



# **Wiltshire & Swindon Aggregate Minerals Site Allocations DPD**

**Pre-Submission**

**Sustainability Appraisal Report**

**January 2012**

**Centre for Sustainability (C4S) *in association with*  
Enfusion**



Sustainability Appraisal /  
Strategic Environmental  
Assessment of the  
Wiltshire & Swindon Aggregate  
Minerals Site Allocations DPD



**Pre-Submission  
Sustainability Appraisal Report**

Report Number: RPN1881

Version: FINAL

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Client: Wiltshire Council and Swindon Borough Council

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# Table of Contents

Non Technical Summary.....	i
1 Introduction.....	1
1.1 Background to Sustainability Appraisal/Strategic Environmental Assessment .....	1
1.2 The Minerals and Waste Development Framework .....	1
1.3 SA/SEA Methodology .....	3
1.4 Compliance with the SEA Directive/ Regulations .....	5
1.5 Consultation .....	6
1.6 This Report .....	7
2 Appraisal Methodology .....	8
2.1 Scoping the Key Sustainability Issues .....	8
2.2 Appraising the Potentially Suitable Sites .....	8
2.3 Initial Site Options for Sand and Gravel Extraction .....	8
2.4 Further analysis of sites .....	9
2.5 Appraising the Aggregate Minerals Site Allocations DPD .....	10
2.6 Geographic and Temporal Scope of the Sustainability Appraisal .....	10
2.7 Sustainability Impacts of Aggregate Extraction .....	11
3 Environmental and Sustainability Planning Context .....	12
3.1 Introduction .....	12
3.2 Review of Relevant Plans and Programmes and description of the social, environmental and economic baseline .....	12
3.3 SA/SEA Framework .....	15
4 Appraising the Aggregate Minerals Site Allocations DPD.....	23
4.1 Introduction .....	23
4.2 Appraising the Initial Site Options for Sand and Gravel Extraction .....	23
4.3 Assessment of Refined List of Sites .....	24
4.4 Appraising the Potentially Suitable Sites .....	25
4.5 Options for Delivery .....	40
4.6 Habitat Regulations Assessment .....	41
5 Cumulative, Synergistic, Secondary and Cross-Boundary Effects .....	43
5.1 Introduction .....	43
5.2 Cumulative, Synergistic, Secondary and Cross-Boundary Effects Assessment .....	44
5.3 Site Phasing .....	48
5.4 Uncertainties .....	49
5.5 How the SA has influenced the Site Allocations DPD .....	49
6 Summary and Recommendations.....	50

7	Monitoring .....	51
7.1	Introduction .....	51
7.2	Monitoring Measures .....	51
8	Next Steps.....	52
8.1	Consultation on the SA Report .....	52
8.2	Examination of the DPD .....	52
8.3	SA/SEA Statement .....	52

Appendix 1: Addendum Review of Plans and Programmes

Appendix 2: Addendum Baseline Information

## List of Tables

Table 1:	Stages in the SA/SEA and Minerals Development Framework .....	4
Table 2:	Impacts and Opportunities Associated with Aggregate Extraction .....	11
Table 3:	Sustainability Appraisal Framework.....	17
Table 4:	Reasons for ruling out sites following consultation.....	24
Table 5:	Reasons for removing sites following further analysis .....	25
Table 6:	Sites proposed for inclusion in the draft Aggregate Minerals Sites DPD	25

# Non Technical Summary

## Background

This document is the summary of the Sustainability Appraisal Report for the Wiltshire and Swindon Aggregate Minerals Site Allocations Development Plan Document (DPD) (Pre-submission Report 2011). It describes how the Sustainability Appraisal (SA) process has been used to assist in planning for the development and the use of land for aggregate extraction, as required by planning legislation and Government guidance.

The SA supports the mineral planning process, with the aim of achieving sustainable mineral extraction through an ongoing dialogue and assessment process during the preparation of Development Plan Documents (DPDs). The SA considers the social, economic and environmental implications of mineral extraction operations.

Wiltshire Council and Swindon Borough Council are working jointly on the production of a Minerals and Waste Development Framework for the County and Borough and commissioned the Centre for Sustainability (C4S) at TRL and Enfusion to progress the SA work.

## Aggregate Minerals Site Allocations DPD

The purpose of the Site Allocations DPD is to provide detailed local expression to the adopted Minerals Core Strategy in terms of the identification of sites that the Councils consider will be required in order to deliver the demand for aggregate minerals.



Following on from community consultation activities in 2007 to help develop a site identification process, the Councils published and

consulted on a 'long-list' of potential aggregate sites in August 2010. Each site was assessed using a series of exclusionary and discretionary environmental and sustainability criteria to determine if the site was suitable for further, more detailed consideration. Some sites were removed at this stage due to sustainability constraints whilst some others were withdrawn by landowners. A total of 22 sites were taken forward for more detailed assessment with seven sites making it through this second round of assessment to now be included in the Pre-submission (Regulation 27) document and listed as the proposed sites in Wiltshire and Swindon to be considered for future aggregate extraction to 2026.

## Sustainability Appraisal & Strategic Environmental Assessment

Planning legislation requires that DPDs are subject to a SA, a systematic process that is designed to evaluate the predicted social, economic and environmental effects of development planning. European and UK legislation require that the DPDs are also subject to a Strategic Environmental Assessment (SEA), a process

that considers the effects of development planning on the environment. Where significant adverse effects are predicted, the SEA aims to identify means to avoid or mitigate such effects. Government guidance advises that these two processes should be carried out together and requires DPDs to be subject to a SA incorporating SEA. The Wiltshire and Swindon Aggregate Minerals Site Allocations DPD has been prepared in accordance with these requirements for a SA/SEA.

### **The Stages of Sustainability Appraisal**

Government guidance outlines stages of SA work that need to be carried out as the LDF is being prepared:

- Stage A: Setting Context & Scope
- Stage B: Developing Options & Assessing Effects
- Stage C: Preparing the SA Report
- Stage D: Consulting on the Plan & the SA
- Stage E: Monitoring Implementation of the Plan

### **The Character of Wiltshire and Swindon**

Wiltshire and Swindon are located in the east of the region of South West England and cover an area of 3,486 square kilometres. The area is predominantly rural in character, with the majority of settlements being market towns. Swindon is the largest settlement, with other significant sized settlements including Salisbury, Trowbridge and Chippenham.

Wiltshire has a high quality environment, with over two thirds of the Plan area designated for its international, national and local environmental importance. This includes three Areas of Outstanding Natural Beauty (AONB): the Cranbourne Chase and West Wiltshire Downs, the North Wessex Downs and the Cotswolds. It includes a number of European sites designated for ecological importance and over 130 Sites of Special Scientific Interest. There are also approximately 14,000 listed buildings, 10 Historic Parks and Gardens and more than 250 Conservation Areas.



### **Issues for Sustainability**

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.

Examples of issues identified in this scoping process include:

- 8% of the areas of all Sites of Special Scientific Interest in Wiltshire are in unfavourable condition and are declining;
- Six 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;
- 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**

The SA/SEA Scoping in 2005 covered all the Minerals Development Plan Documents which form part of the Wiltshire and Swindon Minerals and Waste Development Framework. The SA Framework developed through this scoping process was sent to a wide range of organisations and also made available on the Councils' websites. The Scoping consultation took place from November 2005 to January 2006 and comments received were incorporated into the SA Framework.

For the Site Allocations DPD revisions to the SA Framework were made to reflect the locationally specific nature of the proposals and these changes were subject to consultation in May-June 2009. This resulted in the following SA Objectives being agreed for use for assessing each of the sites proposed in the Aggregate Minerals Site Allocations Pre-submission DPD as well as the Plan as a whole:

### **Aggregate Minerals Site Allocations SA Objectives**

- |  |
|--|
| <ol style="list-style-type: none"> <li>1. Promote stronger more vibrant communities</li> <li>2. Protect and improve the health and well-being of people living, working and visiting Wiltshire and Swindon and adjacent areas</li> <li>3. Foster a vibrant, varied economy</li> <li>4. Encourage more sustainable transportation of minerals and reduce the impacts of transport</li> <li>5. Protect and enhance biodiversity and geodiversity</li> <li>6. Promote the conservation and wise use of land</li> <li>7. Protect and enhance landscape and townscape</li> <li>8. Maintain and enhance cultural and historical assets</li> <li>9. Keep water consumption within local carrying capacity limits (taking account of climate change)</li> <li>10. Minimise waste and the use of non-renewable minerals resources and where possible promote the use of renewable resources</li> <li>11. Minimise land, water, air, light, noise, and genetic pollution</li> <li>12. Reduce greenhouse gas emissions</li> <li>13. Ensure that adequate measures are in place to adapt to the impacts of climate change</li> </ol> |
|--|

C4S and their partners Enfusion worked closely with the Councils to ensure that the SA/SEA objectives were fully incorporated into the site selection and site appraisal methodology so that a single appraisal could be undertaken by Council officers, with C4S undertaking an independent quality assurance role. This method of working avoided unnecessary duplication of appraisal effort.

## **Aggregate Minerals Site Alternatives**

Minerals can only be extracted where they exist and the Councils are therefore restricted in terms of the alternative sites that can be considered. The Plan area contains reserves of sharp sand & gravel and soft-sand with both types being needed to serve the local building market. There has therefore been a need to consider alternative sites for both resource types.

During the development of the DPD the Councils considered an option which would involve only including sites that have backing from the minerals industry. However this option has not been taken forward as the industry did not provide enough sites to meet local forecast demand and the option would therefore have resulted in uncertainty as to where future new sites should be taken forward once those sites currently with industry support have been worked out. This could mean that speculative applications are brought forward in areas outside of those considered to be the most suitable for development.

## **Appraisal of the Aggregate Minerals Site Allocations Pre-Submission DPD**

Each of the sites considered for inclusion in the Plan have been appraised against a series of sustainability and deliverability criteria. These criteria have incorporated the SA objectives developed and used for all the previous stages of developing the Wiltshire and Swindon Minerals Development Plan Documents.

An initial list of 62 potential sites was reduced down to 22 possible sites following initial appraisal and a consultation period with the public and key stakeholders. Sites were ruled out for reasons such as poor access; impacts on the local communities; and effects on the historic environment, with some being, simply withdrawn from further consideration by the landowners.

The 22 remaining sites were then subject to further detailed assessment in the areas of ecology; transport; landscape and visual impact; historic built environment; and archaeology. These detailed assessment resulted in a further 14 sites being removed from further consideration, leaving seven sites for inclusion in the Pre-Submission DPD (NB: from this stage onwards two sites adjacent to Brickworth Quarry were considered as a single site due to their similar constraints, restoration proposals, proximity, and the likelihood that they would be worked in a phased manner).

Further detailed assessments in relation to noise, air quality and the water environment were then undertaken on the remaining sites (where relevant) in order to obtain additional details on the potential impacts of minerals extraction operations at these sites.

As well as considering the individual sites in isolation, the sustainability appraisal also considered the cumulative effects that could result from developing the seven sites as a whole during the Plan period. This wider assessment process also considered the potential for cross-boundary effects that may be felt in neighbouring counties (e.g. in Gloucestershire and Hampshire).

Those sites which had major constraints in terms of sustainability were removed from consideration at the initial stage of assessment, with the next stage of assessment removing further sites due to constraints identified in the more detailed assessments.

The seven sites that are included in the Pre-Submission DPD are not without constraints, but the need for Wiltshire and Swindon to produce aggregates for local markets means that there is a requirement for the Councils to identify a certain number of sites to deliver against an agreed target.

Potential sustainability issues identified for the sites include:



Site U3 – Cox’s Farm (east of Marston Meysey)

- Site within Groundwater Source Protection Zone 1
- The site is considered to be in an area of high archaeological potential
- Issues relating to the suitability of the local road network
- Potential impacts on the setting of the village of Marston Meysey
- Noise issues for some neighbouring buildings
- Some potential for dust impacts
- Potential for restoration of site to wet woodland or return to agriculture
- The site is adjacent to RAF Fairford and stand-off distances to the base perimeter will need to be agreed

Site U4 - Blackburr Farm (north west of Castle Eaton)

- Potential impact on the setting of St Mary’s Church and Castle Eaton Conservation Area, impact on Second Chance Touring Park and local landscape impacts
- Area is considered to be an area of high archaeological potential
- Issues relating to the suitability of the local road network
- Noise issues for some neighbouring buildings
- Some potential for dust impacts
- Potential hydrogeological issues through proximity to the River Thames
- Potential for restoration of site to wet woodland / reedbed or to grazing pasture. Also potential to restore the canal.

Site U5 – North Farm (south west of Castle Eaton)

- Potential impact on the setting of Castle Eaton Conservation Area
- Potential impact on Second Chance Touring Park
- The site is considered to be in an area of high archaeological potential
- Issues with site access
- Noise issues for some neighbouring buildings
- Some potential for dust impacts
- Potential hydrogeological issues through proximity to the River Thames
- Potential for restoration of site to wet woodland or to grazing pasture.

Site U7 - Land East of Calcutt

- Listed buildings in proximity to site and the area is considered to be of medium archaeological potential
- Local Road/site access issues
- Proximity of the site to North Meadow Special Area of Conservation and the River Thames
- Noise issues for some neighbouring buildings
- Some potential for dust impacts
- Potential for restoration of site to wet woodland or to grazing pasture

Site U22 - Land at Cotswold Community

- Impacts on listed buildings
- The site is considered to be in an area of high archaeological potential
- Site is adjacent to a Scheduled Monument
- Access to the local road network is considered to be problematic
- Some potential for dust impacts
- Potential for restoration of site to open water with reedbeds

Site C3 - Land near Compton Bassett

- Potential access constraints
- Some potential for dust and air quality impacts
- Potential for restoration of site to agriculture with woodland planting

Site SE2/SE3 - Extension to Brickworth Quarry

- Area is classified as ancient woodland (based on the soils and seed bed)

- Some potential for dust impacts
- Potential for restoration of site to agriculture with woodland planting

The assessment of cumulative effects examined how the DPD as a whole might give rise to significant effects both within the Plan area and also in neighbouring counties. Given the proximity of the sites in the Upper Thames Valley to the Gloucestershire border there is the potential for cumulative effects relating to transportation of minerals from the combination of sites either side of the county boundary.

In addition, combined effects resulting from the cluster of proposed and existing sites around Marston Meysey and Castle Eaton and the two sites adjacent to Brickworth Quarry will need to be taken into account. These include effects on the environment, for example on the water environment in relation to hydrology from dewatering as well as changes to flood risk, and effects on local communities and amenity. Phasing of the extraction at these sites will limit the magnitude of impacts at any one point in time, however this will mean that the time over which effects will be felt will be prolonged.

Given the mitigation measures available none of the effects that have been predicted in relation to the individual sites, or the wider Plan as a whole, are considered to be significant. However there remain some issues which will need to be addressed through detailed planning application processes when the proposed sites are taken forward for mineral extraction operations.

## **Mitigation Measures**

The policies that are included in the adopted Minerals Development Control Policies Development Plan Document will ensure that the impacts of extraction and transportation activities are minimised, whilst also seeking to provide environmental enhancements and community benefits through the restoration of sites post-extraction.

The overarching aim of the Minerals Development Control Policies DPD is to ensure that applications for minerals development received by Wiltshire Council and Swindon Borough Council result in sites that are operated and managed to high standards with minimum impacts to local communities and the environment.

The mitigation measures for aggregate sites are more appropriately dealt with at the planning application stage when details regarding the extraction timing and processes will be known. Mitigation may include, for example, the phased restoration of the site; dust suppression measures; or transport management to minimise disruption to the local road network.

## **Monitoring**

There is a requirement in the SEA Regulations to monitor significant environmental effects from the implementation of plans and programmes. This monitoring could also help to identify unforeseen adverse effects at an early stage along with the need for appropriate remedial action. No significant effects have been identified within the Aggregate Minerals Site Allocations DPD, however measures are being proposed to monitor uncertain and minor negative effects.

The Minerals and Waste Development Framework is being developed as an on-going, iterative process, in which stakeholders are kept up to date through a rolling process of public involvement, monitoring and, where necessary, adjustment of the Plan. The monitoring of the significant effects of any plan of this type is an essential part of the SEA process, and the Councils believe that all stakeholders should have an opportunity to be part of the process.

The Councils have developed one set of indicators to meet the monitoring requirements for both the Minerals and Waste Development Framework and SA processes. The key sustainability issues identified in the SA Scoping Report, including consultation, and the SA of the Core Strategy DPD and Development Control Policies DPD have assisted in developing appropriate indicators and targets for monitoring.

## **Next Steps**

When the Aggregate Minerals Site Allocations DPD 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 also be presented at this stage.

## **How to Comment on the Report**

The SA Report, Non-Technical Summary and technical appendices will be available along with the Aggregate Minerals Site Allocations Pre-Submission DPD on the Wiltshire Council website at [www.wiltshire.gov.uk/](http://www.wiltshire.gov.uk/). Comments can be made online.

The Councils (at County Hall, Trowbridge; Watt Tyler House, Swindon; and all libraries in the County and Borough) will hold copies of the main report and/or Non-Technical Summary along with the Aggregate Minerals Site Allocations Pre-submission DPD. Hard copies of any of the documents are available on request from the address below. If you wish to make comments in writing, please direct them to:

[mineralsandwastepolicy@wiltshire.gov.uk](mailto:mineralsandwastepolicy@wiltshire.gov.uk)

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# **1 Introduction**

## **1.1 Background to Sustainability Appraisal/Strategic Environmental Assessment**

Regulations require planning authorities to replace their local minerals plans with local minerals development frameworks (MDF). Wiltshire Council (WC) and Swindon Borough Council's (SBC) Aggregate Minerals Site Allocations DPD 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) (as amended) 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.

SA assists in promoting sustainable forms of development through integrating sustainability considerations into plan making. It is an ongoing process that is integral to plan making. SEA considers the effects of the emerging Local Development Documents (LDDs) on the environment. It must predict and evaluate the significant effects of the Plan alternatives and propose measures to offset any adverse effects identified. SA/SEA also includes measures to monitor the sustainability impacts of the Minerals Development Framework (MDF), which is made up of the LDDs, during its implementation.

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<sup>1</sup> and for SA of Development Plan Documents<sup>2</sup> 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 The Minerals and Waste Development Framework**

The Minerals and Waste Development Framework (MWDF) is part of the system introduced by the Planning & Compulsory Purchase Act (2004) (as amended), which takes the form of a portfolio of documents including Minerals and Waste Development Plan Documents (Core Strategy, Development Control Policies DPD, Site Specific Allocations and where required, Area Action Plans), the Statement of Community Involvement, and an Annual Monitoring Report. Wiltshire Council and Swindon Borough Council are jointly preparing Minerals and Waste Development Plan Documents (DPDs), which cover the geographical areas of Wiltshire County and Swindon Borough. The Minerals Local Development Documents (MLDDs) will form part of the Councils' Minerals and Waste Development Framework (MWDF). To date the Councils have produced:

- A Minerals Core Strategy DPD (adopted June 2009); and
- A Minerals Development Control Policies DPD (adopted September 2009).

When the Core Strategy was produced there was requirement for Wiltshire and Swindon to produce 1.85 million tonnes of aggregates per annum. This figure was set by the South West Regional Aggregates Working Party (SW RAWP) and was based on historical rates of production. Recent production in the Plan area has

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<sup>1</sup> "A Practical Guide to the Strategic Environmental Assessment Directive" (ODPM 2005)

<sup>2</sup> CLG (September 2009) Planning Manual - Sustainability Appraisal

been significantly below these levels<sup>3</sup> and as a result the SW RAWP proposed that this figure be reduced to 1.41 million tonnes per annum. However the funding for the SW RAWP ceased in September 2010 so this new figure has not been formally adopted by the Government.

In the absence of the RAWP, the Minerals Products Association (representing the majority of minerals companies operating in Wiltshire and Swindon) has recently suggested that it would support an approach whereby local authorities base their provision rate on the average of the past 10 years production. For Wiltshire and Swindon, this would equate to a local forecast rate of 1.2 million tonnes per annum.

The Councils have therefore concluded that a local forecast of 1.2 million tonnes per annum more closely reflects recent demand than figures derived from national and regional forecasts and has used this figure as a basis when identifying a number of sites suitable for delivering this requirement.

### **Minerals Core Strategy DPD**

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 "Spatial Vision for Minerals Development in Wiltshire and Swindon 2006-2016".

The Core Strategy<sup>4</sup> 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.

### **Minerals Development Control Policies DPD**

The purpose of the Development Control Policies DPD<sup>5</sup> is to set out the development policies required to deliver the vision for minerals in Wiltshire and Swindon. The document outlines the key criteria that will be used to assess whether a planning application should be permitted.

### **Aggregate Minerals Site Allocations DPD**

The purpose of the Aggregate Minerals Site Allocations DPD is to provide detailed local expression to the adopted Minerals Core Strategy in terms of the identification of sites that the Councils consider will be required in order to deliver the demand for aggregate minerals.

Minerals can only be extracted where they exist and the Councils are therefore restricted in terms of the alternative sites that can be considered. The Plan area contains reserves of sharp sand & gravel and soft-sand with both types being

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<sup>3</sup> Average production during the period 1991 – 2010 was 1.05 million tonnes pa

<sup>4</sup> [http://www.wiltshire.gov.uk/minerals\\_core\\_strategy\\_june\\_2009.pdf](http://www.wiltshire.gov.uk/minerals_core_strategy_june_2009.pdf)

<sup>5</sup>

[http://www.wiltshire.gov.uk/adopted\\_minerals\\_development\\_control\\_policies\\_dpd\\_september\\_2009.pdf](http://www.wiltshire.gov.uk/adopted_minerals_development_control_policies_dpd_september_2009.pdf)

needed to serve the local building market. There has therefore been a need to consider alternative sites for both resource types.

During the development of the Minerals Core Strategy DPD, strategic options for identifying future supplies of aggregate minerals were explored. The preferred option was to concentrate extraction within defined Mineral Resource Zones in the following areas:

- 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 developing the Aggregate Minerals Site Allocations DPD a large number of site options within these Mineral Resource Zones have been considered, with evidence gathering, assessments, and consultations all contributing towards the selection of a final list of sites to be included in this DPD (see Section 4).

Also considered during the development of the DPD was an option to only include sites in the DPD that have backing from the minerals industry. However this option has not been taken forward as the industry did not provide enough sites to meet local forecast demand and the option would therefore have resulted in uncertainty as to where new sites should be taken forward once those sites currently with industry support have been worked out. This could mean that speculative applications are brought forward in areas outside of those considered to be the most suitable for development.

The Councils prepared and consulted on a consolidated 'Minerals Site Appraisal Methodology' in the summer of 2009. This methodology was finalised and published in August 2009.

Following on from this the Councils published and consulted on a 'long-list' of potential aggregate sites during an initial 'site options' phase of work in August 2010.

Using the new methodology the Councils appraised the sites contained in the Initial Site Options report and carried out an appraisal of any new or alternative sites that were put forward as part of the consultation. The site appraisal matrices were used to assess each potential site against exclusionary and discretionary environmental and sustainability criteria to determine if the site was suitable for further, more detailed consideration. At this stage some sites were ruled out for inclusion in the DPD.

Further, assessments ruled out additional sites and the Pre-submission (Regulation 27) document now proposes a total of seven sites for aggregate extraction.

This SA Report should be read in conjunction with the Aggregate Minerals Site Allocations Pre-Submission DPD. The Pre-Submission document provides details of the sites that have been selected to deliver the requirements for aggregates in Wiltshire and Swindon.

The Aggregate Minerals Site Allocations Pre-Submission DPD will be submitted in early 2012 to Government for examination by the Planning Inspectorate.

### **1.3 SA/SEA Methodology**

The stages of the SA/SEA are shown in Table 1 which takes into account CLG guidance. This document is the SA Report which documents the SA and SEA

process, drawing together stages B and C. It is being published alongside the Aggregate Minerals Site Allocations Pre-Submission DPD, in accordance with SEA regulations and SA guidance. Further information regarding what a SA Report is required to include is presented in Section 1.4.

**Table 1: Stages in the SA/SEA and Minerals Development Framework**

<b>SA / SEA Stages</b>
<p><b>Stage A: Setting the context, establishing the baseline and deciding on the scope</b></p> <ul style="list-style-type: none"> <li>▪ Identify other plans or programmes and sustainability objectives</li> <li>▪ Collect baseline information</li> <li>▪ Identify sustainability issues</li> <li>▪ Develop the SA framework (SA objectives)</li> <li>▪ <b><i>Produce scoping report</i></b></li> <li>▪ Consult on the scope of the SA</li> </ul>
<p><b>Stage B: Developing and refining options and assessing the effects of the plan</b></p> <ul style="list-style-type: none"> <li>▪ Identify, assess and choose preferred\alternative options, and assess the impact of not following each option</li> <li>▪ Test the plan objectives against the SA framework</li> <li>▪ Predict and assess the effects of the options</li> <li>▪ Mitigate (prevent, reduce and as fully as possible offset) adverse effects</li> <li>▪ Develop proposals for monitoring</li> </ul>
<p><b>Stage C: Documenting the appraisal process in the SA report</b></p> <p><b>Stage D: Consultation with the public and statutory bodies</b></p> <ul style="list-style-type: none"> <li>▪ Consult on the SA and the plan</li> <li>▪ Appraise significant changes</li> <li>▪ Decision making and providing information</li> </ul>
<p><b>Stage D: (as at Stage C) Documenting the Appraisal</b></p> <ul style="list-style-type: none"> <li>▪ Produce, publish and submit SA Report</li> </ul>
<p><b>Stage D: Appraise significant changes resulting from representation</b></p>
<p><b>Stage E: Monitor the effects of the plan on the environment/sustainability</b></p>

The SA/SEA of the Wiltshire and Swindon Minerals Development Framework 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.

*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 DPD. The relationship with other relevant plans is summarised in Section 3.2 and further 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 3.2 of this report summarises the relevant baseline conditions for sustainability and minerals planning for Wiltshire and Swindon. A detailed baseline was appended to the SA Reports for the Minerals Core Strategy and Development Control Policies DPDs. A focused update to these baselines is available as an addendum to this SA Report (Appendices 1 & 2). The likely evolution of current conditions is also summarised in Section 3.2.

*The environmental characteristics of areas likely to be significantly affected:*

- Section 3.2 summarises the key environmental characteristics of the areas likely to be affected. The environmental characteristics of sites are provided in Section 4.

*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 3.2 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 4.6.

*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 3.2 summarises how environmental protection objectives (from the plans and programme reviews) that are relevant to the Plan have informed the SA Framework and appraisal.

*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 3.3 of this report covers all of the topics in the SEA regulations, and progresses them through SA objectives. The SA objectives were incorporated into the site

appraisals process to ensure that all key sustainability issues were considered. The likely effects of the Aggregate Minerals Site Allocations DPD (including environmental effects, as well as an indication of the nature of that effect) are summarised in Sections 4 and 4.5.

*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:*

- Potential mitigation measures are identified where necessary in Sections 4 and 4.5.

*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:*

- Section 0 outlines how the seven sites contained in the Aggregate Minerals Site Allocations DPD, as well as alternative sites that have been removed from consideration, have been assessed through the site appraisal process, incorporating SA/SEA objectives.
- Section 0 provides a summary of the methodology used in undertaking the assessment.
- The difficulties encountered in compiling information and undertaking the assessment are summarised in Sections 3.2 and 5.4.

*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 Aggregate Minerals Site Allocations DPD are provided in Section 7 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:*

- Information on consultation can be found in Section 1.5.

## **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<sup>6</sup>, English Heritage and the Environment Agency). However, the then Wiltshire County Council and Swindon Borough Council 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.

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

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<sup>6</sup> NB: Natural England replaced the Countryside Agency and English Nature in October 2006.

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. For further information on the consultation for the Scoping Stage including a summary of responses, please refer to Section 1.5 of the SA Report for the Minerals Core Strategy Submission DPD (February 2008).

Several further rounds of consultation have subsequently been undertaken during the development of the Core Strategy and Development Control Policies DPDs.

For the Aggregate Sites DPD Sustainability Appraisal consultation has been undertaken on the methodology to be used for assessing the individual aggregate sites. This consultation took place between May and June 2009.

This SA Report is being published for public consultation along with the Aggregate Minerals Site Allocations DPD Pre-Submission document, in accordance with SEA regulations and SA guidance. It will be published on the Council's website and sent to statutory consultees and wider stakeholders. Further information on how to make comments on the SA report can be found in Section 8.1.

## **1.6 This Report**

This Report has been prepared for publication alongside the Aggregate Minerals Site Allocations DPD Pre-Submission document, in accordance with requirements for SA and SEA. It provides an outline of the Minerals Development Framework DPDs, including the Aggregate Minerals Site Allocations DPD (Section 0), a summary of the baseline evidence (Section 0), a summary of the appraisals undertaken for potential aggregate sites (Section 4), a cumulative effects assessment (Section 5), a summary of the assessment (Section 6) and potential monitoring measures (Section 7).

## **2 Appraisal Methodology**

### **2.1 Scoping the Key Sustainability Issues**

The Centre for Sustainability (C4S) at TRL, in association with Enfusion Ltd, was commissioned in 2005 to undertake the Sustainability Appraisal of the Minerals and Waste Development Framework for the then Wiltshire County Council and Swindon Borough Council. For the Minerals Local Development Documents, a Scoping process was undertaken during late 2005 to help ensure that the SA covers the key sustainability issues relevant to minerals planning in Wiltshire and Swindon. This included the development of an SA Framework of objectives to comprise the basis for appraisal, which is described in further detail in Section 3.3 of this Report. A Scoping Report was prepared to summarise the findings of the Scoping process, which was published in August 2005 for consultation with stakeholders.

### **2.2 Appraising the Potentially Suitable Sites**

The Councils have developed a methodology for appraising the suitability of sites for aggregate mineral extraction. This site selection and appraisal method follows a progressive 'sieving' process where areas of land put forward for consideration by landowners are assessed against a set of objectives and indicators within an appraisal matrix to determine their suitability as aggregates sites.

C4S and their partners Enfusion worked closely with the Councils to ensure that the SA/SEA objectives were fully incorporated into the site selection and site appraisal methodology so that a single appraisal could be undertaken by Council officers, with C4S undertaking an independent quality assurance role. This method of working avoided unnecessary duplication of effort.

As part of this work it was first considered necessary to undertake a review of the Minerals Site Appraisal Process; this was carried out by C4S and Enfusion in March 2009. The review provided recommendations for how SA and HRA could be integrated more effectively into the site appraisal process. This included the suitability of using Sustainability Threshold Assessment during the Exclusionary Objective Stage and a compatibility analysis of the exclusionary and discretionary objectives against the current SA objectives.

As part of the review, the SA Framework (originally developed in the SA/SEA Scoping Report published in 2005) was revised to make it more relevant to the Aggregate Minerals Site Allocations DPD. The SA objectives were also adapted so that they better relate to sustainability issues surrounding potential aggregates sites and could also be integrated more effectively into the aggregates site appraisal process. Changes to the waste and minerals SA Frameworks were carried out in parallel to ensure consistency. The revised SA Framework is presented in Section 3.3 of this Report.

Changes to the mineral site appraisal objectives and matrices were then made as a result of the findings and recommendations of the review. This included the revision of the Exclusionary and Discretionary Objectives to ensure that SA/SEA and HRA issues have been considered. The revised aggregate site selection and site appraisal method, including the revised SA Framework was consulted on in May/June 2009, with the final methodology being published in August 2009. This methodology can be accessed from the Wiltshire Council website 'Minerals and Waste Policy' pages.

### **2.3 Initial Site Options for Sand and Gravel Extraction**

Wiltshire and Swindon Councils initially undertook a focused 'call for sites' in April 2004 by writing to mineral operators and landowners known to have an interest

in sand and gravel extraction. This resulted in a number of sites being put forward for consideration. However, the estimated yield for these sites was insufficient to meet forecast demand of 1.85 million tonnes per annum at the time.

The Councils issued a further call for sites in 2006 through a newsletter issued to every contact on the Councils' consultation database. As a result of this work no additional land was put forward for consideration.

Issues and Options work for the sites DPD was then undertaken in 2007, including the development of topic papers covering the key Mineral Resource Zones (MRZs), and a series of workshops about the site identification process being held with local residents in settlements close to, or within, the MRZs. The adopted Mineral Resource Zones cover extensive areas of land, some parts of which may not be suitable for development due to planning constraints. Following initial work in 2004 and 2006 the Councils embarked on a methodical sieving exercise of the un-worked areas of the five Mineral Resource Zones during 2009/2010, in line with key SA criteria, removing the most constrained areas from further consideration. Landowners within the remaining areas were then identified and contacted to see whether they would consider putting their land forward for sand and gravel extraction. Through this process 62 initial site options were identified.

A consultation on these 62 initial site options for sand and gravel extraction in Wiltshire and Swindon took place between 5<sup>th</sup> August and 31<sup>st</sup> October 2010. The purpose of this consultation was to provide an early opportunity for stakeholders to review the site options presented by landowners for consideration and comment on the key issues identified for each site option to help determine the scope of any further assessments.

Two additional site options were submitted as part of the consultation. One of these was considered suitable for further assessment. During the consultation eight site options and parts of two site options were withdrawn from further consideration at the request of the landowners.

The Councils produced a report presenting the results of the consultation exercise on the initial list of 62 site options for sand and gravel extraction across Wiltshire and Swindon. This can be accessed from the Wiltshire Council website 'Minerals and Waste Policy' pages.

## **2.4 Further analysis of sites**

Following the analysis of comments received during the consultation period a report was prepared in March 2011 for consideration by Council members. Based on a further review against the SA criteria used in the site appraisal process and the comments received through the consultation exercise, this report recommended that a further 32 site options be excluded at that stage of the process as they were unlikely to be deliverable given constraints to development.

The report recommended that the 22 remaining site options should be subject to further evidence gathering and assessment to ensure that any decision on their suitability is based on robust evidence and qualified professional judgement.

The councils then initiated further more detailed assessments on the remaining site options on a range of disciplines using in-house experts. Detailed assessments were carried out on the 22 sites in the following specialist areas:

- Archaeology
- Ecology
- Historic built environment
- Landscape and visual impact
- Transport

The details of these further assessments can be accessed from the Wiltshire Council website 'Minerals and Waste Policy' pages.

The detailed assessments identified a number of constraints with the site options being considered, leading the Councils to determine that it is not possible to meet Wiltshire and Swindon's contribution to national and regional forecasts for sand and gravel, currently set at 1.85 million tonnes per annum. The results of the assessments, past production data and detailed dialogue with the minerals industry indicated that a local forecast figure of 1.2 million tonnes per annum would be achievable over the remaining plan period to 2026 and should be used as the basis for finalising the list of site options in the emerging Aggregate Minerals Site Allocations DPD.

Taking into account the findings from the detailed assessments, seven sites that theoretically should be able to deliver the required volume of sand and gravel were considered as being suitable for inclusion in the Aggregate Minerals Site Allocations DPD. (NB: from this stage onwards two of the sites adjacent to Brickworth Quarry were considered to be a single site (Site SE2/SE3) due to their similar constraints, restoration proposals, proximity, and the likelihood that they would be worked in a phased manner).

Additional noise, air quality and hydrogeological assessments have been undertaken, where relevant<sup>7</sup>, on these seven sites by external specialist consultants in order to predict the impacts associated with extraction operations at these sites and to consider the mitigation measures that would be most suitable for reducing any impacts.

## **2.5 Appraising the Aggregate Minerals Site Allocations DPD**

This SA Report summarises the findings of the site appraisal matrices - which incorporate SA objectives - for the sites included in the Aggregate Minerals Site Allocations DPD. The focus of the appraisal summaries presented in Section 4, is on the potential sustainability issues identified by the appraisals for which mitigation may need to be considered. In particular, the summaries identify where potential sustainability issues for particular sites may become significant where their effects are cumulative.

These key issues and the possibility of cumulative effects are considered in more detail in Section 5. The assessment considers the potential cumulative effects that could arise from the development of sites and groups of sites. Appropriate mitigation measures for each issue considered under the topic headings are then provided.

Finally the assessment considers the potential cross-boundary effects that may result from the implementation of the DPD.

## **2.6 Geographic and Temporal Scope of the Sustainability Appraisal**

The spatial scope for the assessment is the County of Wiltshire and the Borough of Swindon. However, the assessment has also taken into account the potential impacts that could affect the environment outside the immediate area (i.e.

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<sup>7</sup> Hydrogeological assessments were only undertaken on the Upper Thames Valley sites in response to concerns raised by the Environment Agency during consultation in relation to the sensitivity of the water environment in the area.

impacts on Hampshire, Somerset, Bath and North East Somerset, the New Forest, South Gloucestershire, Gloucestershire, South Oxfordshire and West Berkshire).

When undertaking the assessments the SA/SEA has considered effects both during the extraction period and in the post-extraction stage, post-restoration.

## 2.7 Sustainability Impacts of Aggregate Extraction

The site selection/ appraisal method and the cumulative effects assessment of the Site Allocations Document has been informed by a consideration of the sustainability impacts and sustainability/environmental benefits of aggregate extraction.

A summary of the potential impacts and opportunities arising from aggregate extraction is provided in Table 2.

**Table 2: Impacts and Opportunities Associated with Aggregate Extraction**

Material	Activities associated with extraction	Environmental impacts
Land won sand and gravel	<p>Extracted by hydraulic elevators following the stripping of soil. Screened and washed.</p> <p>Silt is typically managed in settlement lagoons.</p> <p>Transport is often by road because of the relatively 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.</p>	<ul style="list-style-type: none"> <li>▪ Noise levels relatively low (compared to hard rock quarries).</li> <li>▪ Silt disposal capacity is important – potential for water impacts in relation to surface and groundwater quality.</li> <li>▪ Soil stripping in summer can cause dust problems.</li> <li>▪ Higher land-take than crushed rock production per tonne.</li> <li>▪ Road transport impacts.</li> <li>▪ Dewatering may affect water quality and water quantity.</li> <li>▪ Impacts on flood risk.</li> </ul>

## **3 Environmental and Sustainability Planning Context**

### **3.1 Introduction**

This section summarises the baseline evidence that has informed the development of the SA Framework and the Sustainability Appraisal process for Wiltshire and Swindon's Minerals and Waste Development Framework. It signposts the key baseline information, (including the review of plans and programmes) that was produced through the SA Scoping process to inform the appraisal of the Minerals Development Plan Documents including higher tier Core Strategy and Development Control Policies DPDs.

The section also highlights the updates to the SA Framework and the baseline evidence that were prepared to support the appraisal of the Site Allocations DPD.

### **3.2 Review of Relevant Plans and Programmes and description of the social, environmental and economic baseline**

Evidence gathering for the SA/SEA of the plans being delivered through the Development Framework was first undertaken through the SA Scoping and has been revisited throughout the appraisal process to ensure that the requirements for SA/SEA are being met (as outlined below).

**The SEA Directive Annex I (a-e) requires that an environmental report should provide information on:**

- Relationship with other relevant plans and programmes
- The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme
- The environmental characteristics of areas likely to be significantly affected
- 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
- The environmental protection objectives, 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

The sustainability appraisal evidence base for this Site Allocations DPD and the preceding higher tier Minerals DPDs is documented through the following key SA/SEA documents<sup>8</sup>:

- Wiltshire and Swindon Minerals Development Documents SA/SEA Scoping Report (August 2005);
- Sustainability Appraisal/ Strategic Environmental Assessment of the Wiltshire and Swindon Minerals Core Strategy (February 2008); and

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<sup>8</sup> Published SA/SEA Reports are available at:  
<http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy.htm>



- Sustainability Appraisal/ Strategic Environmental Assessment of the Wiltshire and Swindon Minerals Development Control Policies DPD (July 2008).

In addition to the baseline information and review of plans and programmes, the appraisal process has also been informed by the wider evidence base produced by the Council to inform the development of the Core Strategy, Development Control Policies and Site Allocations DPDs.<sup>9</sup>

In line with the requirement to track changes to the baseline conditions and maintain the currency of the evidence base; the plans and programmes review and the baseline characterisations presented in the most recent (2008) SA/SEA reports<sup>10</sup> have been reviewed and updated for the SA/SEA of the Site Allocations DPD. These focused updates are provided in Appendix 1 and 2 as an addendum to this Report.

### **Sustainability Baseline and Issues**

Based on the baseline information and the review of plans and programmes, the key sustainability issues and potential negative effects for the baseline conditions associated with the development of aggregate minerals sites, are summarised (by SEA topic) below.

#### **Air Quality, Climatic Factors and Transport**

As a predominantly rural area, the air quality in the Plan area is good with Air Quality Management Areas (AQMAs) confined to urban settings. Minerals extraction activities generate transport, plant and machinery emissions, which will be most significant where facilities are concentrated or transport is required to pass through residential areas. Mitigation measures should address cumulative effects where identified.

Six AQMAs have been declared in Wiltshire due to relatively high levels of atmospheric pollutants, most notably nitrogen dioxide. The Wiltshire and Swindon Third Local Transport Plans (LTP3) both consider how freight transport should be managed, with the Wiltshire LTP3 adopting an advisory freight network based on national, regional and county routes (or equivalent) with local routes to town centres and business/industrial estates.

#### **Biodiversity, Fauna and Flora**

The Plan area is home to a rich natural environment that includes sites of European, national and local importance. The condition of Sites of Special Scientific Interest in Wiltshire has improved over recent years with 2% being in unfavourable condition and not recovering (2011) compared to 8% in 2005.

The quality of this environment should be supported and maintained through the site selection process, with avoidance of direct impacts a priority. Mitigation measures may be necessary for indirect cumulative effects (e.g. impacts on air quality arising from transportation) to ensure that all areas, including those without designation do not experience a reduction in quality/ integrity overall.

Post-extraction restoration of sites provides opportunities for generating biodiversity enhancements and contribution towards meeting targets of

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<sup>9</sup> All documents can be accessed via [http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy.htm#minerals\\_core\\_strategy](http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy.htm#minerals_core_strategy)

<sup>10</sup> Appendix A and B of the SA Report for the Wiltshire and Swindon Minerals Development Control Policies DPD (July 2008).

Biodiversity Action Plans and the South West Nature map. A workshop to explore restoration options for the seven minerals sites proposed for inclusion in Aggregate Minerals Site Allocations DPD was held in August 2011. This was jointly hosted by the Councils and Nature After Minerals<sup>11</sup> and was attended by a wide range of stakeholders including amongst others, nature conservation groups, minerals extraction companies and the RAF. The recommendations for each site are summarised in Section 4.4.

### **Cultural Heritage, including Architectural and Archaeological Heritage**

The Plan area has extensive archaeological interests including the World Heritage site (Stonehenge and Avebury), a significant number of scheduled ancient monuments, and special character settlements. Site selection should ensure that these sustainability interests inform individual site selections by seeking to avoid interests and develop appropriate mitigation measures as appropriate, for potential indirect impacts (e.g. air pollution, vibration from increased heavy goods vehicle traffic).

### **Human Health and Social Exclusion**

The residents in the Plan area enjoy a high quality of life as one of the least deprived areas in the Index of Multiple Deprivation (IMD). Wiltshire and Swindon community strategies aim for people to live healthy lives and it is therefore important that mineral extraction activities minimise impacts on local amenity.

Potential impacts on amenity arising from mineral extraction (noise, air, dust, traffic) should be addressed through the site selection process, which incorporate sustainability criteria, with effect mitigation measures for specific sites as necessary.

### **Landscape**

The landscape in the Plan area is of a high quality with over 43% designated as an Area of Outstanding Natural Beauty (AONB). The potential for visual impacts on designated landscapes arising from mineral extraction will depend on the scale and the specific location of individual sites. Tailored mitigation measures, as appropriate, should be developed particularly for sensitive locations close to AONBs.

Overall Wiltshire has high levels of tranquillity, however loss of tranquillity and increased light pollution are areas of concern.

### **Population/ Employment**

Population figures have been gradually rising in the Plan area, with an increased reliance on service sector and public sector employment. Economic changes may result in less positive growth and an accompanying reduction in the requirements for aggregates.

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

### **Soil and Material Assets**

Agricultural land classifications show a high grade of provision across the Plan area, lying around the main urban (and military training) areas. The area also has a range of mineral types including sand and gravel, chalk, clay, building sand, and building stone workings which are worked through a combination of open cast and underground mine complexes. Site selection should seek to avoid the best and most versatile agricultural land wherever possible.

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<sup>11</sup> <http://www.afterminerals.com>

## Water

Water quality, in line with broader South West catchments, has improved across the Plan area with the principal pollutants arising from dispersed agricultural sources. However much of the Plan area lies in areas which have been identified by the Environment Agency as having unacceptable flow regimes in local water courses.

Minerals extraction has the potential to affect both water quality and also flow regimes, including groundwater flow. Mitigation measures should identify key sensitivities that will require specific management, (e.g. location in groundwater protection zones).

## Limitations and Assumptions

The collation of baseline information supporting this appraisal process has reflected the level of detail and aggregation that is available from published sources. While some topics are effectively addressed through existing data sources (e.g. the condition of designated biodiversity sites and the quality of key river assets) others sources are less well established, (e.g. climate change information) and therefore the consideration of impacts, and in particular the potential changes to baseline conditions reflects the information available to the appraiser.

### 3.3 SA/SEA Framework

The SA/SEA Scoping in 2005 covered all the Mineral Development Plan Documents which form part of the Wiltshire and Swindon Minerals and Waste Development Framework. The SA Framework developed through this scoping process was subject to consultation in August/September 2005 and the final Framework has informed the appraisal of the higher tier Core Strategy and Development Control Policies DPDs.

To ensure that the SA Framework objectives and the corresponding decision aiding questions were appropriate for the locationally specific Site Allocations DPD appraisal, the SA Framework was revisited and refined in early 2009. In particular, the Framework was reviewed and adapted to ensure that it was relevant to site level appraisal and could be effectively integrated with the overarching site selection process. This revised framework was also subject to consultation<sup>12</sup>.

Table 3 below presents the revised and reorganised SA Framework tailored for SA/SEA of the minerals site selection. The changes to the SA objectives and decision-aiding questions [from the original SA Framework] are marked in red (additions) and ~~striketrough~~ (deletions). It should be noted that these changes have been undertaken in parallel with changes to the SA Frameworks informing the appraisal of the Minerals DPDs to ensure that there is consistency across the Development Frameworks.

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12

<http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy/aggregatemineralssiteallocations.htm>

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**Table 3: Sustainability Appraisal Framework**

Scoped in Appraisal questions. SA/SEA objectives. Does the policy...		SA/SEA sub-objectives	SA/SEA Assessment Questions. Would the <b>development of the site plan</b> in association with other plans, programmes and projects ...
±	Help make suitable housing available and affordable for everyone	Make a positive sustainable contribution by minimising negative impacts to meet Wiltshire and Swindon's sub-regional apportionment	Help ensure that a sustainable contribution is made to the sub-regional aggregate apportionment?
1	Promote stronger more vibrant communities	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 Promote healthy exercise, especially daily exercise by providing access to countryside spaces and areas.	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?
2	Protect and improve the health and well-being of people living, working and visiting Wiltshire and Swindon and adjacent areas.	Minimise health impacts (noise, dust, fumes, and vibration) from minerals workings and HGV site traffic Minimise the impact of minerals developments on rights of way, recreational facilities and open space Promote healthy exercise, especially daily exercise by providing access to greenspace Protect local rural communities and rural ways	Ensure appropriate standards of restoration, including progressive restoration techniques in order to bring health benefits to local communities? Change the ease with which people can access the countryside, rights of way, open space and common land? Cause development in areas which are valued for their tranquillity?

Scoped in Appraisal questions. SA/SEA objectives. Does the policy...	SA/SEA sub-objectives	SA/SEA Assessment Questions. Would the development of the site plan in association with other plans, programmes and projects ...	
	<p>of life</p> <p>Protect and improve the quality of countryside in proximity to mineral working and / or ancillary development</p> <p>Protect and enhance rights of way, open space and common land and maintain access to the countryside</p>		
3	<p><del>To foster a vibrant, varied economy, with particular emphasis on supporting regeneration projects in market towns</del></p>	<p><b>Increase employment opportunities through an increase in minerals developments</b></p> <p><b>Promote diversification in the economy</b></p> <p>Promote methods for protecting valuable mineral reserves <b>from sterilisation</b></p> <p><b>Provide materials that help to support the local economy</b></p> <p><del>Promote dialogue between all local authorities to ensure valuable mineral resources are not sterilised by non minerals development</del></p>	<p><b>Help to provide employment opportunities in both rural and urban areas of the County?</b></p> <p><b>Provide employment opportunities in an area of low employment?</b></p> <p><b>Provide employment opportunities close to where employees might live?</b></p> <p><del>Help to protect mineral reserves (i.e. through the establishment of Mineral Consultation Areas or Mineral Safeguarding Areas)?</del></p> <p><del>Help to promote dialogue between all local authorities to ensure valuable mineral resources are not sterilised by non minerals development?</del></p> <p><b>Provide materials which will enable the maintenance and further development of infrastructure and facilities that benefit the local economy, i.e. workplaces and transport infrastructure?</b></p>
4	<p><b>Encourage more sustainable transportation of minerals and reduce the impacts of transport a switch from transporting freight by road to rail or water</b></p>	<p><b>Reduce transportation of minerals by road through locating minerals sites close to growth centres</b></p> <p>Encourage the best use of existing transport mode options for mineral supply</p> <p><del>Protect important distribution network nodes (e.g. rail facilities)</del></p>	<p><b>Allow for sensitive lorry routing?</b></p> <p><b>Encourage the use of sustainable alternative fuels?</b></p> <p><b>Identify and provide incentives to use sustainable transport options?</b></p> <p><b>Encourage a switch from transporting freight by road to rail, water or conveyor?</b></p> <p>Help to protect important existing distribution network</p>

Scoped in Appraisal questions. SA/SEA objectives. Does the policy...	SA/SEA sub-objectives	SA/SEA Assessment Questions. Would the development of the site plan in association with other plans, programmes and projects ...
	Enhance and promote opportunities for sustainable transport options for mineral supply	<p>nodes (e.g. rail facilities)?</p> <p><del>Encourage, wherever possible the identification of</del> Provide new minerals sites facilities close to major centres of growth?</p> <p><del>Identify and provide incentives to use sustainable transport options?</del></p>
5	<p>Protect <b>and enhance</b> habitats and species <b>biodiversity and geodiversity</b></p> <p><del>To enhance the biodiversity resource and if possible prevent damage to geodiversity. Avoid key biodiversity and geodiversity features.</del></p> <p>Actively seek to protect and enhance biodiversity and geodiversity in each development</p> <p>Encourage the restoration and the creation of habitats and geodiversity features</p> <p>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)</p> <p>Consider alternatives to mineral extraction in resource areas of high ecological value</p> <p><b>To consider whether sites can maintain and expand the Strategic Nature Areas that are identified in the South West Nature Map</b></p> <p><del>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</del></p> <p><del>Maximise the potential for habitat creation through positive restoration of mineral workings</del></p>	<p>Adversely affect the integrity of designated sites?</p> <p>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?</p> <p>Improve or remove geodiversity?</p> <p>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?</p> <p>Include actions that affect areas where biodiversity is already exposed to significant threat, e.g. through habitat loss or fragmentation?</p> <p><b>Increase the risk of bird strike?</b></p> <p>Include actions that help to reach targets or compromise targets of BAPs and / or Geodiversity Action Plans (GAPs) where produced?</p> <p><del>Include actions that affect Natura 2000 sites, SSSIs or other designated site?</del></p> <p><del>Include actions that could increase the risk of bird strike?</del></p> <p>Provide an major opportunity for habitat creation and enhancement <b>to maximise biodiversity gain?</b></p>

Scoped in Appraisal questions. SA/SEA objectives. Does the policy...		SA/SEA sub-objectives	SA/SEA Assessment Questions. Would the development of the site plan in association with other plans, programmes and projects ...
		Ensure that the risk of bird-strike is kept to an absolute minimum through implementing appropriate mitigation and site management measures	
6	Promote the conservation and wise use of land	<p>Minimise the area of land take per tonne of mineral (aggregate) produced if appropriate.</p> <p>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</p> <p>To minimise the loss of soil resources and to encourage the re-use of soils locally</p>	<p>Change the area of land take per tonne of mineral produced?</p> <p>Improve the planning of site restoration by considering restoration and mitigation throughout the life of the site not just at the end?</p> <p>Consider the long term aftercare and after-use of mineral sites?</p> <p>Cause significant loss of soils, particularly carbon-rich soils, due to site development and usage?</p> <p>Cause the best and most versatile agricultural land to be lost either temporarily or permanently?</p>
7	Protect and enhance landscape and townscape	<p>Protect designated and non designated areas of landscape or other amenity value</p> <p>Reduce visual intrusion from mineral workings and / or ancillary development</p> <p>Ensure all mineral sites and areas affected by mineral working are restored to a high standard</p> <p>Consider alternatives to mineral working in resource areas of high landscape value or areas of tranquillity</p> <p>Maintain and wherever possible enhance access and overall amenity of the countryside to residents and visitors</p>	<p>Cause changes to designated areas which threatens the reason for their designation?</p> <p>Cause changes to the landscape / townscape that are completely at variance with the character of the area?</p> <p>Change the number of people that are affected by the visual impact of minerals development?</p> <p>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? (Note: no methodology currently exists to adequately model this)</p>
9	Value and protect diversity and local distinctiveness including rural ways of life	Minimise significant impacts on the countryside from all stages of mineral working and / or ancillary development	



Scoped in Appraisal questions. SA/SEA objectives. Does the policy...		SA/SEA sub-objectives	SA/SEA Assessment Questions. Would the development of the site plan in association with other plans, programmes and projects ...
		<p>Protect local rural communities and rural ways of life</p> <p>Protect and improve the quality of countryside in proximity to mineral working and / or ancillary development</p> <p>Protect and enhance rights of way, open space and common land and maintain access to the countryside</p> <p>Protect the best and most versatile agricultural land</p>	
8	Maintain and enhance cultural and historical assets	Preserve and enhance archaeological sites, historic buildings, Conservation Areas, registered battlefields, historic parks and gardens and other locally important features and areas and their settings	<p>Include actions that could impact upon sites, monuments and areas valued for their cultural heritage?</p> <p>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?</p>
10	Reduce vulnerability to flooding	<p>Reduce risk of flooding</p> <p>Minimise risk of flood pollution from minerals workings</p>	Improve flood management and reduce flood risk?
9	Keep water consumption within local carrying capacity limits (taking account of climate change) and reduce adverse hydrological effects	<p>Minimise any adverse impacts on water resources at all stages of mineral working through effective site design and management</p> <p>Protect and where possible improve surface, groundwater and drinking water quality-quantity</p>	<p>Include measures that could increase or decrease the potential for water pollution?</p> <p>Increase / reduce the risk of effects on groundwater and surface water quality and quantity?</p> <p>Minimise on-site water consumption?</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?
10	Minimise waste and the use of non-renewable minerals resources and where possible promote the use of renewable resources	<p>Reduce reliance upon primary, land-won minerals in favour of increasing the contribution made by secondary and / or recycled materials</p> <p>Minimise the amount of waste produced per</p>	<p>Change the mix of aggregates produced between primary materials and secondary / recycled materials?</p> <p>Provide suitable sites for aggregate recovery and recycling?</p>

Scoped in Appraisal questions. SA/SEA objectives. Does the policy...		SA/SEA sub-objectives	SA/SEA Assessment Questions. Would the development of the site plan in association with other plans, programmes and projects ...
		tonne of saleable mineral	Increase or decrease the amount of waste produced including uneconomic quarry fines per tonne of mineral?
11	Minimise land, water, air, light, noise, and genetic 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 <del>Protect and improve the quality of water resources</del> Protect and where possible improve surface, groundwater and drinking water quality	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)? Result in minerals workings or associated transportation in proximity to an AQMA? Include measures that could increase or decrease the potential for water pollution? Take account of the precautionary principle? Protect and/or enhance groundwater resources (paying particular regard to sensitive aquifers, potable reserves and Source Protection Zones)? Create the likelihood for increased genetic pollution
12	<del>Minimise the impacts on climate change</del> Reduce greenhouse gas emissions	Reduce greenhouse gas emissions from site operations and transportation <del>Minimise the vulnerability of minerals extraction operations to climate change</del>	Reduce energy consumption on sites? Improve the production and use of renewable energies? Maintain existing carbon stores (e.g. organic soils, broad-leaved woodland)?
13	Ensure that adequate measures are in place to adapt to the impacts of climate change	Reduce vulnerability to the effects of climate change Reduce the risks of flooding	Minimise the vulnerability of minerals extraction operations to climate change? Result in minerals development within the floodplain? Mitigate against flooding or drainage problems? Increase flood storage capacity, improve flood management and reduce flood risk? Provide habitat corridors to allow species to adapt to the changing climate?

## **4 Appraising the Aggregate Minerals Site Allocations DPD**

### **4.1 Introduction**

The SA/SEA of the aggregate minerals site allocation options followed the method detailed in Section 0 of this report. The method considered each site against the sustainability objectives set out in the SA Framework. This involved determining: whether the proposal would support and promote sustainability objectives; if any sustainability constraints were present; and where sustainability issues were identified - how mitigation might be most effectively addressed.

The appraisals evaluated the available evidence and where appropriate, ruled out sites with absolute sustainability constraints, or in circumstances where the options for mitigation were considered sufficiently problematic that they would prevent deliverability. The full details of the site appraisals undertaken can be viewed in the Summary of minerals site appraisal matrices.<sup>13</sup>

This section provides a summary of the potential sustainability issues arising from the SA/SEA undertaken as an integral component of the site selection process. The focus of the appraisal summaries in this section concerns the potential sustainability issues that may require appropriate mitigation measures and the type of measures that should be considered. In particular the sections highlight issues that may become significant where they are cumulative and the potential for cumulative effects, including appropriate mitigation measures, is detailed in Section 5.

While the focus of these appraisal sections is on issues that may require management to ensure no significant impacts to the baseline environmental conditions, the text also highlights a range of positive environmental impacts and enhancements that may occur as a result of the DPD implementation. These positive effects and contributions towards the objective set out in the SA Framework are described more fully in the detailed appraisal matrices.

### **4.2 Appraising the Initial Site Options for Sand and Gravel Extraction**

As described in Section 2.3 the initial appraisal of sites examined 62 sites for their suitability for aggregate extraction.

Sites in the Upper Thames Valley (U)<sup>14</sup> provide sharp sand and gravel whilst sites in the Calne Area (C) and South East of Salisbury (SE) supply soft sand. Two other resource areas for sand and gravel, which do not currently support any operational quarries, are the Bristol Avon area (BA) and the Salisbury Avon (SA).

Following the consultation eight sites were withdrawn from consideration at the request of the landowners, as were parts of two further sites. These sites were:

- C1 (part of): Land near High Penn, Calne;
- C4: Land north of Quemerford;
- C6: Land near Mile Elm;
- C7: Land north of Broads Green;

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<sup>13</sup> Summary of minerals site appraisal matrices available at <http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy/aggreatemineralssiteallocations.htm>

<sup>14</sup> Letters in brackets denote the prefixes used in the Site ID codes.

- C9: Land south of Chittoe;
- C10: Land north east of Chittoe;
- C12: Land east of Studley;
- C13: Land south of Studley A;
- C14: Land south of Studley B; and
- BA5 (part of): Land north of Beanacre.

Of the 54 remaining sites 32 were dropped from further consideration owing to constraints that had either been highlighted by the site appraisal process or which had come to light as a result of the consultation process and further work by council officers.

In addition, two new sites were put forward during the consultation. One site was an extension to a site already included in the consultation (SA1: Land near Petersfinger Farm, Salisbury) and this was taken forward for further consideration (see Section 4.3). The second new site (Land at Swillbrook Farm) was considered unsuitable for taking forward, with the reasons for removing this site along with the other 32 sites being shown in Table 4.

**Table 4: Reasons for ruling out sites following consultation**

Reason for removal	Site ID
Transport / access constraints	U1, U19, U20, U21, Additional site option at Swillbrook Farm, BA1, BA2, BA3, BA8, BA9
Small size/low anticipated yield of site with mitigation measures in place	U8, U11, U12, U13, U14, U15, C2, C8, C11, BA1, BA5, BA6, BA7, BA8, BA9, BA11, BA12, BA13, BA14, BA15 and BA16
Nature conservation issues	U10
Archaeological value / historic environment constraints	U10, C8, C11, BA5 (remaining part), BA7, BA12
Impacts on local amenity	U11, C17, BA1, BA2, BA3, BA5, BA6, BA7, BA8, BA9
Site previously worked	U14, C1 (remaining part)
Visual impact	C2, BA1
Site already benefitting from dormant consent	C5 (consent (3809.NW) – mineral extraction)
Poor quality of mineral	BA10, BA11
Old landfill site	BA6, BA16

As a result of this process 22 sites remained as potential sites for extraction.

### 4.3 Assessment of Refined List of Sites

As described in Section 2.4 the 22 sites that remained as potential sites for extraction following the initial consultation and appraisal were subject to detailed analysis in the areas of:

- Archaeology;
- Ecology;
- Historic built environment;
- Landscape and visual impact; and
- Transport.

As a result of this more detailed assessment a further 14 sites were considered as being too heavily constrained to take forward for inclusion in the Site Allocations DPD.

The reasons for removing the sites are shown in Table 5.

**Table 5: Reasons for removing sites following further analysis**

Reason for removal	Site ID
Transport / access constraints	U2, C16, SA1, SA2, BA4
Small size/low anticipated yield of site with mitigation measures in place	U16, U17, U18
Nature conservation issues	SA1, SA2
Archaeological value / historic environment constraints	U6, U9, U23 (part), SA1
Poor quality of mineral	U16, U17, U18
Not needed to meet local forecast	C15, C18, SE1

Table 6 lists the seven site options proposed to be carried forward into the draft Aggregate Minerals Sites DPD.

**Table 6: Sites proposed for inclusion in the draft Aggregate Minerals Sites DPD**

Site ID	Site Yield (tonnes)
U3 – Cox’s Farm (east of Marston Meysey)	2,400,000
U4 - Blackburr Farm (north west of Castle Eaton)	812,000
U5 – North Farm (south west of Castle Eaton)	300,000
U7 - Land East of Calcutt	2,200,000
U22 - Land at Cotswold Community (as amended to include non-scheduled part of U23 and part of adjacent land)	2,760,000
C3 - Land near Compton Bassett	450,000
SE2/SE3 - Extension to Brickworth Quarry	1,948,750
<b>Total Yield</b>	<b>10,870,750</b>

#### 4.4 Appraising the Potentially Suitable Sites

For the seven sites included in the Aggregate Minerals Sites DPD, the findings of the detailed assessments undertaken by Wiltshire Council officers for Archaeology; Ecology; Historic built environment; Landscape and visual impact; and Transport are summarised in the sections below. Also summarised are the findings of the Noise and Air Quality assessments that were undertaken by external consultants for all of the seven sites proposed for inclusion in the Site Allocations DPD, and the hydrogeological assessments which were only undertaken on the four sites in the Upper Thames Valley (U3, U4, U5 and U7), also by external consultants.

The recommendations from a ‘Nature after Minerals’ workshop on post-extraction restoration for the sites are also summarised for each site.

The full assessments can be found on the Wiltshire Council website 'Minerals and Waste Policy' pages. These provide detailed information, including baseline information and maps of constraints and sensitive receptors.

### **Site U3 Cox's Farm.**

**Resource Type: Sand and Gravel. Potential Yield: 2,400,000 tonnes.**

**Size: 106.1 hectares. Current land use: Agricultural.**

#### **Summary of findings from 2010 assessment and consultation**

The site is located in a rural setting with residential properties in close proximity (some adjacent to the site boundary). There are a number of currently active and proposed quarries operating in this area. There are concerns locally regarding the impacts on the setting of the village of Marston Meysey and the potential to increase flooding. The Environment Agency has flagged up significant concerns in relation to groundwater (the entire site is within Groundwater Source Protection Zone 1) and although technically feasible to mitigate, further investigation will need to be undertaken on this matter. There are potential issues for the restoration of the site in terms of avoiding or increasing the risk of birdstrike for aircraft using the adjacent operational airbase of RAF Fairford (dialogue with the Defence Estates will continue to ensure that a suitable restoration scheme can be implemented). There are also issues with the use of the local road network that may require improvements to be made. This area is considered to be an area of high archaeological potential. Although these issues are considered problematic they are not necessarily insurmountable if appropriate mitigation measures are put in place.

Aggregate Industries, the mineral operator and landowner, have promoted the site. The site was given 'resource block' status in the Minerals Local Plan 2001, essentially meaning that this site has been in the development plan for a number of years as the next suitable location for development once the Preferred Areas for sand and gravel extraction in Wiltshire had been developed.

#### **Summary of findings from detailed assessments (2011)**

##### Ecological assessment

No significant issues identified for this site in the ecological site briefings although a Great Crested Newt population is located in close proximity at RAF Fairford. Restoration could result in enhancements (e.g. to bat flight paths, great crested newt habitat and replanting of Black Poplar trees).

##### Transport assessment

New access possible?: Yes

Suitability of local road network: Potentially unsuitable, although probably possible to achieve a suitable access through improvements to the C124/C126.

Extension to nearby quarry: No

##### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: Medium sensitivity – with some mitigation required

##### Archaeological assessment

Archaeological potential: High

##### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (with appropriate mitigation)

##### Human health assessment (noise and air quality)

The combined noise assessment for sites U3, U4, U5 and U7 identified that without mitigation the predicted noise levels from extraction operations at the site would be more than 10dB above the limits specified in Minerals Policy Statement 2 (MPS2) at all nine of the Receptors included in the noise assessment for these sites. With appropriate mitigation the noise levels at seven of the Receptors are predicted to be below the MPS2 criteria. However at receptors MP9 (Cox's Farm) and MP12 (Lower Part Farm), noise levels are predicted to remain at levels either equal to or above the MPS2 criteria – but not exceeding the level by more than 10dB.

The air quality assessment for Site U3 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Substantial Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the site was suitable on air quality grounds subject to a strict Dust Management Plan being implemented, along with monitoring surveys.

#### Hydrogeological Impact Assessment

A combined hydrogeological risk assessment for sites U3, U4 and U5 identified that there are potential significant effects from development of an aggregate quarry due to dewatering activities and turbid waters entering the surface watercourses. However the assessment concludes that mitigation measures, most of which can be embedded into the design of the quarry, can be designed to ensure that the residual effects are insignificant.

#### Restoration potential – summary of findings from restoration workshop

Restoration to Wet Woodland would limit extent of open water and subsequent bird strike risk. It would also help expand the habitat within Cotswold Water Park (CWP).

Restoring the site to agriculture (arable and/or grazing pasture with provision for appropriate BAP habitats where possible) was also considered appropriate as this will protect the grade 2 and 3 agricultural soils.

Ponds should be included in the restoration mosaic where appropriate.

#### **Key issues to be considered in Cumulative Effects Assessment:**

Transport effects alongside sites U4, U5 and U7.

Cross-boundary transport effects.

Effects on Right of Way network south-east of Marston Meysey – with site U4.

In combination effects on amenity to residents of Marston Meysey and Castle Eaton – with sites U3, U4 and U5.

Effects on archaeological resource in the locality.

Post-extraction restoration opportunities together with sites U4 and U5.

#### **Site U4 Blackburr Farm**

**Resource Type: Sand and Gravel. Potential Yield: 812,000 tonnes.**

**Size: 49.7 hectares. Current land use: Agricultural.**

#### **Summary of findings from 2010 assessment and consultation**

Wiltshire Council owns the 3 parcels of land that comprise U4. The site is located in a rural setting in proximity to the village of Castle Eaton and adjacent to the

Second Chance Touring Park. There are open views to the eastern part of the site from Castle Eaton (a Conservation Area) and most notably St Mary's Church, a Grade I listed building. The potential impact on the setting of St Mary's Church and Castle Eaton Conservation Area is considered to be a potentially significant issue although appropriate mitigation can be planned at any future planning application stage. This area is also considered to be an area of high archaeological potential. The parcels are separated by single track lanes, which are lined by substantial hedgerows and trees, offering an element of natural screening. Although there are a number of issues that are considered problematic they are not necessarily insurmountable if appropriate mitigation measures are put in place.

No minerals companies are formally promoting the site at this stage but it is considered to have potential for working (possibly in conjunction with adjacent quarries) and therefore Councils would not wish to see it discounted.

### **Summary of findings from detailed assessments (2011)**

#### Ecological assessment

No significant issues identified for this site in the ecological site briefings apart from the requirement to implement a buffer to the river environment and provide mitigation for the species found in the area. Restoration could result in enhancements (e.g. to bat flight paths and great crested newt habitat).

#### Transport assessment

New access possible?: No

Suitability of local road network: Access via C124/C116 potentially unsuitable. Utilisation should make use of existing access through extension to Roundhouse Farm.

Extension to nearby quarry: Yes

#### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: High sensitivity due to proximity of Castle Eaton conservation area and the setting of St Marys Church – significant mitigation required

#### Archaeological assessment

Archaeological potential: High

#### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Difficult. Small field systems and hedgerows to the north allow the site to accommodate change – however, the loss of hedgerows and habitat resource would be a negative outcome and would alter the landscape character of the area, resulting in a loss of biodiversity and sense of place. Significant strengthening of screening to the south will be required to avoid visual impact on views from St Marys Church and Castle Eaton.

#### Human health assessment (noise and air quality)

The combined noise assessment for sites U3, U4, U5 and U7 identified that without mitigation the predicted noise levels from extraction operations at the site would be more than 10dB above the limits specified in Minerals Policy Statement 2 (MPS2) at all nine of the Receptors included in the noise assessment for these sites. With appropriate mitigation the noise levels at seven of the Receptors are predicted to be below the MPS2 criteria. However at receptors MP9 (Cox's Farm) and MP12 (Lower Part Farm), noise levels are predicted to remain at levels either equal to or above the MPS2 criteria – but not exceeding the level by more than 10dB.



The air quality assessment for Site U4 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Substantial Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the site was suitable on air quality grounds subject to a strict Dust Management Plan being implemented, along with monitoring surveys.

#### Hydrogeological Impact Assessment

A combined hydrogeological risk assessment for sites U3, U4 and U5 identified that there are potential significant effects from development of an aggregate quarry due to dewatering activities and turbid waters entering the surface watercourses. However the assessment concludes that mitigation measures, most of which can be embedded into the design of the quarry, can be designed to ensure that the residual effects are insignificant.

#### Restoration potential – summary of findings from restoration workshop

Restoring the site to a mosaic of Wet Woodland and Reedbed would address bird strike concerns and could link with other restoration schemes in the area.

Restoration to grazing pasture where fill material is available, which could include Coastal and Floodplain Grazing Marsh BAP habitat (the site is with a CWP SNA for Coastal and Floodplain Grazing Marsh).

Cotswold Canals Trust advocates restoration of the canal which bisects the site (and is currently in-filled).

Urban run-off into the River Ray is likely to increase in future years; therefore a network of sites downstream in CWP could become important for flood alleviation. The site could be designed to provide flood storage capacity.

#### **Key issues to be considered in Cumulative Effects Assessment:**

Transport effects alongside sites U3, U5 and U7.

Cross-boundary transport effects.

Effects on Right of Way network south-east of Marston Meysey – with site U3.

In combination effects on amenity to residents of Marston Meysey and Castle Eaton – with sites U3, U4 and U5.

Effects on archaeological resource in the locality.

Post-extraction restoration opportunities together with sites U3 and U5.

#### **Site U5 North Farm**

**Resource Type: Sand and Gravel. Potential Yield: 300,000 tonnes.**

**Size: 75.6 hectares. Current land use: Agricultural.**

#### **Summary of findings from 2010 assessment and consultation**

The site is located in a rural setting in proximity to the village of Castle Eaton and adjacent to the Second Chance Touring Park. There are open views to the eastern part of the site from Castle Eaton (a Conservation Area). Impact on the setting of the Conservation Area is considered to be a potentially significant issue. This site option is also in an area of high archaeological potential. Although there are a number of issues that are considered problematic they are not necessarily insurmountable if appropriate mitigation measures are put in place

The site option cannot be accessed by road and would need to be linked to an adjacent quarry across the River Thames or connected to site option U7. There is no mineral company interest in this site option at this stage.

### **Summary of findings from detailed assessments (2011)**

#### Ecological assessment

No significant issues identified for this site in the ecological site briefings other than to provide mitigation for the species found in the area. Restoration could result in enhancements (e.g. to bat flight paths and great crested newt habitat).

#### Transport assessment

New access possible?: No

Suitability of road network: C114 unsuitable. Access to this site would need to be through existing quarries.

Extension to nearby quarry: Yes

#### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: High sensitivity due to proximity to Castle Eaton conservation area – significant mitigation required

#### Archaeological assessment

Archaeological potential: High

#### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (with appropriate mitigation)

#### Human health assessment (noise and air quality)

The combined noise assessment for sites U3, U4, U5 and U7 identified that without mitigation the predicted noise levels from extraction operations at the site would be more than 10dB above the limits specified in Minerals Policy Statement 2 (MPS2) at all nine of the Receptors included in the noise assessment for these sites. With appropriate mitigation the noise levels at seven of the Receptors are predicted to be below the MPS2 criteria. However at receptors MP9 (Cox's Farm) and MP12 (Lower Part Farm), noise levels are predicted to remain at levels either equal to or above the MPS2 criteria – but not exceeding the level by more than 10dB.

The air quality assessment for Site U5 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Moderate Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the site was suitable on air quality grounds subject to a strict Dust Management Plan being implemented, along with monitoring surveys.

#### Hydrogeological Impact Assessment

A combined hydrogeological risk assessment for sites U3, U4 and U5 identified that there are potential significant effects from development of an aggregate quarry due to dewatering activities and turbid waters entering the surface watercourses. However the assessment concludes that mitigation measures, most of which can be embedded into the design of the quarry, can be designed to ensure that the residual effects are insignificant.

#### Restoration potential – summary of findings from restoration workshop

There is a high water table at U5 and the site is prone to flooding. The restoration will require careful design to reduce open water whilst also managing potential

flood risk and the site's capacity for flood storage. The site could be designed to provide flood storage capacity.

Restoration to Wet Woodland could be feasible but may be subject to availability of inert fill.

The site may also be suitable for black poplar and a planting scheme could be included in the restoration.

As the site is likely to be partly wet, an agricultural restoration to grazing pasture (with consideration of Coastal and Floodplain Grazing Marsh and Lowland Meadows BAP habitat) could be most suitable.

**Key issues to be considered in Cumulative Effects Assessment:**

Transport effects alongside sites U3, U4 and U7.

Cross-boundary transport effects.

In combination effects on amenity to residents of Marston Meysey and Castle Eaton – with sites U3, U4 and U5.

Effects on archaeological resource in the locality.

Post-extraction restoration opportunities together with sites U3 and U4.

**Site U7 Land East of Calcutt**

**Resource Type: Sand and Gravel. Potential Yield: 2,200,000 tonnes.**

**Size: 172.6 hectares. Current land use: Agricultural.**

**Summary of findings from 2010 assessment and consultation**

Although this site option is large in size, the mineral is not evenly distributed within the site boundary. This has been taken into account in the original estimate of yield, although the exact quality and quantity of sand and gravel within this site option is unknown at this stage. There are listed buildings in proximity to site option and the area is considered to be of medium archaeological potential, however, mitigation is considered achievable. Access to this site via a new junction from the A419 is considered inappropriate if it were to be operated as a standalone quarry. Ideally it would be worked as an extension to the quarries currently operating in close proximity to the site to the north. The Environment Agency has expressed significant concern regarding the proximity of the site option to North Meadow Special Area of Conservation and the River Thames. The site is substantial in size and therefore in principle can accommodate options for controlling groundwater surface water flow and standoffs from the river. At this stage no detailed hydrological and hydrogeological information has been provided and this will be required to support the allocation moving forward. [NB: a hydrogeological assessment has been undertaken since this assessment summary was prepared]. Although there are a number of issues that are considered problematic they are not necessarily insurmountable if appropriate mitigation measures are put in place.

No mineral company has expressed an interest in this site at this stage.

**Summary of findings from detailed assessments (2011)**

Ecological assessment

The site is situated 1.1km from North Meadow SSSI, which is a component of the North Meadow and Clattinger Farm Special Area of Conservation (SAC). The County Ecologist has carried out a test of likely significant effects that could occur

as a result of operation of this site for mineral extraction and concluded that there will be no likely significant adverse effects on the designated features of the SAC.

Restoration provides opportunities for enhancements, providing features and habitats for farmland birds, harvest mouse, brown hare, otters, water voles and curlew.

#### Transport assessment

New access possible?: No. Unless it can be demonstrated at planning application stage that safe/suitable access to Cricklade junction could be engineered.

Suitability of local road network: New access to site would be potentially unsuitable. The site should be treated as an extension to nearby quarries and any existing access arrangements should be utilised.

Extension to nearby quarry: Yes

#### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: Medium sensitivity – with some mitigation

#### Archaeological assessment

Archaeological potential: Medium

#### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (with appropriate mitigation)

#### Human health assessment (noise and air quality)

The combined noise assessment for sites U3, U4, U5 and U7 identified that without mitigation the predicted noise levels from extraction operations at the site would be more than 10dB above the limits specified in Minerals Policy Statement 2 (MPS2) at all nine of the Receptors included in the noise assessment for these sites. With appropriate mitigation the noise levels at seven of the Receptors are predicted to be below the MPS2 criteria. However at receptors MP9 (Cox's Farm) and MP12 (Lower Part Farm), noise levels are predicted to remain at levels either equal to or above the MPS2 criteria – but not exceeding the level by more than 10dB.

The air quality assessment for Site U7 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Substantial Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the site was suitable on air quality grounds subject to a strict Dust Management Plan being implemented, along with monitoring surveys.

#### Hydrogeological Impact Assessment

A hydrogeological risk assessment for Site U7 identified that there are potential significant effects from development of an aggregate quarry due to dewatering activities and turbid waters entering the surface watercourses. However the assessment concludes that mitigation measures, most of which can be embedded into the design of the quarry, can be designed to ensure that the residual effects are insignificant.

#### Restoration potential – summary of findings from restoration workshop

Similar restoration options to U4 and U5 were recommended in discussions. The site could be suitable for restoration to grazing pasture (potentially Coastal and Floodplain Grazing Marsh or Lowland Meadows) and could be important in providing flood alleviation through flood storage capacity.

**Key issues to be considered in Cumulative Effects Assessment:**

Transport effects alongside sites U3, U4, and U5.  
Cross-boundary transport effects.

**Site U22 Land at Cotswold Community****Resource Type: Sand and Gravel. Potential Yield: 1,260,000 tonnes.****Size: 14.4 hectares. Current land use: Agricultural.**

NB: The assessment detail provided in this section is for the area originally proposed for Site U22. The area included in the Pre-Submission DPD now also includes land previously associated with the Cotswold Community School as well as part of the area previously covered by Site U23. This has resulted in a single site with an estimated yield of 2,760,000 tonnes.

The assessment for U23 follows the U22 assessment.

**Summary of findings from 2010 assessment and consultation**

The site is located adjacent to a residential school (Cotswold Community School). The school is closing and will be vacant from the end of term 6 in July 2011 and therefore use as a school should not be considered as a sensitive receptor [NB: the school has now closed]. A number of Grade II listed buildings are located within the boundary of the school and mitigation would be required to ensure the setting of the listed buildings in question is not compromised. This area is also considered to be an area of high archaeological potential but it is considered that appropriate mitigation could be designed and applied at an application stage. Due to the closure of the school additional land within the area can now be considered (the landowner for site options U22 and U23 also owns the land associated with the school), which is estimated to increase the potential yield for this site by at least 1.5 million tonnes (initial calculations indicate that up to 2 million tonnes of additional resource could be available) if the non-scheduled part of U23 is incorporated into this option (please refer to site option U23 below). Access to the local road network is considered to be problematic. Therefore this site would ideally be linked to an adjacent quarry to the north. Although there are a number of issues that are considered problematic they are not necessarily insurmountable if appropriate mitigation measures are put in place.

Although there is no formal mineral company support for this site option at this stage, it has been indicated by representatives of the minerals industry that this would be a feasible option for a quarry.

**Summary of findings from detailed assessments (2011)**Ecological assessment

No significant issues identified

Suitable restoration proposals for these sites would include open water, ponds, reedbed and wet woodland. Enhancements for biodiversity should focus on connectivity of habitat areas via hedgerows and ditches that can offer secluded corridors for wildlife commuting. They could also include planting of blackthorn hedges to be managed specifically for Brown Hairstreak butterflies.

Transport assessment

New access possible?: No

Suitability of local road network: Access unsuitable from C85 Spine Road West. Access should be via existing quarry site access to the north.

Extension to nearby quarry: Yes

#### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: Medium sensitivity – with some mitigation

#### Archaeological assessment

Archaeological potential: High

#### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (if appropriate restoration masterplan is developed)

#### Human health assessment (noise and air quality)

The noise assessment for sites U22 and U23 identified that without mitigation the predicted noise levels from extraction operations at the site would be below the limits specified in Minerals Policy Statement 2 (MPS2) for two of the three Receptors included in the noise assessment for these sites. At the third receptor (MP1: Cotswold Country Park and Beach) the predicted levels were 0-10dB above the MPS2 criteria, however with appropriate mitigation the noise level is predicted to fall below the MPS2 levels.

The air quality assessment for sites U22 and U23 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Substantial Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the sites were suitable on air quality grounds subject to strict Dust Management Plans being implemented, along with monitoring surveys.

#### Restoration potential – summary of findings from restoration workshop

Compared to other sites in the Upper Thames Valley a different set of issues influences sites U22 and U23, and this is reflected in the restoration options discussed. The depth of the mineral working may result in a large void with limited material for infill. This was recognised by the groups as a key influence on the restoration.

Restoration to agriculture and Lowland Meadows (neutral grassland) was discussed but is likely to be constrained by lack of inert fill needed to restore levels.

Open water on these sites may be less problematic as aircraft are at a high enough altitude this distance from RAF Fairford to be beyond bird flight lines.

Restoration to open water with Reedbed was considered a potential option though will require careful design to maximise interest for both people and wildlife (e.g. maximising fringing habitat around edge of open water).

Public access could become a key component of the restoration and could include cycle paths, board walks and interpretation boards – integrating people with nature conservation.

Other features such as hedgerows and ditches could be included to provide connectivity to surround land and restored sites.

**Key issues to be considered in Cumulative Effects Assessment:**

Cross-boundary transport effects.

**Site U23 Land at Cotswold Community**

**Resource Type: Sand and Gravel. Potential Yield: 1,730,000 tonnes.**

**Size: 19.8 hectares. Current land use: Agricultural.**

NB: The assessment detail provided below is based on the originally proposed area covered by site U23. This area has subsequently been reduced to avoid affecting a Scheduled Ancient Monument, with the remaining area being incorporated into a single site along with Site U22. This single site has a potential yield of 2,760,000 tonnes.

**Summary of findings from 2010 assessment and consultation**

The site is located adjacent to a residential school (Cotswold Community School). The school is closing and will be vacant from the end of term 6 in July 2011 and therefore use as a school should not be considered as a sensitive receptor. A number of Grade II listed buildings are located within the boundary of the school, although it is considered that mitigation is possible. This area is also considered to be an area of high archaeological potential, with a significant proportion of the site option designated as a Scheduled Ancient Monument. English Heritage has confirmed that allocation of this SAM for sand and gravel extraction would not be appropriate due to the level of information required to support such an allocation as a plan proposal. If proposals to work the mineral within SAMs are submitted to the Council, then a significant amount of evidence would be required to fully justify development. However, due to the closure of the Cotswold Community School, it is possible that additional land may be suitable for extraction which will thereby increase the potential yield. It is recommended that the non-scheduled part of U23 is incorporated into an extended U22 (see comments for U22 above).

**Recommendation from Initial Assessment**

The part of site option U23 designated as a scheduled monument should be excluded from further consideration when considered against Historic Environment SA Objective 1. However, the remaining part of site option U23 should be carried forward and included as part of site option U22.

**Summary of findings from detailed assessments (2011)**

Ecological assessment

No significant issues identified

Suitable restoration proposals for these sites would include open water, ponds, reedbed and wet woodland. Enhancements for biodiversity should focus on connectivity of habitat areas via hedgerows and ditches that can offer secluded corridors for wildlife commuting. They could also include planting of blackthorn hedges to be managed specifically for Brown Hairstreak butterflies.

Transport assessment

New access possible?: No

Suitability of local road network: Access unsuitable from C85 Spine Road West. Access should be via existing quarry site access to the north.

Extension to nearby quarry: Yes

Historic built environment assessment

Level of sensitivity from built historic environment perspective only: Medium sensitivity – some mitigation may be required

#### Archaeological assessment

Archaeological potential: High. Scheduled Monument – Exclude. The scheduled part of the site is not considered suitable for sand and gravel extraction. In light of the high archaeological potential of the area, the County Archaeologist holds significant reservations about the suitability of remainder of this site (not scheduled) for sand and gravel extraction.

#### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (with appropriate mitigation and subject to archaeological constraints)

#### Human health assessment (noise and air quality)

The noise assessment for sites U22 and U23 identified that without mitigation the predicted noise levels from extraction operations at the site would be below the limits specified in Minerals Policy Statement 2 (MPS2) for two of the three Receptors included in the noise assessment for these sites. At the third receptor (MP1: Cotswold Country Park and Beach) the predicted levels were 0-10dB above the MPS2 criteria, however with appropriate mitigation the noise level is predicted to fall below the MPS2 levels.

The air quality assessment for sites U22 and U23 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Substantial Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the sites were suitable on air quality grounds subject to strict Dust Management Plans being implemented, along with monitoring surveys.

#### Restoration potential – summary of findings from restoration workshop

See Site U22 above

#### **Key issues to be considered in Cumulative Effects Assessment:**

Cross-boundary transport effects.

### **Site C3 Land near Compton Bassett**

**Resource Type: Sand. Potential Yield: 450,000 tonnes.**

**Size: 23.4 hectares. Current land use: Agricultural.**

#### **Summary of findings from 2010 assessment and consultation**

This site option is located adjacent to an active quarry and a concrete products factory, is fairly well screened and separated from other land uses. It is therefore considered relatively unconstrained. The grading against SA objectives demonstrates that this site option would be the first choice of the site options for the Calne area. Priority would also be given to this site in policy terms as an extension to an existing operational quarry. Although some issues are considered potentially problematic they are not necessarily insurmountable if appropriate mitigation measures are put in place. Although the site option was not originally proposed by the minerals industry, it is considered to have good potential as an extension to the existing adjacent quarry. This site would not form an extension to the adjacent landfill (there is more than sufficient landfill capacity for Wiltshire and Swindon) but instead would be restored using inert material. The industry



has indicated that they are confident that sufficient inert material would be available to restore site C3.

## **Summary of findings from detailed assessments (2011)**

### Ecological assessment

No significant issues identified for this site in the ecological site briefings.

Restoration proposals for this site could include habitats with water bodies such as ponds, lakes and ditches and should also focus on enhancing connectivity of habitats particularly along hedge lines and along the Abberd Brook riparian strip.

### Transport assessment

New access possible?: No. (Although there is potential via Sandpit Lane or using current access arrangements for the nearby quarry)

Suitability of road network: A3102 via Sandpit Lane suitable

Extension to nearby quarry: Yes

### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: Low sensitivity – unlikely to require mitigation

### Archaeological assessment

Archaeological potential: Low

### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (with appropriate mitigation)

### Human health assessment (noise and air quality)

The noise assessment for Site C3 identified that the predicted noise levels from extraction operations at the site would be below the limits specified in Minerals Policy Statement 2 (MPS2) for all three Receptors included in the noise assessment for these sites.

The air quality assessment for Site C3 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) without mitigation would be 'Slight Adverse'. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was also predicted to be 'Slight Adverse' and this was predicted to remain the case with mitigation in place. The assessment concluded that the site was suitable on air quality grounds subject to detailed assessment of impacts on local air quality and investigation of feasibility of alternative HGV routes and or speed management/restrictions (60mph).

### Restoration potential – summary of findings from restoration workshop

The principal option to emerge from group discussions was restoration to agriculture (possibly arable), with scope for woodland planting, (possibly in the form of a copse).

Restoration to arable farmland would protect the grade 2 and 3 agricultural soils on site and also provide an opportunity to integrate BAP priority habitats such as arable field margins.

These comprise a number of different features (including conservation headlands and margins sown to provide seed for wild birds) so consideration should be given to which are appropriate and how they could connect to habitat and land use in the wider area. In addition, skylark plots and beetle banks would also be desirable as in-field features within the restoration scheme.

Hedgerows could be a key feature of the restoration scheme, and would complement the surrounding land use. In particular, hedgerows which feature

individual trees along their length would be welcomed as these are an important and distinctive landscape feature.

Woodland was recognised as a potentially important component of the restoration scheme, possibly planted as a copse to balance with other components of the restoration. This could fit with aspirations for the wider landscape as other woodland planting schemes are being undertaken in this part of the county.

The groups highlighted the potential for the restoration scheme to also include enhancement of Abberd Brook which flows along the northern boundary of the site (possibly using the woodland planting as one way to improve water quality). Ponds would also be a positive addition to the restoration scheme.

The restoration scheme also presents an opportunity to enhance the Public Rights of Way (PRoW) associated with the site and the potential to extend the footpaths and connect with the wider PRoW network. If appropriate, these could be positioned along hedgerows and/or field boundaries.

National Cycle Network route 403 runs adjacent to the south side of the site and is recognised as a key access corridor in need of improvement, which could be sought through the restoration scheme or the planning permission.

**Key issues to be considered in Cumulative Effects Assessment:**

Transport and amenity issues in combination with extraction activities at the nearby quarry.

**Site SE2/SE3 Extensions to Brickworth Quarry**

**Resource Type: Sand. Potential Yield: 1,948,000 tonnes.**

**Size: 25.2 hectares. Current land use: Agricultural.**

NB: The assessment details provided in this section encompass the assessments undertaken for Sites SE2 and SE3 that were considered as separate sites during the site assessment process during the development of the Pre-Submission DPD.

**Summary of findings from 2010 assessment and consultation**

Apart from the classification of this site option as ancient woodland, there are very few constraints to development. The site has, for several decades, been used for forestry and therefore none of the trees contained within the site could be considered to be ancient or veteran. However, the seed bed contained within the soils is of importance, hence the classification. Mitigation involving adequate protection of the soils and seed bed has been successfully implemented at Brickworth quarry and is therefore considered feasible for SE2/SE3. The site would act as a natural extension to the existing quarry at Brickworth and therefore there are no concerns regarding the use of the current access to the A36.

This site option has minerals industry support.

**Summary of findings from detailed assessments (2011)**

Ecological assessment

The site lies within 1.5km to the north west of the New Forest Special Area of conservation (SAC). The County Ecologist has carried out a test of likely significant effects on the designated features of the European site as a result of operations to extract sand at this site and has concluded that although there is

mechanism for pollutants to potentially reach the SAC, since hydrological connectivity exists. Suitable mitigation methods could be employed to ensure that this could be prevented. The HRA of the Mineral and Waste Core Strategy did not identify any other potentially damaging effects of mineral extraction for this N2K site at this distance.

The SE2 part of the site lies partly within Lowden's Copse County Wildlife Site, designated for its Ancient Woodland interest. The SE3 part of the site lies almost entirely within Sandland/Goose Eye Copse County Wildlife Site, which is designated for its Ancient Woodland interest.

Restoration must be phased alongside extraction and should be managed to native woodland and agricultural grazing.

#### Transport assessment

New access possible?: No (not required)

Suitability of road network: Suitable

Extension to nearby quarry: Yes

#### Historic built environment assessment

Level of sensitivity from built historic environment perspective only: Low sensitivity

#### Archaeological assessment

Archaeological potential: Medium

#### Landscape and visual impact assessment

Site suitability to accommodate quarry activity: Yes (with appropriate mitigation)

#### Human health assessment (noise and air quality)

The noise assessment for site SE2/SE3 identified that without mitigation the predicted noise levels from extraction operations at the site would be below the limits specified in Minerals Policy Statement 2 (MPS2) for two of the four Receptors included in the noise assessment for this combined site. At a third receptor (MP17: Ashdod Lodge) the levels predicted were 0-10dB above the MPS2 criteria, however with appropriate mitigation the noise level is predicted to fall below the MPS2 levels. At the fourth Receptor the levels predicted were greater than 10dB above the MPS2 criteria, however with appropriate mitigation the noise level is predicted to fall below the MPS2 levels.

The air quality assessment for site SE2/SE3 identified that the 'Overall Impact Significance for Local Air Quality' (NO<sub>2</sub> and PM<sub>10</sub>) would be 'Negligible' even without mitigation. For dust impacts, the 'Overall Impact Significance for Dust Emission' without mitigation was predicted to be 'Substantial Adverse', falling to 'Slight Adverse' with mitigation in place. The assessment concluded that the site was suitable on air quality grounds subject to a strict Dust Management Plan being implemented, along with monitoring surveys.

#### Restoration potential – summary of findings from restoration workshop

Both SE2 and SE3 were considered together and in relation with the wider Brickworth site. The consensus was that the sites could support restoration to woodland and agriculture. Both options were recognised as being dependent on available inert fill to restore levels on site.

Creation of Lowland Mixed Deciduous Woodland will provide UK Biodiversity Action Plan (BAP) Priority Habitat to help buffer and provide connectivity to the BAP woodland in the surrounding landscape. Both sites are situated within Langley Wood Strategic Nature Area (SNA) and restoration to woodland would support objectives for woodland creation in the SNA.

The designated ancient woodland soils will be stored and then replaced as part of the restoration scheme. Whilst the viability of the seed bank was thought to be questionable (and may require supplementary planting with native tree species) it is likely to retain important woodland flora, which will be valuable as the habitat establishes post-restoration.

The groups considered that if parts of SE2/SE3 are restored to agriculture - whether the restoration is to arable or grazing pasture - provision could be made for BAP priority habitats and BAP species. Features such as Hedgerows, Ponds and Arable field margins (all BAP priority habitats) could be designed into the restoration scheme where appropriate; providing habitat corridors to other restored areas on the site and surrounding land. Further details are presented in site C3 below.

Depending on extraction and phasing, existing hedgerows and tree lines should be retained and/or enhanced to facilitate species movement and protect flight lines for bats (there is an important population of Barbastelle bats close to Brickworth Quarry).

Areas felled/cleared in preparation for extraction may develop valuable interim habitat (e.g. for nightjar) so this will need to be recognised and mitigated if necessary or accommodated where possible.

The Public Rights of Way (PRoW) associated with SE2/SE3 should be retained or if necessary, temporarily diverted to move footpath users away from operational areas. In addition, relocated footpaths should avoid restored areas of established or developing habitat sensitive to disturbance. In addition, there may be scope for new PRoW in the restoration scheme

The groups discussed whether SE2/SE3 and the wider quarry could be suitable as an alternative green space once restored, with the aim of drawing some visitors away from nearby sites in the New Forest National Park, the boundary of which is less than 1km to the south. This could help alleviate recreational pressures on the New Forest and on habitat sensitive to disturbance. Both PRoW and 'Green Infrastructure' proposals will require further discussion with the landowner and operator.

**Key issues to be considered in Cumulative Effects Assessment:**

Transport effects with any ongoing activities at Brickworth Quarry.

## 4.5 Options for Delivery

Of the seven sites described in Section 4.4 not all have backing from the minerals industry and there is therefore some uncertainty as to whether they will ever be developed.

The Councils have therefore considered an option which would take forward only those sites which have industry backing (Option 1 Scenario). These sites are as follows:

Sharp sand and gravel

U3: Cox's Farm

U22: Land at Cotswold Community

Soft sand

SE2/SE3: Extensions to Brickworth Quarry

Taking forward this option would provide an estimated yield of 5.15 million tonnes of sharp sand and gravel and 1.95 million tonnes of soft sand. This compares to the 8.47 million tonnes and 2.4 million tonnes respectively that would be provided if all seven sites are included in the DPD (Option 2 Scenario).

Without knowing exactly where the shortfall would be made up from it is not possible to accurately predict the effects of taking forward Option 1 ahead of Option 2. However there are some general effects that can be identified here.

Option 1 would result in a requirement for minerals for local use in Wiltshire and Swindon to be provided from outside the Plan area. This would mean having to transport aggregates over greater distances with associated adverse effects relating to greenhouse gas emissions and air quality. The increase in haulage miles would also have impacts in terms of congestion and community severance.

Local environmental impacts on landscape, biodiversity, cultural heritage etc. in the Plan area would be reduced under Option 1. However these effects would simply be transferred into neighbouring authorities, to sites which could have fewer environmental constraints, thereby reducing overall impacts, but conversely which could be more heavily constrained with an associated increase in overall effects.

#### **4.6 Habitat Regulations Assessment**

Land use plans are subject to the provisions of Article 6 (3) and (4) of the Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) and may therefore require the undertaking of an Appropriate Assessment (AA) of their implications for European Sites. The purpose of AA is to assess the impacts of a land-use plan against the conservation objectives of a European site and to ascertain whether it would adversely affect the integrity of that site, whether alone or in combination with other plans and projects. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects.

Habitats Regulations Assessment is also commonly referred to as Appropriate Assessment (AA) although the requirement for AA is first determined by an initial 'screening' stage undertaken as part of the full HRA. This initial screening stage has been undertaken for Wiltshire and Swindon's Aggregate Minerals Site Allocations DPD and a summary of the findings are presented below. The screening took forward the Minerals and Waste Core Strategies and Development Control Policies HRA findings and ensured that the recommendations were effectively applied to the Aggregate Minerals Site Allocations DPD.

A HRA Screening Report was completed for the Minerals Core Strategy<sup>15</sup> 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<sup>16</sup>. The report considered the impacts of the strategies, whether these impacts were likely to have significant effects on the European sites and the possibility of in-combination effects from other plans and programmes.

The screening identified that significant effects were possible at nine European sites due to the Minerals Core Strategy. These potential effects were primarily due to the anticipated proximity of the minerals activities to European sites and

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<sup>15</sup> A joint HRA was undertaken for Wiltshire and Swindon's Minerals and Waste Core Strategies.

<sup>16</sup> [www.wiltshire.gov.uk/minerals-waste-habitats.pdf](http://www.wiltshire.gov.uk/minerals-waste-habitats.pdf)

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 are:

- 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 Minerals and Waste Core Strategy HRA identified that for each European site there was a distance for which it cannot be certain that a likely significant effect will not result from the siting and operation of a mineral and/or waste site. Based on the findings of the HRA for the Minerals and Waste Core Strategies, eight of the 22 sites that were taken forward for additional assessment were within the distance at which aggregate extraction may adversely affect a European site. NB: These distances vary from European site to site dependant on the site's characteristics and reasons for designation<sup>17</sup>.

Of these eight sites, three are included as proposed allocations in the Aggregate Minerals Site Allocations Pre-Submission DPD. These are shown in ***bold italics*** below. The eight potential aggregate sites and their distance from European sites were as follows:

- SA1 – Land at Petersfinger, Salisbury. Abuts the River Avon SAC.
- SA2 – Land nr Alderbury Farm, Salisbury. Within 200m of River Avon SAC.
- ***U7 – Land east of Calcutt***. 1.1km from North Meadow & Clattinger Farm SAC.
- U9 – Land near Latton. 130m from North Meadow & Clattinger Farm SAC.
- ***U22 – Land west of Cotswold Community***. 200m from North Meadow & Clattinger Farm SAC.
- SE1 – Land at Whiteparish. 1.4km from New Forest SAC.

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<sup>17</sup> See Appendix 4 of the Habitats Regulations Assessment for the Minerals and Waste Core Strategies & Development Control Policies: Submission Reports July 2008.

- **SE2/SE3 – Land at Whiteparish.** 1.1/1.4km from New Forest SAC.

NB: sites SE1, SE2 and SE3 were assessed as one site for the purposes of HRA. Sites SE2 and SE3 are being considered as a single site in the Aggregate Minerals Site Allocations Pre-Submission DPD.

These eight aggregate sites were then assessed by the Wiltshire County Ecologist in May 2011 to determine the likelihood for aggregate extraction to have significant effects on the nearby European sites, both alone and in combination with other plans or projects. Details of the assessments are included in Appendix A of '*Further assessment for Aggregate Minerals Site Options in Wiltshire and Swindon: Ecological Site Briefings*'<sup>18</sup>. The assessments resulted in the following conclusions in terms of whether the proposal is likely to have a significant effect on a European Site:

- SA1: Uncertain due to potential effects on groundwater flow.
- SA2: Uncertain due to potential effects on groundwater flow.
- SE1, **SE2** and **SE3**: No likely significant effects.
- **U7**: No likely significant effects.
- U9: Effects are uncertain due to the current information gap as to whether or not the site lies within the same river catchment as the North Meadow & Clattinger Farm SAC. If the site does lie in the same catchment there could be potential effects on water levels at the SAC.
- **U22**: No likely significant effects.

Whilst the potential for adverse effects was identified (including changes to the water table and flooding regime, ground or surface water pollution, changes in siltation, dust pollution, air pollution, and disturbance), it was considered that appropriate site level mitigation is available to mitigate these effects (recommendations include robust site management plans and the phasing of extraction and restoration).

As shown above, for the three sites being taken forward in the Aggregate Minerals Site Allocations Pre-Submission DPD the HRA concluded that the proposals will not have likely significant effects on the identified European sites, either alone or in combination with other plans and projects.

## 5 Cumulative, Synergistic, Secondary and Cross-Boundary Effects

### 5.1 Introduction

**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.

**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

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<sup>18</sup> Available at URL:

<http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy/aggregatemineralssiteallocations.htm>

on biodiversity and water management if long-term partial and full restoration schemes in close proximity to one another are implemented.

**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.

Where mineral extraction activities in Wiltshire and Swindon are based close to the borders of other local authorities there are likely to be **cross-boundary effects** felt in these areas.

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.

## **5.2 Cumulative, Synergistic, Secondary and Cross-Boundary Effects Assessment**

An appraisal of each potential site was undertaken to determine the suitability of aggregate extraction at that site. The findings of these appraisals are summarised in the preceding, Section 4, of this report. The individual assessments considered the potential sustainability issues arising from extracting aggregates at each particular site in line with SA objectives and threshold for assessment. The SEA Directive requires that specific consideration is given to the secondary, cumulative and synergistic effects of the plan.

An advantage of the strategic nature of the SA/SEA process is that it allows the combined effects of different measures to be more effectively identified. The assessment of individual sites may have identified that mineral extraction operations will have a minimal impact on landscape, for example, however if there is another potential site in close proximity then the impacts generated from more than one aggregate site may act in combination to have a more significant effect on the landscape.

This section therefore considers the Aggregate Minerals Site Allocations DPD as a whole, taking into account the site assessments undertaken in Section 4 and considering the potential for cumulative effects by SA topic/theme to arise from the implementation of the DPD. Where appropriate, mitigation measures are suggested and/or reference is made to related documents where relevant mitigation measures have been considered.

### **Human Health and Amenity**

The operation of aggregate extraction sites has the potential to generate airborne emissions through increased traffic and the extraction activities themselves. This could be in the form of pollutants such as nitrogen dioxide or as dust.

Increased traffic and the operation of machinery can also impact road safety as well as resulting in noise and light pollution and vibration. These could all have negative effects on the health of people living and working in close proximity to aggregate sites.

The proximity to each other of sites U3, U4, U5 and U7 could result in cumulatively more significant effects on local residents compared to those predicted for the sites in isolation. The same is the case for sites U22/U23, as well as site SE2/SE3.

In combination the development of sites U3 and U4 could have a cumulative adverse effect on the rights of way network to the south east of Marston Meysey with associated implications for local residents who regularly use this area for recreation.



In addition the proximity of sites U3, U4, U5, U7, U22/U23 to the Gloucestershire border means that there could be adverse effects on communities within this neighbouring county.

**Mitigation:** Phasing the extraction of aggregates from the sites in close proximity will help to reduce the cumulative effects, although it would result in the effects, although not as marked, being felt over a longer period of time.

There are a number of mitigation measures available to address the potential impacts of mineral extraction facilities on human health.

Development Control DPD Policy MDC2 'Managing the Impacts of Minerals Development' has a requirement that proposals for minerals development will be permitted where it can be demonstrated that the proposal avoids and/or adequately mitigates, significant adverse impacts associated with the following environmental considerations:

- Noise levels;
- Dust levels;
- Air emissions;
- Lighting; and
- Vibration levels.

Potential mitigation measures that could be considered are:

- The incorporation of a defensible separation distance between residents and mineral workings;
- Landscaping to create bunds;
- Using natural vegetation for screening purposes;
- Restricting the hours of operation;
- Water bowsers to suppress dust, and wheel washers to reduce the road debris caused by lorries;
- The phasing of operations to reduce the impact on local residents;
- The choice of route, location and suitability of access arrangements for vehicles entering and leaving the site.
- The use of shields, louvers, baffles and restrictions on operational hours to prevent 'light spill', 'light trespass' and 'sky glow' in sensitive areas.

The most appropriate mitigation measures for each site will vary depending on site specific conditions, the environmental conditions at the time and the proximity and sensitivity of the population that might be affected. These detailed issues are more appropriately addressed at the planning application stage.

## **Economy**

The cumulative effects of all the extraction sites together could have positive, albeit relatively limited effects on employment opportunities in Wiltshire and Swindon however these are not likely to be significant.

## **Traffic and Transportation**

Given that none of the extraction sites are able to utilise rail or water for the transportation of minerals, all will rely on road transport with associated impacts on the local road networks.

In terms of cumulative impacts resulting from several sites the significance of the impacts will be dependent on the phasing of extraction, both with the other new

sites in close proximity and with sites already in operation. Where more than one site in an area is operational at the same time the volumes of lorry traffic could result in significant adverse effects. These could be avoided if sites are operated on a sequential basis.

The site clusters which are considered as having the potential for cumulative sustainability issues on traffic and transportation relate to sites U3, U4, U5 & U7 and to site SE2/SE3.

The Wiltshire Third Local Transport Plan identifies that there are cross-boundary transport issues with Hampshire relating to "*HGV movements associated with minerals and waste sites in the Whiteparish area*". Site SE2/SE3 will therefore contribute towards potentially exacerbating or prolonging any existing effects.

However, Hampshire's latest publication as part of the development of their minerals DPD (Planning for Hampshire's Minerals and Waste (March 2011)) identifies a series of new sites and site extensions to provide future supplies of sand and gravel and none of these sites are in close proximity to any of the sites put forward in the Wiltshire and Swindon Aggregate Minerals Sites DPD. Therefore there are unlikely to be any resultant cumulative effects resulting from the implementation of the two DPDs.

With the sites in the Upper Thames Valley all being located within relatively close proximity to the Gloucestershire border there is also the potential for cross-boundary adverse effects given that aggregate lorries will use the A417 and A419 east of Cirencester. The Gloucestershire Minerals DPDs are not yet at the stage of having identified potential sites for future extraction and therefore it is difficult to determine specific combined effects. However it is likely that the vast majority of future sand and gravel production in Gloucestershire will come from the Upper Thames Valley and therefore cumulative effects can be expected.

**Mitigation:** Development Control DPD Policy MDC8 'Sustainable Transport and Minerals Development' places requirements on mineral operations to minimise transportation distances wherever possible, establishing mineral site transport plans, where deemed necessary and mitigating or compensating for any adverse impact on the safety, capacity and use of a highway, railway, canal route, bridleway, cycleway or public right of way, through improvements to the appropriate network where necessary.

In addition the policy requires that where appropriate, applications for minerals development will need to be accompanied by a Transport Assessment which will need to:

- Consider the impact of the development upon the highway network (and where relevant the local railway, canal route, bridleway, cycleway or public right of way), in the local area;
- Consider the potential cross-boundary impacts and cumulative impacts of the development with other local developments; and
- Identify any mitigation or compensatory works directly related to the development that may need to be funded by the developer in conjunction with the proposal.

The impact of lorries on the road network can be reduced if the operator takes mitigation measures such as using water bowsers to suppress dust during spells of dry weather; wheel washers to prevent debris from being deposited on the road network; and through consideration of the choice of route, location and suitability of access arrangements for vehicles entering and leaving the site.

## **Biodiversity and Geodiversity**

No cumulative adverse effects on biodiversity and geodiversity have been identified in relation to the seven sites proposed for aggregate minerals extraction. Those sites that are adjacent to each other, for example U3, U4 and U5 (albeit with a road and river separating them) and site SE2/SE3, provide opportunities to take a more strategic approach to post-extraction restoration and help towards meeting targets in the relevant biodiversity action plans (e.g. Cotswold Water Park BAP).

**Mitigation:** Development Control Policy MDC6 'Biodiversity and Geological Interest' requires that proposals for minerals development will only be permitted where adverse impacts will be:

- a) Avoided; or
- b) Where an adverse impact cannot be avoided, the impact will be adequately mitigated; or
- c) Where adverse impacts cannot be avoided or adequately mitigated, compensation will result in the maintenance or enhancement of biodiversity/geodiversity.

A Construction Method Statement (CMS) will need to describe the measures that are to be taken at each stage of the extraction process to ensure the protection of biodiversity both within the site and in the surrounding area.

## **Landscape**

No cumulative adverse effects on landscape have been identified in relation to the seven sites proposed for aggregate minerals extraction. Opportunities exist for post-restoration enhancement of local landscapes.

**Mitigation:** The Development Control DPD Policy MDC5 'Protection and enhancement of Wiltshire and Swindon's landscape character' requires that proposals for minerals development should include appropriate provisions to protect and where possible enhance the quality and character of the countryside and landscape. Proposals in proximity to settlements must safeguard their character, setting and rural amenity through the implementation of mitigation measures that incorporate an acceptable separation distance, landscaping and planting, appropriate to the existing landscape setting and consistent with the proposed after-use of the site.

## **Cultural Heritage**

Some of the extraction sites have been identified as being in areas of high archaeological potential. Where more than one site could have an adverse effect on the same resource there is the potential for cumulative adverse effect. This could be the case for sites U3, U4 and U5 all of which are in areas of high archaeological potential.

**Mitigation:** The Development Control DPD Policy MDC7 'The Historic Environment' requires that proposals for minerals development will only be permitted where it can be demonstrated that areas of archaeological or cultural heritage importance and their settings can be protected, enhanced and/or preserved.

## **Water resources**

Where several sites are located close to a water course (for example sites U4 and U5 which both adjoin the River Thames near Castle Eaton) or are located in a groundwater protection zone there is the potential for adverse cumulative effects

on the water environment, such as effects from dewatering on hydrology and effects on flood risk.

**Mitigation:** Development Control DPD Policy MDC3 'Managing the Impact on Surface Water and Groundwater Resources' requires that proposals for minerals development will only be permitted where it can be demonstrated that appropriate controls will be made available to protect and, where appropriate, enhance the water environment.

### **Resource Efficiency**

The proximity of several sites to each other and to existing mineral workings will help to maximise resource efficiency, for example in the provision of extraction associated infrastructure such as conveyors.

### **Pollution**

All extraction activities have the potential to generate emissions of pollutants through the extraction activities (e.g. dust and emissions from extraction plant and machinery) and through increased traffic movements. Increased levels of atmospheric pollution have the potential to reduce air quality, with indirect negative effects on human health, biodiversity and the water environment.

A cluster of sites where there is potential for negative cumulative effects on local air quality relates to sites U3, U4, and U5.

**Mitigation:** Development Control DPD Policy MDC2 'Managing the Impacts of Minerals Development' requires that pollution be taken into account by mineral operations.

### **Climate change**

Mineral extraction and transportation inevitably leads to greenhouse gas emissions and this is an issue that has been considered in the Sustainability Appraisal of the Wiltshire and Swindon Minerals Core Strategy. However, no cumulative site specific issues have been identified.

The restoration of aggregate sites provides opportunities for providing additional flood storage capacity, although in areas where there is a birdstrike risk it will not be possible to restore sites to open waterbodies.

The location of the sites in the Upper Thames Valley, whilst being close to RAF Fairford and therefore within an 'Airfield Safeguarding Area', nevertheless provides opportunities for wetland creation to BAP habitats such as wet woodland, reedbed and floodplain grazing marsh which can help to provide additional flood storage capacity to help in the adaptation to climate change.

## **5.3 Site Phasing**

Many of the effects identified in Section 5.2 will depend on the timing of when sites are released for extraction activities. Where there are groupings of new sites and/or sites adjacent to existing mineral extraction activities, if more than one site is operational at the same time this could result in impacts on local communities and the environment which are not possible to adequately mitigate. Conversely if sites are phased so that only one is operational at a time the effects will be reduced in magnitude but will be prolonged over time meaning that local communities will be affected in a different way.

Such effects will need to be taken into account when determining how sites are taken forward for delivery.

## **5.4 Uncertainties**

The Option 2 Scenario that is been taken forward in the DPD allocates some sites which do not currently have backing from the minerals industry. As a result there is uncertainty as to whether these particular sites will be developed during the lifetime of the DPD.

From the Sustainability Appraisal point of view this means that there is uncertainty as to whether the effects identified for those sites, and any associated cumulative effects, will materialise.

## **5.5 How the SA has influenced the Site Allocations DPD**

Through the development of a site appraisal methodology that has incorporated the SA objectives, the Sustainability Appraisal has been inherently incorporated into the site selection process. The sites were initially graded against SA objectives which helped to inform decision making on sites during initial desktop sieving exercises and also through the development of the initial 62 site options. The SA methodology also helped to further refine these site options in line with comments received to arrive at the 22 sites to be carried forward for further detailed assessment. The SA work helped to highlight the specific issues with these sites and what further detailed assessments were required.

## **6 Summary and Recommendations**

The site appraisals (summarised in Section 4) identified that there are potential sustainability issues at the majority of sites - as is generally the case with most forms of development - the significance of which is dependent on the location and environmental conditions at each site.

The Core Strategy and Development Control Policies DPDs include policies to avoid/minimise any adverse effects from minerals extraction and encourage post-extraction enhancements to the local environment. Suitable management and mitigation measures are available to address any sustainability issues identified that may lead to negative effects, and these will be detailed at the planning application stage. The SA noted (Section 5) that for particular groups of sites where sustainability issues have been identified, there is the potential for some of the effects to be cumulative.

If mitigation measures are appropriately designed and implemented then the likelihood of negative effects becoming significant, is reduced. Where appropriate, any management and mitigation measures developed should be checked for their success and suitability through a monitoring programme.

The site selection and appraisal method has followed a progressive 'sieving' process where potential extraction sites have been assessed against a set of objectives and indicators to determine their suitability for minerals extraction. The integration of SA objectives into this process has ensured that the 62 site options originally considered including the seven sites now contained in the Aggregate Minerals Site Allocations DPD have been thoroughly appraised against sustainability objectives and thresholds at both a strategic and local level. These appraisals have been underpinned by an extensive, updated evidence base ensuring that the sites put forward by the DPD are the most suitable sites for extraction in the period up to 2026.

The appraisals have identified the key sustainability issues associated with extraction at each of the proposed sites. It is recommended that, where necessary, the Councils take account of the potential for cumulative negative effects at the groups of sites identified and ensure that mitigation measures are fully integrated/ required for the development of sites. Monitoring will allow the Councils to determine whether or not the effects identified do indeed materialise and to put in place corrective measures/further mitigation if it appears that cumulative effects have manifest.

## 7 Monitoring

### 7.1 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.

Government also requires local planning authorities to produce Annual Monitoring Reports (AMRs). Guidance indicates that, "*These need to include the findings of SA monitoring*"<sup>19</sup>. Accordingly, the monitoring strategy for the SA should be integrated with the monitoring approach produced for the Minerals and Waste Development Framework.

Monitoring already plays a large role in the performance management of the Wiltshire 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. Where relevant, use will be made of these existing monitoring processes for the monitoring proposed as part of this SEA.

### 7.2 Monitoring Measures

Suggested monitoring targets for the Minerals Core Strategy and Development Control Policies DPDs have been prepared. These ensure that the significant effects of the Core Strategy and Development Control Policies DPDs will be monitored in the AMR. Whilst no significant negative effects were identified in the SA of the Minerals Core Strategy, the appraisal identified a number of areas of uncertainty relating to impacts (in particular, cumulative impacts) from an increase in extraction activities over the plan period (e.g. air pollution, traffic congestion, increased greenhouse emissions). The monitoring strategy, therefore, included provision for assessing such impacts, where feasible. These issues have now been considered and assessed in more detail through the SA/SEA of the Sites Allocations DPD. No significant effects have been identified within the Aggregate Minerals Site Allocations DPD, however measures are being proposed to monitor uncertain and minor negative effects.

The monitoring targets developed for the higher tier DPDs remain applicable to the Site Allocations DPD as they address the potential negative cumulative effects identified in more detail through the sites SA/SEA (Section 5). The monitoring measures can be viewed in the SA Adoption Statements for the Minerals Core Strategy and Development Control Policies DPDs, which are available online:

[http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy.htm#minerals\\_core\\_strategy](http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy.htm#minerals_core_strategy)

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<sup>19</sup> *Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents* ODPM, November 2005

## **8 Next Steps**

### **8.1 Consultation on the SA Report**

The SEA Regulations set specific requirements for consultation with the Statutory Environmental Bodies, the public and other interested parties (these could include NGOs, and community groups for example). This SA Report will be published for consultation alongside the Aggregate Minerals Site Allocations DPD Pre-Submission document and will be made available to all these parties so that they can provide a response to the contents of the draft DPD and the accompanying SA Report.

The SA Report, Non-technical Summary and technical appendices will be available along with the Aggregate Minerals Site Allocations DPD Pre-Submission document on the Wiltshire Council website at the following link: <http://www.wiltshire.gov.uk/planninganddevelopment/planningpolicy/mineralsandwastepolicy.htm>. Comments can be made online.

The Councils (at County Hall, Trowbridge; Watt Tyler House, Swindon; and all libraries in the County and Borough) will hold copies of the main report and Non-Technical Summary along with the Aggregate Minerals Site Allocations Pre-Submission DPD. Hard copies of any of the documents are available on request from the address below.

If you wish to make comments in writing, please direct them to:

Minerals & Waste Policy  
Wiltshire Council  
County Hall  
Bythesea Road  
Trowbridge  
Wiltshire  
BA14 8JD  
Tel (01225) 713213  
Fax 01225 713437  
[mineralsandwastepolicy@wiltshire.gov.uk](mailto:mineralsandwastepolicy@wiltshire.gov.uk)

Responses must be received by 5pm on Monday 12<sup>th</sup> March 2012.

All comments received will be publicly available. When the consultation period has finished, the comments received will be considered during the next stage of the SA/SEA process.

### **8.2 Examination of the DPD**

Following on from the consultation a Submission document will be produced, which will then be submitted for Examination. A final SA/SEA Report will be produced to form part of the evidence base for the DPD.

The Aggregate Minerals Site Allocations Submission DPD will be submitted in Summer 2012 for Independent examination by the Planning Inspectorate.

### **8.3 SA/SEA Statement**

The SA/SEA Statement will be published alongside the Adopted Plan in 2012, 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.

# Appendix 1: Addendum Review of Plans and Programmes

## Biodiversity

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### Regional Documents

- South West Biodiversity Action Plan (1997) (*No reference to regional BAPs on official website*)

## Land and Soil Resources

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- Gloucestershire Minerals Core Strategy Preferred Options (January 2008)
- Planning for Hampshire's Minerals and Waste (March 2011)

## Water Resources and Flood Risk

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### Regional Documents

- Housing growth and water supply in the South West of England (2005) (Part of RSS, which is proposed for revocation)
- Water for People and the Environment; Water Resources Strategy Regional Action Plan for Thames Region, 2009
- Wessex Water Services Ltd (2010) Water Resource Management Plan
- Thames Water (2009) Revised Draft Water Resource Management Plan

### New PPS Documents

- Planning Policy Statement 25: Development and Flood Risk (2010)

## Air Quality and Environmental Pollution

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### Updated Local Documents

- Wiltshire Air Quality Core Strategy (April 2009)
- Salisbury Air Quality Action Plan (2006) (*This plan and the West Wiltshire Plan have been drawn together on the Wiltshire website [<http://www.wiltshire.gov.uk/environmentandplanning/publicprotection/pollutionandnoise/airandwaterpollution/airquality/aqreviewandassessment.htm>] as, since 2009, the District council's have been combined*)
- West Wiltshire District Council Air Quality Action Plan (2005) (*see above*)

## Climatic Factors

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### Regional Documents

- Revision 2010: Empowering the Region – Renewable Energy Targets for the South West (2004) (*Replaced by REvision 2020 South West Renewable Electricity, Heat and On-Site Generation Targets for 2020 (2005)*)

### **Updated Local Documents**

- Wiltshire Council Energy Change and Opportunity Strategy 2011 - 2020
- Wiltshire Council Carbon Management Plan 2010 - 2014
- Wiltshire Council (2010) Climate Change Adaptation Plan

### **Historic Environment**

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#### **Regional Documents**

- Strategy for the Historic Environment in the South West (2004)

#### **New PPS Documents**

- Planning Policy Statement 5: Planning for the Historic Environment (2010)

### **Landscapes**

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#### **Updated Local Documents**

- The Delivery Plan for a Sustainable Farming and Food Industry in the South West (2003)
- North Wessex Downs AONB Management Plan (2004) (*replaced by North Wessex Down AONB Management Plan 2009 - 2014 (2009)*)
- The Bourne Valley Linear Park, Feasibility Study

### **Population and Housing**

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#### **Regional Documents**

- The Delivery Plan for a Sustainable Farming and Food Industry in the South West (2003)
- Draft Regional Spatial Strategy for the South West
- State of the South West 2008 (*replaced by State of the South West 2010 in March 2010*)

#### **Updated Local Documents**

- Wiltshire Council Homelessness Strategy (2010)
- Swindon Homelessness Strategy 2008 - 2013
- Building Strong Foundations: Wiltshire Housing Strategy 2011 - 2016
- New Forest National Park Management Plan 2010 - 2015
- West Berkshire Core Strategy: Submission Document (2010)
- Emerging Wiltshire Core Strategy
- Draft South Wiltshire Core Strategy

#### **New PPS Documents**

- Planning Policy Statement 3: Housing (2010)

### **Healthy Communities**

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#### **Updated Local Documents**

- A Strategy for Health, Kennet District Council (2004)
- A Strategy for Sport and Recreation in Salisbury and South Wiltshire 2002-2006

- Taking the next step: modern and affordable healthcare for all. Kennet and North Wilts PCT & West Wilts PCT (2006)
- Wiltshire & Swindon Affordable Warmth Strategy (2007)

## **Inclusive Communities**

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### **Updated Local Documents**

- People, Place and Promises: Wiltshire Community Plan 2011- 2026
- Pewsey Community Area Plan: The Future 2008-2018 (*replaced with Pewsey Community Area Plan 2010/2011 (2010)*)
- Pewsey Community Resource Feasibility Study and Pewsey: A Working Village (2005) (*Cannot find online*)
- Supporting People Strategy - Salisbury District Council (*cannot find online*)
- Ways of Life: Salisbury and South Wiltshire Cultural Strategy 2002-2007 (*cannot find online*)
- West Wiltshire's Horizon 21 - A Local Strategy for Sustainable Development (2003) (*cannot find online*)

## **Education and Skills**

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### **Regional Documents**

- South West Regional Skills Partnership - Skills Strategy 2006-2009

## **Transport**

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### **Regional Documents**

- South West RSS - Regional Transport Strategy (Regional Approach to transport) (2008)

### **Updated Local Documents**

- Swindon Local Transport Plan 3 2011 - 2026 - Engagement Draft, 2010
- Wiltshire Local Transport Plan 2011 - 2026 (adopted February 2011)
- Gloucestershire Local Transport Plan 3
- Hampshire Local Transport Plan 3 (adopted February 2011)

## **Economy and Enterprise**

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### **Regional Documents**

- The Delivery Plan for a Sustainable Farming and Food Industry in the South West (2003)

### **Updated Local Documents**

- A tourism strategy for south Wiltshire (2006)
- Kennet Corporate Strategy April 2004 - 2008
- West Wiltshire District Council Corporate Plan 2005-2010

## **Overarching documents**

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### **National**

- Draft National Planning Policy Framework

## Appendix 2: Addendum Baseline Information

Baseline information relating to specific aggregate sites has been gathered and updated as part of the DPD planning process. This forms part of the MWDF evidence base and it is therefore not appropriate for this information to be reproduced as part of the SA/SEA.

However updated information that does need to be included for the SA/SEA relates to the annual production of aggregates in Wiltshire and Swindon as shown in the table below.

<b>Production Year</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Production amount (million tonnes)	1.30	1.04	1.08	0.45	0.34*

\* unpublished figure which may be subject to minor amendment before formal publication in the 2010 Annual Monitoring Report