Hertfordshire Local Aggregate Assessment 2019

(Covering the calendar year of 2018)
EXECUTIVE SUMMARY

The county council, as a Minerals Planning Authority, has a duty under the National Planning Policy Framework (NPPF) 2019 to produce a Local Aggregate Assessment (LAA) on an annual basis and to participate in the operation of an Aggregate Working Party (AWP), whose advice must be taken into account when preparing the LAA.

In line with National Policy requirements Hertfordshire County Council is part of the East of England Aggregates Working Party (EoEAWP), whose advice has been taken into account in the preparation of this LAA. This LAA was prepared in 2019 and covers data from the calendar year of 2018 and follows on from last year’s 2018 LAA, which covered the calendar year of 2017.

The LAA is an evidence base document that contributes towards the review of Hertfordshire’s Minerals Local Plan. Its primary purpose is to set out the current level of aggregate supply and demand for Hertfordshire and to calculate the current landbank of sand and gravel. The LAA also acts as a monitoring report for aggregates and reports on the supply of secondary and recycled aggregates within Hertfordshire and the imports and exports of sand and gravel and crushed rock at Hertfordshire’s rail aggregate depots.

The headline figures for 2018 show that extraction is steadily continuing at the active sand and gravel sites within Hertfordshire (see Table 2 for site details). Sales of sand and gravel have seen an increase by approximately 39,585 tonnes when compared to last year’s total sales figure and reserves have declined in line with sales and the re-calculated sand and gravel reserves provided by Mineral Operators through the annual Aggregate Monitoring Surveys.

The permitted reserves can supply aggregate for a period of 7.2 years based on Hertfordshire’s agreed sub-regional apportionment figure of 1.39 million tonnes per annum and can supply aggregate for a period of 8.5 years based on the 10 year average sales data.

At 1.21 million tonnes, the sales of sand and gravel are above the ten year average sales figure (which stands at 1.19 as of 31 December 2018) and above the three year average sales figure (which stands at 1.18 million tonnes as of 31 December 2018).

The county council intends to continue to use the sub-regional apportionment figure (1.39 million tonnes) for the planning of sand and gravel in Hertfordshire, which is in line with the requirements of the NPPF 2019.
<table>
<thead>
<tr>
<th>2018 Headline Figures</th>
<th>Performance in 2018</th>
<th>Comparison with 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land won sand and gravel sales (tonnes)</td>
<td>1,206,507</td>
<td>↑ 39,585.3</td>
</tr>
<tr>
<td>Permitted reserves of sand and gravel at end of year (tonnes)¹</td>
<td>10,056,000</td>
<td>↓ 402,309</td>
</tr>
<tr>
<td>Landbank based on apportionment (years)</td>
<td>7.2</td>
<td>↓ 0.3</td>
</tr>
<tr>
<td>Landbank based on 10 year average sales (years)</td>
<td>8.5</td>
<td>↓ 0.5</td>
</tr>
<tr>
<td>Landbank based on 3 year average sales (years)</td>
<td>8.5</td>
<td>↓ 0.3</td>
</tr>
<tr>
<td>Rail depot imports (sand and gravel)</td>
<td>47,277</td>
<td>↑ 42,723</td>
</tr>
<tr>
<td>Rail depot imports (crushed rock)</td>
<td>595,907</td>
<td>↑ 100,118</td>
</tr>
</tbody>
</table>

¹ Based on 2018 levels, Hertfordshire holds 9% of the total permitted sand and gravel reserves in the East of England region.
1 INTRODUCTION

1.1 The Government recognises the importance of minerals to support sustainable economic growth and our quality of life. They are a finite resource and can only be worked where they are found.

1.2 The NPPF 2019 continues\(^2\) to recognise the importance of minerals and sets out the requirement for Minerals Planning Authorities to produce a Local Aggregate Assessment (LAA) on an annual basis.

1.3 Paragraph 207 of the National Planning Policy Framework (NPPF) 2019 states:

> 'Minerals planning authorities should plan for a steady and adequate supply of aggregates by:

> Preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years’ sales data and other relevant local information, and an assessment of all other supply options (including marine dredged, secondary and recycled sources)'

1.4 The LAA has been prepared to fulfil the requirements of the NPPF 2019, to produce an annual LAA which forecasts future demand of aggregates in Hertfordshire and assesses all other supply options.

1.5 This LAA also has been prepared in line with guidance set out within the National Planning Practice Guidance (NPPG) and the Planning Officers Society and Mineral Products Association (POS/MPA) Practice Guidance on the production and use of LAAs living document (May 2017).

1.6 In line with the above requirements of the NPPF 2019, taking into account local information, the county council intends to continue to use the sub-regional apportionment figure of 1.39 million tonnes for the planning of sand and gravel in Hertfordshire. The apportionment figure is the amount of sand and gravel that is anticipated to be contributed to the market on an annual basis.

1.7 This approach factors in the high levels of planned growth in the emerging District and Borough Local Plans of Hertfordshire and takes into account the previous ten years sales data.

1.8 The LAA will continue to identify the current landbank of sand and gravel in Hertfordshire using this figure (1.39 Mt) and will also continue to identify what the landbank figure would be if the county council were to use the ten year or three year average sales data in order to provide comparisons.

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\(^2\) This requirement was recognised in both previous (2012 and 2018) versions of the NPPF
1.9 Hertfordshire’s apportionment figure of 1.39 million tonnes is slightly higher than that of the 10 years sales average figure, which stands at 1.19 million tonnes as of 31 December 2018. It is considered that using the apportionment figure of 1.39 million tonnes will provide flexibility to maintain supply as the economy continues to recover out of the recession and will also ensure that an adequate and steady supply of aggregate is achieved over the longer term, in order to provide supply for the high levels of growth being planned for in Hertfordshire.

1.10 The difference between the sub-regional apportionment figure and the 10 year average and three year average sales figures are shown below:

<table>
<thead>
<tr>
<th>Sales and Apportionment</th>
<th>Million tonnes per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed sub regional apportionment</td>
<td>1.39</td>
</tr>
<tr>
<td>10 year sales average</td>
<td>1.19 (2009 –2018)</td>
</tr>
<tr>
<td>3 years sales average</td>
<td>1.18 (2016 –2018)</td>
</tr>
</tbody>
</table>
2 GEOLOGY OF HERTFORDSHIRE

2.1 The main naturally occurring mineral resources in Hertfordshire include sand and gravel with smaller deposits of chalk and brick clay (as shown in Figure 1). The county does not have any hard rock resources and receives a supply of this mineral through the operational Rail Aggregate Depots (as shown in Figure 6). The geology of Hertfordshire is largely Chalk of the Cretaceous period, overlain in the south and east by London Clay. In the far north and northwest of the county are small areas of Gault Clay. Throughout much of the county, the superficial deposits which overlay the solid geology complicate the picture. These include the Clay-with-flints of much of west Hertfordshire; including the Chilterns dip slope; the boulder clay of central and east Hertfordshire; and the gravels of the Vale of St Albans and the river valleys.\(^3\)

2.2 Sand, gravel, crushed rock, chalk and clay all provide the construction industry with the raw materials required for constructing and maintaining roads, buildings and other infrastructure. Minerals are also essential elements in the production of a variety of other products. An adequate and steady supply of minerals is essential if current standards of living are to be maintained in society as well as meeting basic needs for quality of life, such as shelter.

Figure 1: Geological map of the main mineral resources of Hertfordshire 4

Sand and Gravel Resources

2.3 Sand and gravel resources occur in Hertfordshire within superficial or ‘drift’ deposits, subdivided into fluvioglacial sand and gravel, glacial sand and gravel, river terrace deposits and sub-alluvial deposits.5

2.4 Sand and gravel deposits are found in most parts of the county although they are concentrated in an area south of a line between Bishops Stortford in the east and Hemel Hempstead in the west (often referred to as the sand and gravel belt).

2.5 Of the sub-alluvial gravel deposits, these occur within the valleys of the rivers Mimram, Ver and Colne of St Albans and Hemel Hempstead areas. Resources have in many cases been extensively worked and exhausted in the Ver and Colne valleys.

2.6 The adopted Hertfordshire Minerals Local Plan, which covers the period from 2002-2016, contains a policy map which identifies the Sand and Gravel Belt in Hertfordshire. The Sand and Gravel Belt covers the areas where there are higher concentrations of sand and gravel and spans across the southern half of the county, covering the whole of the District Council areas of Three Rivers, Watford, Hertsmere, Welwyn Hatfield and Broxbourne. The adopted Sand and Gravel Belt can be seen in Figure 2 below.

2.7 The county council is currently in the process of reviewing the Minerals Local Plan. In reviewing the Minerals Local Plan, the county council is proposing a revised Sand and Gravel Belt which reflects more up to date data provided by British Geological Survey (BGS).

2.8 The revised Sand and Gravel Belt (which is referred to as the’ Sand and Gravel Mineral Safeguarding Area’ in the emerging Minerals Local Plan, which is currently at Proposed Submission stage) can be seen below in Figure 3.

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Figure 2: Adopted Sand and Gravel Belt
Figure 3: Emerging Sand and Gravel Mineral Safeguarding Area
2.9 Sand and gravel from Hertfordshire is mostly used by the construction industry. Most is washed and screened to remove clay particles and to separate the various sized stones. Larger stones are usually crushed and screened again. Most sand extracted in Hertfordshire is sharp sand and is suitable for making concrete (when mixed with various selections of gravel sizes, cement and water).

 Crushed Rock Resources

2.10 Crushed rock (imported to Hertfordshire) may be used in place of local gravel, but sand may only be substituted by fines from crushed rock which is more costly to use because of its lesser binding properties. Building sand, for use in mortars, may also be washed and screened before use. Known as soft sand it is less commonly found in the county and is mostly imported.

 Sand and Gravel Sites

2.11 There are nine operational sand and gravel quarries in Hertfordshire as of the end of 2018. Of these nine sites, sand and gravel extraction is currently taking place at four (as of the end of 2018). These four sites are outlined below.

- Tyttenhanger Quarry, Colney Heath;
- Hatfield Quarry with the linked Symondshyde extraction site;
- Thorley Hall Farm;
- Pynesfield

2.12 The remaining five sites are not extracting sand and gravel and are in the process of infill/restoration. See Table 2 for further details of the sand and gravel sites in Hertfordshire.

2.13 When compared to last year’s LAA, Braziers has been added to the list of operational quarries in Hertfordshire (and can be seen in Table 2 and identified in Figure 5). On 05 March 2018, the site began taking in waste in order to re-store the site in line with an extant planning permission. Areas of the former landfill have settled at different rates, resulting in an uneven landform. The site is being re-restored to correct and even out the landform using a total of 300,000 tonnes of construction, demolition and excavation waste. This site will continue to be monitored in subsequent LAA’s.

 Additional Reserves of Sand and Gravel:

2.14 On 18 October 2018 permission was granted for sand and gravel extraction at Furze Field, as an extension to Hatfield quarry. The site is set to provide 450,000 tonnes of sand and gravel in total and extraction is to be completed two years after it commences.

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6 All sand and gravel quarries are classed as operational until they reach aftercare stages.
Extraction has not yet commenced at the site and as such it is not classed as operational. The reserves from Furzefield have been added to this year’s reserves figure (end of 2018 figure) which can be seen in Table 1.

Potential Future Reserves of Sand and Gravel:

BAE Hatfield Aerodrome has a resolution to grant planning permission subject to the signing of a S106 agreement. The time period in which the S106 was due to be signed has lapsed. It is anticipated that the application will go back to committee.

During the calendar year of 2018, the county council received two planning applications which could potentially provide future reserves of sand and gravel, should they be permitted.

On 16 November 2018, the county council received an application for the extraction of approximately 3.5 million tonnes of sand gravel at Land adjoining Coopers Green Lane, Hatfield Quarry.

On 20 November 2018, the county council received an application for a variation of condition (time limit for commencement) on a previous planning application for an extension to the previously mothballed site at Rickney’s quarry. This variation of condition may lead to additional reserves of 1.24 million tonnes of sand and gravel.

The above three permissions will continue to be monitored through subsequent LAA’s.

Hard Rock

There is no hard rock found in the county and reserves from outside of Hertfordshire are relied upon Hertfordshire imports crushed rock into the county via the rail aggregate depots.

Marine Aggregates

Hertfordshire is a land locked county and as such contains no areas suitable for the dredging of marine aggregates. A relatively small amount of marine sand and gravel is consumed in the county which is imported via Kent and London.

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7 Land adjoining Coopers Green Lane is proposed as an extension to the existing Hatfield Quarry
Table 1: Permitted sand and gravel extraction sites in Hertfordshire

<table>
<thead>
<tr>
<th>Active Extraction Site</th>
<th>Operator</th>
<th>Status</th>
<th>Restoration</th>
<th>Cessation dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hatfield Quarry</td>
<td>Cemex UK Ltd</td>
<td>Active. Processing plant on original Hatfield Quarry site area.</td>
<td>Inert restoration</td>
<td>Extraction and site permission 01-10-2020</td>
</tr>
<tr>
<td>Symondshyde Farm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tyttenhanger Quarry</td>
<td>Tarmac Ltd</td>
<td>Active. Permission in February 2011, for the extraction on land identified as Preferred Area No.3 in the Minerals Local Plan Review 2002-2016.</td>
<td>Inert restoration</td>
<td>Extraction and site permission 31-12-2032</td>
</tr>
<tr>
<td>Colney Heath</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thorley Hall Farm</td>
<td>David Tinney</td>
<td>Active</td>
<td>Agricultural reservoir</td>
<td>06-06-2021</td>
</tr>
<tr>
<td>Pynesfield</td>
<td>Harleyford Aggregates Ltd</td>
<td>Active</td>
<td>Agriculture and Small wetland area</td>
<td>Extraction and restoration 31-12-2018</td>
</tr>
<tr>
<td>Permitted. Excavation complete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westmill Quarry</td>
<td>Cemex UK Ltd</td>
<td>Active</td>
<td>Non-hazardous restoration</td>
<td>Extraction 31-12-2015 Site permission 31 12 2027³.</td>
</tr>
<tr>
<td>Ware</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panshanger Quarry</td>
<td>Tarmac Ltd</td>
<td>Active</td>
<td>Inert restoration</td>
<td>Extraction 31-12-2030</td>
</tr>
<tr>
<td>Hertford</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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8 Furze Field has been permitted as an extension to Hatfield Quarry. Furze Field is not active.

³ Revised Final Restoration date granted in March 2018.
<table>
<thead>
<tr>
<th>Permitted. Inactive extraction</th>
<th>Operator</th>
<th>Status</th>
<th>Restoration</th>
<th>Cessation dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterhall Complex Hertford</td>
<td>Waterhall (England) Ltd/Frank Lyons</td>
<td>Permission to extract up to end of 2019 but not currently extracting due to enforcement proceedings relating to the restored areas of the site, in the Bunkers Hill area. Only sand and gravel reserves under plant site.</td>
<td>Inert restoration</td>
<td>Extraction, infilling, mineral processing and restoration to cease on 31-12-2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sites in Restoration only</th>
<th>Operator</th>
<th>Status</th>
<th>Restoration</th>
<th>Cessation dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Westwood Quarry</td>
<td>Cemex UK Ltd</td>
<td>Active. Site is restored and close to aftercare stages.</td>
<td>Inert restoration</td>
<td>Site to be restored by 30/09/2018 (this excludes aftercare)</td>
</tr>
<tr>
<td>Braziers</td>
<td>H Brazier Ltd</td>
<td>Active. Inert re-restoration taking place on an extant planning permission.</td>
<td>Inert restoration</td>
<td>Re-restoration of the site is expected to take approximately two and a half/three years to complete.</td>
</tr>
</tbody>
</table>

2.23 For information on chalk and clay sites please see Appendix 1 of this document.
3 SAND AND GRAVEL SALES

3.1 Sales of sand and gravel (including soft sands) for the ten year period between 2009 and 2018 inclusive are shown in Figure 4 and Table 1. The figures are based on actual sales data retrieved from the county’s Aggregate Monitoring Surveys and the BGS Aggregate Minerals Survey 2014 for England and Wales collated data for Hertfordshire’s aggregate sales and destinations.

3.2 There have historically been difficulties in obtaining mineral data and this problem is recognised nationally. Only some minerals data is made available to the minerals planning authority and can be inaccurate, inconsistent and incomplete.

3.3 The county council is part of the East of England Aggregates Working Party (EEAWP), which is a technical working group comprising mineral planning authorities and other interested parties that are working together to obtain better survey data which is used by individual authorities and collated in the East of England Authorities’ Monitoring Report\textsuperscript{10}. It is hoped that in the years to come the data available for both minerals and waste will be more available and consistent.

Figure 4: Sales of sand and gravel in Hertfordshire 2009 – 2018 compared with apportionment

3.4 Sand and gravel sales at the end of 2018 stood at 1.21 million tonnes. An increase of 39,585.3 tonnes when compared to last year’s figure (which was 1.7 million tonnes at the end of 2017). This means that sales have reached 1.20 million tonnes and above, five times over the last 10 year period (2009-2018).


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3.5 This year’s sales figure (1.21 million tonnes) is the highest sales have been since 2015.

3.6 The average sales of sand and gravel in Hertfordshire over the last 10 years is 1.19 million tonnes (2009-2018). As a comparison, this figure was 1.16 million tonnes as of the end of 2017, 1.15 million tonnes as of 2016 and 1.16 million tonnes as of 2015, thereby remaining relatively constant over the last few years.

3.7 The rolling 3 year sales average is 1.18 million tonnes per annum (2016-2018). This was 1.19 million tonnes at the end of 2017 and 1.20 million tonnes at the end of 2016.

3.8 Based on 2018 levels, Hertfordshire contributed 10% of the sand and gravel sales in the East of England region. A slight increase when compared to the 9% 2017 figure.\(^{11}\)

3.9 The table below shows the sales figure alongside the reserves figure for sand and gravel in Hertfordshire (during the ten year period from 2009-2018).

**Table 2: Sand and gravel sales and permitted reserves in Hertfordshire since 2008**

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales of soft sand and sharp sands and gravel (tonnes)</th>
<th>Permitted reserves of soft sand and sharp sands and gravel (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1,214,306(^{12})</td>
<td>10,619,000</td>
</tr>
<tr>
<td>2010</td>
<td>1,172,890</td>
<td>10,786,465</td>
</tr>
<tr>
<td>2011</td>
<td>1,268,465</td>
<td>16,700,000</td>
</tr>
<tr>
<td>2012</td>
<td>1,123,645</td>
<td>15,792,000</td>
</tr>
<tr>
<td>2013</td>
<td>1,130,295</td>
<td>16,260,000</td>
</tr>
<tr>
<td>2014</td>
<td>1,209,532</td>
<td>14,440,000</td>
</tr>
<tr>
<td>2015</td>
<td>1,224,284</td>
<td>13,215,716</td>
</tr>
<tr>
<td>2016</td>
<td>1,164,633</td>
<td>11,752,000</td>
</tr>
<tr>
<td>2017</td>
<td>1,166,921</td>
<td>10,458,308</td>
</tr>
<tr>
<td>2018</td>
<td>1,206,507</td>
<td>10,056,000</td>
</tr>
</tbody>
</table>

3.10 The table above shows that between 2009 and 2010 the permitted reserves of sand and gravel in the county remained fairly constant. In 2011 the reserves

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\(^{12}\) There is a slight difference between the figure in the HCC Annual Monitoring Report 2010 and the figure recorded by the East of England Aggregate Monitoring Survey for 2009 (1,214,306t and 1,207,000t respectively)
increased due to additional planning permissions and reassessments of actual reserves by operators.

3.11 In more recent year’s reserves have started to decline in line with the sales. As stated in paragraph 2.20, the applications at BAE Hatfield Aerodrome, Rickney’s Quarry and Land adjoining Coopers Green, will continue to be monitored in subsequent LAA’s. Together, these three sites have the potential to contribute a significant amount of sand and gravel to the reserves in Hertfordshire.

3.12 Figure 5 shows the location of the sand and gravel quarries across Hertfordshire.
Figure 5: Permitted sand and gravel sites
Apportionments

3.13 The current annual apportionment for Hertfordshire is 1.39 million tonnes of sand and gravel.

3.14 The county’s sand and gravel apportionment figure has changed over time due to periodic reviews. In 1998 the annual apportionment was set at 2.4 million tonnes. The annual apportionment in the current adopted Minerals Local Plan (adopted March 2007) was set at 1.99 million tonnes for the time period 2002-2016. The annual apportionment figure was subsequently reviewed through the National and Regional guidelines in 2009 and now stands at 1.39 million tonnes for the time period 2005-2020.

3.15 The 2009 guidelines states in Annex A that the revised apportionment figure (the apportionment figure was reduced from 1.99 to 1.39) reflects an overall fall in national demand for sand and gravel and crushed rock, an increase in the assumed contribution use of alternatives to primary aggregates notably construction and demolition waste, an increase in the assumed contribution of marine sand and gravel and decrease in the assumed contribution of net imports.

3.16 The 1.39 mt sub-regional apportionment was approved by the East of England Aggregates Working Party based on the Managed Aggregate Supply System (MASS) which was in operation at the time and now forms part of the National Planning Practice Guidance. The East of England Aggregates Working Party supports the use of the 1.39 mt apportionment figure for use in Hertfordshire’s emerging Minerals Local Plan.

3.17 The 1.39 apportionment figure more closely reflects the sales figures (which are illustrated in Figure 4) and at the same time still provides flexibility to account for the anticipated continued rise in sales in line with the high levels of growth being planned for in the Hertfordshire District and Borough Local Plans.

3.18 Figure 4 provides a comparison of Hertfordshire’s sales figures over the 10 year period from 2009 to 2018 against the county’s apportionments during this period. It can be seen in Figure 4 that the end of 2018 sales exceeds the ten and three year average sales.

Local approach to determining apportionment figures

10 year and 3 year sales average

3.19 The revised 2019 NPPF states in paragraph 207 that Mineral Planning Authorities (MPAs) should prepare an annual LAA ‘based on a rolling average of

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10 years sales data, and other relevant information, and an assessment of all supply options (including marine dredged, secondary and recycled sources).

3.20 When planning for a steady and adequate supply of aggregates, such local information includes geology, environmental issues, local demand and past patterns of supply.

3.21 The government’s aim is to provide a simpler and more transparent approach to calculating the apportionment than the sub-regional apportionment method that relies on a complex model incorporating a range of confidential variables.

3.22 The NPPG suggests the use of the 3 year sales average to identify a general trend in sales and consider increasing supply if this is appropriate. The NPPG states that the rolling 10 year average, 3 year average sales and sub-regional guidelines should all be taken into account in order to establish a broad view of planned provision.

3.23 The difference in the agreed apportionment and average sales are as follows:

Table 3: Sales and apportionment

<table>
<thead>
<tr>
<th>Sales and apportionment</th>
<th>Million tonnes per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed apportionment</td>
<td>1.39</td>
</tr>
<tr>
<td>10 year sales average</td>
<td>1.19 (2009-2018)</td>
</tr>
<tr>
<td>3 year sales average</td>
<td>1.18 (2016-2018)</td>
</tr>
</tbody>
</table>

3.24 The NPPG states, MPAs can plan for more or less than the figure set out in the sub-regional guidelines based on their LAA and ‘in those areas where apportionment of the land-won element has already taken place, those figures may be used as an indicator as to how much should be planned for’ (NPPG, paragraph 071).

3.25 There may be advantages of taking into account average sales data over a period of time which levels out the peaks and troughs of an economic cycle by accounting for periods of slow (2008-2011) and high (2001-2007) economic growth. However, the Table 4 below shows that if the current ten or three year sales averages were used to calculate the sand and gravel landbank for Hertfordshire, this would result in a lower provision being planned for. This year’s sales figure (1.2mt) exceeds both the ten and three year average sales figures.

3.26 Planning for a lower annual apportionment would place additional pressure on neighbouring MPAs to meet any shortfall if the demand for aggregates rises. The demand for aggregates in Hertfordshire will only increase over coming years due to the high levels of future growth being planned for.
**Landbank of permitted mineral reserves**

3.27 Permitted reserves of sand and gravel in Hertfordshire are currently 10,056,000 tonnes (as of the end of 2018).

3.28 By dividing the permitted reserves figure by the annual apportionment figure (1.39 mt), this gives the landbank (in years) of sand and gravel in Hertfordshire. A landbank is defined in the adopted Minerals Local Plan as ‘a stock of planning permissions for the winning and working of minerals’.

3.29 The current landbank for Hertfordshire is 7.2 years (as of 31 December 2018). This is lower than the landbank for the East of England which stands at 8.2 years (as of the end of 2018) (based on sub-regional apportionment figures rather than rolling average 10 year sales).

3.30 To provide comparisons, the landbanks for Hertfordshire over the past 7 years, are set out below:

- 11.4 years in 2012
- 11.7 years in 2013
- 10.4 years in 2014
- 9.5 years in 2015
- 8.5 years in 2016
- 7.5 years in 2017
- 7.2 years in 2018

3.31 The sand and gravel permitted reserves that make up the figure to calculate the Hertfordshire landbank are contained in four of the nine sites detailed in Table 2.

3.32 Table 4 shows the most up-to-date landbank calculations based on the reserves and shows the difference when sales figures are used compared with the apportionment figure.

**Table 4: Landbanks for sand and gravel in Hertfordshire in 2018**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted reserves as at 31/12/2018</td>
<td>10,056,000</td>
</tr>
<tr>
<td>East of England AWP apportionment for Herts 2005-2020</td>
<td>1,390,000</td>
</tr>
<tr>
<td><strong>Landbank based on EEAWP apportionment (years)</strong></td>
<td>7.2</td>
</tr>
<tr>
<td>Permitted reserves as at 31/12/2018</td>
<td>10,056,000</td>
</tr>
<tr>
<td>10 year average sales 2009-2018</td>
<td>1,188,147.8</td>
</tr>
</tbody>
</table>

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14 East of England Aggregates Monitoring Report 2018
15 This also includes the recently permitted reserves at Furze Filed (which will be worked as an extension to Hatfield Quarry)
<table>
<thead>
<tr>
<th>Landbank based on 10 year average sales (years)</th>
<th>8.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted reserves as at 31/12/2018</td>
<td>10,056,000</td>
</tr>
<tr>
<td>3 year average sales 2016-2018</td>
<td>1,179,353.6</td>
</tr>
<tr>
<td>Landbank based on 3 year average sales (years)</td>
<td>8.5</td>
</tr>
</tbody>
</table>

**Timeline for mineral planning**

3.33 For mineral planning purposes the landbank is crucial. In preparing the emerging Minerals Local Plan, the county council is required to plan for the steady and adequate supply of minerals, by designating (one or more of) Specific Sites, Preferred Areas and/or Areas of Search\(^{16}\).

3.34 The emerging Minerals Local Plan is currently at Proposed Submission stage and includes three proposed Specific Sites and one proposed Preferred Area\(^ {17}\), in line with the requirement set out above.

3.35 It is proposed that these designated sites and Preferred Area will contribute to the Hertfordshire landbank in the future and it is intended that the need for land-won aggregate (over the 15 year period that the new Minerals Local Plan will cover and the additional seven years after) will be met from these sites.

3.36 In preparing the revised Minerals Local Plan, the county council must also consider the existing level of permitted sand and gravel reserves and plan ahead to ensure sufficient supply. Based on the existing level of permitted reserves and given the end date of the existing Minerals Local Plan (2002-2016), the revised plan identifies sand and gravel over a 22 year period. Adoption of the revised plan is anticipated for late 2020.

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\(^{16}\) Paragraph: 008 of the NPPG

\(^{17}\) The sites and areas designated within the emerging Minerals Local Plan are subject change throughout the remainder of its preparation
4 IMPORTS AND EXPORTS

National Aggregate Monitoring

4.1 Data relating to the sales and consumption of aggregates are collected and collated at a national and regional level. The most up to date published figures have been used in this report.

4.2 A national four-yearly Aggregate Minerals Survey (AMS) provides in-depth information of regional and national sales, inter-regional flows, transportation, consumption and permitted reserves of primary aggregates in England and Wales. Conducted by DCLG (now MHCLG) and BGS the latest survey was carried out in 2015 to capture data for 2014.

Imports – Sand and Gravel

4.3 Of the land won sand and gravel consumed in Hertfordshire (1,126,000 tonnes) as reported in the AMS 2014:

- 60-70% came from within Hertfordshire;
- 10-20% came from Essex;
- 1-10% came from Bedford Borough,
- Cambridgeshire, Central Bedfordshire & Suffolk (within the East of England) and Windsor & Maidenhead District and Great London East (outside of East of England);
- <1% came from Wiltshire, Hampshire, Oxfordshire, Leicestershire, Northamptonshire & Staffordshire. 18

Imports – Marine sources

4.4 Of the 19,000 tonnes of marine sand and gravel consumed in Hertfordshire as reported in the AMS 2014 (Table 11):

- 10-20% was supplied via Kent;
- 70-80% was supplied via Greater London – East; &
- <1% was supplied via Hampshire. 19

4.5 In summary, of the imports of sand and gravel into Hertfordshire, approximately 9-29% came from within the East of England area and 71-91% from outside the East of England area. 20

Imports – Crushed Rock

18 Information supplied directly by BGS – AMS2014 source of primary aggregates by sub-region as percent categories
19 Information supplied directly by BGS – AMS2014 source of primary aggregates by sub-region as percent categories
20 Information supplied directly by BGS - AMS2014 source of primary aggregates by sub-region as percent categories
4.6 Of the total crushed rock consumed in Hertfordshire (591,000 tonnes) as reported in the AMS 2014 (Table 11):
  o 80-90% came from Leicestershire;
  o 10-20% came from Somerset;
  o 1-10% came from Cambridgeshire, Shropshire and Powys;
  o <1% came from outside England & Wales, Gloucestershire, Doncaster, Yorkshire Dales and Neath Port Talbot;

4.7 In summary, of the imports of crushed rock, only 1-10% came from the East of England area.  

Exports – Sand and Gravel

4.8 Of the total land won sand and gravel sales from quarries in Hertfordshire in (1,209,532 tonnes) for which year there is a breakdown of sales destinations as reported in the AMS 2014, 57% was within Hertfordshire (692,000 tonnes), 22% was to the rest of the East of England (265,000 tonnes) and 21% was to other destinations (252,000 tonnes).

4.9 The results of the AMS 2014 survey show that Hertfordshire consumes the majority (60-70%) of the sand and gravel extracted in the county. Hertfordshire exports dome sand and gravel and imports a small amount (19,000) of marine aggregate. Hertfordshire relies on imports of crushed rock as the geology of the county doesn’t allow for local extraction.

From a national perspective the UK Minerals Yearbook 2015 reports the following:

4.10 In GB there were:
  o 56 million tonnes of sand and gravel consumed; (2014) and
  o 99 million tonnes of crushed rock consumed (2014);
  o 535 sand and gravel workings in the UK (as at March 2016);

4.11 Of the aggregates produced in the UK in 2014:
  o 46.8 million tonnes was land-won sand and gravel;
  o 14.3 million tonnes was marine dredged sand and gravel;
  o 110.3 million tonnes was crushed rock; and
  o 6.8 million tonnes was clay and shale (for bricks).

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21 Information supplied directly by BGS - AMS2014 source of primary aggregates by sub-region as percent categories
22 Hertfordshire total sales figure for sand and gravel in 2014
23 Table 9d, AM2014 Survey
24 Page 22, BGS, 2015, United Kingdom Minerals Yearbook 2015, Minerals and Waste Programme Open Report OR/16/021
26 Page 18 of BGS, 2015, United Kingdom Minerals Yearbook 2015, Minerals and Waste Programme Open Report OR/16/021
27 Page BGS, 2015, United Kingdom Minerals Yearbook 2015, Minerals and Waste Programme Open Report OR/16/021
28 Page 23 BGS, 2015, United Kingdom Minerals Yearbook 2015, Minerals and Waste Programme Open Report OR/16/021
Total imports of sand and gravel and crushed rock into the UK in 2012 were 39.2 million tonnes and total exports from the UK were 68.2 million tonnes.\(^{29}\)

The Annual Minerals Raised Inquiry (AMRI) 2014 reports the following:

- A total of 4.7 million tonnes was extracted in Great Britain.\(^{25}\) There are no figures reported for clay extracted and sold for Hertfordshire.
- The UK had a rise in total clay sales from 6,464 to 6,806 thousand tonnes 2013-2014;
- The UK had a rise in sales from 3,528 thousand tonnes 2012-2013 to 3,312 thousand tonnes 2013-2014. There are no figures reported for chalk extracted and sold for Hertfordshire.\(^{31}\)
- Hertfordshire is listed as one of only 13 areas in Great Britain that produce chalk.
- UK total sales of sand and gravel rose from 51,925 in 2012-2013 to 56,129 thousand tonnes.\(^{32}\)

From the East of England area perspective the Area’s Annual Monitoring Report 2014 reports the following:

- Hertfordshire contributed 10% of sand and gravel sales in the East of England in 2014 and 11% in 2015;\(^ {33} \)
- Cambridgeshire & Peterborough and Bedford, Central Bedfordshire & Luton have a higher landbank of sand and gravel than Hertfordshire in the East of England;\(^ {34} \)
- The East of England landbank (average over all authorities) stands at 9.5 years using the sub-regional apportionment figure derived from the National and regional Guidelines 2005-2020;\(^ {35} \)
- Cambridgeshire & Peterborough and Norfolk are the only authorities in the East of England that extract rock and propose to maintain current extraction rates;\(^ {36} \)
- Although likely to be under-representations, in 2015 the EEAWP area imported over 2.2 million tonnes of aggregate (sand and gravel and crushed rock) from outside the area by rail depots and wharfs. In comparison exports of aggregates from the area by rail were over 100,000 tonnes.\(^ {37} \)

Sales and Consumption

The following table shows the comparison of sales and consumption in Hertfordshire in 2014.

\(^{25}\) Page 19 of BGS, 2014, United Kingdom Minerals Yearbook 2013, Minerals and Waste Programme Open Report OR/14/036
\(^{26}\) Table 8, DCLG & ONS, March 2016, Annual Mineral Raised Inquiry (AMRI) ‘Mineral extraction in Great Britain 2014’, Business Monitor PA1007
\(^ {27} \) Table 9, DCLG & ONS, March 2016, Annual Mineral Raised Inquiry (AMRI) ‘mineral extraction in Great Britain 2014,’ Business Monitor PA1007
\(^ {28} \) Table 2, DCLG & ONS, March 2016, Annual Mineral Raised Inquiry (AMRI) ‘Mineral extraction in Great Britain 2014’, Business Monitor PA1007
\(^ {29} \) Figure 2 of East of England Aggregates Working Party, Annual Monitoring Report 2014-2015
\(^ {32} \) Table 1, East of England Aggregates Working Party, Annual Monitoring Report 2014-2015
Table 5: Sales and consumption in 2014

<table>
<thead>
<tr>
<th>Destination</th>
<th>Proportion of Sales</th>
<th>Assumed Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hertfordshire</td>
<td>57%</td>
<td>689,433t</td>
</tr>
<tr>
<td>East of England</td>
<td>22%</td>
<td>266,097t</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>21%</td>
<td>254,002t</td>
</tr>
<tr>
<td><strong>Total Sales of Land Won Sand &amp; Gravel (2014)</strong></td>
<td><strong>100%</strong></td>
<td><strong>1,209,532t</strong></td>
</tr>
<tr>
<td>Consumption</td>
<td></td>
<td>1,146,000t</td>
</tr>
</tbody>
</table>

Source: DCLG & BGS, 2014, Collation of the results of the 2014 Aggregate Minerals Survey for England and Wales

4.14 The AMS 2014 indicated that most of Hertfordshire’s sand and gravel produced is consumed in the county (57%). Of the exports, the majority of the sand and gravel is used outside of the East of England region (21%).

**Rail Aggregate Depots**

4.15 Linked with the mineral industry is the need for rail aggregate depots within the county. Currently Hertfordshire has a total of five such sites which are at:

- Langley Sidings, Stevenage;
- Walsworth Road Rail Aggregate, Hitchin
- Rye House, Hoddesdon;
- Harper Lane, Radlett; and
- Orphanage Road, Watford.

4.16 As last year’s 2018 LAA stated, the infrastructure at Walsworth Road Rail Aggregate Depot (formerly referred to as Hitchin Rail Aggregates Depot) has been reinstated and the site is now being used as a rail aggregates depot. The site receives imports of limestone, which is mostly used for Sustainable Drainage Systems (SuDS), and sand and gravel, which is used for concrete mixing.

4.17 The emerging Minerals Local Plan has been amended and now identifies Walsworth Road Rail Aggregate depot as a safeguarded site (as well as continuing to safeguard all other rail aggregate depots as listed above).

4.18 From this year’s figures it is clear that there has been a significant increase in the total amount of crushed rock imported into Hertfordshire’s rail aggregate depots. This year’s total figure has increased by 100,118 tonnes when compared to last year’s total figure.

4.19 There has also been an increase in the total amount of sharp sands and gravels imported into Hertfordshire’s rail aggregate depots. This year’s total figure has increased by 42,723 tonnes.
Imports of minerals at the operational rail aggregate depots:

<table>
<thead>
<tr>
<th>Mineral imported at RADs</th>
<th>Total tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed rock</td>
<td>595,907</td>
</tr>
<tr>
<td>Sharp sands and gravels</td>
<td>47,277(^{39})</td>
</tr>
<tr>
<td>Total</td>
<td>643,184</td>
</tr>
</tbody>
</table>

4.20 Crushed rock passes through Langley Sidings. Concrete batching is carried out at Orphanage Road, ready mix at Langley Sidings and Harper Lane and asphalt plants at Langley Sidings and Harper Lane. The asphalt plant is no longer operating at Rye House; instead the site only handled imports of crushed rock and gravels.

4.21 The Mineral Planning Authority responds to District/Borough Council Local Plan consultations requesting the continued safeguarding of rail aggregate depots. Where there is pressure on the continued operation of these sites due to other development proposals, the county council will be an active member of any discussion group to shape proposals so as to retain the rail aggregate depot and a suitable buffer around it or assist with the relocation to another site. The county council has been engaged in discussions regarding two rail aggregate depots that may be at risk from other development over the time period of the next Minerals Local Plan, namely Orphanage Road, Watford and Walsworth Road, Hitchin.

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\(^{38}\) HCC Rail Aggregate Depots (RAD), Aggregate Monitoring Survey returns 2018

\(^{39}\) Only one of Hertfordshire’s operating Rail Aggregate Depots received imports in this category.
Figure 6: Hertfordshire’s rail aggregate depots

Key:
- A Active
- Settlement
- Railway Line

Hertfordshire rail aggregate depots include facilities such as Rickmansworth, Watford, and Letchworth. The map highlights active depots and railway lines within the county.
5 SECONDARY AND RECYCLED AGGREGATE

5.1 Mineral Planning Authorities are expected to plan for aggregates, taking account of all sources of aggregates and having regard to the overall objective to minimise the amount of primary extraction.

5.2 Secondary and recycled aggregates play their part in providing a source of material for construction which reduces the need for extraction at quarry sites and reduces the amount of waste from construction sites needing to be landfilled.

5.3 Definitions of secondary and recycled aggregates can be seen below.

5.4 Secondary aggregates are usually by-product wastes from construction, industrial or mineral extraction processes. This includes both natural and manufactured materials such as glass, incinerator bottom ash, fine ceramic waste, scrap tyres, flue ash, slag, china clay, coal and slate extraction and spent foundry sand.

5.5 Recycled aggregates are aggregates produced from reprocessed construction, demolition and excavation (CD&E) waste. This includes crushed concrete, stone and brick, asphalt road planings and railway ballast.

5.6 In May 2019, the MPA launched a new briefing entitled ‘The Contribution of Recycled and Secondary Materials to Total Aggregates Supply in Great Britain’. In order to provide some context on the significant contribution and importance of secondary and recycled aggregates, the following statements have been extracted from this document:

In 2017,

‘A total of 176 million tonnes of primary aggregates were produced by the industry in Great Britain, which, together with an estimated 72 million tonnes from recycled and secondary sources, supplied demand.’

‘Recycled and secondary materials accounted for 29% of the total aggregates supply, which has put Great Britain in a leading position internationally in the use of recycled and secondary aggregates for many years, well ahead of the European average.’

5.7 With its obvious benefits, the use of secondary and recycled aggregates is encouraged. Due to the high levels of growth planned for in Hertfordshire and the volumes of waste coming in from London, Hertfordshire will have a significant proportion of construction, demolition and excavation wastes (i.e inert wastes) that needs to be managed.
5.8 Recycling construction, demolition and excavation waste allows for its re-use within construction projects. This recycling and re-use process is in keeping with a Circular Economy for waste and ensures that waste is kept in continuous cycle rather than it being disposed of and adding to the need for extraction of more primary resources.

5.9 The processing of aggregate occurs both on construction sites to enable the reuse of the material on the same site, or off site, at facilities such as those listed in Table 8, for use in other construction works at a later date.

Inert Waste Management in Hertfordshire

5.10 The data available on recovered material that can be sold as recycled and particularly secondary aggregate is variable and not considered completely reliable.

5.11 The county council is continuing to monitor the amount of construction, demolition and excavation waste which is recycled at facilities within the county, through the annual Aggregate Monitoring Surveys. The county council receives limited data provided by site operators in response to the annual Aggregate Monitoring Surveys. As Table 7 identifies, in 2018, 265,171 tonnes of secondary and recycled aggregates were produced in Hertfordshire. 40

5.12 This year’s total processing figure, which records data from the calendar year of 2018, has seen an increase (by approximately 26,551) when compared to last year’s figure.

5.13 Table 7 below provides an overview of the secondary and recycled aggregate figures over the last 10 year period.

<table>
<thead>
<tr>
<th>Year</th>
<th>Recycled and Secondary Aggregate Processing (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>258,427</td>
</tr>
<tr>
<td>2010</td>
<td>346,560</td>
</tr>
<tr>
<td>2011</td>
<td>303,869</td>
</tr>
<tr>
<td>2012</td>
<td>316,941</td>
</tr>
<tr>
<td>2013</td>
<td>329,457</td>
</tr>
</tbody>
</table>

Table 7: Total recycled and secondary aggregate processed over the last 10 years

40 Hertfordshire County Council annual waste survey 2018 provided by operators, and average figures from previous years where actual data was not obtained

41 Please note there may be a difference in the figures available from difference sources, including HCC operator data, Environment Agency data and other studies.
<table>
<thead>
<tr>
<th>Year</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>362,203</td>
</tr>
<tr>
<td>2015</td>
<td>317,314</td>
</tr>
<tr>
<td>2016</td>
<td>234,783</td>
</tr>
<tr>
<td>2017</td>
<td>246,105</td>
</tr>
<tr>
<td>2018</td>
<td>272,656</td>
</tr>
</tbody>
</table>

5.14 According to the Environment Agency’s Waste Data Interrogator, figures of inert C, D & E waste treated in the county may be different to the figures received from operator returns. The Environment Agency’s figure does not include figures at waste transfer stations that bulk up and transfer aggregate on to recycling facilities for processing.

**Secondary and Recycled Aggregate Sources**

5.15 It should be noted that there are several different factors which have influenced the 2018 total aggregate processing figure (as seen in Table 7 above).

5.16 Firstly, five out of the six aggregate processing sites (identified in Table 8) provided survey returns.

5.17 Two of the sites listed in Table 8 of last year’s 2018 LAA have closed (and are no longer identified in Table 8) and as such no figures were obtained for these two sites. These two sites include Codicote Quarry and Anstey Quarry (See Appendix 1 for more details). Both quarries formerly operated aggregate recycling facilities (in addition to the extraction of chalk).

5.18 A figure was also provided by Skinners Yard, Hertford in relation to the amount of reclaimed asphalt pavement which was processed at the stand alone asphalt plant. This figure has been added to the total aggregate processing figure in Table 7. Skinners Yard has also been added to the list of sites in Table 8 below.

5.19 The Minerals Planning Authority also obtained figures from the Hertfordshire County Council Highways Department relating to road planings.

5.20 The figures provided show that during the calendar year of 2018, a total of 520,000 square metres of carriageway was resurfaced. This resulted in approximately 50,000 tonnes of road planings needing to be recycled. As paragraph 5.5 states, road planings are considered a recyclable aggregate. All road planings (both hazardous and non-hazardous) that arise from Highway Authority works in Hertfordshire are recycled, none are sent for disposal.

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42 HCC, 2013, Authority Monitoring Report
5.21 Approximately 10% of the 50,000 tonnes of road planings were taken to sites outside of Hertfordshire to be recycled. Approximately 15% of the 50,000 tonnes of road planings were classed as hazardous and taken to the fully permitted recycling facility at Burrows Farm, Bulphan, Brentwood, Essex.

5.22 The remainder of the (non-hazardous) road planings arising from works in Hertfordshire were taken to Harper Lane (Tarmac Ltd). This amounted to 75% (37,500 tonnes) of the total road planings being recycled in Hertfordshire. This figure (37,500 tonnes) has been added to the total aggregates figure in Table 7 above.

5.23 There are currently six sites with planning permission which provide capacity for the production of secondary of recycled aggregates (including CD&E) in Hertfordshire, as listed below. Figure 7 shows the location of these sites in the county.

**Table 8: Secondary and recycled aggregate sites**

<table>
<thead>
<tr>
<th>SITE</th>
<th>COMPANY</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnside, Hatfield</td>
<td>Peter Brothers Ltd</td>
<td>Permanent</td>
</tr>
<tr>
<td>Harper Lane (Rail Loop)</td>
<td>Tarmac Ltd</td>
<td>Permanent</td>
</tr>
<tr>
<td>Burrowfields Waste Solutions</td>
<td>Ground Waste Recycling Ltd</td>
<td>Permanent</td>
</tr>
<tr>
<td>Birchall Lane, Cole Green, Welwyn Garden City</td>
<td>BP Mitchell Ltd</td>
<td>Permanent</td>
</tr>
<tr>
<td>Land adjacent to B197, north of Graveley</td>
<td>Envirowaste (Inc) Ltd/Stevenage Skips</td>
<td>Permanent</td>
</tr>
<tr>
<td>Skinners Yard, Hertford</td>
<td>G Skinner &amp; Sons Ltd</td>
<td>Certificate of Lawful Use</td>
</tr>
</tbody>
</table>

**Hertfordshire Waste Local Plan review**

5.24 The adopted Waste Core Strategy and Development Management Policies document concludes that (at the time it was prepared) there were sufficient opportunities via mineral extraction restoration schemes with inert fill to manage this waste stream. It was also hoped that the imposition of Site Waste Management Plans would aid the monitoring and diversion of this waste stream.43

5.25 It is now recognised that whilst mineral sites will continue to use inert material for restoration there is still a need for more aggregate recycling facilities due to the

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high levels of growth planned Hertfordshire and the proportion of C,D & E waste imported to Hertfordshire from London.

5.26 In 2017 the county council commenced with the review of its adopted Waste Local Plan. The initial evidence gathering stage is anticipated to span from 2017 to 2019.

5.27 So far in the review, the county council has carried out its first Regulation 18 public consultation on the ‘Hertfordshire Waste Local Plan Initial Consultation Document’ which took place from 05 February 2018 to 30 March 2018 and has undertaken a Call for Sites Exercise, which ran from 23 July to 16 September 2018. It is anticipated that the consultation on the Draft Waste Local Plan (which will be another Regulation 18 consultation) will take place in spring 2020.

5.28 The new Waste Local Plan will contain revised calculations for the capacity requirements for each of the different waste streams, which will include C, D & E waste. A draft Waste Capacity Gap Report has been prepared for the emerging Waste Local Plan. The draft study highlights a significant increase in C, D&E waste, with further imports increasing from London. which can be seen by following the link below:

Figure 7: Location of permitted sites in Hertfordshire for the production of recycled/secondary aggregates
Expected Contribution to Supply

5.29 In terms of relying on secondary and recycled aggregate and thereby reducing the need for extracting land won sand and gravel to meet the demand in Hertfordshire, precise data on this supply option needs to be available to factor this into mineral planning. This is not always available. The county council surveyed operators of known recycled and secondary aggregate sites and figures have been provided.

5.30 In addition, there is the use of some inert material that is reprocessed on demolition sites and used in their redevelopment as groundworks and basic engineering fill. Whilst this is potentially a lower grade aggregate, its use can also offset the need for primary won extraction of sand and gravel. Again, the difficulty is obtaining reliable data to quantify how much of this material can be relied upon.

5.31 Issues with data availability and reliability for secondary and recycled aggregates does not allow for a firm figure for local supply of this source of aggregate in Hertfordshire. It is considered reasonable to assume that as the economy recovers out of recession, volumes of secondary and recycled aggregates similar to those of recent years will continue to be available in the county. As such there should not be any significant effect on the demand for newly extracted land won sand and gravel.

5.32 In a similar way, a small amount of marine dredged sand and gravel as detailed is imported for use in the county (see paragraph 4.4). It is considered reasonable to assume that this supply of sand and gravel will continue to be used in the county at a similar volume in future years and therefore there should not be a significant effect on the amount of newly extracted sand and gravel required.

5.33 Hard rock is supplied from other counties as Hertfordshire does not have any of this resource. As the economy grows it is assumed that as this aggregate is already within the supply chain it is considered reasonable to assume that the proportions of market demand currently being met from these sources will continue to be met.

5.34 As stated in paragraph 5.26, the county council is in the process of reviewing the Waste Local Plan and has produced a Draft Waste Capacity Gap Report. Figures from this draft report\(^{44}\) show that Hertfordshire has a maximum capacity to process approximately 366,000 \(^{45}\) tonnes of secondary and recycled aggregates per year. This figure is significantly lower than the predicted future annual waste arisings for this waste stream as identified in the same report.

\(^{44}\) Report published alongside the Waste Local Plan Initial Consultation Document in February 2018

\(^{45}\) Estimates as of 2017
5.35 Whilst the total figure for aggregate processing in Hertfordshire has seen a slight decrease when compared to last year’s figures, it is still considered that there is a clear indication that additional facilities/extensions to existing facilities are required.
6 FUTURE AGGREGATES SUPPLY AND DEMAND

Current and Future Supply from Specific Sites and Preferred Areas

6.1 As shown in the calculations of sand and gravel landbanks in table 4, using the EEAWP sub-regional apportionment of 1.39 mtpa (7.2 years), the 10 year rolling average sales (8.5 years) or the 3 year average sales figures (8.5 years) the county is meeting the requirements of the NPPF in maintaining a landbank of at least 7 years.

Supply from the Preferred Areas of the Adopted Minerals Local Plan

6.2 The adopted Minerals Local Plan 2002-2016 (adopted in 2007) identified three Preferred Areas with the intention that they would supply the county with enough sand and gravel resources over the period that it covers. The three Preferred Areas of the adopted Minerals Local Plan:

- PA1 – BAE
- PA2 – Rickneys;
- PA3 – Coursers Road (Tyttenhanger)

6.3 Of these sites, all three of them have come forward for extraction.

6.4 Preferred Area 1 BAE, Land at Hatfield Aerodrome has a resolution to grant planning permission subject to S106 at Committee in January 2017. A decision notice has not been issued to date and as such the reserves of sand and gravel at this site are not included in the total reserves figure as of 31 December 2018.

6.5 Planning permission lapsed for the extraction of sand and gravel on Preferred Area 2 Rickneys. An application was submitted to the county council on 20 November 2018 for the variation of condition 2 (Time Limit for Commencement) of planning application 3/0629-06 to vary the date of commencement to be no later than eight years from the date of the original permission (i.e. up until 31st December 2021 for sand and gravel extraction). This permission will continue to be monitored within subsequent LAA’s.

6.6 A planning application on Land at Ware Park, which covers the southern part of Preferred Area 2 (which adjoins Rickneys Quarry), had permission refused at Committee in March 2017 (for the extraction of 2.6 million tonnes of sand and gravel).

6.7 The applicant submitted a further application for Land at Ware Park in September 2017 (for the phased extraction of 1.25 million tonnes of sand and gravel) which was also refused at Committee on 23 April 2018.
6.8 The applicant appealed the decision on the first application (2.6 million tonnes\textsuperscript{46}) and a Public Inquiry was held for three weeks in May 2018 and for a further three days in October 2018. The Secretary of State issued a decision on 04 April 2019 which dismissed the appeal and concluded that planning permission be refused.

6.9 Preferred Area 3 is being worked as an extension to Tyttenhanger quarry. The application for an eastern extension of the existing quarry (south of Coursers Road) was conditionally permitted on 23 February 2011.

6.10 As stated within the adopted Minerals Local Plan, the total estimated resources at BAE Preferred Area 1 is 8 million tonnes of sand and gravel and the total estimated resources at Preferred Area 2 is 5-6 million tonnes. Therefore should there be a supply of mineral from these sites in the future it could assist with meeting the sand and gravel requirements to be planned for in the county. The unworked Preferred Area sites will be considered alongside the site selection criteria within the site selection methodology for the review of the Minerals Local Plan which is taking place.

6.11 The county council is in the process of reviewing the adopted minerals local plan. The revised minerals local plan will contain revised proposed specific sites and preferred areas\textsuperscript{47}.

\textbf{Potential Future Supply from Specific Sites and Preferred Area of the emerging Minerals Local Plan}

6.12 In carrying out its statutory duty of preparing a Minerals Local Plan that must plan to provide enough sand and gravel (i.e 1.39mt per year) over the 15 year period that it covers ( and for the additional 7 years at the end of the plan period), the current level of permitted reserves are not sufficient.

6.13 The county council is currently in the process of addressing this issue in the review of the adopted Minerals Local Plan. The emerging Minerals Local Plan is currently in the process of being prepared and is at Proposed Submission plan stage. It is anticipated that the emerging Minerals Local Plan will be adopted in late 2020 and will cover the period from 2016 to 2031.

6.14 The county council has identified three Specific Sites and one Preferred Area within the emerging Minerals Local Plan. It is proposed that these designated sites and Preferred Area will contribute to the Hertfordshire landbank in the future and it is intended that the need for land-won aggregate (over the 15 year period that the new Minerals Local Plan will cover and the additional seven years after) will be met from these sites. An outline of these sites is provided below.

\textsuperscript{46} The applicant amended the extraction limit of this application from 2.6 million tonnes to 1.75 million tonnes.

\textsuperscript{47} The National Planning Practice Guidance 2014 states that in planning for minerals extraction, Minerals Planning Authorities should designate (one or more of either) Specific Sites, Preferred Areas or Areas of Search
Proposed Specific Site 1: Hatfield Aerodrome

6.15 Proposed Specific Site 1 has an anticipated annual output of 250,000 tonnes of sand and gravel and potential workable reserves of approximately eight million tonnes.

6.16 The site currently has a planning permission for sand and gravel extraction that is subject to a Section 106 (S106) agreement.

Proposed Specific Site 2: Furze Field

6.17 Proposed Specific Site 2 has an anticipated annual output of 400,000 tonnes of sand and gravel and potential workable reserves of approximately 450,000 tonnes.

6.18 The site obtained planning permission on 19 October 2018. Extraction of sand and gravel has not yet commenced.

Proposed Specific Site 3: Land Adjoining Coopers Green

6.19 Proposed Specific Site 3 has an anticipated annual output of 400,000-600,000 tonnes of sand and gravel and potential workable reserves of approximately 3.8 million tonnes.

6.20 An application was received by the county council on 16 November 2018 for the extraction of approximately 3.5 million tonnes (MT) of sand gravel. The application is still awaiting a decision.

Proposed Preferred Area 1: Briggens Estate

6.21 Proposed Preferred Area 1 has an anticipated annual output of 500,000 tonnes of sand and gravel and gravel. The potential workable reserves at the Briggens Estate were estimated to be 10.2 mt, as stated in the Proposed Submission Minerals Local Plan. Further work has been carried out on the Briggens Estate since it was proposed for inclusion within the emerging Minerals Local Plan. The potential workable reserves now stand at 9 mt. The reason for this drop in potential workable reserves is due to the reduction which has been made to the site boundary. The parameters of the site have been reduced to further take into account the heritage assets surrounding the site, in order to create a greater separation distance.

6.22 Table 10 below provides a comparison between how much sand and gravel the emerging Minerals Local Plan needs to plan for using the sub-regional apportionment figure of 1.39mt against how much it would need to plan for if the county council were to use the 10 year average sales figure of 1.19mt.
Table 9: Requirement for sand and gravel in Hertfordshire over the plan period of 15 years 2016 to 2031

<table>
<thead>
<tr>
<th></th>
<th>10 year average sales (2009-2018) (Mt)</th>
<th>EEAWP apportionment 2009 (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual provision</td>
<td>1.19</td>
<td>1.39</td>
</tr>
<tr>
<td><strong>Total Plan Requirement:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual provision x standard plan period (15 years)</td>
<td>17.85</td>
<td>20.85</td>
</tr>
<tr>
<td>Annual provision x standard plan period + 7 years to maintain landbank at the end of the Plan (22 years).</td>
<td>26.18</td>
<td>30.58</td>
</tr>
<tr>
<td><strong>Permitted Reserves (2018)</strong></td>
<td>10.06</td>
<td>10.06</td>
</tr>
<tr>
<td><strong>Amount to plan for (standard 15 years)</strong></td>
<td>7.79</td>
<td>10.79</td>
</tr>
<tr>
<td><strong>Amount to plan for (planned 22 years)</strong></td>
<td>16.12</td>
<td>20.52</td>
</tr>
</tbody>
</table>

Future Demand for Aggregates

6.23 District and borough councils in Hertfordshire plan for objectively assessed needs for housing, business and infrastructure within their Local Plans. The National Planning Policy Framework 2019 requires that local planning authorities identify the objectively assessed need for housing in their areas, and that Local Plans translate those needs into land provision targets.

6.24 The majority of the ten District and Borough Council’s within Hertfordshire are in the process of preparing revised Local Plans for their areas. In revising their Local Plans, the District and Borough Council’s will be/have re-calculated the housing need for their areas, in line with the government’s new methodology, to supply homes throughout for a projected period into the future.

6.25 Development planned for within the emerging District and Borough Local Plans will require aggregate materials for the construction of dwellings and associated infrastructure such as employment, roads, schools and retail. This includes both the need for land won aggregates and secondary and recycled aggregates.

6.26 The table below sets out the level of housing being planned for in the District and Borough Local Plans based on their authority area objectively assessed housing needs.

Table 10: Planned Housing requirements in Hertfordshire

<table>
<thead>
<tr>
<th>District/Borough Council</th>
<th>Planned housing requirement (as identified in emerging and new Local Plans)</th>
<th>Source of housing figure</th>
</tr>
</thead>
</table>

40
<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broxbourne</td>
<td>7,718 dwellings over 17 years (2016-2033).</td>
<td>Broxbourne Local Plan- Submission Document (November to December 2017)</td>
</tr>
<tr>
<td>Dacorum</td>
<td>17,388 homes in the Borough from 2013 to 2036.</td>
<td>Dacorum Issues and Options Consultation document</td>
</tr>
<tr>
<td>East Herts</td>
<td>A minimum of 18,458 new homes in the District up to 2033</td>
<td>East Herts District Local Plan (adopted 23 October 2018)</td>
</tr>
<tr>
<td>Hertsmere</td>
<td>Adopted Local Plan plans for 4,177 homes from 2012-2027. This works out to be 278 per annum. Hertsmere Borough Council is in the process of reviewing its adopted Local Plan. No housing figures are currently available. However, the number of houses to be planned for each year is set to rise.</td>
<td>Duty to Cooperate meeting 28/06/18</td>
</tr>
<tr>
<td>North Herts</td>
<td>15,950 homes to be provided in North Hertfordshire over the period of 2011-2031</td>
<td>North Herts Proposed Submission Local Plan October 2016</td>
</tr>
<tr>
<td>St Albans</td>
<td>14,608 homes from 2020-2036</td>
<td>St Albans Draft (Reg 19) Local Plan 2018</td>
</tr>
<tr>
<td>Stevenage</td>
<td>7,600 homes from 2011-2031</td>
<td>Stevenage Borough Local Plan (adopted 22 May 2019)</td>
</tr>
<tr>
<td>Three Rivers</td>
<td>The adopted plan plans for 180 homes per annum (4,500 by 2025/2026) The District Council is looking at increasing the number of dwellings to be delivered across the Borough throughout the period that the new Local Plan will cover. The Draft Local Plan is anticipated to be published for</td>
<td>District Concil website/ Duty to Cooperate meeting 04 December 2018.</td>
</tr>
</tbody>
</table>
The following table identifies the number of dwelling completions throughout the financial year of 1 April 2018 to 31 March 2019. This table will be updated yearly to provide an insight into the rate of housing growth within each District and Borough. Completions are predicted to rise in line with the high levels of growth being planned for as set out in table 10.

**Table 11: Housing Completions**

<table>
<thead>
<tr>
<th>Borough/District Name</th>
<th>Gross Completions</th>
<th>Gross Losses</th>
<th>Net Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broxbourne</td>
<td>485</td>
<td>26</td>
<td>459</td>
</tr>
<tr>
<td>Dacorum</td>
<td>595</td>
<td>39</td>
<td>556</td>
</tr>
<tr>
<td>East Hertfordshire</td>
<td>942</td>
<td>34</td>
<td>908</td>
</tr>
<tr>
<td>Hertsmere</td>
<td>677</td>
<td>47</td>
<td>630</td>
</tr>
<tr>
<td>North Hertfordshire</td>
<td>249</td>
<td>29</td>
<td>220</td>
</tr>
<tr>
<td>St Albans</td>
<td>731</td>
<td>107</td>
<td>624</td>
</tr>
<tr>
<td>Stevenage</td>
<td>295</td>
<td>10</td>
<td>285</td>
</tr>
<tr>
<td>Three Rivers</td>
<td>174</td>
<td>25</td>
<td>149</td>
</tr>
<tr>
<td>Watford</td>
<td>292</td>
<td>24</td>
<td>268</td>
</tr>
<tr>
<td>Welwyn Hatfield</td>
<td>505</td>
<td>38</td>
<td>467</td>
</tr>
<tr>
<td><strong>Hertfordshire Total:</strong></td>
<td><strong>4945</strong></td>
<td><strong>379</strong></td>
<td><strong>4566</strong></td>
</tr>
</tbody>
</table>

**Population Projections**

The planned growth will be required to support the increasing population of Hertfordshire. The latest estimate of the usual resident population of Hertfordshire is 1,184,400 as at mid-2018.\(^{48}\) This is an increase of 3,500\(^{49}\) in the

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\(^{48}\) ONS mid-2018 population estimates, as reported in Hertfordshire’s Local Information System (www.hertislis.org)

\(^{49}\) Calculated from subtracting the mid-2017 estimate away from the mid-2018 estimate
last year. Using the Office of National Statistic’s published data of the 2016-based subnational population projections for England; population projections for Hertfordshire suggest an increase of approximately 187,700 in population over the 25 year period from 2016 to 2041.²⁰

**Housing completions and forecast**

6.29 The Spatial Planning and Economy Unit at Hertfordshire County Council annually survey the county to check on the permitted housing developments that have been started and completed. Information obtained for 2018 (financial year 1 April 2018 to 31 March 2019) shows⁵¹:

- There were 4,566 housing completions
- There were 5,042 housing starts
- Compared with last year’s figures there has been an increase in completions by approximately 631 and an increase in housing starts by250

6.30 The Hertfordshire Local Enterprise Partnership’s (LEP) growth deal is planning for housing provision of 16,500 new homes and 11,000 jobs by 2024/25.⁵²

**Key Planned Infrastructure Requirements**

6.31 The requirement for minerals will increase in the event of the development of major infrastructure within Hertfordshire or in the surrounding areas. The council is mindful of other planned development that will be required to support additional housing growth in and around the county. Whilst mineral miles will be a consideration in the supply of minerals, specific quality of mineral may be required for schemes that are not readily available in the immediate vicinity of the project. As such, Hertfordshire may be required to provide minerals to development schemes in neighbouring authority areas. Other significant schemes will be required to accommodate growth and will be monitored annually.

6.32 The certainty of some projects is unknown as is the timing for their delivery therefore it is difficult to programme this requirement into the supply of material for such projects. The known major development schemes and those that are being planned in and around Hertfordshire that may require minerals to be supplied are as follows:

**Potential schemes across Hertfordshire:**

- A120 bypass Little Hadham;

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⁵⁰ ONS mid-2016 population estimates, as reported in Hertfordshire’s Local Information System (www.hertslis.org)
⁵¹ Information obtained from the Spatial Planning and Economy Unit, October 2019
Other development schemes potentially affecting Hertfordshire

- HS2
- Crossrail 2

Planning Applications submitted for large scale development within the county:

- Land At Delamare Road Cheshunt Hertfordshire, EN8- outline application for a residential-led mixed use development comprising up to 1,853 apartments
- Cheshunt Football Club Theobalds Lane Cheshunt Hertfordshire EN8 8RU- New stadium with capacity for up to 2000 spectators, 62 x 2 bedroom apartments, 26 x 3 bedroom houses and 22 x 4 bedroom houses
- 499 & 501, London Road, Hemel Hempstead, HP3 9BG- Outline application for the proposed demolition and replacement of both 499 and 501 London Road sites and replacement with a mixed development scheme comprising a total of 435 apartments
- Jarmans Fields, St Albans Road, Hemel Hempstead- construction of 5 retail (class a1) units totalling 10,730 sqm floorspace, and one unit totalling 186 sqm
- Land north of Dacorum way, west herts college, Dacorum campus, Marlowes, Hemel Hempstead, hp1 1hd. residential (class c3) development following demolition of existing block a building (outline application with all matters reserved except access)
- LA5, Land at Icknield Way, Tring. hybrid planning application for 240 dwellings, cemetery car park and 0.75 hectares of employment space and a cemetery extension of 1.7 hectares
- Frogmore Road Industrial Estate, Frogmore Road, Hemel Hempstead, HP3 9RW. Demolition of all existing buildings and construction of two buildings comprising 170 residential units

53 Please note that Croxley Rail Link (Metropolitan Line extension) has been removed from this list. The project was cancelled.

54 Planning Applications which are for 100+ dwellings/units and other large mixed use developments, which the county council, as Minerals and Waste Planning Authority, has provided comments on during the calendar year of 2018.
- Marlowes shopping centre, the Marlowes, Hemel Hempstead, HP1 1DX. Construction of a cinema with supporting restaurants and leisure uses, in a part refurbished Marlowes shopping centre.
- Plots 2 & 3 Kier Park, Maylands Avenue, Hemel Hempstead, HP2 4FQ. Construction of 268 flats and 1095 square metres of office space
- East Herts District Council Car Park, Northgate End, Bishops Stortford, CM23 2ET. Erection of Multi Storey Car Park providing 546 spaces, open air surface car parking for 35 spaces. Erection of a 4 storey building which includes 15 residential flats arranged over the upper 3 levels
- (HERT2) Land East of Marshgate Drive Hertford Hertfordshire SG13 7AQ. Hybrid planning application comprising: Full planning permission for 383 residential dwellings and Outline planning permission for the construction of 1,500 square metres of employment floorspace, car parking, landscaping and associated works
- Land between the A505 and the eastern edge of Baldock Inc Land off Royston Road Baldock. Outline application comprising up to 495 dwellings and up to 18.3ha of Employment land uses
- Land East Of North Road and North of the Railway Line Bygrave Road Baldock Hertfordshire. Mixed use development comprising up to 2,800 dwellings, a new local centre, two primary schools and a secondary school, a healthcare hub, up to 1,900sqm of ‘A’ Class land uses.
- Land South Of Heath Lane Codicote Hertfordshire SG4 8YL. Residential development of 167 dwellings
- Land opposite Heath Farm Briary Lane Royston Hertfordshire. Residential development for the erection of up to 107 dwellings
- Land to the East of High Street and North Road and West of Ten Acre Plantation, High Street, Graveley, Hertfordshire. Outline application for up to 900 dwellings
- 51-57 St Peters Street St Albans Hertfordshire AL1 3Dy. Demolition of existing retail unit and construction of 130 bed hotel
- The Bragbury Centre, Kenilworth Close, Stevenage, Herts, SG2 8TB. Demolition of community centre, Asquith Court and various residential dwellings. Construction of a mixed use development including 159 dwellings
- Former Little Furze Junior Mixed Infants School, Gosforth Lane, South Oxhey, Watford, Hertfordshire WD19 7RE. Outline Application for the erection of up to 70 dwellings (Use Class C3) and a 75 bed care home
- 8-12 Chalk Hill, Watford, WD19 4BN. Redevelopment of the site to provide a mixed use scheme which includes 151 residential units
- 149A, 149B and Land to the Rear of 149, St Albans Road Watford WD24 5BB. Redevelopment of the site to provide a mixed use scheme which includes 146 residential units
- 45-69 and 73-89 Sydney Road Watford WD18 7QA. Proposed redevelopment of the site to provide 227 residential units
• Land to the Rear of 1 - 43 Sydney Road & Plot between 7 & 9 Sydney Road (Inc. Humphreys Plus) Watford WD18 7PZ. Erection of new B1C (Industrial) and B8 (storage and distribution) building and yard, and erection of two apartment buildings to provide No. 291 apartments

• Former Shredded Wheat Factory Welwyn Garden City AL8 6UN. Creation of a mixed-use quarter comprising the erection of up to 1,340 residential dwellings

• Land to North East of Welwyn Garden City, Panshanger, Welwyn Garden City, AL7 2QJ. Outline application for a residential-led development of up to 650 residential units

• Hatfield Business Park, Hatfield, AL10 9SL. Outline application for a large-scale mixed use development including 1,100 new homes

• Ratcliff Tail Lifts Ltd site, Bessemer Road, Welwyn Garden, City AL7 1ET. Redevelopment of the site including erection of 110 residential units
7 CONCLUSION

7.1 Planning for mineral provision must be seen in the context of the wider economy and the government’s growth agenda. In light of the economic recession, which began in 2007, average sales of sand and gravel are likely to be skewed. Whilst there may be less of a need for minerals in the short term, mineral planning is concerned with longer term provision.

7.2 As Chapter 6 of this document identifies, there are significant levels of growth being planned for within the Hertfordshire Local Plans (in line with the government’s revised approach to calculating objectively assessed needs for housing) and planning applications for large scale development are continuing to come forward. This level of projected housing supply and increased frequency of large scale applications coming forward will require an adequate provision of minerals to be planned for and supplied.

7.3Whilst the option of using the 3 year average sales figure to plan for minerals supply may identify a local influence that requires either more or less minerals to be extracted, this is only a short term outlook on the demand for sand and gravel and does not provide a clear direction of sand and gravel sales.

7.4 The rolling 10 year sales average may be a better indicator of the need for minerals, by using a more reasonable time span to judge the need for minerals in the county. However, given that the last ten year average sales figure has spanned the period of recession, the ten year average sales figure is unlikely to portray the level of sand and gravel which needs to be planned for in the present day.

7.5 Planning for mineral provision at the lowest of levels will not allow for any economic recovery out from recession. Whilst it is recognised that secondary and recycled aggregates may reduce demand for land won provision of sand and gravel, the local data is not considered reliable to properly take account of this and adjust the land won provision requirement that has been debated by EEAWP members and based on a sound and thorough assessment of national
need. The small amount of marine aggregates is not significant to adjust the apportionment figure either.

7.6 This year, both the ten year average sales figure (which stands at 1.19) and the three year average sales figure (which stands at 1.18) are lower than the total sales figure, which stands at 1.21 million tonnes. This is an indicator that the annual apportionment figure of 1.39 million tonnes is more appropriate for Hertfordshire and will accommodate to the increase in demand for sand and gravel in line with the high levels of planned growth.

7.7 The county council, as Minerals Planning Authority will continue to use the subregional apportionment figure of 1.39 to calculate its landbank supply of sand and gravel. Although using this figure results in a lower landbank figure it is considered that this figure is more appropriate moving forward as the economy recovers out of the recession to avoid undersupply and to ensure that a sufficient level of sand and gravel is supplied to support the projected level of housing, development proposals and other large scale infrastructure projects that may affect the county.

7.8 This LAA and subsequent annual updates will inform the Minerals Local Plan review and continue to monitor the supply and demand for aggregates.
References

BGS, 2016, United Kingdom Minerals Yearbook 2015, Minerals and Waste Programme Open Report OR/16/021


DCLG & BGS, 2011 (second edition), Collation of the results of the 2009 aggregate minerals survey for England and Wales;

DCLG & BGS, Aggregate Mineral Survey AM2014 source of primary aggregates by sub-region – percent categories

EoEAWP, East of England Aggregates Annual Monitoring Report 2017

EoEAWP, East of England Aggregates Annual Monitoring Report 2018

EoEAWP Aggregate Monitoring Survey Returns 2018


HCC, Hertfordshire Minerals Local Plan Proposed Submission January 2019;


http://www.hertslis.org/env/qualityoflife/


National Planning Policy Framework (NPPF) 2019

National Planning Practice Guidance (NPPG)

Practice Guidance on the production and use of Local Aggregate Assessments, Living Document (May 2017), Planning Officers Society and Minerals Products Association

Further Information
This document has been produced by the Spatial Planning and Economy Unit, Hertfordshire County Council.
Should you have any questions in relation to this document please email Minerals.Planning@hertfordshire.gov.uk.
Appendix 1: Industrial minerals supply

7.10 Chalk is extracted in Hertfordshire for use as an agricultural lime on farms to improve soil quality and is therefore classed as an industrial mineral rather than an aggregate used in construction (e.g. for use in cement). Clay is also classed as an industrial mineral. Clay is very specialist in its nature and the bricks produced are heavily dependent on the blend of material used in the production process.

7.11 Hertfordshire County Council uses it’s LAA to monitor the supply of industrial minerals in Hertfordshire in addition to the supply of aggregates. By monitoring this information, an up to date, yearly picture of industrial mineral supply can be maintained. This information is helpful in the preparation the Hertfordshire Minerals Local Plan.

Chalk

7.12 Chalk occurs as bedrock throughout much of the county. It is a major aquifer and is the most important source of groundwater in the county. The White Chalk runs through Watford and Hertford although much is covered by superficial deposits and chalk crops out along the sides of the valleys of the rivers Ash and Lea near Hertford and the Colne valley. Grey Chalk is found in the north and far west of the county.

7.13 The Chilterns area within Hertfordshire is an area that consists of rolling chalk hills capped with Clay-with-Flints superficial deposits. This area runs from Tring to Hitchin, through Welwyn, St Albans and Watford. Steep chalk scarp slopes are found in Tring with gentler slopes covering a larger area. Gentler chalk hills than the Chilterns are found in the East Anglian Chalk area which runs from the Chilterns through Hertfordshire and South Cambridgeshire.

7.14 There were many chalk extraction sites in Hertfordshire the past, essentially for local use. However today, the scale of working is small and chalk is now quarried at one site.

7.15 Last year’s LAA (2018, covering the calendar year of 2017) noted that there were three chalk extraction sites in Hertfordshire, which included Codicote Chalk Quarry, Bedwell Chalk Quarry and Anstey Chalk Quarry.

7.16 Last year’s LAA did note that Codicote quarry ceased extraction of chalk in line with a S106 agreement (by 01 April 2017). The site is now closed and will no longer be monitored within the LAA.
7.17 Last year’s LAA noted that Anstey Quarry had planning permission to extract chalk up until the end of 2018. The site is now completely closed and will no longer be monitored within the LAA.  

7.18 Bedwell Chalk Quarry is now the only remaining quarry to supply chalk in Hertfordshire. Details of the quarry can be seen in Table 6 below.

**Table 6: Permitted 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>Bedwell Park Quarry</td>
<td>BP Mitchell Haulage Contractors Ltd</td>
<td>Currently active.</td>
<td>Extraction to cease by 21/2/2042</td>
</tr>
</tbody>
</table>

Clay

7.19 Hertfordshire sits within the Northern Thames Basin Character Area with geology of mostly London Clay overlain with superficial deposits of sand and gravel. The west Anglian Plain with geology of Gault Clay adjoins the northern part of the county and the Eastern Anglian Plain covers a large part of the East of the county with underlying chalk with a covering of Boulder Clay.

7.20 The scale of opportunities for the working of brick clay is relatively small in Hertfordshire. The only brick clay deposits are located in the Hemel Hempstead area which the emerging Minerals Local Plan will continue to safeguard through the use of Brick Clay Mineral Safeguarding Areas.

7.21 As stated in last year’s 2018 LAA (which covered the calendar year of 2017) Bovingdon Brickworks ceased operation and is no longer producing specialist brickworks.

7.22 Two sites in Hertfordshire had permission to extract brick clay for use at Bovingdon Brickworks.

7.23 Pockets Dell Quarry obtained permission to supply brick clay to Bovingdon Brickworks in 2000. The permitted reserves at Pockets Dell Quarry were completely depleted during the operation of Bovingdon Brickworks and the majority of the land (including the perimeter haul route) has been substantially restored.

7.24 Land at Cox and Croft Fields, Shantock Hall Lane, obtained planning permission for brick clay extraction in 2016. This planning permission was not implemented

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55 Where any chalk extraction planning applications are submitted to the county council, it will be monitored within the LAA.
due to the fact that Bovingdon Brickworks ceased brick production prior to opening up the land for extraction.

7.25 The NPPF 2019 requires that a stock of permitted reserves of at least 25 years for brick clay should be planned for by Minerals Planning Authorities. At the time the adopted Minerals Local Plan was prepared this requirement did not exist and as such the adopted document does not plan for a stock of brick clay to be maintained.

7.26 The revised Minerals Local Plan (which is currently at Proposed Submission stage) integrates the requirement to provide an apportionment for clay\(^56\) in line with the new NPPF requirements by safeguarding the known clay resources of the county.

7.27 The NPPF is a material planning consideration and therefore would need to be taken into account should any applications relating to brick clay come forward before the emerging Minerals Local Plan is adopted, so that the applications can be considered against the newer National Policy requirements for brick clay provision (in addition to ‘Minerals Policy 6-Other Non-Energy Minerals’ of the currently adopted Minerals Local Plan which will be used to help determine applications for brick clay extraction (should any come forward) until the emerging Minerals Local Plan is adopted).

\(^{56}\) In line with the requirements of the revised NPPF 2019