Central Bedfordshire, Bedford Borough and Luton Borough Councils'

Local Aggregate Assessment

2014 - 2015

Central Bedfordshire Council, Bedford Borough Council and Luton Borough Council

working together

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Executive Summary

This Local Aggregate Assessment (LAA) has been compiled in order to assess the supply of and demand for aggregates to ensure a steady and adequate supply of aggregate mineral in line with Government requirements. It has been prepared on behalf of Central Bedfordshire, Bedford Borough and Luton Borough Councils, although within that Plan area, mineral extraction is confined to the administrative areas of Central Bedfordshire and Bedford Borough. The LAA has been compiled for the years 2014 and 2015.

- In the year ending **31 December 2014**, sales of sand and gravel stood at 1.622 million tonnes (Mt). This represented a rise of 29.2% from the sales for 2013 which stood at 1.255 Mt.

- The rolling three year average figure up to 31 December 2014 was 1.358 Mt representing an increase of 14.2% on the three year average figure of 1.189 Mt up to 31 December 2013.

- The average for the 10 year period from 2005 - 2014 stood at 1.297 Mt registering a slight decline of 2.6% from the figure for the previous year of 1.331 Mt.

- The sub-regional apportionment for the Plan area was set at 1.84 Mt having previously been set at 1.93 Mt prior to 2003. Annual production for 2014 therefore was 88% of the apportionment target, an increase of 20% from figures for the previous year. In the last 20 years the Bedfordshire authorities have met their apportionment target twice, in 1999 and 2004.

- Permitted reserves as at the end of December 2014 were estimated at 13.559 Mt equating to a 7.4 year landbank based on agreed apportionment. Using a rolling 3 year average sales gave a landbank of 9.9 years whilst applying 10 year average sales indicated a landbank of 10.4 years.

- Having regard to the trends of figures for both sales and permitted reserves it is suspected that anomalies may exist within the figures collected as part of the National Survey. The 2014 sales figure represents a significant percentage increase in sales from 2013 and, whilst the recorded figure could be accurate, it appears out of kilter with the trend of more moderate increases in sales suggested by the data around that period. In terms of permitted reserves at the end of 2014, this conversely indicated a significant slump from fairly consistent levels recorded in the preceding years. Permitted reserves recorded for 2015 (see below) indicate a substantial uplift back towards pre-2014 levels, although such an increase in permitted reserves is not matched by the grant of planning permissions as would be expected. The 2014 figures are, therefore, considered to be questionable although having been derived from the National Survey the Bedfordshire authorities have no way of interrogating the data.

- In the year ending **31 December 2015**, sales of sand and gravel stood at 1.322 Mt representing a fall of 18.5% from the production in 2014 (1.622 Mt).

- The rolling three year average figure up to 31 December 2015 rose to 1.400 Mt representing an increase of 3.1% on the three year average figure (1.358 Mt) up to 31 December 2014.

- The average for the 10 year period from 2006 - 2015 stood at 1.261 Mt registering a slight decline of 2.8% from the figure for the previous year of 1.297 Mt.

- Annual production for 2015 equated to 72% of the apportionment target (1.84 Mt), a fall of 16% from figures for 2014.

- Permitted reserves as at the end of December 2015 were estimated at 19.386 Mt equating to a 10.5 year landbank based on agreed apportionment. Applying a rolling 3 year average sales produces a landbank of 13.8 years whilst using 10 year average sales indicates a landbank of 15.3 years. The Bedfordshire authorities are therefore confident that the at least 7 year aggregate sand and gravel landbank required by the National Planning Policy Framework has been met.

- The Minerals and Waste Local Plan: Strategic Sites and Policies (Adopted 2014) allocates six strategic aggregate sand and gravel sites. As at the end of December 2015 an application had been received in respect of one these sites but no planning permissions had been granted. The allocated sites should help ensure an at least 7 year landbank is maintained over the Plan period.

Summary Table:

Bedford Borough, Central Bedfordshire & Luton Borough Councils 2016									
	Sales (Mt) (2014) 2015	Average 10 yr Sales (2014) 2015	Average 3 yr Sales (2014) 2015	Trend[1]	LAA Rate (Mt)[2]	Reserve (Mt)	Landbank (Yrs)	Capacity (Mtpa)	Comments
All Sand & Gravel	(1.6) 1.3	(1.3) 1.3	(1/4) 1.4	(↑) →	(1.3) 1.3	(13.6) 19.4	(10.5) 14.9		Adopted MWLP makes provision for 6 strategic allocations
Crushed Rock	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Comments	1 Sales for 2014 were up compared with the rolling 10 year average. Sales for 2015 were in line with the rolling 10 year average although marginally down on the rolling 3 year average. 2 The LAA Rate is the LAA Provision Rate determined by the mineral planning authorities (MPAs) as the suitable measure for estimating the landbank for land-won aggregates. The adopted default is the 10 year average sales but this has been informed by other factors including the 3 year average sales. In all cases, the MPAs an aggregate sand and gravel landbank of at least 7 years can be demonstrated. The Plan area accommodates on-going construction work in respect of an A5-M1 link road and a new Junction 11a on the M1. No additional construction of an exceptional scale is currently planned although emerging strategic plans aim to make provision for over 45,000 new houses. No particular problems are identified as arising from this LAA.								

Section One: Background

Introduction

Aggregate Minerals are needed to sustain the economy, providing the raw materials for built development, construction, maintenance and utilities. However, they are a finite resource and can only be worked where they are found. It is therefore essential that they are used prudently. The National Planning Policy Framework (NPPF) states at paragraph 142:

"Minerals are essential to support sustainable economic growth and our quality of life. It is therefore important that there is a sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs. However, since minerals are a finite natural resource and can only be worked where they are found, it is important to make best use of them to secure their long-term conservation."

The Government recognises the importance of maintaining sufficient aggregate production and as such requires Minerals Planning Authorities (MPAs) to produce a Local Aggregate Assessment (LAA) on an annual basis. The purpose of the LAA is to monitor aggregate production and facilitate the steady and adequate supply of aggregates.

This is the third LAA produced on behalf of Central Bedfordshire, Bedford Borough and Luton Borough Councils. It should be noted that whilst this LAA relates to the Plan area, mineral extraction only takes place within the Bedford Borough and Central Bedfordshire administrative areas.

The document meets the requirements of Chapter 13, paragraph 145 of the NPPF and the DCLG 2012 Technical Guidance as:

- It includes a forecast of demand for aggregates based on existing reserves and the agreed apportionment.
- It assesses whether an at least 7 year landbank for sand and gravel has been met and whether it is likely to be maintained in the future.
- It provides information on existing sites, strategic sites and the geology of the area.
- It considers other potential sources of aggregates including recycled and secondary aggregates, and
- Looks at the importation of aggregates not found within the Plan area.

The NPPF (paragraph 143) also requires Local Planning Authorities (LPAs) to take account of the contribution that substitute, secondary and recycled minerals waste can make to the supply of materials, before considering extraction of primary materials.

Geology of Central Bedfordshire, Bedford Borough and Luton Borough

The Plan area has a rich and varied geology. The most significant minerals found in the Plan area are:

- River Valley/Glacial Sand and Gravel
- Woburn Sands
- Chalk
- Oxford Clay
- Gault Clay
- Cornbrash Limestone

Due the economic importance of these minerals six mineral safeguarding areas (MSAs) have been identified in the Minerals and Waste Local Plan: Strategic Sites and Policies document which was adopted in January 2014 (MWLP: SSP – The Plan). These areas are shown on the MWLP:SSP Policies Map and, in conjunction with Mineral Strategic Policies MSP11: '*Minerals Resource Assessment*' and MSP12: '*Surface Development within a Mineral Safeguarding Area*', will ensure that potentially important minerals are safeguarded from needless sterilisation by surface development. A map showing the geology of the Plan area is shown at Figure 1 while the extent of the MSAs is shown at Figure 2.

A more detailed version of the MSA map is available to download from the CBC website:

http://www.centralbedfordshire.gov.uk/planning/minerals-waste/framework/policies.aspx

River Valley/Glacial Sand and Gravel
The Plan area contains significant reserves of aggregate sand and gravel, the majority of which originate from the river valley/glacial sand and gravel deposits found south of the A421 and west of the A1.

Woburn Sands
The Woburn Sands which stretch diagonally across the Plan area also provide an important source of aggregate sand, and in the area near Leighton Buzzard, silica sand (specialist sand).

Chalk and clay
The Plan area also contains marine borne minerals in the form of chalk, limestone and clay which could be used as an alternative to aggregate. However, chalk extracted within the plan area is currently only used for cement works in Rugby and small scale building repair works, while clay extraction ceased a number of years ago.

Marine dredged and marine borne Aggregates
The Plan area contains significant reserves of aggregate sand and gravel but, being land locked, it contains no areas suitable for the dredging of marine aggregates although a small amount is imported to the Plan area

Figure 1: Geology of the Plan area

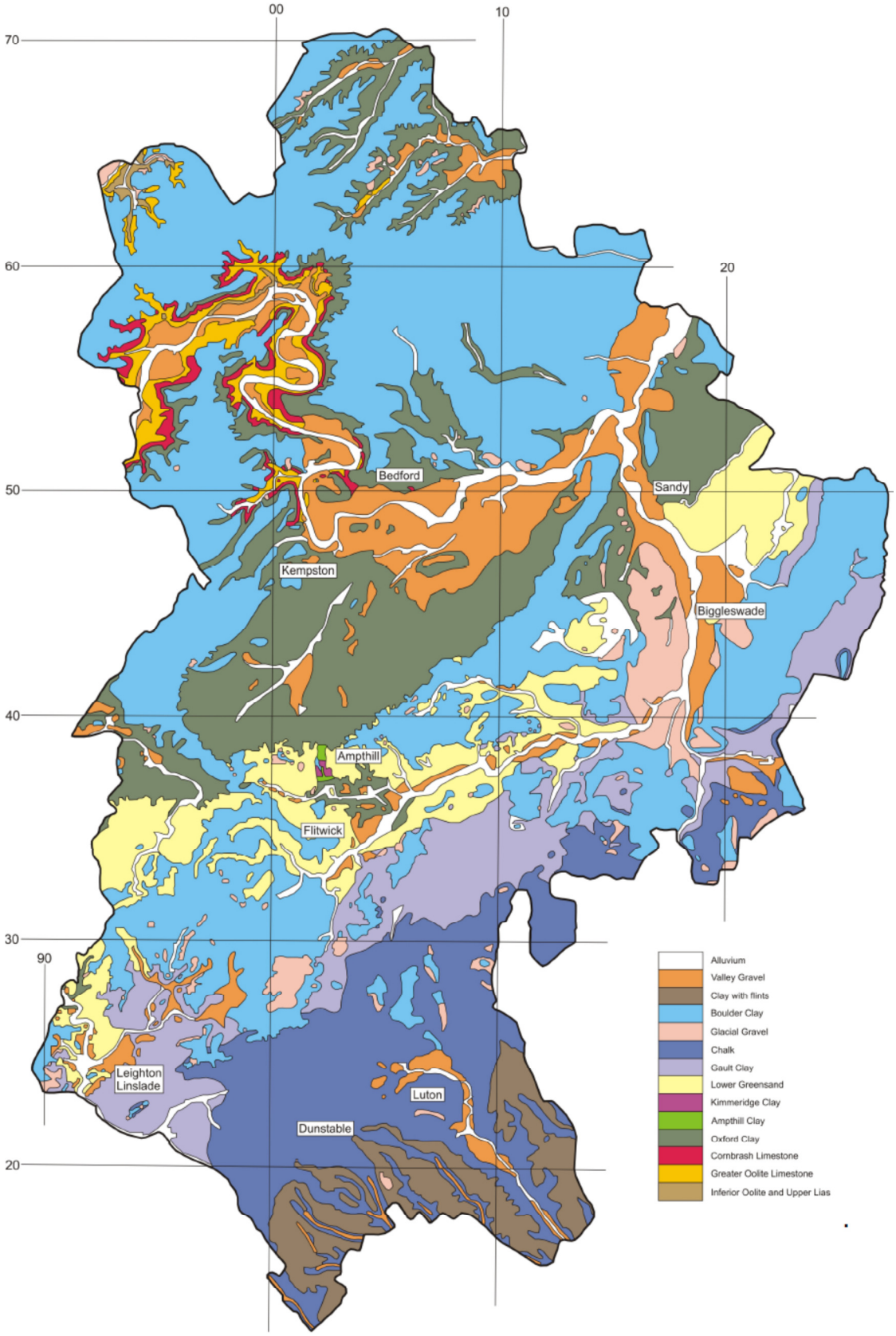
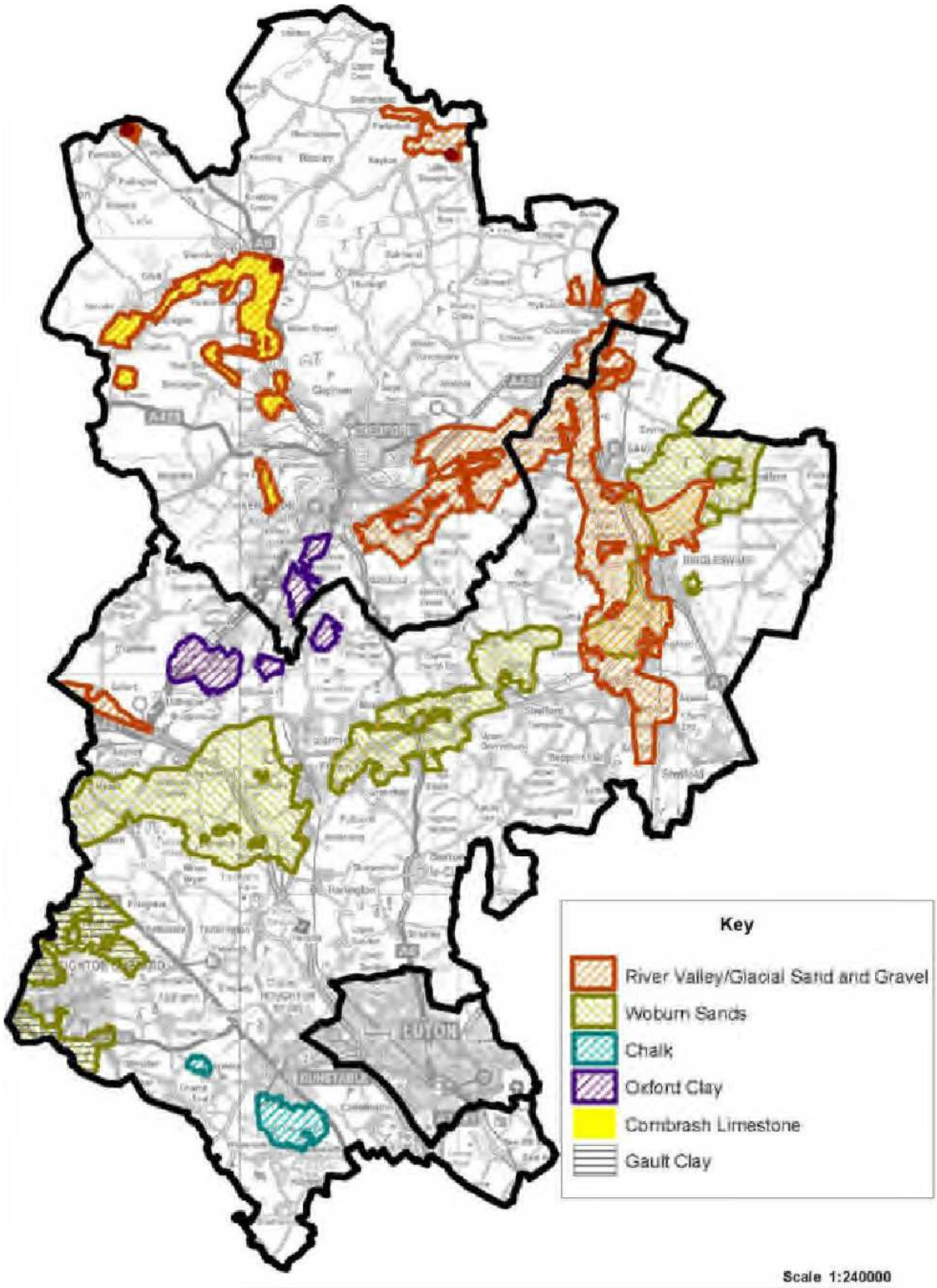


Figure 2: Mineral Safeguarding Areas



Section Two: Aggregate Sand and Gravel

Paragraph 145 of the NPPF states that; *"Minerals planning authorities should plan for a steady and adequate supply of aggregates by: preparing an annual Local Aggregate Assessment, either individually or jointly by agreement with another or other mineral planning authorities, 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)."*

This section contains factual information concerning existing mineral extraction sites, current reserves and annual sales. It includes an assessment of aggregate sand and gravel provision and considers whether there is a surplus or shortfall in aggregate sand and gravel within the Plan area.

Existing sites

In 2014 and 2015 fourteen permitted aggregate extraction sites were active in the Central Bedfordshire and Bedford Borough Council administrative areas. As noted above, no mineral extraction is undertaken within Luton Borough Council's administrative area. Table 1 below lists these sites and identifies the operator, mineral type and the status of each site; while the map entitled "Mineral extraction sites (2014-15)", illustrates the approximate locations of each site.

Table 1: Land-won mineral sites[1]

	Operator	Site	Mineral extraction end date as stated in the extant PP	Mineral type	Status (extraction undertaken in 2014-5)
1	Thomas Bros	Cainhoe	Dec 2029	Aggregate	Active
2	Hanson Building Products Ltd[2]	Simpsonhill	Feb 2042	Aggregate	Active
3	Sibelco[3]	Double Arches	Feb 2042	Both aggregate and silica sand in broadly equal proportions.	Active
4	LB Silica Sand	Reach Lane	Oct 2015	Both aggregate and silica sand in broadly equal proportions.	Active - for processing
5		Bryants Lane	Dec 2041	Both aggregate and silica sand in broadly equal proportions.	Active
6	Aggregate Industries	Mundays Hill	Feb 2042	Approximately two thirds aggregate sand, one third silica sand	Active
7		Churchways/ Checkleywood	Feb 2042	Both aggregate and silica sand in broadly equal proportions.	Active
8			July 2021	Both aggregate and silica sand in broadly equal proportions.	Active
9	Lafarge	Sandy Heath	Main site =	100%	Active

[1] Please note "Table 1: Land-won mineral sites" lists sites with permitted mineral reserves available within Bedford Borough and Central Bedfordshire. It does not include exhausted sites now in restoration.

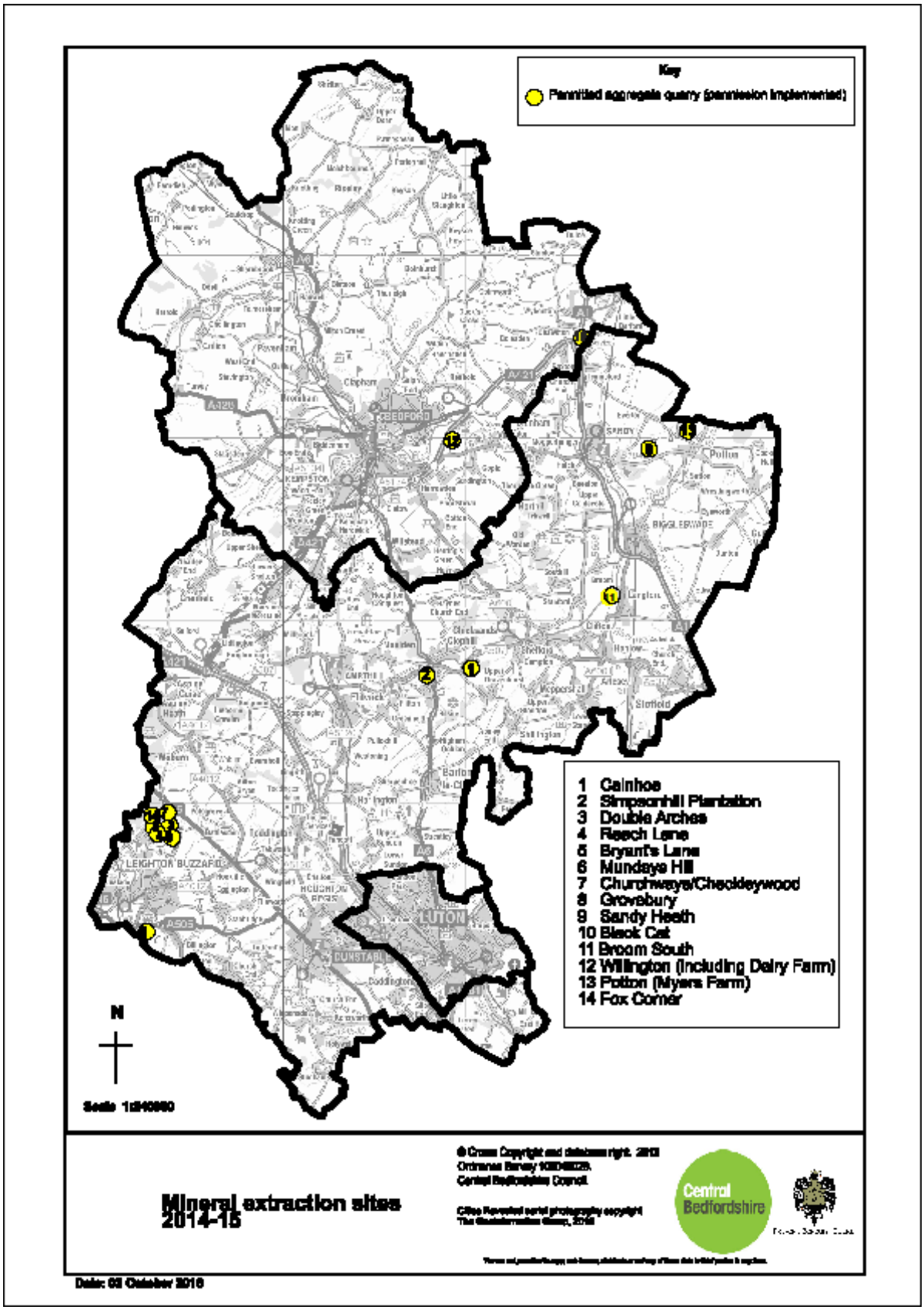
[2] Since October 2015 Hanson Building Products Ltd has been known as Forterra.

[3] Sibelco withdrew from this site in 2015 with Aggregate Industries taking on a lease in respect of part of Double Arches with effect from March 2015. Fox Omwby Ltd responsible for the remainder of the site on behalf of the landowner.

	Tarmac[4]		Dec 2017 Extension = Dec 2014	aggregate	
10		Black Cat	Jan 2022	100% aggregate	Active
11		Broom South	April 2026	100% aggregate	Active
12	Hope Construction[5]	Willington (including Dairy Farm)	19 October 2016	100% aggregate	Active
13		Potton (Myers Farm)	2015	100% aggregate	Active
14	D B Standing and Sons	Fox Corner	Feb 2042[6]	Aggregate sand.	Active

[4] NB Lafarge Tarmac became Tarmac Ltd with effect from 3 August 2015
[5] Hope Construction Materials were taken over by the Breedon Group in August 2016
[6] Extension to end date granted following Review dated March 2015

Figure 3: Mineral extraction sites 2014-15



East of England Aggregates Working Party and aggregate provision

The 2009 DCLG national and regional guidelines for aggregates provision in England replace those published in 2003. These guidelines take account of a revised target of 64 million tonnes (Mt) per annum by 2015 for alternative materials. The document apportioned 236 Mt of land-won sand and gravel and 8 Mt of land-won crushed rock to originate from the East of England between 2005 and 2020.

The sub-regional apportionment for the Plan area was set at 1.84 Mt per annum for which provision was made within the adopted Plan. Whilst the Regions have now been abolished; the government recognises the need for Minerals Planning Authorities to co-operate on strategic aggregate minerals planning matters.

The NPPF advises MPAs to seek and to take into account the technical advice from the relevant Aggregate Working Party (AWP). The East of England AWP has encouraged each MPA within its area to maintain the agreed apportionment figure. For the Central Bedfordshire, Bedford Borough and Luton Borough MPAs this means maintaining an aggregate sand and gravel provision of 1.84 Mt per annum.

Annual sales

According to the East of England AWP Annual Monitoring Report (AMR) (2014/2015) permitted aggregate reserves in Bedford Borough, Central Bedfordshire and Luton totalled 13.559 Mt in 2014 and 19.386 in 2015, while aggregate sand and gravel sales for 2014 totalled 1.622 Mt and for 2015 totalled 1.322 Mt. These figures are based on the results of the National Survey undertaken for 2014 and the EEAWP survey (2015) and information contained in planning applications' supporting documents (where 2014/2015 survey information was not available).

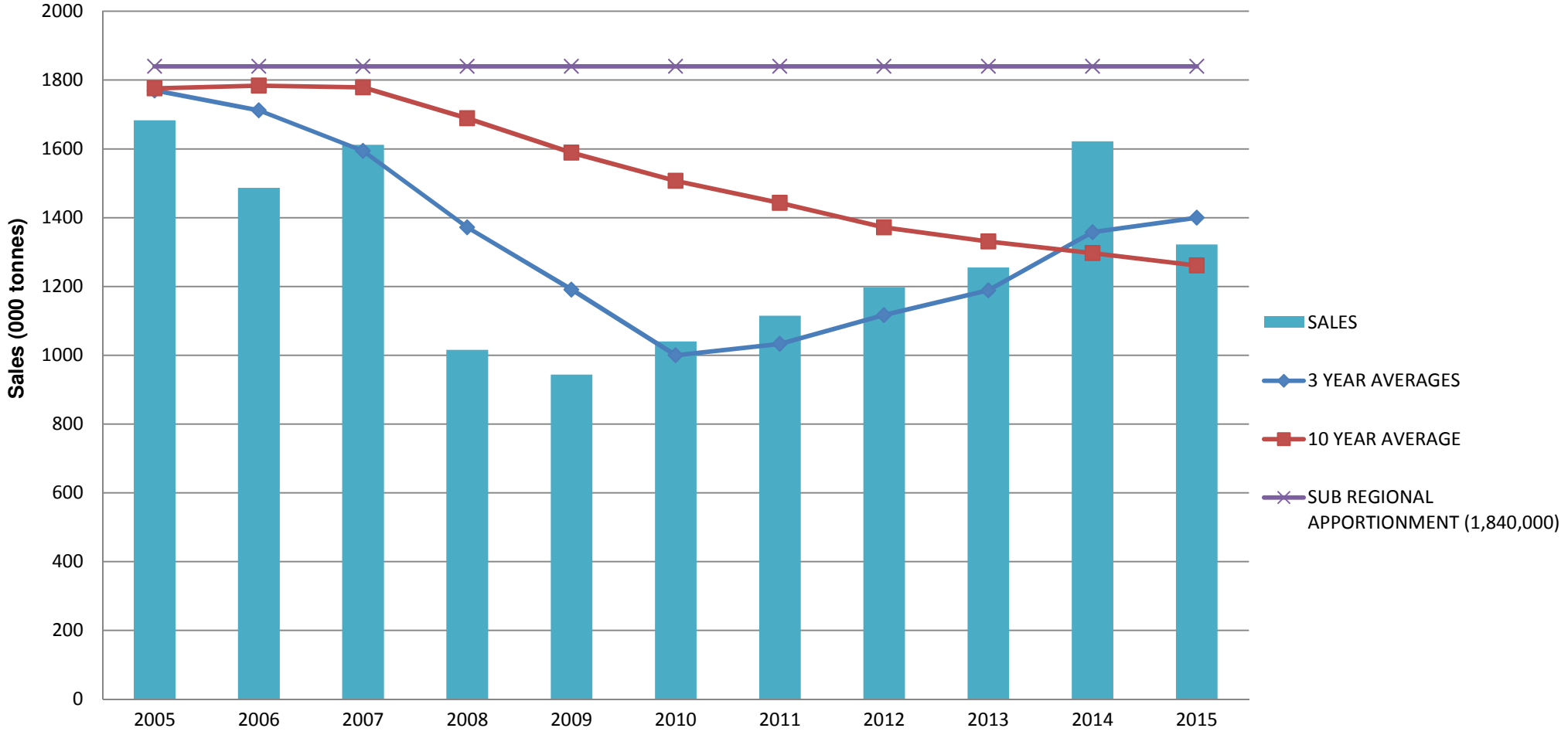
Figures in the table below show the aggregate sand and gravel annual sales over the from 2005 as stated in the EEAWP AMR (2014/2015) so as to cover the 10 year periods from 2005 -2014 and 2006 -15.

Table 2: Sales data (Mt)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1.683	1.487	1.612	1.016	0.944	1.040	1.115	1.197	1.255	1.622	1.322

The NPPF requires MPAs to maintain a landbank of at least 7 years for sand and gravel. It also encourages MPAs to base their LAA on a rolling average of 10 years sales data and other relevant information. The graph below illustrates the trends in aggregate sand and gravel sales. It shows that the 10 year sales average at 31st December 2014 totalled 1.297 Mt and at December 2015 totalled 1.261 Mt. It indicates that the agreed apportionment figure of 1.84Mt is 0.543Mt higher than the 10 year sales average up to the end of 2014 and 0.579 Mt higher than the 10 year sales average up to the end of 2015. The agreed apportionment is 0.482 Mt higher than the three year sales average for 2012-14 and 0.44 Mt higher than the three year sales average for 2013-15

Figure 4: Aggregate Sand and Gravel Sales in the Plan area (2005-2015)



Trends

Planning Practice Guidance advises Minerals Planning Authorities to look at the 10 year sales average and other information to identify the general trend as part of the consideration of whether it might be appropriate to increase supply. The website link is:
http://planningguidance.planningportal.gov.uk/blog/guidance/minerals/planning-for-aggregate-minerals/the-managed-aggregate-supply-system/

Figure 4 shows the annual sales figures for the period 2005 – 2015 so as to cover the 10 year periods 2005 - 14 and 2006 - 15. In 2014 sales totalled 1.622 Mt representing a significant increase of 29% from the previous year and continuing an upward trend in sales since 2009. Sales during 2015 fell back to 1.322 Mt, a drop of 18% from the 2014 figure, although otherwise it continued the upward trend of sales since 2009. The graph shows that the sub-regional apportionment figure of 1.840 Mt, depicted as the purple line, has not been met by production figures in the last 10 years from either 2015 or 2014. Production in 2014 accounted for 88% of the apportionment figure whilst in 2015 production accounted for 72%. Despite the drop from 2014 to 2015, the percentage of the apportionment figure met in those years represents an uplift from the figures recorded for the five years between 2008 and 2012, albeit generally still short of the figures recorded pre-recession. The percentage of the apportionment figure met by production over the preceding 10 year periods is set out in the table below:

Table 3: Production (Mt) as a percentage of apportionment figure

Year	Apportionment Figure (Mt)	Production (Mt)	Production as %tage of Apportionment Figure
2005	1.84	1.683	91%
2006	1.84	1.487	81%
2007	1.84	1.612	88%
2008	1.84	1.016	55%
2009	1.84	0.944	51%
2010	1.84	1.040	57%
2011	1.84	1.115	61%
2012	1.84	1.197	65%
2013	1.84	1.255	68%
2014	1.84	1.622	88%
2015	1.84	1.322	72%

The 10 average of annual sales up to the end of December 2014 was 1.297 Mt which was 2.6% down on the 2013 figure of 1.331 Mt. This is due to the historically high pre-recession sales figures for 2004 no longer falling within the 10 year accounting period. The 10 year average for the period ending December 2015 was 1.261 Mt which represents a fall of 2.78% from the 2014 figure. The table below

shows the 10 year average figure (in Mt) covering the 10 year periods from 2005 -14 and 2006 – 15:

Table 4: 10 year average sales figures (Mt)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1.776	1.784	1.779	1.689	1.589	1.507	1.443	1.372	1.331	1.297	1.261

This shows the 10 year average continuing the year on year fall since 2006 albeit the rate of fall experienced in 2014 and 2015 has slowed compared with preceding years. Sales in 2014 and 2015 represent the only two years when production of aggregate sand and gravel has exceeded the corresponding 10 year average sales figures. It should be noted that sales data for Bedfordshire for the years 1996 – 99 was sourced from aggregates monitoring reports prepared by the South East Regional Aggregates Working Party which included Bedfordshire over that period.

Advice set out in Planning Practice Guidance suggests the use of 3 yearly average figures to determine recent sales trends.
Figure 4 depicts the rolling 3 yearly average figures, plotted as a dark blue line. The table below shows the 3 year average (in Mt) covering the 10 year periods from 2005 -14 and 2006 – 15:

Table 5: 3 year average sales figures (Mt)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1.770	1.712	1.594	1.372	1.191	1.000	1.033	1.117	1.189	1.358	1.400

The 3 yearly average figure for 2014 stood at 1.358 Mt representing a 14.2% increase from the 2013 figure and continuing the upward trend recorded since 2010. The 3 yearly average figure for 2015, at 1.400 Mt, extends that upward trend, albeit at a more modest rate being a 3.1% rise from the 2014 figure. The 3 yearly figures for 2014 and 2015 are the only years within the preceding 10 year periods when such figures have exceeded the 10 year rolling averages.

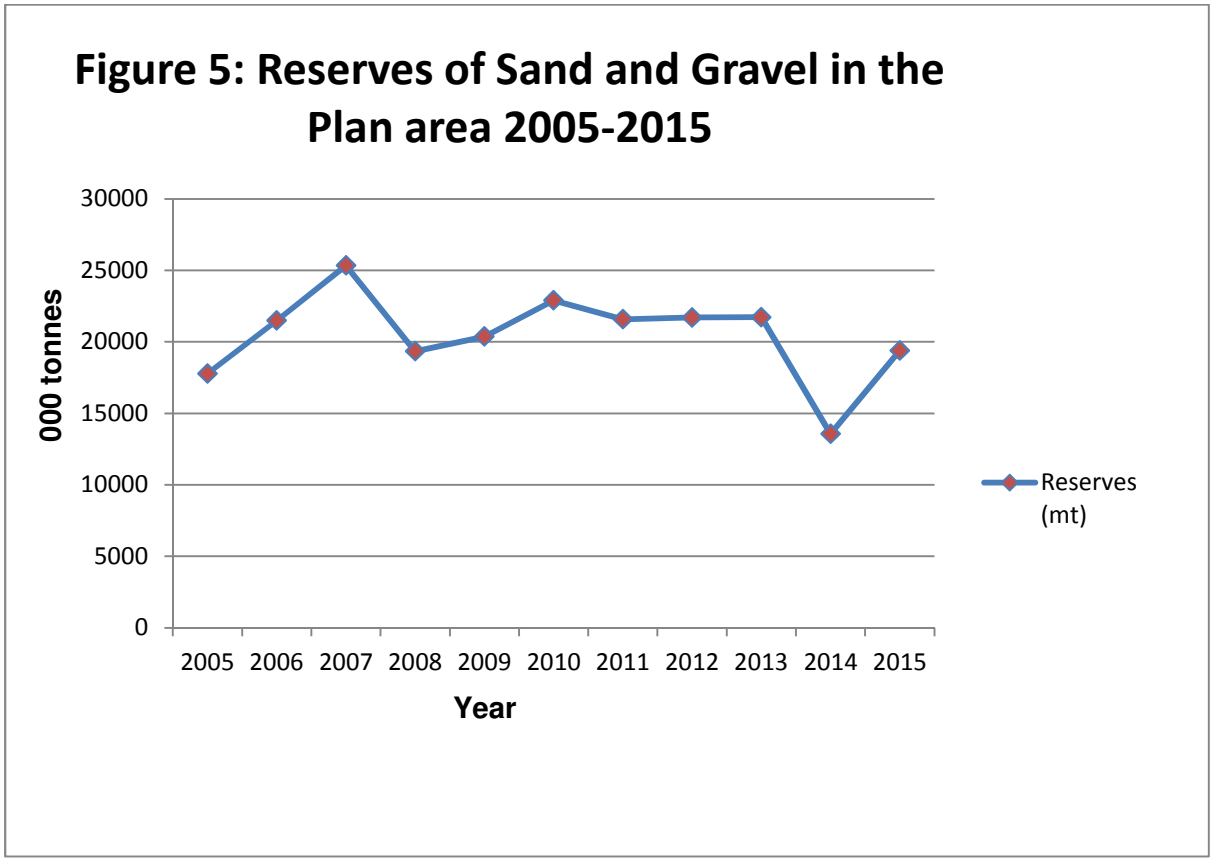
The Bedfordshire Authorities consider that, when analysing trends, reliance should be placed on the 3 yearly and 10 yearly rolling averages, as the NPPF advises, rather than taking any longer term view which would reflect different economic climates, methods of working and markets.

Reserves

Table 6 and Figure 5 below shows trends in aggregate sand and gravel reserves within the Plan area between 2005 and 2015 covering the 10 year periods 2005-14 and 2006 -15. Figure 5 shows that in the five year period (2009 – 13) prior to 2014 levels of permitted reserves were relatively stable at around 20.3 to 21.7 Mt. The figure of reserves in 2014, however, slipped sharply to 13.5 Mt. This figure was collected as part of the national survey and would appear to be something of an anomaly particularly given that the figure recorded in respect of 2015 appears to have rallied at close to 20 Mt, in closer alignment with reserves recorded in the years immediately preceding 2014. The difference in permitted reserves recorded at the end of 2014 compared with the end of 2015 is significant, being close to 6Mt, which is not reflected in planning permissions issued in 2015. The accuracy of the 2014 data on reserves is, therefore, considered to be questionable, although MPAs within Bedfordshire have no way of interrogating the figures collected as part of the national survey.

Table 6: Reserves data (Mt)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
17.787	21.492	25.341	19.334	20.364	22.898	21.573	21.700	21.726	13.559	19.386



Significant construction projects

The emerging strategic planning documents for Bedford Borough, Central Bedfordshire, and Luton Borough seek to make provision for some 45,700 new houses (see box below). The construction of these houses will require significant quantities of aggregate. In addition to the aggregates required for the construction of these new homes and associated infrastructure to support this projected growth,, improvement works on the M1 near Luton as well as the A5-M1 link road are also requiring a significant tonnage of aggregate. The A5-M1 link road is a £162.1M project to improve east-west connectivity though the construction of a new 2.8 mile dual carriageway. Construction commenced in March 2015 and is scheduled to be completed by June 2017. Part of this scheme involves the construction of a new junction (11A) on the M1 near Dunstable with this element commencing in June 2015.

- The evidence base to support the new Central Bedfordshire Local Plan suggests a need for around **20,000** new homes between 2015 and 2035.
- The latest evidence base to support the emerging Bedford Borough Local Plan suggests that around **19,000** houses will be required between 2015 and 2035.
- The draft Luton Local Plan (2011 – 2031) suggests that around **6,700** new dwellings will be delivered in the borough through key allocations.

Whilst it is clear that development of the Plan area will take place in the future, it is impossible to predict the level of development and the tonnage of aggregate that will be required. Nevertheless, the Shared Service is satisfied that the existing permitted reserves are sufficient to ensure the delivery of planned developments, though of course the MPA will closely monitor the aggregate sand and gravel landbank each year.

Landbank for sand and gravel: Analysis of demand and supply

Paragraph 145 of the NPPF states that MPAs should prepare an annual LAA based on a rolling average of 10 years and other relevant information.

If the current 10 year sales average is used to calculate the sand and gravel landbank as at the end of 2014, the landbank would total **10.4 years** (13.559 Mt / 1.297Mt). If the landbank was based on the apportionment figure the result would result in a reduced landbank of **7.4** years (13.559Mt / 1.84Mt). Based on the 3 year sales average the landbank is **9.9** years (13.559 Mt / 1.358). However, regardless of whether the agreed apportionment, the 10 year sales average or the 3 year sales average is used to calculate the landbank, in 2014 the Bedfordshire MPAs were providing at least a 7 year landbank for aggregates.

Table 7: Landbank Calculations 2014

Bedford Borough, Central Bedfordshire and Luton Borough	
Sand and gravel sales 2014 estimate (Mt)	1.622
Permitted reserves 31/12/2014 (Mt)	13.559
Measure 1	
EoEAWP sub-regional apportionment (Mtpa)	1.84
Landbank based on EoEAWP sub-regional apportionment (Years)	7.4
Measure 2	
Rolling average of 10 year sales (2005-2014)	1.297
Landbank based on rolling 10 year sales average (Years)	10.45
Measure 3	
Rolling average of 3 year sales (2012-2014)	1.358
Landbank based on rolling 3 year sales average (Years)	9.98

Table 8: Landbank Calculations 2015

Bedford Borough, Central Bedfordshire and Luton Borough	
Sand and gravel sales 2015 estimate (Mt)	1.322
Permitted reserves 31/12/2015 (Mt)	19.386
Measure 1	
EoEAWP sub-regional apportionment (Mtpa)	1.84
Landbank based on EoEAWP sub-regional apportionment (Years)	10.5
Measure 2	
Rolling average of 10 year sales (2006-2015)	1.261
Landbank based on rolling 10 year sales average (Years)	15.37
Measure 3	
Rolling average of 3 year sales (2013-2015)	1.4
Landbank based on rolling 3 year sales average (Years)	13.85

Applying the 10 year sales average data for the year ending 31 December 2015, results in a sand and gravel landbank of **15.3** years (19.386 Mt / 1.261 Mt). Basing the calculation on the apportionment figure produces a landbank of **10.5** years (19.386 Mt / 1.84 Mt). Based on the 3 year sales average the landbank is **13.8** years (19.386 Mt / 1.4 Mt). Again, whichever approach is applied to the 2015 figures, the Bedfordshire MPAs can be satisfied that they are continuing to provide for at least a 7 year landbank for aggregates.

As noted earlier, attention is drawn to the apparently anomalous permitted reserves figure of 13.559 Mt recorded as part of the national survey. It is suggested that this figure largely explains the significant difference in the corresponding landbanks calculated from 2014 to 2015.

Meeting the agreed apportionment and Strategic Aggregate Sites

The Plan identifies six strategic aggregate sand and gravel sites based on providing the apportionment figure of 1.84 million tonnes per annum for the Plan period (until 2028). The strategic sites have been selected according to the following sequential test:

- Extensions to existing extraction mineral sites
- "Satellite" extraction sites serving an existing processing plant site
- New sites not connected with any existing operation.

The strategic aggregate sites are listed in Table 9 below. During 2014 and 2015 none of these sites had been granted planning permission for mineral extraction, although an application was live in respect of the allocated extension to the Black Cat site in Bedford Borough. *[Note: Planning permission was subsequently granted in April 2016 for the extraction of approximately 650,000 tonnes of sand and gravel from the allocated extension to the Black Cat site].*

Table 9: Status of Strategic Mineral Sites as at the end of December 2015

Operator	Site	Mineral type	Potential yield (tonnes)	Current Status
Hope Construction Materials[7]	Willington Lock	Aggregate sand & gravel	830,000 – 1,180,000	
Lafarge Tarmac[8]	Blunham/ Roxton	Aggregate sand & gravel	2,950,000 – 3,550,000	
Hope Construction Materials[7]	Black Cat (unpermitted area)	Aggregate sand & gravel	670,000 – 770,000	Planning permission granted in April 2016
Hope Construction Materials[7]	Willowhill Farm	Aggregate sand & gravel	250-000 – 950,000	
Hope Construction Materials[7]	Bridge Farm	Aggregate sand & gravel	250,000 – 950,000	
Lafarge Tarmac[8]	Land south of Broom Village (unpermitted area)	Aggregate sand & gravel	4,000,000	
		Total =	8,950,000-11,400,000	

[7] Hope Construction Materials were taken over by the Breedon Group in August 2016
[8] Lafarge Tarmac became Tarmac with effect from 3 August 2015

Section Three: Recycled and secondary aggregates

Secondary and recycled aggregates help to reduce the rate at which primary aggregate resources are depleted and therefore make an important contribution to the supply of aggregates. As such their use is encouraged through the NPPF. According to the British Geological Society (BGS) report, "*Aggregate resource alternatives: Options for future aggregate minerals supply in England*" (2008), the quantity of recycled and secondary aggregates produced within Great Britain in 2005 had increased by 107% from the level as at 1990.

The National and Regional guidelines for aggregate provision 2005-2020 assume that for the East of England 117 million tonnes of alternative materials will be produced. The guidelines for land-won production are 236 million tonnes and 8 million tonnes in the East of England for land-won sand and gravel and crushed rock respectively as shown in the table below.

Table 10: National and regional guidelines for aggregate provision in England 2005-2020 (million tonnes).[9]

	Guidelines for land-won production		Assumptions		
	Land-won sand and gravel	Land won Crushed rock	Marine sand and gravel	Alternative materials	Net imports to England
East of England	236	8	14	117	7
England	1,028	1,492	259	993	136

Recycled aggregates

Recycled aggregates are sourced from construction, demolition and excavation wastes (C, D, E). The Plan area contains a number of sites with planning permission to recycle aggregate waste. Their permitted capacities and approximate locations are shown Table 11 and Figure 6 below.

[9] Based on a table in the June 2009 DCLG document: National and regional guidelines for aggregate provision in England 2005-2020.

Table 11: Aggregate recycling facilities in the Plan area[10]

Site	Operator	Type of facility	Permitted capacity as stated on the Planning permission (tonnes p.a.)
North End Farm, Bletsoe	C Jackson and Sons	Aggregates recycling	10,000
Willington Quarry Willington	Lafarge Aggregates	Aggregates recycling (until December 2017)	50,000
Land to the North of Barford Road, Blunham	Acorn Transport and Plan Hire	Aggregates recycling	no planning restriction (CLEUD)
Cainhoe Quarry, Clophill	Thomas Bros Exc Ltd	Aggregates recycling (until Dec 2036)	125,000
Land adjacent to A507, Cainhoe Road, Clophill	Winton Haulage	Aggregates recycling	no planning restriction (CLEUD)
Unit 16, Harmill Industrial Estate, Leighton Buzzard	JP Callanan and Son Ltd	Aggregates recycling	75,000
Heron's Farm, Caddington	Mr G Sayers	Aggregates recycling	No planning restriction (CLEUD)
Gorerong Farm, Poddington	Stable Hire	Aggregates recycling	10,000
Old Sand Quarry, Haynes, West End	Bradshaw's	Aggregates recycling	7,500
Whitsundoles Farm, Salford	Smith Construction	Aggregates recycling (temp permission until Sept 2015)	30,000
Goosey Lodge, Wymington	Wykes Engineering	Aggregates recycling	105,000
Keysoe Road, Thurleigh	C Jackson and Sons	Aggregates recycling	1,900
Fox Corner, Heath and Reach	DB Standing and Sons	Aggregates recycling (until March 2030).	7,000

[10] The table above reflects the permitted capacity of aggregate recycling sites within the Plan area during 2014 and 2015. It does not include any information pertaining to Environment Agency requirements.
Please note a number of sites have permission to accept a variety of waste-streams. This means some of the sites have the flexibility to import different types of waste, and may therefore choose not to recycle aggregate on site for commercial reasons.
The tonnage of aggregate recycled in 2014 & 2015 at each site has not been recorded for confidentiality reasons.

Chiltern Green Road, East Hyde	Holywell Haulage	Aggregates recycling (are able to accept other waste streams)	48,000
Paul Riches Skips, Kempston Court, Manor Road	Paul Riches Skips	Transfer and MRF including aggregates recycling	75,000 (mixed waste)
G Moore Haulage, Kempston Court	G Moore Haulage	Transfer and Aggregates recycling	150,000 (mixed waste)
Cow Close, Biggleswade	FD O'Dell and Sons Ltd	Transfer and MRF Aggregates recycling	25,000
Total capacity (as at the end of 2014)			**712,400**
Total capacity (as at the end of 2015)			**689,400**

Total capacity as at the end of 2014 stood at 712,400 tonnes. This declined slightly by 23,000 tonnes as at the end of 2015 following the expiry of a permission granted at Whitsundoles Farm, Salford, for a temporary period expiring in September 2015, offset by a permission granted to recycle a small tonnage of aggregates at Fox Corner.

Information held on the Environment Agency Waste Interrogator has been analysed in order to identify soils and aggregates arising or managed within the Plan Area in 2014 and 2015. This data is set out in Table 12 below. However, it is crucial to understand that there are limitations in how these figures have been collected and derived and, as such, this data cannot be wholly relied upon and instead should be seen as indicative of the broader picture. Attention is therefore drawn to the Notes beneath the table which highlight, for example, the fact that significant volumes of aggregate materials are processed at exempt sites which are excluded from the Interrogator.

It should be noted that exports from Bedfordshire only identifies materials exported from a permitted waste management site and would not, therefore, include waste going directly out of County from construction sites. Consequently it was considered necessary to identify all imports from Bedfordshire to any permitted waste management site which inevitably involves a lot of variables. It should also be noted that it was not possible to break down the figures for individual Waste Planning Authority areas due to a major proportion of the waste being recorded as 'Bedfordshire (WPA not codeable)' This arises because many operators simply enter 'Bedfordshire' on the EA Waste Returns.

Table 12: Soils and Aggregates (tonnes) arising or managed within the Plan are 2014 and 2015

Waste Description	A. Total Arisings within the Plan Area (incl. exports)		B. Total Managed within the Plan Area (incl. imports)		C. Proportion (of B) Managed for Recovery/Land Restoration	
	2014	**2015**	**2014**	**2015**	**2014**	**2015**
1. Soils & Stones	432,037	495,571	1,472,743	1,059,269	1,071,072	572,954
2. Concrete, Bricks & Tiles	94,237	275,905	116,922	317,908	36,497	14,020
3. Bituminous Materials	43,313	30,807	48,383	33,891	573	0
4. Total Soils & Aggregate Material	**569,587**	**802,283**	**1,638,048**	**1,411,068**	**1,108,142**	**586,974**
5. Aggregate Material (2 & 3 above)	**137,550**	**306,712**	**165,305**	**351,799**		
6. Aggregate Material (excl. that sent to landfill/land recovery)	63,450	64,883	71,329	81,366		
7. Mixed Construction & Demolition Waste (not included above)	41,583	43,065	27,449	29,096		

Source: EA Waste Interrogator

Notes:

1. Waste Interrogator records all movements of waste into or out of EA permitted waste management sites.
2. Figures should be regarded as providing a broad indication of materials handled. There may be potential for some double counting e.g. material passing through a transfer station to a waste processing facility would be recorded twice.
3. Significant volumes of aggregate materials are processed at exempt sites which are not included in the Interrogator.
4. Whilst the table provides a comparison between the volumes arising and the volumes managed within the County, cross boundary movements are complex and the level of imports and exports cannot be derived from this table.
5. Column C shows the volume of waste utilised in land recovery and major landfill restoration projects (e.g. Stewartby and Sundon) but does not include material going to active inert landfills.
6. Reduction in the 2015 Recovery figures is largely due to Caddington Golf Course ceasing taking in soils.
7. Mixed Construction & Demolition waste is not included in the aggregate figures but is shown separately (row 7) as this may be a source of some aggregate material.

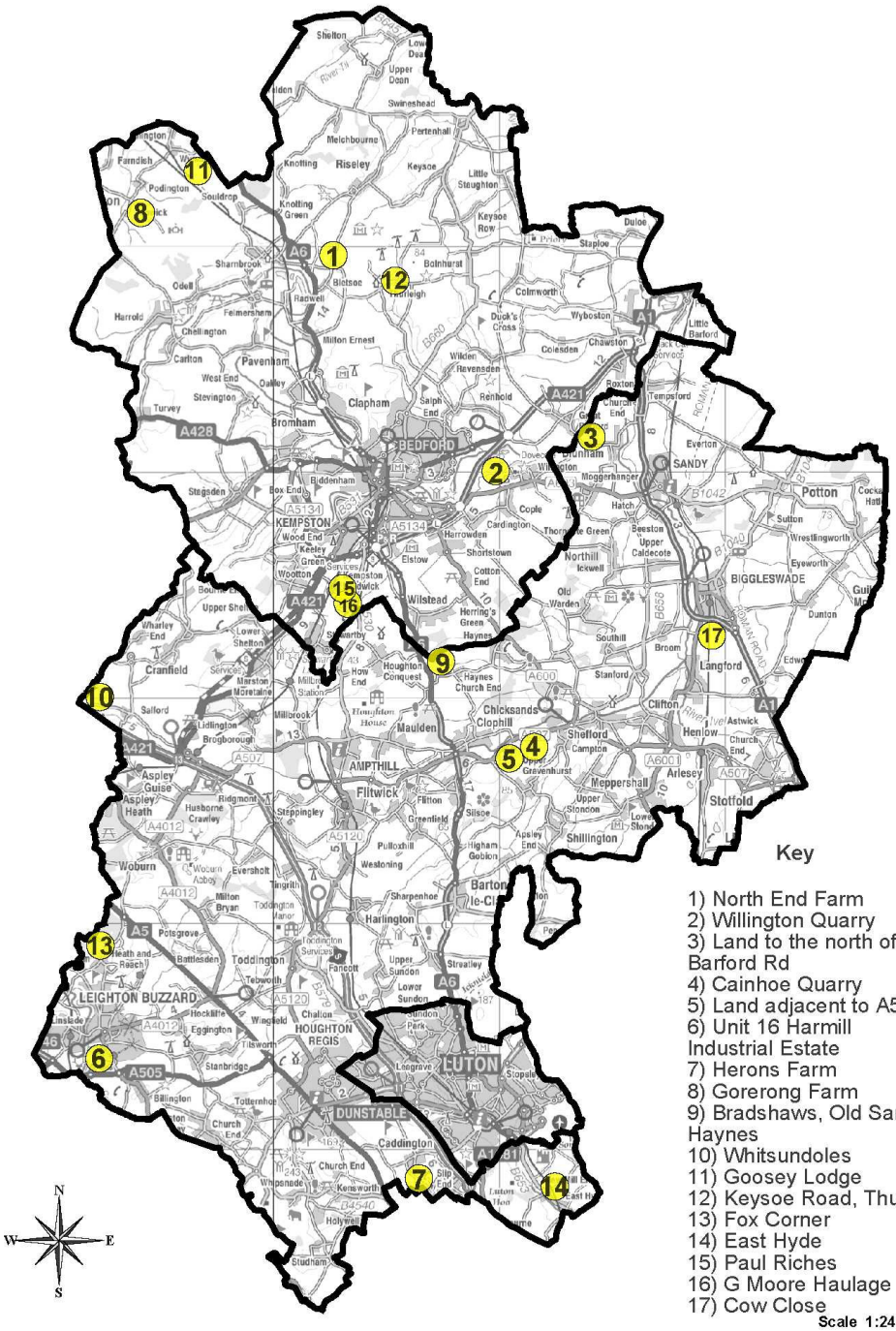
As noted above the reliability limitations of this data can only provide an indication of the volumes of materials handled and does not detail the end use with some material, for example, having gone to inert landfill. It should also be noted that significant volumes of aggregate materials are processed at exempt sites not included in the Interrogator.

The sizeable reduction in the Recovery figure for 2015 is principally due to the fact that Caddington Golf Course ceased accepting soils. It should be noted that the aggregate figures exclude mixed demolition and construction waste which may be a source of aggregate materials and consequently this has been identified as a separate row in Table 12. Issues of data availability and reliability for recycled aggregates does not aid collection of precise figures for the local contribution of this source of aggregate but it is reasonable to assume that it will continue to provide an important contribution to local aggregate needs.

Secondary aggregates

Secondary aggregates are sourced from industrial wastes, such as glass, ash, railway ballast, fine ceramic waste and scrap tyres; and industrial and minerals by-products, notably waste from china clay, coal and slate extraction and spent foundry sand. The Plan area contains no china clay, coal or foundries and is not industrial in nature. Its ability to produce secondary aggregates is therefore limited. An aggregates railhead facility at Stewartby offers a potential source of secondary aggregates but this facility is used for the removal of worn ballast from the rail network and the importation of fresh ballast. As such, none of this material enters the local aggregate market.

Figure 6



Aggregates Recycling Facilities

2014-2015

Bedford Borough Council

LUTON BOROUGH COUNCIL

Central Bedfordshire

Section Four: Imports and exports

The Aggregate Minerals Survey for England and Wales 2014 produced by the British Geological Survey (BGS) on behalf of DCLG includes information on primary aggregate imports. According to the BGS collation document Bedford Borough, Central Bedfordshire and Luton Borough imported 497,000 tonnes of land-won sand and gravel, 24,000 tonnes of marine sand and gravel and 584,000 tonnes of crushed rock in 2014.

The BGS collation document provides a breakdown of principal transport methods in respect of sales of primary aggregates although this is only presented by region and therefore the LAA cannot provide data specific to the Plan area. In general terms however, according to the BGS document, the Plan area was a net importer of aggregate in 2014 albeit only by a marginal sum as shown in Table 13.

Table 13: Bedford Borough, Central Bedfordshire and Luton Borough aggregate import and export figures (2014)

	Sand and gravel	Crushed Rock
Imports	**497,000 tonnes**	**584,000 tonnes**
Exports	**491,000 tonnes** (233,000 tonnes sent to the East of England, 258,000 tonnes to authorities outside the East of England).	0
Difference	6,000 tonnes	584,000 tonnes

Railhead facilities

Whilst Central Bedfordshire and Bedford Borough have significant reserves of aggregate sand and gravel, the Plan area is deficient in crushed rock. As a result it continues to be reliant on authorities outside the Plan area, most notably Leicestershire, for crushed rock. Crushed rock is imported into the Plan area via two aggregate railhead facilities - Elstow (Bedford Borough) and Crescent Road (Luton Borough), while the Stewartby Brickworks railhead facility is used solely for the movement of ballast on the rail network rather than entering the local aggregates market.

Limbury Sidings, Leagrave Road (Luton Borough) imports sand from the Greenwich wharf and is used in the production of ready-mixed concrete.

Table 14: Aggregate railhead facilities

Site	Handling activity	OS Grid reference	Source of material
Elstow, Bedford (LafargeTarmac)[11]	Receiving depot	TL041 457	Leicestershire
Crescent Road, Luton (LafargeTarmac)[11]	Receiving depot	TL 097 215	Leicestershire
Limbury Sidings, 519 Leagrave Road, Luton (Hope Construction Materials)[12]	Receiving depot	TL 075 229	Greenwich wharf (London)
Stewartby Brickworks Rail Depot (Network Rail)		TL 01252 42750	Rail ballast

Section Five: Conclusions

Land–won aggregates

The Plan area contains significant deposits of aggregate sand and gravel. As at 31 December 2014 estimates of permitted reserves totalled 13,559,000 tonnes. The aggregate sand and gravel landbank for Central Bedfordshire, Bedford Borough and Luton equated to 7.4 years (based on the agreed apportionment figure of 1,840,000 tonnes per annum) or 10.4 years if based on the rolling 10 year average sales. The 3 year sales average for aggregate sand and gravel stood at 1,358,000 tonnes (December 2014). Applying the rolling 3 year sales average indicates a landbank of 9.9 years.

At 31 December 2015 estimates of permitted reserves totalled 19,386,000 tonnes. The aggregate sand and gravel landbank for the three MPAs equates to 10.5 years (based on the agreed apportionment figure of 1,840,000 tonnes p.a) or 15.3 years if based on the 10 year average sales. The 3 year sales average for aggregate sand and gravel stands at 1,400,000 tonnes (December 2015). If the MPAs adopt the 3 year sales average to calculate the landbank, it would total 13.8 years.

The three MPAs (Bedford Borough Council, Central Bedfordshire Council and Luton Borough Council) are therefore confident that the at least 7 year aggregate sand and gravel landbank required by the NPPF has been met.

[11] Lafarge Tarmac became Tarmac with effect from 3 August 2015

[12] Hope Construction Materials were taken over by the Breedon Group in August 2016

The adopted Minerals and Waste Local Plan: Strategic Sites and Policies includes a number of strategic mineral policies and six strategic aggregate sand and gravel sites which together help to ensure that the 7 year landbank will continue to be maintained over the plan period.

Given the level of the landbank, and the reserves contained in the strategic mineral sites identified in the Plan, the three authorities are in a satisfactory position in respect of aggregate supply.

Marine dredged aggregates

The Plan area contains no deposits of marine dredged or marine borne aggregates. There are currently no sites from which crushed rock can be sourced and consequently it remains necessary to continue to rely on sites outside the Plan area for these minerals.

Secondary and recycled aggregates

At the end of the calendar year 2014, sixteen permitted aggregate recycling sites existed in the plan area. The same number existed as at the end of 2015 albeit comprising the loss of one site due to the expiry of a temporary permission and the granting of a permission at another site. It is not likely that secondary aggregate is produced from the Plan area.

Data sources

- National Planning Policy Framework
- 2014 BGS National Survey and 2015 East England AWP Survey
- SE AWP Annual Monitoring Reports 1996-99
- Goodquarry.com Quarry Fines and Waste British Geological Survey
- DCLG Mineral extraction in Great Britain 2011: Business Monitor PA1007
- DCLG National and regional guidelines for aggregates provision in England 2005-2020 2009 Guidelines
- DCLG, BGS and Welsh Assembly document October 2011: Collation of the results of the 2009 aggregate minerals survey for England and Wales.
- Local Plan Minerals Technical Evidence Papers.
- POS & MPA Practice Guidance on the Production and Use of Local Aggregate Assessments (Living Document)
- Environment Agency Waste Interrogator