

Minerals Local Plan Local Aggregates Assessment 2014

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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 2014 edition and includes the most recent (2013) aggregate sales and reserves data for Milton Keynes. The previous 2013 LAA formed 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 currently has four permitted sand and gravel sites. Estimated reserves as of 31 December 2013 cannot be published for confidentiality reasons but are known to be limited.
- Sales increased year on year between 2006 and 2010, however have decreased since 2011. Actual sales figures cannot be identified for confidentiality reasons.
- In 2009 0.925 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 (2004 – 2013) and three year period (2011 - 2013) are 0.12Mtpa and 0.14Mtpa 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 0.17Mtpa provision rate. To address this, four sites for sand and gravel extraction have been put forward for allocation in the emerging MLP which, 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 over 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 necessary.
- In 2009 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) which seeks, through Government guidance, to ensure a steady and adequate supply of aggregates across the country.
- 1.2. This system has recently been reformed as part of National Planning Policy Framework (NPPF) (March 2012) and new 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 2030/2035. 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 required to be updated on an annual basis and forms part of the Council's Annual Monitoring Report (AMR). This LAA is the 2014 edition and includes the most recent (2013) aggregate sales and reserves data for Milton Keynes. The earlier 2013 LAA formed part of the evidence base to inform the emerging Minerals Local Plan (MLP) for Milton Keynes, currently at its Draft Plan stage. As part of this process the LAA underwent consultation at the Issues and Options stage and was amended in light of responses. It assisted in determining the most appropriate apportionment / provision approach to take forward in the Draft Plan.
- 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 glacialfluvial 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. Currently there are no operational quarries in Milton Keynes. The previously operational quarry at Manor Farm, Wolverton has now been fully worked and is in the process of being restored. Three further sand and gravel quarries are permitted: land at Calverton (Passenheim), land south of Caldecote Farm (Newport Pagnell) and land east of Haversham Road (Wolverton). Production started at Calverton but is currently mothballed. The quarry to the south of Caldecote Farm was recently permitted and is yet to be implemented. It is adjacent to the quarry at Caldecote Farm that is now exhausted and currently being restored. The quarry to the east of Haversham Road was also recently permitted and is yet to be implemented.
- 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 Quarryhall Farm, Lathbury in the past. Over 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.

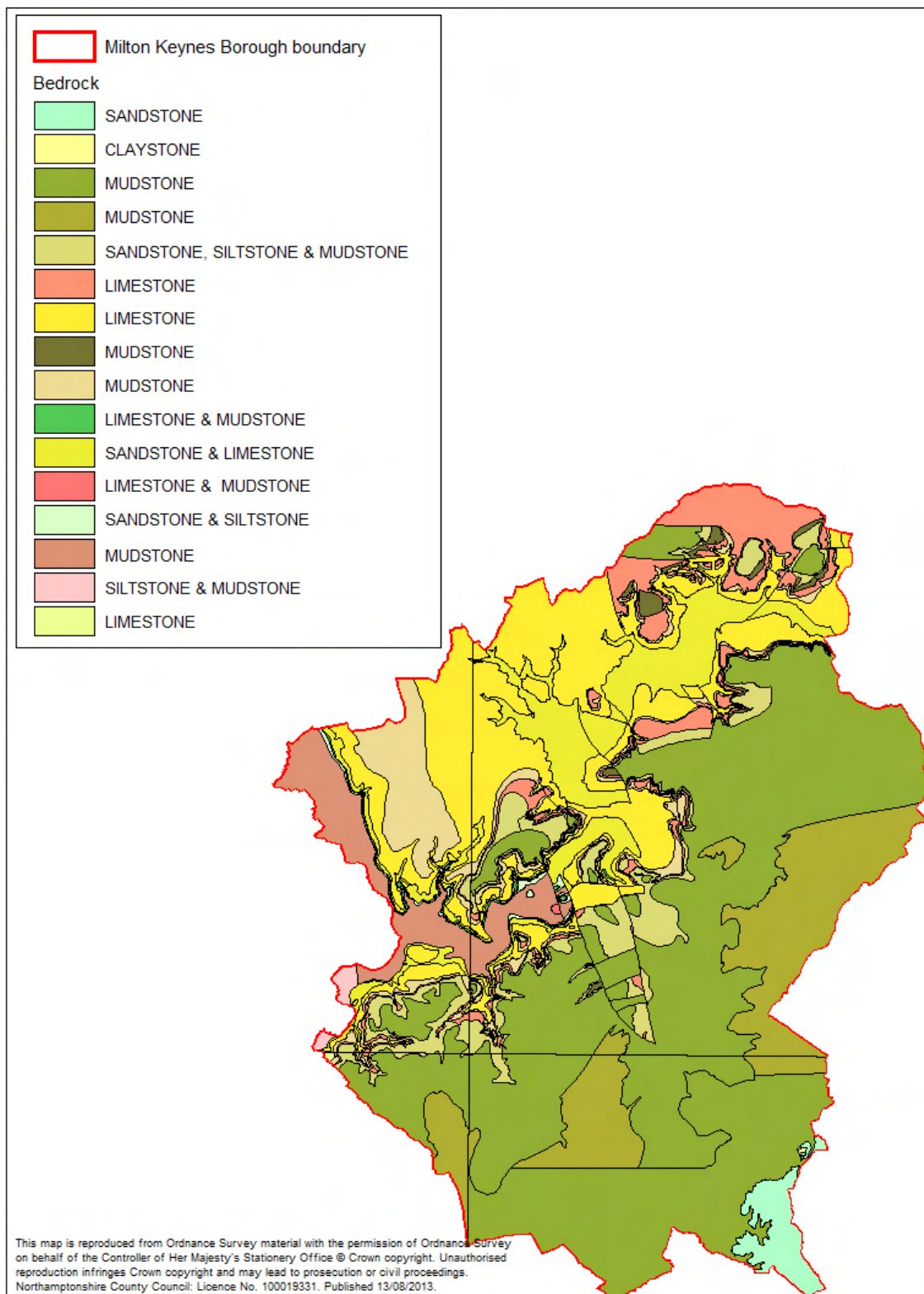


Figure 1: Geological bedrock map of Milton Keynes

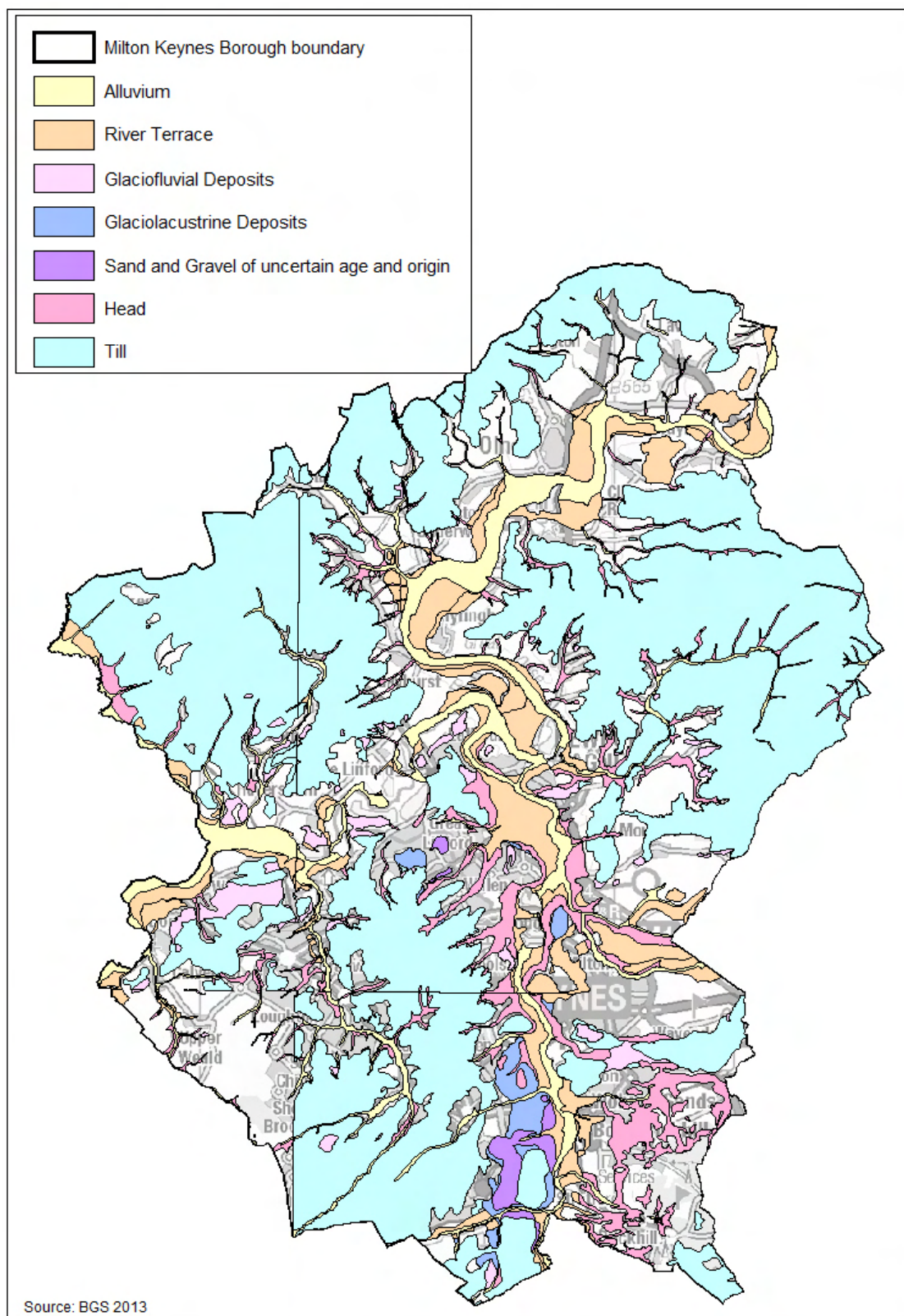


Figure 2: Geological map of the superficial mineral resources of Milton Keynes

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 predominately 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 currently four 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

Site	Operator	Status	Permission end date
Passenham/Calverton	RGS Roadstone	Quarry has permission for the extraction of 0.475 Mt of sand and gravel. It is currently inactive although work will re-commence by end of 2014.	2017
Land south of Caldecote Farm	Specialist Groundwork Services Construction Ltd	Quarry has permission (granted April 2013) for the extraction of 0.45 Mt of sand and gravel but remains unimplemented.	No later than 7 years from commencement date.
Manor Farm	Hanson Aggregates	Quarry now exhausted and in the process of being restored.	2016
Land east of Haversham Road	Hanson Quarry Products Europe Ltd	Quarry has permission (granted January 2014) for the extraction of 0.34 Mt of sand and gravel but has not yet been implemented.	5 years from commencement date

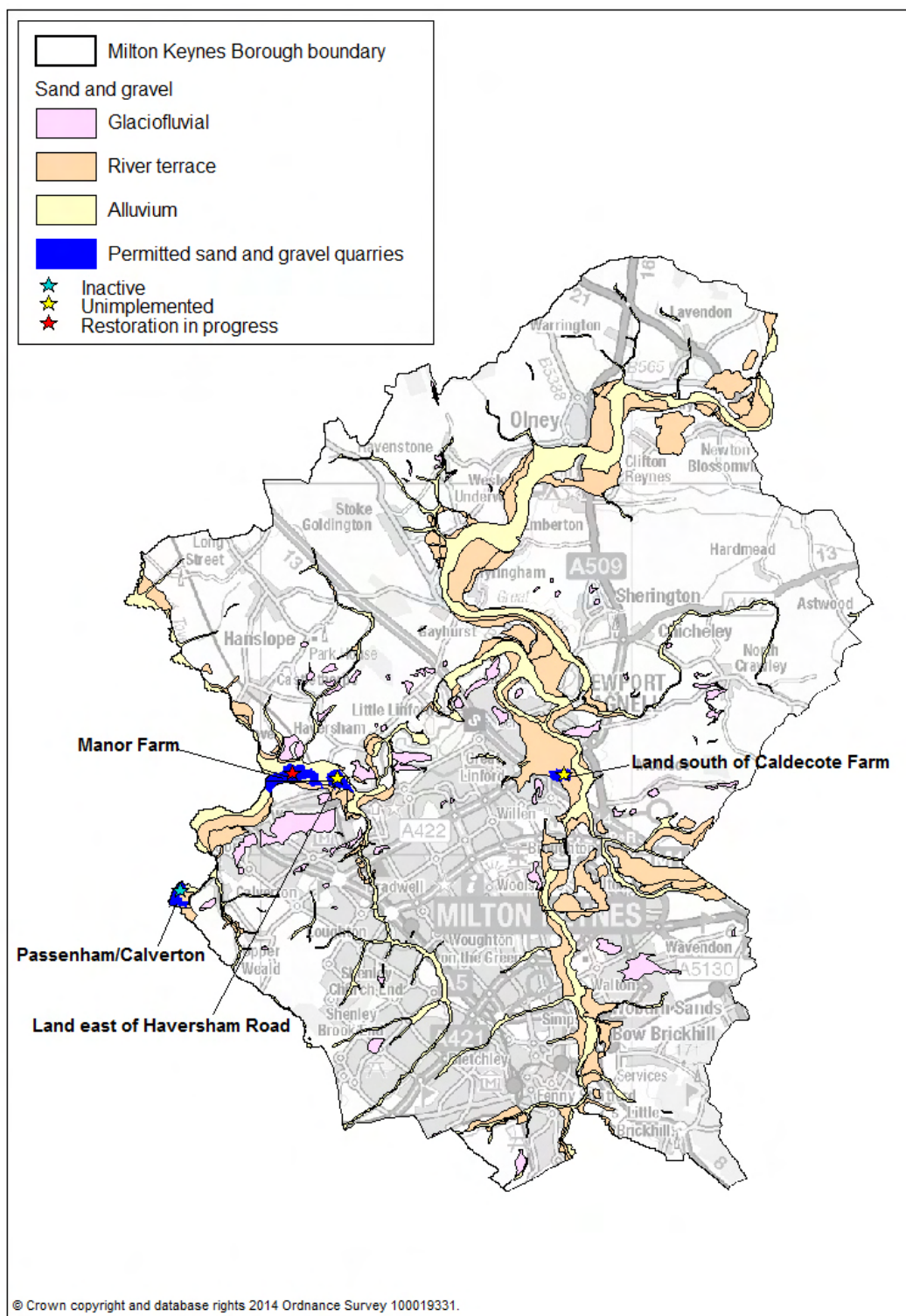


Figure 3: Geology of Milton Keynes with permitted sand and gravel sites

- 2.6. Estimated total sand and gravel reserves for Milton Keynes as of 31 December 2013 cannot be published for confidentiality reasons but are known to be limited. Figures are based on reserve information retrieved from the 2013 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 were invited to put forward sites for mineral related development, including extraction, for possible inclusion in the plan. Through this 'call for sites' process, thirteen sites were identified in Milton Keynes: ten for sand and gravel extraction and three for limestone (building stone) extraction.. The suitability of these 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 2004 – 2013 is shown in Figure 4. Sales figures are shown up to the end of 2013 as this the most recent data available.

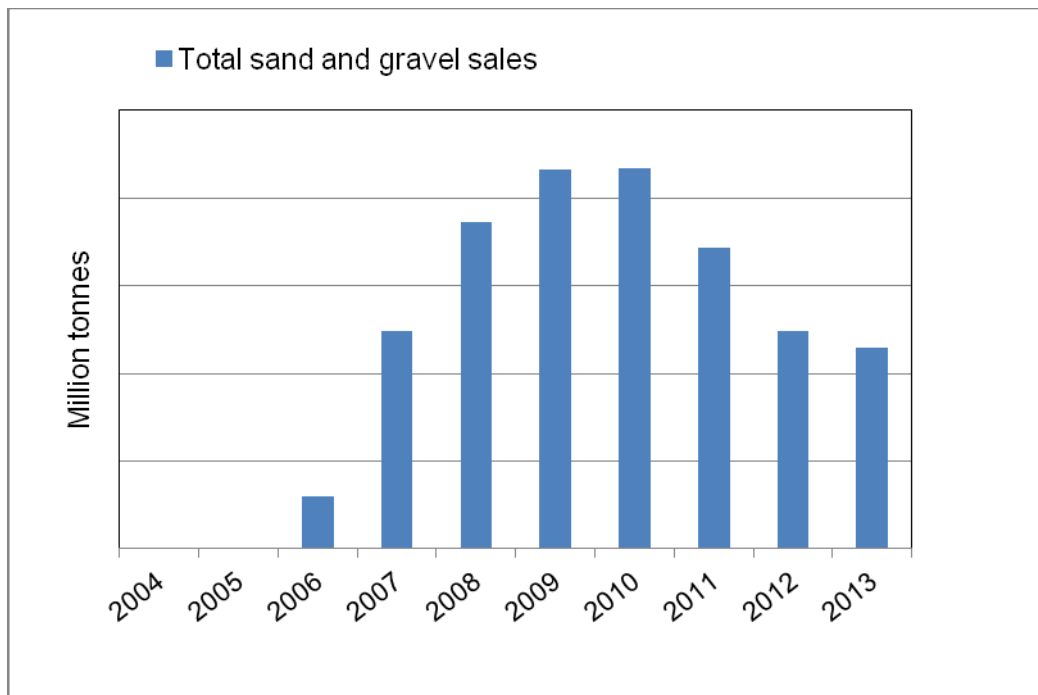


Figure 4: The trend of sand and gravel sales in Milton Keynes (2004 – 2013)

- 2.9. There were no sales of sand and gravel between 2004 and 2005. This is because there were no operational quarries during this time. Sales increased year on year between 2006 and 2010, and since 2011 have decreased. It is reasonable to assume that the recent decline in sales has to a large extent been attributable a deficit between rates of extraction and rates of replenishment through new permissions. Between 2011 and 2013 two active quarries (land at Caldecote Farm and Manor Farm) came to their end of life. Between 2011 and 2012 the only other permitted site was Passenham/Calverton which was inactive for this period. In 2013 an additional site (land south of Caldecote Farm) was permitted but has yet to be implemented).
- 2.10. In relation to national and regional sales trends, the DCLG and British Geological Survey (BGS) conduct a national four-yearly AMS which includes analysis of sales in England and Wales. The most recent AMS in 2009 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 conducted by the DCLG and the BGS also includes analysis of movements (imports and exports) of aggregates for each MPA in England and Wales. The latest survey in 2009 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).

2.15. 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.

2.16. 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 Peterborough, Cambridgeshire 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.

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 2004 and 2013. With regards to the production of limestone for non-aggregate building stone purposes, there were no sales between 2004 and 2009 but in more recent years between 2010 and 2013 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

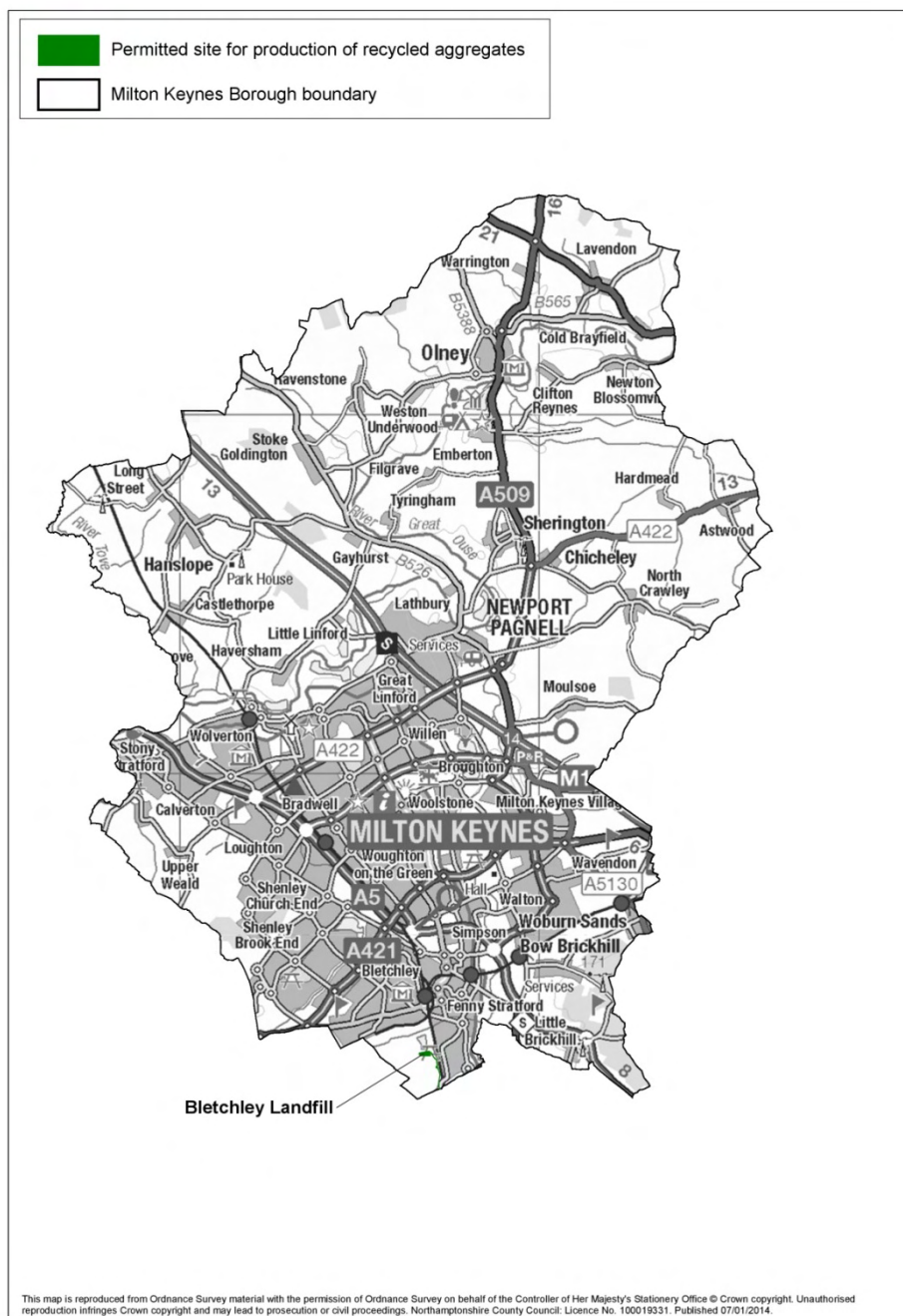


Figure 5: Location of permitted site in Milton Keynes for the production of recycled aggregates

- 2.23. In Milton Keynes there is also a waste transfer and recycling facility at Chesney Wold (Bleak Hall) which 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 four of the years between the period 2004 - 2013..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 (2004 - 2013) and shows a ten year average sales for the period 2004 - 2013 and three year average sales for the period 2011 - 2013. The most recent ten year period of sales (2004 – 2013) would give a sand and gravel provision figure of 0.12 Mtpa.

Table 5: Total sand and gravel sales in Milton Keynes 2004 - 2013

Year	Sand and gravel (Mt)
2004	0
2005	0
2006	C
2007	C
2008	C
2009	C
2010	C
2011	C
2012	C
2013	C
Total sales 2004 - 2013	1.18
10 year average 2004 - 2013	0.118
3 year average 2011 - 2013	0.137

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- 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 2010 - 2012, as reported in the previous LAA, was 0.17Mtpa; the most recent three year period (2011- 2013) sees this decrease to 0.14 Mtpa (0.03 Mt (18%) lower).
- 3.5. Table 6 compares the provision of sand and gravel for a 15 and 20 year period from 2015 (anticipated adoption of the MLP) to 2030/2035 based on alternative annual apportionment / provision rates.

Table 6: Provision of sand and gravel in Milton Keynes to 2030/2035 based on alternative apportionment / provision rates

	Adopted MLP apportionment rate (2006)*	Emerging MLP provision rate	10 year average sales provision rate**	3 year average sales provision rate***
Annual apportionment / provision rate (Mtpa)	0.12	0.17	0.12	0.14
Total plan requirement:				
Annual apportionment /provision x plan period (Mt)				
15 years (to 2030)	1.8	2.55	1.8	2.1
20 years (to 2035)	2.4	3.4	2.4	2.8
Permitted reserves (as at 31/12/13) (Mt)	c	c	c	c
Undersupply (-) over supply (+) (rounded to the nearest Mt)				
15 years (to 2030)	-1	-2	-1	-1
20 years (to 2035)	-2	-3	-2	-2

*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 10 year average sales 2004 - 2013.

***Based on 3 year average sales 2011- 2013.

- 3.6. Comparison of total plan requirements, under each apportionment / provision rate, with permitted reserves as at 31 December 2013 indicates that there are not enough remaining reserves in Milton Keynes to meet either a 15 or 20 year total plan requirement. The largest undersupply occurs with the 0.17
- 3.7. Mtpa emerging MLP provision rate, with a requirement for 2.55 or 3.5 Mtpa of sand and gravel over a 15 or 20 year plan period.

- 3.8. In looking to address the apparent shortfall in supply the Council is in the process of allocating sites for sand and gravel extraction through the emerging MLP. Subject to planning permission, the four sites provisionally allocated at Draft Plan stage 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.

Limestone

- 3.9. No apportionment has previously been identified for crushed rock (limestone) in Milton Keynes as due to the very low output, it was not considered necessary.

Secondary and recycled aggregates

- 3.10. The NPPF advises MPAs to calculate and maintain separate landbanks for any aggregate materials of a specific type or quality which have a distinct and separate market. Recycled aggregates have a distinct and separate market in Milton Keynes however sales information is difficult to obtain due a low response rate to AMSs and, where data has been provided, it is not consistent. It is not possible therefore to determine a provision rate (and therefore landbank) on the basis of average sales over a ten year period.

Landbanks

- 3.11. 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 2013 are shown in Table 7.

Table 7: Landbanks for sand and gravel in Milton Keynes in 2013

	Adopted MLP apportionment rate (2006)*	Emerging MLP provision rate	10 year average sales provision rate**	3 year average sales provision rate***
Annual apportionment / provision rate (Mtpa)	0.12	0.17	0.12	0.14
Permitted reserves (as at 31/12/13) (Mt)	c	c	c	c
Landbanks (rounded to full years)	6	4	6	5

*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 10 year average sales 2004 - 2013.

***Based on 3 year average sales 2011- 2013.

- 3.12. Milton Keynes has a history of not meeting landbank figures for sand and gravel. Under every apportionment / provision rate there are not enough reserves needed to meet the minimum seven year landbank requirement. Naturally, more reserves are needed to meet the seven year landbank with

the 0.17 Mtpa provision rate compared with the 0.12 Mtpa apportionment/provision rates.

- 3.13. No landbanks have previously been required to be maintained for limestone as no apportionment figure was adopted.

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 largely drives 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 2003 and 2013. Net housing completions were at their lowest in 2003/04 (1,193 completions) and peaked in 2007/08 (2,317 completions)

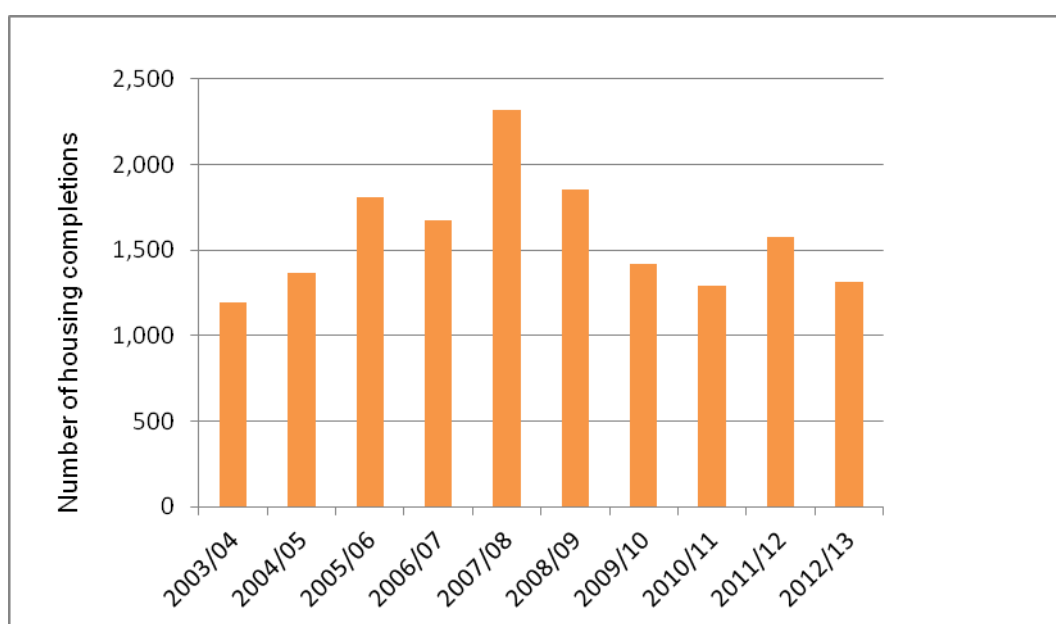


Figure 6: Net housing completions in Milton Keynes 2003 – 2013

- 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 most recent Housing Trajectory (August 2013) shows that in 2010/11 completions remained low (1,295 completions compared with a 1,750 target), increased in 2011/12 but then decreased again to 1,315 completions in 2012/13 (Figure 7).

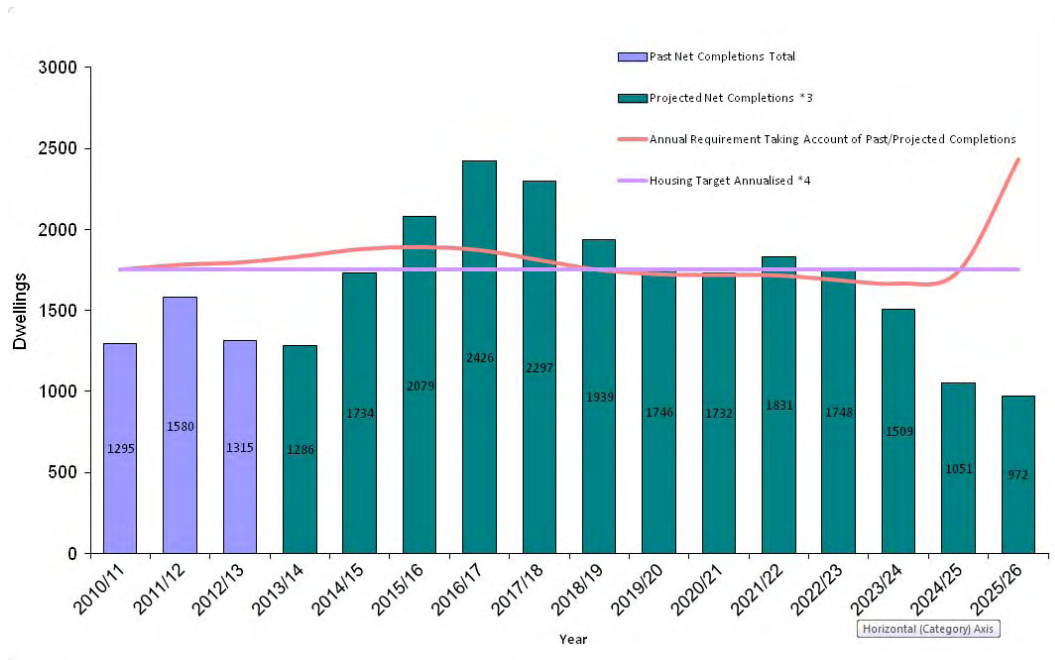


Figure 7: Milton Keynes Housing Trajectory 2010 – 2026

- 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 expected to achieve 28,000 net housing completions between 2010 and 2026.
- 4.7. There are no national infrastructure projects planned for Milton Keynes identified in the National Infrastructure Plan 2013. The Milton Keynes Local Investment Plan (2013) 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 Bletchley Southern by-pass and dualling of the A421 and A509. 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.
- 4.8. Housing and other infrastructure proposals, even if they come to fruition as planned, will not be a change from previous years as Milton Keynes has always had 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

- 4.9. The supply contribution from permitted sand and gravel sites in Milton Keynes is limited. The site at Manor Farm is now exhausted and Passenham/Calverton quarry has reserves of 0.475 Mt but production is currently mothballed. There is an unimplemented site at Caldecote Farm which is relatively small, with a reserve of 0.45 Mt. It will likely come on-stream in the short to medium term, following recent completion of operations at the adjacent site. The land east of Haversham Road site also has a relatively small reserve of 0.34 Mt and is unimplemented.. All active and inactive permissions are set to expire between now and 2017.
- 4.10. As part of the 'call for sites' process, as mentioned previously, industry put forward ten sand and gravel sites in Milton Keynes for potential allocation in the emerging MLP. All sites were subject to detailed site assessments, with four considered appropriate for identification as preferred sites in the Draft 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

- 4.11. 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

- 4.12. The majority of aggregate production in England and Wales is undertaken by companies operating on an international scale. These companies make their investment decisions at an international level, tending to invest in larger sites with significant reserves and capital return. The economic downturn has led to companies rationalising their activities and focusing production even more so on larger reserves. Of the sites put forward in 'call for sites', only two currently have the backing of an international company.

Resources and constraints

- 4.13. Mineral extraction can only take place where the resource arises. Sand and gravel resources largely occur in the river terrace deposits of the Great Ouse and River Ouzel in Milton Keynes. Although they have been extensively worked around Milton Keynes, significant potential resources remain along the Great Ouse to the north of the M1. These resources are free of constraint from national or international environmental designations however there are some local designations in the area to consider when assessing the suitability of potential sites for extraction. These include Registered Parks and Gardens, Scheduled Monuments and Country Parks.
- 4.14. As part of the emerging MLP detailed site assessments were undertaken to identify preferred sites for allocation in the plan. These sites underwent a rigorous assessment to ensure those selected were deliverable. The main factors in favour of the site, physical, built and natural environmental constraints and potential adverse impacts resultant from site development were assessed. In addition, the cumulative impacts of minerals development

on the well-being of the local community, including any significant adverse impacts on environmental quality, social cohesion, inclusion and economic potential, were taken into consideration. All issues and constraints will be taken into account both through the plan making process and when applications have been submitted to the MPA for consideration.

- 4.15. Where potential adverse impacts do arise from extraction they need not automatically prevent development as such impacts may be able to be avoided and / or mitigated in order to reduce potentially adverse impacts to an acceptable level. For instance, potential impacts and disturbances arising from proximity of mineral workings to nearby dwellings and settlements (e.g. noise, dust and lorry movements) can be mitigated satisfactorily with the use of appropriate conditions attached to a permission. In some cases a site-specific management plan may be required to ensure the implementation and maintenance of mitigation measures throughout construction, operation and restoration works. Mineral extraction is a temporary activity and it may be possible for potential short term adverse impacts to be offset with longer term benefits. Site restoration for example can result in significant environmental, social and economic gain.
- 4.16. In accordance with the Duty to Co-operate relevant MPAs are being consulted with to identify if there are any issues surrounding the continuation of the importation of aggregates to Milton Keynes.

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 (2011 - 2013) is 0.14 Mtpa and for the most recent ten year rolling period (2004 – 2013) is 0.12 Mtpa. 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 31/12/2013) to maintain the government recommended seven year landbank based on this provision rate, however the allocated sites proposed at Draft Plan stage in the 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 necessary. 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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