Buckinghamshire County Council

Local Aggregate Assessment 2017

October 2018

Contents

1. Executive Summary

1.1. This Local Aggregate Assessment (LAA) for Buckinghamshire is produced under the requirements set out in the National Planning Policy Framework (NPPF). This LAA considers aggregate supply and consumption during 2017 from all known sources. Paragraph 207 of the NPPF requires Minerals Planning Authorities (MPAs) to produce an annual LAA. The LAA is intended to outline the sources of supply of and demand for aggregates within Buckinghamshire, make an assessment as to whether there is a shortage or surplus of supply, and how any shortages will be addressed.

1.2. Buckinghamshire is a landlocked area, and only produces sand and gravel, predominantly found in the south of the county. Sales of sand and gravel in Buckinghamshire declined following the recession in the late 2000's. However, over the past few years sales has started to increase, with sales in 2017 being similar to pre-recession sales. Crushed rock aggregate is imported from Leicestershire, Somerset, and the West Country. Buckinghamshire is a net importer of sand and gravel and it is believed that flows of sand and gravel into the north of the County take place from adjacent Mineral Planning Authority areas, including Milton Keynes, Northamptonshire, Bedford Borough, Central Bedfordshire, and Hertfordshire. In addition, Buckinghamshire is well connected to other sand and gravel producing areas, within the South-East, East of England, and East midlands former regions, such that the County is effectively part of a much larger sand and gravel aggregate producing area.

1.3. The level of permitted reserves of sand and gravel at 31st December 2017 were sufficient for 13.4 years based on the rolling average from the most recent ten years sales. This increase has is due to new permission granted in 2017. The rolling average of the most recent year's sales is the method of calculating the landbank, since it is based on the guidance contained in the NPPF.

1.4. Although the data concerning production of recycled aggregates is generally poor, a significant source of secondary aggregates has commenced supply in 2017, since the completed construction of the Energy from Waste (EfW) incinerator at Calvert that has now begun supplying Incinerator Bottom Ash.

1.5. Three large construction projects are likely to commence in the next few years. These include the construction of the High Speed 2 (HS2) rail line, the East West Rail line, and a scheme for the widening of the M4 between junctions 3 and 12, over some 32 miles. It cannot be known with certainty that these projects will source materials from quarries in Buckinghamshire as opposed to other neighbouring Counties.

1.6. Nearly all of the Preferred Areas for sand and gravel extraction identified in the Buckinghamshire Minerals and Waste Local Plan adopted in 2006 have been developed. In order to maintain a supply of aggregates from the most environmentally acceptable locations, a replacement Minerals and Waste Local Plan (MWLP) is being developed, with the purpose of creating new positive policies and identifying land which is suitable in principle for supplying aggregates over the plan period. During 2017 the draft plan was subject to a public consultation.

	2017 Sales (mt)	Average (10 year) Sales (mt)	Average (3 year) Sales (mt)	LAA Rate (mt)	Trend (10 year Sales)	Trend (3 year Sales)	Reserve (mt)	Landbank (years)	Capacity (mtpa)	Comments
Sharp Sand & Gravel	-	-	-	-	-	-	-	-	-	
Soft Sand	C	C	C	-	-	-	C	C	C	
All Sand & Gravel	1.17	0.79	0.98	0.79	⇨	⇧	10.67	13.4	2.62	
Crushed Rock	-	-	-	-	-	-	-	-	-	
Recycled/Secondary Aggregates	0.12	-	-	-			-	-	0.4	
Marine Sand & Gravel	-	-	-	-	-	-	-	-	-	
Rock Imports by Sea	-	-	-	-	-	-	-	-	-	
Rail Depot Sales (S & G)	-	-	-	-	-	-	-	-	-	There are no active rail aggregate depot within Buckinghamshire
Rail Depot Sales (Crushed Rock)	-	-	-	-	-	-	-	-	-	
General Comments:	The emerging Minerals and Waste Local Plan set at provision rate for the primary area of focus, the Thames Valley, south of the county, at 0.81 mtpa based on the 2015 ten year average sales figure. An additional provision rate for the secondary area of focus, the Great Ouse Valley in the north of the county has been set at 0.12 mtpa.									

2. Introduction and Purpose of the Local Aggregate Assessment

2.1 Buckinghamshire County Council (BCC), as a Minerals Planning Authority (MPA), is required under the National Planning Policy Framework (NPPF)[1] to prepare an annual Local Aggregate Assessment (LAA). The LAA provides an annual evaluation of aggregate supply and demand in the county, and examines a rolling average of the most recent ten years sales data, as well as other relevant local information in order to develop an assessment of all supply options.

2.2 BCC adopted its Minerals and Waste Core Strategy (MWCS) in November 2012, which contained strategic policies for the provision of aggregate minerals in Buckinghamshire. The County Council published an update to the Minerals and Waste Local Development Scheme in February 2017. This set out the authorities intension to produce one comprehensive plan that will include spatial strategies, updated strategic policies and site allocations for minerals and waste within the county.

2.3 This document uses the most recently available information in order to monitor and review aggregate sales within county and provides information on the county's permitted reserves during the period January to December 2017.

2.4 Buckinghamshire is not a producer of crushed rock, and imports all the crushed rock required for the county's needs. Since the county is not a producer of crushed rock it is not required to identify a "landbank". Therefore this report will not include sales and reserve data for crushed rock.

3. Aggregates in Buckinghamshire

Geology

3.1 The most significant of mineral resources in Buckinghamshire is sand and gravels. There are two areas in the county in which these can be found; the Thames and Colne Valley located in the south of the county and the Great Ouse Valley east of Buckingham in the north of the county. The MWCS identified a Minerals Safeguarding Area in the south of the county, to safeguard the known economically viable sand and gravel deposits against sterilisation through non-mineral development. The MWCS identified an "Area of Search" to the east of Buckingham that includes parts of the Great Ouse Valley.

3.2 These areas, Thames and Colne Valley and Great Ouse Valley, have been identified as part of the Minerals Safeguarding Area in the emerging Minerals and Waste Local Plan 2016-2036.

[1] National Planning Policy Framework, Paragraph 145, DCLG 2012

3.3 The county also has resources of Chalk, Clay with Flints, Woburn Sands and Limestone,[2] which can be seen on figure 1. There is some small scale extraction of chalk at Pitstone Quarry, and single operational brickworks at Bellingdon which uses 'clay with flints' to produce traditional Chiltern bricks. While there is no active working of Woburn sands, there is a single dormant site in the west of the county. There is presently no extraction of limestone in the county.

3.4 Buckinghamshire does not have any significant hard rock resources and is not a producer of crushed rock. All crushed rock consumed within the county is imported and the county is reliant upon the ability of the exporting areas to be able to continue to supply this material.

Primary Aggregate

3.5 During 2017, there were 8 sites in Buckinghamshire actively producing sand and gravel, one of which received permission of an extension to the extraction area. There was also 1 inactive site during 2017. Sites with planning permission for mineral extraction are shown in Table 1 and Figure 1. At the end of 2017, there was one planning applications awaiting determination that if permitted would contribute an additional 1.25 million tonnes (mt) approximately to the county's reserves.

Table 1: Active Sand and Gravel Extraction Sites in Buckinghamshire during 2017

Active Sites	Site Operators	Planning Permission End Date
All Souls Farm, Wexham	Tarmac Ltd	30/06/2017
Berry Hill Farm, Taplow	Summerleaze Ltd	01/10/2019
Park Lodge Quarry, Iver Heath	Brett Aggregates	31/12/2020
Beechwood Nurseries, East Burnham	Summerleaze Ltd	31/12/2021
George Green	Brett Aggregates	31/12/2024
New Denham Quarry, Denham	Summerleaze Ltd	31/12/2026
Springfield Farm, Beaconsfield	Springfield Farm Ltd	30/09/2029
Denham Park Farm, Denham	Ingrebourne Valley Limited	31/08/2031

[2] Available at http://www.buckscc.gov.uk/media/4509343/bcc-mwlp-aug17.pdf chapter 4 paragraph 4.1 to 4.13

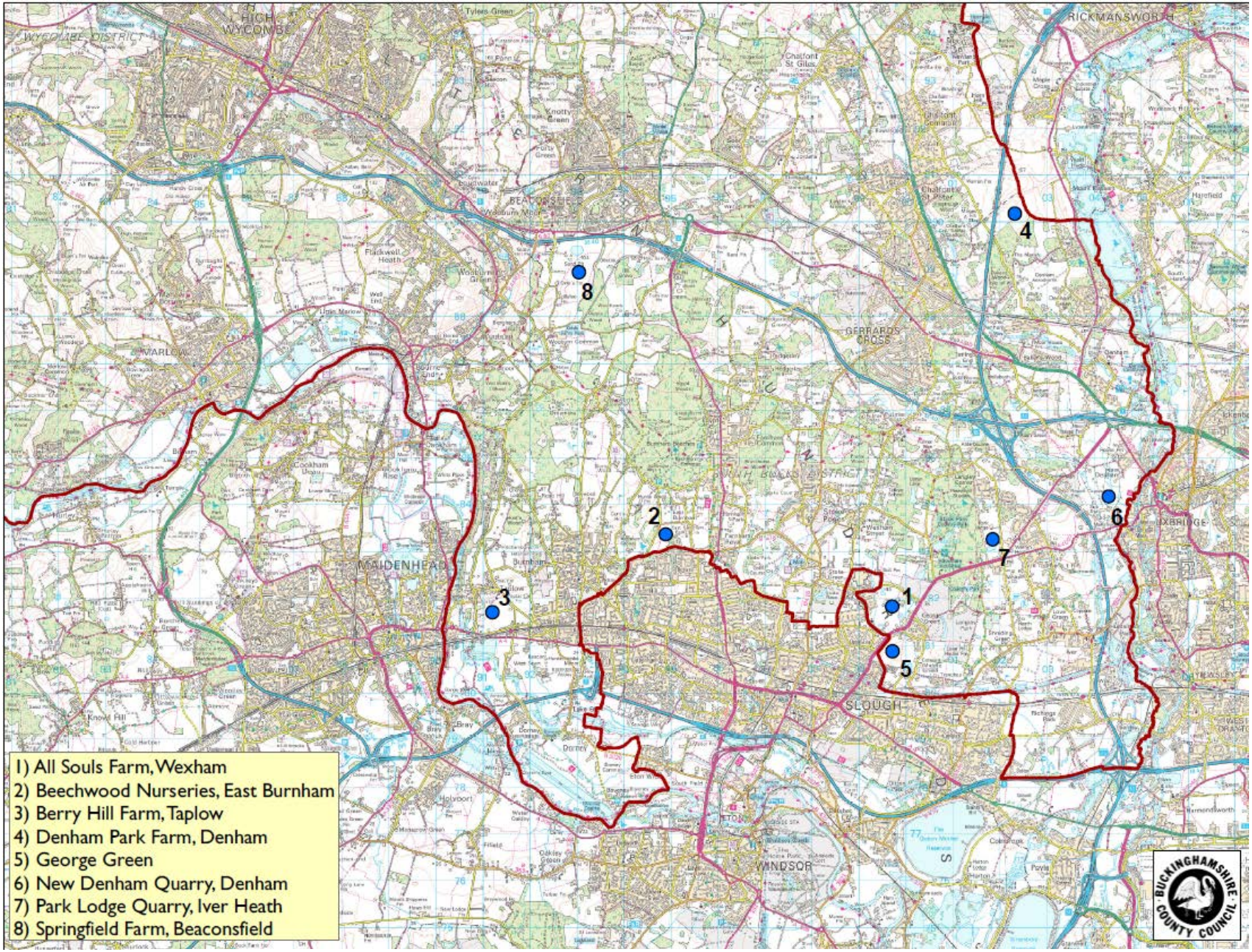


Figure 1: Map of Buckinghamshire showing permitted sand and gravel sites (active and inactive) 2017

Sales

3.6 Total sales for the most recent ten years (2008-2017) of sand and gravel in Buckinghamshire are shown in Table 2 and Figure 2. These sales figures show that since 2008 there has been an overall decline in sales of primary aggregate that would reflect the economic downturn experienced, however growth has been seen in the last few years, with sales figures in 2017 returning to similar rates seen in Buckinghamshire during 2005. However the ten year average has remained similar over the last few years, 0.81mt in 2015 and 0.79mt in 2016.

3.7 In addition to the ten year average provided in line with the approach detailed in the NPPF[3], the average of the most recent three years (2015-2017) sales data is given for comparison purposes. Due to significant increasing sales over the past 2 years the three year sales average is greater than the previous 3 year average increasing from 0.82mt to 0.98mt.

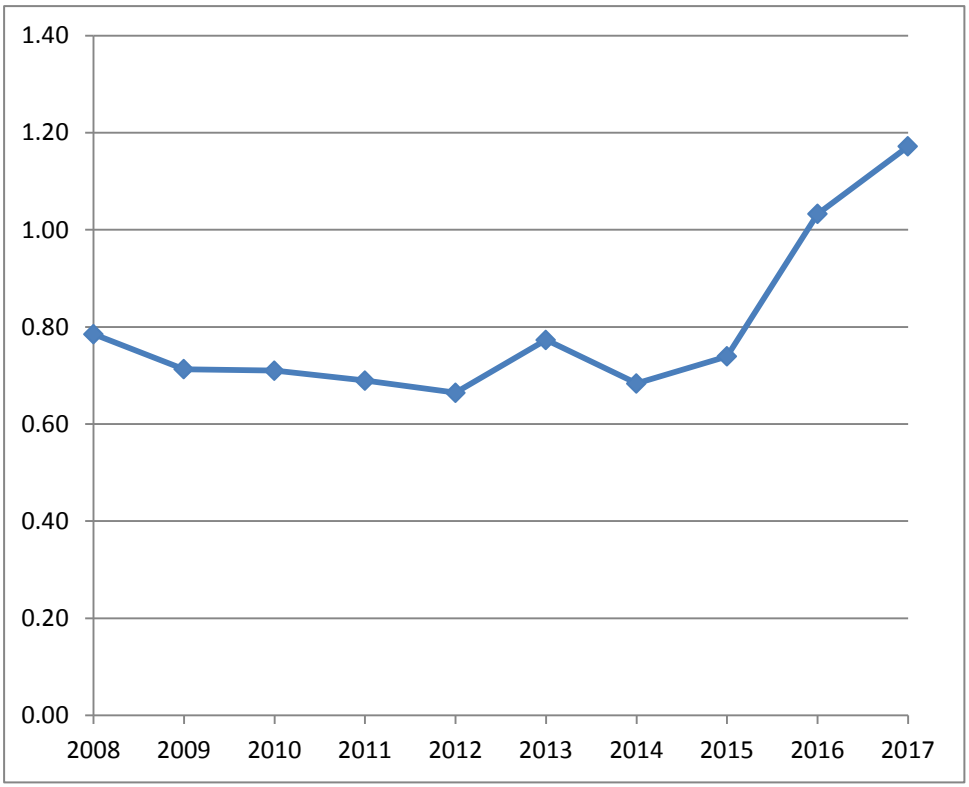
3.8 It is worth noting that sales data for Buckinghamshire includes both sand and gravel and soft sand sales. This is due to being unable to publish a separate figure for soft sand due to its confidential nature.

Table 2: Sand and Gravel Sales in Buckinghamshire 2008 - 2017 (million tonnes)

Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**10yr Average (2007-2017)**	**3yr Average (2014-2017)**
Sales	0.79	0.71	0.71	0.69	0.66	0.77	0.69	0.74	1.03	1.17	0.79	0.98

[3] National Planning Policy Framework, Paragraph 145, DCLG 2012

Figure 2: Sales of Sand and Gravel in Buckinghamshire (million tonnes) 2008-2017



Reserves

3.9 As of 31st December 2017 estimated permitted reserves of sand and gravel in Buckinghamshire totalled approximately 10.67mt. Figure 3 shows that permitted reserve within Buckinghamshire had been in a broad decline since 2012 but with the planning applications approved during 2017 help remains above the 7 year landbank figure, although the permitted reserves has not reached pre-2010 levels.

Table 3: Permitted Reserves of Sand and Gravel in Buckinghamshire (2012-2017)

Years	Permitted Reserves
2008	13,501,800
2009	12,788,600
2010	10,917,400
2011	10,429,000
2012	10,049,244

Years	Permitted Reserves
2013	9,143,356
2014	10,074,537
2015	9,045,955
2016	8,221,250
2017	10,676,936

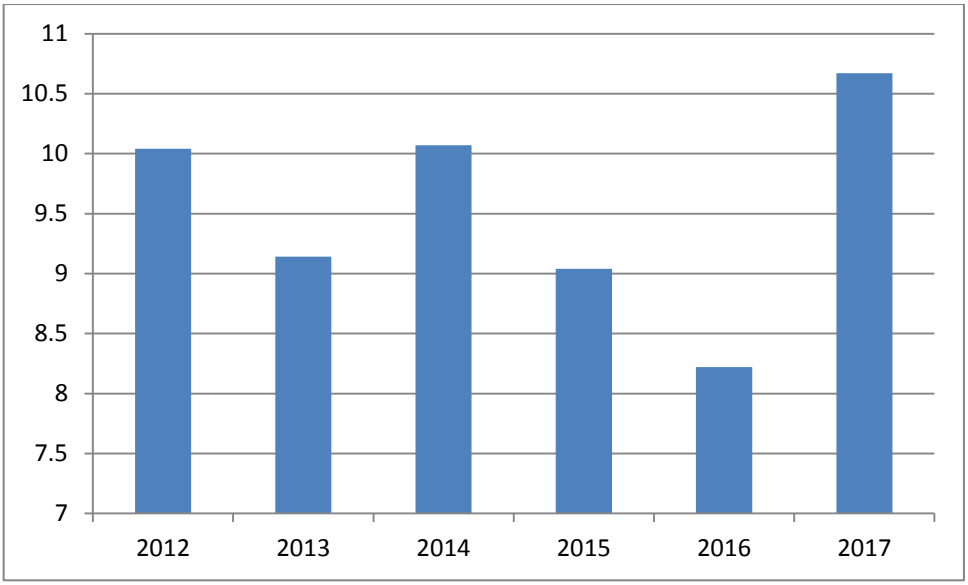


Figure 3: Permitted reserves of Sand and Gravel in Buckinghamshire (million tonnes) 2012-2017

Site Capacities

3.10 In the 2016 and 2017 Monitoring Surveys, operates were asked to provide their maximum annual output taking account of limitations on the site such as plant size, operating hours and lorry limits. Table 4 set out the maximum annual output that the sites within the County could achieve. There may be a number of reason as to why this has varied over the two years, sites could have varied planning conditions as well as improved reporting of data from the operators.

Table 4: Maximum annual output in Buckinghamshire for 2016 and 2017

	Soft Sand output (tpa)	Sharp Sand and Gravel output (tpa)	Sand & Gravel or hoggin output (tpa)	Totals
2016	62,000	1,077,500	850,000	**1,989,500**
2017	476,500	1,364,279	780,000	**2,620,779**

Imports and Exports

3.11 The National Aggregate Monitoring Survey 2014, which was undertaken by the British Geological Survey (BGS), provides an understanding of regional and national sales, consumption and the transportation and movement of aggregates between MPAs and regions. The South East Aggregates Monitoring Report 2014 & 2015 (AM 2014/15) [4] collated this data for the South

[4] South East Aggregates Monitoring Report 2014 & 2015, SEEAWP, July 2016 Available at: http://documents.hants.gov.uk/see-awp/SEEAWP16-03AMReport2014-15.pdf

East Region. The report collates data for Buckinghamshire and Milton Keynes as one “sub-region”, and indicates that as a sub-region, consumed 0.78 mt of sand and gravel during 2014 with up to 40% of the sand and gravel being supplied by the authorities shown in table 5. Sand and gravel was also sourced from Windsor & Maidenhead and Bedford MPA areas.

Table 5: Percentage of Sand and Gravel consumed by Buckinghamshire and Milton Keynes in 2014 by source region.

Source region	Source sub-region	Percentage of sand and gravel consumed by Milton Keynes & Buckinghamshire	Exports by region (tonnes)
South West	Devon	<1%	
	Gloucestershire	<1%	
	Wiltshire	<1%	
South East	Buckinghamshire	30 – 40%	319,626
	Milton Keynes	1 - 10%	
	Kent	<1%	
	Hampshire	<1%	
	Oxfordshire	1 - 10%	
	West Sussex	1 - 10%	
	Windsor & Maidenhead	10 - 20%	
	Berkshire		53,261
	Surrey		80
	Unknown South East		286,842
East of England	Bedford	10 - 20%	1,156
	Central Bedfordshire	1 - 10%	
	Cambridgeshire	1 - 10%	
	Essex	1 - 10%	
	Hertfordshire	1 - 10%	
	Peterborough	<1%	
	Suffolk		20
East Midlands	Derbyshire	<1%	
	Leicestershire	<1%	
	Lincolnshire	1 - 10%	
	Northamptonshire	1 - 10%	957
West Midlands	Staffordshire	<1%	

London	East London		2,141
	West London		20,624
	Unknown Greater London		31,050
North West	Unknown North West		12,321
Total consumption		0.72 Mt	728,079

3.12 The AM 2014/15 report demonstrates that as the sub-region is a net importer of primary aggregate, it relies on imports of crushed rock as it is not a producer of crushed rock.

Table 6: Primary Aggregates Imports to and Exports from Buckinghamshire and Milton Keynes 2014 (tonnes)

	Imports in Buckinghamshire and Milton Keynes	**Exports from Buckinghamshire and Milton Keynes**	**Balance**
Sand and Gravel	430,000	410,000	+20,000
Crushed Rock	486,000	Not Applicable	+486,000
Total	919,000	408,000	+511,000

3.13 The AM 2014/15 reports that sand and gravel sales within the region increased to 5.7mt in 2014 from 5.4 in 2013, but slightly decreased to 5.5 in 2015. It also notes that sales in the last 5 years have averaged 5.8mt which is a fall of 35% compared to 2004-2008.

3.14 As Buckinghamshire has only one rail aggregate depot, data on rail-served aggregates from depots in Buckinghamshire has been amalgamated with those in Milton Keynes and Oxfordshire. At present the rail aggregate depot in Buckinghamshire is inactive meaning all imports and export of sand and gravel travels via road.

Table 7: Sales of Aggregate at South East England Rail Depots (000 tonnes) 2007 - 2016

	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Berks and Hants	1,935	1,369	1,094	1,054	1,215	1,222	1,090	1,431	1,565	1,517
Buckinghamshire, Milton Keynes and Oxfordshire	887	733	447	729	659	552	762	975	918	1,038
Kent and Medway	594	581	414	356	446	313	465	533	445	492
Surrey and West Sussex	669	657	621	888	949	1,000	1,192	1,688	1,456	1,087
Total	**4,085**	**3,340**	**2,576**	**3,027**	**3,269**	**3,087**	**3,509**	**4,627**	**4,384**	**4,134**

Source: Data taken from South East Aggregate Monitoring Report 2016, SEEAWP 2017

Secondary and Recycled Aggregates

3.15 Secondary aggregates are often materials from industrial by-products, an example of which is 'incinerator bottom ash' (IBA) from the Energy from Waste (EfW) treatment process. This can be used in, or form parts of, construction materials, such as for building foundations or roads.

3.16 An EfW facility became operational in the county in June 2016 at Greatmoor, north west of Aylesbury. It can thermally manage up to 300,000 tonnes of residual household collected waste per annum and produced an average 24MW of electricity during the last monitoring year. It is expected that 25% of its waste input will be exported from the site as secondary aggregate.

3.17 Most of the known aggregate recycling in Buckinghamshire takes place at temporary facilities, often located at sand and gravel quarries, although a number of sites also benefit from permanent planning permissions. The difficulties in gathering information relating to the movements of construction and demolition waste, and the production of recycled aggregate, are widely acknowledged by other Minerals and Waste Planning Authorities. In Buckinghamshire, information relating to facilities which manage secondary and recycled aggregates consists largely of data sourced through the annual monitoring survey.

3.18 Minerals returns for 2017 indicated that there were three active recycled aggregates sites producing approximately 122,033 tonnes of recycled aggregate and two inactive sites within Buckinghamshire. It also indicates that there is the annual output potential for 400,000 tonnes for recycled aggregate and secondary aggregate.

4. Aggregate Supply, Demand, Future Provision and Local Considerations

4.1 The MWCS identified an annual supply requirement of 1.09 million tonnes per annum (mtpa) based on a ten year average of sales data for the period 2001-2010. However the MWCS acknowledged that the appropriate level of annual supply may require revision, dependant on the findings of the LAA. Policy CS4 refers to *"…prevalent agreed local annual supply requirement for Buckinghamshire"*. According to the NPPF, paragraph 207, the LAA is intended to provide important information to enable MPAs to plan for a steady and adequate supply of aggregates, and specifically to inform the preparation of a Minerals Local Plan.

> '*Minerals planning authorities should plan for a steady and adequate supply of aggregates by:*
> *a) 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 supply options (including marine dredged, secondary and recycled sources);'*

4.2 The rolling average now reflects a period from 2008 – 2017, figure 4 shows the sales data for sand and gravel in Buckinghamshire for the most recent ten year period 2008-2017 against the ten year average sales data. This shows that the ten year average sales figure for the past few years have plateaued out while there has been an increase in sales. However, the increase in sales each year is not as high as the one that is dropping off resulting in the minimal change in the 10 ten year average. However, if sales are to remain at the leave that has been seen since 2016, then it is expected that the 10 year average should start to increase accordingly.

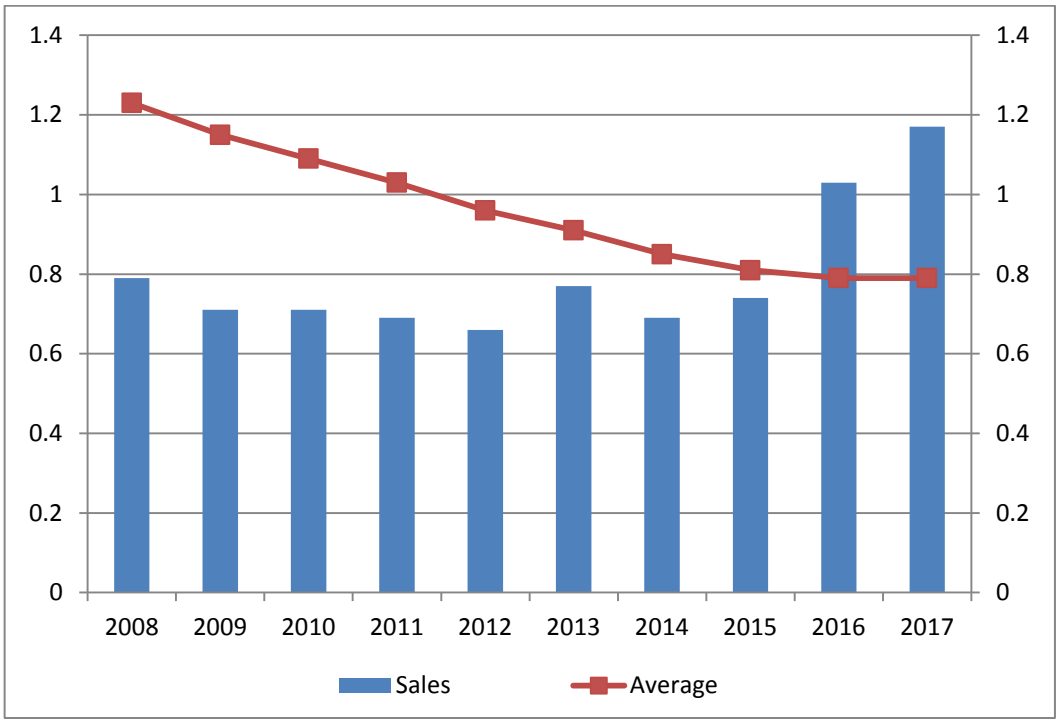


Figure 4: Comparison of past sand and gravel production with ten year average (million tonnes) 2008-2017

4.3 Use of sales data over the most recent ten year period is considered to be a balanced indicator of required provision, since it includes intervals of relatively high and low economic activity, and therefore evens out the relative peaks and troughs. However, in accordance with the NPPF, MPAs are also required to give consideration to a 3 year sales data averages as well as any “local factors” that could affect aggregate supply and demand.

4.4 The adopted MWCS is currently subject to review as part of the preparation for the Minerals and Waste Local Plan (MWLP) 2016-2036. It is possible that planning applications for minerals extraction may come forward prior to adoption of the MWLP. In this instance, proposals will be tested against Policy CS4 of the MWCS and the criteria for selection of Preferred Areas set out in Policy CS5, as well as the “Saved” policies in the Buckinghamshire Minerals and Waste Local Plan 2004-2016.

4.5 Table 8 sets out calculations for the sand and gravel landbank based on different provision rates used including:

- the most recent ten year average of sales data based on the period 2007 – 2017, and
- the average of the last three years sales data based on the period 2014 – 2017

Table 8: Sand and Gravel Landbank in Buckinghamshire as of 31/12/2017

Permitted reserves (mt) at 31/12/2017	10.67	
Rolling average of ten years sales data (mtpa)	0.79	13.4 Years Supply
Average of three years sales data (mtpa)	0.98	10.9 Years Supply

4.6 As previously mentioned in paragraph 2.6, these figures do not include the undetermined planning application in 2017. If this is to be permitted it would contribute an additional approximate 1.25 mt to the reserves of the county.

Local considerations

4.7 The districts within the county are planning for housing growth through their new Local Plans. The Objectively Assessed Housing Need for Buckinghamshire[5] has identified the need for 39,798 new homes for the period 2013-33. This would result in a significantly greater housing delivery rate than in the past. Table 9 show housing completions from 2011 to 2016 and it should be acknowledged that the significant increase, compared to past completions, in house building in Buckinghamshire in the next 20 years if delivered is likely to lead to an increase in demand for aggregates.

Table 9: Housing Completions across Buckinghamshire Districts 2011 – 2016

Year beginning 1st April	Aylesbury Vale	Chiltern	South Bucks	Wycombe
2011	1,100	177	128	514
2012	930	309	226	223
2013	990	148	142	266
2014	1,420	114	139	423
2015	1,190	158	80	376
2016	1,323	234	411	788
Total	**6,953**	**1,140**	**1,126**	**2,590**

Source – District Councils Annual Monitoring Reports, data taken for April - March each year

[5] Available at https://www.wycombe.gov.uk/uploads/public/documents/Planning/New-local-plan/Bucks-Housing-and-Economic-development-needs-assessment-update-2016.pdf

4.8 There are a number of large national infrastructure schemes due to start in the county as set out in the National Infrastructure Delivery Plan[6] that will impact upon the county. One of the biggest impacts upon the county is the HS2 rail link. The main construction works are not expected to start until 2019 but at present there are considerable uncertainties concerning its likely demand for construction materials, as the main works contractors have not published their mineral requirements. It is not possible to estimate the likely requirements of the HS2 project for locally arising construction materials, given the close proximity of other aggregate producing MPAs to the line of the HS2 project. There is also scope for the reuse of surplus excavation waste arising from the HS2 scheme for use in engineering works in the future, which could substitute for quarried materials.

4.9 Other national infrastructure schemes induced the Phase 2 western section of the East West Rail (EWR) project (Bicester/Aylesbury to Bletchley/Bedford) is subject to planning approval expected to commence construction in 2019. Its requirement for aggregate is believed to be much less than that of HS2, and indications are that it may not be sourced entirely, or at all, from within Buckinghamshire. It will be a commercial decision as to where its contractors source construction materials at the time of any construction works taking place. The scheme proposed for the reconstruction of the M4 as a smart motorway between junctions 3 and 12 is also likely to require significant volumes of aggregates between 2017 and 2022, but likely quantities are not publicly available. Locally the Aylesbury Link Roads, other road schemes and various flood mitigation schemes would require aggregates but would probably not be significant in the context of previous such development.

4.10 Other sources of potential significant demand for aggregates arising from national infrastructure schemes in the future could include the Western Rail Access to Heathrow, the A421 Oxford to Cambridge Expressway and, Heathrow Expansion. Both the Western Rail Access to Heathrow and the Heathrow Expansion are progressing towards Development Consent Orders and are listed as in the pre application stage by the Planning Inspectorate. Construction of a new runway at Heathrow, should a development consent order be granted, is expected as early as 2021.

4.11 The expectation for the level of future demand for aggregates is therefore highly mixed, with potentially significant demand anticipated from infrastructure schemes and housing growth. Sales have significantly increased this year with not many of these infrastructure schemes commencing, therefore additional reserves may be required in the short to medium term to maintain the landbanks depending on the planning applications awaiting determination.

[6] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/520086/2904569_nidp_deliveryplan.pdf