1. Introduction

Hertfordshire County Council, as Waste Planning Authority for the county, is in the process of reviewing its adopted Waste Local Plan (adopted 2012). To help with the review, a series of topic papers have been produced which explain different issues that the county council must take into account.

This topic paper provides an overview of secondary and recycled aggregates, which can be produced from construction and demolition waste. This is the first version of this topic paper and it will be revised in future as the review of the Waste Local Plan progresses through subsequent stages of Plan-production.

2. What are secondary and recycled aggregates?

**Aggregates** are bulk materials used in the construction industry for purposes such as making concrete, mortar and asphalt or for road stone, drainage or bulk filling.

**Primary aggregates** are aggregates produced from naturally occurring mineral deposits, including sand and gravel and crushed rock, extracted specifically for first time use as aggregate.

**Secondary aggregates** are produced as *by-products of other processes* and can be 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.

Secondary or recycled aggregates can be used as an alternative to primary aggregates, simultaneously reducing the need to extract finite, naturally-occurring mineral deposits and reducing the quantity of waste that requires disposal.

In Hertfordshire, recycled aggregates currently offer the greatest potential as an alternative to primary aggregates. The principal reasons for this are that:-

- the volume of generated waste is considerable;
- the waste is generated at many locations across the county and often close to potential markets for construction material;
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.

3. Hertfordshire Considerations

The growth promoted by Hertfordshire’s borough and district Local Plans means that significant quantities of construction and demolition waste will continue to be generated in the county throughout the period of the next Waste Local Plan. Currently, this totals approximately 2 million tonnes every year and Hertfordshire’s proximity to London, which is also experiencing significant levels of development, results in the county receiving approximately 1 million additional tonnes of construction and demolition waste each year. Much of this waste is sent to landfill, either in or outside of Hertfordshire, when it could be re-processed for re-use or recycling in place of primary aggregates.

4. National Policy

The emerging Waste Local Plan must be developed in line with national policy. Paragraph 3 of the National Planning Policy for Waste (NPPW)\(^1\) states that local plans should be prepared to:

“drive waste management up the waste hierarchy, recognising the need for a mix of types and scale of facilities”.

Paragraph 3 also says that local plans should:

“consider the need for additional waste management capacity of more than local significance”.

In addition, paragraph 143 of the National Planning Policy Framework (NPPF)\(^2\) states that local plans should:

“take account of secondary and recycled minerals before considering extraction for primary minerals”

The emerging Waste Local Plan should therefore facilitate and promote the use of secondary and recycled aggregate as a means of pushing the management of construction and demolition waste up the waste hierarchy (as detailed in the accompanying Waste Minimisation Topic Paper), and as a preference to the use of primary aggregate in development proposals.

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\(^1\) https://www.gov.uk/government/publications/national-planning-policy-for-waste
\(^2\) https://www.gov.uk/guidance/national-planning-policy-framework

The adopted Waste Local Plan\textsuperscript{3} promotes the efficient use of resources, including the reuse of waste as an alternative to primary materials in large construction projects via the implementation of Site Waste Management Plans. The policy wording is currently as follows:

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\textbf{Policy 12: Sustainable Design, Construction and Demolition}\\
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Where appropriate new and existing development, including waste management facilities, must contribute to resource efficiency, the reduction of carbon emissions and the effective management of climate risk.\\
As a minimum, proposals will be required to address the principles of sustainability by incorporating the following:\\
i) construction and demolition methods that minimise waste generation and re-use/recycle materials and buildings, as far as practicable on site;\\
ii) design principles and construction methods that minimise the use of primary aggregates, use of water are consistent with the energy hierarchy and encourage the use of high quality building materials made from recycled and secondary sources;\\
iii) good and innovative design with layout principles that allow for the effective sorting, recycling and composting of waste where appropriate;\\
iv) demonstrate that no significant noise or light intrusion will arise from the development, and include measures to minimise adverse impact on human health, amenity and wildlife habitats; and the natural and built environment; and\\
v) Sustainable Drainage Systems (SUDS);\\
In particular waste management facilities should be enclosed within a building wherever possible which, along with plant and machinery, should be in keeping with the surrounding setting and landscape/townscape.\\
All new development proposals should demonstrate how the principles of integrated sustainable development, as set out in the Hertfordshire Building Futures Guide, have been addressed.\\
Completed Site Waste Management Plans should support relevant developments to include details of the management of waste at construction and demolition sites and should be passed onto the Waste Planning Authority to collate the data.\\
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In addition, the adopted Waste Local Plan aims to reduce the proportion of construction and demolition waste produced in the county that is sent to landfill. As such, existing sites with planning permission and sites on which planning permission is subsequently granted for waste management are safeguarded to prevent their loss to other, non-waste land use. The policy wording is currently as follows:

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\textbf{Policy 5: Safeguarding of Sites}\\
Land and sites where there are existing waste management facilities; land and sites where planning permission exists but not yet implemented; or land and sites on which\\
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\textsuperscript{3} Waste Core Strategy and Development Management Policies Document (adopted November 2012)
planning permission is subsequently granted for waste management facilities will be safeguarded to contribute to a strategic network of waste management provision within the county.

The Waste Planning Authority will oppose development proposals which are likely to prevent or prejudice the use of land identified or safeguarded for waste management purposes unless alternative or enhanced provision is made for a facility dealing with the equivalent waste capacity or where it can be demonstrated that the need for those facilities can no longer be justified.


The use of recycled and secondary aggregates is also relevant to the efficient use of the county’s finite, naturally occurring mineral reserves. As such, the Minerals Local Plan (adopted 2007)\(^4\) contains policy to promote their use in place of primary aggregates as part of development proposals and the development of proposed facilities for processing and distribution of aggregates. The policy wording is currently as follows:

**Minerals Policy 7: Secondary and Recycled Materials**

The County Council will seek, encourage and support the increased use of secondary and recycled materials in place of primary land-won aggregates in development proposals.

Facilities to allow the handling, and where necessary the re-processing, of secondary and recycled aggregates will be supported in appropriate locations, particularly where this reduces the need for the extraction of primary land-won aggregates, particularly within Hertfordshire.

7. Emerging Minerals Local Plan

The county council is currently undertaking a review of the adopted Minerals Local Plan with the aim of producing a replacement Minerals Local Plan. The emerging Minerals Local Plan will continue to promote the increased use of secondary and recycled aggregate as an alternative to primary aggregate and as a result will seek to reduce the quantity of waste material requiring disposal. The policy wording in the Regulation 18 Draft Minerals Local Plan (December 2017)\(^5\) is as follows:

**Policy 5: Secondary and Recycled Aggregates**

The county council will support the increased use of secondary and recycled aggregates in place of primary land-won aggregates in development proposals to reduce reliance on land-won minerals and to minimise the quantity of Construction, Demolition and Excavation waste being sent to landfill.

The county council will support proposed facilities for processing, distribution and where necessary the re-processing of aggregates subject to proposals being

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\(^4\) Hertfordshire Minerals Local Plan 2002-2016 (adopted 2007)

consistent with the Development Plan and subject to the criteria below unless material considerations indicate otherwise.

Proposals for recycling facilities must demonstrate that:

- the siting, scale and design of the development is appropriate to the location and the character of the surrounding natural and built environment;
- the landscaping and screening of the site is designed to effectively mitigate the impact of the proposal;
- the proposed development would not adversely impact upon the natural, built or historic environments, amenity or human health;
- the transportation of aggregates will not have a significant adverse impact on highways safety and the effective operation of the highway network; and
- there would not be an unacceptable adverse cumulative impact on the local area.

In addition, proposals for temporary recycling facilities must demonstrate that where facilities are proposed within an existing quarry:

- the size and throughput of the recycled and secondary aggregate operation is of an appropriate scale to existing operations; and
- the duration of the development does not prejudice or unduly delay the restoration of the site.

8. Other Local Considerations

The Draft Capacity Gap Report published alongside the Waste Local Plan Initial Consultation document identifies the capacity of existing waste facilities to manage construction and demolition waste. The Draft Capacity Gap Report shows that Hertfordshire currently has facilities capable of reprocessing approximately 350,000 tonnes of this waste stream per year. In addition, inert landfill capacity exists to recover between 500,000 and 950,000 tonnes per year for restoration landscaping as part of mineral extraction planning permissions.

In combination, this capacity is short of the identified quantities of waste management capacity required and it is considered by the county council that the capacity to reprocess construction and demolition waste into recycled aggregate is particularly insufficient and should be promoted through the emerging Waste Local Plan.

9. Other Waste Planning Authority Examples

It is important that, as well as looking at Hertfordshire’s own plans, the approach of other waste planning authorities is examined as examples of best practice. The table below outlines polices related to secondary and recycled aggregate within other Waste Local Plans. This information has been used to help shape the suggested polices for the review of Hertfordshire’s Waste Local Plan.
<table>
<thead>
<tr>
<th>Local Plan</th>
<th>Transport Policies</th>
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<tbody>
<tr>
<td>Essex and Southend-on-Sea Waste Local Plan (Adopted July 2017)</td>
<td><strong>Policy 1 - Need for Waste Management Facilities</strong></td>
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<td>In order to meet the future needs of the Plan area, waste development will be permitted to meet the shortfall in capacity of:</td>
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<td>a. Up to 218,000 tonnes per annum by 2031/32 of biological treatment for non-hazardous organic waste;</td>
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<td>b. Up to 1.95 million tonnes per annum by 2031/32 for the management of inert waste;</td>
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<td>c. Up to 200,000 tonnes per annum by 2031/32 for the further management of non-hazardous residual waste;</td>
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<td>d. Up to 50,250 tonnes per annum by 2031/32 for the management of hazardous waste.</td>
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<td>Hampshire Minerals and Waste Plan (Adopted October 2013)</td>
<td><strong>Policy 18: Recycled and secondary aggregates development</strong></td>
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<td>Recycled and secondary aggregate production will be supported by encouraging investment and further infrastructure to maximise the availability of alternatives to marine-won and local land-won sand and gravel extraction.</td>
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<td>Bedford Minerals and Waste Local Plan: Strategic Sites and Policies (Adopted Jan 2014)</td>
<td><strong>Mineral Strategic Policy MSP 3 Substitute, Secondary and Recycled Aggregates</strong></td>
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<td>The Mineral Planning Authority will give priority to the production and supply of substitute/recycled/secondary aggregates to be used in preference to land won aggregates.</td>
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<td>All facilities permitted in the Plan Area for the handling, processing and distribution of substitute, recycled and secondary aggregate will be safeguarded and there will be a presumption</td>
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<tr>
<td>Kent County Council: Minerals &amp; Waste Local Plan (Adopted July 2016)</td>
<td><strong>Policy CSM 8 Secondary and Recycled Aggregates</strong></td>
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<td>Sites will be identified in the Minerals Sites Plan to ensure processing capacity is maintained to allow the production of at least 2.7 million tonnes per annum of secondary and recycled aggregates, throughout the Plan period.</td>
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<td>Proposals for additional capacity for secondary and recycled aggregate production including those relating to the expansion of capacity at existing facilities that increases the segregation and hence end product range/quality achieved, will be granted planning permission if they are well located in relation to the source of input materials or need for output materials, have good transport infrastructure links and accord with the other relevant policies in the development plan, at the following types of sites:</td>
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<td>1. temporary demolition, construction, land reclamation and regeneration projects and highways developments where materials are either generated or to be used in the project or both for the duration of the project (as defined by the planning permission)</td>
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<td>2. appropriate mineral operations (including wharves and</td>
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rail depots) for the duration of the host site permission.
3. appropriate waste management operations for the
duration of the host site permission.
4. industrial estates, where the proposals are compatible
with other policies set out in the development plan
including those relating to employment and regeneration.
5. any other site that meets the requirements cited in the
second paragraph of this policy above.
The term ‘appropriate’ in this policy is defined in terms of
the proposal demonstrating that it will not give rise to
unacceptable adverse impacts on communities or the
environment as a whole over and above the levels that
had been considered to be acceptable for the host site
when originally permitted without the additional facility.
Planning permission will be granted to re-work old inert
landfills and dredging disposal sites to produce
replacement aggregate material where it is demonstrated
that net gains in landscape, biodiversity or amenity can
be achieved by the operation and environmental impacts
can be mitigated to an acceptable level.

Northamptonshire County Council:
Northamptonshire Minerals and Waste Local Plan (adopted 1 July 2017)

Policy 8: Development criteria for secondary and recycled aggregate processing facilities
Proposals for the development of facilities for the
handling, storage and processing of secondary and
recycled aggregate materials (including inert recycling
and inert CD&E wastes) should not conflict with the
spatial strategy for waste management. Preference will
be given to locations within:
- existing industrial areas, or on land that is
  permitted or allocated for general industrial
development,
- committed or allocated waste management /
disposal facilities (including temporary facilities)
  where this accords with the type of waste
  management / disposal use at that location, and
- existing and disused railheads and wharves.

Development of temporary aggregate recycling facilities
will be permitted at mineral extraction sites with existing
processing plants, particularly where this allows for
secondary and recycled materials to be processed or
blended to achieve a higher quality end-use.
Development of temporary facilities for the recovery and
processing of recycled aggregate, including inert CD&E
wastes, must demonstrate that the materials will be
recycled and re-used (as far as practicable) onsite.

10. Proposed Way forward for the review of the Waste Local Plan

Upon finalisation of the Waste Capacity Gap Report, it is likely that a significant
requirement for additional waste management facilities will be identified for the
processing of construction, demolition and excavation waste. The size of the
capacity requirement could necessitate the identification of sites and/or areas
for the production of recycled aggregates to divert waste from landfill and
reduce the demand for primary aggregate extraction.