1. Introduction

1.1 This document describes the preliminary assessment of sites nominated for mineral extraction in the Oxfordshire Mineral and Waste Development Framework. The objectives of this assessment of sites are:

- To assess the likely deliverability of the sites nominated for inclusion in the MWDF, through consultation with operators and by carrying out an assessment of the sites against a number of planning criteria.
- To identify sites which are unlikely to deliver any resources over the period of the MWDF
- To use the findings from objectives 1 and 2 to determine whether the nominations will enable the spatial strategy option areas to contribute to the need for aggregates over the plan period.

1.2 A further, detailed assessment of the site nominations will take place later in the preparation of the MWDF, when sites are being considered for inclusion in a Minerals Sites Development Plan Document; a separate methodology for this phase of the assessment will be published at a later date. This preliminary site assessment is a strategic level assessment to inform the identification of preferred strategies for aggregate working.

1.3 A minerals sites selection methodology was produced in July 2006. This methodology assessed sites to determine whether they should be included in a minerals sites development plan document which was published for consultation in April 2007. Since that time, spatial strategies for mineral working have been developed to identify broad areas of the county where the principle of further mineral working would be acceptable. The development of spatial strategy options has highlighted the need for a preliminary site assessment at a strategic level of nominated sites to inform this area of work.

1.4 Subsequent work on developing spatial strategies for aggregates has highlighted the need to review the 2006 methodology, and to carry out a preliminary site assessment at a more strategic level of nominated sites to create an evidence base which will inform consideration of a preferred spatial strategy.
1.5 In their response to the council’s consultation on the draft minerals strategy in September 2011, the Environment Agency noted that an assessment of the groundwater vulnerability to pollution had not been carried out as part of the preliminary site assessment process. This document has been updated to include an assessment of groundwater vulnerability in light of the Environment Agency’s comments.

2. Preliminary Site Assessment Methodology

Stage 1: Identify a long list of possible sites

2.1 In 2006, mineral operators, landowners and agents were invited to nominated potential minerals sites for consideration for inclusion in the Oxfordshire Minerals and Waste Development Framework. These sites were included in the Minerals Sites Proposals and Policies Issues and Options paper which was published for consultation in April 2007. That paper also included sites identified by officers which were thought to have potential resources but had not been nominated. Those sites have not been considered further because deliverability is uncertain and there are more than sufficient potential resources within nominated sites.

2.1 A further ‘call for sites’ was made in December 2008, when mineral operators, landowners and agents were invited to renew their existing nominations, withdraw any they no longer wished to put forward and to submit new nominations. Approximately 60 site nominations were received for sand and gravel s, 10 for soft sand and 10 for crushed rock sites. A list of all sites nominated is on the County Council’s website.

Stage 2: Assessment of deliverability

2.3 Using information from the nominations, the potential available resources in each nomination were estimated and this information was used to inform the generation of spatial strategy options during 2010. The preliminary site assessment has sought to update the information on the deliverability of the nominations; ie the resource potentially available and the likely timescale within which each site could be worked.

2.4 In November 2010, mineral operators, landowners and agents who had made nominations were asked to provide up to date information on the likely deliverability of sites by confirming when sites would be likely to become operational, and notifying any sites which they wished to withdraw (Appendix 1).

2.5 This information has been collated and analysed to build up a picture of the likely timescale within which sites in each strategy area would be deliverable. In strategy option areas where there are few nominations,
this analysis has demonstrated whether there is likely to be a sufficient number of nominations from which resources could be worked to make a strategic contribution to the need for sand and gravel over the plan period.

**Stage 3: Planning criteria assessment**

2.6 Each of the site nominations has been assessed against the following planning criteria:

- The estimated mineral resources in the site;
- Whether the site is in or directly adjacent to an AONB;
- Whether the site is in or directly adjacent to a site designated of international or national nature conservation importance – SAC, SSSI or NNR;
- A recommendation from the County Archaeology Officer on whether the site should be precluded on the grounds of archaeological assets.
- The agricultural land classification of the site;
- The proportion of the site in Flood Zone 3b, the functional flood plain;
- Distance from the site to the lorry route network suitable for HGVs.
- Groundwater vulnerability to pollution
- Proximity to residential development

**Estimated resources**

2.7 The estimate of resources in each nomination has been checked against the area of the site and information from British Geological Survey Mineral Assessment Reports.

**Environmental constraints**

2.8 There is a policy presumption against mineral working unless it can be shown that the need for the development outweighs any adverse environmental consequences on:

- Areas of Outstanding Natural Beauty or their setting;
- The conservation interest of a Special Area of Conservation, SSSI or National Nature Reserve;
- A Scheduled Ancient Monument or other nationally important archaeologically asset.

2.9 If a site is in or immediately adjacent to one of these areas and is constrained by other planning criteria, this could preclude further development.
Agricultural Land Classification

2.10 Planning Policy Statement 7 (2004), Sustainable Development in Rural Areas, notes that the presence of best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification), should be taken into account alongside other sustainability considerations. There is very little Grade 1 agricultural land in Oxfordshire. Where a site would significantly affect Grade 1 land it should be excluded from further consideration. Where sites affect Grade 2 or 3a land, further consideration is advised, but with caution.

Distance from site to lorry route network

2.11 The distance was measured from each site to the lorry route network identified on the map published by the County Council as being suitable for HGVs.

Proportion of site in Flood Zone 3b

2.12 Sand and gravel extraction is defined in PPS 25 (2010), Development and Flood Risk, as water compatible development and as such can take place in the functional flood plain, although it should still be subject to the sequential test. The infrastructure associated with mineral extraction is not water compatible development and should therefore be located outside the functional flood plain. Using the data from the Oxfordshire SFRA (2010), this assessment identifies sites which are wholly within the functional flood plain and where any processing plant would therefore need to be located within the functional flood plain. Such sites should be excluded from further assessment.

Groundwater vulnerability to pollution

2.13 A principal aquifer is essential for providing a water resource, while a secondary aquifer is a potential water resource but is not essential and the yield is often lower. The Environment Agency classifies vulnerability to pollution as either high, intermediate or low, and this refers to the potential for liquids to leach through the soil. An assessment of vulnerability has been included because of the importance of the consideration of groundwater to the operation and restoration of sand and gravel working and the use of inert fill in restoration, although generally sand and gravel extraction poses a low risk of pollution to groundwater.

2.14 Proximity to residential development

The proposed site’s proximity to individual residential properties and to villages or towns was noted.
3. **Summary of Assessment Results**

3.1 The results of the assessment against the planning criteria and the deliverability of sites are shown on separate spreadsheets for the sand and gravel site nominations and for the soft sand and crushed rock site nominations.

3.2 The conclusions of the assessment for each of the sand and gravel strategy option areas are as follows:

a) **Lower Windrush Valley**
   No nominated sites are precluded from further assessment at this stage. The potentially deliverable capacity of site nominations in this area is 14.5 million tonnes.

b) **Eynsham/Cassington/Yarnton**
   No nominated sites are precluded from further assessment at this stage. The potentially deliverable capacity of site nominations in this area is 12.2 million tonnes.

c) **Sutton Courtenay**
   No nominated sites are precluded from further assessment at this stage. The potentially deliverable capacity of site nominations in this area is 2.55 million tonnes.

d) **Radley / Nuneham Courtenay**
   Site SG-42 (land at Nuneham Courtenay) is precluded from further assessment on the grounds of the archaeological and historic environment assessment of the site. Site SG-41 (land north of Lower Radley) would not be deliverable in the first 10 years of the plan period. This area is therefore unlikely to be able to make a strategic contribution to sand and gravel supply in the short to medium term, and there is uncertainty about the longer term.

e) **Caversham / Mapledurham**
   Site SG-12 (Chazey Wood, Mapledurham) is precluded from further assessment on the grounds that it is unlikely to be deliverable until after 2020, proximity to AONB and poor access. The remaining potentially deliverable resource of site nominations in the Caversham area is 4 million tonnes.

f) **Clanfield/Bampton**
   All four nominated sites in this area are precluded on the grounds of the archaeological and historic landscape assessment and distance from markets. This area is therefore unlikely to make a strategic contribution to sand and gravel supply during the plan period.

g) **Clifton Hampden**
   The one site nomination in this area is not precluded from further assessment. The potentially deliverable resource is 4 million tonnes.
h) **Warborough / Benson / Shillingford / Drayton St Leonard / Stadhampton**
Site SG03 (land adjacent to Benson Marina) is precluded from further assessment on the grounds that it is almost wholly in Flood Zone 3b, is adjacent to the AONB, and has Grade 1 agricultural land. Site SG-13 (land at Dorchester – Shillingford – Warborough) is precluded from further assessment on the grounds of the archaeological assessment and the Grade 1 agricultural land on site. The remaining potentially deliverable resource of site nominations in the Drayton St Leonard – Stadhampton area is 5.5 million tonnes.

(i) **Sutton/Stanton Harcourt**
No nominated sites are precluded from further assessment in this area. The potentially deliverable resource of site nominations in this area is 14 million tonnes.

(j) **Cholsey**
No nominated sites are precluded from further assessment at this stage. The potentially deliverable capacity of site nominations in this area is 4.9 million tonnes.
Appendix 1

Dear xx,

Assessment of deliverability of nominated mineral sites

I hope that you recently received an update from me on the preparation of the Minerals and Waste Development Framework; I attach the update for your reference. In it, I refer to Cabinet’s recent approval of an interim preferred strategy for mineral working in Oxfordshire based on continued working within areas of existing mineral workings. This strategy will be reviewed in the New Year, informed by a local assessment of aggregates supply requirements for Oxfordshire, to test whether it can deliver the required mineral supply or whether one or more new areas of working also needs to be considered.

As part of this testing and review process, we need to assess the deliverability of nominated site options. I would therefore be grateful if you could provide me with information on when you intend that your nominated site(s) will become operational. We will need to be reasonably sure that this timescale is realistically deliverable. This will help us to understand how the different areas could contribute to meeting the County’s aggregates supply requirement over the period to 2030 and ensure that we come up with a strategy that will work.

I would be grateful if you could therefore send me this information by Friday 3rd December 2010 for the following site(s):

Xx
Xx
xx

Regards,

Lois Partridge
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