1. Introduction

This topic paper provides an overview of secondary and recycled aggregates in Hertfordshire. The intention is to use this topic paper as a guide for assisting with the review of the Minerals Local Plan 2002-2016, adopted March 2007.

Each year approximately three million tonnes of waste are produced in Hertfordshire. It is estimated that a high proportion of this waste is construction, demolition and excavation waste (1.5mt). This waste can be used as aggregate. This topic paper considers the issues surrounding the production and use of secondary and recycled aggregates as alternatives to primary aggregates, such as sand and gravel.

In 2007 it was estimated that 275 million tonnes of aggregate were used in UK construction every year. Over 70 million tonnes of this aggregate came from alternative sources. The use of alternatives has been increasing over the last ten years as the challenges associated with their use are tackled.

2. What are secondary and recycled aggregates?

Secondary aggregates are produced as by-products of other processes and used instead of primary aggregates. Secondary aggregates include boiler ash, burned shale, burned clay, pulverised fuel ash, broken airfield concrete and clay, chalk and shale.

Recycled aggregates are aggregates that have been used previously in construction and can comprise construction and demolition wastes, asphalt road planings and used railway ballast, all of which are currently produced in Hertfordshire.

Recycled aggregates currently offer the greatest potential as an alternative to primary aggregates. The principal reasons for this are that:

- the volumes of waste arisings are considerable;
- the waste is generated and recycling takes place at many locations across the country and often close to potential markets;
- the material can provide an end product with a variety of different construction uses; and
- where adequate sorting facilities are available, recycled aggregates can compete with a wide range of primary materials.
These materials are also used in restoring many surface mineral workings and landfill sites. This could cause conflict between the aim of encouraging the use of recycled aggregates and the traditional need for such material in securing satisfactory and speedy restoration of mineral workings and landfill sites.

The processing of secondary and recycled aggregate could be viewed as a compatible operation on a existing mineral site particularly when restoration is by infilling and appropriate waste materials are already being brought to the site. A number of mineral sites in Hertfordshire use the space provided by the extraction to process secondary and recycled aggregates, as it can offer a well screened location.

Operations associated with the production of recycled and secondary aggregate include:-
- segregation and storage of waste at source;
- collection of waste and loading transport;
- transportation of waste;
- segregation of waste at processing site;
- processing of material;
- grading of processed material;
- deposition of processed material for storage;
- collection of aggregates and loading for transport;
- transportation to aggregate supply; and
- the transportation of unwanted material

3. Issues Arising

The reason for encouraging recycled and secondary aggregate production is to reduce reliance on primary material. Recycled and secondary aggregate production also assists in reducing the amount of waste that needs to be disposed of.

A policy or policies on recycled and secondary aggregate production could be included in the Minerals Local Plan for a number of reasons;
- To promote the use of alternatives safeguards mineral for the future,
- To encourage recycled aggregate secures a supply for restoration, and
- To identify and manage the impacts of developments.

Other Planning Authorities, which have recently reviewed their plans, have included policies to encourage the production of secondary/recycled aggregate and so reduce the reliance on primary land won aggregate. Many authorities also have objectives. Dorset, Essex, Bedfordshire, Norfolk, Hampshire, Lincolnshire, Oxfordshire and Kent all have policies that relate to the production of secondary and recycled aggregates. Some policies promote the use of
alternative materials in construction, whilst other support the allocation of specific sites for process such material.

The production of recycled aggregates can take place in a wide variety of locations and sites, subject to planning, environmental protection and commercial considerations. It is not the intention of the Minerals Local Plan review to identify specific sites for secondary and recycled aggregates, as it is felt that sites would need to be dealt with on a case by case basis. However, the adopted Minerals Local Plan encourages the use of alternative material to those natural resources extracted from the ground. The supporting text and policy promote the use of alternatives and support facilities to process them. The plan also encourages the District and Borough council’s to include policies in their plans to promote the re-use and recycling of material in built developments.

National policy also supports the contribution that alternatives can make to the overall provision of supply materials. Over the last ten years, the amount of alternative aggregate being used as a material has risen.

The table below shows the sales of sand and gravel and production of secondary and recycled aggregates over the past 10 years. The total aggregate produced in the county has risen over the past ten.

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual apportionment figure</th>
<th>Sales of soft sand and sharp sands and gravel (tonnes)</th>
<th>Recycled and Secondary Aggregate Processing (tonnes)</th>
<th>Total aggregate production in Hertfordshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1.99</td>
<td>1,047,000</td>
<td>78,390</td>
<td>1,125,390</td>
</tr>
<tr>
<td>2005</td>
<td>1.39</td>
<td>965,238</td>
<td>95,951</td>
<td>1,061,189</td>
</tr>
<tr>
<td>2006</td>
<td>1.39</td>
<td>1,230,885</td>
<td>172,238</td>
<td>1,403,123</td>
</tr>
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<td>2007</td>
<td>1.39</td>
<td>1,010,466</td>
<td>267,210</td>
<td>1,277,676</td>
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<tr>
<td>2008</td>
<td>1.39</td>
<td>988,517</td>
<td>229,769</td>
<td>1,218,286</td>
</tr>
<tr>
<td>2009</td>
<td>1.39</td>
<td>1,214,306</td>
<td>258,427</td>
<td>1,472,733</td>
</tr>
<tr>
<td>2010</td>
<td>1.39</td>
<td>1,172,890</td>
<td>346,560</td>
<td>1,519,450</td>
</tr>
<tr>
<td>2011</td>
<td>1.39</td>
<td>1,268,465</td>
<td>303,869</td>
<td>1,572,334</td>
</tr>
<tr>
<td>2012</td>
<td>1.39</td>
<td>1,123,645</td>
<td>316,941</td>
<td>1,440,586</td>
</tr>
<tr>
<td>2013</td>
<td>1.39</td>
<td>1,130,295</td>
<td>329,457</td>
<td>1,459,752</td>
</tr>
</tbody>
</table>

The figures above show that from 2009 to 2013 the combined figure of mineral extracted and recycled aggregate was above the agreed apportionment level.

From 2005, the apportionment took account of the increased use of alternative materials. In using the national guidelines for the provision of aggregates, assumptions have been made for the level of alternatives to primary land won aggregates.

The main purpose of the Minerals Local Plan is to ensure that there is a steady and adequate supply of minerals to enable development. The use of alternative sources of aggregate will help to ensure that the naturally occurring minerals
are used more sustainably. The Minerals Local Plan cannot dictate the use of secondary aggregate over that of primary, however it can help to enable supply of the both so that there is a choice of materials to use in built development projects.

National policy states that in order to plan for a steady and adequate supply of minerals; minerals planning authorities should look at sales data and make an assessment of other supply options (in this case secondary and recycled aggregates). The collection of reliable waste data makes it very difficult to set target for the use of secondary and recycled aggregates. It can be seen from the table of figures that the production of secondary and recycled aggregates has increased and the Minerals Local Plan should continue to support the use of alternatives.