Minerals Local Plan - Submission Plan, March 2016

Contents

1 Planning for Minerals

Role of the Milton Keynes Minerals Local Plan

1.1 Milton Keynes Council is the Minerals Planning Authority (MPA) for the administrative area of the Borough of Milton Keynes, refer to Figure 1 'Milton Keynes Minerals Local Plan Area'. As the MPA, Milton Keynes Council is responsible for land use planning matters for minerals related development.

1.2 Applications for planning permission must be determined in accordance with the development plan (unless material considerations indicate otherwise), this includes the adopted local plans and any neighbourhood plans that have been adopted in the area.

1.3 This Minerals Local Plan (MLP) is that part of the development plan for Milton Keynes that relates to mineral and mineral-related development. It has a plan period up to 31 December 2032. The MLP replaces the Milton Keynes Mineral Local Plan 2006 (MLP 2006). The MLP seeks to contribute towards sustainable development, provide a driver for investment (for minerals related development) and links together existing land use patterns, infrastructure and other strategies and how these relate to and can benefit from minerals related development, and vice versa.

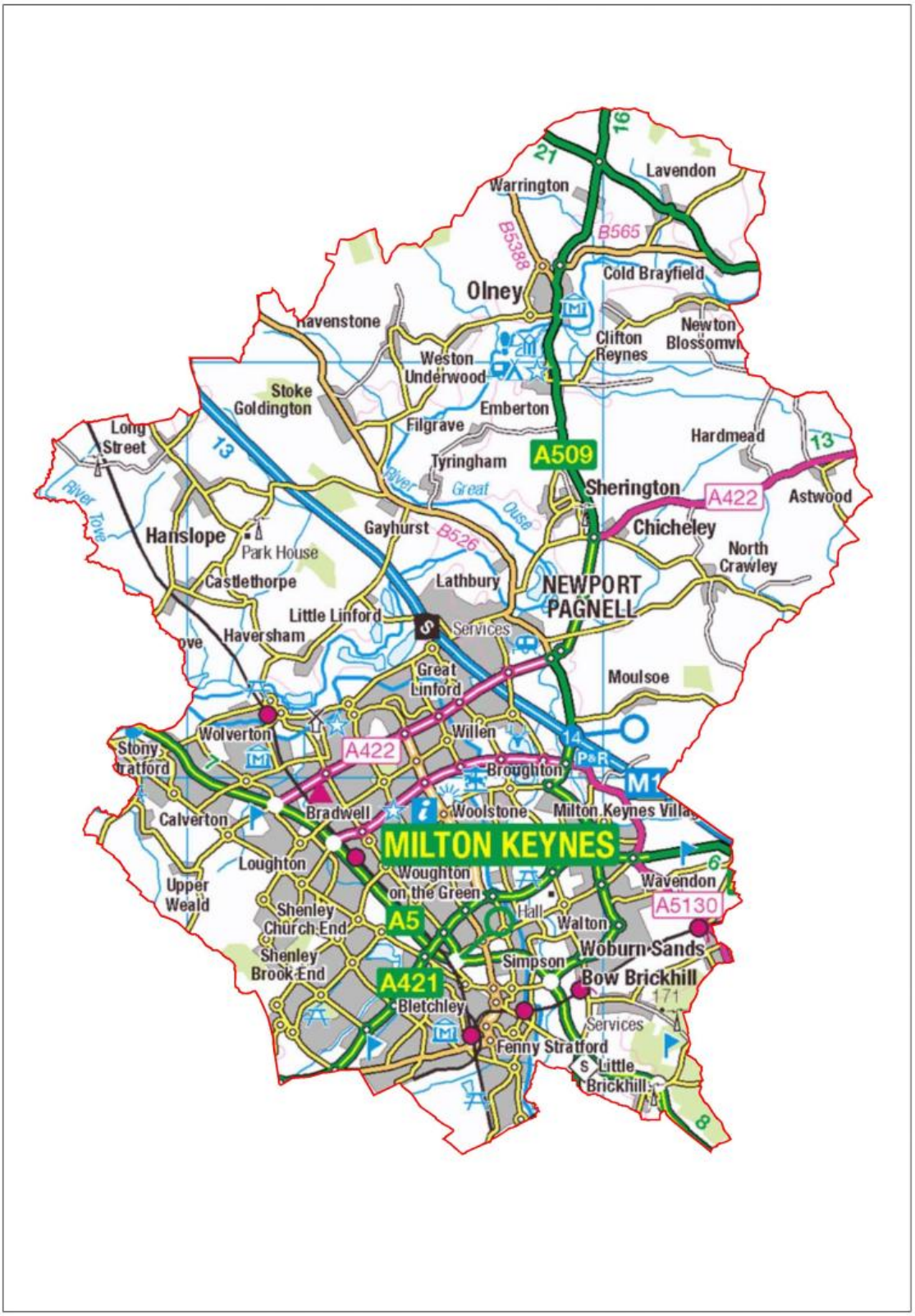
1.4 The role of the MLP is to set out the strategic vision and objectives for minerals related development, identify the mineral resources of local and national importance as well as the amount of these to be provided from within Milton Keynes, identify the development strategy and site-specific allocations to facilitate delivery of a steady and adequate supply of aggregates and maintenance of landbanks, and set out the policies and proposals against which planning applications for minerals related development will be determined. The MLP also sets out policies and proposals that apply to other forms of development, covering matters such as the safeguarding of mineral resources of local and national importance, committed and allocated minerals-related development and associated infrastructure as well as measures to reduce potential land use conflict with incompatible forms of development.

1.5 The MLP is applicable to all proposals for minerals related development and other forms of development within Milton Keynes. The MLP should be read as a whole, with development proposals expected to comply with relevant policies and proposals of the plan and, where relevant, other parts of the development plan.

1.6 In order to monitor the effects of implementing the plan and its policies, the MLP includes a monitoring framework. The monitoring framework is focussed on measureable planning outcomes and reflects the Sustainability Appraisal monitoring framework in order to assess the plans contribution towards sustainable development.

1.7 Accompanying the MLP when adopted will be a Policies Map which provides a spatial illustration on an OS base map of the plans policies and site-specific allocations. This will be a combined Policies Map for all of the adopted plans in the Borough and in relation to minerals will identify the allocations for minerals development from the relevant Policies 3 and 4 (and whose site areas are shown in Appendix 1 'Site Profiles') and the minerals safeguarding areas identified under Policy 18 (and as shown on Figure 7 'Mineral Safeguarding Areas within Milton Keynes').

Figure 1 Milton Keynes Minerals Local Plan Area



Planning policy context

1.8 The MLP must be in general compliance with the broader policy context whilst also reflecting local circumstance and providing a platform for local planning considerations to be taken into account through the decision-making process. The broader policy context for minerals planning includes national policy and regulations and the development plan for Milton Keynes. The main components influencing minerals planning in Milton Keynes are summarised below.

National

1.9 The National Planning Policy Framework (NPPF) must be taken into account in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions. The NPPF includes a presumption in favour of sustainable development.

1.10 This means that when considering development proposals local authorities should take a positive approach that reflects the presumption in favour of sustainable development. Local authorities should work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible (in line with the development plan and relevant policies therein), and to secure development that improves the economic, social and environmental conditions in the area. Planning applications that accord with the policies in the Local Plan (and, where relevant, with polices in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise.

1.11 Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then permission should be granted unless material considerations indicate otherwise – taking into account whether: (i) Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in NPPF taken as a whole; or (ii) Specific policies in the NPPF indicate that development should be restricted.

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

1.13 The NPPF sets out the factors to be addressed by Local Plans and taken into consideration in determining planning applications relating to minerals planning. It also requires MPAs, in planning for a steady and adequate supply of aggregates, to prepare an annual Local Aggregates Assessment (LAA) based on a rolling average of ten years sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources).

1.14 The LAA (2013) has been used to inform the plans aggregate provision rate.

Local

1.15 The planning documents that will form the development plan for Milton Keynes are set out through the Local Development Scheme (LDS) and include a principal spatial plan for general development within the Borough, separate minerals and waste planning documents and neighbourhood plans.

Milton Keynes Core Strategy

1.16 The Milton Keynes Core Strategy, adopted in July 2013, is the key land use plan for the Borough. It contains a spatial vision which outlines the desired strategic outcomes for Milton Keynes in 2026; this may be summarised as a modern sub-regional city promoting healthy communities, sustainable development, environmental excellence, business innovation and competitiveness, improved transport links and reduced reliance on road transport and adequate infrastructure to support growth.

1.17 The Core Strategy also sets out the strategic spatial planning considerations for general development including housing, employment, retail and industry. It draws together other local economic, environmental and social considerations and strategies adopted by the Council, including the Sustainable Community Strategy.

1.18 The Core Strategy objectives expand on the vision and facilitate its delivery. Of specific relevance to minerals planning is Objective 15 "To manage mineral extraction, safeguarding reserves and processing facilities, restoring worked sites, and maximising use of secondary and recycled materials".

1.19 The MLP seeks to support the Core Strategy by ensuring a sufficient supply of minerals in order to support sustainable economic growth and our quality of life.

1.20 The Core Strategy along with the remaining saved policies in the Milton Keynes Local Plan 2005 are intended to be replaced by the Plan:MK which will address all detailed policy matters in the Borough such as housing, employment, retail, open space and heritage and include strategic policies, detailed development management policies and site-specific allocations that would help deliver the strategy. A Site Allocations Plan will be prepared to top up the short term supply of housing sites. However, both the Plan:MK and the Site Allocations Plan would not cover minerals and waste matters that would continue to be addressed under separate 'Local Plans'.

Waste Development Plan Document

1.21 The Waste Development Plan Document (DPD) was adopted in February 2008 and identifies the spatial vision and strategic objectives, strategic policies required to deliver the vision, development control policies and site-specific allocations for waste management facilities. The Waste DPD has a plan period up to 2026. Of particular relevance to the MLP, the Waste DPD addresses inert waste arisings from construction and demolition activities (which includes recycled aggregates) and the management and disposal of such material.

Neighbourhood Plans

1.22 Neighbourhood planning is a key component of the Government's Localism Act, introducing a new tier in planning. The Localism Act devolves greater powers to councils and neighbourhoods, giving local people new rights to shape the development of the communities in which they live by taking a more active role in the development of planning policy at a local level. Neighbourhood Plans will form part of the development plan as and when produced by relevant bodies and adopted by the Council following a neighbourhood referendum. A number of neighbourhood plans are being developed across the Borough, with plans for Woburn Sands and Central Milton Keynes (a business neighbourhood plan) having already been made part of the development (as at July 2015). However, it should be noted that neighbourhood plans are not permitted to address mineral planning matters.

Other local planning documents

1.23 Supplementary Planning Documents (SPDs) provide more detailed guidance to explain policies and proposals set out in Local Plans and DPDs. A number of SPDs have been prepared to support the Milton Keynes development plan. An up-to-date listing of these is available on the Councils website. None of these are directly relevant to minerals planning.

Milton Keynes Community Strategy

1.24 The Milton Keynes Community Strategy sets out the community vision for the future of Milton Keynes. The MLP takes the community strategy forward by supporting sustainable development and economic growth set out though the Strategies vision. In particular the MLP supports the commitment to sustainable development and protecting and enhancing environmental assets and quality of life linked to the Strategies aspirations falling under Priority Pillar 1: Reinvesting our city, places and spaces – Designing and planning together, and Being a modern city. While Community Strategies are no longer a statutory requirement, the planning regulations set out conformity with the Community Strategy as one of the tests of soundness for a Local Plan.

Sustainability and Environmental Assessment

1.25 The MLP has been subject to Sustainability Appraisal (SA), incorporating requirements of the Strategic Environmental Assessment process, with a separate SA Scoping Report and Environmental Report prepared detailing the assessment of the plan's environmental, social and economic impacts.

1.26 A scoping brief was prepared to determine whether the MLP is likely to have a significant effect on a European (Natura 2000) site as per the Habitats Regulations. No European sites were identified that could be impacted on by implementation of the plan, as such further assessment under the Habitats Regulations was not required.

2 Milton Keynes in perspective

Living in Milton Keynes

2.1 Milton Keynes has grown into a significant regional centre in less than 40 years. Prior to Milton Keynes designation as a new town in 1967 the area that now comprises the Borough of Milton Keynes had a population of around 55,000 but growth, overwhelmingly but not exclusively within the new town designated area, has seen the population increase to 250,000. It is the seventh fastest expanding Borough in the country, experiencing a 17% increase between 2001 and 2011.

2.2 The area, which is located equidistant from London and Birmingham and Oxford and Cambridge, remains a key focus for growth. Future growth is expected to roughly replicate previous rates (albeit slightly reduced from previous estimates), despite the impacts of the recent economic down-turn. This increase in population has also seen the population become more diverse. By 2030 the population of the Borough is currently projected to be well above 300,000.

2.3 The Borough covers approximately 8,900 ha. The urban area of Milton Keynes accounts for approximately 40% of the geographical extent of the Borough with the rest of the administrative area to the north being mainly rural. Around 16% of the population lives in the rest of the Borough which includes the adjacent urban area of Newport Pagnell and the small towns of Olney and Woburn Sands along with the rural areas.

2.4 The Core Strategy sets out the spatial strategy for non-minerals development through Policy CS1 Milton Keynes Development Strategy. The strategy includes a settlement hierarchy which concentrates development in the most sustainable locations: Milton Keynes and the towns of Newport Pagnell, Olney and Woburn Sands, with some development in the rural parts of the Borough at the villages of Sherington, Bow Brickhill and Hanslope. There will also be opportunities for infill and redevelopment in other villages that have defined development boundaries.

Work and business

2.5 Milton Keynes location and reputation has made it a nationally recognised business centre. It also performs a regional role as a business and retail centre for an area that includes centres such as Bedford and Aylesbury (locations largely within a 30 mile radius of the city).

2.6 Milton Keynes has maintained a high proportion of population in employment and shows economic activity levels above the national average, including during the recession. The area provides for around 139,000 jobs with 30% of those who work in the city commuting from outside of the Borough. Wholesale and retail are the largest employers, followed by education, transport and storage. Information and communication are higher than national averages and provide some of the larger employment industries for the area.

2.7 Future economic development will continue to target investment in the development of a knowledge-based economy (including research and development, design and software development).

Transport and infrastructure

2.8 Urban development and transport links are focussed to the Milton Keynes urban area. The M1 motorway and the West Coast Main Line railway link Milton Keynes with the wider south east and the midlands. Links in other directions have not historically been as good but the A421 now provides a high quality dualled route to the east and the A4146 to Aylesbury has also been upgraded. The re-opening of the rail line to Oxford, along with its electrification, during the earlier part of the plan period will further enhance east-west links. The A509 is the main transport route linking the north and south of the Borough.

Connecting with other areas

2.9 In a national context Milton Keynes lies between London and Birmingham and Oxford and Cambridge. Regionally it lies at the edge of three standard regions: East of England, East Midlands and the South East, although it is actually within the latter standard region. Milton Keynes is still part of the historic county of Buckinghamshire but that is purely for ceremonial purposes - MK Council is an all purpose (unitary) authority in relation to local government matters and therefore is a minerals planning authority in its own right. The Borough is bordered by four mineral planning authorities: Buckinghamshire (South East), Bedford and Central Bedfordshire (both East of England) and Northamptonshire (East Midlands). The continuance of Milton Keynes as a growth area places greater pressures on its natural resources, including the mineral resources required to support this growth.

Environment

2.10 The Milton Keynes area forms part of the Bedfordshire and Cambridgeshire Claylands character area, characterised by gently undulating topography and plateau areas that are divided by broad shallow valleys. The majority of the landscape is designated as part of the Ouse Valley which follows the River Ouse from the Northamptonshire boundary at Passenham northeast-wards where it crosses the Bedfordshire boundary at Turvey. This is the principal water catchment within the area. Ancient woodlands are also found within Milton Keynes, although recognised in planning policy these do not have statutory protection.

2.11 Milton Keynes also has established Wildlife Corridors forming linear habitat pathways that encourage movement of plants and animals between important wildlife sites. These Wildlife Corridors are given the same status as Milton Keynes Wildlife Sites (MKWS). In addition, Biodiversity Opportunity Areas (BOAs) have been identified within Milton Keynes. BOAs are broad areas (landscape scale) that have been identified as containing concentrations of Biodiversity Action Plan (BAP) priority habitats or where there is the opportunity for strategic biodiversity gain.

2.12 Key environmental designations (those of national importance) within Milton Keynes comprise three Sites of Special Scientific Interest (SSSI). In addition there is one Local Nature Reserve (LNR), 16 Milton Keynes Wildlife Sites (MKWS) and around 200 Local Wildlife Sites (LWS) as well as Biological Notification Sites (BNSs)[1]. MKWS (including Local Geological Sites, LGS) are equivalent to County Wildlife Sites and are designated on account of their special features or habitat, plant or animal communities, species or geology. They

1 BNSs are in the process of being reviewed and assessed against the LWS criteria and may be re-designated to an LWS. Until the programme of review has been completed, BNSs should be treated in the same way as LWSs

do not receive statutory protection but are protected through planning policy. LWSs are designated for their importance for wildlife, geology, education and public enjoyment but have a limited planning policy status.

2.13 The creation of accessible greenspace and smaller pockets of open space, linking residential areas within Milton Keynes has benefited both wildlife and local residents. The Milton Keynes Green Infrastructure Strategy recognises the existing linear parks system which provides accessible, continuous open space along the Broughton, Caldecotte and Loughton Brooks. The parkland includes watercourses and lakes which together act as an innovative strategic flood management system, reducing the risk of flooding in the city, and in settlements downstream such as Newport Pagnell and Bedford. This series of parkland includes some areas that were formed as a result of minerals extraction and subsequent restoration. The Core Strategy seeks to extend and incorporate green spaces into new urban extensions.

2.14 Milton Keynes has a rich history with evidence of human settlement dating back to the Palaeolithic period. The area is first thought to have been settled along the river valleys of the Great Ouse, Loughton Brook and Ouzel, with gradual further settlement occurring up to the Roman period which brought larger scale development with the area continuing to grow at a relatively steady rate on a town by town / village by village basis. Rapid urban development of the Milton Keynes city area was brought about by its designation as a 'New Town' in 1967. The New Town area has been subject to numerous archaeological investigations and many significant sites have been preserved within the linear park network. Elsewhere in the Borough the Iron Age hillfort of Danesborough and the Roman small town of Magiovinium are just two of the area's Scheduled Monuments which also include medieval manorial and monastic sites and more recent industrial heritage such as the 200 year old iron bridge at Newport Pagnell. In addition to the above, a number of very significant archaeological sites and deposits have been revealed as a direct consequence of mineral extraction activity on the gravel terraces of the Great Ouse and Ouzel.

2.15 The Boroughs historic environment designations include (as at December 2014), 50 Scheduled Ancient Monuments, three Registered Parks and Gardens and 27 Conservation Areas.

Minerals resources in Milton Keynes

What are minerals?

2.16 Mineral resources are natural concentrations of minerals or, bodies of rock that are, or may become, of potential economic interest due to their inherent properties. A mineral reserve is that part of a mineral resource which has been fully evaluated and is commercially viable to work; in relation to the MLP this means those minerals for which a valid planning permission for extraction exists (i.e. permitted reserves).

What are aggregate minerals?

2.17 Aggregate minerals are the raw materials used by the construction industry. Aggregate minerals come in a variety of forms and have different characteristics and properties that determine what they can be used for (e.g. concrete, mortar, asphalt, roadstone, drainage material, etc). Aggregates can be divided into two main categories:

- Primary aggregates are land-won, i.e. extracted directly from the ground in quarries or pits, and are naturally occurring such as sand and gravel or hard rock (limestone).
- Secondary aggregates are by-products of other mining or quarrying activities (e.g. china clay and slate waste) or other industrial processes (e.g. flue ash and blast furnace slag) that have not been used in construction. Recycled aggregates are produced as a result of recycling construction, demolition and excavation (CD&E) waste, such material may include concrete, glass, stone, brick and asphalt planings (from the re-surfacing of roads), etc.

2.18 Different types of primary aggregates are not inter-changeable, however secondary and recycled aggregates may be used in the construction industry to replace the use of primary aggregates. It is estimated that secondary and recycled aggregates contribute 25% of the total aggregate consumption nationally.

Other forms of minerals-related development

2.19 Other forms of minerals-related development may include railheads, rail links to quarries, wharfs and associated storage, handling and processing facilities as well as facilities for concrete batching, manufacture of coated materials, other concrete products and the handling, processing and transport of secondary and recycled aggregate materials.

Geology of Milton Keynes

2.20 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. Areas of superficial deposits are extensive in the Borough and largely obscure this underlying geology.

2.21 Sand and gravel resources are recognised as being the main mineral resource of economic value within Milton Keynes and include the river terrace, sub-alluvial and glaciofluvial (glacial) deposits. Sand and gravel deposits were laid down during glacial periods and during inter-glacial and post-glacial periods as a result of river action widening and deepening the valley floors (forming the valley or terrace deposits). An assessment of sand and gravel resources within Milton Keynes was undertaken by the British Geological Survey (BGS) in 2010, this indicated that sand and gravel resources within Milton Keynes are confined to river deposits. The largest resources being in the Great Ouse Valley downstream of the M1 with the Great Ouse Valley above Manor Farm (Wolverton) and the valley of the River Tove containing modest resources with few viable resources remaining elsewhere.

2.22 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 viable 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.

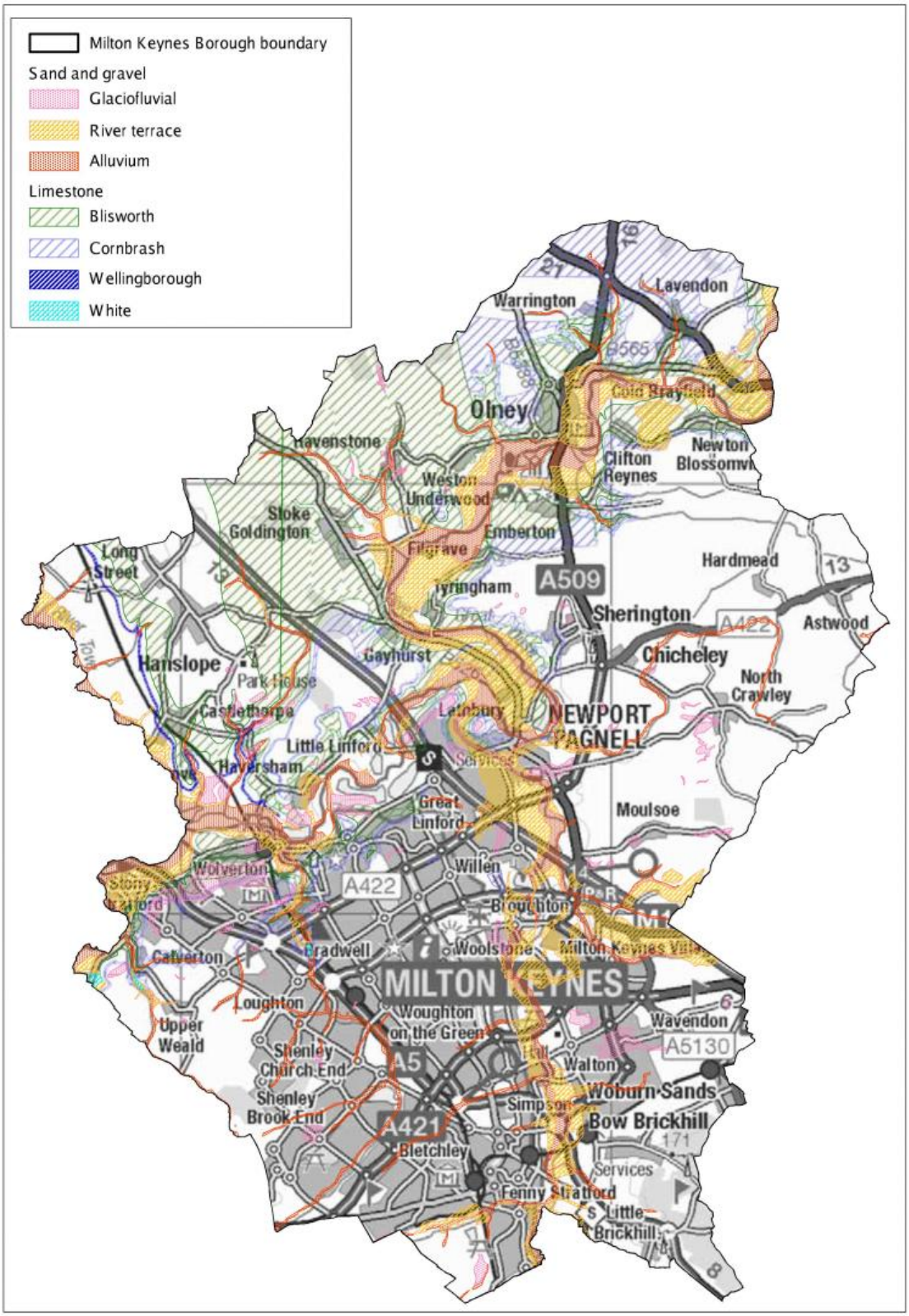
2.23 Limestone is predominantly found within the northern part of Milton Keynes. Milton Keynes does not have any significant limestone resources suitable for use as crushed rock aggregate with extraction historically being from the Blisworth Limestone Formation for building stone purposes rather than aggregate. Limited resources of White Limestone which is generally more suitable for aggregate use is also found in the south-west.

2.24 Brick clay was also previously produced in Milton Keynes. Deposits of brick clay are extensive however a large amount is located in the Milton Keynes urban area and have been sterilised by development. Remaining resources are found to the north and east of the city.

2.25 It is estimated that up to 25% of total aggregate production and consumption in England is comprised of secondary and recycled aggregates. Recycled aggregates (from Construction & Demolition waste) are also produced within Milton Keynes.

2.26 Minerals make an important contribution to the national economy including serving the construction industry. Large quantities of construction materials, including sand and gravel for concrete, crushed rock for road construction and maintenance and clay for brick manufacture, are required to support growth across the UK. The UK's population is forecast to rise in the future, likely leading to an increasing consumption of these minerals. Within Milton Keynes, mineral resources for which provision should be made is limited to sand and gravel; recognised as being of national importance.

Figure 2 Mineral resources within Milton Keynes



Sand and gravel extraction

2.27 As at July 2015 there are four sites with planning permission for a combined two million tonnes (Mt) of sand and gravel in Milton Keynes; this includes Passenham / Calverton, land south of Caldecote Farm, Manor Farm and land east of Haversham Road. This figure relates to when permission was granted and as there has been subsequent extraction the estimated total remaining sand and gravel reserves for Milton Keynes will be considerably less than this figure (but which cannot be published for confidentiality reasons).

2.28 Permitted sites are detailed in Table 2.1 'Permitted mineral extraction and recycled aggregate processing facilities in Milton Keynes' with their location and associated geology shown in Figure 3 'Location of permitted sites in Milton Keynes'.

Limestone extraction

2.29 There has been a very low output of crushed rock (limestone) extraction for aggregate purposes in Milton Keynes with limited extraction in Clifton Reynes and at Quarryhall Farm, Lathbury in the past. At present, there are no permitted sites for the extraction of limestone for aggregate purposes in Milton Keynes.

2.30 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.

2.31 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.

2.32 The permitted site is detailed in Table 2.1 'Permitted mineral extraction and recycled aggregate processing facilities in Milton Keynes' with its location and associated geology shown in Figure 3 'Location of permitted sites in Milton Keynes'.

Brick clay

2.33 Brick clay, used for the manufacture of bricks, tiles and pipes, is not currently worked in Milton Keynes due to low demand. A clay pit was worked at Newton Longville (now Bletchley Landfill site) in the early 1990s but has ceased and is now a waste disposal site. The permission for brick clay extends beyond the site but modern conditions would need to be submitted and agreed before works could ever commence again.

Secondary and recycled aggregates

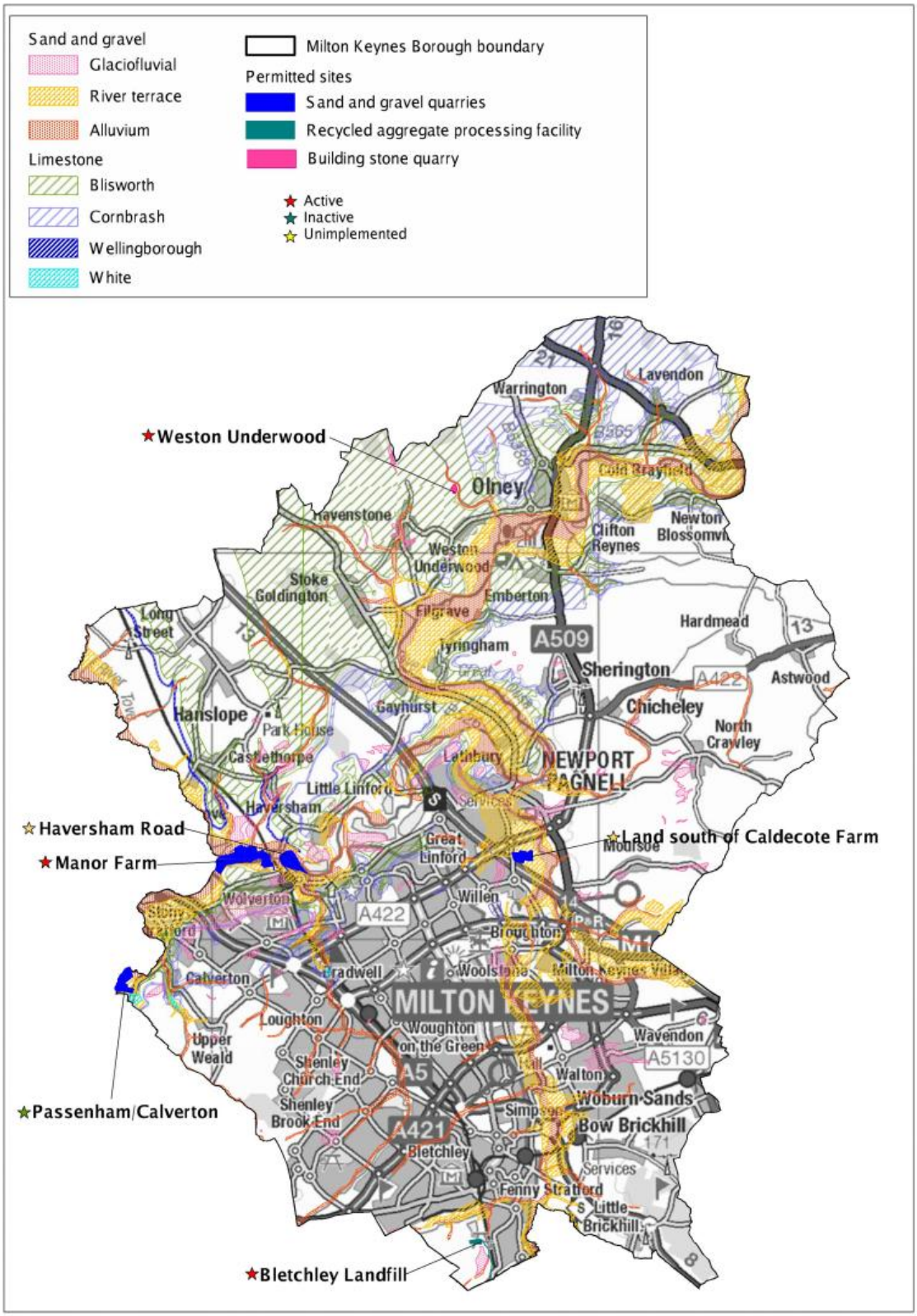
2.34 Currently a limited amount of recycled aggregates are produced and processed in the Borough. C&D waste arisings in Milton Keynes, from which recycled aggregates are produced, are typically low as the majority of development that takes place within the Borough is green-field; meaning few buildings and structures are demolished to produce this waste stream. Bletchley Landfill is currently the only site in Milton Keynes with planning permission for the recycling of inert C&D waste to produce recycled aggregates. Bletchley Landfill is a Materials Recycling Facility (MRF) that screens and sorts waste as it arrives on site including aggregates for recycling. Currently it pulls out very little aggregate as it only receives small volumes of C&D waste. There are currently no secondary aggregates produced or processed in the Borough.

2.35 The permitted site is detailed in Table 2.1 'Permitted mineral extraction and recycled aggregate processing facilities in Milton Keynes' with its location shown in Figure 3 'Location of permitted sites in Milton Keynes'.

Table 2.1 Permitted mineral extraction and recycled aggregate processing facilities in Milton Keynes

Site	Operator	Commodity	Status	Permission end dates
Passenham/ Calverton	RGS Roadstone	Sand and gravel	Quarry has permission for the extraction of 0.475 Mt of sand and gravel. It is currently inactive	2017
Land south of Caldecotte Farm	Specialist Groundwork Services Construction Ltd	Sand and gravel	Quarry has permission 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	Sand and gravel	Quarry operational with permission for the extraction of 0.7 Mt of sand and gravel	2016
Land east of Haversham Road	Hanson Quarry Products Europe Ltd	Sand and gravel	Quarry has permission for the extraction of 0.34 Mt of sand and gravel but remains unimplemented	5 years from commencement date
Weston Underwood Quarry	M. Goss and Sons	Building stone	Quarry operational	Permission has now expired; however the operator is currently in discussions with the MPA about extending the permission date
Bletchley Landfill	FCC Environmental	Recycled aggregate	Operational with permission for the recycling of a proportion of 0.15 Mtpa of C&D waste	End life of landfill operations (2022)

Figure 3 Location of permitted sites in Milton Keynes



Movements of aggregates

2.36 Imports and exports of aggregates are reported through the national Aggregate Monitoring Survey (AMS). The latest survey (2009) collates data for Milton Keynes separately for sales of primary aggregates; however imports are combined with Buckinghamshire as one sub-region.

2.37 Sand and gravel produced within the 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.

2.38 Specific to Milton Keynes, of the 0.212 Mt of sand and gravel produced in the Borough in 2009 around half (0.101 Mt) was used within the sub-region with the majority of exports to areas outside of the South East region and a very small amount to areas within the South East region. This reflects the fact that Milton Keynes is on the edge of the South East region, with a large proportion of the Borough surrounded by counties in the East of England and East Midlands regions.

2.39 Imports of sand and gravel into the sub-region totalled 0.242 Mt; the main source(s) of which are unknown due to data limitations. It is possible that some is imported from Cambridgeshire and Peterborough (a large exporter of sand and gravel in relative proximity to Milton Keynes) but amounts are unknown. Small amounts are known to be imported from Leicestershire, Oxfordshire and Northamptonshire.

2.40 Overall movements of sand and gravel into and out of the sub-region are not self-balancing (total exports 0.404 Mt – total imports 0.242 Mt = 0.162 Mt); exporting two-thirds more than it imports. This indicates that the sub-region is a net exporter of sand and gravel.

2.41 Crushed rock (including limestone for aggregate purposes) is not produced within Milton Keynes and as such the Borough is a net importer; the AMS 2009 shows that imports into the Milton Keynes/Buckinghamshire sub-region totalled 0.160 Mt. It is not possible to identify exactly where all imports of crushed rock come from due to data limitations however it is known that Leicestershire accounts for approximately 23% of crushed rock (igneous rock) imports and Oxfordshire accounts for approximately 14% of crushed rock (limestone) imports.

2.42 Although the MLP seeks to encourage the supply of locally sourced materials to support growth through the identification of aggregate provision rates and site-specific allocations for extraction, the current patterns in movements of aggregates are likely to continue into the future. This is mainly due to two factors: (i) all of the different varieties of aggregates required to support construction are not available within Milton Keynes; and (ii) movements are largely market driven, with industry sourcing materials with particular characteristics and properties for specific purposes.

2.43 Further detail on movements of aggregates is set out in the Local Aggregates Assessment.

3 The Minerals Local Plan Vision and Strategic Objectives

3.1 Milton Keynes will continue to experience significant growth and development, by looking forward and outlining our desired economic, environmental and social outcomes we can guide development in the right direction. The MLP is underpinned by a 'vision' and a set of 'strategic objectives' that seek to drive development to where we want to be in 2032 by outlining our strategic priorities.

3.2 The vision also links back to the Core Strategy and centres on ensuring a sufficient supply of minerals in order to support sustainable economic growth and our quality of life.

3.3 The purpose of the strategic objectives is to expand on the vision and facilitate its delivery, the plans policies and other proposals provide detailed guidance on implementing the vision and strategic objectives and how development should seek to support and delivery these.

Minerals Local Plan Vision

MK will continue to develop as a vibrant place featuring a modern city and sustainable rural settlements supporting a prosperous economy, sustainable growth and environmental networks / linear parks; underpinned by appropriate services, facilities and infrastructure. The community will benefit from access to green infrastructure and open spaces promoting health and quality of lifestyle.

This growth will be supported by the delivery of a sufficient supply of minerals, recognising cross-boundary linkages. The sustainable use of resources and beneficial outcomes of restoration will contribute towards quality of life, local identity and environmental excellence. Milton Keynes Council will plan positively for the future through the safeguarding of minerals resources, reserves and ancillary development.

Minerals Local Plan Strategic Objectives

1. Support Milton Keynes', and wider, needs by ensuring a sufficient supply of aggregates in order to facilitate growth and the delivery of infrastructure.
2. Provide clear guidance regarding how minerals-related development should relate to growth patterns, other land-use forms and infrastructure networks and support industry investment through the spatial strategy for minerals-related development and the identification of specific sites.
3. Reinforce local identity through the supply of locally sourced building stone.
4. Maximise the efficient recovery and use of mineral reserves and the use of secondary and recycled materials.
5. Safeguard Milton Keynes' mineral resources of local and national importance (sand and gravel), reserves and ancillary development from other forms of development.
6. Protect and enhance Milton Keynes' key (national and international) environmental and heritage designations and ensure that permitted operations do not have unacceptable adverse impacts on the natural and historic environment or human health by avoiding and / or minimising adverse effects to acceptable levels.
7. Ensure minerals-related development and associated transport movements do not have unacceptable adverse impacts on human health and minimise adverse effects on residential amenity.
8. Support the provision of green infrastructure and recreational opportunities to promote healthy communities and quality of life in Milton Keynes.
9. Ensure progressive restoration of mineral extraction sites and maximise environmental gains and benefits to local communities through appropriate after-uses that reflect local circumstance and landscape linkages.
10. Support Milton Keynes' transition to a low carbon economy and tackle climate change through the promotion of sustainable development principles, alternative modes of transport and by addressing flood risk.

4 Providing for minerals

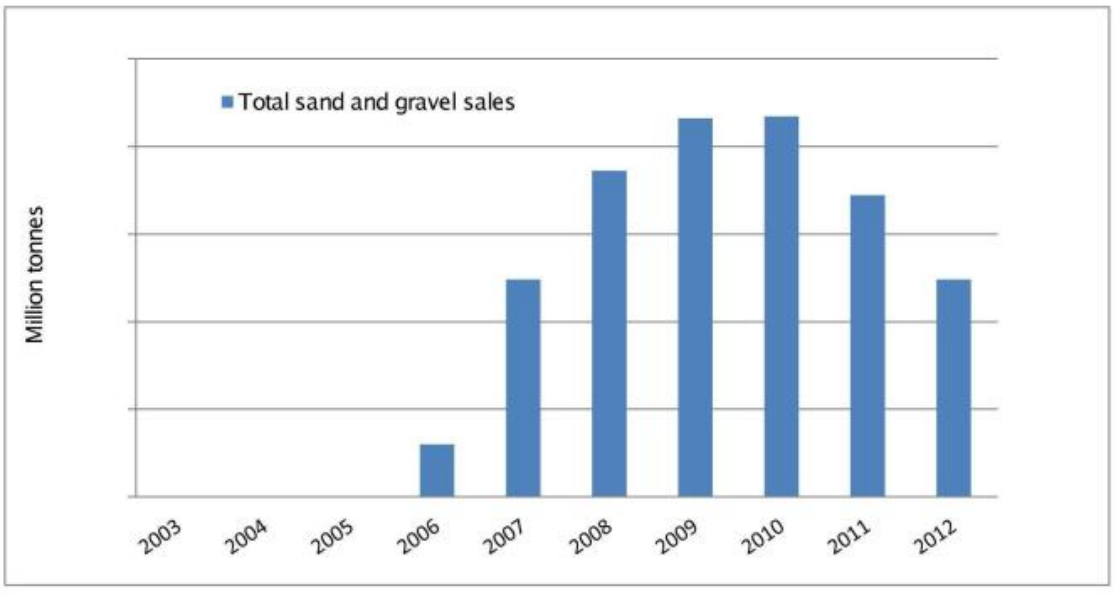
4.1 The NPPF requires MPAs to plan for a steady and adequate supply of aggregates. This includes the preparation of an annual Local Aggregate Assessment (LAA), making provision for land-won aggregates through site-specific allocations and locational criteria (as appropriate), a commitment towards maintaining landbanks and by taking account of advice of Aggregate Working Parties (AWP) and the National Aggregate Co-ordinating Group (NACG) as appropriate as well as published National and sub-national Guidelines on future provision.

4.2 This has been taken forward through the MLP in the form of an identified annual aggregate provision rate and landbank targets for mineral resources of national importance, development strategy and principles for minerals extraction and the processing of secondary and recycled aggregates and site-specific allocations. Advice from other parties and sources has been taken into account as appropriate.

Development strategy for the extraction of sand and gravel

4.3 As previously noted, mineral resources within Milton Keynes that are of national importance are limited to sand and gravel. Although it is not possible to publish annual sales data for reasons of commercial confidentiality the general trend of sales is shown in Figure 4 'Trends in sand and gravel sales for Milton Keynes (2003 - 2012)' below. It should be noted that there was no sand and gravel extraction in the Borough in the years 2003 to 2005 and that there was growth in production in 2008 to 2010 whereas in other MPA areas production declined.

Figure 4 Trends in sand and gravel sales for Milton Keynes (2003 - 2012)



Providing for a steady and adequate supply

4.4 An annual aggregate provision rate for sand and gravel will help to ensure a steady and adequate supply is maintained to meet anticipated needs of the construction industry and reflect housing provision and growth.

4.5 The LAA (2013) has been used to inform the identification of the annual aggregate provision rate. Consideration of other relevant local information and an assessment of all supply options are set out in the LAA. In addition Government guidance on what is called the managed aggregates supply system, or MASS, (Department of Communities and Local Government, DCLG, 2012) 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.

4.6 The plan will seek to secure a provision of 0.17 million tonnes per annum (mtpa). This figure is based on average sales of sand and gravel over a three year period (2010 - 2012) as this is considered to more adequately reflect the longer term sales position than the ten year average would – this is because the ten year figure is skewed by a number of years of nil production in the first five years. Consideration of local circumstances in relation to construction levels and population growth projections identify that Milton Keynes has historically been one of the fastest growing areas in the country and continues to be so. As such there is no change in local circumstance and hence need for this to be reflected in the provision figure. Also, no major infrastructure projects are planned for the Borough to justify an increase in the provision from a three-year sales average.

Landbank

4.7 A landbank is a stock of planning permissions for mineral extraction calculated by dividing permitted reserves by the annual rate of future demand based on the latest annual LAA. Landbanks are used as a monitoring tool to provide an early indication (to the MPA) of the security of and possible disruption to aggregate minerals supply, and to indicate the additional provision that needs to be made for new aggregate extraction and alternative supplies. Landbank levels will be monitored and reported through the LAA and the plan's monitoring framework.

4.8 National planning policy requires landbanks of at least seven years for sand and gravel to be maintained, although it should be noted that this could only occur if the minerals industry submits planning applications that can be granted. Milton Keynes has a history of not meeting landbank figures for sand and gravel (at 1 January 2013 the landbank for sand and gravel was two years, but has since increased[(2)]). The plan seeks to maintain landbanks by planning positively for the extraction of sand and gravel through the allocation of specific sites for extraction and enabling unallocated sites to come forward through the planning application process where in compliance with relevant local plan policies.

2 Landbank rounded to full years. The landbank increases to six years if land south of Caldecotte Farm (permitted April 2013) and land east of Haversham Road (permitted January 2014) are included.

Policy 1

Providing for sand and gravel

Sand and gravel resources are recognised as being of national importance. In order to ensure a steady and adequate supply of sand and gravel the plan will seek to secure provision of 0.17 million tonnes per annum. This will be delivered through existing commitments and new sites (including allocated and unallocated sites where in compliance with relevant local plan policies).

The plan will seek to maintain a landbank of at least seven years for sand and gravel.

Spatial strategy for sand and gravel extraction

4.9 Surveys of sand and gravel resources within Milton Keynes have determined that viable resources are largely contained to the river deposits. Significant inferred resources exist within the river deposits, with an approximate total of 70 Mt, however land use and operational constraints may drastically reduce this.

4.10 Although minerals can only be worked where they are found, where possible it is preferable to identify a spatial strategy in order to provide guidance on how such development should relate to and support sustainable development within Milton Keynes as well as other plans and strategies, land use patterns and constraints (at a landscape level) and infrastructure networks. This can assist in providing a focus for industry investment and confidence within the community regarding where minerals extraction may occur in the future.

4.11 The spatial strategy for sand and gravel in Milton Keynes is to primarily focus extraction within resource areas that are well-related to the main built-up areas of Milton Keynes. To strike a balance, and avoid over-concentration of extraction in any one area however, the strategy also supports extraction of sand and gravel resources north of Tyringham / Sherington and along the River Tove (away from the majority of urban areas) as a secondary focus.

4.12 The preferred areas for extraction are the River Great Ouse south of Manor Farm Wolverton, River Great Ouse between Manor Farm Wolverton and the M1, River Ouzel south of Newport Pagnell and River Great Ouse south of Tyringham / Sherington; locations well-related to the main built-up areas of Milton Keynes and well placed to support future growth within the Borough. These areas include previous mineral extraction sites (i.e. have been previously worked). The remaining inferred resource in these areas is estimated at 20 Mt, of which around 17.5 Mt are over the minimum threshold (0.50 Mt per individual resource area) identified by industry as being economically viable[3]. By primarily focusing on these areas the plan seeks to support sustainable development by reducing the transport distance for minerals used within Milton Keynes, maximising recovery from previously worked areas and encouraging prior extraction of minerals in urban fringe areas (as these areas may be expanded and developed by future generations). It is recognised that this

3 As per the BGS 2010 Sand and gravel resources in Milton Keynes Borough study, 0.5 Mt was identified as the minimum tonnage of mineral a new site in Milton Keynes should contain before it is economically viable

may include the possibility of extractive operations being located near more populated or developed areas, however the plans development management and control policies address potentially adverse impacts and seek to maximise beneficial outcomes.

4.13 The strategy also supports, as a secondary focus, extraction from the river deposits of the River Great Ouse north of Tyringham / Sherington and River Tove; these are areas largely away from the urban areas (with the exception of Olney), that have not previously been extensively worked. The inferred resources within these areas are estimated at 60 Mt, of which the majority are over the minimum threshold identified by industry as being economically viable. By including these areas the plan seeks to support sustainable development by promoting extraction of some of the richest resources and so facilitating the delivery of a steady and adequate supply of aggregates to support development. It is recognised that this may include the possibility of extractive operations being located having (comparatively) reduced access to main transport links connecting to the Milton Keynes urban area and wider market areas, however the plans development management and control policies address potentially adverse impacts and seek to maximise beneficial outcomes.

4.14 This strategy balances areas previously subject to relatively extensive sand and gravel extraction (typically in the south of the Borough, with the exception of the River Tove) with the inclusion of mineral resource areas in the north of the Borough that have not previously been extensively worked.

4.15 It is important to note that the inclusion of areas within the spatial strategy does not imply grant of planning permission. Site-specific proposals for minerals extraction will need to comply with the spatial strategy but will also be subject to assessment through the planning application process and need to be in compliance with other relevant local plan policies.

Policy 2

The spatial strategy for sand and gravel extraction

Primary Focus

The preferred areas for extraction of sand and gravel resources within Milton Keynes are the river deposits located:

- within the River Great Ouse south of Manor Farm Wolverton,
- River Great Ouse between Manor Farm Wolverton and the M1,
- River Ouzel south of Newport Pagnell, and
- River Great Ouse south of Tyringham/Sherington.

Secondary Focus

Extraction from the river deposits of the River Great Ouse north of Tyringham/Sherington and the River Tove would also be supported if it can be demonstrated that the site would have reduced impacts (compared to sites in the primary focus areas) and prevent cumulative impacts elsewhere.

Site-specific allocations

4.16 The total provision to be met for sand and gravel during the plan period (from 1 January 2013 to 31 December 2032) is 3.4 Mt. Permitted reserves as at 1 January 2013 total 1.5 Mt, of which it is estimated that less than a quarter remains[4]. This means that the majority of the total provision still needs to be delivered during the plan period. Two additional sites have been permitted since 1 January 2013 and will facilitate the delivery of a further 0.8 Mt. These existing commitments coupled with the allocation of specific sites for sand and gravel, identified in Policy 3, will facilitate the delivery of around 3.14 Mt which will deliver approximately 90% of the required provision for the plan period; leaving a balance of 0.28 Mt to be provided by sites coming forward through the planning application process.

4.17 The allocation of specific sites is complemented by the spatial strategy and development principles for mineral extraction that provide for flexibility by allowing for unallocated sites to come forward where in compliance with relevant local plan policies.

4.18 The identified sites for sand and gravel extraction are either located in the primary or secondary areas of focus, ensuring the allocations are in line with the spatial strategy. The majority of allocated sites are located within the primary area of focus in the resource areas along the River Great Ouse south of Manor Farm Wolverton and south of Tyringham/Sherington. However, one site is allocated in the secondary area of focus in the resource area along the River Great Ouse north of Tyringham/Sherington. This is to help balance locational provision in the Borough which would otherwise be over-concentrated within that part of the primary area of focus just to the north of Newport Pagnell.

4 Actual figures can not be published for confidentiality reasons.

Policy 3

Site-specific allocations for the extraction of sand and gravel

Proposals for the extraction of sand and gravel at the following sites will be permitted in accordance with other relevant local plan policies:

Primary - River Great Ouse south of Manor Farm Wolverton

A1: Calverton/Passenham Extension (approx. yield 0.25Mt)

Primary - River Great Ouse south of Tyringham/Sherington

A2: Quarry Hall Farm (approx. yield 0.72Mt)*

A3: Northampton Road, Lathbury (approx. yield 0.65Mt)*

Secondary - River Great Ouse north of Tyringham/Sherington

A4: Manor Farm and Lavendon Mill (approx. yield 0.46Mt)

** Extraction of mineral from Quarry Hall Farm and Northampton Road, Lathbury must be phased to ensure that the two are not operational at the same time.*

There are also specific development requirements at Northampton Road, Lathbury - these requirements are set out in the relevant site profile in Appendix 1 'Site Profiles'."

Development strategy for the extraction of other mineral resources

Limestone

Limestone for aggregate purposes

4.19 Over the last ten years there has been no extraction of limestone for aggregate purposes. Previously, no crushed rock allowance was set out under the AWP and Regional Plan regime. As such the plan does not identify a specific aggregate provision rate for limestone for aggregate purposes (crushed rock). Limestone formations within Milton Keynes most suitable for aggregate use include the White Limestone formation; however the Blisworth Limestone formation may also be suitable for such applications. This material is consumed within Milton Keynes and so the provision of limestone for aggregate purposes is supported where environmentally feasible and in compliance with relevant local plan policies. Preference is for the extraction of limestone from the White Limestone formation and secondly, from the Blisworth Limestone formation.

Building stone

4.20 Limestone formations within Milton Keynes suitable for building stone purposes include the Blisworth Limestone Formation. The properties of this formation can vary widely with some stone suitable for building and other used for walling and aggregate. The use of this resource for building stone purposes is generally localised; reflecting the small scale working.

4.21 The extraction of locally sourced building materials such as building or roofing stone generally occurs at a much smaller scale (and output) and over a longer timeframe (due to the intermittent nature of operations) than that of other minerals. Such sites are often associated with heritage assets, which tended to be built from materials extracted from within the immediate vicinity, or a local need (e.g. supporting local distinctiveness) and so generally have specific characteristics and properties that may have a very localised occurrence. This means that extraction of such materials may be more likely to occur in closer proximity to sensitive receptors and in locations considered to be more intrusive (such as rural areas or small sites within settlements).

4.22 Extractive operations for building and roofing stone often have significant wastage (overburden); this is likely to be of a higher proportion than that of the stone that can be won. This overburden may be suitable for use as construction aggregate (crushed rock), the sale of which may help to offset the expense of extracting the stone.

4.23 The small-scale extraction of building and roofing stone is supported where it would support the conservation of historic building and structures, conservation areas or local distinctiveness and where extraction is environmentally feasible and in compliance with relevant local plan policies. Preference is for the extraction of limestone from the Blisworth Limestone formation.

4.24 Limestone for building stone purposes is currently produced from one site at Weston Underwood, however output is limited. Further resources are known to be in the locality but the total yield is likely to be small. There has been no other working of building stone in Milton Keynes for many years. This material may be considered of local importance due to its role in supporting Milton Keynes' heritage. However, given the very small amounts extracted the plan does not identify a specific aggregate provision rate for limestone for building stone purposes.

Policy 4

Site-specific allocations for the extraction of building stone

Proposals for the extraction of building stone at the following site will be permitted in accordance with other relevant local plan policies:

A5: Weston Underwood (yield unknown)

Brick clay

4.25 Brick clay is not currently worked in Milton Keynes due to low demand. As such the plan does not identify a specific aggregate provision rate for brick clay. Should a demand for such material be identified the provision of such material is supported where environmentally feasible and in compliance with relevant local plan policies.

Development principles for mineral extraction

4.26 The allocation of specific sites for the extraction of minerals does not equate to the grant of planning permission. All proposals for mineral extraction will be required to be in compliance with relevant local plan policies; including both allocation and unallocated sites.

4.27 The aggregate provision rate for sand and gravel is identified in Policy 1, proposals that come forward that would result in the supply of sand and gravel exceeding this rate will need to demonstrate that the proposed over-supply is supported by the latest LAA.

4.28 Where proposals for unallocated sites come forward for either sand and gravel or building stone the proposal should demonstrate that the need for the material cannot be met from existing commitments or allocations. This may include consideration of supply options (including supply-demand phasing), specific characteristics and properties of the aggregate. Proposals for other windfall sites such as agricultural reservoirs will be determined against Policy 5 Development principles for mineral extraction.

Policy 5

Development principles for mineral extraction

Proposals for the extraction of minerals will be permitted where it can be demonstrated that the development complies with relevant local plan policies, maximises recovery of the reserve, minimises waste, promotes the best end-use of materials, ensures land stability, avoids and/or mitigates potentially adverse impacts (including cumulative impacts) to acceptable levels and is environmentally feasible.

Proposals for the extraction of building or roofing stone should also demonstrate how the proposal supports conservation of historic building and structures, conservation areas or local distinctiveness and that this is the main purpose of the proposal.

Preference will be given to proposals for the extraction of minerals at the site-specific allocations identified in Policy 3 and 4.

Proposals for the extraction of minerals at unallocated sites will need to demonstrate that the need cannot be met from existing commitments or allocations, unless:

i. the proposal is for the prior extraction of mineral resources within a Mineral Safeguarding Area in order to avoid needlessly sterilising mineral resources of local and national importance;
ii. extraction of the mineral can be clearly demonstrated to be ancillary to the proposed development (e.g. agricultural reservoirs) or
iii. allocated sites are not coming forward and being implemented or that average sales figures indicate an increase in need for extraction that cannot be met from allocated sites.

Borrow pits

4.29 There is often a need for large quantities of aggregates or clay in association with major construction and engineering works. It may be preferable to supply this need from a borrow pit in close proximity to the construction works rather than import the materials from further afield elsewhere, creating additional heavy traffic. The timeframe for extraction should not exceed that of the associated construction or engineering works.

Policy 6

Borrow Pits

Proposals for borrow pits will be permitted where it can be demonstrated that:

- Extraction of mineral from the borrow pit constitutes the most appropriate supply option with reference to the type and quality of the mineral and proximity to other mineral extraction sites.
- The estimated size of the resource, and proposed extractive operations, is commensurate to the estimated needs of the project.
- It is within close proximity to the associated construction or engineering works that it is intended to supply, and minimises the use of public highways in transporting the mineral.
- The proposal promotes the best end-use of materials, minimises waste, avoids and/or mitigates potentially adverse impacts to acceptable levels and is environmentally feasible.
- The site will be progressively restoration to an acceptable condition and completed as soon as possible following cessation of the associated construction or engineering works.
- Where possible inert waste arising from the associated construction or engineering works should be used in restoration of the borrow pit.

Development strategy and principles for secondary and recycled aggregates

4.30 Materials processed into recycled aggregates within Milton Keynes mainly arise from C&D waste. The majority of development that takes place within the Borough is green-field meaning that few buildings and structures are demolished; limiting C&D waste arisings and therefore the potential contribution that recycled aggregates could make towards the Boroughs total aggregate production. There are currently no significant sources of secondary aggregates produced or processed within the Borough.

4.31 The production of secondary and recycled aggregates is linked to both minerals and waste related development. In relation to minerals this is due to the ability of such material to be fed into mineral processing plants where it allows the material to be processed or blended to achieve a higher quality end-use and the use of the resulting aggregate in place of primary aggregates. For waste this is due to the material being processed arising from the C&D waste stream, and so the operational throughput, or capacity, of such facilities contributes towards delivering sustainable waste management.

4.32 Such materials are consumed within Milton Keynes and so the provision of secondary and recycled aggregates is supported where in compliance with relevant local plan policies, as well as those for C&D waste management set out through the development plan. This includes facilities for the handling, processing, storage and transport of secondary and recycled aggregates.

Policy 7

Development principles for facilities for secondary and recycled aggregates

Proposals for facilities for secondary and recycled aggregates will be permitted where it can be demonstrated that the development complies with relevant local plan policies and avoids and/or mitigates potentially adverse impacts to acceptable levels.

Preference will be given towards sites at the following locations: mineral processing plants, onsite as an ancillary activity to construction or demolition projects, waste management facilities and at existing industrial sites or on land that is permitted or allocated for general industrial development.

Other forms of minerals-related development

4.33 Minerals-related development also includes rail aggregate depots, rail links to quarries, wharfs and associated storage, handling and processing facilities as well as facilities for concrete batching, manufacture of coated materials and other concrete products.

4.34 Currently there is one aggregate rail depot in Milton Keynes at Station Yard, Bletchley. It is operational and understood to import sand and gravel from Lincolnshire and crushed rock aggregate from Derbyshire. There are no wharves in the Borough.

4.35 Other forms of minerals-related development are supported where such development is demonstrated to support the provision of a steady and adequate supply of aggregates and where in compliance with relevant local plan policies.

Policy 8

Development principles for other forms of minerals-related development

Proposals for the storage, handling, processing and transport of minerals will be permitted where it can be demonstrated that the development complies with relevant local plan policies and avoids and/or mitigates potentially adverse impacts to acceptable levels.

Key Diagram

4.36 The spatial strategy for sand and gravel extraction is identified below in Figure 5 'Milton Keynes Minerals Local Plan Key Diagram'. This also identifies the site specific allocations for sand and gravel and building stone extraction.

Figure 5 Milton Keynes Minerals Local Plan Key Diagram

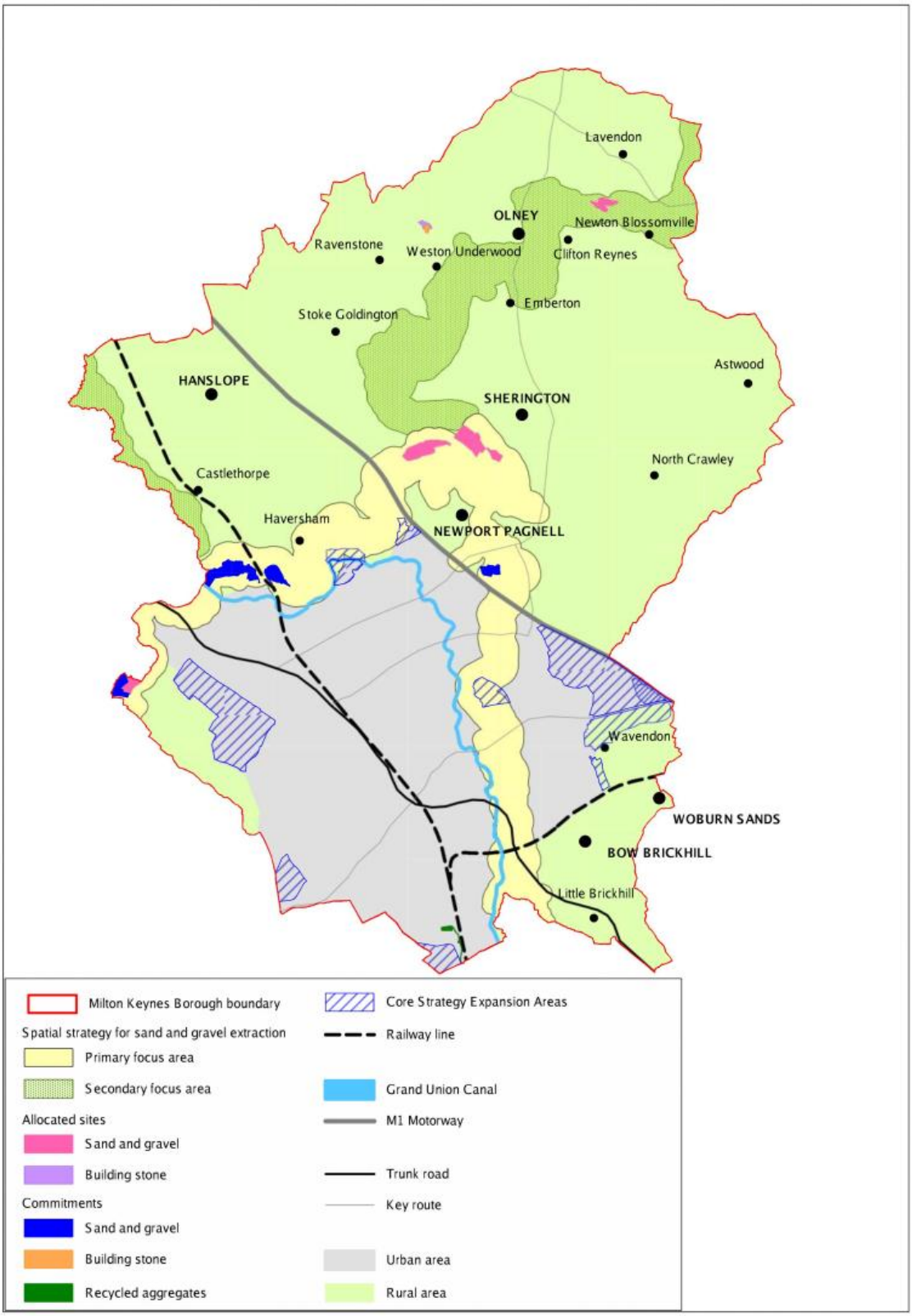
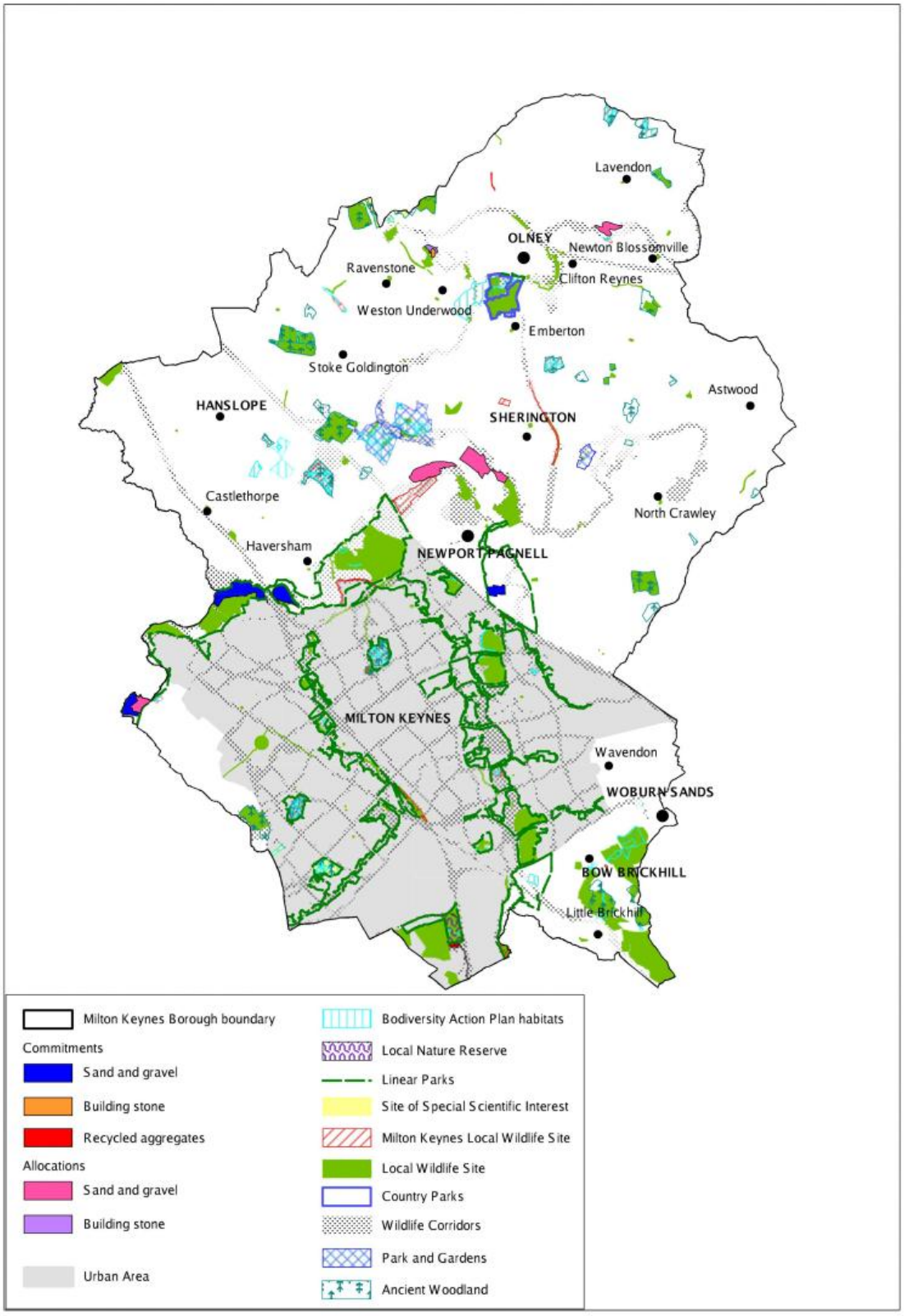


Figure 6 Permitted sites, mineral allocations and ecological networks in Milton Keynes



5 Controlling and managing development

5.1 The following development management and control policies will apply to all proposals for minerals-related development; this includes proposals on allocated and unallocated sites. The purpose of the development management and control policies is to ensure that any potentially adverse impacts associated with the proposed minerals-related development are identified early in the planning application process and can be addressed at an appropriate level. This helps to ensure that such development contributes towards sustainable development and that the resulting economic, environmental and social impacts and outcomes are acceptable.

Built, natural and historic environment

Natural assets and resources

5.2 It is important to recognise the wider benefits of ecosystem services that contribute towards not only our quality of life but also the economy. The national policy stance in relation to mineral extraction recognises that minerals can only be worked where they are found and are a finite resource; as such minerals extraction is temporary in nature. Even so extractive operations have the potential to adversely impact on natural assets and resources. However careful management and future planning can avoid and/or mitigate such impacts to acceptable levels and see beneficial outcomes and net gains achieved as a result of restoration works; e.g. through improving linkages between habitat areas and reinstating priority habitats. As such it is important that potentially adverse impacts resulting from minerals-related development are identified early in the planning process.

5.3 Environmental designations of relevance to Milton Keynes are:

- National – SSSIs
- Local – LNRs, MKWSs (including roadside verges, LGS and Wildlife Corridors), LWSs (including BNSs) and ancient woodland.

5.4 National policy states that proposed development on land within or outside a SSSI that is likely to have an adverse effect on that site (either individually or in combination with other developments) should not normally be permitted. Three SSSIs are found within Milton Keynes, these include Oxley Mead and Howe Park Wood located in the south-west, as well as part of the Yardley Chase SSSI which straddles the northern Milton Keynes / Northamptonshire boundary. In addition the Salcey Forest and Mill Crook SSSIs are located directly on the northern and western boundary (within Northamptonshire).

5.5 Local designations provide a vital contribution to national biodiversity through increasing the connectivity of ecologically important sites and landscape linkages. The continued enhancement of these sites is encouraged along with the development of nationally important Biodiversity Action Plan (BAP) habitats and Green Infrastructure.

5.6 Ancient woodlands are irreplaceable features of our landscapes that can be high in biodiversity or cultural value. It is not appropriate to plan to re-create or replace these elements of the environment due to the timescales they require to develop. In line with national planning policy, ancient woodland (and other irreplaceable habitats) and aged or veteran trees found outside ancient woodland should be protected from loss or deterioration unless the need for, and benefits of, the development in that location clearly outweighs the loss.

5.7 The Buckinghamshire & Milton Keynes BAP describes the biological resources relevant to Milton Keynes and provides detailed action plans for how the most threatened species and habitats will be recovered. Priority habitat protection and creation is essential to maintaining and enhancing biodiversity within the Borough. The action plans highlight the potential for biodiversity improvements within the wider area and does not purely focus on existing protected sites. BOAs are key locations for conservation and creation of ecological networks through the restoration and creation of priority habitat, as such should be viewed as areas of opportunity (not constraint). In order to ensure that biodiversity improvements are successful it is important that ecologically important sites do not become isolated and that designated sites, wildlife corridors and the stepping stones that provide connectivity between habitats, are protected and enhanced where possible. These ecological networks are indicated on Figure 6 'Permitted sites, mineral allocations and ecological networks in Milton Keynes'.

5.8 Biodiversity within Milton Keynes is mainly focused along the River Ouse, its tributaries and within the associated floodplains. These provide wetland habitats for a number of species. Whilst the Borough contains extensive areas of countryside, wildlife habitats have become degraded over time due to the intensity of farming. Other than some woodland areas and other islands of natural space, land tends to be a mix of arable fields and pasture on generally fertile chalky clay soils which are not conducive to high levels of biodiversity and habitat creation. It is therefore increasingly important that minerals-related development does not lead to further loss of habitat. Where development is permitted, careful consideration must be given to the restoration scheme and what would provide the most beneficial and successful outcome in terms of the BAP targets, Green Infrastructure provision and the protective buffering of existing natural assets.

Policy 9

Natural assets and resources

Minerals related development should contribute to and enhance natural assets and resources, including a net gain in biodiversity. This is achievable through:

- Protecting environmental designated sites of national and international importance,
- Enhancing the natural environment and recognise wider ecological networks, particularly regarding local environmental designations, and
- Contributing towards the Buckinghamshire and Milton Keynes Biodiversity Action Plan targets.

Proposals for minerals-related development must include an assessment of natural assets and resources, the purpose of which is to:

- Identify natural assets and resources that may be affected by the proposed development,
- Determine the nature, extent and level of their importance,
- Assess the level of any potential impacts, and
- Identify measures to be implemented to avoid, reduce and manage any potentially adverse impacts.

Historic environment

5.9 Natural heritage and historic landscapes also contribute to the historic environment. It is not appropriate to plan to re-create or replace these elements of the environment due to the timescales they require to develop. The effects of development on natural heritage and the historic landscape should be taken into consideration due to the potential for wider impacts affecting landscape linkages and connectivity as well as the setting of historic assets.

5.10 Of relevance to Milton Keynes, and in line with national policy, as far as is practical the maintenance of a landbank for sand and gravel should be provided for from outside of Conservation Areas and Scheduled Ancient Monuments. Other designations for heritage assets and the historic environment of relevance to Milton Keynes include listed buildings, scheduled monuments and Registered Parks and Gardens of Historic Interest. In addition there are also numerous Conservation Areas, each with a distinctive character. Of the three designated Parks and Gardens of Historic Interest at Chicheley, Gayhurst and Tyringham, the latter two locations are dissected by the River Great Ouse and therefore in a key resource area for sand and gravel.

5.11 The irreplaceable nature of historic assets (both designated and undesignated) makes it all the more necessary to ensure that adequate information is available and that investigations are carried out which can reliably inform the decision making process. Mineral extraction can be intensive and therefore as having the potential to impact the local historic environment. However mineral extraction can also have positive impacts by ensuring that local character is enhanced through the provision of limestone for building and roofing, helping to maintain local distinctiveness. Restoration schemes should also be developed by taking account of any historical assets within the vicinity of the extraction site and enhancing these where possible.

5.12 In relation to archaeology, proposals for mineral extraction will be subject to a desktop archaeological investigation and where required further investigation will be completed. It is recognised that the existence of archaeological features is often unknown prior to underground investigations taking place. In order for further investigation and continued assessment to be carried out a phased investigation approach may be adopted this may involve desk based and / or field evaluations.

Policy 10

Historic environment and heritage assets

Minerals-related development should conserve and enhance the historic environment and heritage assets of Milton Keynes in a manner appropriate to their significance. This should be achieved through:

- Careful management of the historic environment and heritage assets, including their setting,
- Enhancement of special and unique features within the historic environment through appropriate restoration,
- Undertaking of necessary desktop assessment and / or field investigations where the proposed minerals-related development involves heritage assets or the setting of an asset (including archaeological interests),
- Identifying the nature of the relevant heritage asset(s), the extent and level of their significance, any contribution made by their setting and the level of any potential impacts on assets or their setting,
- Avoiding and / or mitigating potentially adverse impacts, and
- Identifying a programme of works to be carried out once permission has been granted, including the outlining of any mitigation measures and long-term monitoring.

Landscape and townscape character

5.13 Whilst a large area of the Borough is predominantly urban in form, there are also large areas of countryside. The local landscape has largely been created / altered by human action through activities such as farming and mineral extraction. This however has led to the development of locally distinctive landscapes and important features (including those relating to topography, habitats, geology and historic landscapes), all of which are a part of our cultural heritage should be protecting. There are no national landscape designations (i.e. National Parks or Areas of Outstanding Natural Beauty, AONBs) within Milton Keynes Borough.

5.14 Milton Keynes is primarily located within the 'Bedfordshire and Cambridgeshire Claylands' landscape area. The Milton Keynes Landscape Character Assessment identifies further sub-divisions for this area. This provides an overview of the rural landscape of Milton Keynes and identifies the broad differences in character.

5.15 In-terms of sand and gravel extraction, the area of greatest importance is the Ouse Valley Landscape Character Area with some further deposits found in the Shenley Lowlands. Limestone deposits can generally be located within the north, north-west and west of the Borough.

5.16 Whilst the urban form of the long standing towns in the Borough, including those now in the Milton Keynes urban area, is traditional, the urban form and townscape of the new town is nationally distinctive. Its 'grid square' development and the linkages of these to linear parks and green space is not found elsewhere in the UK. Many settlements across the Borough have been constructed using local stone providing them with a distinctive identity in relation to townscape.

5.17 Proposals for mineral extraction which are considered to have the potential to significantly affect the character of a landscape or townscape will be subject to a landscape impact assessment which must address any potential impacts as well as the mitigation measures.

5.18 Policy S11 from the MK Local Plan 2005 identifies areas of attractive landscape and includes the Ouse valley (north of Wolverton) and the Brickhills. This policy remains extant but its criteria that development in the area should (i) not damage the special character of the area; (ii) enhance important landscape features where possible; (iii) protect and enhance features of nature conservation value; and (iv) retain and improve public access and opportunities for countryside recreation, is not incompatible with mineral extraction and indeed such extraction is likely to support criteria (iii) and (iv) of the policy.

Policy 11

Landscape and townscape character

Minerals-related development should aim to retain and enhance the landscape and townscape character of Milton Keynes. Any potential adverse impacts on landscape or townscape character should be avoided and / or mitigated throughout the operational life of the facility, including restoration, aftercare and after-use.

Proposals for minerals-related development should undertake a landscape character assessment. This must:

- Assess the condition and value of the immediate and wider landscapes,
- Assess the nature, extent and level of importance of the landscape and determine the extent of any potential impacts,
- Include any necessary measures to avoid and / or mitigate potential adverse impacts,
- Identify opportunities to protect and enhance particular features present within the immediate or wider area that create a specific aspect of the character and contribute towards the distinctiveness of the location, and
- Address any townscape impacts as appropriate.

Quality of life

5.19 Our quality of life is influenced by many factors, including environmental parameters and physical surrounds. Defining quality of life is largely subjective, however in relation to potential impacts associated with development the following planning matters may impact on quality of life: general amenity and environmental nuisance impacts (including dust, noise and vibration), transport and access, the built environment and climate.

5.20 Potentially adverse impacts will have to be investigated and addressed before any proposed development can take place.

5.21 Proposals for minerals-related development should give consideration to the surrounding land-uses, compatibility of the existing and proposed use(s) and investigate how well the environment will accommodate the proposed development.

5.22 Different land-uses have different levels of sensitivity to development effects associated with minerals-related development, the below listing provides an indication of land-uses / types of development and their relative sensitivity . These categories of sensitivity can help to determine land-use compatibility and should be taken into consideration in determining potential impacts and avoidance and / or mitigation measures to be implemented.

- High Sensitivity – Hospitals, clinics, retirement homes, high-tech industries and food processing
- Medium Sensitivity – Schools and nurseries, residential areas, food retailers, horticultural land, green houses and offices
- Low Sensitivity – Farms, industry and outdoor storage.

Amenity

5.23 Potential impacts affecting amenity that may result from minerals-related development include dust, noise and vibration. Proposals for minerals-related development must include detailed assessments to determine the existing levels, potentially adverse impacts resulting from the proposed development and identify appropriate avoidance and / or mitigation measures to reduce impacts to acceptable levels. As an example, possible mitigation measures that could be applied to sites to minimise impacts include:

- Separation areas,
- Site layout,
- Bunding and screening,
- Acoustic screening,
- Design of access and roads, and
- Routeing agreements.

Dust

5.24 Proposals for minerals-related development are to be accompanied by a dust assessment. This assessment will need to consider all sources of dust, including haul road, crushers and stockpiles of materials. This assessment will be based on the latest national guidance (as set out in the PPG) and will need to:

- Establish normal levels of dust around the proposed operation area.
- Identify activities on site that could lead to generation of dust.
- Recommend mitigation measures that could be put in place.
- Monitor and report dust emissions to ensure conditions and environmental standards are being met.

Noise

5.25 Proposals for minerals-related development are to be accompanied by a noise impact assessment. This assessment will be based on the latest national guidance (as set out in the PPG) and will need to:

- Give consideration to the process that will be taking place on site and how this could potentially impact on the surrounding environs, considering the location of noise sensitive receptors.

- Assess the existing noise levels around the proposed site, including background noise levels at nearby sensitive receptors.
- Estimate future noise levels from the development and its impact on the surrounding receptors.
- Identify methods to minimise, mitigate or remove noise emissions.
- Monitor noise levels to check compliance with conditions included on the planning permission.

Vibration

5.26 Vibrations on sites in Milton Keynes are unlikely to be from blasting due to size of the sites and the materials being extracted. Vibrations are more likely to be from vehicle movements both on and off site. Conditions will be imposed on the site to provide monitoring at sensitive receptors to make sure that limits are not exceeded.

Policy 12

General amenity

Proposals for minerals-related development must ensure that potentially adverse impacts on quality of life and amenity (compatibility of land use, dust, noise, vibration, light pollution etc) are avoided and / or reduced to acceptable levels.

Site-specific assessments may be required to determine existing / ambient levels, identify potential impacts and appropriate avoidance and / or mitigation measures to be implemented. Where applicable a site management plan should be developed to ensure implementation and maintenance of mitigation measures throughout operations.

Transport and access

5.27 The transport of minerals if often a key concern regarding impacts on the local environment and amenity as such it is important that this is addressed in detail through the planning application process. The impacts from transport can be reduced through routeing agreements to direct traffic away from sensitive areas and by encouraging the use of alternative transport methods (e.g. rail, water, conveyor or pipeline) and other measures in order to limit the amount of traffic movements.

5.28 However minerals can only be worked where they are found so it may not be possible to locate developments in close proximity to intended markets or at sites that can make use of alternative transport methods. The minerals industry work to reduce transportation costs and so look to reduce traffic movements and haul distances, with the majority of resources used within 30 miles of extraction.

5.29 Minerals sites are often not in locations that can make use of alternative methods of transport, with no navigable waterways or accessible rail network nearby. Even when sites are located near enough to alternative methods of transport the cost implications of using these methods may be prohibitive. In order for alternative methods of transport to be viable a large amount of materials needs to be transported and often over long distances. Due to the size of the potential minerals sites within Milton Keynes it is likely that road based transport will be the predominant method.

Policy 13

Sustainable transport

Minerals-related development should, where possible, be well placed to serve their intended market and seek to reduce transport distances and minimise movements. The use of alternative transport modes such as rail, water, pipeline or conveyor is encouraged where possible.

A sustainable transport statement must accompany any planning application for new minerals-related development or that which will result in a significant increase in transport movements. The purpose of which is to demonstrate that consideration has been given to alternative methods of transport, identify safe and suitable access to the site and identify potential impacts resulting from transport and appropriate management and / or mitigation measures to address these including any necessary improvements.

Sensitive design and layout

5.30 All new built development in Milton Keynes must be of a high standard of design in terms of layout, form and appearance and make a positive contribution to the character of the area in which it is located; this is also relevant to minerals-related development.

5.31 Careful design of the site layout can help to mitigate impacts on the surrounding area as well as improving the public perception of minerals-related developments, increasing operational efficiency, safety and security.

5.32 The inclusion of landscaping schemes within the site can help improve biodiversity in the surrounding area as well as contributing to local amenity and elements of historic interest. Boundary treatments can provide screening and buffering of the site but can also increase visual interest.

5.33 Proposals for minerals-related development within airfield exclusion zones will need to give consideration to the design of site buildings and plant to limit the amount of reflective surfaces that can impact on the visibility of pilots.

Policy 14

Site design and layout

The layout and design of minerals-related developments need to demonstrate that the development:

- Makes a positive contribution to the character of the area and local identity,
- Increases safety and security of the site,
- Includes elements of visual interest, and
- Assist in avoiding and / or mitigating potentially adverse impacts on the surrounding area.

Climate change

5.34 Climate change is one of the most important and difficult issues affecting our environment today. In order to combat climate change and minimise its effects, it is important to plan for a low carbon future.

5.35 The majority of carbon emissions that directly relate to the minerals industry come from vehicle movements. As mineral extraction sites are generally in relatively isolated locations transportation of minerals to market is predominantly road-based. Whilst it is possible to agree routes that limit the impact on the local environment and amenity, alternative or more sustainable modes of transport (e.g. rail / water) should be encouraged where possible to limit carbon emissions.

5.36 A further reduction in emissions can be obtained through promoting increased use of secondary and recycled aggregates which would reduce emissions associated with the extraction process and transport.

5.37 As well as a reduction in carbon emissions, it is also important to consider the opportunities available to mitigate the effects of climate change through the minerals planning process. Along with higher average temperatures, climate change can be linked to increased incidents of flooding. Restoration schemes create the opportunity to provide flood alleviation schemes as well as creating habitats for species that have been affected by increased rates of development.

Policy 15

Addressing climate change

In order to address climate change and contribute towards the transition to a low carbon future proposals for minerals-related development must consider the following measures (as appropriate):

- Sustainable transport movements,
- Restoration schemes incorporating flood management measures particularly where these also provide priority habitats,
- Environmental / landscape enhancement including specialist planting such as drought resistant species, and
- Use of efficient and well maintained operational plant.

Restoration and after-care

5.38 Minerals are a finite resource, as such the nature of extractive operations means that it is temporary and therefore approved applications must include a restoration scheme. Restoration has moved forward from simply returning land to the previous use (often agricultural) to providing for a wide array of beneficial after-uses; the minerals industry and planning authorities have actively driven forward this agenda.

5.39 There are often competing interests for restoration schemes as sites can present many opportunities for enhancement and beneficial after-uses. After use should be relevant to the local land-use context and the surrounding natural and built environment as well as reflecting the local community's needs and requirements. There may also be

opportunities to incorporate wider needs such as creating landscape or ecological linkages, or providing for flood management. As such it is important that the restoration scheme gives consideration to the sites, and wider, context and balances after-uses. Schemes must be progressive to ensure that land is restored to an acceptable and stable landform as soon as practicable.

5.40 Restoration of mineral extractions sites can provide a key opportunity to contribute towards existing ecological networks; this may be achieved by supporting Buckinghamshire and Milton Keynes BAP priorities. Where sites are in proximity to ancient woodland consideration should be given to increasing the condition and resilience of (ancient woodland) sites. Where sites are to be restored to agricultural use opportunities for increasing the biodiversity value of the land should be incorporated, for example field margins, hedgerows and beetle banks. Within river valleys restoration to predominantly open-water is not considered appropriate due to the limited ecological value they offer. For these sites wetland habitat creation would be encouraged where possible, particularly where such habitat would prove successful in relation to local and national BAP targets.

5.41 As well as enhancements to the natural environment, restoration schemes can also provide opportunities to enhance landscape character, the historic environment and geological interests. These features/assets are often a direct result of their location and are restricted to where they occur, as such where the opportunity is present such features/assets should be enhanced through restoration. In some cases it may be necessary to re-profile the land to lower levels, this is acceptable where the integrity of the local landscape character is retained.

5.42 Climate change, particularly measures to facilitate adaptation and protection from climate change effects, should be considered where possible through the restoration of extraction sites. Sites can often offer opportunities for improvements to flood risk management including the development of flood storage and improvements to flood flow routes. Pre-extraction run-off rates should not be increased through restoration schemes and where possible run-off levels should be reduced.

5.43 Where minerals underlie the best and most versatile agricultural land it is particularly important that restoration and aftercare preserve the long-term potential of the land. Where after-uses other than agriculture are proposed on the best and most versatile agricultural land, the methods used in restoration and aftercare should enable the land to retain its longer-term capability, thus remaining a high quality resource for the future.

5.44 Mixed-use restoration schemes deliver the most valuable and successful outcomes. After-uses which include restoration to agriculture, forestry, economic development and amenity purposes should also include other forms of after-use in order to maximise beneficial outcomes. Opportunities for natural and historic environment enhancement, habitat creation, water conservation, flood attenuation, geodiversity, recreational and educational uses should be considered where appropriate. After-uses must not take precedent over the need to protect the environment or maintain existing environmental assets (including heritage assets).

5.45 Restoration schemes should identify the intended after-use(s) and incorporate clear stages of restoration including layout and design plans as necessary. The scheme must identify an end date by which restoration works are to be completed as well as a programme setting out after-care (including provisions for ongoing management and

maintenance) and monitoring requirements. There may also be a requirement for site-specific assessments (such as landscape character, environmental capacity, ecological networks, flood risk, etc) to accompanying the restoration scheme. The restoration scheme must be submitted to the MPA and approved prior to commencement of development.

Policy 16

Restoration and after-use

All temporary minerals-related development must include a restoration scheme which will result in the site being progressively restored to an acceptable condition and stable landform as soon as is practicable.

The after-use of a site will be determined in relation to the land-use context, surrounding environmental character and the requirements of the local community. Schemes must include objectives that will result in: biodiversity gains, enhancement of the local environment and amenity, and benefits for the local community and/or economy.

Where relevant the restoration of the site must meet the following requirements:

- Sites that are to be restored to the previous land-use must include a secondary after-use which includes environmental enhancement.
- Where specific and favorable conditions occur and when adjacent to identified habitat, precedence must be given to environmental enhancement objectives, the creation of BAP habitat, ecological networks, promotion of geodiversity and enhancement of the historic environment.
- Sites located within river corridors should address flood management and support River Basin Management Plan actions.
- The restoration of sites for economic development purposes will be supported where fully in accordance with relevant planning policy and a secondary after-use is included within the restored function.

Administration and implementation measures

Review of Minerals Permissions and Prohibition Orders

5.46 Minerals Planning Authorities are allowed to make orders prohibiting the continuation of minerals extraction where no development has taken place for a long period of time. The prohibition order ensures that development cannot resume without a fresh planning permission and to make sure the land is restored.

5.47 Prohibition orders served on sites provide certainty for all parties and particularly the public as it will prevent sites suddenly being worked again after a long period of being dormant. Prohibition orders can include the removal of plant on site, compliance with existing planning conditions and any restoration conditions.

5.48 A prohibition order can encompass any number of planning permissions that apply to the land or site to which it relates. Prohibition orders can only be made to sites where extraction has commenced but has permanently ceased and has not been operational for a period of at least two years.

5.49 Measures for controlling and managing minerals sites, including prohibition orders are detailed in Policy 17.

Local Liaison Groups

5.50 Local liaison groups will be established (where necessary) to provide a platform for discussions between the local community and the operators of the site to resolve any issues as they arise. The group will allow those that are affected by minerals-related developments to have regular contact with the council officers and the site operator.

5.51 A condition will be imposed on development to set up a local liaison group for sites of a certain size or if the community has any concerns over the site. The group will be attended by the operator of the site, the planning authority and representatives from the local community (ie. Parish Council).

5.52 Measures for establishing and implementing local liaison groups are detailed in Policy 17.

Planning Conditions

5.53 Minerals-related developments have the potential to impact on the area surrounding the site and also potentially to a wider area. These impacts need to be addressed and, where ongoing, managed.

5.54 Planning conditions are attached to approved applications to minimse the disruption caused by the extraction of minerals and to ensure the restoration of the site is achieved within a set timeframe. The MPA will also impose aftercare conditions to make sure the restored site is used as specified by the planning condition. These conditions may reduce and mitigate impacts so that the development will be allowed to go ahead where otherwise it could have been refused.

5.55 Conditions that could be imposed as appropriate include:

- The period in which work must commence and the period in which the work must be completed and restored.
- Traffic routing agreements.
- Improving and maintaining access (including public rights of way) and highways.
- Levels of noise and dust are controlled or prevented.
- Hours of working.
- Protection and re-creation of environmental features and natural resources.
- Restoration and aftercare.
- Protecting local amenity.
- Long term management and monitoring of the development to make sure the aftercare programme is undertaken.

5.56 Conditions which are attached to the grant of planning permission are used first in relation to planning applications. Obligations are legal agreements relating to the planning approval and these are used when conditions prove inadequate. Planning obligations can be used not only to mitigate the effects of development, but can also deliver benefits to the local community including the enhancement of local community facilities. Benefits from obligations should relate to the proposed development.

5.57 Measures for controlling and managing minerals-related developments including the use of planning conditions and obligations are detailed in Policy 17.

Monitoring of minerals-related development

5.58 After planning permission is granted, the Council will need to ensure that minerals workings are carried out in accordance with the conditions attached to the permission and investigate if there are any potential breaches of conditions. Effective monitoring can avert any potential problems before they arise and reduce the need for potential enforcement action. Monitoring of the sites performs a liaison role between the minerals operators and the local communities and helps create a good working relationship.

5.59 The MPA require information to be submitted by operators post approval so that sites can be monitored and to analyse how policies are performing. This information will be kept confidential and will be collected alongside other related surveys in order to avoid duplication (such as those undertaken on behalf of the AWP).

5.60 Measures for monitoring the implementation of minerals-related development are included in Policy 17.

Policy 17

Implementation

Mechanisms that may be enacted (as appropriate) to facilitate the control and implementation of minerals-related development include:

- Planning conditions.
- Planning obligations.
- Establishment of Local Liaison Groups.
- Monitoring of permitted sites by the Minerals Planning Authority to make ensure that conditions and obligations are being met.
- Monitoring of the permitted development including a requirement for the site operator to record the extracted minerals and sales figures and provide details to the Minerals Planning Authority when required.
- Serving of prohibition orders when the site has not been worked for a two year period or where working is unlikely to resume.

6 General development considerations

6.1 General development considerations are applicable to all proposals for non-minerals development.

Safeguarding mineral resources

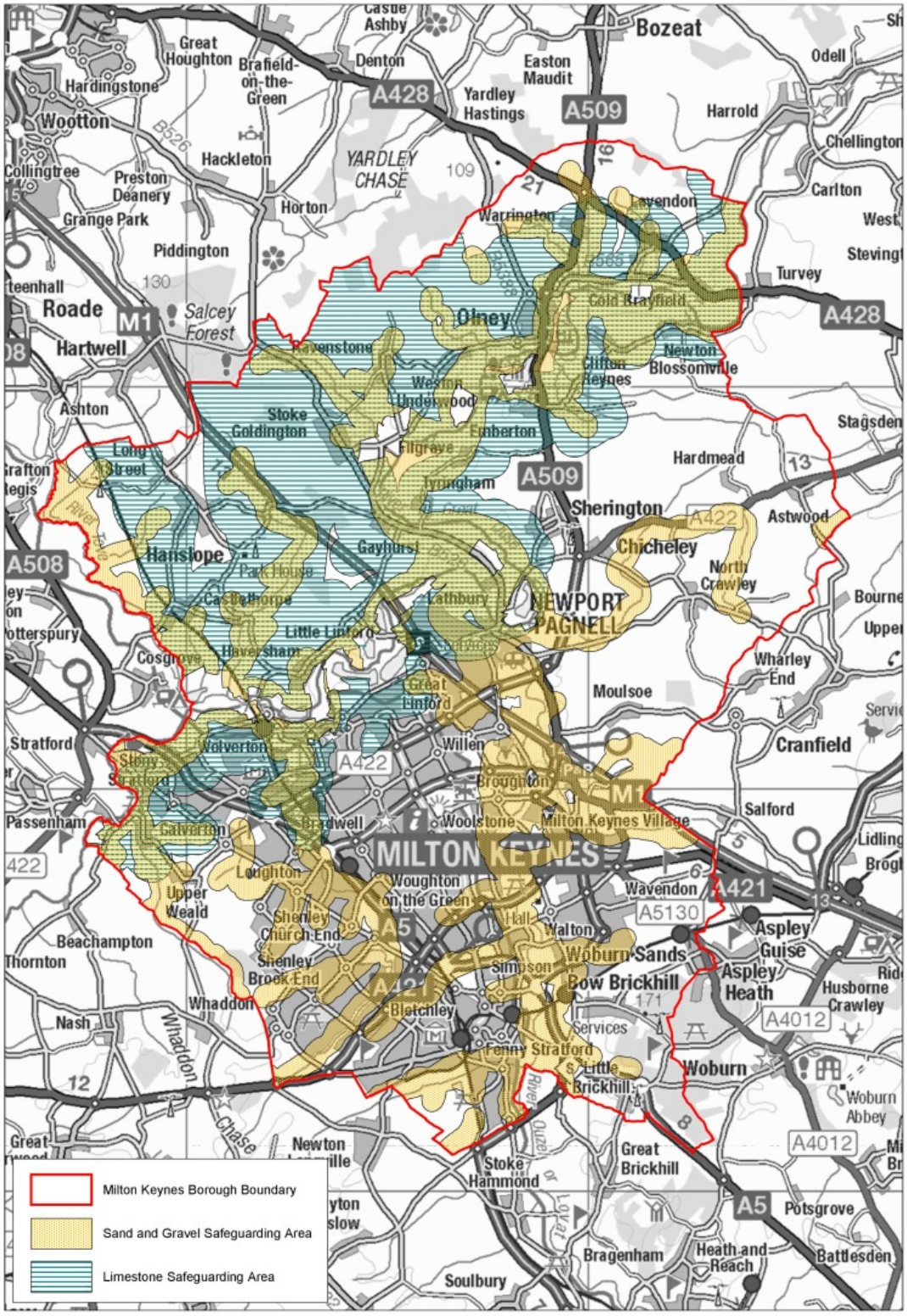
6.2 A key aspect of sustainable development is the conservation and safeguarding of non-renewable resources, such as minerals, for future generations. Sterilisation of mineral resources can occur as a result of surface development either directly overlying or situated on / close to the boundary of the resource. Continued growth and pressure from land use patterns may result in the sterilisation of mineral resources by other forms of development. Although this may not currently be a major issue in Milton Keynes, future generations may find that sterilisation has resulted in insufficient primary aggregates being accessible, limiting supplies to support growth and development.

Mineral Safeguarding Areas

6.3 The NPPF requires MPAs, in preparing their Local Plans, to define Mineral Safeguarding Areas (MSAs) and adopt appropriate policies in order that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development. The identification of MSAs does not necessarily mean that these areas will be worked in the future. The role of MSAs is to act as a sign-post for developers and planners alike to indicate the presence of important mineral resources so that such issues can be taken into account during the decision-making processes for land-use planning. This is particularly important in areas such as Milton Keynes, where significant development has and will continue to take place.

6.4 Mineral resources within Milton Keynes that are of national importance are limited to sand and gravel. Sand and gravel resources recognised as being of economic value within Milton Keynes include the river terrace, sub-alluvial and glaciofluvial (glacial) deposits. Limestone (used as building / roofing stone) is recognised as being of local importance given its use in conservation of historic building and structures, conservation areas and supporting local distinctiveness. Current and historic working of limestone used for such purposes within Milton Keynes is limited to the Blisworth Limestone Formation. Limestone for aggregate use is recognised as being of national importance. Limited resources of White Limestone which is generally more suitable for aggregate use is found in the south-west. Although White Limestone resources within Milton Keynes are not currently worked, future generations may find a requirement for such materials. Brick clay is not in demand in Milton Keynes and it is unlikely that this will change in the long term; as such these resources are not considered to be of local or national importance and are not included in the MSAs. The MSAs are shown on the Policies Map and in Figure 7 'Mineral Safeguarding Areas within Milton Keynes'.

Figure 7 Mineral Safeguarding Areas within Milton Keynes



6.5 MSAs within Milton Keynes were identified as per the methodology summarised below[5], the full methodology is available from the Councils website:

- MSAs include surface-won materials (i.e. sand and gravel / limestone) only as these may be affected by sterilisation from other forms of development.
- The BGS Mineral Resource Area Maps were used as the starting point for identifying resource areas to be safeguarded.
- Areas that have been excluded from the MSAs include previously worked or existing (operational) sites.
- Areas that have not been excluded from the MSAs include sites with planning permission that are not currently operational, allocated sites, environmental designations and urban areas.
- Buffers have been applied to all mineral resources: 250 metres (m) for sand and gravel and 500m for limestone (extending outwards from the boundary of the mineral resource area).

Mineral Consultation Areas

6.6 The NPPF requires Mineral Consultation Areas (MCAs) to be defined based on the MSAs. MCAs are a planning mechanism used to trigger consultation where non-minerals development is proposed within a MCA and is particularly relevant where the roles of minerals planning authority and local planning authority reside in different councils. However, Milton Keynes Council is a unitary authority and therefore will occur at these levels: (i) within the organisation; (ii) between the Council as the MPA and developers; and (iii) between the Council and other MPAs where a development is proposed on an adjoining authority's boundary (or vice versa) and may impact on mineral interests. The purpose of conducting consultation is to ensure due regard is had to mineral interests and open discussions about the economic viability of the mineral resource and whether prior extraction of the resource (i.e. before the other development takes place to avoid sterilisation) is appropriate.

6.7 MCAs within Milton Keynes are co-terminus with the MSAs. The MCAs will be shown on the Policies Map.

6.8 Not all development will need to be consulted on, or is of a scale or nature to present the opportunity for prior extraction. This reflects the low level of risk associated with the proposed (non-mineral) development to cause sterilisation of mineral resources. For example, urban areas have not been excluded from the MSA/MCAs as larger redevelopments, areas of new development and urban extensions may present such opportunities; whereas an extension to an existing dwelling house would not. The following surface development is exempt from consultation and developer requirements set out through the plan specifically relating to MSA/MCAs:

- extensions to existing dwelling houses and other householder planning applications (except for new dwellings),
- provision of dwelling house(s): (i) within an urban area - less than 10 dwelling houses, or a site area of less than 0.5 ha; or (ii) elsewhere - one dwelling house within the recognised settlement boundary,
- minor extension or alteration to an existing building,

5 Methodology based on BGS 2011 Mineral Safeguarding in England: A Good Practice Guide

- Development (other than the provision of dwelling houses) on a site having an area of 1 ha or more within an urban area,
- changes of use, advertisement consent, amendments to previously approved applications/current permissions (with no additional land take involved), reserved matters, prior notifications, certificates of lawfulness of existing use or development, certificate of lawfulness of proposed use or development, works to trees and other miscellaneous minor works/applications (e.g. fences, gates, access, etc).

Encouraging prior extraction of mineral resources

6.9 Prior extraction of minerals is encouraged and will be sought, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place.

6.10 Identifying opportunities for prior extraction of minerals in conjunction with other forms of development in order to avoid sterilisation may be of economic advantage to developers. This is because the extraction operation could act as a feed stock for the development (effectively acting as an on-site borrow pit), thereby significantly reducing costs associated with importing aggregates, in addition excess aggregate could also be sold.

6.11 Although prior extraction is encouraged it may not always be feasible, and so it may be necessary to carry out an assessment to determine whether prior extraction should occur. An assessment of the mineral resource should include site-specific geological survey data (in addition to the MSA and BGS mapping data) to establish the existence or otherwise of mineral resources setting out the type, quality, quantity and extent as well as the overburden to reserve ratio. Such information should accompany the planning application for the non-mineral development and will be used to inform the decision-making process and to determine whether prior extraction is practicable (this must be decided before determination of the non-mineral development application).

6.12 Applications for the prior extraction of mineral resources will be determined in accordance with Policy 5 'Development principles for mineral extraction' as well as other relevant local planning policies and will require a separate planning application to the non-minerals development. The non-minerals development should not proceed before the mineral is extracted or steps taken to avoid sterilisation.

Policy 18

Mineral Safeguarding and Consultation Area

Mineral resources of local and national importance within Milton Keynes include sand and gravel and the White and Blisworth Limestone formations. These resources will be safeguarded from unnecessary sterilisation by other development through the designation of Mineral Safeguarding Areas.

Planning permission will not be granted for non-mineral development that would lead to the unnecessary sterilisation of mineral resources within a Minerals Safeguarding Area unless it can be demonstrated that:

- the mineral concerned is not of economic value or evidence confirms the absence of mineral resources, the proposed development is temporary or of a nature that would not sterilise the mineral resource or hinder future extraction,
- the proposed development is temporary and would not sterilise the mineral resource or hinder future extraction,
- prior extraction can occur where practicable and environmentally feasible and within a reasonable timescale,
- there is an over-riding need for the development, or
- the development is exempt.

In determining whether prior extraction is feasible an assessment of the mineral resource including detailed site investigations should be undertaken to identify the quality, quantity and extent of the resource, the economic viability of prior extraction and the proportion of the mineral to be used on-site and saleable aggregate. The assessment should also take account of the size, nature and need for the (non-minerals) development as well as the proposed phasing of operations and construction of the non-mineral development.

In the event that the non-mineral development is delayed or not implemented the site must be restored to a stable landform and appropriate after-use.

Safeguarding minerals-related development and associated infrastructure

6.13 Existing commitments, site-specific allocations, associated infrastructure[6] and other forms of minerals-related development[7] need to be safeguarded to prevent the encroachment of incompatible development that could prevent or prejudice use of the site.

6.14 The encroachment of incompatible development on mineral-related development can result in land-use conflict, potentially imposing constraints on sites, and reducing the viability of current or future operations as well as resulting in adverse impacts (e.g.

6 Associated infrastructure includes wharfage, railheads, rail links to quarries and associated storage, handling and processing facilities.

7 Other forms of minerals-related development include sites for concrete batching, manufacture of coated materials and other concrete products as well as the handling, processing and distribution of substitute, recycled and secondary aggregate material.

environmental nuisance impacts such as dust, noise etc) on the proposed non-minerals development. The use of separation areas, and other mitigation measures, can help to prevent this.

6.15 The recommended separation area is 250m from the site boundary of the minerals operations. These distances are intended as a guide, it is the developer's responsibility to determine the potential for any land-use conflicts between existing and proposed developments.

6.16 Proposals for non-minerals development located within the separation areas set out above will need to undertake a site-specific assessment to determine the potential for adverse impacts on the minerals operations and to identify any mitigation measures that will need to be implemented to avoid and / or reduce impacts on both the proposed (non-minerals) development and minerals-related development. The assessment should take into account the categories of sensitivity to determine land-use compatibility as set out in paragraph 5.22 and should also give consideration to the full life-cycle of both developments. A reduction in the separation areas is acceptable where the site-specific assessment demonstrates that a reduced distance, potentially coupled with other mitigation measures, would be adequate to avoid and / or reduce potentially adverse impacts.

6.17 The application of separation areas in this sense does not preclude development but acts to initiate discussions between developers, the minerals industry and the MPA to ensure that mineral interests are given due consideration early in the decision-making process.

Policy 19

Safeguarding of minerals-related development and associated infrastructure

Proposals for non-minerals development adjacent or in close proximity to committed or allocated minerals sites, associated infrastructure and other forms of minerals-related development, should only be permitted where it can be shown that the proposed development will not impact on the current or future operations of the minerals-related development and will not result in unacceptable adverse impacts affecting the proposed development.

Proposals for development that are considered to be incompatible with minerals-related development will be required to undertake a site-specific assessment to determine if there are any potentially adverse impacts and identify mitigation measures that will need to be put in place to avoid and / or reduce impacts to an acceptable level.

Separation areas will be used to help prevent the encroachment of incompatible development on minerals-related development.

7 Monitoring

7.1 Ultimately the implementation of the MLP will be through the granting of planning permissions for minerals-related development. There are however a number of factors which can affect the implementation of a plan that are out of the control of the Local Planning Authority. The economy, action taken by the minerals and related industries and the work undertaken by other agencies and authorities can all have an affect on how and to what extent a plan is implemented. The monitoring of the MLP is therefore crucial when assessing the extent to which the plan has been implemented, identification of emerging trends and how any issues can be addressed.

7.2 The monitoring of the MLP considers both positive and negative effects of the mineral planning policy and its implementation. The monitoring of the significant effects is carried out by measuring the level of the effect against the Plan's objectives. This will then identify any unforeseen adverse effects and any remedial action can be carried out, as well as identifying any positive outcomes. Monitoring should also pick up whether the policies are contributing towards the SA objectives and whether mitigation measures are performing as required.

7.3 Monitoring on the implementation and effectiveness of the minerals planning policy for Milton Keynes will be carried out (as required by the NPPF), with the results reported in the Borough's Development Plan Monitoring Report (DPMR).The approach taken within this report will be objective; target led and will focus on significant effects. It is not necessary to monitor all aspects of the MLP or its policy; instead a framework approach will be adopted which will enable the measurement of its performance against established indicators (see the MLP Monitoring Framework).

7.4 As well as the DPMR, it is also the MPA's responsibility to produce a Local Aggregates Assessment (LAA) in order to keep the demand and supply of aggregates under regular review and ensure a continued steady and adequate provision of aggregate is available within the Borough. As part of the monitoring of the MLP, the LAA will be reviewed annually and revised as necessary.

Minerals Local Plan monitoring framework

Table 7.1

Local Plan policy *and link to objectives*	Key indicator(s)	Target	Implementation partners *(in addition to MPA)*	Trigger point *for correction and / or mitigation measures*
Policy 1: Providing for sand and gravel *Objective 1*	Amount of aggregate produced in line with annual provision Size of landbanks for sand and gravel and crushed rock	Sand and gravel production of 0.17 million tonnes per annum (Mtpa) Maintain a 7 year landbank for sand and gravel	• Minerals industry • AWP	Trends identified through the LAA indicate that the average aggregate sales is consistently (over a three year period) different (+/- 20%) to the adopted provision rate Landbank falls below target for more than two years (within the plan period)
Policy 2: The spatial strategy for sand and gravel extraction *Objective 2*	Approved proposals are consistent with spatial strategy	100% of approvals are consistent with spatial strategy	• Minerals industry	More than two proposals are approved (within the plan period) that are not in line with spatial strategy
Policy 3: Site-specific allocations for the extraction of sand and gravel *Objective 1, 2*	Amount of sand and gravel produced from allocated sites is in line with annual provision	Allocated sites come forward to ensure sand and gravel production to meet provision rate	• Minerals Industry • Environment Agency • Highways Agency	More than two unallocated sites are given planning permission during the plan period
Policy 4: Site-specific allocations for the extraction of building stone *Objectives 1, 2, 3*	Amount of building stone produced from allocated sites is in line with annual provision	Allocated sites come forward within the plan period and approvals are and are in line with the development strategy	• Minerals Industry • Environment Agency • Highways Agency	More than two unallocated sites are given planning permission during the plan period

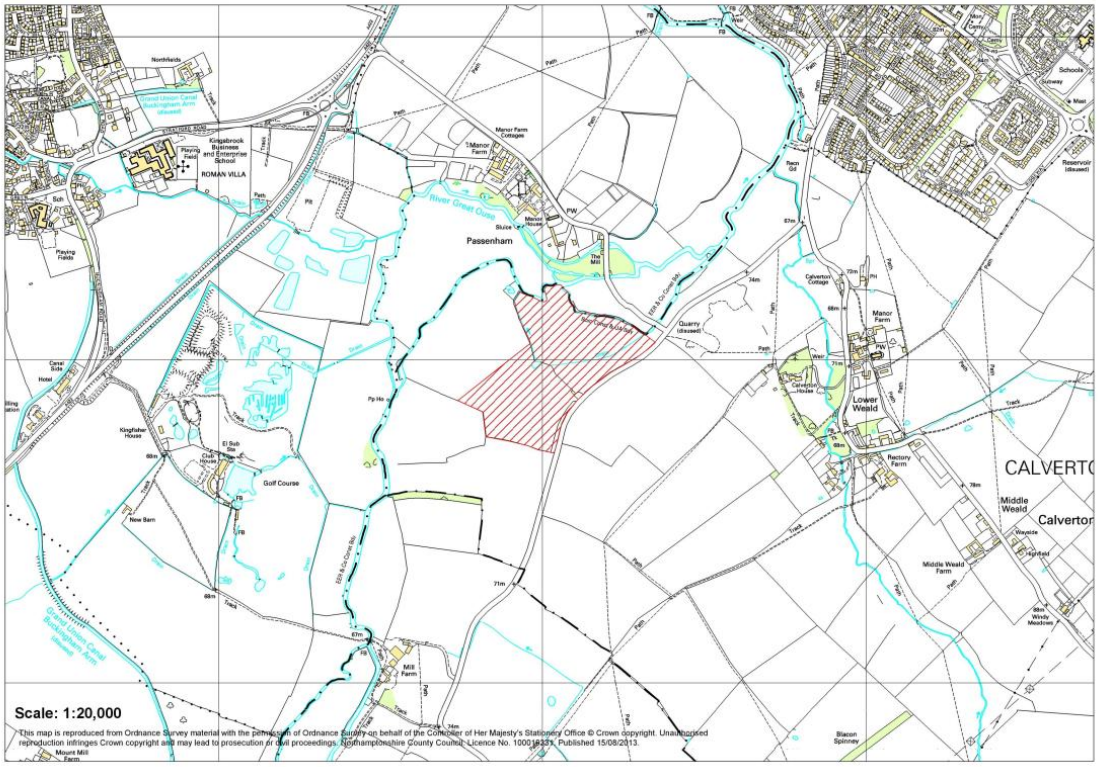
Local Plan policy *and link to objectives*	Key indicator(s)	Target	Implementation partners *(in addition to MPA)*	Trigger point *for correction and / or mitigation measures*
Policy 5: Development principles for mineral extraction *Objectives 1, 2, 4, 5*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 6: Borrow pits *Objectives 1, 2*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 7: Development principles for facilities for secondary and recycled aggregates *Objectives 1, 2, 4*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 8: Development principles for other forms of minerals-related development *Objectives 1, 2*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 9: Natural assets & resources *Objectives 6, 8*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry • Natural England	More than two proposals are approved (within the plan period) that do not meet development principles

Local Plan policy *and link to objectives*	Key indicator(s)	Target	Implementation partners *(in addition to MPA)*	Trigger point *for correction and / or mitigation measures*
Policy 10: Historic environment *Objective 6*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry • English Heritage	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 11: Landscape and townscape *Objectives 6, 8*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry • Natural England	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 12: General amenity *Objectives 6, 7*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry • Environment Agency • Environmental Health Officer	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 13: Sustainable transport *Objective 7*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 14: Site design and layout *Objectives 6 10*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles
Policy 15: Climate change *Objective 10*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry	More than two proposals are approved (within the plan period) that do not meet development principles

Local Plan policy *and link to objectives*	Key indicator(s)	Target	Implementation partners *(in addition to MPA)*	Trigger point *for correction and / or mitigation measures*
Policy 16: Restoration and after-care *Objective 9*		100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry • Industry • Natural England • English Heritage	
Policy 17: Implementation *Objectives 1, 2*	Approved proposals meet development principles	100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Minerals industry	More than two proposals are approved (within the plan period) that do not meet policy objectives and development principles
Policy 18: Mineral Safeguarding and Consultation Areas *Objective 5*	Approved proposals do not have an adverse effect on a safeguarded mineral resource and meet development principles	Mineral resources are not needlessly sterilised 100% of approvals meet development principles No appeals lost on proposals not meeting development principles	• Development industry • Local planning authorities • Minerals industry	More than two proposals are approved (within the plan period) that do not meet development principles and result in sterilisation
Policy 19: Safeguarding minerals-related development and associated infrastructure *Objective 5*	Approved proposals meet requirements	100% of approvals meet requirements	• Development industry • Local planning authorities • Industry • Minerals industry	More than two approved proposals (within the plan period) result in an adverse impact on minerals-related development (with no alternative provision made)

Appendix 1 Site Profiles

A1: Calverton/Passenham Extension



Site summary:

Proposed use

Mineral extraction – Sand and gravel
Resource yield is estimated at circa 250,000 tonnes to be worked at an approximate rate of 75,000 tonnes per annum. The estimated operational life is 4-5 years.

Opportunities

- Site is in line with the spatial strategy for sand and gravel and supports the delivery of the required minerals provision.
- Site is supported by the operator , is a proven resources and an area is already being worked nearby.
- Limited potential for impact on landscape and townscape.
- Restoration of the site has potential to create beneficial outcomes, including linking to areas that have already been restored.

Constraints

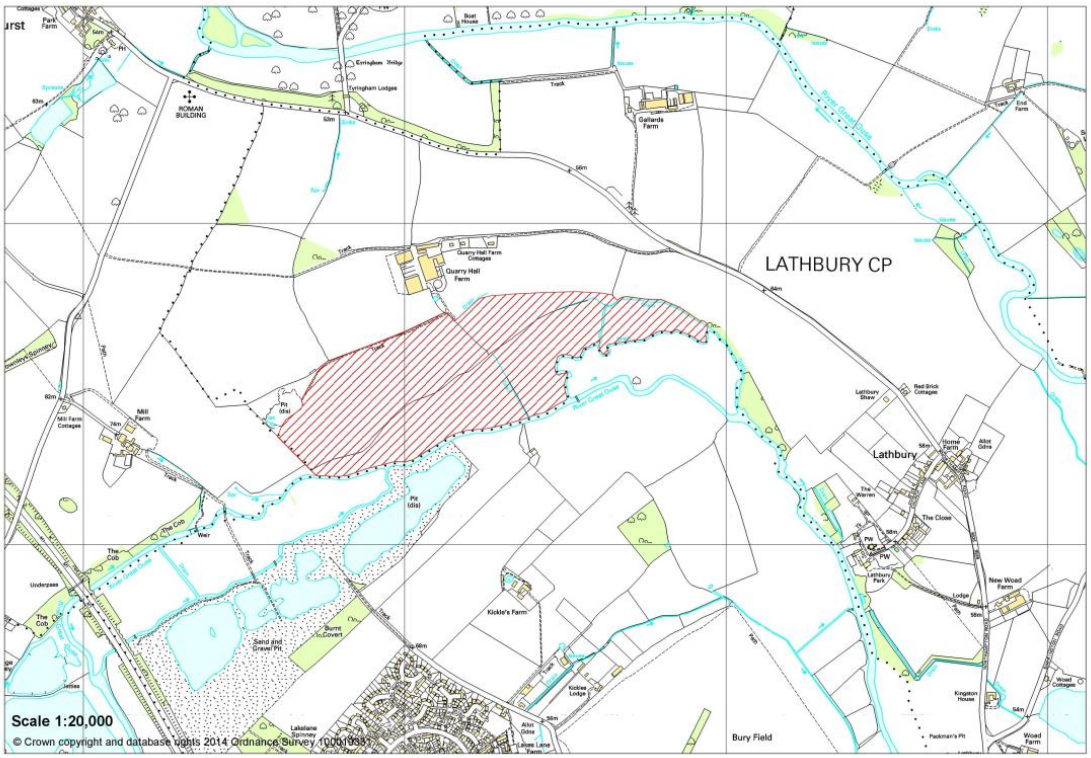
- Site has not previously flooded but is at risk of future flooding, although sand and gravel extraction is water compatible development.
- Potential for adverse impacts on heritage assets. Further site investigation would be required to accompany the planning application. Site is adjacent to Passenham

Conservation Area and located just over 300m from Calverton Conservation Area. The closest listed building to the site boundary is the Grade II listed Dovecote approximately 130m from the site.

Overall assessment outcome

- Suitable – proposed site is both deliverable and adequately meets plan objectives and vision.

A2: Quarry Hall Farm



Site summary:

Proposed use

Mineral extraction – Sand and gravel
Resource yield is estimated at circa 720,000 tonnes to be worked at an approximate rate of 70,000 tonnes per annum. The estimated operational life is 10 years.

Opportunities

- Site is in conformity with the spatial strategy and will contribute to the required sand and gravel provision.
- Restoration of the site has the potential to create beneficial outcomes, including achieving BAP targets.
- Limited potential for impact on landscape and townscape.

Constraints

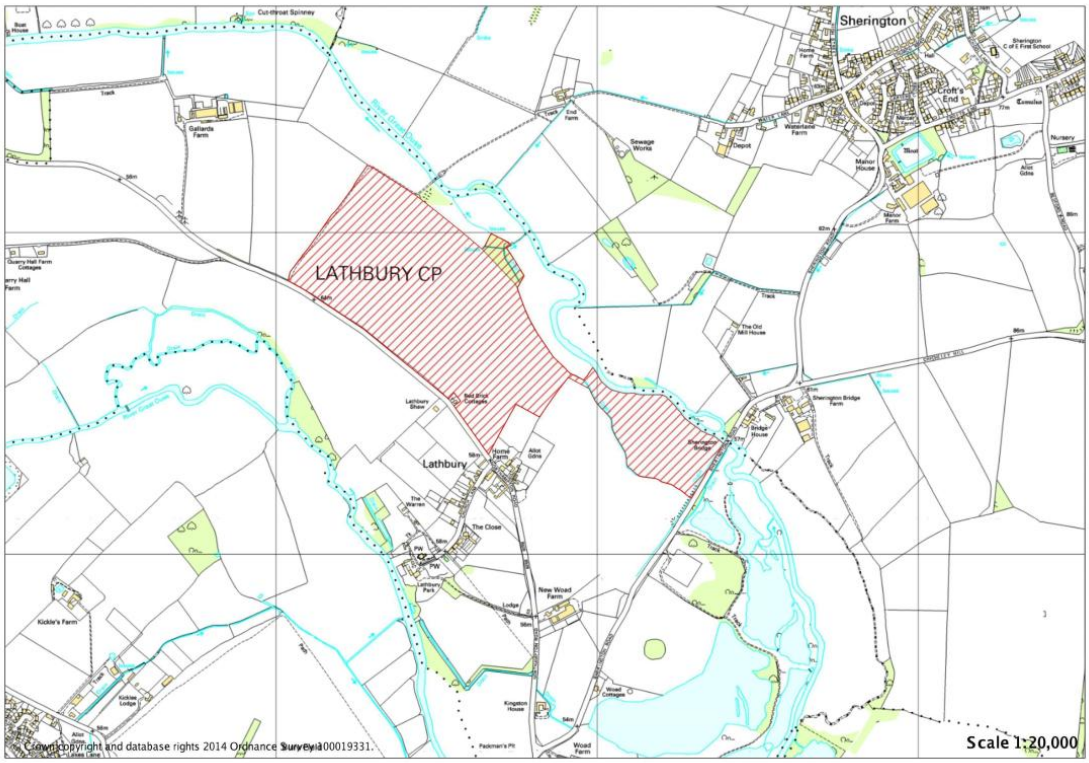
- Site has previously been flooded and is at risk of further flooding, although sand and gravel extraction is water compatible development
- Site is supported by the landowners however at present no site operator has been confirmed
- Potential for adverse impacts on heritage assets. Further site investigation would be required to accompany the planning application. Site is located over 1.5km from Newport Pagnell Conservation Area. The closest listed buildings to the site are the Grade II Mill Farm House, Barn and Stable located 500m from the site. Registered

Historic Park and Gardens of Tyringham (Grade II*) and Gayhurst Court (Grade II) located approximately 500m north and 800m north-west.

Overall assessment outcome

- Suitable – proposed site is both deliverable and adequately meets plans objectives and vision.

A3: Northampton Road, Lathbury



Site summary:

Proposed use

Mineral extraction – Sand and gravel
Resource yield is estimated at circa 650,000 tonnes of sand and gravel to be worked at an approximate rate of 100,000 tonnes per annum. The estimated operational life is 6-8 years.

Opportunities

- Site is in general conformity with the spatial strategy and will contribute to the required sand and gravel provision.
- Restoration of the site has potential to create beneficial outcomes, including BAP targets.
- Site is supported by the owner and has active industry support.

Constraints

- Site has previously flooded and is at risk of further flooding, although sand and gravel extraction is water compatible development.
- Potential for adverse impacts on heritage assets. Further site investigation would be required to accompany the planning application. Site is located approximately 1km from the Newport Pagnell and Sherington Conservation Areas. The eastern end of the

site is adjacent to the Grade II listed Sherington Bridge, in addition site is located within 100m from the listed Inn Farmhouse (Lathbury Manor) and Home Farm House.

- Part of the village is located directly to the south of the site. Proximity to Lathbury village increases the risk of potential impacts, although mitigation measures could be put in place to limit potential impacts.

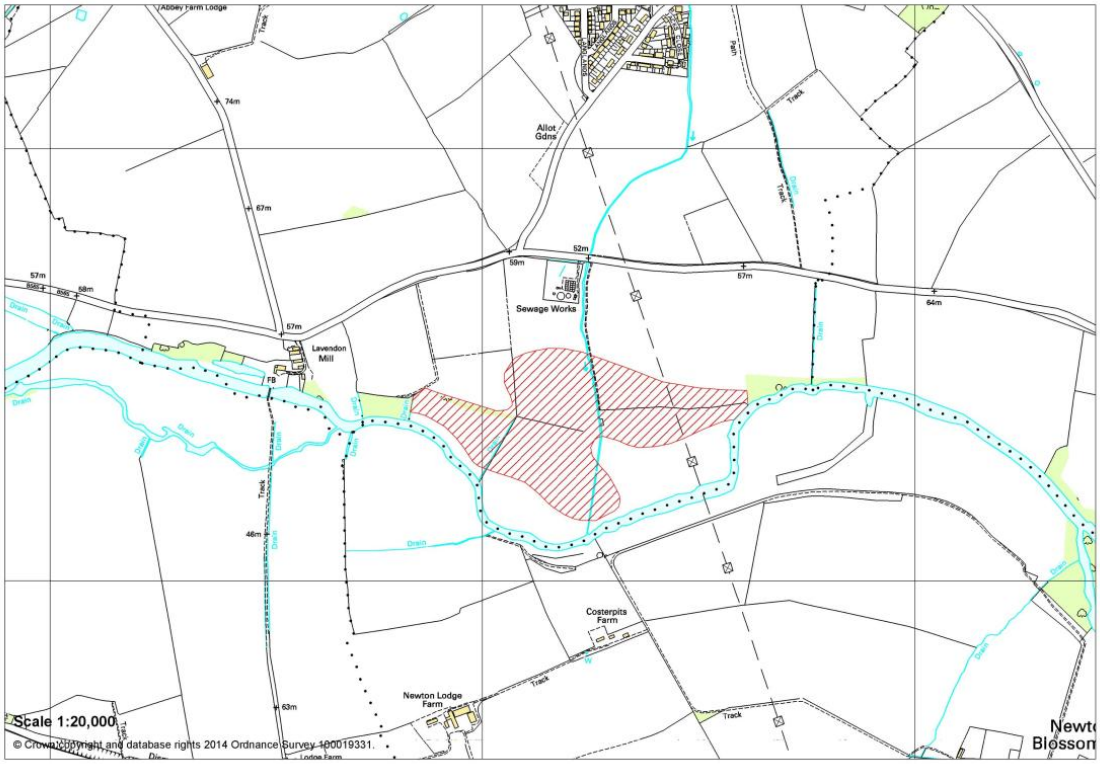
Specific development requirements

- Due to the proximity to the settlements of Lathbury and Sherington villages the site management plan (see Policy 12) should include a satisfactory stand-off and suitable bunding/buffering from extraction and processing operations particularly in that part along Northampton Road nearest to the settlement of Lathbury and this should be at least 100m from the nearest property if bunding of at least 5m high is used or at least 200m if bunding is not used and the bunding should be in the working part of the site.
- The processing plant should be located in an area that minimises visual intrusion and is away from the settlement of Lathbury and other dwellings and should be separated by at least 400m from any dwellings. The processing plant is to be linked to mineral extraction on the site and will not be used to process mineral from other sites.

Overall assessment outcome

- Suitable – proposed site is both deliverable and adequately meets plans objectives and vision.

A4: Manor Farm and Lavendon Mill



Site summary:

Proposed use

Mineral extraction – Sand and gravel
Resource yield is estimated at circa 456,000 tonnes to be worked at an approximate rate of 70,000 - 80,000 tonnes per annum. The estimated operational life is 6 - 7 years.

Opportunities

- Site is in general conformity with the draft spatial strategy and will contribute to the required sand and gravel provision.
- Site is supported by the owner and has active industry support. Site is supported by geological evidence.
- Restoration of the site has potential to create beneficial outcomes.
- Limited potential for impact on landscape and townscape.

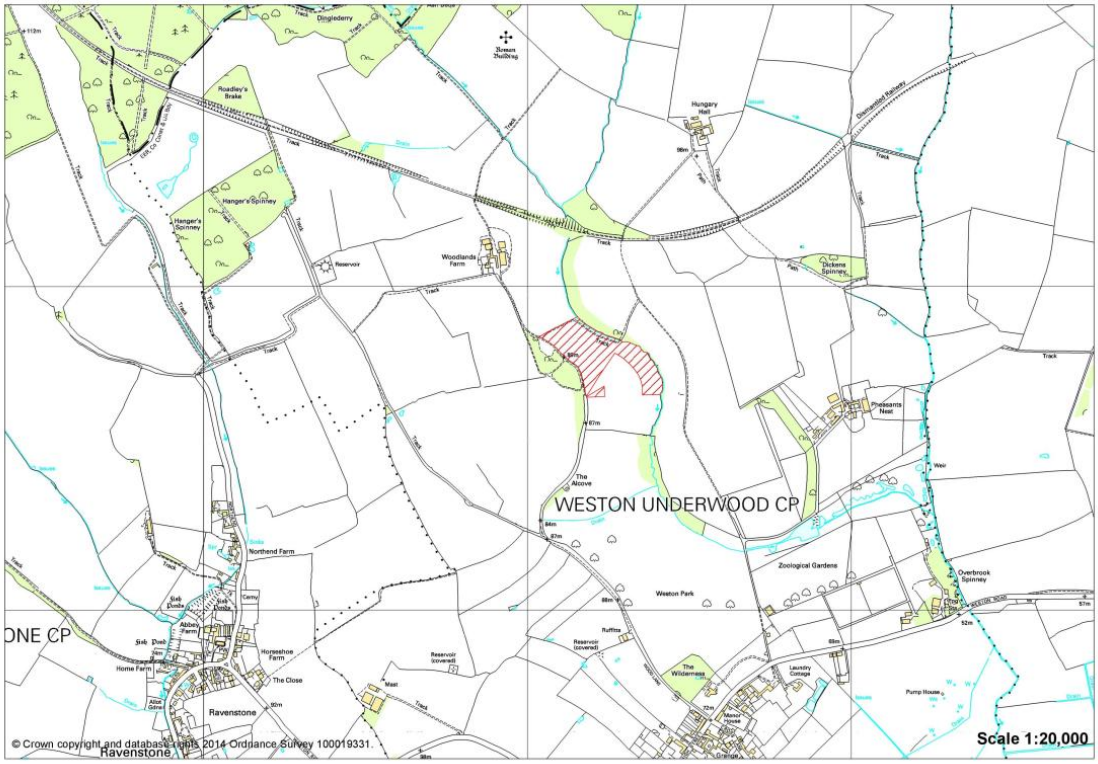
Constraints

- Site has not previously flooded but is at risk of future flood, although sand and gravel extraction is water compatible development.
- Potential for adverse impacts on heritage assets. Further site investigation would be required to accompany the planning application. Site is located 1km from Newton Blossomville, Clifton Reynes and Lavendon Conservation Areas. The closest listed building to the site is the Grade II listed Lavendon Mill House which is approximately 300 from the site boundary.

Overall assessment outcome

- Suitable – proposed is both deliverable and adequately meets plans objectives and vision.

A5: Weston Underwood Quarry



Site summary:

Proposed use

Mineral extraction - Limestone for building stone purposes.
Resource yield and operational life are unknown. Annual extraction rate is estimated to be <1,000 tonnes per annum.

Opportunities

- Site is in conformity with the development strategy and would support the conservation of historic buildings and structures.
- Limited potential for impact on landscape and townscape.
- Site is supported by operators and is currently operational.
- Restoration of the site has potential to create beneficial outcomes including linkages to CWS and SSSI.
- Access already established and HGV movements are unlikely to increase.

Constraints

- Site is at risk of flooding although minerals extraction is waste compatible development.
- Potential for adverse impacts on heritage assets. Further site specific investigation would be required to accompany the planning application. Site is located approximately 400m from Weston Underwood Conservation Area and is located within 100m of two Grade II listed bridges.

Overall assessment outcome

- Suitable – proposed site is deliverable and adequately meets the plans objectives and vision.

Appendix 2 Supporting documents

Documents prepared as part of the evidence base for the Milton Keynes Minerals Local Plan are listed below:

- Local Aggregates Assessment, December 2014
- Sustainability Appraisal Scoping Report, September 2013
- Sustainability Appraisal Environmental Report, June 2015
- Habitats Regulations Scoping Brief, September 2013
- Issues and Options Consultation Paper Annex 1: Site Assessments, October 2013
- Draft Plan for Consultation Annex 1: Site Assessments (Stage 2), July 2014
- Strategic Flood Risk Assessment (Non-technical summary), April 2014
- Methodology for the Assessment of Minerals-Related Development Sites, July 2014
- Mineral Safeguarding Areas Report, July 2014
- Final Draft (Proposed Submission) Plan Annex 1: Site Assessments, June 2015
- Further Call for Sites, Site Assessments, June 2015

All of the supporting documents are available from:

www.milton-keynes.gov.uk/planning-and-building/planning-policy/minerals-policy

Appendix 3 Glossary

Aggregate - Inert particulate matter which is suitable for use (on its own or with the addition of cement or bituminous material) in construction as concrete, mortar, finishes, road stone, asphalt, or drainage course, or for use as constructional fill or railway ballast.
Amenity - A land use which is not productive agriculture, forestry or industrial development; can include formal and informal recreation and nature conservation.
Brick clay - Clay that is suitable to be used in the formation of bricks
Buffer zone - A zone or area that separates minerals sites from other land uses to safeguard local amenity.
Building stone - A piece of rock that has been quarried and worked into a specific size and shape to be used for a specific purpose, in this case to be used in buildings.
Construction, demolition and excavation (CD&E) waste - Waste arising from any development such as vegetation and soils (both contaminated and uncontaminated) from the clearance of land, remainder material and off-cuts, masonry and rubble wastes arising from the demolition, construction or reconstruction of buildings or other civic engineering structures. CD&E may also include hazardous waste materials such as lead, asbestos, liquid paints, oils, etc.
Greenfield land - Undeveloped land in a city or rural area either used for agriculture, landscape design, or left to naturally evolve.
Inert fill - Also known as clean fill. Aggregates or inert materials used in construction or land reclamation works to create new levels. Inert fill includes inert waste material that when buried will have no adverse effect on people or the environment and does not contain contaminants (e.g. combustible, putrescible, degradable, leachable, hazardous, or liquid wastes, etc). May include waste recovery.
Landbank - A stock of planning permissions sufficient to allow for extraction over a given period at an appropriate local level.
Limestone - A sedimentary rock consisting predominantly of calcium carbonate. Often used as aggregate (crushed rock) or a building stone.
Minerals - A naturally occurring, inorganic substance. A substance such as sand or stone that is extracted or obtained from the ground or water.
Mineral resource - Mineral resources are natural concentrations of minerals or, bodies of rock that are, or may become, of potential economic interest due to their inherent properties.
Mineral reserve - A mineral reserve is that part of a mineral resource which has been fully evaluated and is commercially viable to work. In relation to land use planning the term mineral reserve refers to those minerals for which a valid planning permission for extraction exists (i.e. permitted reserves).
Natural assets and resources - includes the following: environmental designations for nature conservation, biodiversity and geodiversity; biodiverse habitats; green infrastructure; air quality; water resources – including flood risk, flow, quality and quantity of surface and ground waters; and soil – including best and most versatile agricultural land.
Potentially adverse impacts - Potentially adverse impacts include adverse impacts on the natural and historic environment or human health, including from noise, dust, visual intrusion, traffic, tip and quarry slope stability, differential settlement of quarry backfill, mining subsidence, increased flood risk, impacts on the flow and quantity of surface and groundwater and migration of contamination from the site; and take into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality (NPPF paragraph 143).

Primary aggregates - Aggregates that are comprised of naturally occurring materials such as crushed rock (e.g. limestone) and sand and gravel which are land won (in other words extracted directly from the ground).

Restoration - The return of land to its former use, or an appropriate condition, and stable landform (using subsoil, topsoil and / or soil making material); may include the remediation of contaminated land.

Sand and gravel - Naturally occurring materials formed as a result of the disintegration of rocks through weathering processes, then transported and deposited by wind, water and ice. In Britain the most common rock types are flint, limestone, quartzite and igneous rock. Sand and Gravel are therefore derived from similar sources, and are similar in their composition, though they differ in the size of their respective particles.

Secondary and recycled aggregates - Materials that do not meet the primary aggregate (e.g. sand, gravel and crushed rock) specifications in certain circumstances. Secondary aggregates are waste or by-products from industrial processes (e.g. scalping and crusher fines from the production of primary aggregates), whereas recycled aggregates are reprocessed materials previously used in construction (e.g. demolition materials). Both secondary and recycled aggregates are used in the construction industry to replace the use of primary aggregate.

Appendix 4 List of abbreviations

BAP - Biodiversity Action Plan
BGS - British Geological Survey
C&D - Construction and Demolition
CD&E - Construction, Demolition and Excavation
CWS - County Wildlife Site
DCLG - Department of Communities and Local Government
DPMR - Development Plan Monitoring Report
DPD – Development Plan Document
EA - Environment Agency
ha - hectares
HRA - Habitats Regulations Assessment
LAA – Local Aggregates Assessment
LGS - Local Geological Sites
LNR – Local Nature Reserves
LWS – Local Wildlife Sites
m - Metres
MASS - Managed Aggregate Supply System
MCA - Mineral consultation area
MK - Milton Keynes
MKWS – Milton Keynes Wildlife Sites
MLP- Minerals Local Plan
MPA - Minerals Planning Authority
Mt - Million tonnes
Mtpa - Million tonnes per annum
MSA - Mineral safeguarding area
NPPF - National Planning Policy Framework
SA - Sustainability Appraisal
SEP - South East Plan
SoS - Secretary of State
SPD – Supplementary Planning Document
SSSI - Sites of Special Scientific Interest

Appendix 5 The tests of soundness

The Minerals Local Plan will be examined by an independent inspector whose role is to assess whether the plan has been prepared in accordance with the Duty to Cooperate, legal and procedural requirements, and whether it is sound. A local planning authority should submit a plan for examination which it considers is "sound" – namely that it is:

- Positively prepared – the plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development;
- Justified – the plan should be the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence;
- Effective – the plan should be deliverable over its period and based on effective joint working on cross-boundary strategic priorities; and
- Consistent with national policy – the plan should enable the delivery of sustainable development in accordance with the policies in the NPPF.

(NPPF paragraph 182)