

**Milton Keynes
Minerals Local Plan**

Draft Plan Stage

July 2014

**Mineral
Safeguarding Areas
Draft Methodology**

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1. Safeguarding mineral resources

- 1.1. National guidance recognises that 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 naturally occur, it is important to make best use of them to secure their long-term conservation. Sterilisation of mineral resources can occur as a result of surface development either directly overlying or situated on / close to the boundary of the resource.
- 1.2. The purpose of safeguarding mineral resources is to ensure that such matters are considered in decision-making processes for land-use planning, and that the ability of future generations to meet their needs is not compromised.
- 1.3. The National Planning Policy Framework (NPPF, paragraph 143) requires that all MPAs in preparing their Local Plans define Minerals Safeguarding Areas (MSAs) and adopt appropriate policies in order that known locations of specific mineral resources of local and national importance are not needlessly sterilised by non-mineral development; and define Minerals Consultation Areas (MCAs) based on the MSAs. However, the designation of MSAs should not create a presumption that resources defined will be worked, nor should it preclude other forms of development from being permitted. In addition Local Plans should set out policies to encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place.
- 1.4. MSAs are a planning tool, acting as a sign-post for the presence of mineral resources that may be sterilised by non-mineral development, and to local mineral safeguarding policies. Due consideration should be had to the presence of MSAs throughout the planning process, including both the preparation of Local Plans (i.e. site allocations) and during development management (i.e. determination of planning applications).
- 1.5. The broad methodology for defining MSAs has been developed in accordance with the NPPF and Mineral safeguarding in England: good practice advice (British Geological Survey, BGS, 2011). The broad methodology is summarised below:
 - i. Identify mineral resources that are of local and national importance and define the MSAs within Milton Keynes (and resulting MCAs) -
 - a. identify the best geological and mineral resource information, and
 - b. decide which mineral resources to safeguard and the physical extent of MSAs.
 - ii. Prepare the draft MSAs (for consultation).
 - iii. Determine how matters related to MSAs are to be addressed through the Local Plan.
 - iv. Determine the need for development management policies and what mechanisms should be included to ensure that mineral resources are taken into account in planning decisions.
- 1.6. Consultation was previously undertaken in May 2013 on the (initial) draft methodology involving the Councils planning and transport service, surrounding MPA's, Aggregate Working Parties, Government Agencies (Environment Agency, Natural England and English Heritage), minerals industry and the BGS. The purpose of which was to ensure that the methodology for defining MSAs and determining policies and other planning mechanisms has an

appropriate scope, utilises appropriate techniques, that the information used is the most up-to-date, takes consideration of local circumstance and is in line with Government guidance. Responses received were given due consideration and amendments made to the method as a result.

- 1.7. Stakeholders were also encouraged to submit additional evidence regarding the extent of mineral resources where appropriate, as this could be used to supplement the BGS mineral resource linework in producing the MSAs. To date no such information has been submitted.
- 1.8. A map of the mineral resources within Milton Keynes is available to view at: www.bgs.ac.uk/mineralsuk/maps/maps.html alternatively the BGS 2003 Mineral Resource Map can be downloaded from: www.bgs.ac.uk/mineralsuk/planning/resource.html
- 1.9. The draft methodology was subject to public consultation alongside the Issues and Options consultation paper (Wednesday 30 October 2013 to Wednesday 22 January 2014). Responses received were given due consideration in the finalisation of the methodology.

2. Identifying mineral resources within Milton Keynes

- 2.1. At the local level, MSAs should focus on identified mineral resources areas that are sufficiently extensive to provide for significant opportunities for current and future use and growth. They also need to centre on resources that are of current local or national (economic) importance, whilst recognising the fact that market demand may change in the future resulting in demand for different resources.

- 2.2. So what is a mineral resource?
“Mineral resources are natural concentrations of minerals in or on the Earth’s crust that are or may become of economic interest because they are present in such form, quality and quantity that there is the potential for eventual extraction. Minerals are thus defined by economic as well as physical parameters.” (BGS 2011, para 2.1.1)
- 2.3. Mineral resources are identified by the BGS Mineral Resource Information and Map which delineate and describe the geographical distribution of all onshore mineral resources of historic, current or potential economic interest in the area.
- 2.4. The Mineral Resource Information in Support of National, Regional and Local Planning: Buckinghamshire and Milton Keynes was produced by BGS in 2003, since this date further studies have been undertaken: BGS 2010 Sand and gravel resources of Milton Keynes Borough; BGS 2007 Aggregate supply and demand for sustainable communities; and refining of the limestone formation in 2012. Information gathered from these studies was incorporated into the updated Mineral Resources Map 2012; this map has been used as the base for identifying the geographical distribution of ‘known’ mineral resources in Milton Keynes. Information from other data sources and reports will also be taken into consideration in defining the MSAs.
- 2.5. Minerals present in Milton Keynes include sand and gravel, limestone (building stone) and brick clay. Coal and hydrocarbons including conventional oil and gas and coalbed methane (CBM) are not identified within Milton Keynes.
- 2.6. **Sand and gravel** is the main mineral resource of economic importance in Milton Keynes, this resource is identified as being of national importance. The principal uses of sand

are as fine aggregate in concrete, mortar and asphalt. The main use of gravel is as coarse aggregate in concrete. Substantial quantities of sand and gravel may also be used for construction fill. Sand and gravel deposits are mainly associated with the River Great Ouse and also the River Ouzel and River Tove. Sand and gravel deposits were laid down during glacial periods and during inter-glacial and postglacial periods as a result of river action widening and deepening the valley floors. Accordingly, sand and gravel resources are categorised as superficial or 'drift' deposits, subdivided into glaciofluvial, river terrace and sub-alluvial deposits. The BGS 2010 report concluded that the river deposits are estimated to contain 72.4 Mt of sand and gravel but (previous) planning constraints and industry viability factors may limit this considerably. The largest resources, potentially some 56 Mt, are in the Great Ouse Valley downstream of the M1. The Ouse Valley above Manor Farm and the valley of the River Tove contain modest sand and gravel resources but elsewhere few viable resources remain.

- 2.7. **Woburn Sands** (bedrock sand deposits) are located in the far south-eastern corner of Milton Keynes. Woburn sands are a source of construction and silica sand. There are indications that deposits in this area are generally thinner and finer grained and so less attractive as a source of construction sand.
- 2.8. **Limestone** is located in the north / north-west of Milton Keynes; the majority of which is identified as Blisworth Limestone Formation with other formations including Cornbrash, White Limestone (limited resources confined to the south-west) and Wellingborough Limestone (limited resources confined to the west) all from the Great Oolite Group from the mid-Jurassic age. The Great Oolite

Group consists of limestones, mudstones and calcareous mudstone units and does not constitute a resource everywhere since some sequences contain more mudstone than others. Limestone may be suitable for use as aggregates however this is dependant on their physical characteristics. Limestone may also be used to produce a range of stones for local building purposes (as building stone). Generally the White Limestone formation is more suitable for aggregate use; however the Blisworth formations also have resource potential as building stone. Cornbrash is of little value for building or road-making. Milton Keynes has limited resources of rock suitable for use as crushed rock aggregate; there are no historic ironstone permissions within Milton Keynes. Although extraction of Blisworth Limestone for use as building stone does occur within the borough there are no major resources of building stone in Milton Keynes. Blisworth Limestone (used as building / roofing stone) may be considered to be of local importance given its use in conservation of historic building and structures, conservation areas and supporting local distinctiveness. In addition White Limestone may be suitable for aggregate use; although not currently worked future generations may find a requirement for such materials.

- 2.9. **Brick clay** is the term used to describe clay and mudstone used predominantly in the manufacture of bricks, and to a lesser extent, roof tiles and clay pipes. These clays may sometimes be used as a source of construction fill, for lining and sealing landfill sites and for cement manufacture. Brick clay was previously worked at Newton Longville (closed in 1990) and used to produce Fletton bricks on a major scale from the Lower Oxford Clay.

2.10. In order to address local circumstances the BGS linework has been refined order to identify the MSAs. MSAs will act as the trigger for application of mineral safeguarding policy and related planning mechanisms. Jointly these mechanisms will act to inform strategic planning and development control in relation to mineral resources. The methodology for identifying MSAs is set out below:

- Minerals resources of local and national importance will be included in the MSAs (i.e. sand and gravel and limestone from the Blisworth and White Limestone Formations).
- The identification of MSAs will focus on surface-won materials as these are of relevance to Milton Keynes and are the most vulnerable to sterilisation by surface development.
- Mineral resources are taken to be those identified on the BGS Mineral Resources Map 2010. Where available / relevant other data sources will be taken into consideration.
- Areas and sites that were previously worked or are existing operations will be excluded from MSAs. These areas have either been worked out or are already recognised within the mineral planning context and hence safeguarded from inappropriate forms of development.
- Areas that have existing planning permission but are not currently operational and those identified as allocations (in both the adopted and emerging plans) will not be excluded as there is the possibility that these may not be developed by industry during either the permission or plan period and hence may experience sterilisation from non-minerals development.
- Environmental designations will not be excluded. The presence of environmental designations does not preclude mineral safeguarding on the basis that sterilising development will not take place in these areas (BGS 2011, para 4.2.9).
- Urban areas will not be excluded, this reflects that mineral resources are present

and may allow for future extraction where associated with large redevelopments.

- Buffers will be applied around all mineral resources in creating the MSAs. This will help to account for encroachment of non-minerals development which could potentially result in sterilisation of the resource. The proposed buffer area for sand and gravel is 250 metres (m) and 500 m for limestone extending outwards from the boundary of the BGS mineral resource linework. These buffers will extend beyond the MPA's administrative boundary on the electronic dataset / mapping layer for the purpose of informing developers and adjoining authorities of the presence of MSAs within Milton Keynes (that development on the adjoining boundary may impact on and so should give consideration to the presence of the MSAs).
- Adjoining MPA's have provided the MSA datasets / layers for their authority areas – this information will be used to inform the identification of MSAs within Milton Keynes and the extension of MCAs beyond the MPA's administrative boundary.
- Boundaries for MCAs are taken to be the same as that of the MSAs.

Assumptions, limitations and uncertainties

2.11. In defining and identifying MSAs the following assumptions have been made:

- The BGS Mineral Resources Map (and the other data sources listed) form the best and most up-to-date source of information for determining the occurrence and extent of 'known' mineral resources.
- Brick clay found within Milton Keynes is not considered of local or national importance due to the lack of current and future demand of product and therefore does not require safeguarding.
- The development of the BGS Mineral Resources Map involved consideration of the geology of deposits together with a range of operational and economic criteria as such the application of a minimum threshold size,

grouping of smaller deposits and inference to larger deposits is not proposed. As such no technical limits will be placed on the data.

- Sites that have planning permission and are operational, and those that have previously been worked (i.e. the mineral reserves have been removed) do not require safeguarding.
- Buffer areas will be applied around identified resources areas to ensure an adequate safeguarding margin.

2.12. It is important to note that the BGS mapping utilises data that is not comprehensive and the quality is variable, therefore mapped boundaries can only be considered as approximate in the majority of instances. Therefore most of the mineral resource information presented is known as an inferred resource, that is, resources that can be defined from available geological information and which may have some economic potential. Inferred resources have neither been evaluated by drilling, or other sampling methods. However, where mineral resource studies have been carried out (including drilling and testing) sufficient information is available to define the resources as indicated resources. These areas are represented spatially on the BGS mapping.

2.13. Mapping undertaken for MSAs is indicative in nature for the purpose of strategically identifying where a mineral resource exists and the potential for a development proposal to sterilise a mineral resource.

Data sources

2.14. Data sources used in preparing this draft methodology are listed below:

- BGS 2003 Mineral Resource Information in Support of National, Regional and Local Planning – Buckinghamshire and Milton Keynes (Report and Map)
- BGS 2006 South East England Regional Assembly: South East Plan – Review of Mineral Supply and Demand

- BGS 2007 Aggregate supply and demand for sustainable communities
- BGS 2010 Sand and gravel resources of Milton Keynes Borough
- BGS 2010 Mineral Resources datasets / layers - Milton Keynes (Sand and gravel, limestone and clay)
- BGS 2012 Limestone dataset
- Milton Keynes Council Planning permission dataset / layers
- Milton Keynes Council Historical planning applications
- MPA / Milton Keynes Council datasets / layers of adjoining MPA's
- Aggregate Working Party annual reports

Addressing the safeguarding of minerals resources through land use planning

Milton Keynes Minerals Local Plan 2006

2.15. The Milton Keynes Minerals Local Plan 2006 identifies one of its principal aims as “To safeguard deposits of potentially valuable minerals against sterilisation by the types of development that would hinder or prevent their subsequent extraction”. The policy direction set out through the 2006 plan for the safeguarding of reserves (Policy MLP4) states that “The MPA will not permit development proposals that would cause sterilisation of mineral deposits on the proposed development site, or which prejudice the future working of minerals on adjacent sites (the same indicative stand-offs as Table 4 will apply), except where it is demonstrated that: a) the mineral deposit is of no commercial interest, and is unlikely to be so in the future; or b) there is an overriding case in favour of allowing the proposed development to proceed without the prior extraction of the mineral; or c) extraction of the mineral would be subject to such strong environmental or other objection that it would be highly

unlikely that it would ever be permitted in any circumstances.”

2.16. The 2006 plan makes provision for the MPA to request detailed investigations prior to applications being determined where there is a threat to a potential reserve. The plan acknowledges that in some cases where known mineral deposit may be sterilised it is appropriate to allow its extraction before permanent development takes place; in addition it is also important to safeguard areas of known mineral reserve from

permanent development close to these areas. The plan identifies stand-off distances / buffers associated with mineral resources through Policy MLP7 and Table 4.

2.17. Policy MLP7(k) – “Satisfactory buffers are provided to safeguard the amenities of nearby uses (see Table 4 Indicative buffer zone widths to ameliorate nuisance). Where a watercourse is adjacent to a proposed mineral development, the applicant must agree details of the appropriate buffer with the Environment Agency”.

Table 4: Buffer Zones for Mineral Extraction

Nature of Proposal	Indicative buffer zone widths to ameliorate nuisance			
	Open Land	Landscape or Physical Features		Landscaped bund Minimum height 5 metres
		Tree belt 100m plus in depth	Major Road	
A Mineral extraction only	200m	100m	100m	100m
B Gravel Processing Plant	400m	300m	200m	300m

NOTE

A distance measured from the edge of the working area to the nearest point of the building to be protected (protective measures such as bunds, landscaping etc to be within the working area as thus defined)

B distance measured from the nearest point of the plant to the nearest point of the building to be protected.

The emerging Minerals Local Plan

2.18. The emerging Minerals Local Plan seeks to expand upon the existing policy and incorporate NPPF requirements, in doing so it will identify MSAs (and MCAs) complemented by policy outlining the strategic direction for the safeguarding of mineral resources including planning provisions and criteria to ensure that mineral resources of local and national importance are not needlessly sterilised by non-mineral development.

2.19. The identification of MSAs may present opportunities for prior extraction of minerals in conjunction with other forms of development in order to avoid sterilisation. Such instances may be of economic advantage to developers as the extraction operation could act as a feed stock for the development, significantly reducing costs associated with importing aggregates. This demonstrates the importance of having due regard to mineral interests. Under such circumstances it may

be necessary for detailed site investigations to be undertaken to determine the quality and extent of the resource, economic viability of prior extraction and the need for the development; this could be set out through developer reporting requirements within the Local Plan.

- 2.20. The specific scope and detail of the emerging Local Plan policy and related planning mechanisms will be developed and consulted on through the plan-making process.

Mineral Consultation Areas

- 2.21. Being a unitary authority means that the implementation of MCAs should be quite straightforward. MCAs are a planning mechanism that facilitates discussion between / within authorities when minerals interests could be compromised by proposed non-minerals development. MCAs can also provide an additional measure of safeguarding to sites such as associated infrastructure (i.e. wharfage, railheads, rail links to quarries and associated storage, handling and processing facilities). As a unitary authority this discussion would occur within the organisation, however it may also occur where a development is proposed on an adjoining authority's boundary.

- 2.22. However, it may not be necessary for every planning application within a MSA to be subject to such consultation. It is proposed that the consultation requirements for MCAs include a development threshold that reflects the level of risk (of sterilisation) associated with the development proposals. For example, planning applications

for 'minor' development such as extension to an existing dwelling house present little risk and therefore should not require consultation. The consultation thresholds may also incorporate the Town and Country Planning (General Development Procedure) Order 1995 development thresholds as these are widely recognised and will act to simplify procedures.

- 2.23. The specific scope and detail of the emerging Local Plan policy and related planning mechanisms will be developed and consulted on through the plan-making process.

Other land use plans within Milton Keynes

- 2.24. As a unitary authority Milton Keynes is also responsible for urban and regional planning and waste planning (in addition to being an MPA). This means that Milton Keynes Council should not include policies and proposals in their other plans for non-mineral related development, or sensitive development around safeguarded mineral areas which may result in sterilisation of mineral resources; these plans should also reflect areas identified as MSAs (e.g. in the Proposals Map).

- 2.25. The Core Strategy was adopted in July 2013, in addition the Waste Development Plan Document was adopted in 2008. The plan-making process and allocation of sites for non-minerals development through these documents incorporated consideration to the safeguarding of mineral resource areas as identified in the 2006 plan. Any reviews of the Core Strategy, Waste Plan or other

land use plans will have regard to the MSA/MCAs identified in the emerging Minerals Local Plan.