1. Introduction

The purpose of this topic paper is to provide commentary on the considerations that have been taken into account during the development of the chalk policy throughout the review of the adopted Minerals Local Plan (MLP).

This topic paper has been updated since the Initial Consultation and prepared in advance of the Draft Plan consultation. It comprises an introduction to chalk, an outline of Hertfordshire’s existing chalk reserves and their use, the requirements for the provision of chalk, the issues and options when planning for chalk, and the approach to planning for chalk within the Draft MLP.

2. Chalk in Hertfordshire

Hertfordshire contains three main types of naturally occurring land-won minerals: sand and gravel, chalk and clay. Chalk is a form of sedimentary limestone rock and the scale of chalk extraction is relatively small compared with the other minerals extracted in the county. Many chalk extraction sites have been used in the past, essentially for local use, however today chalk is quarried at only a small number of sites in the county.

The geology of Hertfordshire is largely Chalk of the Cretaceous period (the geological period of time also known as the ‘Age of the Dinosaurs’, which ended approximately 66 million years ago), overlain in the south and east by London Clay and in the far north and northwest by small areas of Gault Clay.

Chalk occurs as bedrock throughout much of the county. This means it is the main mass of rocks forming the Earth’s geology in the area. There are two types of chalk that have been laid down over different geological time periods within Hertfordshire – White Chalk and Grey Chalk. The Grey Chalk is the oldest and is found in the north and far west of the county. It is soft and greyish in colour and contains fossils. White Chalk however contains more flints and runs through Watford and Hertford. It protrudes along the sides of the valleys of the rivers Ash and Lea near Hertford and the Colne valley. As a major aquifer (underground layer of permeable rock which water travels through) chalk is the most important source of groundwater in the county.

Much of the chalk within Hertfordshire exists within the Chilterns area on the western side of the county. This area consists of rolling chalk hills capped with superficial Clay-with-Flints deposits overlying the bedrock geology. The area from Tring to Hitchin is characterised by a dramatic steep face, with a gentler dip slope towards Welwyn, St Albans and Watford. Moving north east the
landscape moves into the East Anglian chalk, characterised by gentler slopes running from the Chilterns through Hertfordshire and South Cambridgeshire. The distinctive, chalk topography of this area is a continuation of the Chilterns landscape. The Chilterns is designated as an Area of Outstanding Natural Beauty (AONB). The North Eastern part of the AONB covers an area of West Herts. It was designated on account of the quality of the chalk landscape with its dramatic chalk steep slope, open downland and rolling dip slope.

The county council uses British Geological Survey (BGS) data for information about mineral resources and guidance on mineral planning policy and legislation. BGS provides public-good science for government, and research to understand earth and environmental processes, providing objective and authoritative geoscientific data, information and knowledge to help society use its natural resources responsibly.

3. Chalk Uses
Chalk is extracted in Hertfordshire for use as an agricultural lime on farms to improve soil quality, not as an aggregate used in construction (e.g. for use in cement). It can also be used in small amounts in the pharmaceutical industry.

4. Chalk Sales
The Annual Minerals Raised Inquiry (AMRI) Survey 2014 states that 25,000 tonnes of chalk was extracted in Hertfordshire and sold for agricultural uses. The AMRI Survey is carried out at four yearly intervals by DCLG to obtain data on sales, flows, consumption and reserves of primary aggregates.

The County Council annual aggregate survey estimated sales of 14,200 tonnes of chalk in 2016, incorporating previous returns, illustrating the low level of chalk extraction in the county.

5. Chalk Extraction Sites
There are currently three chalk extraction sites in Hertfordshire.

<table>
<thead>
<tr>
<th>Site</th>
<th>Operator</th>
<th>Status</th>
<th>Cessation date for planning permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codicote Quarry</td>
<td>Codicote Quarry Ltd</td>
<td>Currently active. Extraction since 1948, in two parts: RoMPP (northern part) and IDO (southern part).</td>
<td>Extraction to cease by 21/2/2042</td>
</tr>
<tr>
<td>Bedwell Park</td>
<td>BP Mitchell Haulage Contractors</td>
<td>Currently active.</td>
<td>Extraction to cease by 21/2/2042</td>
</tr>
</tbody>
</table>

Table 9, DCLG, 2014, Annual Minerals Raised Inquiry Survey 'Minerals extraction in Great Britain 2012, Business Monitor PA1007'
<table>
<thead>
<tr>
<th>Quarry</th>
<th>Ltd</th>
<th>Winning and working of chalk and reclamation of the site by the importation of inert waste.</th>
<th>Extraction to be completed by 31/12/2018 and importation by 30/06/20.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anstey Chalk Quarry</td>
<td>Anstey Quarry Company Ltd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is not unusual for chalk sites to have other operations taking place on site. Codicote and Anstey quarries both operate aggregate recycling of concrete and hardcore. This is recorded within the list of aggregate recycling sites in the Authority’s Monitoring Report (AMR) 2016 which also presents the following relevant information:

**Bedwell Park** operates under an Interim Development Order (IDO) permission which expires on 21/2/2042. This is a permission for mineral extraction granted between 1943 and 1948 where the county council imposed new conditions to regulate the operation more robustly than had been done in the past.

**Anstey Quarry**’s most recent planning permission was approved on 28/03/2014 for the Variation of Condition 1 of planning reference 3/1182-00 to extend the period for winning and working of chalk to 31 December 2018. Flints found within the chalk deposits at Anstey are collected and sold by the operator.

**Codicote** operates a waste treatment processing plant linked to chalk extraction which is permitted until 21/02/2042. However, a recent application for the continued operation of importing, stockpiling, process and exporting of hardcore and concrete at Codicote Quarry was refused on 18/10/2013. Flints found within the chalk deposits at Anstey are collected and sold by the operator.

Reserves of chalk are tied up within the few sites listed above in the county.

Reserves of chalk at the end of December 2016 were 328,300 tonnes².

6. **Planning for Chalk**

   **National Policy**

   The NPPF³ sets out the requirement for maintaining a stock of permitted reserves for specific minerals. In terms of chalk, paragraph 146 of the NPPF states that:

   “MPAs should plan for a steady and adequate supply of industrial minerals by: providing a stock of permitted reserves to support the

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² Hertfordshire County Council Annual Aggregate Survey 2016
Hertfordshire does not have any cement plants. Therefore there is no requirement for the maintenance of a stock of permitted reserves to support the investment for new or existing plants.

**Adopted Minerals Local Plan**

The current policy in relation to chalk is outlined below:

<table>
<thead>
<tr>
<th><strong>Minerals Policy 6 – Other non-energy minerals</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposals for chalk or clay extraction will only be permitted if:</td>
</tr>
<tr>
<td>i) it can be demonstrated that need for the mineral cannot be met adequately from existing permitted reserves or other sources; and</td>
</tr>
<tr>
<td>ii) The need for the mineral in question can clearly be demonstrated to outweigh all adverse effects of the proposed development.</td>
</tr>
</tbody>
</table>

The adopted Minerals Local Plan states that existing consents for chalk will ensure a continued supply up to and beyond the end of the Plan period.4

The Plan states that in policy terms, applications for chalk extraction are to be:

> ‘judged on general considerations common to every type of mineral development. Although many of the policies within the Plan are relevant to the working of other minerals, Minerals policy 6 provides an overarching policy in respect of proposed clay and chalk workings.’5

The adopted Plan states that, as much of the county’s chalk is located within the Chilterns AONB, planning applications would be carefully considered against Minerals Policy 17 (Criteria for the control of mineral development to protect critical capital and other environmental assets) as well as other policies within the Plan.

**7. Developing a strategy for chalk provision**

In line with the NPPF, there is no requirement for the Draft MLP to plan for the provision of 15 years of chalk as it does not have a cement works to maintain and no other counties depend on a supply of chalk from Hertfordshire.

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4 Paragraph 3.7.1 of the adopted Minerals Local Plan 2002-2016, adopted March 2007
5 Paragraph 3.7.2 of the adopted Minerals Local Plan 2002-2016, adopted March 2007
Whilst the emerging MLP does not need to plan for a provision of chalk during the plan period, the council considers that the Local Aggregate Assessment should continue to include monitoring information relating to the extraction sites and sales. Any trends in sales would then be evident in annual reviews of the Local Aggregate Assessment.

**Issues and options**

With regards to the emerging MLP, the County Council must determine whether to include support for the extraction and safeguarding of chalk reserves, and if so, how. Safeguarding could be included to prevent incompatible non-mineral development taking place near known resources of chalk to the potential detriment of existing or future occupants.

Consultees were asked to respond to two multiple choice questions about these issues within the Initial Consultation document.

**8. Initial Consultation Responses**

**Issue 17**
*Should the Minerals Local Plan support the safeguarding of Chalk resources by identifying Minerals Safeguarding Areas and Minerals Consultation Areas?*

There were a total of 14 responses to this question which provided an inconclusive outcome. Six consultees responded with a yes, a further six said no and the remaining two responses had no comment or view on the safeguarding of Chalk.

**Issue 18**
*How should the Minerals Local Plan Support the extraction of Chalk resources?*

The response shows that the majority of consultees consider a continuation of the existing policy to be the most appropriate approach to planning for chalk in the county. This would only support chalk extraction when a need for additional extraction sites can be demonstrated.

See next page for examples of consultee responses to issue 16.
<table>
<thead>
<tr>
<th>Comment ID.</th>
<th>Issue No.</th>
<th>Name of Consultee</th>
<th>Summary of Representation</th>
<th>HCC Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLPIC29</td>
<td>17</td>
<td>North Hertfordshire &amp; Stevenage Green Party (Karen Harmel)</td>
<td>As chalk is only used agriculturally, HCC is not obliged to maintain a supply in the present day. However, future generations might want to extract more chalk. The industry should be supported by modest safeguarding and reserves should not be needlessly sterilised.</td>
<td>See General Statement</td>
</tr>
<tr>
<td>MLPIC174</td>
<td>17</td>
<td>Mineral Products Association (David Payne)</td>
<td>No - Likely to be excessive to apply safeguarding for a widespread resource with limited likely demand for new sites</td>
<td>See General Statement</td>
</tr>
<tr>
<td>MLPIC259</td>
<td>17</td>
<td>Buckinghamshire County Council (Emily Hodgson)</td>
<td>Yes - should support safeguarding of chalk with MSAs and MCAs</td>
<td>See General Statement</td>
</tr>
<tr>
<td>MLPIC174</td>
<td>18</td>
<td>Mineral Products Association (David Payne)</td>
<td>It should include policy to support the safeguarding of existing sites</td>
<td>See General Statement</td>
</tr>
<tr>
<td>MLPIC223</td>
<td>18</td>
<td>D K Symes Associates (D K Symes)</td>
<td>Only grant permission to extract chalk if need</td>
<td>See General Statement</td>
</tr>
<tr>
<td>MLPIC259</td>
<td>18</td>
<td>Buckinghamshire County Council (Emily Hodgson)</td>
<td>Keep the existing non-energy mineral policy, only grant permission if the need for minerals cannot be met by existing reserves</td>
<td>See General Statement</td>
</tr>
</tbody>
</table>
9. Other Mineral Authority Examples

In order to appropriately plan for chalk in Hertfordshire, it is beneficial to look at what other Mineral Planning Authorities have done to address this in their Minerals Local Plans. The table in section 8 above examines surrounding county councils and their approach to planning for chalk resources. One (Central Bedfordshire) is a significant producer of chalk, one other (Cambridgeshire and Peterborough) has a cement works, whereas the authority that Hertfordshire is similar to in respect of chalk reserves is Essex which has localised deposits used for agricultural and pharmaceutical uses. Essex County Council has chosen to include a policy within their Minerals Local Plan stating that it will only support small-scale chalk extraction for agricultural and pharmaceutical uses at one quarry.

<table>
<thead>
<tr>
<th>Mineral Planning Authority</th>
<th>Approach to planning for chalk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essex</td>
<td>No site specific proposals for chalk to be extracted. Essex has localised deposits of chalk with one chalk extraction site at Newport Quarry. Chalk is used mostly for agricultural purposes and also in small quantities by the pharmaceutical industry. This is considered to be sufficient to meet current and future demand. Essex accepts that new proposals for small-scale chalk extraction may still be promoted during the plan period. As such a policy framework that allows planning applications to be considered on their individual merits having regard to the economic need for the mineral and relevant policies in the Minerals Local Plan is still considered necessary. Relevant policy regarding chalk is policy S7 – Provision for industrial minerals ‘Any proposals for other minerals in the County will be considered as follows:… Chalk Extraction: The small-scale extraction of chalk will only be supported for agricultural and pharmaceutical uses at Newport Quarry as identified within the Policies Map. Extraction of chalk for other uses, such as aggregate, fill material or for engineering will not be supported.’</td>
</tr>
<tr>
<td>Central Bedfordshire</td>
<td>The Plan area is a significant producer of chalk. Chalk extraction occurs at a large scale quarry in Kensworth near Dunstable and is transported via a slurry pipeline to cement works in Rugby outside of the plan area and at Totternhoe quarry for building stone. The site has significant reserves (over 44 million tonnes in 2011) and a further chalk quarry produces small quantities of vernacular building stone. This site is...</td>
</tr>
</tbody>
</table>
located in AONB and the council considers it inappropriate to identify a further site for chalk production within the AONB.

The MWLP states that the presence of a significant chalk deposit will be a material consideration in determining proposals for surface development in the areas designated as MSAs.

There are extensive reserves at Kensworth Quarry, sufficient for the plan period. No strategic sites have been identified to supply chalk for cement manufacture.

No specific policy relating to chalk.

| Cambridgeshire and Peterborough | There are chalk hills in South Cambridgeshire. Small deposits of chalk are used for agricultural uses. Grey chalk, together with clunch and underlying chalk marl is extracted at Barrington in Cambridgeshire and used for the manufacture of cement and other building products. This is the only quarry providing chalk marl in the Plan area and production ceased in 2008 but in line with NPPF need to maintain cement plant with a stock of permitted reserves of at least 15 years. Barrington Quarry has reserves of around 60 years. Unknown if it will re-open but if it does an extension would be required. White chalk is extracted at Steeple Morden for the production of chalk whiting. MSAs for chalk are only to be identified in close proximity to existing quarries. However, where significant areas have already been worked and restored these have been removed from the MSA. |
| Minerals and Waste Core Strategy Development Framework - adopted July 2011. | CS1 Strategic vision and objectives for sustainable minerals development – states provision will be made for chalk marl in case the Barrington Quarry cement works re-opens. Objective M1 – ‘To contribute to the national, regional and local mineral supply by maintaining an adequate and steady supply of minerals (sand and gravel, limestone, brickclay, chalk marl, and specialist minerals) and to meet local requirements, at a rate sufficient to enable the delivery of the planned growth in Cambridgeshire and Peterborough.’ Objective M11 – ‘To safeguard and enhance the distinct landscapes of Cambridgeshire and Peterborough including the wet fens, river valleys,' |
chalk and limestone uplands.'

Indicator 1 – no target for chalk. Monitored to assess medium to long term need (15-25 years) for Barrington Cement Works.

CS9 The scale and location of future chalk marl extraction – ‘Future provision of chalk marl for cement manufacture (of around 10 hectares) will be made in the area adjacent to Barrington Quarry, Barrington).’

CS26 Mineral Safeguarding Areas – ‘Mineral Safeguarding Areas are designated for deposits of sand and gravel, brickclay, limestone and chalk that are considered to be of current or future economic importance, and defined on the Proposals Map.’

10. Way Forward for the Draft Plan

A new Chalk Policy has been included in the Draft MLP. The policy sets out the conditions for which chalk extraction is acceptable and how any proposals must be in accordance to other Policies in the MLP to be granted permission. The policy contains the same support for chalk extraction as the existing Non-Mineral Policy. However, this is specifically for chalk and not for other non-minerals such as clay.

After the inconclusive response to safeguarding chalk reserves in the Initial Consultation, the Draft MLP does not establish Mineral Safeguarding Areas and Mineral Consultation Areas to safeguard wider areas of chalk like it does for sand and gravel and brick clay.

The draft chalk policy is proposed as follows:

Policy 7: Chalk

Proposals for chalk extraction will be permitted where it can be demonstrated that:

- there is a need for additional chalk supply for agricultural use; and
- the proposals are consistent with other policies within this Plan.