primary resources. It did not highlight the need for an increase in the use of recycled and secondary aggregates to reduce the need for primary extraction. Therefore there will be negative effects on minimising resource-use. However, policy MCS3 aimed to maximise the use of secondary and recycled aggregates.

There was uncertainty over the effect that the preferred option would have on habitats and species. Testing the environmental acceptability of minerals extraction could reduce the effect of habitat loss and fragmentation. However due to the location of some of the proposed minerals developments there is the potential for significant adverse effects on Natura 2000 sites. It was highlighted that the effect of the preferred option will need to be assessed as part of the HRA of the Core Strategy. There was also uncertainty over the effect of preferred option on flood risk as new minerals developments may alter the risk of flooding in certain locations.

In the short and medium term the preferred option was considered to have a positive effect on housing as a sustainable contribution towards the need for aggregates for housing construction should be made. In the longer term the effect of this policy was uncertain as it was not clear what primary extraction levels will be in the future.

**Alternative Option MCS1b**

The identified effects of MCS1b (the first alternative option) were very similar to those for the preferred option. The main difference between MCS1a and MCS1b was that MCS1b reflects meeting the need for primary aggregates as defined in the dispersal (alternative) vision. Consequently, this means that MCS1b identified four additional Mineral Resource Zones. This had only one impact on the overall assessment as the impact on water became uncertain due to the potential effects on the River Avon. However, the alternative policy means that new local communities, different areas of habitats and species and new landscapes could be affected by minerals developments.

**Alternative Option MCS1c**

The identified effects of MCS1c (Parts 1 and Parts 2) varied compared to the assessment for MCS1a and MCS1b. The main difference was that Part 1 could have had positive effect on local communities and pollution levels as the impacts of minerals developments would be mitigated. Other differences include: Part 2 encouraging minerals operators to use more sustainable transport modes which could have a positive effect on freight transportation and Part 2 encouraging restoration to deliver contributions to local and national BAP targets.

Encouraging a restoration-led approach to minerals development and recommending phased restoration could help to mitigate the negative effects of both the preferred and the alternative policies on habitats and species, land conservation and landscape. The policy could encourage the use of recycled and secondary aggregates to reduce the effects on resource-use. Finally, to reduce the effects of the policies on pollution and climate change best practice techniques in relation to minimising pollution and emissions should be encouraged and encourage a switch to more sustainable modes of transportation.

**7.2.4 Collaborative Working**

The Core Strategy set out Policy MCS2 as the preferred option for collaborative working in the Upper Thames Valley. This preferred option was considered to have a positive effect on several of the sustainability objectives. Collaborative working could help to reduce the cumulative effects of continued minerals workings across all of these local authority areas.
The policy could help reduce the effects on local communities, habitats and species, rural ways of life, water and pollution.

No negative effects were identified. There was some uncertainty over the effects of the policy on transportation as there is potential to plan for the development of more sustainable minerals transport networks over a larger area.

7.2.5 Use of Secondary and Recycled Aggregates

The Core Strategy set out Policy MCS3a as the preferred option for maximising the use of secondary and recycled aggregates (see Box above). The Strategy also included MCS3b (Part 1 and Part 2) which was an alternative option. An assessment was completed on both of the policy options.

The preferred policy was identified as having a positive effect on several of the sustainability objectives:

- By encouraging the location of sites for reception, processing and distribution of secondary and recycled aggregates within 16km of the Strategically Significant Towns and Cities the distances travelled may be reduced, having a positive effect on freight transportation;
- The greater use of secondary and recycled aggregates could reduce the need for primary extraction, particularly in the short and medium term, and this could reduce the impacts of extraction on land conservation, landscape and cultural assets as well as reducing the amount of minerals waste and the amount of primary resources used; and
- Effects on land conservation and landscape may also be reduced due to the development potentially occurring in industrial areas or on previously developed land.

No negative effects were identified. There was some uncertainty over the effect of the preferred policy in the following areas:

- Local communities may be affected, as by encouraging the location of facilities on industrial sites, previously developed land or within existing or proposed minerals or waste developments, effects on local communities may be reduced due to materials travelling lower distances;
- There is uncertainty over the potential effect on habitats and species. The option could lead to less primary extraction of aggregates and therefore less direct or indirect habitat destruction and reduced effects upon fauna; and
- There remains uncertainty over the effects on climate change. Less extraction of primary aggregates may reduce greenhouse gas emissions from this source. However, greenhouse gas emissions will be produced during the processing and distribution of recycled and secondary aggregates.

Alternative Policy MCS3b

The effects identified for MCS3b Part 1 were very similar as those identified for the preferred alternative. Part 1 will have a positive effect on land conservation, landscape, conservation, landscape, cultural assets, waste and minimising resource-use. No negative effects were identified. In addition, there was some uncertainty over the potential effects on habitats and species.

The assessment on MCS3b Part 2 identified several different effects. In particular, there was more uncertainty over the effects of the policy on land conservation and landscape as although there may be a reduction in the need for primary extraction, land will still be needed to construct the new facilities and there may be effects on landscape depending on the location of the development. The policy, in comparison to the preferred option does not encourage development in industrial areas or on previously developed land.

To reduce the effects of the policy on climate change, it was recommended that best practice techniques in relation to minimising emissions should be encouraged and a switch to more sustainable modes of transportation should also be encouraged.
7.2.6 Supply of Cement Raw Materials

The Core Strategy set out Policy MCS4a as the preferred option for the supply of cement raw materials (see Box above). The Strategy also included MCS4b which set out the alternative option. An assessment was completed of both policy options.

MCS4a was identified as having a negative effect on several of the sustainability objectives, although no significant negative effects were identified. Forecast negative effects included:

- The continued extraction of chalk and clay could lead to an increase in land take affecting land conservation;
- Landscape and rural ways of life due to unsightly extraction sites and ancillary infrastructure. However, the policy is likely to support the rural economy;
- Continued quarrying could lead to increased effects upon cultural heritage due to increased traffic flows and also effects on known and unknown archaeology.
- On water, due to increased consumption, resource-use, due to continued use of primary resources; and climate change due to continued greenhouse gas emissions from site operations and minerals transportation.

There was some uncertainty over the potential effect on habitats and species. The continued quarrying of chalk and clay could increase habitat destruction and fragmentation. In addition it could affect chalk dependant species diversity.

**Alternative Policy MCS4b**

The assessment of the alternative option MCS4b identified the same effects as those for MCS4a. The negative effects could be mitigated by encouraging a phased approach to restoration. This could reduce the effects on habitats and species, land conservation, landscape, and rural ways of life. To reduce the effects on water consumption, it was recommended that usage of water should be monitored and measures should be implemented that help to limit water use, for example, maintenance of pipes. To reduce the effects of the policy on climate change, it was recommended that best practice techniques in relation to minimising emissions should be encouraged and a switch to more sustainable modes of transportation should also be encouraged.

7.2.7 Supply of Building Stone

The Core Strategy set out Policy MCS5a as the preferred option for the supply of building stone (see Box above). The Strategy also included MCS5b which set out the alternative option. An assessment was completed of both policy options.

This policy will have a negative effect on several sustainability objectives, although no significant negative effects were identified. Due to the small scale of stone extraction operations there is limited scope for using alternative and more sustainable transportation modes such as rail. As such the policy was identified as having a negative effect on freight transportation.

Continued extraction of building stone will affect land conservation due to increased land take and will potentially affect water resources due to consumption during operations. Further negative effects were identified as extraction of building stone may increase the quantity of minerals waste, may increase the use of primary resources and may contribute to climate change by emitting greenhouse gases from site operations and minerals transportation.

The policy will have a positive effect on cultural assets as the availability of local stone as a building or facing material may help to maintain the historical and cultural character of certain important areas i.e. conservation areas, listed buildings etc..

There was some uncertainty over the potential effect of the policy on habitats and species as continued quarrying could increase habitat loss and fragmentation. There were also uncertainties related to flooding, as a change in extraction may alter flood risk and pollution.

**Alternative Policy MCS5b**

The assessment of the alternative option MCS5b identified the same effects as those for MCS5a. The identified negative effects could be mitigated by encouraging the reuse and
recycling of minerals waste and encouraging the use of secondary and recycled materials. To reduce the effects on water consumption usage of water should be monitored and measures should be encouraged that help to limit water use, for example, maintenance of pipes. To reduce the effects of the policy on climate change best practice techniques in relation to minimising emissions and a switch to more to more sustainable modes of transportation should be encouraged.

7.2.8 Safeguarding Minerals Resources, Rail-head Facilities and Minerals Recycling Facilities

The Core Strategy set out Policy MCS6a as the preferred option for safeguarding minerals resources, rail head facilities and minerals recycling facilities (see Box above). The Strategy also included MCS6b which set out an alternative option. An assessment was completed of both policy options.

The assessment of the preferred option identified that there was much uncertainty over the effects of this policy upon sustainability. Much of this uncertainty remain as the policy aims only to safeguard land for extraction, rail head facilities and recycling facilities rather than to actually develop on these sites. Therefore the policy may lead to effects on sustainability but they are not definite. The likely effects included:

- The policy could support the development of future housing by allowing for a constant supply of aggregates; and
- Maintaining land involved in rail head facilities and sidings could potentially allow for a reduction in the amount of minerals transported by road. This potential switch to more sustainable modes of transport could also decrease air pollution from minerals transportation.

The preferred option helped to protect minerals resources and ensured that they do not become sterilised by non-mineral development. However, uncertainty remained over the impact of this option on the economy as minerals extraction may not be the best form of development for the sites. For example other industrial or commercial developments could potentially be more beneficial for the economy.

It was identified that protecting existing and future land associated with minerals recycling facilities could have an effect on waste and resource-use as this may support a reduction in the amount of final waste produced once the facilities have been developed. Additionally, it may support the amount of recycled materials available once the facilities have been developed and this may reduce the need for primary extraction.

Alternative Policy MCS6b

The assessment of the alternative option MCS6b identified the same effects as those for the preferred option MCS6a.

7.2.9 Protection and Enhancement of the Environment

The Core Strategy set out Policy MCS7 as the preferred option for protecting and enhancing the environment in Wiltshire and Swindon (see Box above). This policy will have a positive effect on several of the sustainability objectives. No negative effects were identified. Forecast positive effects include:

- Enhancing the environment will have positive effects on the community due to reduced nuisance and reduced impacts on health;
- Minimise effects on areas designated for their biodiversity, landscape or historical importance. Enhancing the environment in these areas will also have a positive effect. Although, areas which are of importance but remain undesignated may be not be protected by the policy and therefore could be adversely affected; and
- The policy should minimise the effects of pollution on the environment i.e. there should be a reduction in air, noise and light pollution.

There was some uncertainty over the impact of this policy on land conservation, water and climate change. Soil and water are not directly protected as part of this policy although they
may be indirectly protected as part of the protection of designated biodiversity and landscapes. The policy could potentially reduce effects on climate change as greenhouse gas emissions from on site operations and transportation could be reduced.

### 7.2.10 Protecting Residential Amenity

The Core Strategy set out Policy MCS8 as the preferred option for protecting residential amenity (see Box above). This policy was identified as having a positive effect on sustainability objectives. No negative effects were identified. Forecast positive effects included:

- Reduce the number of people directly affected by minerals development due to the phasing of operation, traffic management, screening features, the control of site operations and a high standard of restoration and after-care;
- Full or partial restoration of sites during and after operation may bring economic opportunities to the local area;
- Phasing of minerals developments could reduce land take over the life of the project which should have a positive effect on land conservation;
- On landscape as the consideration of the design, location and extent of screening features should minimise the impacts of the minerals development; and
- The control of operations should minimise impacts on pollution levels.

There was some uncertainty over the effect of the policy on freight transportation as there may potentially be a change in the mode of transport from road to rail when arrangements for traffic management are considered. Early consideration of restoration and aftercare has the potential to benefit habitats and species.

It was recommended that to mitigate the effects of this policy, phased restoration of sites should be encouraged. In addition, where alternative modes of transport to road are not available the optimisation of road transportation should be encouraged.

### 7.2.11 Managing Minerals Transportation

The Core Strategy set out Policy MCS9a as the preferred option for the strategic approach to managing minerals transportation (see Box above). The Strategy also included MCS9b which sets out an alternative option. An assessment was undertaken of both options.

The preferred option MCS9a was identified as having a positive effect on several of the sustainability objectives. No significant negative effects were identified. Forecast positive effects included:

- There is potential for more minerals freight to be moved by more sustainable modes as a result of the preferred option and this may have a positive effect on freight transportation;
- There may be increased movements by rail and/or navigable waterways. Where this is not possible optimisation of road transport should be encouraged, such as by avoiding peak time movements in congested areas and using larger articulated vehicles to reduce the number of overall vehicle movements;
- Communities may benefit from this policy as fewer people may be affected by the transportation of minerals. Potentially less minerals transportation by road will reduce traffic levels and consequently this could reduce congestion on roads which can have a negative effect on local economies;
- Rural ways of life may benefit from the decreased traffic flows allowing easier access to the countryside and reduced accident risks for rural residents;
- The preferred option should also have a positive effect on waste and minimising resource-use. Encouraging the transportation of recyclable waste may reduce the amount of minerals waste going to final disposal. There is also potential for the amount of primary extraction to be reduced as transportation of recycled wastes is encouraged; and
The policy might have a positive effect on pollution and climate change due to the increased use of sustainable transport modes.

Uncertainty over the effect of this policy on the economy in the short term as the development of new transportation facilities may require a large capital investment. There was also uncertainty over the effect of the policy on habitats and species as using more sustainable modes of transport may potentially help to reduce habitat severance. Finally, decreased traffic flows due to a potential switch to more sustainable modes of transport could reduce the effects of traffic, such as vibration, on cultural assets.

**Alternative Policy MCS9b**

The assessment of the alternative option MCS9b identified the same effects as those for the preferred option.

### 7.2.12 Restoration and After-use

The Core Strategy set out Policy MCS10 as the preferred option for the strategic approach to restoration and after-use of minerals development (see Box above). This policy was identified as having a positive effect on sustainability objectives. No negative effects were identified. The effects included:

- A high standard of restoration and after-use should benefit local communities and rural ways of life through the provision of open space and a new amenity sites;
- Uses of economic benefit to the community should be encouraged as this will benefit both the community and the economy;
- Habitats and species should benefit from the environmental enhancements which should be designed into restoration schemes;
- Effective restoration may decrease the impacts of minerals development on landscape; and
- It may be possible to increase the amount of water available for consumption through the development of new water bodies.

There was some uncertainty over the impact that this policy may have on flooding. There may be potential to reduce flood risk by using certain restoration techniques. In certain areas the types of restoration may be restricted due to issues associated with aircraft and bird strike. This will need to be considered when planning for restoration.

### 7.2.13 Policy Implementation, Monitoring and Review

The Core Strategy set out Policy MCS11 as the preferred option for policy implementation, monitoring and review (see Box above). This policy was identified as having a positive effect on several of the sustainability objectives. No negative effects were identified. The effects included:

- The continued provision of aggregates to enable appropriate levels of house building;
- Increased community involvement may help to reduce the number of people directly affected by minerals developments and improve site restoration proposals; and
- An increase in communication between the local authorities in and around Wiltshire and Swindon may help to develop a more vibrant economy;
- Through improved communication with local environmental groups the policy should help to reduce effects on the environment, including a reduction in the effects on habitats and species, landscape, water and pollution; and
- Improved mitigation and restoration projects which should have a positive effect on the local environment.
8  Core Strategy Submission Draft – February 2008

8.1 Methodology of the Assessment

As with the earlier assessments from 2006 and 2007, the assessment of the submission draft involved the assessment of the likely effects of each policy upon each of the sustainability objectives, using the significance criteria outlined below (Figure 8). In addition, text surrounding the individual policy options in the Submission Draft Document was appraised for any further impact this may have on sustainability.

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
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<tbody>
<tr>
<td>Green (G)</td>
<td>Option actively encouraged in its current form as it would resolve an existing issue / maximise opportunities. (Where these are considered to be significant it is reported in the text).</td>
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<tr>
<td>White (?)</td>
<td>Option would have an uncertain effect.</td>
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<tr>
<td>Blue (B)</td>
<td>Option would have a neutral effect.</td>
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<tr>
<td>Orange (O)</td>
<td>Option would need some changes in order to have a positive effect on issues identified.</td>
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<tr>
<td>Red (R)</td>
<td>The option would exacerbate existing problems and cannot be suitably mitigated. Consider exclusion of option. (Considered to be significant).</td>
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Figure 8: Assessment Criteria

The effects have been investigated in terms of:
- Timescale (short/medium/long term);
- Likelihood (high/medium/low likelihood of occurrence);
- Scale (local/regional/national); and
- Permanence (permanent or temporary).

Cumulative, synergistic and secondary effects were also assessed and are discussed in Section 8.3.1 to 8.3.3. In addition, inter-relationships and cross boundary effects are included in Section 8.4 and 8.5.

To avoid matrices dominated by the presentation of neutral effects, where an objective was unlikely to be affected by the policy being assessed, then these objectives have been listed at the bottom of the appraisal table.

8.2 Summary of the Assessment and Recommendations

Table 11 summarises the assessment of the vision, objectives and policies of the Submission Draft Document. The table summarises the sustainability effect that has been forecast in the medium term (10-20 years). Details of the Submission Draft Sustainability Assessment are contained in Appendix D.

The following sub-sections summarise the assessment for each policy area, focusing on the significant effects. The findings of the SA suggest that the policies in the Submission Draft will make contributions to the progression of SA objectives.

Where conflicts were identified, possible measures to offset adverse effects were considered, with recommendations provided in the final column of the matrices. The majority of the recommendations from the SA work have been as part of the ongoing plan making process and have been adopted through continuous improvement of the policies. Consequently remaining recommendations provided in this report relate mostly to mitigation and monitoring.
Table 11: Summary of Submission Draft Assessment (Medium Term)

<table>
<thead>
<tr>
<th>SA Objective</th>
<th>Suitable housing</th>
<th>Vibrant communities</th>
<th>Vibrant economy</th>
<th>Freight transportation</th>
<th>Habitats and species</th>
<th>Land conservation</th>
<th>Landscape</th>
<th>Rural ways of life</th>
<th>Cultural assets</th>
<th>Flooding</th>
<th>Water consumption</th>
<th>Waste</th>
<th>Minimise resource use</th>
<th>Pollution</th>
<th>Climate change</th>
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<tr>
<td>B - Generic Criteria for Guiding the Location of Minerals Development</td>
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<tr>
<td>C - Creating a Link Between the Strategy, Site Allocation DPDs and Community Involvement</td>
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<td>Policy MCS 5: Collaborative Working in the Upper Thames Valley</td>
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8.2.1 Spatial Vision for Minerals Development 2006-2026

The Core Strategy Document sets out the Spatial Vision for Minerals Development 2006-2026 (see Box below). This policy should have a positive effect on eleven of the sustainability objectives. No negative effects have been identified.

**Spatial Vision For Minerals Development 2006-2026**

Throughout the period to 2026 minerals development in Wiltshire and Swindon will make a positive and sustainable contribution to the local area. A restoration led approach will result in the implementation of well-designed operations and aftercare provisions that afford protection and enhancement of the environment whilst ensuring that communities are engaged in resolving environmental issues and are active in creating local solutions.

All minerals development proposals will be designed to the highest environmental standards and will apply clear objectives to:

- Wherever practicable minimise vehicular movements and promote alternative modes of transport;
- Safeguard and enhance the landscape character and setting of settlements in mineral working areas;
- Robustly protect and enhance sites designated for historic, cultural or environmental importance; and
- Restore land in a phased and timely manner so as to maximise the potential for afteruses.

Recycling and reuse of construction, demolition and excavation waste associated with the use of previously developed land will be maximised, particularly in the Strategically Significant Cities and Towns of Swindon, Chippenham, Trowbridge and Salisbury. In addition, the Councils will actively encourage sustainable construction techniques and the use of alternative building materials in accordance with national, regional and local policies.

A collaborative working arrangement with stakeholders and local planning authorities will ensure that minerals development makes a positive contribution to biodiversity and the local economy, through the creation of high quality habitats and landscapes that can attract a variety of locally and regionally renowned recreational uses. In addition, collaborative working will encompass the forging of stronger links with neighbouring planning authorities with the aim of collectively addressing issues such as the long-term supply of primary aggregates and the management of flood-risk.

As the availability of primary resources in current production areas decline, the Councils will work with the minerals industry and key stakeholders to identify and examine new resources across the Plan area. Consequently, the presence of minerals operations in areas such as the Upper Thames Valley will have been significantly reduced by 2026.

With regard to non-aggregate minerals, the existing chalk and clay quarries near Westbury will have maintained a local supply of essential raw materials for the nearby strategically significant cement plant. During the period up to 2026, the Councils will have worked with the operators of the Westbury facility to determine and assess locational options for the future supply of raw materials to maintain landbanks in accordance with National policy.

The plan will have also ensured that local sources of building stone are available to contribute towards the maintenance and enhancement of locally distinct built environment.

The forecast positive effects are summarised below:

- A contribution towards the local, regional and national needs for aggregate minerals, and the landbanks should be maintained;
- Collaborative working with neighbouring planning authorities may help to coordinate the long term supply of aggregates, and flood management;
- Ensuring communities are informed of the environmental issues of minerals developments and are active in creating local solutions could potentially reduce the number of people affected by minerals workings;
- A restoration led approach may increase habitat quality and species diversity, may allow for opportunities for the provision of water storage facilities to be explored and may lead to a high standard of restoration and good long term management;
The policy aims to protect and enhance designated sites of historical and cultural importance; and

Maximising the opportunities for the recycling and re-use of construction and demolition waste in the Strategically Significant Cities and Towns, encouraging sustainable construction methods and alternative building materials may reduce the use of primary materials, and the amount of waste going to final disposal.

The forecast uncertain effects are summarised below:

- The policy may reduce pollution levels through the protection and enhancement of designated sites of historical, cultural and environmental importance, and through well-designed operations;
- Ensuring the continued supply of minerals may allow for continued growth and thus may benefit the local economy;
- Minimising vehicle movements and encouraging alternative forms of transport may provide some modal shift; and
- Minerals extraction, processing and manufacture, for example, cement production and batching plants emit greenhouse gases from site operations and transportation. Levels of emissions may, however, be reduced through the protection of designated sites of historical, cultural and environmental importance, and through well-designed operations.

The following mitigation and enhancement measures are recommended:

- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators; and
- The promotion of Environmental Management Systems and public reporting for minerals sites.

8.2.2 Strategic Objectives

The Core Strategy Document sets out five objectives to meet the Spatial Vision for Minerals Development 2006-2026 (see Box below). This policy should have a positive effect on eleven of the sustainability objectives. No negative effects have been identified.

### Strategic Objectives

<table>
<thead>
<tr>
<th>Objective 1: Managing Mineral Resources</th>
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<tbody>
<tr>
<td>To make a sustainable contribution to meeting the need for minerals. The reliance on primary mineral resources in Wiltshire and Swindon will be reduced, firstly through more efficient use of the primary resource and reducing the amount of mineral waste; then the use of recycled and secondary aggregates. Proven mineral deposits which are, or may become, of economic importance will be safeguarded from non-mineral development.</td>
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<table>
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<tr>
<th>Objective 2: Economy</th>
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<tbody>
<tr>
<td>To support opportunities that assist in the economic growth of Wiltshire and Swindon, recognising the important contribution that minerals development can make to the local economy.</td>
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<tr>
<th>Objective 3: Communities and Local Amenity</th>
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<tr>
<td>To provide clear guidance to the communities of Wiltshire and Swindon on minerals planning policy and proposals through the pursuit of a collaborative public involvement approach, which contributes to maintaining and/or enhancing the quality of life of people living in proximity to minerals development. The restoration of mineral workings will deliver tangible benefits to the communities of Wiltshire and Swindon.</td>
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<tr>
<th>Objective 4: Environment</th>
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<tr>
<td>To protect and enhance the diverse and highly valued natural and historical environment of Wiltshire and Swindon, incorporating the landscape character, the setting of local settlements, biodiversity and geological conservation interests, the water environment including flood-risk, and cultural heritage. To reduce and buffer the impacts of climate change, particularly on vulnerable habitats and species. A restoration-led approach to mineral workings will make a positive contribution to Biodiversity Action Plan targets and the implementation of the South West Nature Map. This approach will need to address the potential for open water restoration to increase the risk of bird strike within Aerodrome Safeguarding Areas and the threat to military and civilian aircraft. Options for sustainable transportation will be</td>
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</table>
encouraged and pursued in order to reduce the environmental impacts of transporting minerals by road across Wiltshire and Swindon.

**Objective 5: Collaborative Working**
To identify, develop and implement opportunities to work with all those with an interest in sustainable minerals planning in Wiltshire, Swindon and the surrounding areas. To address long-term supply issues and environmental concerns, the preparation of joint Local Development Documents will be advocated, where necessary, particularly in the Cotswold Water Park / Upper Thames Valley.

The forecast positive effects are summarised below:

- The objectives should allow for the sustainable provision of minerals to maintain the necessary housing developments;
- Public involvement in minerals planning could minimise impacts on local communities;
- A reduction in primary extraction may reduce impacts of minerals workings, such as nuisance and health impacts (i.e. respiratory conditions and stress), on local residents;
- The objectives may protect cultural heritage. However, continued extraction of minerals may have an adverse impact on cultural assets.
- This policy may support economic growth as it aims to support opportunities that assist the local economy;
- The objectives may encourage the modal shift to more sustainable modes of freight transport;
- A restoration led approach may increase habitat quality and species diversity, and reduce impacts upon the landscape and land conservation. In addition, it may lead to a high standard of restoration and good long term management;
- The objectives may help to protect the natural and historic environment of Wiltshire and Swindon from flood damage; and
- The amount of waste from minerals, and the level of primary extraction may be reduced by used of recycled and secondary materials.

The forecast uncertain effects are summarised below:

- The objectives may protect the local water environment. However, continued extraction of minerals may require water abstraction through dewatering;
- The objectives may reduce pollution levels through protecting the environment and local communities; and
- Less extraction of primary aggregates may help to reduce greenhouse gas emissions as a result of fewer operational sites. However greenhouse gas emissions will be produced during the processing and distribution of recycled and secondary aggregates.

The following mitigation and enhancement measures are recommended:

- Phased restoration of sites should be encouraged where appropriate;
- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators; and
- Monitor water consumption and encourage the recycling of water on site.

### 8.2.3 Meeting the Need for Primary Aggregate Minerals

The Core Strategy Document sets out Policy MCS1 as the policy for meeting the need for primary aggregate minerals (see Box below). This policy should have a positive effect on four of the sustainability objectives. A negative effect on minerals resources has been identified.
Policy MCS 1: Meeting the Need for Primary Aggregate Minerals

The Councils will aim to make provision of land in Wiltshire and Swindon sufficient to meet demand for aggregate minerals in accordance with National and Regional policy. This will be achieved through the identification of sites within the Mineral Resource Zones identified on the Proposals Map.

All proposals for minerals development must demonstrate that they have avoided, mitigated and where necessary compensated for the social, economic and environmental impacts that quarrying and/or ancillary development may bring to an area. Extensions to existing sites will be given priority over new sites, subject to environmental acceptability.

To ensure continuity of supply, the Councils will endeavour to maintain a landbank for sand and gravel in accordance with National and Regional policy.

The forecast positive effects are summarised below:

- In the short and medium term, a contribution towards the local, regional and national needs for aggregate minerals and landbanks should be maintained; and
- This policy may reduce the effects of pollution on the environment.

The forecast uncertain effects are summarised below:

- It is unclear how much of the minerals provision would come from each Mineral Resource Zone, therefore the uncertainty of the effects on communities, rural ways of life, habitats and species, landscape, and land conservation has increased from the previous preferred options assessment in 2007;
- Communities and rural ways of life may be protected as a result of the avoidance and mitigation of social, economic and environmental impacts.
- Landscape impacts may be protected as a result of the avoidance and mitigation of social, economic and environmental impacts. Continued minerals extraction, however, may have an adverse impact;
- The effect of this policy upon land conservation is uncertain. There is the potential for increased landtake due to continued minerals development. Giving priority to extensions of existing sites over new sites, however, may reduce the amount of landtake required;
- This policy may help to reduce the impact of minerals development upon habitats and species through the environmental impacts of minerals developments being avoided, mitigated or compensated for. Mitigated impacts, however, may still have residual impacts upon habitats and species;
- Cultural and historical assets may be protected as a result of the avoidance and mitigation of social, economic and environmental impacts; and
- The effect of the policy on climate change is uncertain. Minerals extraction, processing and manufacture, for example, cement production and batching plants emit greenhouse gases from site operations and transportation. The mitigation or avoidance of environmental impacts such as air emissions may, however, help to reduce this contribution.

The following negative effect has been forecast to result from the implementation of this policy:

- This policy focuses on primary resources. It does not highlight the need for an increase in the use of recycled and secondary aggregates to reduce the need for primary extraction. There is, therefore, the potential for adverse effects on minerals resources. Policy MCS2 does, however, aim to maximise the use of secondary and recycled aggregates.

The following mitigation and enhancement measures are recommended:

- Phased restoration of sites should be encouraged where appropriate;
- Habitat creation in line with local Biodiversity Action Plans;
- Monitoring of habitats and species;
- Encourage the use of recycled and secondary materials;
- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators; and
- The promotion of Environmental Management Systems and public reporting for minerals sites.

### 8.2.4 Policy MCS1 (A) (B) (C)

The Core Strategy Document sets out Policy MCS1 (A) (B) (C) as the policy for identifying future supplies of aggregate minerals, guiding the location of minerals development and creating a link between the Strategy, Site Allocation DPDs and community involvement (see Box below). This policy should have a positive effect on four of the sustainability objectives. Negative effects on land conservation, landscape, pollution and climate change have been identified. No significant negative effects have been identified.

#### Policy MCS 1 (A) (B) (C)

**A: Strategic Approach to Identifying Future Supplies of Aggregate Minerals**

Proposals for new or extended sites for minerals extraction should be located within the following Mineral Resource Zones, as identified on the Proposals Map:

- Land within The Cotswold Water Park / Upper Thames Valley;
- Land to the east and south-west of Calne;
- Land to the south-east of Salisbury;
- Land within The Bristol Avon Valley; and
- Land within the Salisbury / Hampshire Avon.

In recognition of the fact mineral resources can only be worked where they exist, proposals for minerals development that lie outside of the identified Mineral Resource Zones will be considered on their merits.

**B: Generic Criteria for Guiding the Location of Minerals Development**

In all cases, the process of identifying, appraising, designing and implementing proposals for new or extended sites for minerals extraction and/or recycling of construction and demolition wastes will be guided by the policies of the Minerals Core Strategy, and other relevant DPDs and the following indicative criteria:

- the need for the mineral and/or recycling capacity within the broad locations outlined in Section (A) and/or the policies of the Waste Core Strategy;
- likely effects on designated sites and other environmentally valuable features;
- likely effects of designated habitats and priority species;
- proximity to a defined flood zone and/or groundwater Source Protection Zone, and other water interests;
- proximity to local communities and the need to maintain and enhance the local landscape character and setting of settlements;
- proximity to primary end-use market(s);
- proximity to the Wiltshire HGV route network as defined in the County Freight Strategy and/or alternative transport modes; and
- the ability for a site or sites to deliver significant contributions to local, regional and national BAP targets for habitat creation and priority species as well as geodiversity gains where applicable.

**C: Linking the Strategy, Site Allocation DPDs and Community Involvement**

In preparing, monitoring and reviewing Minerals Site Allocation Development Plan Documents, the Councils will work with the minerals and waste industries, landowners, local communities within and in close proximity to defined Mineral Resource Zones and other agencies to ensure that issues associated with the development of sites are identified and addressed at the earliest opportunity.

The forecast positive effects are summarised below:

- There is the potential for minerals operators to use more suitable transport routes; and
Consideration of a site(s) ability to deliver contributions to local, regional and national Biodiversity Action plan targets for habitat creation and priority species may bring benefits to habitats and species.

The forecast uncertain effects are summarised below:

- Continued minerals development may increase impacts upon cultural assets. Consideration of minerals developments to have benefits for geodiversity, however, may enhance cultural assets;
- Consideration of the proximity of new minerals sites to flood zones may help to reduce the adverse impacts of flooding. Minerals extraction in the floodplain may reduce the level of flood risk by providing additional storage capacity during its operational phase for flood waters. Alternatively, stockpiles and ancillary buildings could alter the natural flow of flood water increasing flood risk to adjacent land; and
- Taking into account water interests when identifying, appraising and implementing proposals for new or extended minerals sites may help to reduce adverse impacts upon water consumption and water quality.

The forecast negative effects are summarised below:

- Continued minerals development will increase landtake, and may increase landscape impacts;
- Continued minerals development will contribute to climate change by emitting greenhouse gases from site operations and transportation; and
- The continued and future development of minerals workings may cause and increase in pollution levels.

The following mitigation and enhancement measures are recommended:

- Phased restoration of sites should be encouraged where appropriate;
- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators;
- The promotion of Environmental Management Systems and public reporting for minerals sites; and
- Water consumption monitoring and measures to limit water use.

### 8.2.5 Maximising the Use of Secondary and Recycled Aggregates

The Core Strategy Document sets out Policy MCS2 as the policy for maximising the use of secondary and recycled aggregates (see Box below). This policy should have a locally positive effect on six of the sustainability objectives. No negative effects have been identified.

**Policy MCS 2: Maximising the Use of Secondary and Recycled Aggregates**

The Councils will support developments that promote and maximise the use of secondary and/or recycled aggregates. Sites for the reception, processing and distribution of secondary / recycled aggregates will be identified in the following locations within Wiltshire and Swindon:

- Industrial areas and previously developed land within 16km of the Strategically Significant Cities and Towns of Swindon, Chippenham, Trowbridge and Salisbury;
- Within existing, proposed or suitable former minerals developments; and
- Co-located with existing or proposed waste management facilities.

The forecast positive effects are summarised below:

- By encouraging the location of the facilities within 16km of the Strategically Significant Cities and Towns the distances travelled could be reduced;
- This policy may lead to less minerals development, and allows for development on previously development land, therefore potentially reducing greenfield landtake.
Impacts upon landscape and cultural assets may be reduced due to the potential for less new minerals development and less greenfield landtake; and

The promotion and maximisation of recycled and secondary aggregates should lead to less minerals waste (fines), and may lead to less demand on primary resources.

The forecast uncertain effects are summarised below:

- Impacts on local communities through reduced distances travelled may be reduced;
- This policy may reduce new minerals development, potentially reducing habitat destruction and impacts upon biodiversity. The construction of new waste management facilities on industrial areas and previously developed land may, however, adversely impact flora and fauna on these sites. Brownfield sites can represent important wildlife habitats, and can be particularly rich in invertebrates; and
- The effect of the policy on climate change is also uncertain. Minerals extraction, processing and manufacture, for example, cement production and batching plants emit greenhouse gases from site operations and transportation. The mitigation or avoidance of environmental impacts such as air emissions may help to reduce this contribution.

The following mitigation measure is recommended:

- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators.

8.2.6 The Supply of Cement Raw Materials

The Core Strategy Document sets out Policy MCS3 as the policy for the supply of cement raw materials. This policy should have a negative effect on seven of the sustainability objectives, although no significant negative effects have been identified.

Policy MCS 3: The Supply of Cement Raw Materials

In recognition of the Regional and National Importance of the Westbury Cement Works, the Councils will continue to maintain local reserves of chalk and clay to serve the facility from the following areas:

Land to the south, east and northeast of Westbury Cement Works.

The following uncertain effect has been forecast:

- The continued extraction of chalk and clay could increase habitat destruction, fragmentation, and impacts upon chalk dependant species diversity.

The forecast negative effects are summarised below:

- Continued extraction of chalk and clay may lead to increased landtake, an increased impact upon the landscape, and a decrease in primary resources;
- The social and environmental impacts of minerals developments upon rural ways of life may be increased due to usually intrusive extraction sites and ancillary infrastructure. The policy may, however, help to support the rural economy;
- This policy may lead to increased impacts upon cultural heritage due to increased traffic flows, and impacts on known and unknown archaeology;
- This policy may lead to increased water consumption through the mitigation of dust impacts; and
- Cement manufacture is an energy intensive process and as a result contributes to climate change by emitting greenhouse gases.

The following mitigation and enhancement measures are recommended:

- Phased restoration of sites should be encouraged where appropriate;
- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators;
Water consumption monitoring and measures to limit water use; and
Encourage the use of recycled and secondary materials.

8.2.7 The Supply of Building Stones

The Core Strategy Document sets out Policy MCS4 as the policy for the supply of building stones (see Box below). This policy should have a negative effect on six of the sustainability objectives, although no significant negative effects have been identified. A positive effect on cultural assets has been identified.

Policy MCS 4: The Supply of Building Stones
In recognition of the demand for natural building stones for use in schemes to maintain and enhance the character of the built environment, the Councils will support proposals for the extraction of building stones that demonstrate a local need for the mineral and are of a scale which avoids any significant environmental and amenity impacts.

The following positive effect has been forecast:
- The availability of local stone as a building or facing material should help to maintain the historical and cultural character of areas near to listed buildings or near to other cultural assets, conservation areas and listed buildings.

The forecast uncertain effects are summarised below:
- The continued extraction of chalk and clay may increase habitat loss, fragmentation;
- Landscape impacts may increase through the further extraction of building stone. The character of the built environment may, however, be improved;
- A change in minerals operations may alter flood risk; and
- Depending on operational practices, continued minerals extraction could impact on pollution levels.

The forecast negative effects are summarised below:
- There is limited scope for alternative modes of transport such as rail;
- The amount of landtake may be increased;
- Continued minerals development may lead to increased water consumption if the rate of extraction increases;
- Continued minerals development, extensions/re-openings and new quarries would increase minerals waste, and may lead to an increase in the use of primary resources; and
- Continued quarrying may contribute to climate change by emitting greenhouse gases from site operations and transportation.

The following mitigation and enhancement measures are recommended:
- The use of best practice techniques to reduce pollution impacts and greenhouse gas emissions should be promoted to site operators;
- The promotion of Environmental Management Systems and public reporting for minerals sites;
- Water consumption monitoring and measures to limit water use;
- Encourage reuse and recycling of minerals waste; and
- Consider the optimisation of road transport e.g. avoiding peak time movements in congested areas.
8.2.8 Collaborative Working in the Upper Thames Valley

The Core Strategy Document sets out Policy MCS5 for collaborative working in the Upper Thames Valley (see Box below). This policy should have a positive effect on eleven of the sustainability objectives. No negative or uncertain impacts have been identified.

Policy MCS 5: Collaborative Working in the Upper Thames Valley

The Councils will pursue and implement collaborative working arrangements to secure a shared vision, objectives and policy framework for minerals development (including restoration and afteruse) in the Cotswold Water Park / Upper Thames Valley, with the following Planning Authorities:

- Gloucestershire County Council;
- Cotswold District Council; and
- North Wiltshire District Council.

The forecast positive effects are summarised below:

- This policy could potentially reduce the cumulative impacts of minerals developments on local communities, habitats and species, landscape, rural communities, cultural assets, flooding, water consumption, waste production and pollution;
- This policy could allow for enhanced coordination of the use of recycled/secondary resources, and of the use of primary resources;
- Improved mitigation and restoration;
- The potential to plan for more sustainable transport modes in this area; and
- The potential for improved coordination of flood management.

8.2.9 Safeguarding Minerals Resources, Rail-head Facilities and Minerals Recycling Facilities

The Core Strategy Document sets out Policy MCS6 for safeguarding minerals resources, rail-head facilities and minerals recycling facilities (see Box below). There remains uncertainty about the effect of this policy upon six of the sustainability objectives. The policy may have a positive effect on freight transportation and landscape in the short and medium term. No negative effects have been identified.

Policy MCS 6: Safeguarding Minerals Resources, Rail-head Facilities and Minerals Recycling Facilities

The Councils will work with the minerals and waste industries, land owners and other local planning authorities to safeguard the following assets from potential sterilisation by other forms of development:

- Mineral Resource Zones;
- All existing active and dormant minerals sites;
- Land within 1km of active and dormant mineral sites;
- Sites for future mineral working allocated within DPDs;
- Operational land associated with existing and proposed Mineral Recycling Facilities; and
- Operational land associated with the existing Rail Aggregate Depot at Wootton Bassett and any proposed new rail-head facilities and sidings.

The County Council must be notified of any District planning applications that fall within Minerals Consultation Areas, and be given sufficient time to consider the implications of an application as part of the District Council's planning application consultation procedure.

The forecast positive effects are summarised below:

- Preserving railheads will allow for the transportation of aggregates by rail; and
- This policy may protect landscape until either minerals operations take place or an overriding need for other development occurs.
The forecast uncertain effects are summarised below:

- Safeguarding active, dormant and proposed minerals sites should help to reduce the risk of a reduced supply of aggregate. The policy could, however, compromise housing site development;
- This policy may help to protect mineral resources, and ensure that mineral resources are not sterilised by non mineral developments. It could, however, sterilise or delay other development;
- Protecting existing and future land associated with Minerals Recycling Facilities may lead to an increase in the amount of minerals being recycled, and a reduction in the amount of primary materials required; and
- This policy may lead to a reduction in air pollution, and a reduction in greenhouse gas emissions due to modal shift.

**8.2.10 Protection and Enhancement of the Environment in Wiltshire and Swindon**

The Core Strategy Document sets out Policy MCS7 for the protection and enhancement of the environment in Wiltshire and Swindon (see Box below). This policy should have a locally positive effect on six of the sustainability objectives. No negative effects have been identified.

**Policy MCS 7: Protection and Enhancement of the Environment in Wiltshire and Swindon**

In recognition of the significant proportion of Wiltshire and Swindon designated for its biodiversity, geodiversity, landscape and historical importance, minerals development should ensure its protection and enhancement. Where this is not possible, adverse impacts must be mitigated, followed by compensatory measures as a final resort. The designation hierarchy of international, national and local designated sites will be adhered to.

Development proposals must avoid or mitigate for any aspect of the development that could potentially lead to an increase in a likelihood of flooding, as identified through Flood Risk Assessment, and where appropriate provide additional flood storage capacity to increase protection for other vulnerable land uses, taking into account the impacts of climate change.

The forecast positive effects are summarised below:

- This policy should minimise the impacts of minerals workings on areas designated for biodiversity, landscape quality and historic importance. However, areas which are not designated may be adversely affected;
- Impacts upon local communities and pollution levels may be reduced through the minimisation of impacts on the environment; and
- The policy should help to avoid any increase in flood risk due to minerals operation through the requirement for development proposals to provide a Flood Risk Assessment, and additional flood storage capacity where appropriate.

The forecast uncertain effects are summarised below:

- Soils are not protected as part of this policy, although they may be indirectly protected as part of the protection of designated biodiversity and landscapes;
- This policy may protect some important water resources i.e. those which are designated as part of a biodiversity designation. However, the policy does not directly protect other water resources; and
- This policy may reduce greenhouse gas emissions from site operations and transportation through the need to protect, designated sites for biodiversity, geodiversity, landscape and historical importance.

The following mitigation measure is recommended:

- Phased restoration of sites should be encouraged where appropriate.
8.2.11 Living with Minerals Development – Protecting Residential Amenity

The Core Strategy Document sets out Policy MCS8 for protecting residential amenity (see Box below). This policy should have a locally positive effect on five of the sustainability objectives. No negative effects have been identified.

<table>
<thead>
<tr>
<th>Policy MCS 8: Living with Minerals Development – Protecting Residential Amenity</th>
</tr>
</thead>
<tbody>
<tr>
<td>To maintain an acceptable separation of residential areas from proposed minerals development within Wiltshire and Swindon, the Councils will work with local communities, landowners, the minerals and waste industries, regulatory bodies and other organisations to establish, plan and address the following matters prior to the implementation of development proposals:</td>
</tr>
<tr>
<td>- The strategic and localised phasing and duration of operations;</td>
</tr>
<tr>
<td>- The design, location and extent of screening features;</td>
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<tr>
<td>- The control of operations to minimise pollution;</td>
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<tr>
<td>- The arrangements for managing the traffic associated with the development;</td>
</tr>
<tr>
<td>- The restoration and after-use objectives of the proposed development; and</td>
</tr>
<tr>
<td>- All other matters as agreed and deemed relevant by the Councils, local communities and the minerals operator.</td>
</tr>
<tr>
<td>Where appropriate, the Councils will encourage and support the establishment of Community Liaison Groups to help monitor, appraise and resolve operational matters associated with minerals sites throughout the life of the development.</td>
</tr>
</tbody>
</table>

The forecast positive effects are summarised below:

- The policy may reduce the number of people being directly affected by new minerals development due to the phasing of operations, traffic management, screening features, the control of site operations and a high standard of restoration and after-care;
- Restoration may provide opportunities for additional residential amenities;
- Full or partial restoration of sites during and after site operation may bring economic opportunities;
- Phasing of projects may reduce land take over the life of the minerals working;
- Effective screening may reduce landscape impacts; and
- The policy could minimise pollution through the control of minerals operations.

The forecast uncertain effects are summarised below:

- Early consideration of restoration and after-use has the potential to benefit biodiversity; and
- Through consideration of traffic management there may be the potential for modal shift.

The following mitigation and enhancement measures are recommended:

- Phased restoration of sites should be encouraged where appropriate;
- Encourage optimisation of road transport where alternative modes are not available or practicable; and
- Ensure that there is a buffer zone between residents and minerals workings.

8.2.12 Strategic Approach to Managing Minerals Transportation

The Core Strategy Document sets out Policy MCS9 for managing minerals transportation strategically (see Box below). This policy should have a positive effect on six of the sustainability objectives No negative effects have been identified.
Policy MCS 9: Strategic Approach to Managing Minerals Transportation

The sustainable transportation of minerals, recyclable wastes and material used in restoration schemes will be encouraged. Proposals for new or improved rail depots and / or sidings as well as innovative schemes utilising the potential for canals and rivers to transport minerals and recyclable wastes within Wiltshire and Swindon will be supported subject to the social, economic and environmental impacts of such development being avoided, mitigated and where necessary compensated for. Proposals for new Rail Aggregate Depots will be directed towards the Swindon area.

Priority will be given to proposals for minerals development that demonstrate a commitment to implementing sustainable modes and methods for transporting minerals and recyclable wastes. Ultra-short transfer of minerals and recyclable wastes by conveyor either within or between sites will be encouraged. The transportation of minerals by road must utilise the Wiltshire HGV Route Network.

The forecast positive effects are summarised below:

- The policy should encourage a switch to more sustainable modes of transportation;
- With the transportation of recyclable wastes being encourage there is the potential for the amount of mineral waste going to final disposal, and for the use of primary resources to decrease;
- Pollution levels may fall due to the use of more sustainable transport modes and road transport optimisation. The policy is unlikely to have a significant impact upon ambient pollution levels as aggregate transport does not dominate road traffic;
- This policy could reduce greenhouse gas emissions from the transportation of minerals depending upon the mix of modes from quarry to user but magnitude will be small; and
- Rural ways of life may benefit from decreased traffic flows allowing for easier access to the countryside and reduced accident risks for rural residents.

The forecast uncertain effects are summarised below:

- This policy may lead to fewer people being directly affected by the traffic generated by minerals workings. This, however, would depend on the size and location of the minerals development;
- Potentially reduced transportation of minerals by road, therefore, reduced levels of congestion;
- Increased use of sustainable transport methods may reduce the need for further infrastructure development, in particular roads. There may, however, be a need to extend or increase the number of Rail Aggregate Depots; and
- This policy may reduce the impacts of minerals traffic on cultural assets.

The following mitigation and enhancement measure is recommended:

- Encourage the optimisation of road transportation e.g. avoiding peak time movements in congested areas.

8.2.13 Strategic Approach to the Restoration and After-use of Minerals Sites

The Core Strategy Document sets out Policy MCS10 as the policy for the strategic approach to the restoration and after-use of minerals transportation (see Box below). This policy should have a locally positive effect on seven of the sustainability objectives. No negative effects have been identified.

Policy MCS 10: Strategic Approach to the Restoration and After-use of Minerals Sites

The restoration, after-care management and future after-use of mineral sites will be primary considerations in the process of planning for all new minerals development in Wiltshire and Swindon. Proposals for the restoration and management of mineral workings should be addressed at the earliest opportunity within the planning process.
Restoration schemes must be designed to prevent increased risks associated with flooding and/or bird strike and must include long-term environmental enhancement, where appropriate, in accordance with the Wiltshire, Swindon and Cotswold Water Park Biodiversity Action Plans and the South West Nature Map.

The forecast positive effects are summarised below:

- Effective restoration may bring benefits to local communities, habitats and species, and reduce impacts on the landscape;
- Uses of economic benefit to the local community could be considered as part of the restoration process;
- This policy will encourage habitats to be created in line with the Wiltshire, Swindon and Cotswold Water Park Biodiversity Action Plan targets, and the South West Nature Map. Some types of restoration may, however, be restricted due to issues with bird strike;
- Early consideration of restoration and after care may allow for high standard land restoration;
- Effective restoration and the development of an after use may restore open space and amenity land; and
- May be able to increase the amount of water available for consumption by using appropriate restoration techniques.

The following uncertainty has been forecast:

- May be able to reduce flood risk and aid climate change adaptation by appropriate restoration techniques such as a series of small individual ponds. In certain areas the types of restoration may be restricted due to issues associated with aircraft and bird strike. This will need to be considered when planning for restoration.

The following mitigation and enhancement measure is recommended:

- Explore the possibilities of smaller expanses of water that may not cause an unacceptable risk of bird strike such as a series of small individual ponds to act as water storage and reduce flood risk. These ponds would not necessarily be disconnected but no large expanses of water are available to birds for landing or taking off, or for the gathering of large flocks.

**8.2.14 Strategy for Policy Implementation, Monitoring and Review**

The Core Strategy Document sets out Policy MCS11 for the implementation, monitoring and review (see Box below). This policy should have a positive effect on seven of the sustainability objectives. No negative or uncertain effects have been identified.

**Policy MCS 11: Strategy for Policy Implementation, Monitoring and Review**

The Councils will work with local authorities in and around Wiltshire and Swindon, the minerals industry, regulatory authorities, landowners, local communities, local environmental groups, the Regional Planning Body, the South West Regional Aggregates Working Party and Government to plan, monitor and manage minerals development in Wiltshire and Swindon through the implementation of socially, economically and environmentally responsible policies and the Annual Monitoring Report process.

The forecast positive effects are summarised below:

- The policy should allow for the continued provision of aggregates to enable the provision of housing;
- Increased community involvement may help to reduce the number of people directly affected by minerals development and improve site development proposals;
- Increased communication between the local authorities may help to produce a vibrant economy; and
Working with local environmental groups may reduce impacts on habitats and species, landscape, water resources, pollution levels, and improve mitigation and restoration.

8.3 Cumulative, Synergistic and Secondary Effects

8.3.1 Cumulative Effects
Cumulative effects are those effects which, though they may be small in relation to one policy, may combine across a whole plan (or in association with other plans) to produce an overall effect which is more significant.

In relation to the implementation of the Core Strategy policies, cumulative effects have been examined by SA Objectives as a way of identifying the effects on the receptors that are associated with each of the sustainability topics.

No significant negative cumulative impacts have been identified. Where the impacts of the policies on SA Objectives are uncertain, however, there is the potential for there to be slight adverse cumulative effects in relation to habitats and species, climate change, land conservation, landscape, pollution, cultural assets, vibrant economy and communities, minerals resources, freight transportation, waste, flooding and water consumption if the impacts are not adequately avoided or mitigated.

In relation to suitable housing, freight transportation, vibrant economy and communities, habitats and species, landscape, land conservation, rural ways of life, cultural assets, flooding, water consumption, waste, minerals resources, and pollution there is the potential for positive cumulative effects to arise due to 12 of the Core Strategy Policies (including the vision and objectives) having a positive effect upon the SA Objectives.

8.3.2 Synergistic Effects
Synergistic effects are those effects where the combined effect is greater than the sum of the individual effects.

There is potential for positive synergistic effects on biodiversity and water management if long-term partial and full restoration schemes in close proximity to one another are implemented.

No negative synergistic effects have been identified in relation to the Core Strategy Policies.

8.3.3 Secondary Effects
Secondary or indirect effects are effects that are not a direct result of the plan, but occur away from the original effect or as a result of a complex pathway (ODPM, 2005).

The Core Strategy Policies may cause secondary effects as a result of minerals extraction activities affecting the watertable which may then impact on neighbouring areas of biodiversity importance. This could be the case in the Cotswold Water Park area particularly in relation to the Natura 2000 site ‘North Meadow and Clattinger Farm’. The ongoing Habitats Regulations Assessment will be investigating the potential for such an impact.

Secondary effects, such as on local traffic flows, may also result if minerals extraction occurs in an area not yet exploited.

8.4 Inter-relationships
The SEA topics cannot be considered in isolation from one another, as there are a variety of inter-relationships that exist. Air quality is a topic which cuts across most of the other SEA topics, with proven links between air quality and human health (respiratory problems). It can also have indirect effects on biodiversity, soil and water quality, and the condition of heritage assets, whilst there is a more direct link between traffic emission causing poor air quality and the emissions of CO₂.

The development of new minerals sites have shown inter-related effects on criteria such as noise, climatic factors and air quality (from introducing mineral operations and associated traffic into a new area), and water and soil (from introducing pollutant emissions). Biodiversity,
landscape and townscape may also be affected by the introduction of mineral operations into new areas.

Positive effects can also occur from inter-relationships, for example, protecting landscape quality and/or soil, may lead to habitats and species being indirectly protected.

8.5 Cross Boundary Effects

Where mineral extraction activities in Wiltshire and Swindon are based close to the borders of other local authorities there are likely to be effects felt in these areas. The Cotswold Water Park, for example, crosses 3 county boundaries.

In cases of very close proximity, it is possible that all the direct effects forecast for the plan area (air quality, noise, water quality etc.) could be felt in the neighbouring authority. Where there is a greater distance involved effects could still be encountered, for example increased traffic associated with minerals haulage, and changes in hydrology.

8.6 Difficulties Encountered

Due to the strategic nature of the policies contained within the Core Strategy there has often been an insufficient level of detail to make it possible to forecast the likely effects of implementing the policies. Consequently, there remains uncertainty as to how the Core Strategy would affect sustainability issues.

These uncertainties are likely to be reduced as more detail is provided to the overall Minerals Development Framework through the development of the Development Control Policies DPD and the Site Allocations DPD.
9 Mitigation and Enhancement

9.1 Introduction
The SEA Regulations require that measures should be considered to prevent, reduce or offset any significant adverse effects that have been identified during the assessment process. This is a key part of the SEA process, and this SA Report. Further to this, guidance recommends that consideration should also be given to proactive avoidance of adverse effects and enhancement of beneficial effects (DfT, 2004a).

No significant negative effects have been identified in the minerals plan due to its structure and intent to provide the most sustainable solution possible. Section 9.2 details the wider mitigation and enhancement measures which have been proposed through the assessment.

It is probable that some mitigation/enhancement measures may be delivered by parties other than the minerals planning authorities. Indeed, several administrative jurisdictions and stakeholders may be involved. The co-operation of these other interests is needed to ensure that the mitigation/enhancement or monitoring measure is successfully implemented.

9.2 Proposed Mitigation and Enhancement Measures
Table 12 below summarises the proposed mitigation and enhancement measures. Some of these measures are appropriate at the strategic level of the Core Strategy, whereas others are more appropriate for lower level planning documents and for incorporation into environmental assessments of mineral projects. These mitigation measures will therefore be cascaded down to the SA/SEA work that will be undertaken on the Development Control Policies DPD and the Site Allocations DPD.
<table>
<thead>
<tr>
<th>No</th>
<th>SEA Topic</th>
<th>Proposed Mitigation or Enhancement Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Suitable housing</td>
<td>None</td>
</tr>
<tr>
<td>2</td>
<td>Vibrant communities</td>
<td>Care should be taken to reduce community severance issues and increase risks of accidents by minimising HGV traffic through rural and urban communities where this is practicable. Introduce increased numbers of pedestrian crossings to areas with known severance issues. Mineral development design and associated mitigation should ensure that severance of footpaths and other rights of way does not reduce the accessibility of open space and recreation opportunities. The incorporation of a buffer zone between residents and minerals workings. Landscaping to create bunds and use of vegetation for screening purposes. Restricting the hours of site operation. Wheel and body washing, sheeting of lorries prior to leaving the site and spraying of internal haul roads. The phasing of operations to reduce the impact on local residents. Early consultation should be undertaken with new local communities to be affected by minerals developments. Assign a percentage of the overall minerals provision to each Mineral Resource Zone to allow a more accurate assessment of the effects.</td>
</tr>
<tr>
<td>3</td>
<td>Vibrant economy</td>
<td>Ensure that a balance is maintained between environmental, social and economic considerations. Active site management may increase economic opportunities for the local community. Encourage phased restoration of minerals sites.</td>
</tr>
<tr>
<td>4</td>
<td>Freight transportation</td>
<td>Support for optimisation of road transportation where alternative modes are not available or practicable e.g. use of larger vehicles to reduce CO₂ emissions per tonne and time deliveries of materials to avoid congestion at peak hours. Encourage the move towards using alternatively fuelled vehicles on minerals sites including bio-diesel. The oldest vehicles tend to have the highest greenhouse gas emissions per kilometre. Actions that remove the oldest vehicles from the fleet will tend to reduce greenhouse gas emissions. Encourage fewer mineral deliveries during peak congestion times of day to reduce significant emissions being produced.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Habitats and species</strong></td>
<td>A restoration approach to minerals development should be encouraged. Restoration plans should have an agreed consultation period, to enable inclusion of immediate and surrounding biodiversity features at the landscape scale. Sensitive planning/timing of any minerals development site construction and maintenance work will help to reduce adverse impacts on biodiversity. Design and manage minerals development sites and other infrastructure so as to minimise loss of biodiversity and optimise biodiversity benefits, e.g. by planting new hedges. PPS 9 (Biodiversity and Geological Conservation) promotes the <em>enhancement</em> as well as conservation of biodiversity. New minerals developments have the potential to provide new habitats. The provision of new hedges, scrub, trees, ponds etc. as part of minerals development projects as part of the site design, ongoing restoration and final site restoration should be encouraged in the MWDF. Use of lighting at night should be minimised to reduce disturbance on sensitive habitats. Habitat creation in line with local Biodiversity Action Plans. Monitoring of habitats and species.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Land conservation</strong></td>
<td>Encourage restoration approach to minerals development.</td>
</tr>
<tr>
<td>7</td>
<td><strong>Landscape</strong></td>
<td>New and upgraded lighting that minimises light spillage should be utilised on minerals development sites, particularly in the more rural areas of the Wiltshire. Consideration should also be given to the use of lighting at night. Where trees have been removed on the grounds of their location affecting safety or access, replacement trees should be planted in an acceptable nearby location. Phased restoration of sites should be encouraged. Visual barriers such as earth bunds or native vegetation should be used to reduce intrusion. Construction Environmental Management Plans (CEMP) should ensure that soil damage and loss is minimised during the construction process and that soils supporting valuable habitats should be reinstated at the end of construction. Buffer zone between residents and minerals workings.</td>
</tr>
</tbody>
</table>

---

33 [www.goodquarry.com](http://www.goodquarry.com) comments that the minimum distance between workings and residents which has been permitted or suggested varies considerably from less than 25-50m for opencast coal, up to 400m for sand and gravel and 300-900m for limestone workings. The effectiveness of distance as a means of control varies with topography and local environmental sensitivity. The width of buffer zones will need to determined having regard to the potential impact of the development and the nature of the site or the existence of physical features capable of reducing the impact of development.
<table>
<thead>
<tr>
<th></th>
<th>Rural ways of life</th>
<th>Phased restoration of minerals sites should be encouraged.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Cultural assets</td>
<td>Appropriate archaeological investigation should be carried out to accompany mineral development scheme proposals. Project EIA should determine how minerals development schemes impact on heritage features, and propose measures that ought to protect and preserve these assets. Minor minerals development and maintenance works should also take care to avoid damage to heritage assets.</td>
</tr>
<tr>
<td>10</td>
<td>Flooding</td>
<td>Explore the possibilities of using smaller expanse of water that would not cause an unacceptable risk of bird strike such as fragmented ponds to act as water storage and reduce flood risk.</td>
</tr>
<tr>
<td>11</td>
<td>Water consumption</td>
<td>Consider providing new ponds, ditches etc. as part of mineral development scheme provision. Use of sustainable urban drainage systems (SUDS) and reedbeds in minerals developments should be investigated and encouraged. Encourage any future developments that minimise water consumption. Monitor water consumption and encourage the recycling of water on site e.g. minimise the amount of water abstracted from surface waters by recycling the water on site, and return pumped water from the dewatering process back into the groundwater system somewhere else on the site to maintain the groundwater resource.</td>
</tr>
<tr>
<td>12</td>
<td>Waste</td>
<td>Encourage the minimisation, reuse and recycling minerals waste.</td>
</tr>
<tr>
<td>13</td>
<td>Resources</td>
<td>Use of energy efficient plant and equipment and the use of site generated renewable energy if possible. Encourage the use of recycled or secondary aggregates and developing the appropriate recycling capacity at mineral development sites should be considered wherever possible. Site production and other wastes should be minimised.</td>
</tr>
<tr>
<td>14</td>
<td>Pollution</td>
<td>Air quality should be managed in accordance with MPS 2 appendix on dust. Require best practice in relation to minimising pollution emissions to air. Development and implementation of an Environmental Management System. Ensure sites provide adequate oil interceptors etc. Construction Environmental Management Plans (CEMP) should ensure that adverse impacts on water resources are minimised during the construction process. Require best practice in relation to minimising pollution emissions to water. Require minerals operators to develop and implement Environmental Management Systems and adopt CEEQUAL benchmarking.</td>
</tr>
<tr>
<td>15</td>
<td>Climate change</td>
<td>Encouraging a switch to more sustainable transport modes. Require applicants to show best practice in reducing greenhouse gas emissions such as reducing fuel consumption per tonne of aggregate extracted or tonne-km transported e.g. through use of larger vehicles.</td>
</tr>
</tbody>
</table>
10 Monitoring

10.1 Introduction
The SEA Directive requires monitoring of the significant environmental effects of the plan. A monitoring system is being designed which will help to fulfil the following requirements:

- To provide baseline data for the next SEA and to provide a picture of how the environment / sustainability criteria of the area are evolving;
- To monitor the significant effects of the plan; and
- To ensure that action can be taken to reduce / offset the significant effects of the plan.

Monitoring already plays a large role in the performance management of the Wiltshire County Council and Swindon minerals planning process, with the performance of a variety of indicators being tracked against targets. There is also considerable monitoring activity being carried out at local authority level, and by bodies such as the Environment Agency and Regional Aggregate Working Parties (RAWP). Where relevant, use will be made of these existing monitoring processes for the monitoring proposed as part of this SEA.

Targets, Indicators and associated monitoring are based on the Minerals and Waste Development Framework: Annual Monitoring Report (AMR) 2006/07 and the most recent monitoring data updates from Wiltshire County Council. The Waste Core Strategy DPD and Sustainability Indicators and Targets have also been considered to try and reduce the overall types of monitoring data required by the local authorities and for ease of data collection, though in some cases different targets will be required.

10.2 Monitoring Measures
The assessment of the Core Strategy did not identify any significant effects. As a result, monitoring of uncertain and minor adverse effects is being proposed. However the monitoring programme itself will not commence until the Final Core Strategy is adopted. By then the monitoring requirements may have changed, either as a result of changes to the plan or due to other external influences on the baseline situation.

There is the potential that a shared SEA monitoring framework will be considered across Wiltshire. This may influence the monitoring arrangements for the MWDF.

Some monitoring measures are described below in Table 13 based on the current monitoring regime in the AMR. These measures are likely to require alteration as the plan develops. Any such alterations will be documented in the SEA Statement, see Section 11.2.

Table 14 shows a framework for an implementation plan for monitoring. The activities in this table will be decided after the monitoring measures in Table 13 have been finalised. The monitoring implementation plan will be finalised in the SEA Statement, alongside the adopted Core Strategy.
Table 13: Potential Monitoring Measures

Minerals Core Output Indicators (based on the AMR)

<table>
<thead>
<tr>
<th>Effect or indicator to be monitored</th>
<th>Information required</th>
<th>Information source</th>
<th>Information quality, gaps (&amp; solution)</th>
<th>When to take remedial action</th>
<th>Remedial action to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>5a Production of Land Won Aggregates</td>
<td>Mineral sites output figures</td>
<td>From minerals developers (Commercially confidential information)</td>
<td>Not currently available</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>5b Production of Secondary Recycled Aggregates</td>
<td>CD&amp;EW data</td>
<td>DCLG / RAWP</td>
<td>Not currently identified</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>7 Flood Protection and Water Quality</td>
<td>Number of developments permitted contrary to the advice of the Environment Agency.</td>
<td>Environment Agency</td>
<td>Currently monitored</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>8 Changes in areas and populations of biodiversity importance</td>
<td>BAP species monitoring</td>
<td>English Nature Specialist environmental groups i.e. RSPB, wetlands trusts etc</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>9 Renewable energy capacity installed by type.</td>
<td>Minerals sites</td>
<td>Planning process Minerals sites</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
</tbody>
</table>
## Minerals Local Output Indicators (based on the AMR)

<table>
<thead>
<tr>
<th>Effect or indicator to be monitored</th>
<th>Information required</th>
<th>Information source</th>
<th>Information quality, gaps (&amp; solution)</th>
<th>When to take remedial action</th>
<th>Remedial action to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Provision of 7 year aggregates landbank</td>
<td>Remaining commercially extractable minerals at each active or site that can be reactivated.</td>
<td>From minerals developers (Commercially confidential information)</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>2 Number of advertised departures from the Minerals Local Plan approved by the MPA, as a percentage of total permissions granted (Minerals version of waste LOI).</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>4 Proportion of planning/enforcement appeals where the MPA’s decision is overturned at appeal</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>8b Percentage of minerals exported outside the region. (Minerals version of waste LOI).</td>
<td>Tonnages of Minerals exported from the region.</td>
<td>From minerals developers (Commercially confidential information)</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>9b Percentage of minerals imported from outside the region. (Minerals version of waste LOI).</td>
<td>Tonnages of Minerals Imported to the region.</td>
<td>From minerals developers (Commercially confidential information)</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>9</td>
<td>BVPI111- Percentage satisfied with the planning service (survey every 3 years) (Same as waste target)</td>
<td>Satisfaction Survey Data</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>----</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>10</td>
<td>Additional planning applications (Same as waste target)</td>
<td>See Below</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td>Relocation of plant machinery (Same as waste target)</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td>Modification of Conditions (Same as waste target)</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td>Installation of plant machinery (Same as waste target)</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td>Other – removal of redundant railway embankment, recycling materials for lime. (Same as waste target)</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>Data Above</td>
<td>Data Above</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>11 Additional planning applications</td>
<td>See below</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td></td>
<td>Mobile Classroom</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>School excluding mobile classrooms</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------------------</td>
<td>------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Road</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>Other – Reinstatement of waste compound after fire damage and erection of new secure storages perimeter fence and lighting.</td>
<td>Number of applications</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>Total</td>
<td>Data Above</td>
<td>Data Above</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>12 Proportion of active minerals sites which have received at least one monitoring visit.</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>14 Enforcement complaints concerning minerals developments.</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>16 Number of liaison groups for minerals sites that have met at least once.</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
</tbody>
</table>
## Minerals Significant Effect Indicators (based on the AMR)

<table>
<thead>
<tr>
<th>Effect or indicator to be monitored</th>
<th>Information required</th>
<th>Information source</th>
<th>Information quality, gaps (&amp; solution)</th>
<th>When to take remedial action</th>
<th>Remedial action to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Percentage of minerals developments permitted within &lt; 1km, 1-2 km, 2-5 km, &gt; 5 km of the primary route network.</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>9. Number of hectares of agricultural land grades 1, 2 and 3a permanently lost as a result of minerals development.</td>
<td>From Minerals Planning Process</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
<tr>
<td>10. Number of hectares of AONB of other (internationally, nationally or locally) designated land lost and number of sites adversely affected as a result of minerals development.</td>
<td>From Minerals Planning Process and Statutory Bodies</td>
<td>Wiltshire County Council and Swindon Borough Council, Natural England</td>
<td>To be determined</td>
<td>To be determined</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

Other monitoring measures could include such indicators as:
- Noise levels at sensitive receptors (e.g.; houses, schools and hospitals);
- Levels of use of recycled aggregates; and
- Achievement of Biodiversity Action Plan targets where these may relate to minerals activities.

Measures could also be less quantitative, and could include, for example, monitoring to ensure that any Environmental Impact Assessments of major projects incorporate the recommendations made in the SEA.

Example of a monitoring plan that could be developed for inclusion the SEA Statement is shown in Table 14.
<table>
<thead>
<tr>
<th>Monitoring activity to be undertaken</th>
<th>Organisation responsible for monitoring</th>
<th>Frequency of monitoring</th>
<th>Monitoring results presentation</th>
<th>Status/Problems encountered</th>
</tr>
</thead>
</table>
| **1 Promote Healthy Exercise, Especially Daily Exercise**  
No detrimental impacts upon existing rights of way and recreational areas of open space  
Number of rights of way effected by development of Minerals development that have not been diverted by means of an equally acceptable route. | Wiltshire County Council and Swindon Borough Council | Annual | Total km of rights of way lost to mineral extraction?  
Total km of rights of way significantly diverted by mineral extraction?  
Total km of rights of way regained because of restoration activities?  
Square km of new leisure amenity land created from mineral restoration | Not identified |
| **2 Enable Access to Learning, Training, Skills and Knowledge**  
Improvement in public awareness of the need for minerals and involvement in minerals planning process.  
Change in awareness of the public perception of minerals and greater public involvement in planning process through stakeholder engagement processes | Wiltshire County Council and Swindon Borough Council | Annual | Minerals outreach events in areas of significant mineral activity?  
Percentage of eligible population inputting to mineral planning process? | Not identified |
| **3 Promote Stronger More Vibrant Communities**  
Decrease in the number of persons significantly negatively affected by minerals development.  
Change in the number of persons, and quality of life, significantly affected by minerals | Wiltshire County Council and Swindon Borough Council | Annual | Persons identified by the planning process to have a lower quality of life through nuisance or other issues identified by minerals development. | Not identified |
<table>
<thead>
<tr>
<th>Objective</th>
<th>Responsible Bodies</th>
<th>Timeframe</th>
<th>Indicators</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4 Give People in the Country Access to Satisfying Work Opportunities, Paid or Unpaid</strong>&lt;br&gt;Increased in employment levels, particularly in the minerals or associated services sector. Change in employment levels resulting from minerals development and restoration.</td>
<td>Wiltshire County Council and Swindon Borough Council/ Individual Minerals Developers</td>
<td>Annual</td>
<td>Increase/decrease in employment in minerals extraction and processing&lt;br&gt;Increase/decrease in employment in services supporting minerals extraction and processing.&lt;br&gt;Increase/decrease in employment in minerals site restoration and after use activities.</td>
<td>Not identified</td>
</tr>
<tr>
<td><strong>5 Meet Needs Locally</strong>&lt;br&gt;Increase in the number of minerals developments able to supply local needs and work jointly with the recycling sector to support local waste recycling needs.</td>
<td>Wiltshire County Council and Swindon Borough Council/ Individual Minerals Developers</td>
<td>Annual</td>
<td>Numbers of local dimension stone quarries.&lt;br&gt;Numbers of Mineral developments with associated recycling facilities.</td>
<td>Not identified</td>
</tr>
<tr>
<td><strong>6 Balance the Need for Growth with the Protection of the Environment (Wiltshire County Council Corporate Objective)</strong>&lt;br&gt;Increase in the capacity of minerals developments proportionate to local/regional growth. Increase in developments with sustainable development integrated into design principles</td>
<td>Wiltshire County Council</td>
<td>Annual</td>
<td>Capacity of Minerals developments vs identified apportionment of regional supply.</td>
<td>Not identified</td>
</tr>
<tr>
<td><strong>7 Reduce Vulnerability of the Economy to Climate Change and Harness Opportunities Arising</strong>&lt;br&gt;Increase in the quantity of minerals recycled and reused.</td>
<td>Wiltshire County Council and Swindon Borough Council/ Individual Minerals Developers</td>
<td>Annual</td>
<td>Reduction of waste minerals to landfill&lt;br&gt;Change in the quantity of waste minerals diverted to landfill&lt;br&gt;Use of flood risk assessments</td>
<td>Not identified</td>
</tr>
<tr>
<td>Objective</td>
<td>Responsible Bodies</td>
<td>Frequency</td>
<td>Measures</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------</td>
<td>-----------</td>
<td>----------</td>
<td></td>
</tr>
</tbody>
</table>
| **8 To Improve Our Roads and Make Them Safer (Wiltshire County Council corporate objective)** | Wiltshire County Council and Swindon Borough Council/ Individual Minerals Developers | Annual | - Amount of minerals moved by Rail
- Amount of minerals moved by Waterway
- Amount of minerals moved by Road
- Increase/ decrease in overall Road movements |
| **9 Protect Habitats and Species** | Wiltshire County Council and Swindon Borough Council/ Individual Minerals Developers | Annual | - Change in area (ha) of habitat that contributes towards UK, regional or local BAP habitat and species targets, as a result of minerals development
- Changes in populations of selected character species
- Effectiveness of submitted mitigation schemes during/ post restoration (measured as reported population levels for such species)
- Number of applications for minerals development submitted with appropriate species surveys and mitigation schemes where necessary
- Percentage of minerals development proposals achieving a net gain in biodiversity
- Change in number of hectares of internationally, nationally, and locally important biodiversity sites in a favourable condition as a result of minerals development |
| **10 Promote the Conservation and Wise Use of Land** | Wiltshire County Council and Swindon Borough Council | Annual | Change in the quantity of Greenfield land developed for minerals development. |

Not identified
11 **Protect and enhance the landscape and townscape**

- Achieve favourable conditions of internationally, nationally and locally important sites.
- Decrease or limit the number of people significantly affected by minerals development.
- Maintain or enhance overall amenity of the countryside to residents and visitors.
- Number of public rights of way blocked by waste development and not diverted by means of an acceptable and equally extensive route.

<table>
<thead>
<tr>
<th>Wiltshire County Council and Swindon Borough Council</th>
<th>Annual</th>
<th>Number of people affected by the visual impact of minerals development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of minerals developments resulting in significant harm to the right of way network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of hectares of AONB or other (internationally, nationally, or locally) designated land lost and number of sites adversely affected as a result of minerals development.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of designated landscapes in favourable condition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change in countryside character and quality as a result of minerals development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change in traffic flows or nature of traffic from minerals development that alter the character of the landscape</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not identified</th>
<th>Wiltshire County Council and Swindon Borough Council</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Change in areas valued for their tranquillity as a result of waste development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of public rights of way blocked by waste development and not diverted by means of an acceptable and equally extensive route.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loss of Agricultural land grades 1, 2 and 3a.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not identified</th>
<th>Wiltshire County Council and Swindon Borough Council/ English</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change in no. and condition of sites or monuments of historic or cultural value affected by minerals development.</td>
<td></td>
</tr>
</tbody>
</table>

12 **Value and protect diversity and local distinctiveness including rural ways of life**

- No loss of rights of way, open space, common land or access to the countryside.
- No net loss of the best and most versatile agricultural land.
- An increase in areas valued for their tranquillity.
- Number of hectares of agricultural land grades 1, 2 and 3a permanently lost as a result of waste development.

<table>
<thead>
<tr>
<th>Wiltshire County Council and Swindon Borough Council</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change in areas valued for their tranquillity as a result of waste development</td>
</tr>
<tr>
<td></td>
<td>Number of public rights of way blocked by waste development and not diverted by means of an acceptable and equally extensive route.</td>
</tr>
<tr>
<td></td>
<td>Loss of Agricultural land grades 1, 2 and 3a.</td>
</tr>
</tbody>
</table>

13 **Maintain and enhance cultural and historical assets**

- Increase proportion of developments that protect or enhance sites of historical and...
<table>
<thead>
<tr>
<th>Cultural interest</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in traffic flows or the nature of traffic arising from minerals development that affects sites and monuments of historic or cultural value</td>
<td>Heritage</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>14 Reduce vulnerability to flooding</strong> Decrease risk from flooding</td>
<td>Environment Agency</td>
<td>Annual</td>
<td>Number of mineral development proposals permitted which would have an unacceptable adverse impact on land drainage or increase a flooding risk. Number of sites identified that may be able to contribute to flood management as part of restoration proposals.</td>
</tr>
<tr>
<td><strong>15 Reduce non renewable energy consumption and greenhouse emissions</strong> (see 17 and 19) Decrease greenhouse gas emissions as a result of minerals development, including from the transport of minerals.</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>Annual</td>
<td>Change in minerals transportation by road. Pollution emissions (including greenhouse gases) as a result of minerals development Percentage of minerals recycled</td>
</tr>
<tr>
<td><strong>16 Keep water consumption within local carrying capacity limits (taking account of climate change)</strong> Decrease impacts from the effects of climate change Improve the quality of the water environment Increase water efficiency in minerals developments Number of mineral development proposals permitted which would pose an unacceptable risk to water resources</td>
<td>Wiltshire County Council and Swindon Borough Council/ Statutory water Companies</td>
<td>Annual</td>
<td>Number of minerals developments that pose an unacceptable risk to the quality and flow of surface and groundwater.</td>
</tr>
<tr>
<td>Number</td>
<td>Objective</td>
<td>Authority</td>
<td>Frequency</td>
</tr>
<tr>
<td>--------</td>
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</tr>
<tr>
<td>17</td>
<td>Reduce the rate of landfill, increase recycling and open waste to energy facilities in Wiltshire (Wiltshire County Council Corporate Objective)</td>
<td>Wiltshire County Council</td>
<td>Annual</td>
</tr>
<tr>
<td>18</td>
<td>Minimise the use of non-renewable resources and where possible promote the use of renewable resources (see 17 and 15)</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>Annual</td>
</tr>
<tr>
<td>19</td>
<td>Minimise land, water, air, light, noise, and generic pollution</td>
<td>Wiltshire County Council and Swindon Borough Council</td>
<td>Annual</td>
</tr>
</tbody>
</table>
11 Next Steps

11.1 Adoption of the Plan
The Core Strategy will be submitted in March 2008 to Government via the Government Office for the South West (GOSW) and the Planning Inspectorate. This SA report accompanies the Submission Draft of the Core Strategy DPD. At this stage, the Government Office has six weeks to review the Plan and make any comments as part of the independent examination of the Plan before the DPD proceeds to the Examination Stage. Representations may be made by the public during this six week period, and all comments will be taken into account by the Planning Inspectorate. Further SA could therefore be necessary, depending on the Inspectorate’s recommendations. The commencement of the examination is due in 2008. Final Adoption of the Minerals Core Strategy DPD is scheduled to occur in late 2008. The Examination will consider matters of procedure, conformity and consistency with regard to the DPD.

11.2 SEA Statement
The SA/SEA Statement will be published with the Adopted Plan in 2008, and as with the SA Report it must be made available to the three Statutory Environmental Bodies and also the public. The purpose of the Statement is to update the environmental information available with the final Plan in order to outline how the environmental assessment and consultation have influenced the final Plan.

The Statement will document any additions, amendments or deletions with the Plan which have resulted from the findings of, and consultation on, the various SA Reports that have been produced. This will provide detail on how the plan was modified to take account of the issues raised, and if no changes are made in response to an issue, reasons will be given.

At this stage information will also be provided to explain why the alternatives carried forward into the Plan have been accepted, and why other reasonable alternatives were rejected prior to the Plan being submitted.

The monitoring measures proposed in this SA Report will be finalised in the Statement. This may involve the identification of new monitoring measures or amendments to those already proposed, and if the Plan has been altered to avoid predicted significant effects, it may be that some proposed monitoring measures can be removed from the monitoring programme.
Glossary

AA  Appropriate Assessment is part of the HRA process.

Alternatives  These are different ways of achieving the plan objectives. Also referred to as options.

AONB  Area of Outstanding Natural Beauty. A landscape area of high natural beauty which has special status, and within which major development will not be permitted, unless there are exceptional circumstances. Designated under the 1949 National Parks and Access to the Countryside Act.

AQMA  Air Quality Management Area. An area identified by local authorities where statutory UK air quality standards are being, or are expected to be breached up to the end of 2005.

CEMP  Construction Environmental Management Plans. It outlines general environmental management practices and procedures to be followed during construction.

Conservation Area  An area designated under the Planning (Listed Buildings And Conservation Areas) Act 1990 as being of special architectural or historic interest, the character and interest of which it is desirable to preserve and enhance.

Cumulative Effects  The effects that result from changes caused by a project, plan, programme or policy in association with other past, present or reasonably foreseeable future plans and actions. Cumulative effects are specifically noted in the SEA Directive in order to emphasize the need for broad and comprehensive information regarding the effects.

EMS  Environmental Management System. A means for companies or organisations of ensuring effective implementation of an environmental management plan or procedures and compliance with environmental policy objectives and targets.

Indicator  A means by which change in a system or to an objective can be measured.

DCLG  Department for Communities and Local Government, formerly the ODPM.

DPD  Development Plan Document. A Local Development Document which forms part of the statutory development plan, including the Core Strategy, Proposals Map and Area Action Plans.

HRA  Habitat Regulations Assessment. Required to identify likely impacts on Natura 2000 sites.

LDF  Local Development Framework. The portfolio of Local Development Documents which sets out the planning policy framework for the district.

LDS  Local Development Scheme. A three year project plan setting out a planning authority’s programme for the preparation of Local Development Documents, reviewed annually in the light of the Annual Monitoring Report.

MWDF  Minerals and Waste Development Framework. The equivalent of the LDF but containing a portfolio of minerals and waste local development documents.

MWDS  Minerals and Waste Development Scheme. The equivalent of the LDS but concerned with the preparation of minerals and waste local development documents.
Mitigation Measures to avoid, reduce or offset the significant adverse effects of the plan on sustainability.

MLDD Minerals Local Development Document

Monitoring Activities undertaken after the decision is made to adopt the plan or programme to examine its implementation. For example, monitoring to examine whether the significant sustainability effects occur as predicted or to establish whether mitigation measures are implemented


Natura 2000 comprises Special Areas of Conservation (SACs) designated under that Directive and Special Protection Areas (SPAs) classified under the Council Directive on the conservation of wild birds (79/409/EEC) - The EC Wild Birds Directive

Objective A statement of what is intended, specifying the desired direction of change.

ODPM Office of the Deputy Prime Minister.

Options See Alternatives.

PPG Planning Policy Guidance. Guidance documents which set out national planning policy.


Ramsar Sites Wetlands of international importance designated under the Ramsar Convention (1971).

RAWP Regional Aggregate Working Party. Provide technical advice in relation to the supply of, demand for construction aggregates, including sand, gravel and crushed rock.

RPG Regional Planning Guidance. Guidance prepared by the South West Regional Assembly and issued by the Secretary of State, which will be replaced by the Regional Spatial Strategy.

RSS Regional Spatial Strategies. Guidance documents which set out regional planning policy. They are being reviewed and updated and are replacing RPGs.

SA Sustainability Appraisal. A form of assessment used in the UK (primarily for Regional Planning Guidance and development plans) since the late 1990s. Sustainability Appraisal considers social and economic effects as well as environmental effects.

SAC Special Area of Conservation as designated under the European Union Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

SAM Scheduled Ancient Monument. A nationally important archaeological site included in the Schedule of Ancient Monuments maintained by the Secretary of State for the Environment under the Ancient Monuments and Archaeological Areas Act 1979.
| **Scoping** | The process of deciding the scope and level of detail of the SEA. This also includes defining the environmental / sustainability effects and alternatives that need to be considered, the assessment methods to be used, the structure and contents of the Environmental / Sustainability Report. |
| **Screening** | The process of deciding whether a plan or programme requires SEA or an appropriate assessment. |
| **SEA** | Strategic Environmental Assessment. A systematic method of considering the likely effects on the environment of policies, plans and programmes. |
| **SEA Directive** | Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”. |
| **SPA** | Special Protection Area as designated under the European Union Directive 79/409/EEC on the Conservation of Wild Birds. |
| **SSSI** | Site of Special Scientific Interest. The best sites for wildlife and geological features in England as designated under the Wildlife and Countryside Act 1981. |
| **Target** | A specified desired end, stated usually within a specified time-scale. |
References & Bibliography


