

Minerals Local Plan Draft Local Aggregates Assessment

November 2015



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Executive Summary

The National Planning Policy Framework (NPPF) requires Mineral Planning Authorities (MPAs) to plan for a steady and adequate supply of aggregates by preparing an annual Local Aggregates Assessment (LAA). The LAA is required to:

- forecast the demand for aggregates based on average of 10 year sales data and other relevant local information,
- analyse all aggregate supply options, and
- assess the balance between demand and supply.

This LAA is the 2015 edition and includes the most recent (2014) aggregate sales and reserves data for Milton Keynes. This LAA, as with the previous 2014 LAA, forms part of the evidence base to inform the emerging Minerals Local Plan (MLP) for Milton Keynes. The main facts and figures from the report (by aggregate type) are set out below.

Sand and gravel

Milton Keynes has three permitted sand and gravel sites. Estimated reserves as of 31 December 2014 cannot be published for confidentiality reasons but are known to be limited.

Sales increased year on year between 2005 and 2010, however have decreased since 2011. Actual sales figures cannot be identified for confidentiality reasons.

In 2009 (the most recent figures available) 0.925 million tonnes (Mt) of sand and gravel was sold in the Milton Keynes - Buckinghamshire sub-region, of which 0.404 Mt was exported. 0.242 Mt of sand and gravel was imported, leaving an export/import balance of -0.162 Mt; making the sub-region a net exporter.

The average aggregate sales for the most recent ten-year period (2005 – 2014) and three-year period (2012 - 2014) are 0.13 million tonnes per annum (Mtpa) and 0.11Mtpa respectively.

The sand and gravel provision rate being taken forward in the emerging MLP is 0.17Mtpa (based on the three year average sales 2010 - 2012). Local factors affecting the supply and demand for sand and gravel were also considered when determining the provision. It was found, for example, the level of demand meant it was not necessary to factor in any additional growth.

Currently there are insufficient permitted reserves to maintain the government recommended seven-year landbank based on the 0.17 Mtpa provision rate. To address this, four sites for sand and gravel extraction have been put forward for allocation in the emerging MLP that, subject to planning permission, have the potential to increase the landbank significantly.

Crushed rock (limestone)

Milton Keynes does not have any significant crushed rock (limestone) resources. There have been no sales of limestone for aggregate purposes for at least the last ten years and there are currently no permitted sites.

No annual apportionment has previously been identified for limestone and is still not considered appropriate.

In 2009 (the most recent figures available) imports of limestone into the Milton Keynes - Buckinghamshire sub-region totalled 0.160 Mt. As Milton Keynes does not produce limestone for aggregate purposes it is a net importer.

Secondary and recycled aggregate

One site in Milton Keynes currently has permission for the recycling of inert construction and demolition (C&D) waste to produce recycled aggregate.

The supply contribution of secondary and recycled aggregates in Milton Keynes is limited and there is a lack of consistent sales data available. It is therefore not considered necessary (or is it possible) to determine an annual provision rate.

1. Introduction

- 1.1. The supply of land-won aggregate in England is based on the national Managed Aggregate Supply System (MASS) that seeks, through Government guidance, to ensure a steady and adequate supply of aggregates across the country.
- 1.2. This system was reformed as part of National Planning Policy Framework (NPPF) (March 2012) and Planning Practice Guidance, which includes planning for mineral extraction, was published in March 2014 to assist Mineral Planning Authorities (MPAs) in planning for a steady and balanced supply of aggregates. It requires each MPA to prepare an annual Local Aggregates Assessment (LAA) to assess the demand for and supply of aggregates in the MPA's area covering:
 - A forecast of the demand for aggregates based on the rolling average of 10-years sales data and other relevant local information;
 - An analysis of all aggregate supply options, as indicated by landbanks, mineral plan allocations and capacity data. This analysis should be informed by planning information, the aggregate industry and other bodies such as local enterprise partnerships; and
 - An assessment of the balance between demand and supply and the economic and environmental opportunities and constraints that might influence the situation. It should conclude if there is a shortage or a surplus of supply and, if the former, how this is being addressed.
- 1.3. This LAA details the current and future situation in the MPA area of Milton Keynes in terms of aggregate supply and demand including sales data, imports and exports and aggregate apportionment / provision rates to 2032. It presents provision rates based on the average of ten and three year aggregate sales (including the emerging MLP provision rate) and compares with the adopted MLP apportionment. It considers how local circumstances may impact on future aggregate supply and demand.
- 1.4. The LAA is updated on an annual basis and will enable the Council to monitor trends in aggregate production and assess the effectiveness of MLP policies including Policy 1: Providing for sand and gravel. This LAA is the 2015 edition and includes the most recent (2014) aggregate sales and reserves data for Milton Keynes. This LAA and the earlier 2014 LAA form part of the evidence base to inform the emerging Minerals Local Plan (MLP) for Milton Keynes, currently at its Proposed Submission stage. As part of this process the LAA was included as part of the material associated with the Issues and Options and Draft Plan consultation stages. The LAA assisted in determining the most appropriate apportionment / provision approach to take forward.
- 1.5. The LAA is submitted to the South East England Aggregates Working Party (SEEAWP), an advisory body made up of MPAs across the region, for consideration and scrutiny. The AWP has a role to monitor the operation of the MASS through providing technical advice, particularly on supply provision.
- 1.6. The work of MPAs and AWP's across the country will be overseen by a National Aggregate Co-ordinating Group (NACG) whose main role will be to monitor the overall provision of aggregates in England and provide advice to AWP's and the Government. Specifically the NACG will provide guidance to the government on National and Sub-National requirements for aggregate supply. These proposed National and Sub-National Guideline figures will be taken into account by MPAs when preparing future LAAs.

Data limitations

- 1.7. Milton Keynes is a relatively small MPA with a limited number of quarries and sites for the production of recycled and secondary aggregate. It is therefore not possible to publish annual sales or reserve figures in this report for reasons of commercial confidentiality.

2. Aggregate supply and demand

Geology

- 2.1. The bedrock geology of Milton Keynes is mostly Jurassic mudstone and limestone with Cretaceous sand and sandstone outcrops in the south-east of the borough (Figure 1). Areas of superficial deposits are extensive in the borough and largely obscure this underlying geology (Figure 2, Table 1).
- 2.2. Sand and gravel is the main aggregate mineral resource in Milton Keynes largely found in river terrace deposits of the Great Ouse River and its tributaries. The majority of deposits are concentrated in the valley of the River Ouse to the north of the M1 motorway. Small patches of sand and gravel are also found in glaciofluvial deposits, however it is likely to be too clayey and chalky to be of economic interest. The majority of glaciofluvial deposits have been fully worked or sterilised by urban development. Sand and gravel is also found in deposits referred to as Sand and Gravel of Unknown Age and Origin but has now been either worked or sterilised by urban development.
- 2.3. At the end of 2014 sand and gravel extraction took place at only one location in Milton Keynes: land at Calverton (Passenheim). The quarry to the south of Caldecote Farm (Newport Pagnell), adjacent to the recently restored quarry at Caldecote Farm, was permitted in 2013 and at the end of 2014 was yet to be implemented. The quarry to the east of Haversham Road (New Bradwell) was recently permitted and also remained unimplemented. At the end of 2014 Manor Farm Quarry (Old Wolverton) had been fully worked and was in the process of being restored. Only the processing plant remains on site, which is used to serve the Haversham Road site.
- 2.4. Milton Keynes does not have any significant crushed rock (limestone) resources. There has been a very low output of limestone extraction for aggregate purposes in Milton Keynes with limited extraction in Clifton Reynes and at Quarry Hall Farm, Lathbury in the past. Over at least the last ten years there has been no extraction of limestone. Currently there is a small operational quarry at Western Underwood, Olney that extracts limestone for non-aggregate building stone purposes. Apart from this one quarry, there has been no other working of building stone in Milton Keynes for many years. Further resources are known to be in the locality although the total yield is likely to be small.

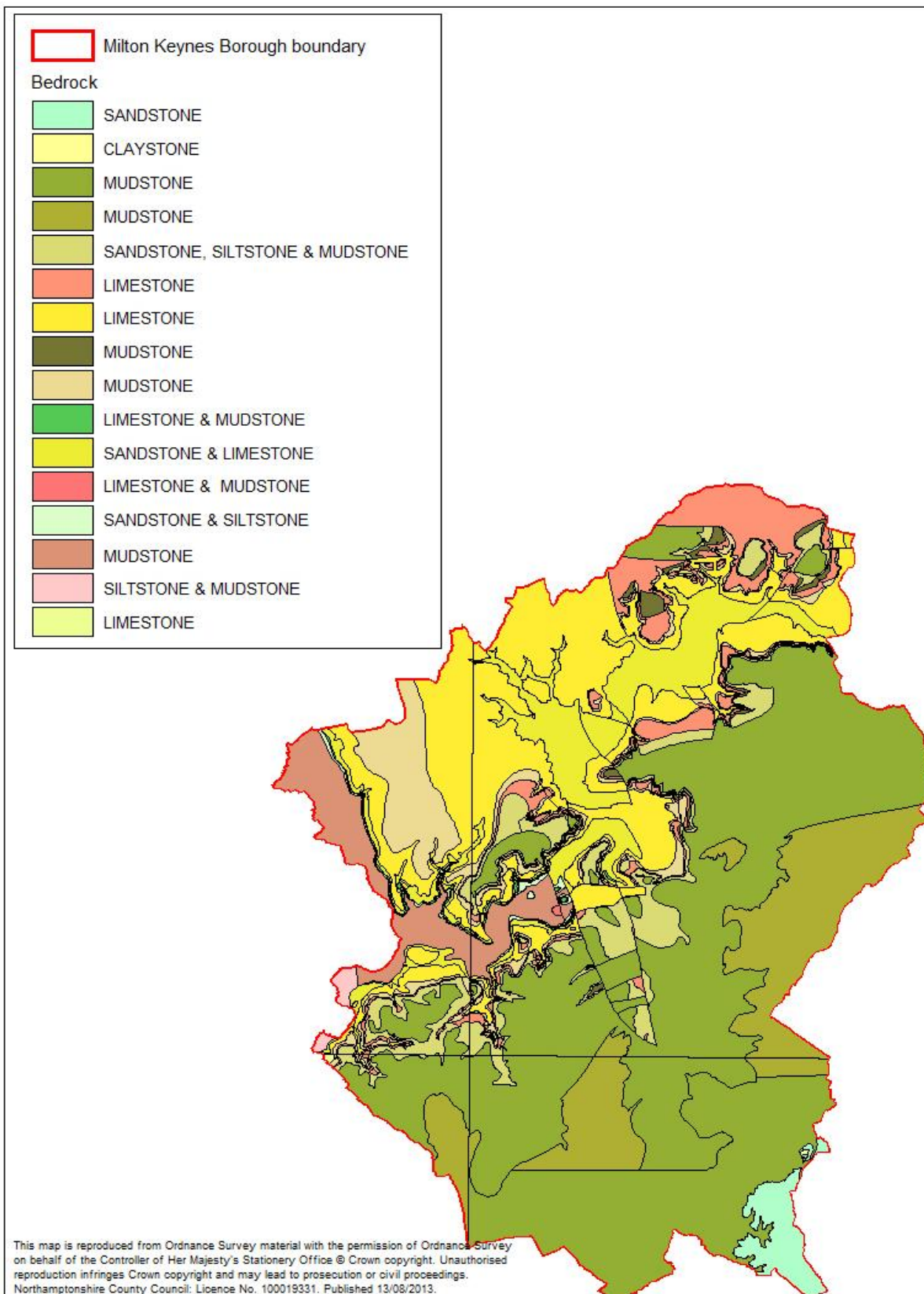


Figure 1: Geological bedrock map of Milton Keynes

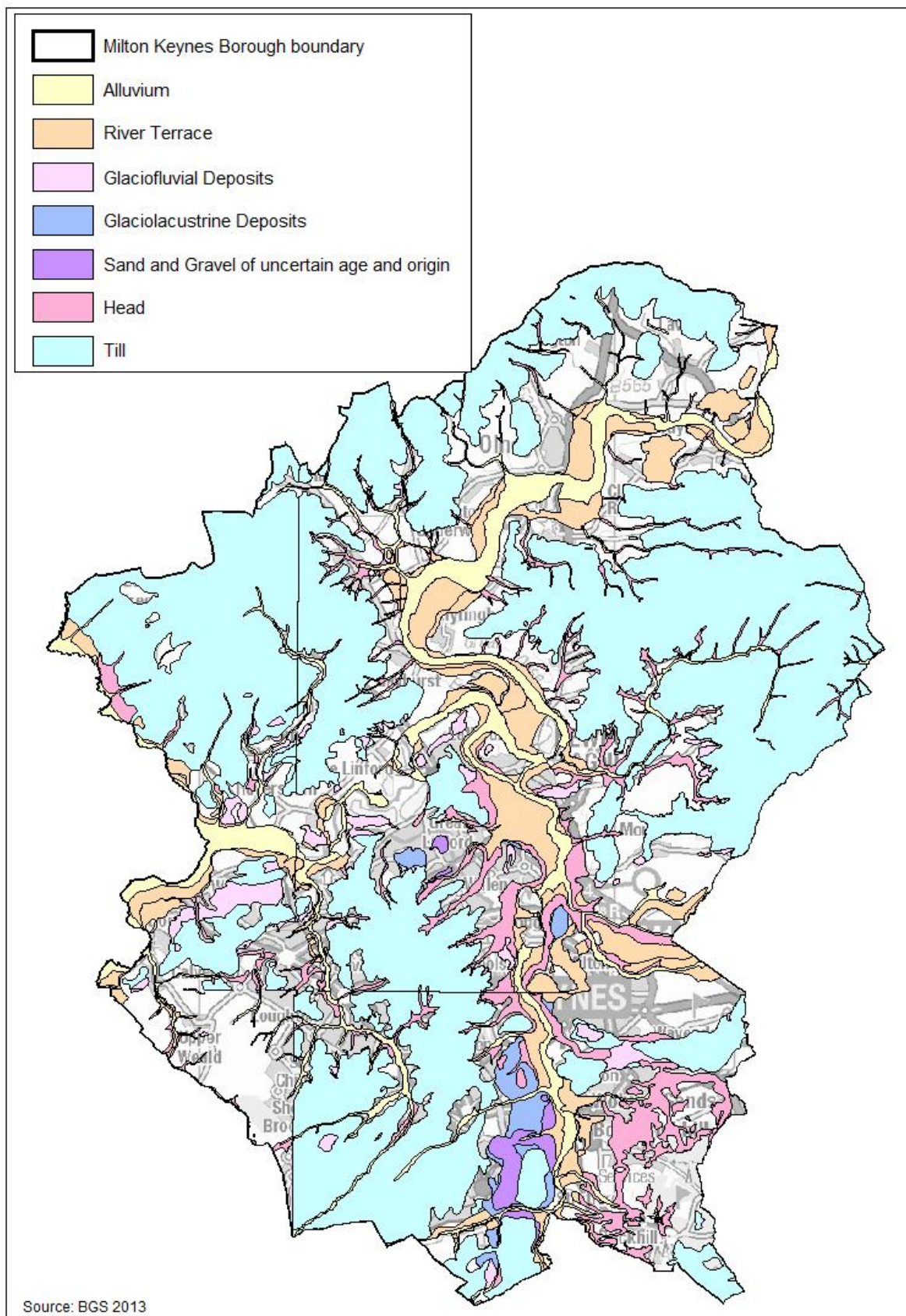


Figure 2: Geological map of the superficial mineral resources of Milton Keynes

Table 1: Superficial mineral deposits in Milton Keynes

Deposit		Description
River deposits	Alluvium	Comprised of clay and silt, alluvium underlies the present day floodplains, generally occupying a wide but shallow channel cut into the underlying river terrace deposits. Concealed river terrace sand and gravel deposits underlay the alluvium and are referred to as 'sub-alluvial gravels'.
	River terrace	River terrace deposits, largely comprised of sand and gravel, are predominantly found in the river valleys associated with the Great Ouse river and its tributaries.
Sand and Gravel of Uncertain Age and Origin		Clayey, sandy gravel designated Sand and Gravel of Uncertain Age and Origin, occurs only in the valley of the River Ouzel.
Glacial deposits	Till	Glacial till (boulder clay), is found on the higher, plateau-like, ground in the borough.
	Glaciofluvial	Glaciofluvial deposits are comprised of clayey sand and gravel, found beneath, within and upon the till.
	Glaciolacustrine	Glaciolacustrine deposits comprise silt, clay with sparse sandy layers and are associated with the till.
Mass movement deposits	Head	Head occurs on the lower valley sides and valley bottoms where it merges with the river terrace deposits. It is typically gravelly, sandy clay.

Sand and gravel

Current supply

2.5. In Milton Keynes there are three sand and gravel sites with planning permission. The details of these are presented in Table 2. The location of these sites within the borough and associated geology is shown in Figure 3.

Table 2: Permitted sand and gravel sites in Milton Keynes (as of 31/12/2014)

Site	Operator	Status (as of 31/12/2014)	Permission end date
Land at Calverton, Passenham	RGS Roadstone	Active quarry with permission for the extraction of 0.475 million tonnes (Mt) of sand and gravel.	2017
Land South of Caldecote Farm, Newport Pagnell	No operator identified as at end December 2014	Quarry has permission (granted April 2013) for the extraction of 0.45 Mt of sand and gravel. Permission unimplemented at end December 2014.	No later than 7 years from commencement date.
Land East of Haversham Road, New Bradwell	Hanson Quarry Products Europe Ltd	Quarry has permission (granted January 2014) for the extraction of 0.34 Mt of sand and gravel. Permission unimplemented at end 2014.	5 years from commencement date

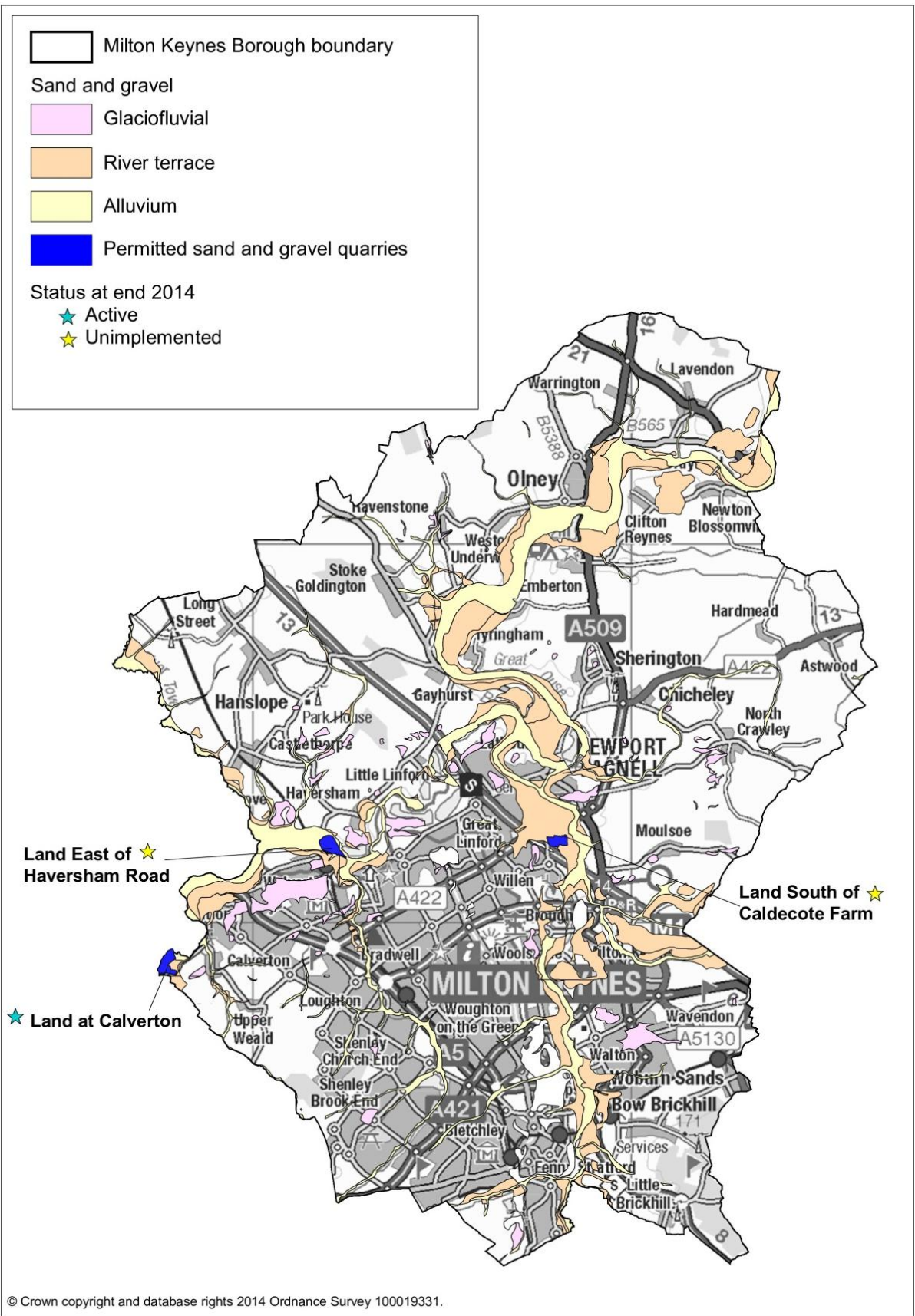


Figure 3: Geology of Milton Keynes with permitted sand and gravel sites

- 2.6. Estimated total sand and gravel reserves for Milton Keynes as of 31 December 2014 cannot be published for confidentiality reasons but are known to be limited. Figures are based on reserve information retrieved from the 2014 Aggregate Monitoring Survey (AMS) returns, the latest AMS data available at time of writing.
- 2.7. As part of the development of the emerging MLP, industry was invited to put forward sites for mineral related development, including extraction, for possible inclusion in the plan. Through this initial 'call for sites' process undertaken in 2014, fourteen sites were identified in Milton Keynes: eleven for sand and gravel extraction and three for limestone (building stone) extraction. As a result of the Draft Plan consultation, during which several representations were received that indicated concern that other potential sites in the Borough had not been fully explored, an additional call for sites was undertaken in 2015. As a consequence of this contact, a total of eight sand and gravel sites came forward. The suitability of all 22 sites and their contribution to supply were considered as part of the site assessment process.

Milton Keynes sales

- 2.8. To protect commercial confidentiality sales figures cannot be identified; however the general trend of sales for the period 2005 – 2014 is shown in Figure 4. Sales figures are shown up to the end of 2014 as this the most recent data available.

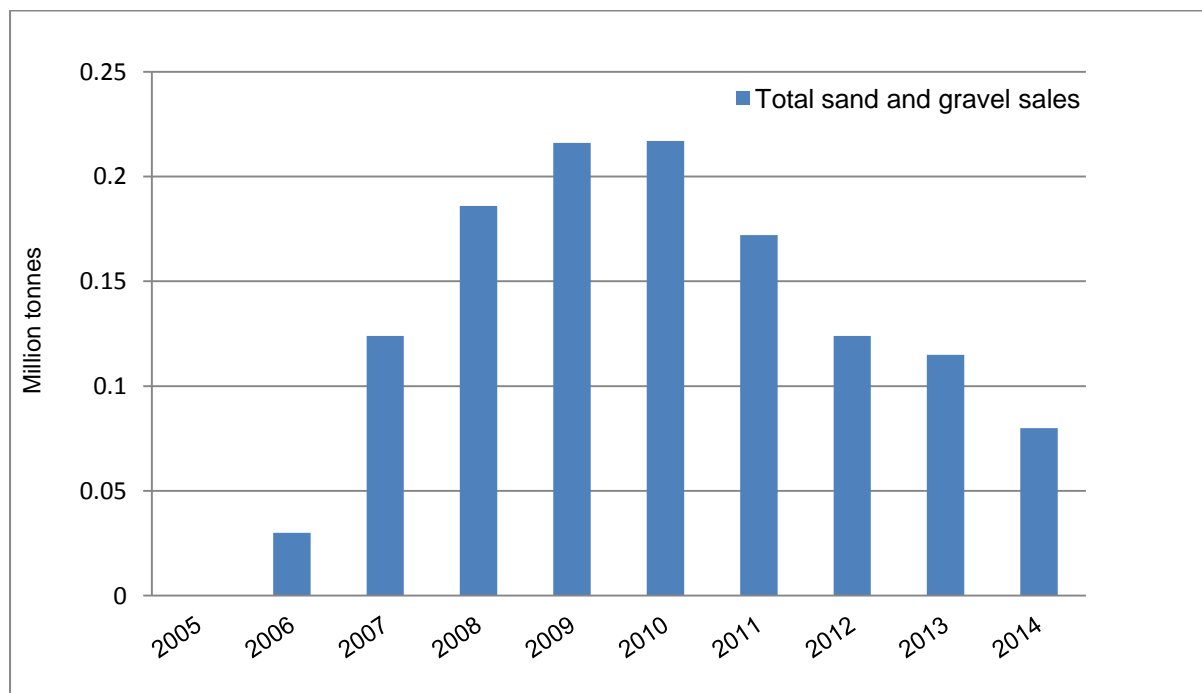


Figure 4: The trend of sand and gravel sales in Milton Keynes (2005 – 2014)

- 2.9. There were no operational quarries in 2005 hence no sand and gravel sales at this time. Sales increased year on year between 2006 and 2010 (following a three year period of no sales), and since 2011 have decreased. It is reasonable to assume that the recent decline in sales is directly attributable to a deficit between rates of extraction and rates of replenishment through new permissions. Between 2011 and 2014 two active quarries of medium scale (land at Caldecote Farm and Manor Farm) came to their end of life. Between 2011 and 2012 the only other permitted site was land at Calverton, which was inactive for this period. In 2013 and 2014 two quarries were permitted: land south of Caldecote Farm and land east of Haversham Road, however, at the end of 2014 both permissions remained unimplemented.
- 2.10. In relation to national and regional sales trends, the DCLG and British Geological Survey (BGS) conduct a national AMS that includes analysis of sales in England and Wales.

The AMS is usually conducted every four years with the exception of the latest survey for 2014 (five years after the last one in 2009). The survey data has not yet been collated or reported on nationally therefore the data presented in this LAA is for 2009. The 2009 AMS reported that in England and Wales total sales of sand and gravel fell 35% from 72.6 Mt in 2005 to 48.3 Mt in 2009. In the South East region total sales of sand and gravel fell year on year between 2004 and 2012 (with the exception of 2010) from 10.4 Mt in 2004 to 5.5 Mt in 2012 as reported in the South East AM report 2013, however in Milton Keynes growth in sales continued to 2010 before declining.

Imports and exports

2.11. The AMS also includes analysis of movements (imports and exports) of aggregates for each MPA in England and Wales. The 2009 survey collates data for Milton Keynes separately for sales of primary aggregates; however imports are combined with Buckinghamshire as one sub-region. Overall movements of sand and gravel into and out of the sub-region are not self-balancing; the sub-region is a net exporter of sand and gravel (Table 3).

Table 3: Milton Keynes sand and gravel imports and exports 2009 (million tonnes)

Total sales	Imports - Milton Keynes and Buckinghamshire sub-region	Exports - Milton Keynes and Buckinghamshire sub-region	Balance
0.925 Milton Keynes and Buckinghamshire sub-region (0.212 Milton Keynes)	0.242	0.404 (0.111 from Milton Keynes)	-0.162

Note: in balance column, a '-' prefix indicates a net export. Source: AMS 2009 (Table 9b: Sales of primary aggregates by mineral planning authority and principal destination sub-region, and Table 10: Imports of primary aggregates by sub-region). Note that as Milton Keynes – Buckinghamshire are reported on a sub-regional basis the above figures do not include imports / exports within the sub-region (i.e. between Milton Keynes and Buckinghamshire).

- 2.12. Sand and gravel produced within the Milton Keynes-Buckinghamshire sub-region in 2009 totalled 0.925 Mt, of which around half (0.521 Mt) remained within the sub-region. Exports from the sub-region totalled 0.404 Mt with 0.182 Mt staying within the South East region and the remainder exported to other areas outside of the region.
- 2.13. Specific to Milton Keynes, of the sand and gravel produced in Milton Keynes around half (0.101 Mt) was used within the sub-region whilst exports to other areas outside of the South East region were slightly higher than this (at 0.106 Mt) and only a very small amount (0.005 Mt) was exported to areas within the South East region. Exports from Milton Keynes to the South East region are significantly lower than to other areas presumably because Milton Keynes is on the edge of the region, with a large proportion of the borough surrounded by counties in the East of England and East Midlands regions.
- 2.14. Imports of sand and gravel into the sub-region totalled 0.242 Mt, leaving an export / import balance of -0.162 Mt (i.e. the sub-region exports 0.162 Mt more than it imports). As this data represents a snapshot from 2009 it is only likely to be broadly representative of the current position. Findings from 2009 cannot be compared with those in previous AMSs (conducted in 2001 and 2005) as in 2005 Milton Keynes data was presented within the 'Berkshire, Oxfordshire and Buckinghamshire' sub-region and in 2001 data is only displayed by region.
- 2.15. Discussions with neighbouring authorities on the movements of aggregates into Milton Keynes indicate that:
- Sand and gravel - Imports of sand and gravel will likely be able to continue in the medium term from those areas known to have supplied the sub-region previously.

Areas such as Cambridgeshire/Peterborough and Bedfordshire have the potential to supply Milton Keynes in the longer term (with landbanks of at least 15 years), together with imports from further afield.

- Crushed rock - Oxfordshire has a sufficient landbank of crushed rock and there is currently no reason why imports from here could not continue in the long term. At current rates of production however, there will likely be a shortfall in supply of crushed rock from Leicestershire in the medium to long term. Those areas with larger crushed rock landbanks such as Derbyshire and the Peak District for example could potentially be relied upon to make up any shortfall in supply over the plan period.

2.16. In the South East, as nationally, the majority of sand and gravel and crushed rock aggregate is transported by road, with significantly less transported by rail and water. Some of the sand and gravel and crushed rock imported into Milton Keynes is by rail and uses the rail depot at Bletchley. In 2013 (the latest available data) all of the sand and gravel imported into Milton Keynes via rail originated from Lincolnshire and the crushed rock from Derbyshire.

Limestone

Current supply

2.17. At present, there are no permitted sites for the extraction of limestone for aggregate purposes in Milton Keynes. One site at Weston Underwood Quarry currently extracts crushed rock for non-aggregate building stone purposes, however it is a small site with limited output.

Milton Keynes sales

2.18. There have been no sales of crushed rock (limestone) in Milton Keynes in the ten year period between 2005 and 2014. With regards to the production of limestone for non-aggregate building stone purposes, there were no sales between 2005 and 2009 but in more recent years between 2010 and 2014 there have been a very small amount of sales (although figures cannot be identified for confidentiality reasons).

Imports and exports

2.19. The 2009 AMS shows that in 2009 imports of crushed rock (limestone) into the Milton Keynes – Buckinghamshire sub-region totalled 0.160 Mt. Milton Keynes does not produce limestone for aggregate purposes and as such is a net importer.

Recycled and secondary aggregates

2.20. Recycled aggregates, which include concrete, stone and brick are sourced from reprocessed materials that have previously been used in construction, demolition and excavation (CD&E) work. Secondary aggregates are usually by-products of other industrial processes that have not been used in construction. They include both natural and manufactured materials such as china clay, slate, flue ash and slag.

2.21. There is an increased importance of, and reliance on, alternative aggregate sources. Production of recycled and secondary aggregates is increasing in England and Wales especially following the introduction of the Landfill Tax, which discourages the disposal of waste to landfill, and the Aggregates Levy which taxes the extraction of primary aggregates. It is estimated that up to 25% of total aggregate production and consumption in England is comprised of secondary and recycled aggregates. As the alternative aggregate sector grows, and provided the aggregate produced is of good quality, the reliance on primary aggregates will reduce.

2.22. In Milton Keynes there is currently one site (Bletchley Landfill) with planning permission for the recycling of inert C&D waste to produce recycled aggregates, as listed in Table 4. Bletchley Landfill is a Materials Recycling Facility (MRF) that screens and sorts waste as

it arrives on site including aggregates for recycling. It is a temporary facility with a permission end date of 2022. Figure 5 shows the location of this site in the county.

Table 4: Permitted site in Milton Keynes for the recycling of inert C&D waste to produce recycled aggregates

Site	Operator	Status	Permission end date	Annual consented throughput (million tonnes per annum)
Bletchley Landfill	FCC Environment	Active	End life of landfill operations (2022)	Proportion of 0.15 C&D waste for recycled aggregate

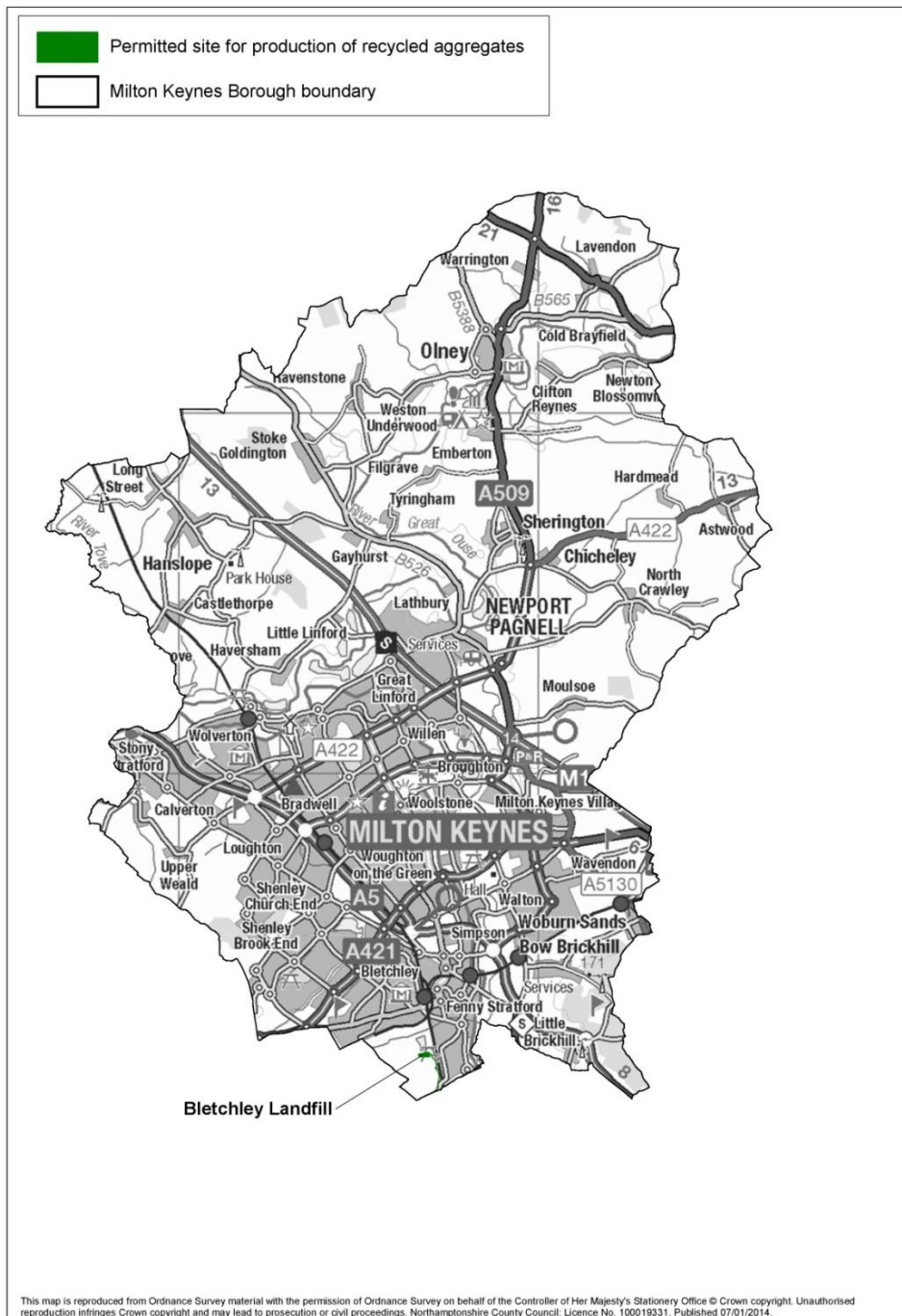


Figure 5: Location of permitted site in Milton Keynes for the production of recycled aggregates

- 2.23. In Milton Keynes there is also a waste transfer and recycling facility at Chesney Wold (Bleak Hall) that segregates hardcore aggregate waste and sends to the aggregate recycling facility at Whitsundoles Compound in Bedfordshire for reprocessing.
- 2.24. The data available on secondary and recycled aggregate is variable and not considered completely reliable, particularly at the sub-regional level. National surveys undertaken for CD&E waste provide comparable datasets from 1998, 2003 and 2005. The 2005 dataset shows total arisings of CD&E waste for the South East of 14.2Mt, of which 4.2Mt is attributed to Berkshire, Buckinghamshire (including Milton Keynes) and Oxfordshire. More recently the Waste and Resources Action Programme (WRAP) undertook a study to estimate CD&E waste at a National level indicating arisings of 94.5, 76.9 and 77.4Mt for 2008, 2009 and 2010 respectively. The study estimated that 55% was recycled and 11% re-used or recovered on exempt sites (e.g. as cleanfill for engineering purposes usually land reclamation, agricultural improvement or infrastructure projects).
- 2.25. Sales information for facilities producing recycled and secondary aggregate in Milton Keynes is inconsistent, with no data available for five of the years between the period 2004 - 2014. The response rate, as experienced by some other MPAs, is typically low. Survey data on sites producing recycled and secondary aggregate for the South East region, presented in the AM reports, is therefore incomplete and should be treated with caution.

3. Future aggregate supply

Aggregate provision

- 3.1. An annual aggregates provision figure for Milton Keynes is required to ensure an adequate and steady supply of aggregates is maintained to meet anticipated needs of the construction industry and reflect housing provision and growth.

Sand and gravel

- 3.2. New national guidelines for the provision of aggregates were issued in the NPPF in 2012 requiring each MPA to calculate their own provision rate on the basis of average aggregate sales over a ten-year rolling period and other relevant local information.
- 3.3. Table 5 presents the total sand and gravel sales in Milton Keynes during the ten-year period (2005 - 2014) and shows the ten-year average sales for the period 2005 - 2014 and three-year average sales for the period 2012 - 2014. The most recent ten-year period of sales (2005 – 2014) would give a sand and gravel provision figure of 0.13 million tonnes per annum (Mtpa).

Table 5: Total sand and gravel sales in Milton Keynes 2005 – 2014

Year	Sand and gravel (Mt)
2005	0
2006	C
2007	C
2008	C
2009	C
2010	C
2011	C
2012	C
2013	C
2014	C
Total sales 2005 - 2014	1.3
10 year average 2005 - 2014	0.13
3 year average 2012 - 2014	0.11

'C' confidential

- 3.4. Government Planning Practice Guidance for Minerals (DCLG, 2014 - paragraph 64) states that MPAs should also look at the average three year sales to identify the general trend of demand and whether it may be appropriate to increase supply. The average three year sales figure for the period 2011 - 2013, as reported in the previous LAA, was 0.14Mtpa; the most recent three-year period (2012 - 2014) sees this decrease to 0.11 Mtpa (0.03 Mt (21%) lower). The provision rate for sand and gravel in the emerging MLP is 0.17 Mtpa (based on the three year average sales 2010 – 2012) which is 35% higher than the 0.11 Mtpa provision rate based on the most recent three year average sales and 24% higher than the 0.13 Mtpa provision rate based on the most recent ten year average sales.
- 3.5. Table 6 compares the provision of sand and gravel based on different apportionment / provision rates (including the emerging MLP provision rate) for the emerging MLP 20 year plan period (1 January 2013 – 31 December 2032) and remaining 18 year plan period (from 1 January 2015 – 31 December 2032).

Table 6: Provision of sand and gravel in Milton Keynes to 2032 based on alternative apportionment / provision rates

	Adopted MLP apportionment rate (2006)*	Emerging MLP provision rate**	10 year average sales provision rate (2005 – 2014)	3 year average sales provision rate (2012 – 2014)
Annual apportionment / provision rate (Mtpa)	0.12	0.17	0.13	0.11
Total plan requirement: Annual apportionment /provision x plan period (Mt)				
18 years (remaining plan period 2015 to 2032)	2.2	3.1	2.3	2
20 years (total plan requirement 2013 to 2032)	2.4	3.4	2.6	2.2
Permitted reserves (as at 31/12/14) (Mt)	C	C	C	C
Undersupply (-) over supply (+) (rounded to the nearest Mt)				
18 years (to 2032)	-1	-2	-1	-1
20 years (to 2032)	-1	-2	-2	-1

*Figure derived from the South East Plan Regional Strategy (2009) (now abolished), which apportioned a regional figure for sand and gravel supply between MPAs in the South East region. This 'apportionment' approach has now been superseded by the 'provision' approach as outlined in the NPPF.

**Based on three-year average sales 2010 – 2012.

'C' confidential.

- 3.6. Comparison of total plan requirements, under each apportionment / provision rate, with permitted reserves as at 31 December 2014, indicates that there are not enough remaining reserves in Milton Keynes to meet either a 20 year total plan requirement or 18 year remaining plan requirement.
- 3.7. In looking to address the apparent shortfall in supply the emerging MLP (currently at Proposed Submission stage) identifies four sand and gravel allocations (Table 7). Subject to these sites being confirmed in the adopted plan and then planning permission being granted, the sites could potentially add a further 2.08Mt to the supply. It is also possible that unallocated, or 'windfall' sites in Milton Keynes may come forward during the plan period and add to the supply.

Table 7: Sites proposed for allocation in the emerging MLP

Proposed allocations	Approximate resources (Mt)
A1 Calverton/Passenham Extension	0.25
A2 Quarry Hall Farm	0.72
A3 Northampton Road, Lathbury	0.65
A4 Manor Farm and Lavendon Mill	0.46
Total reserves	2.08

Limestone

- 3.8. No apportionment has previously been identified for crushed rock (limestone) in Milton Keynes as it was not considered appropriate.

Secondary and recycled aggregates

- 3.9. Unlike for sand and gravel aggregate, it is not possible to determine a provision rate for secondary and recycled aggregates based on average sales over a ten year period. Sales information is difficult to obtain due a low response rate to AMSs in Milton Keynes and unfortunately where data has been provided, it is not consistent.

Landbanks

- 3.10. A landbank is a stock of planning permissions for mineral extraction which are calculated by dividing permitted reserves by the apportionment / provision figure. National planning policy requires landbanks of at least seven years for sand and gravel to be maintained. Approximate landbanks for sand and gravel for Milton Keynes as of 31 December 2014 are shown in Table 8.

Table 8: Landbanks for sand and gravel in Milton Keynes in 2014

	Adopted MLP apportionment rate (2006)*	Emerging MLP provision rate**	10 year average sales provision rate (2005 – 2014)	3 year average sales provision rate (2012 – 2014)
Annual apportionment / provision rate (Mtpa)	0.12	0.17	0.13	0.11
Permitted reserves (as at 31/12/14) (Mt)	C	C	C	C
Landbanks (rounded to full years)	8	6	8	9

*Figure derived from the South East Plan Regional Strategy (2009) (now abolished), which apportioned a regional figure for sand and gravel supply between MPAs in the South East region. This 'apportionment' approach has now been superseded by the 'provision' approach as outlined in the NPPF.

**Based on the three-year average sales 2010 – 2012.

'C' confidential.

- 3.11. Milton Keynes has a history of not meeting landbank figures for sand and gravel. Under the emerging MLP provision rate there are not enough reserves remaining to meet the minimum seven-year landbank requirement.
- 3.12. No landbanks have previously been required to be maintained for limestone as no apportionment figure was adopted, and this will continue to be the case.

4. Consideration of local circumstance

- 4.1. The NPPF requires MPAs to base their future mineral requirements on average sales over a ten year rolling period, factoring in relevant local information to provision determination where applicable.
- 4.2. Local factors affecting the supply and demand of sand and gravel in Milton Keynes are discussed below. No apportionment has previously been identified for crushed rock (limestone) in Milton Keynes due to low output; therefore consideration of local information affecting its supply and demand is not included.

Demand for sand and gravel

Construction levels and population growth

- 4.3. Sand and gravel is used in the construction industry for purposes such as the making of concrete and mortar or for roadstone or drainage material. The level of construction, including house building and infrastructure, therefore contributes to the demand for sand and gravel and are key local factors to consider when determining a provision figure for Milton Keynes.
- 4.4. The rate of house building in Milton Keynes has fluctuated over the last twenty years. Figure 6 shows the number of housing completions over the last ten years between 2004 and 2014. Net housing completions were at their lowest in 2013/14 (1,000 completions) and peaked in 2007/08 (2,317 completions).

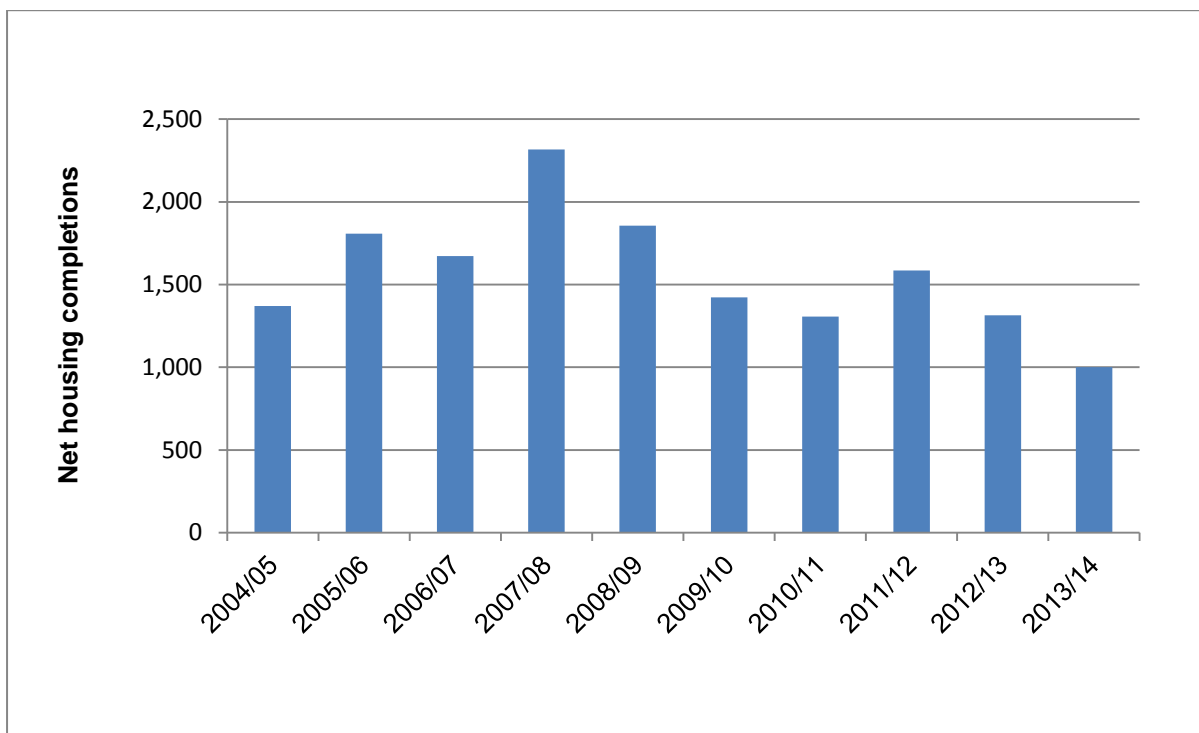


Figure 6: Net housing completions in Milton Keynes 2004 – 2014

- 4.5. The recent economic downturn saw a decrease in the rate of house building across Milton Keynes, resulting in fewer housing completions compared to Housing Trajectory targets. The latest Housing Trajectory for Milton Keynes (2015) shows that between 2010/11 and 2013/14 the number of completions remained low and was below the annual target figure of 1,750 (Figure 7). It is expected however that the market will recover from the recession over the coming years with signs of an upturn beginning 2014/15.

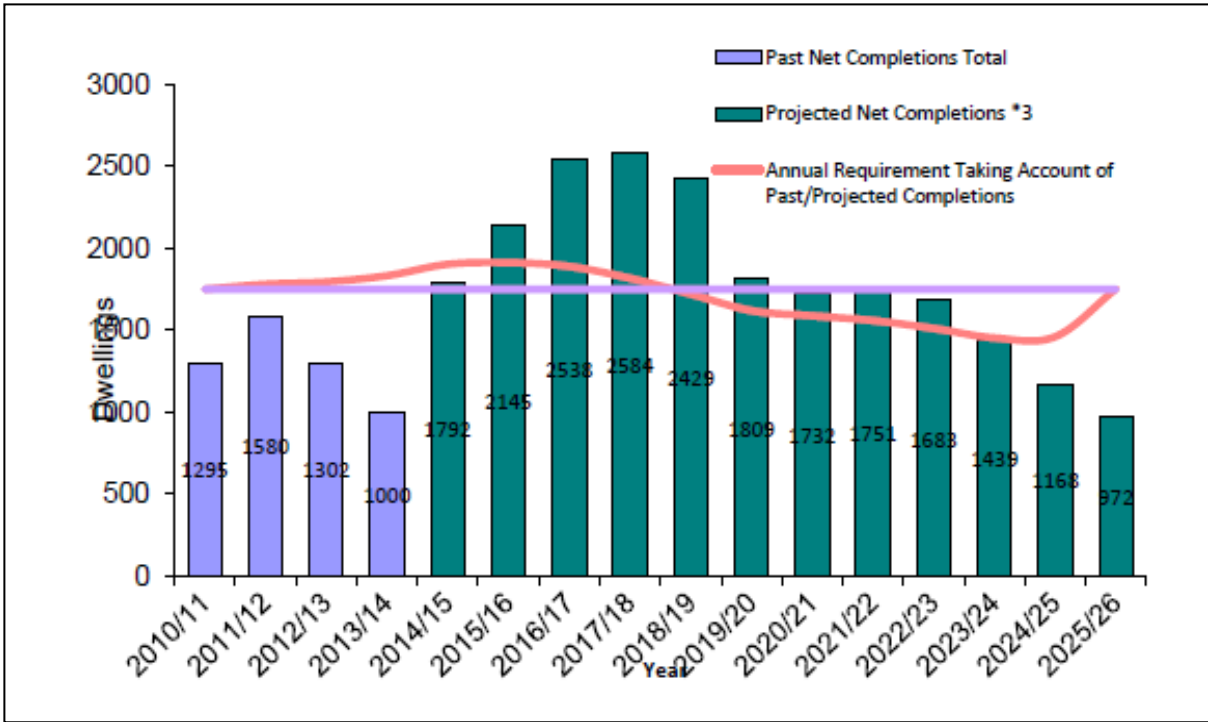


Figure 7: Milton Keynes Housing Trajectory 2010 – 2026

- 4.6. Milton Keynes has historically been, and continues to be, one of the fastest growing areas in the country. Since it was designated a New Town in 1967, the population has grown from 60,000 to over 240,000 (2011 Census). Its projected growth in population between 2010 and 2026 is over 57,000 people. To support this growing population, Milton Keynes is planned to achieve 28,000 net housing completions between 2010 and 2026.
- 4.7. A degree of caution should be exercised when considering the correlation between demand for aggregate and level of house building. Between 2008 and 2010 for example sales of sand and gravel increased by 14% but during this same period the total number of house building completions in the county decreased by 30%. Conversely, sales of sand and gravel began to fall between 2011 and 2014 when rates of housing building were also relatively low.
- 4.8. There are no national infrastructure projects planned for Milton Keynes identified in the National Infrastructure Plan (NIP) 2014. The NIP does however identify an opportunity to explore the feasibility of investment into creating a dedicated east-west road link between Cambridge, Milton Keynes and Oxford in the future. The Milton Keynes Local Investment Plan (2015) identifies minimum infrastructure requirements, including transport developments, to enable sustainable growth in Milton Keynes for the plan period 2012 - 2026. The plan outlines a number of indicative transport projects for Milton Keynes including the development of a possible A421 – A4146 link road and dualling of the A421. The re-opening of the Bletchley – Bicester rail line as part of the East/West Rail Link will take place over the next few years. South of the Borough work commenced in 2015 on the A5 – M1 Link which will provide a northern bypass for Dunstable.
- 4.9. The government propose a High Speed Two (HS2) rail network in the UK connecting London and the West Midlands (Phase One) continuing onto Manchester and Leeds (Phase Two). However no part of the new railway line will pass through Milton Keynes with the nearest point being 15 miles to the west. It will place demands on aggregates nationally but it is difficult to identify at this stage the amount of mineral required. Construction of Phase 1 is programmed to start in 2017 and its progress will be monitored through future LAAs.

- 4.10. Housing and other infrastructure proposals, even if they come to fruition as planned, will not be a change from previous years as in and around Milton Keynes there has always been a growth focus. There is no indication therefore that the level of demand for sand and gravel will increase beyond that experienced previously and as such, it is not necessary to factor in any additional growth to a provision rate.

Supply of sand and gravel

Mineral commitments

- 4.11. The supply contribution from permitted sand and gravel sites in Milton Keynes is limited. At the end of November 2015 the site at Manor Farm had been fully worked and land at Calverton site had limited reserves remaining. The land South of Caldecote Farm site is of a medium scale, with a reserve of 0.45 Mt. The permission remains unimplemented however it is thought it will likely come on-stream in early 2016, following a new operator taking over the site. Extraction commenced at the land east of Haversham Road site in 2015. The site has a relatively small reserve of 0.34 Mt. The two active sites at the end of November 2015 are set to expire between now and 2020.
- 4.12. As part of the 'call for sites' process, as mentioned previously, a total of nineteen sand and gravel sites in Milton Keynes were put forward for potential allocation in the emerging MLP. All sites were subject to detailed site assessments, with four considered appropriate as allocations in the Proposed Submission Plan. If all four sites are developed (subject to planning permission in accordance with relevant local plan policies) they will potentially add a total of 2.08Mt to the existing sand and gravel supply.

Commitments for producing secondary and recycled aggregates

- 4.13. The majority of development in Milton Keynes is on greenfield sites and few buildings and structures are demolished therefore a limited amount of recycled material is generated to be used as aggregate. Milton Keynes has adequate capacity for the processing of waste to produce recycled aggregates, although this capacity is temporary. There will remain a continued reliance on primary aggregate sources to meet demand.

Investment opportunities

- 4.14. The nature of the mineral resources in Milton Keynes is such that large scale sites are not likely to come forward in the long term. This means that in future sites are likely to be more of the scale of those identified in the emerging MLP. Such sites are probably more suited to medium sized operators rather than the larger international companies who operate in the UK. It is known (November 2015) that medium sized operators are actively looking for opportunities in the Milton Keynes area. The allocations identified through the MLP can meet these requirements. It appears that the Borough has the operator interest and is more than capable of delivering at least three sites at any one time into the future. This would be in line with the provision figure of 0.17 Mtpa set out in the emerging MLP.

Resources and constraints

- 4.15. The emerging MLP has identified four allocations that are considered to meet requirements to 2031 and which are capable of being delivered. This will far from exhaust the opportunities for further extraction post-2031. There will be further opportunities in the Ouse Valley in areas where environmental and amenity considerations are such that extraction would not be ruled out on these grounds. However there is the possibility that the Tove Valley could be an alternative long term location subject to the resource being of a scale and quality, allied to potential higher costs to access these sites, to make extraction worthwhile.

5. Conclusions

- 5.1. An adequate and steady supply of aggregate is required to meet anticipated needs of the construction industry and support continued economic growth in Milton Keynes.
- 5.2. Government guidance (NPPF) requires MPAs to calculate annual aggregate provision on the basis of rolling ten-year average sales data and other relevant local information. Local information to consider includes:
 - Housing and infrastructure construction levels,
 - Population growth,
 - Current commitments,
 - Investment opportunities, and
 - Available resources and constraints.
- 5.3. The average aggregate sales for sand and gravel for the most recent three year rolling period (2012 - 2014) is 0.11Mtpa and for the most recent ten year rolling period (2005 – 2014) is 0.13Mtpa. The sand and gravel provision rate currently being taken forward in the emerging MLP is 0.17Mtpa (based on the three year average sales 2010 - 2012). There are insufficient permitted reserves (as of 31/12/2014) to maintain the government recommended seven-year landbank based on this provision rate, however the allocated sites proposed in the emerging MLP (should they be brought forward and be permitted) have the potential to increase the landbank significantly.
- 5.4. Previously, an annual apportionment for crushed rock (limestone) for Milton Keynes has not been required to be identified. It is still not considered appropriate. Limestone for use as building stone is however supported in plan policy. Likewise, through the plan, policies support the continued production of secondary and recycled aggregates as alternatives to primary aggregates, but with a limited supply contribution it is not considered necessary to set an annual provision target.

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