Hertfordshire County Council

Local Aggregates Assessment 2021

(Covering the calendar year of 2020)

Hertfordshire

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Executive Summary

Hertfordshire County Council, as the Mineral Planning Authority for the area, has a duty under the National Planning Policy Framework (NPPF) to produce a Local Aggregate Assessment (LAA) on an annual basis and to participate in the operation of an Aggregate Working Party, whose advice must be taken into account when preparing the LAA.

The 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 2021 and covers data from the calendar year of 2020.

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 headline figures for 2020 show that total sales of sand and gravel declined when compared to last year's figure (2019 sales figure stood at 1.25 Mt (million tonnes). At 1.12Mt, the sand and gravel sales reflect the anticipated drop in demand, as a direct consequence of the Coronavirus pandemic and temporary shutdown and slowdown in parts of the construction sector.

The 2020 total sales figure (1.12Mt) is also below the 10-year average sales figure (1.19Mt) and below the 3-year average sales figure (1.19Mt).

The sand and gravel reserves have decreased in line with sales and the current landbank stands at 5.9 years. This is based on Hertfordshire's revised Annual Provision Rate of 1.31Mtpa (million tonnes per annum). It can supply aggregate for a period of 6.5 years based on the 10-year average sales data.

2020 Headline Figures

	Performance in 2020	Comparison with 2019
Land won sand and gravel sales (tonnes)	1,122,625	↓125,386
Permitted reserves of sand and gravel at end of year (tonnes)	7,684,000	↓1,267,000
Landbank based on Annual Provision Rate (years)	5.9[1]	↓0.5
Landbank based on 10-year average sales (years)	6.5	↓1
Landbank based on 3-year average sales (years)	6.5	↓0.9
Number of Allocated Sites (in current adopted Minerals Local Plan)	3	3
Remaining potential yield (Mt) from Preferred Areas	Up to 14	N/A
Rail depot imports (crushed rock) (tonnes)	719,730	↑114,161[2]

[1] Please note that the landbank figure has been calculated using the revised Annual Provision Rate of 1.31Mtpa (former rate stood at 1.39Mtpa). Please see Section 4 of this report for more information on the revised Annual Provision Rate

[2] The 2020 figures have been compared against the data collected through the county council's own 2019 Annual Aggregate Monitoring Survey. The EoEAWP Annual Monitoring Reports will use data from the 2019 British Geological Survey (BGS) Aggregate Minerals Survey for England and Wales. This means that the 2019 figures for Hertfordshire reported in the EoEAWP Annual Monitoring Reports may differ to the figures used by the county council for 2019.

1. Introduction

1.1 Minerals such as 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, for example ground chalk is added to bread to give calcium and the abrasive in toothpaste comes from limestone[3]. 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.

1.2 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.

1.3 The NPPF recognises the importance of minerals and sets out the requirement for Minerals Planning Authorities to produce a LAA on an annual basis.

1.4 Paragraph 213 of the NPPF 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)'

1.5 The LAA has been prepared to fulfil the requirements of the NPPF and has also been prepared in line with 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 moving forwards with the review of the Minerals Local Plan, a revised Annual Provision Rate will be used to plan for the supply of sand and gravel. The revised figure stands at 1.31Mtpa. The former Annual Provision Rate stood at 1.39Mtpa and was based on information which is now out of date.

1.7 The revised Annual Provision Rate is based on the 10-year average sales figure (1.19Mt) in line with the requirements of the NPPF, plus an extra ten percent uplift, to provide flexibility and accommodate to future growth.

[3] https://mineralproducts.org/qua_agg01.htm

1.8 More information on the revised Annual Provision Rate can be found in Section 4 of this report.

1.9 This LAA will identify the current landbank of sand and gravel using the revised Annual Provision Rate (1.31Mtpa). The landbank is the number of years the permitted reserves of sand and gravel will last for. It is calculated by dividing the total sand and gravel reserves figure by the Annual Provision Rate. For more information on the landbank, please see Chapter 4 of this document.

1.10 The LAA will continue to identify what the landbank figure would be if the county council were to use the 10-year or 3-year average sales data in order to provide comparisons.

1.11 The difference between the Hertfordshire revised Annual Provision Rate and the 10-year average and 3-year average sales figures are shown below in Table 1 below:

Table 1: Annual Provision Rate vs the 10 and 3-Year Average Sales Figures

Annual Provision Rates	**Million Tonnes Per Annum**
Hertfordshire revised Annual Provision Rate	1.31
10-year sales average (2011-2020)	1.19
3-year sales average (2018-2020)	1.19

2. Mineral Resources

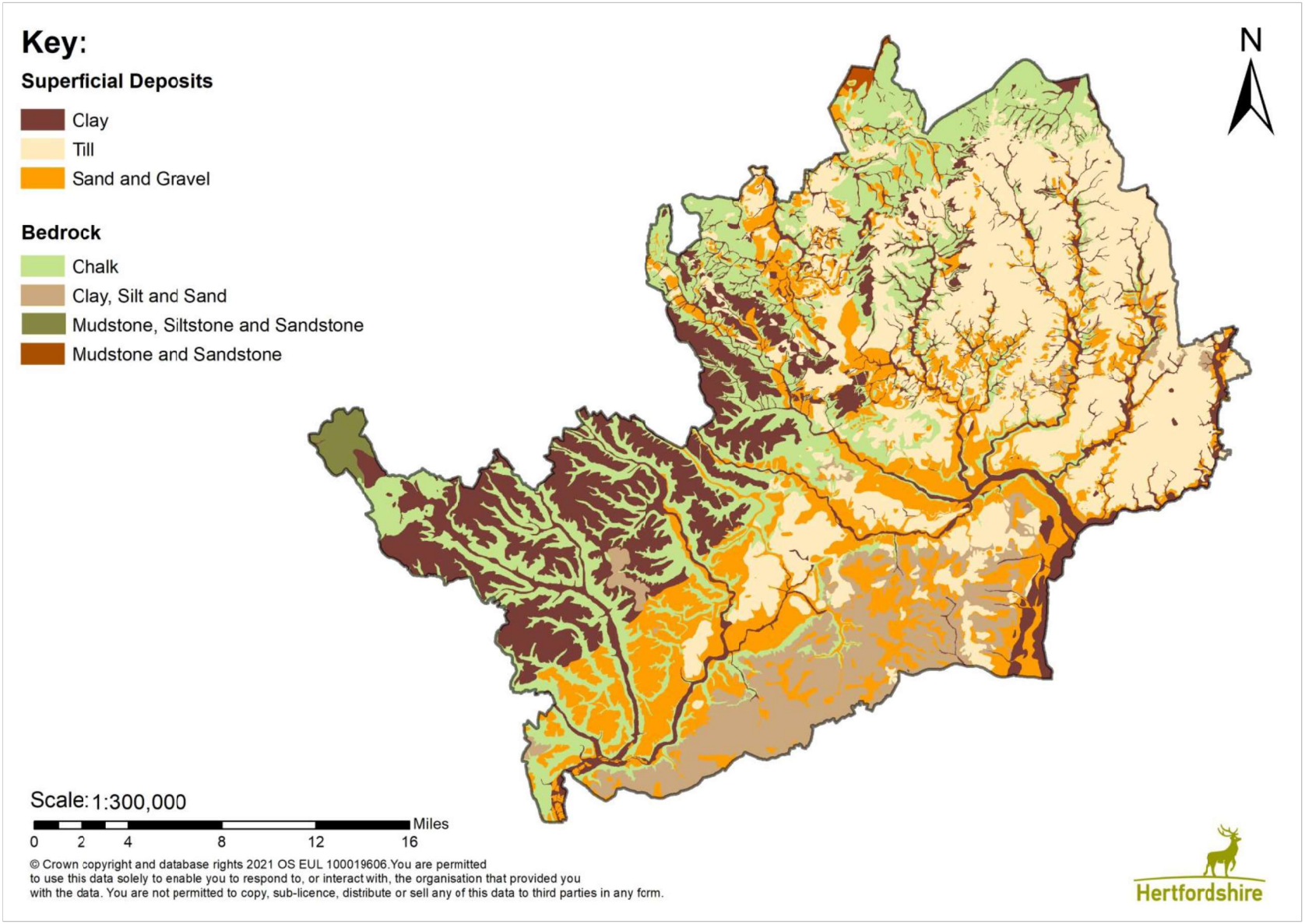
Naturally Occurring Geological Deposits

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 below). The county does not contain any naturally occurring resources of hard rock and relies on imports of this mineral through the Hertfordshire Rail Aggregate Depots.

2.2 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.[4]

[4] Biodiversity Action Plan for Hertfordshire 2006, www.hef.org.uk

Figure 1: Main Naturally Occurring Minerals in Hertfordshire



Location of Sand and Gravel Deposits

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 Sand and gravel from Hertfordshire is mostly used by the construction industry. Material 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). Building sand, also known as soft sand, is less commonly found in the county and is mostly imported.

2.6 The Minerals Local Plan is used to plan for the future supply of sand and gravel and identifies the sand and gravel resources across the county. The current Hertfordshire Minerals Local Plan (adopted 2007) contains a Proposals 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 the southern half of the county, covering the whole of the District/Borough 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 and has prepared 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) can be seen below in Figure 3.

[5] BGS & ODPM, 2003, Technical report CR/03/075/N Mineral Resource Information in support of National, Regional and Local Planning: Hertfordshire and Northwest London Boroughs

Figure 2: Adopted Sand and Gravel Belt

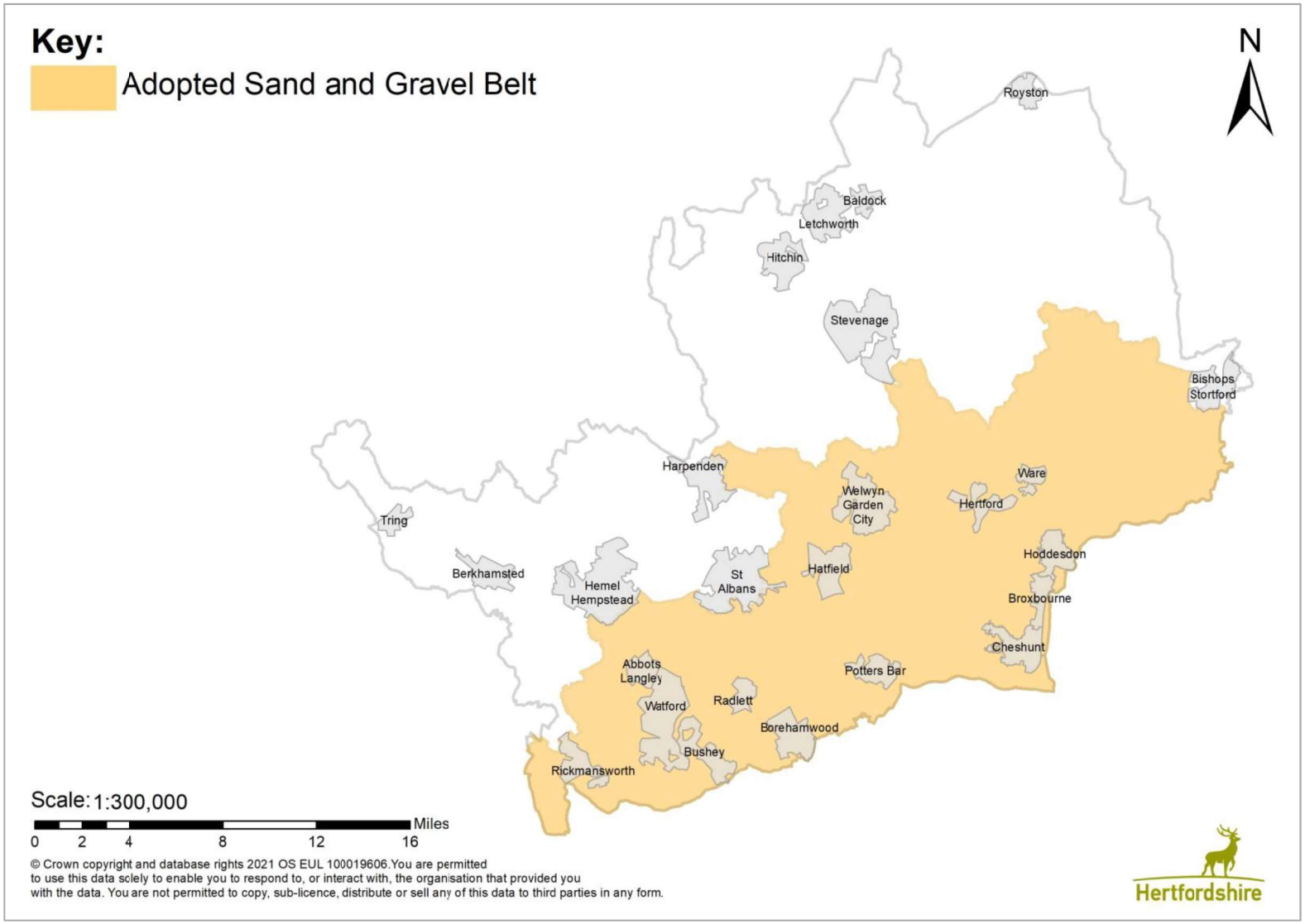
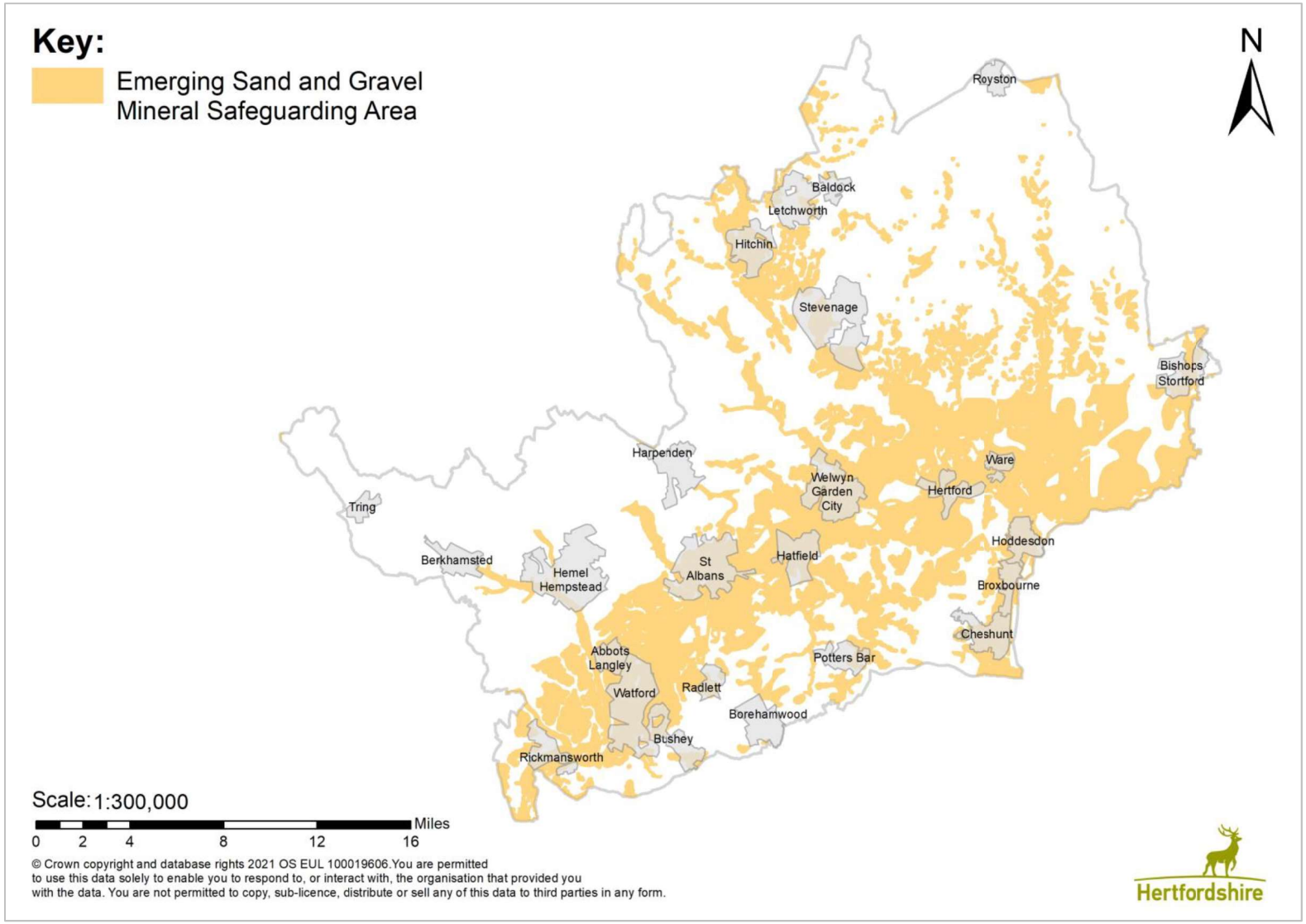


Figure 3: Emerging Sand and Gravel Mineral Safeguarding Area



3. Sand and Gravel Reserves

3.1 The term ‘sand and gravel reserves’ refers to the supply of sand and gravel in Hertfordshire which has planning permission to be extracted. There are seven permitted sand and gravel quarries in Hertfordshire as of the end of 2020. Of these seven sites, three have remaining reserves of sand and gravel. Sand and gravel extraction is therefore taking place at these three sites only. The three sites include:

- Tyttenhanger Quarry, Colney Heath
- Hatfield Quarry -Symondshyde[6] &
- Thorley Hall Farm

3.2 The remaining four sites are no longer extracting sand and gravel and are either in the process of infill/restoration or are not currently operating. See Table 3 and Figure 4 below for further details of the sand and gravel sites in Hertfordshire.

3.3 When compared to last year’s LAA, Great Westwood Quarry has been removed from the list of permitted sites in Hertfordshire and removed from Table 3 and Figure 4. Great Westwood Quarry reached aftercare stages in July 2020. The site will no longer be monitored within the LAA and is complete from Hertfordshire County Council’s planning perspective.

3.4 At the end of 2020 the total reserves figure stood at 7.68Mt. This figure is made up of the permitted reserves remaining at the three sites listed above. The reserves have decreased by approximately 1.27Mt when compared to last year’s reserves figure (8.9Mt), in line with the sand and gravel sales and in line with a recalculation in reserves, provided through the operator returns[7].

3.5 On 22 October 2020, an application for the extraction of approximately 3.52Mt of sand gravel at Land adjoining Coopers Green Lane, Hatfield Quarry (planning reference PL\0963\18) was presented to the county council’s Development Control Committee and received approval from members, subject to the signing of a Section 106 legal agreement (S106). This means that the site does not formally have planning permission and the reserves from the site cannot be added to the total reserves figure this year. Once the Decision Notice has been issued, the reserves can be included in the total reserves figure.

[6] Hatfield Quarry contains permitted reserves within two parcels of land known as Symondshyde Furze Field Extraction is not yet taking place on Furze Field

[7] Operators of the sand and gravel quarries in Hertfordshire, provide information to the county council through the Annual Aggregate Monitoring Surveys

3.6 A breakdown of the Hertfordshire reserves over the past ten years can be seen in Table 2 below. As the figures show, the reserves have been declining since 2014. Reserves decline as sites are worked and material is supplied to the market. However, reserves figures are boosted periodically through the approval of planning applications for additional sand and gravel extraction. For example, the approval of Furze Field (an extension to the existing Hatfield Quarry) in October 2018 meant that the end of 2018 reserves figure remained at a similar level to the end of 2017 reserves figure, as opposed to dropping in line with the sales.

3.7 The total reserves figure will be boosted by the sand and gravel supply for Land adjoining Coopers Green Lane (3.52Mt) once the site formally receives planning permission. Next year's LAA will provide an update on Land Adjoining Coopers Green Lane.

Table 2: Sand and Gravel Reserves

Year	Permitted Reserves of Sand and Gravel (tonnes)
2011	16,700,000
2012	15,792,000
2013	16,260,000
2014	14,440,000
2015	13,215,716
2016	11,752,000
2017	10,458,308
2018	10,056,000
2019	8,951,000
2020	7,684,000

Table 3: Permitted Sand and Gravel Sites

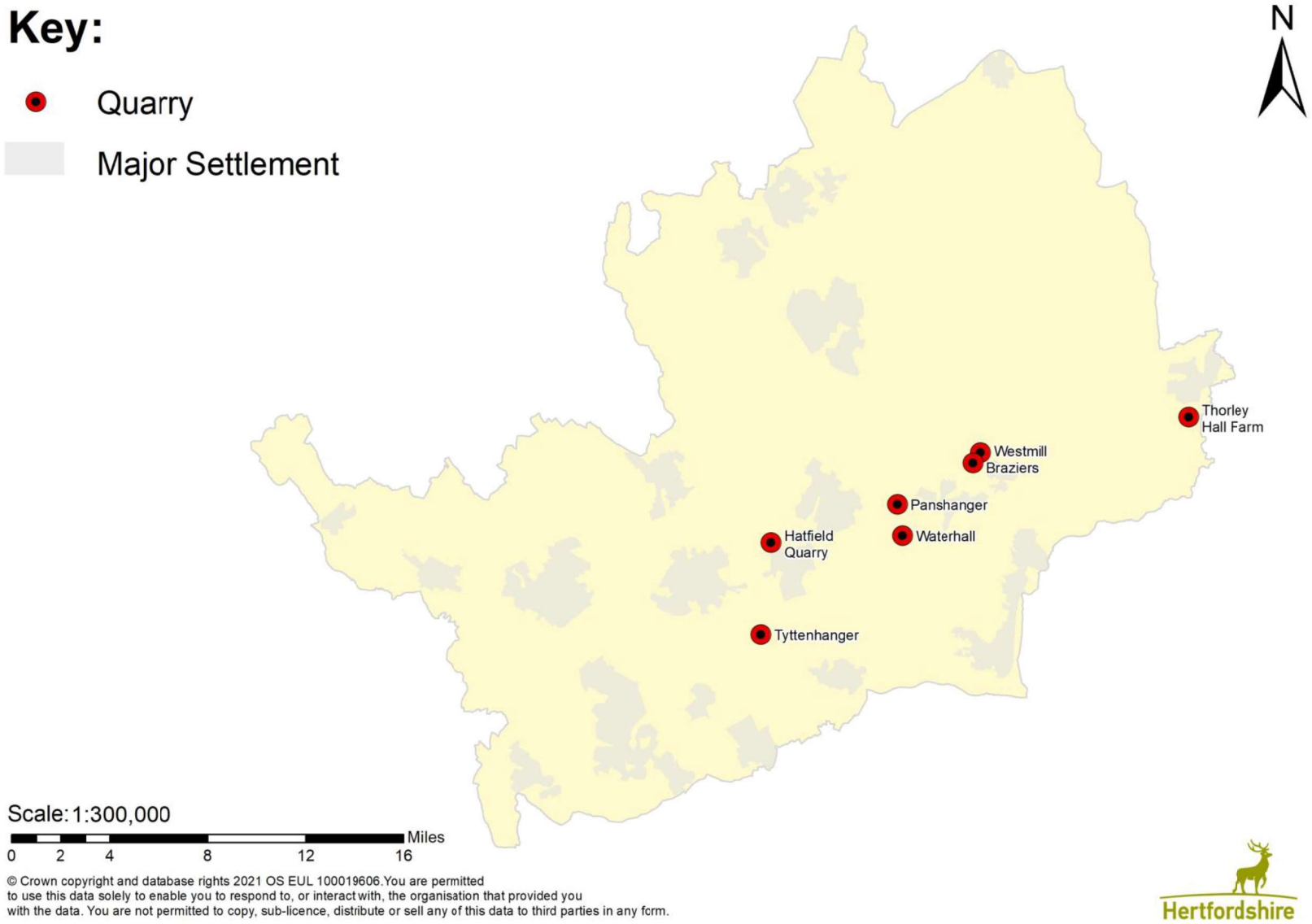
Site Name	Operator	Status	Restoration	Cessation dates
Hatfield Quarry Hatfield Quarry is comprised of the following permitted sites: Symondshyde Farm (planning reference number: 6/0439-03) Furze Field (planning reference number: PL\0820\16) Cutfield Landfill (restoration of Cutfield Lagoon) - Inert fill only (planning reference number: 5/1240-14)	Cemex UK Ltd	Active. Extraction taking place at Symondshyde only and inert fill is taking place at Cutfield Landfill	Inert restoration	Symondshyde Farm to be completed by 31-12-2023[8] Furze Field to be completed by summer 2023
Tyttenhanger Quarry (planning reference number: 0/1353-06)[9]	Tarmac Ltd	Active. Extraction and inert fill.	Inert restoration	Extraction and site permission 31-12-2032
Thorley Hall Farm (planning reference number: PL\0549\13)	Ingrebourne Valley Ltd	Active. Extraction taking place.	Agricultural reservoir	Reservoir construction & restoration works are to be completed by 30-10-2024[10]

[8] Cessation dates extended. Search using planning reference PL/0165/20
[9] Tyttenhanger has a long and complicated planning history. This is the most relevant planning reference number, which relates to the most recently permitted area for extraction. To search the 2001 planning consent (50.5 hectare extraction area) use reference number 5/0250-97
[10] Cessation dates extended. Search using planning reference PL/0188/20

Westmill Landfill (planning reference number: PL\0750\15)	Biffa Waste Services Ltd	Active. Excavation is complete. Site active as a landfill only. The site receives restoration soils inert materials.	Non-hazardous restoration	Final restoration to be completed by 31-12-2027.
Panshanger Landfill (planning reference number: PL\0684\15)	Tarmac Ltd BP Mitchell Haulage Limited	Active. Excavation is complete. Inert restoration taking place.	Inert restoration	Restoration to be completed within 10 years of commencement of importation of infill (Infill commenced on 28 January 2019).
Braziers Landfill (planning reference number: 3/1416-97. Inert restoration taking place on an extant planning permission)	Frank Lyons Services Group	Active Inert restoration	Inert restoration	Restoration of the site is expected to take approximately two and a half/three years to complete. Site began taking waste on 05 March 2018.
Waterhall Complex The Water Hall Quarry Complex is divided into four distinct geographical and planning areas: Water Hall, Southfield Wood, Bunkers Hill and Pollards. (planning reference number: PL\0582\13)[11]	Waterhall (England) Ltd/Frank Lyons	Inactive. The site has been worked and restoration has ceased.	Inert restoration	Extraction, infilling, mineral processing and restoration to cease on 31-12-2019

[11] Waterhall Complex has a long and complicated planning history. This is the most relevant planning reference number, which relates to the most recently approved permission on the complex (relating to time limits for completion of restoration)

Figure 4: Locations of Permitted Sand and Gravel Sites



Sand and Gravel Reserves Permitted During 2020

3.8 Two planning applications for sand and gravel extraction were determined during 2020, at the county council's Development Control Committee.

3.9 An application for sand and gravel extraction on Land at Hatfield Aerodrome (planning reference number 5/0394-16) was refused at Development Control Committee on 24 September 2020.

3.10 As last year's LAA explained, whilst the application on Land at Hatfield Aerodrome was refused, the site still forms part of the potential yield of reserves which remain in the county council's identified Preferred Areas (in the adopted Minerals Local Plan 2007) and therefore any future updates regarding the site will be monitored within the LAA.

3.11 On 30 June 2021, Brett Aggregates Limited submitted an appeal to the Secretary of State against the decision of Hertfordshire County Council to refuse planning permission for the extraction of sand and gravel on Land at Hatfield Aerodrome (appeal reference APP/M1900/W/21/3278097).

3.12 The appeal will be determined on the basis of a public inquiry which will commence on 16 November 2021. Next year's LAA will detail the outcomes of the public inquiry. For more information on the planning application and appeal relating to Land at Hatfield Aerodrome, please follow the link below and search using reference number 5/0394-16.

https://planning.hertfordshire.gov.uk/

3.13 On 22 October 2020, a planning application for the extraction of approximately 3.52Mt of sand gravel at Land adjoining Coopers Green Lane, Hatfield Quarry (planning reference number PL\0963\18) was presented to the county council's Development Control Committee and received approval, subject to the signing of a Section 106 legal agreement (S106). This means that the site does not formally have planning permission and the reserves from the site cannot be added to the total reserves figure this year. Once the Decision Notice has been issued, the site will have planning permission and the reserves can be included in the total reserves figure.

Supply from the Preferred Areas within the Adopted Minerals Local Plan

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

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

3.15 Of these sites, one is being worked for its reserves, one is subject to a planning application and one had a planning application refused at Development Control Committee and will be subject to a Public Inquiry in November 2021.

Preferred Area 1

Land at Hatfield Aerodrome

3.16 Land at Hatfield Aerodrome was given a resolution to grant planning permission subject to the signing of a Section 106 legal agreement (S106) at Development Control Committee in January 2017. The time period in which the S106 was due to be signed lapsed and the application went back to committee in December 2019. Issues remained unresolved following the December 2019 committee and no decision was made. On 24 September 2020, the application went back to Development Control Committee and was refused.

3.17 As Paragraph 3.11 explains, on 30 June 2021, Brett Aggregates Limited submitted an appeal to the Secretary of State against the decision of Hertfordshire County Council to refuse planning permission for the extraction of sand and gravel on Land at Hatfield Aerodrome (appeal reference APP/M1900/W/21/3278097).

3.18 The appeal will be determined on the basis of a Public Inquiry which will commence on 16 November 2021. Next year's LAA will detail the outcomes of the Public Inquiry.

3.19 As it currently stands, Preferred Area 1 has a remaining potential yield of 8Mt.

Preferred Area 2

Eastern Extension to Rickneys Quarry

3.20 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 eastern extension to the mothballed site at Rickneys Quarry, to extract 1.24Mt of sand and gravel (planning reference number 3/2077-13). This application falls within the boundary of Preferred Area 2 and remains undetermined as of the end of 2020.

3.21 Planning permission (3/0629-06) for an eastern extension to Rickneys Quarry was granted in 2009 by Hertfordshire County Council. The permission provided a period of four years (until 31 December 2013) to implement the development.

3.22 Due to the economic downturn, the applicant did not commence development within that four-year period and subsequently the permission to extract the sand and gravel expired. For this reason, the 1.24Mt of sand and gravel within the eastern extension does not form part of the total reserves figure for Hertfordshire.

3.23 The applicant is now seeking to vary the date of commencement for the development, to be no later than eight years from the date of the original permission (i.e. up until 31st December 2021).

3.24 The planning application for the proposed eastern extension to Rickneys Quarry will continue to be monitored through subsequent LAAs. Should this application be permitted, the sand and gravel reserves from the site will be added to the total reserves figure for Hertfordshire.

Land at Ware Park (also known as Bengeo Quarry)

3.25 Two planning applications were submitted on Land at Ware Park, which covers the southern part of Preferred Area 2 and adjoins Rickneys Quarry. Both applications were refused at Development Control Committee on separate occasions.

3.26 The applicant appealed the decision on the first application (2.6Mt[12]) 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 4 April 2019 which dismissed the appeal and refused planning permission.

[12] The applicant amended the extraction limit of this application from 2.6Mt to 1.75Mt.

3.27 As it currently stands, Preferred Area 2 has a remaining potential yield of 5-6Mt.

Preferred Area 3- Coursers Road (Tyttenhanger)

3.28 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 permitted on 23 February 2011.

Potential Future Supply from Specific Sites and Preferred Area within the emerging[13] Minerals Local Plan

3.29 The county council, as Minerals Planning Authority, is carrying out its statutory duty of reviewing the Minerals Local Plan, such that it continues to provide enough sand and gravel over the plan period. The current level of permitted reserves (7.68Mt) is not sufficient to provide enough material to meet future demands, and the review of the Minerals Local Plan is addressing this matter.

3.30 The emerging Minerals Local Plan is currently in the process of being prepared and is at Proposed Submission stage. The county council has identified three Specific Sites and one Preferred Area within the emerging Minerals Local Plan. It is intended that the county's need for land-won sand and gravel will be met from these sites as well as existing permitted reserves. An outline of the three Specific Sites and Preferred Area is provided below.

Proposed Specific Site 1: Hatfield Aerodrome

3.31 Proposed Specific Site 1 has an anticipated potential yield of approximately 8Mt. As paragraph 3.16 explains, the application at Land at Hatfield Aerodrome was refused at committee on 24 September 2020 and a Public Inquiry will be taking place in November 2021.

3.32 Specific Site 1 has been subject to extensive assessment through a Sustainability Appraisal and Site Selection Study[14] and is seen as a suitable for identification as a Specific Site in the emerging Minerals Local Plan.

[13] The term 'emerging' refers to the Minerals Local Plan which is currently being prepared and which will eventually replace the current adopted Minerals Local Plan.
[14] Both documents were prepared by Land Use Consultants and were produced to support the review of the Minerals Local Plan

Proposed Specific Site 2: Furze Field

3.33 Furze Field obtained planning permission on 19 October 2018. The site is to be worked as an extension to the existing Hatfield Quarry and has a permitted workable reserve of 0.45Mt. Extraction of sand and gravel has not yet commenced (as of the end of 2020).

Proposed Specific Site 3: Land Adjoining Coopers Green

3.34 Land adjoining Coopers Green Lane has approval subject to the signing of a S106 legal agreement. Once the Decision Notice has been issued, the site will have planning permission to be worked.

Proposed Preferred Area 1: Briggens Estate

3.35 Proposed Preferred Area 1 has an anticipated annual output of 0.5Mt of sand and gravel and gravel. The potential workable reserves at the Briggens Estate are estimated to be 8.8Mt.

3.36 Preferred Area 1 has been subject to extensive assessment through a Sustainability Appraisal and Site Selection Study and is seen as a suitable for identification as a Specific Site in the emerging Minerals Local Plan.

4. Annual Provision Rate and Landbank

4.1 The Annual Provision Rate is the amount of sand and gravel (in Mt) required each year in order to meet demand. It is used to calculate the sand and gravel landbank and inform how much sand and gravel needs to be planned for within the Hertfordshire Minerals Local Plan.

4.2 The landbank is the number of years the permitted reserves of sand and gravel will last for. It is calculated by dividing the total sand and gravel reserves figure by the Annual Provision Rate.

4.3 As Paragraph 213 of the NPPF states, Minerals planning authorities should plan for a steady and adequate supply of aggregates by:

'using landbanks of aggregate minerals reserves principally as an indicator of the security of aggregate minerals supply, and to indicate the additional provision that needs to be made for new aggregate extraction and alternative supplies in mineral plans'

'maintaining landbanks of at least 7 years for sand and gravel and at least 10 years for crushed rock[15], whilst ensuring that the capacity of operations to supply a wide range of materials is not compromised'

4.4 Hertfordshire's Annual Provision Rate has changed over time due to periodic reviews. The current adopted Minerals Local Plan (adopted March 2007) was prepared using the Annual Provision Rate of 1.99Mtpa[16]. The Annual Provision Rate was reviewed through the 2009 National and Regional Guidelines for Aggregates Provision, resulting in a decreased Annual Provision Rate of 1.39Mtpa. This figure has been used in the preparation of the emerging Minerals Local Plan.

4.5 The 2009 National and Regional Guidelines for Aggregates Provision in England are now out of date (the Guidelines covered the period from 2005-2020) and therefore no longer provide an accurate basis upon which to inform the Annual Provision Rate.

4.6 The NPPG states that the 2009 Guidelines are not to be interpreted as rigid standards[17] and that Mineral planning authorities may decide, collectively, to

[15] Hertfordshire does not plan for a supply of crushed rock as the county does not contain any naturally occurring resources. All crushed rock is imported into Hertfordshire via the rail aggregate depots
[16] As detailed in former Minerals Planning Guidance Note 6: Guidelines for Aggregates Provision in England, 1994-2016, dated April 1994, as amended June 2003
[17] Paragraph: 068 Reference ID: 27-068-20140306

plan for more or less than set out in the Guidelines based on their Local Aggregate Assessment. The NPPG goes on to state that such provision must be supported by robust evidence and be properly justified, having regard to local and national need.[18]

4.7 When considering the use of the 10-year sales average figure to calculate future supply, the NPPG states:

'Local Aggregate Assessments must also consider other relevant local information in addition to the 10 year rolling supply, which seeks to look ahead at possible future demand, rather than rely solely on past sales. Such information may include, for example, levels of planned construction and housebuilding in their area and throughout the country.'[19]

4.8 The Annual Provision Rate for Hertfordshire has been revised based on the 10-year average sales figure (1.19Mt) plus an extra ten percent uplift, to provide flexibility and accommodate to future growth. This gives an Annual Provision Rate of 1.31Mtpa. Assessments of other factors which may influence supply and future demand for sand and gravel (including future growth) are set out in Sections 6 and 7 of this report.

4.9 As Paragraph 4.1 explains, the Annual Provision Rate is used to calculate the sand and gravel landbank. Table 4 below shows the difference in the using the revised Hertfordshire Annual Provision Rate to calculate the landbank, vs the 3 or 10-year average sales figures for comparison.

Table 4: Annual Provision Rates and Landbank

Annual Provision Rate	**Million Tonnes Per Annum**	**Landbank (in years)**
Revised Hertfordshire Annual provision Rate	1.31	5.9
10-year sales average (2011-2020)	1.19	6.5
3-year sales average (2018-2020)	1.19	6.5

4.10 As can be seen from the table above, Hertfordshire currently has a landbank under 7 years. Paragraph 213 of the NPPF states that Minerals planning authorities should maintain landbanks of at least 7 years. As Paragraph 3.29 explains, the review of the Minerals Local Plan is addressing the shortfall in future supply of sand and gravel in Hertfordshire. It is intended that the sites identified in the emerging Minerals Local Plan will provide a sufficient supply of sand and gravel to meet future needs.

[18] Paragraph: 070 Reference ID: 27-070-20140306
[19] Paragraph: 064 Reference ID: 27-064-20140306

4.11 The total reserves figure will also be boosted by the sand and gravel supply from Land adjoining Coopers Green Lane (3.52Mt), once the site formally receives planning permission.

4.12 To provide comparisons, the landbanks for Hertfordshire[20] over the past 7 years are set out below:

- 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
- 6.4 years in 2019
- 5.9 years in 2020

4.13 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, as Table 4 shows, if the current 10-year or 3-year sales averages were used to calculate the sand and gravel landbank for Hertfordshire, this would result in a lower provision being planned for.

4.14 An Annual Provision Rate of 1.19Mtpa would be considered too low to use when planning for sand and gravel in Hertfordshire. The total sand and gravel sales have exceeded 1.19Mt five times over the past ten years, whereas the sales have never exceeded 1.31Mt over the past ten years (see Figure 5).

4.15 The revised Annual Provision Rate is considered to more closely reflect the sand and gravel sales figures and at the same time still provides flexibility to account for the anticipated higher levels of demand for sand and gravel, to support the growth in the county.

4.16 The remaining chapters of the LAA explore the supply and demand factors which will influence the requirement for sand and gravel in the county and seek to justify and support the revised Annual Provision Rate.

[20] The landbank figures from 2013 to 2019 were calculated using the previous Annual Provision Rate of 1.39Mtpa. The 2020 landbank figure has been calculated using the revised Annual Provision Rate of 1.31Mtpa.

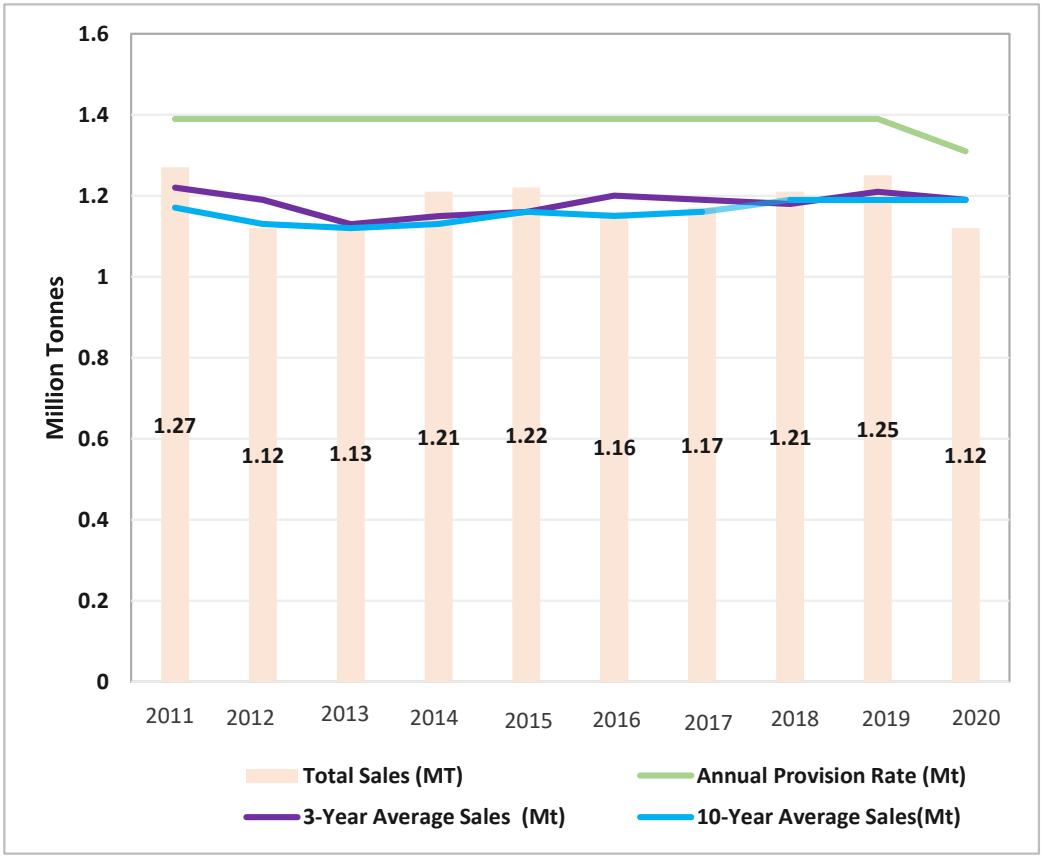
5. Sales Data

5.1 Sand and gravel sales at the end of 2020 stood at 1.12Mt; a decrease when compared to last year's total sales figure which stood at 1.25Mt.

5.2 It can be assumed that the decrease in sales during 2020 is partly as a result of the Coronavirus pandemic. Some quarries closed during parts of the year and some sites were affected by staffing issues. It is expected that sand and gravel sales will steadily rise again as the country recovers from the pandemic.

5.3 Sales of sand and gravel (including soft sands) for the 10-year period between 2011 and 2020 inclusive are shown in Figure 5 below. The figures are based on actual sales data from the county's annual Aggregate Monitoring Surveys and the BGS Aggregate Minerals Survey 2014 for England and Wales.

Figure 5: Sales Compared with Annual Provision



3-Year and 10-Year Average Sales

5.4 The average sales of sand and gravel in Hertfordshire over the last 10-year period is 1.19Mt (2011-2020). As a comparison, this figure was 1.19Mt at the end of 2019 and 1.19Mt at the end of 2018, thereby remaining at the same level over the past three years.

5.5 The average sales of sand and gravel in Hertfordshire over the last 3-year period is also 1.19Mt (2018-2020). This figure was 1.21Mt at the end of 2019 and 1.18Mt at the end of 2018. The reduced figure directly reflects the drop in sales during 2020.

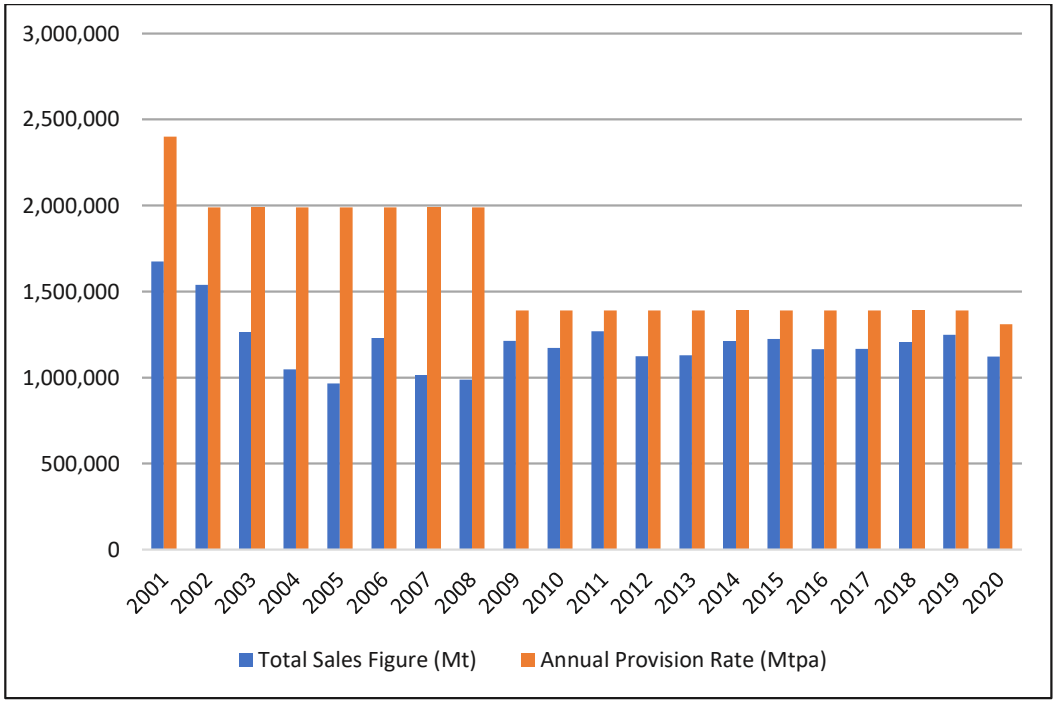
5.6 The sand and gravel sales as of the end of 2019 stood at 1.25Mt. The highest sales figure since 2011. As can be seen in Figure 5 above, this increase in sales resulted in a small spike in the 3-year sales average and the figure has lowered to 1.19Mt as a result of the reduced sales in 2020.

Annual Provision Rate vs Sales Figures

5.7 It is important to investigate how close the Annual Provision Rate is to the sand and gravel sales figures, to ensure that there is enough flexibility provided. A figure that is too low could result in a shortage of sand and gravel. A figure that is too high could result in an oversupply being planned for.

5.8 Figure 6 below shows the sand and gravel sales figures over the past 20-year period (2001-2020) against the Annual Provision Rate. Figure 6 shows that the sales have never reached or been above the Annual Provision Rate over the 20-year period. When solely considering the current Annual Provision Rate (1.31Mtpa), the sales have not been above this figure since 2002.

Figure 6: Sand and Gravel Sales vs Annual Provision Rate



5.9 It is anticipated that the revised Annual Provision Rate will continue to exceed the sales for the foreseeable future. An Annual Provision Rate that is higher than the average sales figures will ensure flexibility in the supply of sand and gravel being planned for and will ensure there is enough material to accommodate to future growth. See Section 7 for more information on the future growth being planned for in Hertfordshire.

5.10 As Paragraph 4.14 explains, the current 10-year sales average is too low to use for the planning of future sand and gravel supply in Hertfordshire and a higher Annual Provision Rate is required. In line with the NPPG, the Minerals Planning Authority has considered the use of the 10-year sales average figure and has also considered other relevant local information and possible future demand[21].

[21] See NPPG Paragraph: 064 Reference ID: 27-064-20140306

6. An Assessment of all other Supply Options

6.1 As Paragraph 213a of the NPPF 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'*

6.2 This Chapter sets out an assessment of all other supply options which have been considered in planning for future sand and gravel supply in Hertfordshire.

Imports and Exports

6.3 A small portion of aggregate consumed within Hertfordshire is supplied by other authorities. This can include crushed rock, land won sand and gravel, marine dredged sand and gravel and recycled aggregates.

6.4 It is important to investigate where this external supply comes from and what contribution this supply makes to the amount of material consumed within Hertfordshire.

6.5 Data relating to the sales and consumption of aggregates are collected and collated at a national and regional level. 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.

6.6 Conducted by MHCLG[22] and BGS, the latest survey was carried out in 2020 to capture data for 2019. As last year's LAA explained, the 2019 National AMS was undertaken later in 2020 than anticipated and as such, data from the survey was unavailable to use within last year's LAA (2020 LAA which covers data from 2019).

6.7 The county council (and all other MPA's who operate as part of the EoEAWP) chose to carry out their usual Annual Aggregate Monitoring Survey to ensure there would be no delay in producing the 2020 LAA[23].

[22] Ministry of Housing, Communities and Local Government (formerly Department for Communities and Local Government)

[23] The EoEAWP Annual Monitoring Reports will use data from the 2019 National AMS. The 2019 figures for Hertfordshire reported in the EoEAWP Annual Monitoring Reports may differ to the figures used by the county council for 2019.

6.8 Whilst the county council has already collected and published its own data for 2019 (within the 2020 LAA), the data from the 2019 national AMS provide additional insights relating to imports and exports of aggregate minerals, that the county council cannot collect through its own annual survey.

6.9 These data provide the information required to determine how reliant Hertfordshire is on different types of imported aggregates and forms an integral part of the assessment of all other supply options, as required by paragraph 213a of the NPPF.

6.10 The figures from the 2019 National AMS are set out below.

Imports and Consumption of Land Won Sand and Gravel

6.11 The 2019 AMS reports that Hertfordshire received 222,000 tonnes of imported land won sand and gravel[24]. In comparison, the 2014 AMS reported that Hertfordshire received 434,000 tonnes of imported land won sand and gravel.

6.12 Of the land won sand and gravel consumed[25] within Hertfordshire (1,148,000 tonnes) as reported in the 2019 AMS:

- 80-90% came from within Hertfordshire;
- 1-10% was supplied from Buckinghamshire mt
- 1-10% was supplied from Essex
- 1-10% was supplied from Windsor and Maidenhead
- <1% was supplied from Wiltshire, Bedford Borough, Cambridgeshire, Hampshire, Central Bedfordshire, Norfolk, Peterborough, Suffolk and Herefordshire

6.13 When compared to the land won sand and gravel consumption figure from the 2014 AMS (1,126,000 tonnes), it is clear that a greater quantity of land won sand and gravel was consumed in the county during 2019. It is also evident that a greater proportion of that sand and gravel originated from within Hertfordshire.

Imports and Consumption of Marine sources

6.14 The 2019 AMS reports that Hertfordshire received 216,000 tonnes of imported marine sand and gravel[26]. In comparison, the 2014 AMS reported that Hertfordshire received 19,000 tonnes of imported marine sand and gravel.

6.15 Of the 216,000 tonnes of marine sand and gravel consumed in Hertfordshire as reported in the AMS 2019:

[24] Table 10 of the Collated results of the 2019 Aggregate Minerals Survey for England and Wales
[25] Consumption is an overall figure combining imports from external sources as well as the supply consumed from in-county sources
[26] Table 10 of the Collated results of the 2019 Aggregate Minerals Survey for England and Wales

- 90-100% was supplied from the London Borough of Greenwich &
- 1-10% was supplied from the London Borough of Barking & Dagenham

6.16 When comparing the 2019 data to the 2014 data, it is clear that the county received a greater supply of marine sand and gravel in 2019 when compared to 2014. During 2019, the supply of marine sand and gravel was provided from authorities in Greater London only, whereas in 2014, supply was provided by Greater London (East), Kent and Hampshire.

Imports and Consumption of Crushed Rock

6.17 The 2019 AMS reports that Hertfordshire received 729,000 tonnes of imported crushed rock[27] from the following sources[28]:

- 60-70% came from Leicestershire;
- 10-20% came from Somerset;
- 1-10% came from Cambridgeshire
- 1-10% came from Shropshire
- 1-10% came from Powys
- <1% came, Gloucestershire, Oxfordshire, Derbyshire, the Peak District National Park, Durham and from outside England & Wales

6.18 Hertfordshire received and consumed a greater quantity of crushed rock in 2019 when compared to the figure from the 2014 AMS (591,000 tonnes). The 2019 AMS data reveal that the majority of the crushed rock imports were received from Leicestershire and Somerset. The 2014 AMS identifies the same two authority areas as the main sources of supply.

Exports of Hertfordshire's Sand and Gravel

6.19 Of the total land won sand and gravel sales from quarries in Hertfordshire in 2019 (1,248,011 tonnes 74% was consumed within Hertfordshire, 11% was consumed within the East of England and the remaining 15% was consumed elsewhere[29].

6.20 To provide a comparison, the information on exports from the 2014 AMS showed that 57% of the total land won sand and gravel sales from quarries in Hertfordshire was consumed within Hertfordshire, 22% was consumed within the East of England and 21% was consumed elsewhere.

6.21 The 2019 data reveal that Hertfordshire continues to consume the majority of the sand and gravel extracted within the county. When comparing 2019 and 2014 data, it is clear that the amount of Hertfordshire's sand and gravel consumed within Hertfordshire has increased.

6.22 A breakdown of the 2019 and 2014 AMS data can be seen in Table 5 below:

[27] Table 10 of the Collated results of the 2019 Aggregate Minerals Survey for England and Wales
[28] Table 11 of the Collated results of the 2019 Aggregate Minerals Survey for England and Wales
[29] Table 9d of the Collated results of the 2019 Aggregate Minerals Survey for England and Wales

Table 5: 2019 AMS data vs 2014 AMS data

	2019 Data (tonnes)	2014 Data (tonnes)	Difference (tonnes)
Imports of land won sand and gravel	222,000	434,000	↓ 212,000
Imports of marine sand and gravel	216,000	19,000	↑ 197,000
Imports of crushed rock	729,000	591,000	↑ 138,000
Exports of land won sand and gravel	324,483[30]	520,099[31]	↓195,616
Consumption of land won sand and gravel	1,148,000	1,126,000	↑ 22,000
Consumption of marine sand and gravel	216,000	19,000	↑ 197,000
Consumption of crushed rock	729,000	591,000	↑ 138,000
Total Consumption for all sand and gravel (marine + land won)	1,364,000	1,146,000	↑ 218,000
Total Consumption for Primary Aggregates (marine + land won + crushed rock)	2,093,000	1,737,000	↑ 356,000

[30] 26% of Hertfordshire's total sand and gravel sales (1,248,011**)** were exported out of county in 2019

[31] 43% of Hertfordshire's total sand and gravel sales (1,209,532) were exported out of county in 2014

Crushed Rock and the Hertfordshire Rail Aggregate Depots

6.23 Crushed rock has a wide range of uses including as a source of both coarse and fine concrete aggregate, other screened and graded aggregates, and for other construction uses, including fill. However, its main use is in road construction, both unbound ('dry stone'), primarily for the foundations of roads and bound with either bitumen (to produce 'coated roadstone') or cement in the upper layers.[32]

6.24 Of the total aggregates consumed within Great Britain, crushed rock accounts for the largest proportion of the total sales. Of the total aggregates sales in Great Britain in 2018, the total amount of crushed rock sold was 117.3Mt, whereas total sand and gravel sales stood at 62.6Mt[33]. As of 2019, there were 263 active crushed rock quarries within Great Britain, with the number of active sand and gravel quarries only slightly higher, at 270.[34]

6.25 Hertfordshire relies on imports of crushed rock via the rail aggregate depots as the geology of the county does not allow for local extraction. Currently Hertfordshire has a total of five such sites which include:

- Langley Sidings, Stevenage;
- Walsworth Road, Hitchin
- Rye House, Hoddesdon;
- Harper Lane, Radlett; &
- Orphanage Road, Watford

6.26 As stated in Paragraph 6.21, Hertfordshire received and consumed a greater quantity of crushed rock in 2019 (729,000 tonnes) when compared to the figures from the 2014 AMS (591,000 tonnes).

6.27 The total amount of crushed rock imported into the county during 2020 was 719,730 tonnes[35]. A very minor decrease when compared to the 2019 import figure reported through the 2019 National AMS[36],signifying a continued and steady demand for this aggregate.

6.28 The county council as the Mineral Planning Authority responds to District and Borough Council Local Plan consultations and planning application consultations requesting the continued safeguarding of the rail aggregate depots.

6.29 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

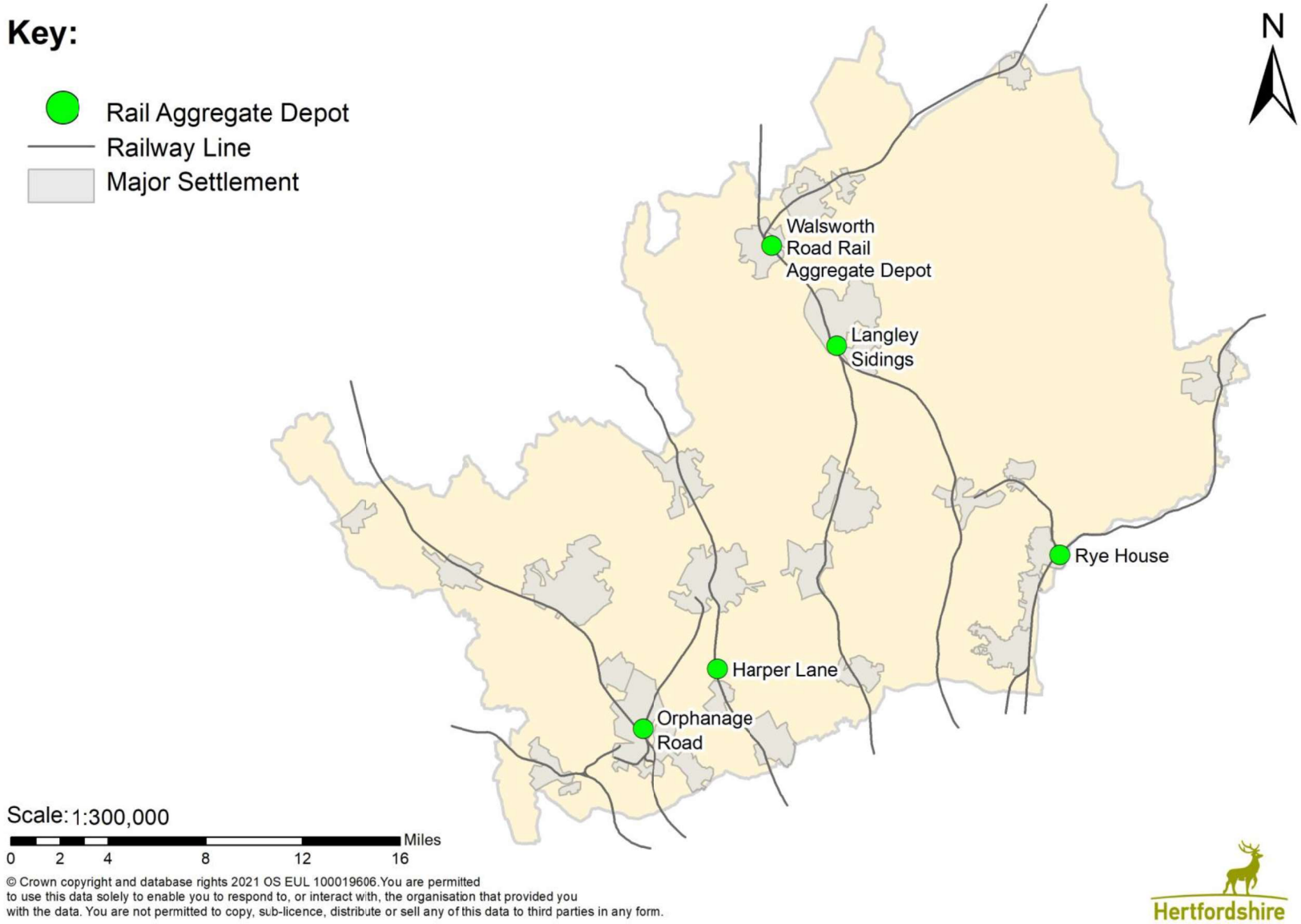
[32] Paragraph 4.3 from the Collated results of the 2019 Aggregate Minerals Survey for England and Wales
[33] Table 1a of the Mineral Products Association publication entitled: 'Profile of the Mineral Products Industry -2020 Edition'
[34] Table 1b from the 'Profile of the Mineral Products Industry -2020 Edition'
[35] Figure collated from data received through the county council's annual Aggregate Monitoring Survey
[36] The crushed rock import figure reported through the 2019 National AMS may vary from the import figure collected by the county council in response to its own annual Aggregate Monitoring Survey

any discussion group to shape proposals so as to retain the rail aggregate depots and a suitable buffer around them or assist with their relocation to another site.

6.30 The county council has been engaged in discussions regarding two rail aggregate depots that may be at risk from other development. These are Orphanage Road, Watford and Walsworth Road, Hitchin.

6.31 Figure 7 below sets out the locations of the Hertfordshire rail aggregate depots.

Figure 7: Hertfordshire Rail Aggregate Depots.



Secondary and Recycled Aggregate Sources

6.32 Mineral Planning Authorities are expected to plan for a future supply of sand and gravel and in doing so must take account of all sources of aggregates in line with Paragraph 213a of the NPPF. The purpose of considering all sources and types of aggregates is to try and minimise the amount of primary material which needs to be extracted.

6.33 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.

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

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.

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.

6.35 CD&E waste represents the largest waste stream in the UK economy. C & D waste constitutes the “hard” element of CD&E waste, typically containing waste types that include concrete, bricks, tiles and ceramics, wood, glass and plastic and metal. The individual constituents that comprise CD&E waste ultimately influence the extent to which they can be recycled or recovered[37].

6.36 In 2021, the MPA published the 2020 edition of the ‘Profile of the UK Mineral Products Industry’. The publication states that recycled and secondary materials accounted for 28% of total aggregates supply in Great Britain in 2018. The publication also identifies that Great Britain is in a leading position in the use of recycled and secondary aggregates when compared to other European countries.

6.37 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 CD&E waste that needs to be managed.

6.38 Recycling CD&E waste allows for its re-use within construction projects. This recycling and re-use process is in keeping with a Circular Economy approach for materials and ensures that they are kept in a continuous cycle

[37] Text sourced from Mineral Products Association publication titled ‘From Waste to Resource, a UK Mineral Products Industry Success Story’

rather than being disposed of and adding to the need for extraction of more primary resources.

6.39 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 7, for use in other construction works at a later date.

Inert Waste Management in Hertfordshire

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

6.41 The county council is continuing to monitor the amount of CD&E 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 these surveys. As Table 6 below identifies, in 2020, 236,069 tonnes of secondary and recycled aggregates were produced in Hertfordshire.

6.42 This year's total processing figure, which records data from the calendar year of 2020, has seen a very minor decrease when compared to last year's figure, by approximately 1,723 tonnes.

6.43 Table 6 below provides an overview of the secondary and recycled aggregate figures over the last 10-year period.

Table 6: Total recycled and secondary aggregate processed over the last 10 years

Year	Recycled and Secondary Aggregate Processing (tonnes)
2011	303,869
2012	316,941
2013	329,457
2014	362,203
2015	317,314
2016	234,783
2017	246,105
2018	272,656
2019	237,792
2020	236,069

6.44 According to the Environment Agency's Waste Data Interrogator, figures of inert CD&E waste treated in the county may be different to the figures received from operator returns.

6.45 To provide some context on how much aggregate could be recycled at the sites listed in Table 7 below, the total highest combined throughput figure over the period from 2014 to 2019 (when using data from the Waste Data Interrogator 2019) is 438,837 tonnes.

Secondary and Recycled Aggregate Sources

6.46 There are several different factors which have influenced the 2020 total aggregate processing figure (as seen in Table 6 above). Firstly, four out of the six aggregate processing sites (identified in Table 7) provided survey returns. This lower return rate has resulted in a lower and skewed total processing figure.

6.47 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 in Table 7 below. Figure 8 shows the location of these sites in the county.

Table 7: Secondary and Recycled Aggregate Sites

Site	Company	Status
Burnside, Hatfield	Peter Brothers Ltd & BP Mitchell	Permanent
Harper Lane (Rail Loop)	Tarmac Ltd	Permanent
Burrowfields Waste Solutions	Ground Waste Recycling Ltd	Permanent
Birchall Lane, Cole Green, Welwyn Garden City	BP Mitchell Ltd	Permanent
Land adjacent to B197, north of Graveley	Envirowaste (Inc) Ltd/Stevenage Skips	Permanent
Skinners Yard, Hertford	Aggregate Industries UK Ltd	Certificate of Lawful Use

6.48 The Minerals Planning Authority also obtained figures from the Hertfordshire Highways Department relating to road planings. Road planings, like crushed concrete, stone or brick, are a type of recycled aggregate and contribute towards reducing reliance on primary excavated material.

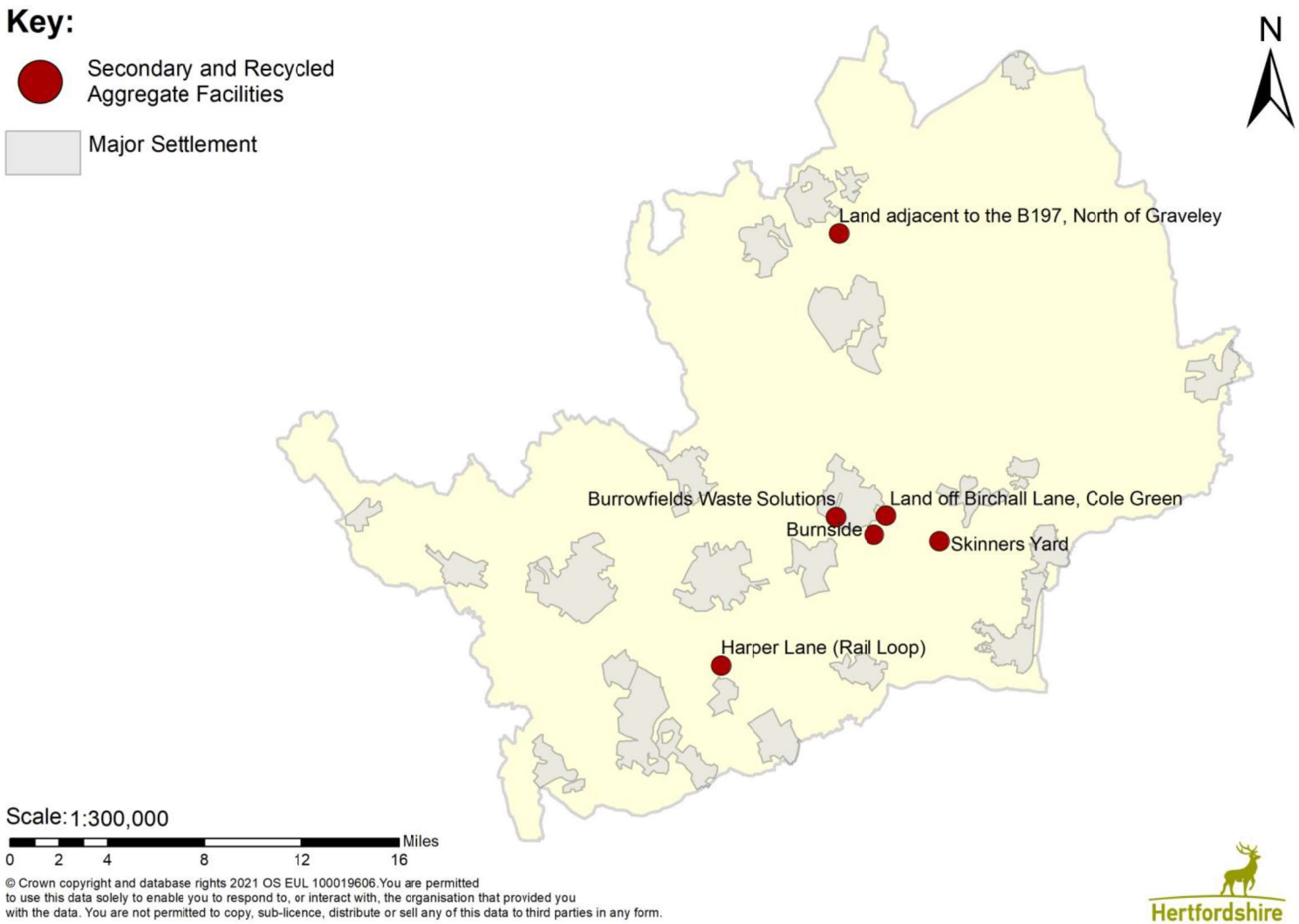
6.49 The figures provided show that during the calendar year of 2020, a total of approximately 69,000 tonnes of road planings were recycled. All road planings that arise from Highway Authority works in Hertfordshire are recycled, none are sent for disposal.

6.50 Approximately 75% of the road plainings were recycled in Hertfordshire. This amounts to 51,750 tonnes. This figure has been added to the total aggregates figure in Table 6.

6.51 Inert CD&E waste can also be reused and recycled directly on the construction site from which it originated. Reusing and recycling inert CD&E waste directly on construction sites not only reduces the reliance on imported materials but also reduces costs associated with disposal and purchase and keeps waste in a more circular economy.

6.52 The county council is unable to monitor the reuse and recycling of inert CD&E waste on construction sites and only receives very limited information. It is therefore unknown how much waste material is being consumed (re-used or recycled) within construction projects.

Figure 8: Location of Secondary and Recycled Aggregate Sites



Hertfordshire Waste Local Plan

6.53 The Waste Local Plan has a part to play in reducing CD&E waste and encouraging and supporting developments which move the management of this waste stream up the waste hierarchy, away from disposal.

6.54 It is now recognised that whilst mineral sites will continue to use inert CD&E waste material for restoration there is still a need for more aggregate recycling facilities in the county, in order to reduce reliance on primary sand and gravel, to move CD&E waste into a more circular economy and to support the high levels of growth planned for within Hertfordshire, which will give rise to significant quantities of this type of waste.

6.55 In 2017 the county council commenced with the review of its adopted Waste Local Plan. The initial evidence gathering stage took place from 2017 to 2019. The county council carried out the first Regulation 18 public consultation on the Initial Consultation Document from 05 February 2018 to 30 March 2018, undertook a Call for Sites Exercise from 23 July to 16 September 2018 and carried out a second Regulation 18 consultation on the Draft Waste Local Plan from 11 January 2021 to 19 March 2021.

6.56 The Draft Waste Local Plan includes policies which will work to encourage the reuse, reduction and recycling of CD&E waste arising from built development to avoid its disposal to landfill and maximise its recovery. The Draft Waste Local Plan also identifies and safeguards existing waste sites which manage CD&E waste in Hertfordshire.

6.57 The emerging Waste Local Plan is supported by revised calculations for the capacity requirements for CD&E waste. A Waste Capacity Gap Report was published alongside the Draft Waste Local Plan. The report highlights that the county will have significant capacity gaps for CD&E waste. The Waste Capacity Gap Report and Draft Waste Local Plan can be seen by following the link below:

hertfordshire.gov.uk/wlp

7. Other relevant local information

7.1 In planning for a future supply of sand and gravel, it is important to examine the factors which may influence the demand for sand and gravel, to ensure the planned supply will provide enough material to meet future needs.

7.2 As Paragraph 213a of the NPPF states, Minerals planning authorities should plan for a steady and adequate supply of aggregates by:

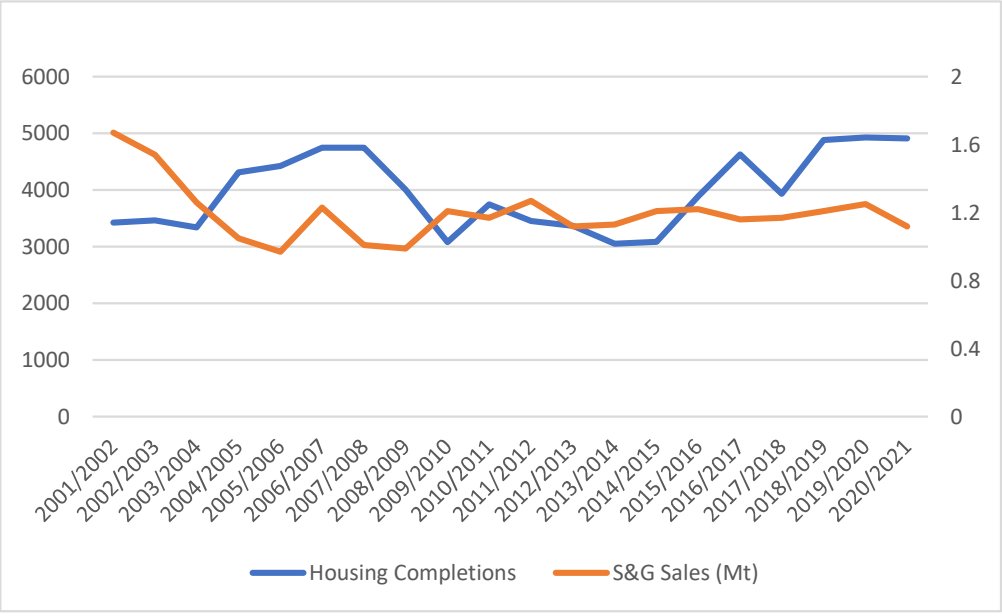
'Preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data and ***other relevant local information****, and an assessment of all other supply options (including marine dredged, secondary and recycled sources'*

7.3 The Practice Guidance on the Production and use of Local Aggregate Assessment Living Document May 2017 states that Minerals Planning Authorities should consider the indicators of potential future growth in demand for aggregates in order to make a qualitative forecast in the LAA to, if necessary, clearly indicate whether demand is considered likely to be above the prevailing 10 years average.

Housing Delivery vs Sand and Gravel Sales

7.4 The correlation between housing delivery and sand and gravel sales has been examined to determine the interrelationship between the two. Figure 9 below provides a comparison between sand and gravel sales and housing completions[38] between the years of 2001/2002 to 2020/2021[39].

Figure 9: Sand and Gravel Sales vs Housing completions



[38] Gross completions

[39] The data were obtained from the Strategic Land Use Team within the county council's Spatial Planning Unit

7.5 As can be seen from Figure 9 above, the sand and gravel sales were at their highest in 2001/2002 but the housebuilding numbers were relatively low during this time. Comparatively, when looking at the data from 2020/2021, the sand and gravel sales are relatively low, yet the housebuilding figure was at its highest.

7.6 As Figure 9 shows, sand and gravel sales have remained relatively consistent over the past 10 years, with some small fluctuations. However, the housebuilding during this time has seen more variations, peaking in more recent years.

Housing Delivery Rates

7.7 Table 8 below sets out the housing completion rates over the past 10 years (2011/2012-2020/2021) for each of the District and Boroughs in Hertfordshire. The data reveal that the total annual gross housing completion numbers have increased over the past 10 years (2011/2012-2020/2021) and a total of 40,131 houses were built during this period.

7.8 To provide a comparison, Table 9 sets out the housing completion rates over the previous 10 years period, from 2001/2002 to 2010/2011. As Table 9 shows, housing completion rates throughout this period were similar to the following 10-year period (2011/2012-2020/2021), with a total housing completion number of 39,292.

7.9 Altogether, a total of 79,423 gross housing completions have been achieved over the 20-year period from 2001/02 to 2011/12-2020/21.

Table 8: Gross Housing Completions (2011/2012-2020/2021)

District/Borough	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Broxbourne	180	192	119	184	183	276	260	483	165	222	**2264**
Dacorum	477	364	254	402	701	764	628	532	522	802	**5446**
East Herts	445	729	394	535	739	668	613	943	994	854	**6914**
Hertsmere	217	334	473	225	406	340	562	677	623	521	**4378**
North Herts	422	314	274	251	360	556	346	249	338	601	**3711**
St Albans	466	400	504	398	457	404	493	731	474	602	**4929**
Stevenage	196	90	179	154	155	704	77	295	328	154	**2332**
Three Rivers	261	208	172	308	243	164	286	174	510	277	**2603**
Watford	479	568	431	271	308	384	357	292	278	454	**3822**
Welwyn Hatfield	309	170	254	356	338	370	314	505	695	421	**3732**
Total	**3452**	**3369**	**3054**	**3084**	**3890**	**4630**	**3936**	**4881**	**4927**	**4908**	**40131**

Table 9: Gross Housing Completions (2001/2002-2010/2011)

District/Borough	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total
Broxbourne	175	155	267	916	508	287	298	202	333	278	**3419**
Dacorum	375	705	446	333	250	480	472	459	259	636	**4415**
East Herts	636	397	297	381	644	812	599	597	494	304	**5161**
Hertsmere	327	111	215	251	341	285	409	328	331	225	**2823**
North Herts	760	685	482	437	569	662	769	488	390	455	**5697**
St Albans	422	357	285	668	379	439	337	466	329	495	**4177**
Stevenage	175	101	58	171	130	414	471	400	255	312	**2487**
Three Rivers	381	255	186	94	229	369	286	351	69	160	**2380**
Watford	79	192	277	379	638	292	336	369	540	665	**3767**
Welwyn Hatfield	95	504	825	682	737	708	768	348	83	216	**4966**
Total	**3425**	**3462**	**3338**	**4312**	**4425**	**4748**	**4745**	**4008**	**3083**	**3746**	**39292**

7.10 Whilst housebuilding rates can help to provide an indication of the demand for aggregates, they can only be used as a partial guide to future demand as aggregates sales reflect much wider demands including refurbishment of the housing stock and infrastructure maintenance. Other factors which influence future demand must be explored.

Planned Housing

7.11 At least 100,000 new homes and jobs are aspired to be created in Hertfordshire by 2031[40] and an estimated 50% of these new homes will be situated along the A414 corridor (within a 5-mile radius).[41]

7.12 The majority of the ten District and Borough Councils within Hertfordshire are in the process of preparing new Local Plans or have recently adopted[42] Local Plans. The Local Plans look ahead over the period up to 2031, with some spanning up to 2038. In revising their Local Plans, the District and Borough Councils must re-calculate the housing need for their local areas, in line with national requirements.

7.13 Table 10 below sets out how much housing is being planned for within the Hertfordshire District and Borough Local Plans[43].

7.14 Many of the larger housing allocations in the recently adopted Local Plans are starting to come forward and are either at planning application stage, have received planning permission or are under construction.

7.15 These housing allocations are of strategic importance and will help to deliver the county's ambition of building 100,000 new homes by 2031. The below list provides some examples of larger housing allocations which are at planning application stage or have recently been granted planning permission:

- Gilston Garden Town- 10,000 homes
- Bishops Stortford North- 2,200 homes
- East of Stevenage – 618 homes
- East of Luton – 1,400 homes
- North of Baldock- 2,800 homes
- Stevenage Town Centre- 1,867 homes
- North of Stevenage- 800 homes
- Watford Junction – 1,200 homes
- Broadwater Road, Former Shredded Wheat Site- 1,340 homes

[40] HGB - Hertfordshire: driven by firm beliefs and a clear purpose (hertfordshiregrowthboard.com)
[41] a414-corridor-strategy-report-8.10.19-pdf-12mb.pdf (hertfordshire.gov.uk)
[42] Stevenage Borough Council adopted on 22 May 2019, East Herts Council adopted on 23 October 2018 and Broxbourne adopted on 23 June 2020
[43] The planned housing figures are subject to change and may alter throughout the Local Plan preparation process

Table 10: Local Plan Housing Figures

Council	Planned Housing Figure	Source of housing figure
Broxbourne	7,700 homes by 2033	Adopted Local Plan (2018 - 2033) June 2020
Dacorum	16,600 homes by 2038	Emerging Strategy for Growth Consultation (Anticipated Plan period:2020-2038)
East Herts	18,458 homes by 2033	2018 East Herts District Local Plan (2011-2033) Adopted October
Hertsmere	Approximately 12,000 homes by 2038	Duty to Cooperate meeting 02/06/2021
North Herts	15,950 homes by 2031	Proposed Submission Local Plan October 2016 (Anticipated Plan period:2011-2031)
St Albans	14,608 homes by 2036	St Albans Draft Regulation 19 Local Plan 2018[44]
Stevenage	7,600 homes from 2011-2031	Stevenage Borough Local Plan (2011-2031) Adopted May 2019
Three Rivers	12,624 homes by 2038	Local Plan Regulation 18 Preferred Policy Options Consultation (Anticipated Plan period:2018-2038)
Watford	7,500 homes by 2036[45]	Regulation 18 Preferred Options Local Plan Consultation September 2019 (Anticipated Plan period:2020-2036)
Welwyn Hatfield	12,000 homes by 2032[46]	Draft Local Plan Submission Document, August 2016 (Anticipated Plan period:2013-2032)

[44] The St Albans Local Plan was withdrawn in November 2020. St Albans District Council are now preparing a new Local Plan and the housing numbers in the new plan will vary from what is set out within this table. This table will be updated annually. New information on housing numbers will be added when available.
[45] The government has set Watford a challenging target: to deliver approximately 12,000 new homes up to 2036. However, to date the council has identified that there is only enough land available for about 7,500 new homes
[46] The housing target and plan period may change as a result of the current examination taking place for the submitted Welwyn Hatfield Borough Council Local Plan.

7.16 Development planned for within the 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 (this includes sand and gravel and crushed rock), and secondary and recycled aggregates.

7.17 To achieve a housing completion rate of 100,000 new homes by 2031, it is clear that a higher housing delivery rate will need to be achieved. This means that there will likely be a greater demand for sand and gravel to support this accelerated delivery and an accelerated approach to housebuilding is required.

7.18 The Hertfordshire Growth Board was formed in 2018 as a collective response to managing the scale and pace of growth required in the county over the next decade. Hertfordshire Growth Board is made up of Hertfordshire County Council, Hertfordshire Local Enterprise Partnership, and the 10 district and borough councils in Hertfordshire. Together, the Board are committed to working together to deliver an ambitious growth agenda to support a thriving economy, with affordable housing, a sustainable transport network, excellent schools and healthcare facilities.

7.19 One of the aims of the Hertfordshire Growth Board is to support the delivery of new homes in the county to achieve the ambitious housing targets. The Hertfordshire Growth Board is supporting the use of offsite manufacturing (OSM) and modern methods of construction (MMC), to accelerate the delivery of sustainable homes.

7.20 An informal consortium of nearly 20 housing providers, led by Watford Community Housing and supported by Herts Innovation Quarter, Hertfordshire Growth Board and Hertfordshire LEP, has committed to scale up its use of offsite manufacturing methods to speed up the progress of the county's aspiration to build 100,000 new homes, and enable the county to meet its net zero carbon targets[47].

Current Major Infrastructure Projects in Hertfordshire

7.21 For Hertfordshire, the major infrastructure projects currently being delivered include:

High Speed 2 (HS2):

7.22 HS2 is a Department for Transport project to build a new high-speed railway between London and Birmingham, with later extensions to Manchester and Leeds. A section of the line, due to open in 2026, passes within Hertfordshire's county boundary and requires significant construction works, namely the Colne Valley Viaduct and Chiltern Tunnel Southern Portal.

[47] HGB - Offsite Manufacturing to accelerate the delivery of new homes in Hertfordshire (hertfordshiregrowthboard.com)

Updates to the A602 from Stevenage to Ware:

7.23 The scheme includes a series of Improvements to major junctions (such as the A119 junction, Hertford Road junction and the A120 junction) and roads, including Westmill Road and Ware Road. The improvements are expected to be completed in Spring 2022.

A120 Bypass and the associated Flood Alleviation Scheme:

7.24 The scheme provides a new 3.9km bypass to the north of Little Hadham, will alleviate congestion along the A120 and provide more reliable journey times. The Flood Alleviation Scheme is being delivered by the Environment Agency in collaboration with the county council. Construction started in July 2019 and is currently scheduled for completion in winter 2021[48].

Potential Future Major Infrastructure Projects for Hertfordshire

Hertford Bypass

7.25 The Hertfordshire Local Transport Plan (LTP4) includes details of potential future transport projects in the county. LTP4 identifies that a highway bypass north or south of Hertford (referred to as Hertford Bypass) may be required in order to re-route the A414 and connect it with the A10 to the east of Hertford town. LTP4 states that the Hertford Bypass is a concept which will be investigated further as part of the A414 Corridor Strategy.

New M1 Junction 8a

7.26 The Hertfordshire LTP4 states that a new junction on the M1 could address the highway capacity concerns for the existing M1 Junction 8 and along the A414. The existing A414 and traffic using it through Hemel Hempstead, results in severance and local environmental impacts. It also constrains the potential to improve active travel and passenger transit improvements along and around the A414 route.

7.27 The concept of a new Junction will be developed further as part of the LTP4 Growth and Transport Plans and in partnership with Highways England who are responsible for the motorway.

Aspirations for Hertfordshire's Rail Network

7.28 The Hertfordshire Rail Strategy December 2020 sets out the key aspirations for the county's rail network. The Rail Strategy identifies that new stations may be required at Turnford and Park Plaza (on the Southbury Loop) and Stevenage South (on the Hertford Loop). The Rail Strategy also identifies a list of other additional new or improved rail line projects which include the delivery of Crossrail 2[49], a new line to be built between Stevenage and Luton and more.

[48] A120 bypass (Little Hadham) and flood alleviation scheme | Hertfordshire County Council

[49] Crossrail 2 is a proposed new rail route going through London, which will link to some stations in Hertfordshire Crossrail 2 - Supporting Growth in the South East

Adjoining Major Projects

7.29 There are a number of large housing development sites which are proposed/coming forward in neighbouring authority areas which could have an impact on the demand and supply of sand and gravel in Hertfordshire. Some of these major housing sites include[50]:

- Harlow Gilston Garden Town[51]- approx. 23,000 units (10,000 of the 23,000 will be built in Hertfordshire)
- Houghton Regis Development, Central Bedfordshire- 7,000 units
- North of Luton, Bedfordshire- 4,000 units
- East of Arlesey, Bedfordshire – 2,000 units
- Northstowe New Town, Cambridgeshire – 10,000 units
- Cambourne New Town, Cambridgeshire – 5,000 units

[50] Source of information: Hertfordshire Infrastructure & Funding Prospectus 2018-2031

[51] The project crosses over the border of Hertfordshire, into Essex. Harlow and Gilston Garden Town - Home (hggt.co.uk)

8. Conclusion

8.1 In preparing this LAA the county council has forecasted future demand for sand and gravel in Hertfordshire based on an assessment of previous sand and gravel sales figures, other relevant local information and an assessment of all other supply options.

8.2 It is recognised that the current stock of sand and gravel reserve in Hertfordshire is insufficient to meet future demands and as such a review of the Hertfordshire Minerals Local Plan is being undertaken to address this matter.

8.3 The emerging Minerals Local Plan is being prepared using the Annual Provision Rate of 1.31Mtpa. When considering the appropriate Annual Provision Rate for the county, the Minerals Planning Authority has considered the use of the 10-year average sales figure.

8.4 Using the 10-year sales average figure to forecast future demand is considered insufficient for the planning of sand and gravel supply in Hertfordshire. The current 10-year average sales figure (as of end 2020) stands at 1.19Mt. The total sand and gravel sales figure has reached over this number five times in the past 10-year period (2011-2020).

8.5 In addition, there are significant growth aspirations within the Hertfordshire District and Borough Local Plans and allocations are starting to come forward for development. Housebuilding levels are expected to increase and there are potential major infrastructure projects which are being considered for the future.

8.6 When looking at the contribution made by other supply options including secondary and recycled aggregates, crushed rock and imported sand and gravel (both from land won and marine sources) it can be concluded the contribution these additional sources of aggregate make towards the total amount of aggregate consumed within the county, is small. Trends suggest that there is a small increase in consumption from some external aggregates including crushed rock and marine sand and gravel, however the contribution made from the supply of secondary and recycled aggregates has remained at a similar level over the past 5-year period (2016 -2020).

8.7 The total consumption rates of aggregate in Hertfordshire have increased when looking at data from the National AMS but the increase is not considered significant. The total consumption of sand and gravel (including land won and marine) in Hertfordshire has increased by approximately 0.22Mt when comparing 2019 AMS data to 2014 AMS data.

8.8 As a result of the assessments of future planned growth, the contribution made from other supply options and when looking at consumption rates, it is considered that an Annual Provision Rate above the 10-year average sales figure is necessary. A ten percent uplift has been added to the 10-year average

sales figure to ensure flexibility in future supply.

8.9 When using the Annual Provision rate of 1.31Mt, Hertfordshire has a landbank of 5.9 years. Whilst the Hertfordshire landbank is below the required 7-year minimum, it is considered that the landbank will increase once Land adjoining Coopers Green receives planning permission. The reserves from this site (3.52Mt) will boost the total reserves figure and subsequently increase the landbank. The review of the Hertfordshire Minerals Local Plan is being undertaken to address the shortfall in supply. It is intended that the identified sites in the emerging Minerals Local Plan, in addition to the remaining reserves at the current permitted sand and gravel sites, will meet the county's future need for land-won sand and gravel.

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Further Information

This document has been produced by the Spatial Planning Unit, Hertfordshire County Council.

Should you have any questions in relation to this document please email: MineralsandWaste@hertfordshire.gov.uk