

West Midlands Regional Spatial Strategy Phase Three Revision

Minerals

Background Paper

June 2009



**West Midlands
Regional Assembly**

This Background Paper has been prepared on behalf of the West Midlands Regional Assembly (WMRA), the Regional Planning Body, as advice to inform the Regional Spatial Strategy Revision process. It is one of a suite of papers to inform the development of Options for the Phase Three of the Revision of the West Midlands Regional Spatial Strategy (WMRSS).

For revising the WMRSS, the WMRA adopts “decentralised” working arrangements where much of the technical and policy development work is done by a network of RSS Policy Leads, predominantly drawn from local authorities across the Region. This enables the WMRA to draw on the expertise held throughout the Region.

The Policy Lead for Minerals is Paul Wilcox (Staffordshire County Council).

This Background Paper has not been formally endorsed by, and therefore does not necessarily reflect the views of, the West Midlands Regional Assembly.

Further information and details of the West Midlands Regional Strategy and the Revision process can be found on our web site **www.wmra.gov.uk**

Every effort has been made to verify and check the contents of this report including all figures and tables. However the West Midlands Regional Assembly can not accept any responsibility for errors or inaccuracies.

Introduction

The WMRSS was approved and published in June 2004 by the Secretary of State. Since 2004 the WMRSS has been part of the statutory development plan for each local authority in the West Midlands Region.

The WMRSS covers a wide range of topics, including housing, employment, transport and the environment. You can find a copy of the WMRSS on the WMRA website at [http://www.wmra.gov.uk/Planning_and_Regional_Spatial_Strategy/Regional_Spatial_Strategy/Regional_Spatial_Strategy_\(RSS\).aspx#Jan2008](http://www.wmra.gov.uk/Planning_and_Regional_Spatial_Strategy/Regional_Spatial_Strategy/Regional_Spatial_Strategy_(RSS).aspx#Jan2008)

The purpose of the WMRSS is to guide the preparation of local authority development plans and local transport plans, so together they can provide a coherent framework for the development of the Region. The WMRSS also provides a planning framework for other regional, sub-regional and local strategies, programmes and plans such as the West Midlands Economic Strategy and Regional Housing Strategy.

Following the publication of the WMRSS in June 2004, the Secretary of State recommended that some issues should be developed further. It was decided that this task be carried out in a phased way.

- **Phase One** concentrated on the Black Country Study, where the aim was to identify and 'fast-track' urban renaissance proposals through to implementation.
- **Phase Two** considered housing, employment, transport and waste.
- This phase of the WMRSS Revision, **Phase Three**, examines critical rural services, provision for gypsies and travellers, culture, sport and tourism provision, quality of the environment and minerals.

Because there are likely to be a number of choices as to the nature and content of new or revised policies, an **Options** consultation document is being issued for consultation to help identify those choices and the consequences of adopting them. At this stage, policies are not fixed and everybody has a chance to say what they think about the Options before a Preferred Option is developed.

This Background Paper has been prepared to help improve understanding of the **Minerals** issues examined in the RSS Phase Three Options consultation document.

1. RSS Revision Objectives

The RSS Phase Three revision has three objectives relating to Minerals Policy:

- To develop a policy for safeguarding brick clays, natural building and roofing stone and aggregates. The purpose of this would be to supplement Policy M1 (Mineral Working for Non-Energy Minerals) in the WMRSS.
- To produce new sub-regional apportionments for aggregates for the period to 2026. This would replace Policy M2 (Minerals – Aggregates) in the WMRSS.
- To examine the supply and demand for brick clays and to ensure that there is appropriate provision made in the region. The purpose of this would be to supplement Policy M1 in the WMRSS to ensure that the brick industry has sufficient supplies to maintain brick production.

The objectives are considered in turn in this paper.

2.1 Mineral Safeguarding

2.1.1 RSS Revision Objective

The objective for the WMRSS Revision is to develop a policy for the safeguarding of brick clays (including fireclays), natural building and roofing stone and aggregates and minerals and minerals related infrastructure.

The reason for this revision is that one of the national objectives for mineral planning is “to safeguard mineral resources as far as possible”, paragraph 9, Minerals Planning Statement 1 (MPS1). It is important therefore that economically important minerals in the Region are not needlessly sterilised by surface development.

2.1.2 National Policy Context

Safeguarding is a process necessary to ensure that natural resources are not needlessly sterilised by other forms of development, leaving insufficient supplies for future generations. It also applies to the infrastructure needed to support the supply and distribution of minerals in an area such as rail depots and wharves. It also involves trying to avoid the location of incompatible development next to planned, potential and existing mineral development sites and facilities including local, regional and national infrastructure.

Paragraph 32 of the Practice Guide which accompanies Mineral Planning Statement 1 “Planning and Minerals” says that “ The planning system has an important role to play in safeguarding proven deposits of minerals which are, or may become, of economic importance within the foreseeable future, from unnecessary sterilisation by surface development.”

Paragraph 9 of MPS1 sets out the national objectives for minerals planning and these include:

- to safeguard mineral resources as far as possible ;
- To promote the sustainable transport of minerals by rail, sea or inland waterways.

Paragraph 10 requires the Regional Planning Body to carry out its functions in accordance with a number of national policies one of which is safeguarding.

Paragraph 13 sets out the required policies to be applied and includes defining mineral safeguarding areas, encouraging the prior extraction of minerals and safeguarding existing, planned and potential facilities/sites for the bulk transport of minerals and for the manufacture of minerals related products and alternate sources of materials for construction purposes.

In October 2007 the British Geological Survey published “A guide to mineral safeguarding in England “, to provide information, advice and guidance to MPAs and RPBs on how the national policy can be complied with.

The main tools for complying with national policy are the designation of mineral safeguarding areas (MSAs) and mineral consultation areas, formulation of policies and the development of a policy framework for managing the process. The document provides guidance on the use and purpose of MSAs, and a step by step methodology for delineating MSAs together with examples of policies for operating the safeguarding process.

There is no specific guidance on the process or tools required for safeguarding the necessary infrastructure required by the minerals industry to maintain supplies of minerals for society. General guidance is set out in paragraphs 34 and 35 in the Practice Guide and this deal with the identification of sites and facilities and the need to avoid constraining the future use of such sites by locating sensitive development nearby such as housing.

Information on mineral resources is published or held by the British Geological Survey, or held by mineral planning authorities as part of their statutory duties or made available by the industry. In making decisions on defining MSAs it is important to use the best geological and minerals resource information available.

The marked differences in the geological occurrences, properties, markets and supply and demand for minerals give rise to different land use implications and safeguarding considerations and this need to be taken into account when looking at the MSA for an individual mineral resource.

2.1.3 Regional Policy Context

Policy M1 in the current RSS and draft revised RSS (phase 2) require safeguarding of resources and sites/facilities to be secured through local development plans:

- By identifying the resources needed to maintain appropriate levels of planned and future supplies (Bi);
- By identifying and safeguarding opportunities for the transportation of minerals (Biv) and;
- By including policies to safeguard mineral resources from other forms of development (Bv).

However the existing RSS does not specifically define which regionally important minerals and infrastructure needs to be safeguarded and the mechanisms for delivering those requirements. It also does not define how Mineral Planning Authorities should safeguard mineral resources from other forms of development.

It does not recognise the potential for different responses in different areas such as in rural and urban areas and that the working and distribution of the various minerals in the region may have differing policy requirements which need to be taken into account.

2.1.4 Mineral Resources

Most of the mineral resource information in the West Midlands is held by the British Geological Survey and The Coal Authority. Industry makes information available through the planning process and MPAs hold information acquired/provided as part of their statutory duties however much of this is provided on a confidential basis.

The information held by the BGS comes in the form of Geological Maps and memoirs, resource assessments and studies and borehole information. Much of the information is now held electronically and can be accessed through their websites. In the 1990's the former DETR and the BGS published "Mineral Resource Information for Development Plans" for all the shire counties and one map covering the West Midlands conurbation. These documents provided a summary of mineral resource information on a map at a scale of 1:100,000 together with a Technical report. These plans were brought together as a region wide map which informed the preparation of the former RPG now RSS for the region.

The Coal Authority has produced consultation maps for use by MPAs and with the BGS produced a 1:1500,000 Coal Resources Map of Britain. The latter provides information on the various coalfields in the region and the coal resources in those areas are categorised by reference to the depth from the land surface to the coal.

The BGS and the DTI published a Mining and New Technologies Summary Map at scales of 1:175,000 and 1:600,000 to identify areas which are suitable for future exploitation of coal. The technologies covered include underground and opencast coal mining, coal and abandoned mine methane extraction, underground coal gasification, coal bed methane and the potential for carbon dioxide sequestration.

The data used to produce the resource maps can be of variable quality and very age dependent. However, in the absence of more detailed information they provide a useful mineral resource base for mineral planning purposes.

2.1.5 Regionally Important Minerals in the West Midlands

Minerals can only be extracted where they occur but the UK is fortunate in being relatively well endowed with a wide range of minerals that can be worked profitably.

The existing RSS lists Etruria marl, gypsum, silica sand and limestone used to produce cement as nationally important. Some minerals are of regional significance such as building stone, brick shale and fireclay. There are significant reserves of aggregates, building stone, shale, coal and other clays including fireclays in the region.

The continuity of supply of these indigenous minerals is dependent on four main factors:

- availability of resources- this is dependent on geology
- economic viability
- Is there a market demand.
- Access to resources – includes securing agreements with the mineral owner and gaining approvals, consents and planning permission.

Resource availability is dependent not only on geological and geographical distribution but also the grade or quality of the resource. For example high quality silica sand resources that meet the demanding specifications of the colourless glass industry are relatively scarce and certain premium brick clay resources ,such as the Etruria Formation, are also of limited extent.

The production of these minerals can support key industries such as the construction and brick making industries in the West Midlands. In determining which minerals are important in the Region for environmental, economic and social development consideration needs to be given to:

- the available resources including rock types in the region
- the scarcity of the resource
- the value to the regional and local economy
- geological/geographical distribution

Etruria marl is only present in specific locations and to a limited extent in Staffordshire and Walsall. There are 17 brickworks in the region dependent upon clay resources both within and outside the region. There are only very limited outcrops of building stone (mainly in sandstone formations) in Staffordshire, Shropshire, Worcestershire and Warwickshire. There are extensive reserves of coal across the region but there is now only one deep mine working at Daw Mill. Shale and limestone is used to produce cement at Rugby and Cauldon in Staffordshire. Gypsum is only mined at Fauld in Staffordshire but there are extensive reserves of aggregates across the region in the form of crushed rock (igneous and limestone) and sand and gravel (including bedrock) and silica sandstone. Finally there are fireclay seams within the coal resources but they are only mined in one location at present in Shropshire. Fireclay is important for the manufacture of bricks particularly buff facing bricks.

Regional planning policy should not repeat or reformulate national policy therefore it should be regionally distinctive and add value to the RSS. Since there is no requirement to safeguard coal resources in MPG3 and there is existing national planning policy guidance covering limestone/shale for cement (MPG10), silica sand (MPG15) there is no

need to require specific safeguarding of these minerals at the regional level. Gypsum is located in a very specific area and its future protection can be addressed by local safeguarding.

Those minerals which are considered to be of importance to the economy and development needs of the region are:

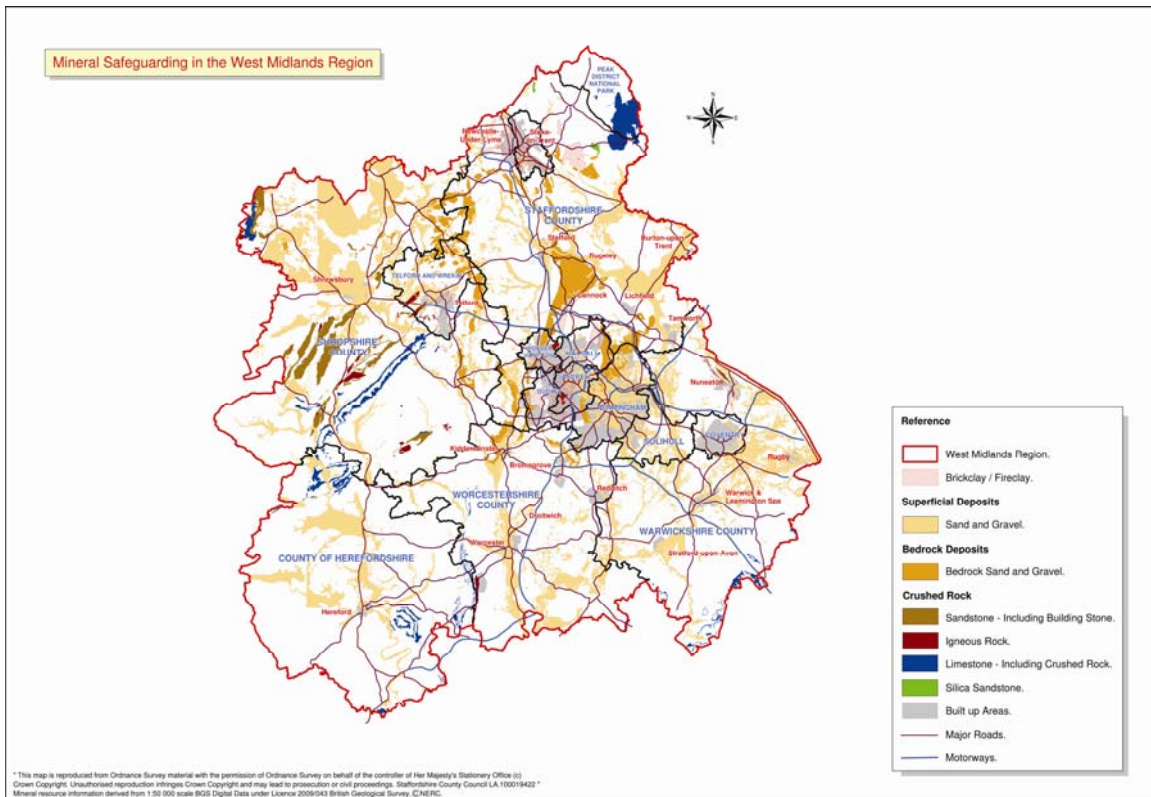
- brick clays and fireclays – the brick making industry and new housing and built development, employment and security of supply for other downstream markets:
- aggregates – new housing, built development and infrastructure provision, employment and security of supply for the local market:
- Natural building and roofing stone – maintain regional distinctiveness and for us in maintaining the historic environment.

The requirements for new housing, built development and infrastructure are based on the new housing figures produced for the Submitted Phase 2 revision to the RSS together with the other employment and infrastructure requirements to support the level of growth in the region.

The distribution of brick works across the region reflects the occurrence of mineral resources for brick making and the accessibility of the various sites to other producing areas.

The occurrence of these minerals is shown on the map below which is based on an assessment of:

- The quality and age of the mineral resource data informed by any local information which is available;
- the importance of regional distinctive parameters for refining the line work used to produce the mapped resources;
- The information made available by the minerals industry.



If the West Midlands is to ensure that indigenous mineral resources are not needlessly sterilised it needs to put in place a policy framework to identify the important mineral resources to be safeguarded, define the regional mechanisms to secure effective safeguarding and manage the overall process.

Failure to properly manage this process will have implications for securing and maintaining supplies of indigenous mineral resources for the region (its citizens and the local economy) and ensuring that future generations have supplies available to meet their future needs. A long term view needs to be taken of the mineral resources and infrastructure that need to be safeguarded and for this to be embedded in spatial plans across the region.

The population of the West Midlands is forecast to increase significantly. This increase will create additional demand for minerals and competition for land. The location of many mineral resources coincides with environmental and nature conservation designations such as Areas of Outstanding Natural Beauty and Special Areas of Conservation. The cumulative impact of this could be to restrict future development options for mineral development and supply.

In order to avoid regionally important mineral resources being needlessly sterilised by non-mineral development policies will need to address the following matters:

- the need for a consistent approach to be taken to avoid the sterilisation of regionally important minerals

- The maintenance of mineral production from existing and planned mineral sites and the continued operation of mineral related infrastructure by strictly limiting encroachment by non-mineral development.
- The prior extraction of minerals where practical and environmentally acceptable before non mineral development takes place.
- The need to refer regionally significant non mineral development planning applications to the Regional Planning Body to consider general conformity with the RSS. Thresholds will need to be set on the level of referral and consideration given to only developments which fall within the mapped resources areas defined on the above map.
- To protect existing planned and potential facilities/sites for the bulk transport of minerals and for the manufacture of mineral related products and alternate sources of materials for construction purposes.

To ensure that the policies are being complied with consistently across the region:

- Mineral Planning Authorities will need to define Mineral Consultation Areas where they are to be consulted by local Councils on planning proposals for non-mineral development.
- Mineral Planning Authorities will need to record in the Annual Monitoring Report the number of planning applications for non-mineral development on which they were consulted and where objections and no objections were raised on mineral safeguarding grounds

2.2 Minerals Infrastructure

2.2.1 National Policy Context

Paragraph 13 of MPS1, sets out the need to safeguard existing, planned and potential rail heads, wharfrage and associated facilities for the bulk transport by rail or inland waterways of minerals. It also requires the need to identify future sites and for these to be reflected in LDDs of district councils in two-tier planning areas. District Councils in these areas should not normally permit other development proposals near such safeguarded sites where they might constrain future use for these purposes. Existing, planned and potential sites for rail and water served mineral related products and recycled materials also need to be safeguarded. Where appropriate future sites for these uses should be identified and reflected in District Council LDDs.

2.2.2 Regional Policy Context

Policy M1 in the existing RSS requires the identification and safeguarding of opportunities for the transportation of minerals by rail or water, including the maintenance of existing, and the provision of new rail head facilities. The draft Phase 2 revision of RSS Policy T10 requires plans and strategies to improve the efficiency of freight movement by safeguarding existing and disused railway lines and sidings which could be used for rail traffic in the future and to encourage the use of rail and inland waterways for freight.

There is a water-borne mineral transportation facility operating in the region and that is located on the River Severn in Worcestershire. There are three sites (one in Sandwell and two in Birmingham) providing for the rail transportation of mineral related products, two sites (Shrewsbury and in Herefordshire) providing for the transportation of aggregates by rail and two sites with permission (Staffordshire) which are rail connected but have not been developed to transport materials by rail.

If the impact of the transportation of minerals by road in the region is to be minimised then it will be important to encourage the use of other modes of transportation to move materials around the region and to promote local sourcing of materials for construction purposes. This could be achieved by:

- identifying sites and facilities of regional importance for the transportation of minerals and mineral related products
- Formulating policies to safeguard these sites and facilities by ensuring they have capacity to expand and are not constrained by other forms of development.
- Requiring all major proposals for the extraction of minerals and manufacture of mineral related products to be accompanied by a Transport Impact Assessment which would include an examination of the potential to transport the materials to the market by other modes of transportation.
- Requiring all major proposals for the extraction of minerals and manufacture of mineral related products to be accompanied by details of efforts to source locally the demand for construction materials as a contribution towards Climate Change.

2.3 Aggregates

2.3.1 RSS Revision Objective

The RSS Revision Objective is to examine and produce new sub-regional apportionments for the period 2007-2026.

The reason for the revision is that construction aggregates (sand and gravel and crushed rock) are essential to built development, other construction and maintenance of infrastructure (e.g. roads, flood defences) and are therefore essential to delivering growth and Urban and Rural Renaissance in the West Midlands

2.3.2 National Policy Context

Aggregates supply is, by far, the largest minerals sector in England at about 153 million tonnes per annum consisting of about 86mt of crushed rock, 62mt of land won sand and gravel, and 12mt of marine dredged sand and gravel in 2004. These construction materials are essential to built development, other construction, and maintenance of infrastructure (e.g. roads, flood defences) and are therefore essential to delivering growth and regeneration.

Minerals Policy Statement 1 (paragraph 15) sets out the national policies for the supply of minerals in England. These policies include the need to identify at the regional level,

those minerals which are of national and regional significance, to try and source mineral supplies indigenously and to provide for the maintenance of landbanks for non –energy minerals as far as practicable from outside National Parks and Areas of Outstanding Natural Beauty.

Annex 1 to MPS1 explains that the term “aggregates” includes land won sand and gravel and crushed rock and alternatives including recycled materials supplied or used as aggregates.

Paragraph 2.1 in the Annex sets out the specific policy objectives for aggregates which are:

- to encourage the use, where practicable, of alternative aggregates in preference to primary aggregates;
- to encourage the supply of marine-dredged sand and gravel to the extent that environmentally acceptable sources can be identified and exploited, within the principles of sustainable development;
- To make provision for the remainder of supply to be met from land won sand and gravel and crushed rock.

The Government publishes at intervals National and Regional Guidelines for Aggregates Provision in England. These are intended to assist with the preparation of regional and local plans and strategies so that they can address the geographical imbalances between the supply of, and demand for, aggregates at the national level. These imbalances lead to the need to maintain a mixture of sites that variously contribute to meeting local, regional or national demands. The Regional Guidelines are then apportioned to the local authority level by the Regional Planning Body through the RSS process. The RPB receives technical advice from the West Midlands Regional Aggregates Working Party on the preparation of the sub regional (or local) apportionments.

In June 2003 the Government published the National and Regional Guidelines for Aggregates Provision 2001- 2016 and this sets out the aggregates provision to be made by the West Midlands. It identified a need for 255 million tonnes of aggregates materials to be provided from primary land won sources and an additional 104 million tonnes from other sources including imports and alternative materials (secondary and recycled aggregates).

The Government published for consultation purposes draft revised National and Regional Guidelines for Aggregates Provision in England for the period 2005-2020 in April 2008. The consultation period closed on 27th June 2008. A final set of revised guidelines is likely to be published in autumn 2009. The draft guidelines identify a need to provide 247million tonnes from land won sources and an additional 123 million tonnes from other sources.

2.3.3 Regional Context

In 2005 over 9.1 million tonnes of land won sand and gravel was sold in the West Midlands which represented over 15% of the national sales making it with the East

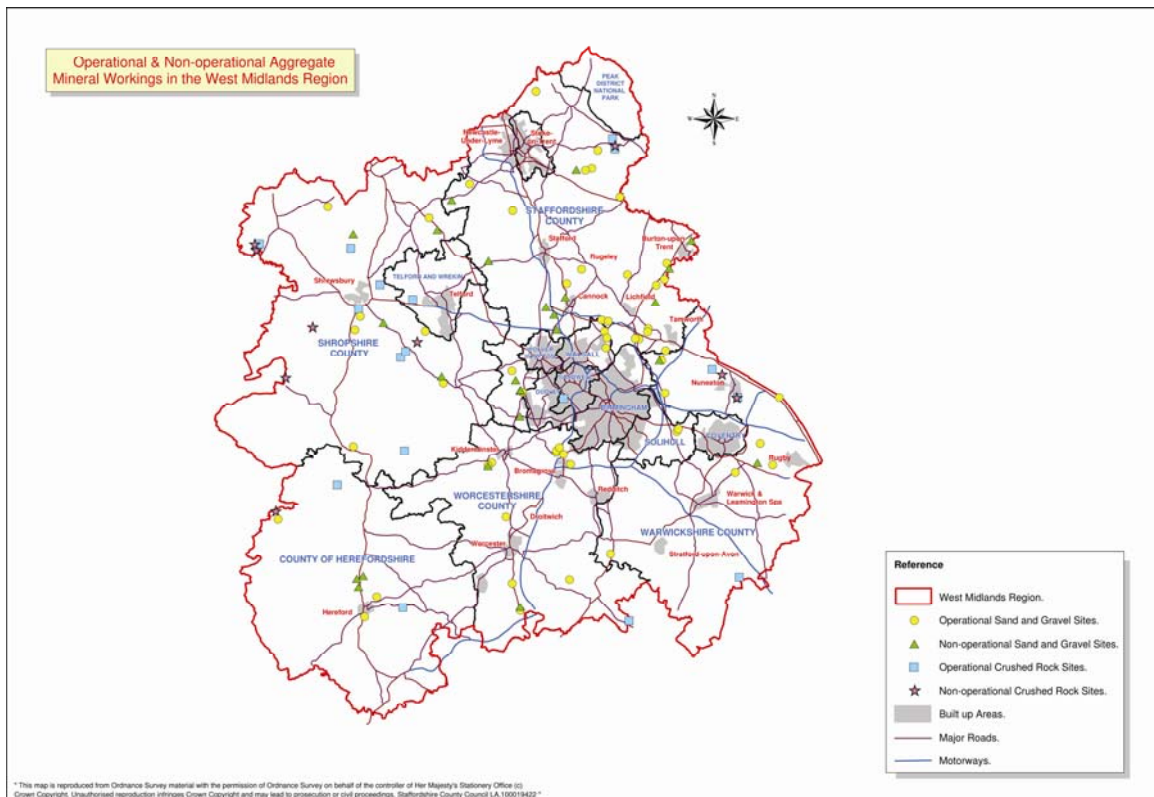
Midlands the second largest producer after the East of England. The region provided over 5% of the crushed rock sales making a modest contribution to the national picture.

The sales of aggregates and the level of permitted reserves in the aggregates sites in the region are monitored each year by West Midlands Regional Aggregates Working Party. The latest Annual Report 2006 reports that the total sales for sand and gravel in the region increased by over 9% to 9.99mt from the 2005 figures but is still less than the total apportionment of 10.125million tonnes set out in the existing RSS.

The level of permitted reserves of sand and gravel in the West Midlands continues to show a steady decline from 133.85mt in 2005 to 123.8mt in 2006. The land bank for sand and gravel is below the national guidelines of at least 7 years in three sub-regions and well above the requirements in the remaining 3 sub-regions.

Sales of crushed rock continue to show an overall fall in the West Midlands and permitted reserves have declined slightly from 2005 levels to 298 million tonnes. The land bank for crushed rock remains healthy and well above national guidelines of at least 10years.

The total level of aggregates sold in the West Midlands in 2006 was therefore 14.29mt up from 13.6mt in 2005. A map showing the location of the aggregates sites in the West Midlands is set out below:



However not all the material produced and sold in the region is consumed in the West Midlands. Based on the most recent information (AM2005 Collation) 87% of the sales

were consumed in the West Midlands. As a whole the West Midlands consumed 17.827mt of aggregates in 2005 of which 33% were imports. Of that 33% ninety three percent was crushed rock imported from other regions and Wales.

The AM2005 Collation also reveals that some 54% of the sales were used to produce concrete aggregates and over 20% of road stone for use in building, repairing and maintenance of highways in the region.

Policy M1 in the existing RSS requires appropriate provision to be made for minerals taking account of the provision made for aggregates in Policy M2. Policy M2 sets out the local or sub regional annual apportionment over the period 2001- 2016 and this is set out below:

	S&G	CR (2001-05)	CR (2006-16)
<i>Hereford</i>	0.283	0.424	0.424
<i>Worcestershire</i>	0.871	0.163	0.163
<i>Shropshire</i>	0.820	2.662	2.949
<i>Staffordshire</i>	6.602	1.395	1.395
<i>Warwickshire</i>	1.043	0.593	0.88
<i>West Midlands County</i>	0.506	0.575	0
<i>Totals</i>	10.125	5.812	5.812
<i>(Total over the Guideline Period. x 16years)</i>	(162)	(93)	

If the figures set out in the draft revised National and Regional guidelines published in April 2008 are used to prepare a draft revised local apportionment based on the same sub-regions and the same methodology and then rolled forward by 6 years to cover the period up to 2026 then the new apportionment could look as follows:

Table 1: Apportionment of the Regional Guidelines 2005-2026 (million tonnes) by existing sub-regions

	Annual Apportionment	Annual Apportionment
	Sand & Gravel	Crushed Rock
Herefordshire	0.308	0.398
Worcestershire	0.946	0.153
Shropshire	0.891	2.77
Staffordshire	7.172	1.31
Warwickshire	1.133	0.827
West Midlands County	0.55	0
Regional Total	11	5.46

Regional Total 2005-2020	165	82
Additional Requirement 2020-2026	+66	+32.76
Regional Total 2005-2026	231	114.76

In the AM 2005 Collation the sub-regions are defined as follows:

1. Shropshire and Telford/Staffordshire and Stoke on Trent.
2. Solihull, Coventry and Warwickshire
3. Herefordshire and Worcestershire
4. The Remainder of the West Midlands (Wolverhampton, Dudley, Walsall, Sandwell and Birmingham).

Following a request for advice from the Section 4(4) authorities the following suggestions were made about amendments to the existing sub regions:

Existing	As proposed by S.4(4) Authorities
<ul style="list-style-type: none"> • Herefordshire • Worcestershire • Shropshire (inc. Telford) • Staffordshire (inc. Stoke) • Warwickshire • West Midlands County 	<ul style="list-style-type: none"> • Staffordshire/Stoke and Walsall • Coventry, Solihull and Warwickshire • Worcestershire • Herefordshire • Shropshire • Telford and Wrekin • West Midlands (Wolverhampton, Dudley, Sandwell, Birmingham)

If the proposed sub regions were introduced then the following apportionment may arise:

	Annual Apportionment	Annual Apportionment
	Sand & Gravel	Crushed Rock
Herefordshire	0.308	0.398
Worcestershire	0.946	0.153
Shropshire	0.784	2.437
Staffordshire/Walsall	7.452	1.31
Coventry, Solihull and Warwickshire	1.403	0.827
West Midlands County	0	0
Telford and Wrekin	0.107	0.333
Regional Total	11	5.46
Regional Total 2005-2020	165	82
Additional Requirement 2020-2026	+66	+32.76
Regional Total 2005-2026	231	114.76

2.4 Contribution of Alternate Materials to Future Supply

The Government's draft regional provision includes a requirement to provide 100 million tonnes of alternative materials over the period 2005-2020 (a 16 year period). This is an increase in the contribution towards total aggregates provision from 24% to 27% and an increase of 15% for the annual requirement in the region – 5.5 million to 6.25 million tonnes.

Policy W9 in the revised draft WMRSS (Phase 2) requires new sites for facilities to store, treat and recycle soils and construction and demolition waste to be provided and for more recycling through on site activities and purpose built facilities in urban areas.

The Survey of Arisings and Use of Alternatives to Primary Aggregates in England, 2005 (C, D and E wastes) indicates that 45% of the Construction, demolition and excavation wastes arisings in the region are recycled for aggregates.

An analysis of the data in the 2005 survey suggests that there is limited additional potential to recycle 'Hard C&D waste' (162ktpa); slightly more potential to recover aggregate materials from mixed construction, demolition & excavation wastes (CDEW: 197ktpa); and significant potential to recover additional aggregate materials from secondary sources (1,190ktpa). A substantial proportion of the latter potential is identified as being colliery spoil in Coventry, Solihull & Warwickshire.

However, the quality of the available data is not sufficiently robust to determine reliable geographical area based local apportionments for alternate materials.

If the increase in use of alternative materials is to be delivered better collection of data will be required and even more emphasis placed on reuse and recycling of on site materials particularly in the urban areas.

2.5 Brick and Fireclays

2.5.1 RSS Revision Objective

The Revision objective is to examine the supply of and demand for brick clays and ensure that appropriate provision is made in the Region.

The reason for the revision is that while brick clays are found in many parts of England only some are suitable for use in the manufacture of bricks, pipes and tiles, or for environmental and engineering uses. Some valuable clays (including fireclays) are nationally scarce and only occur in limited locations such as the specific outcrops within the West Midlands.

Security of supplies of clay over a period of 25 years is needed by operators to justify and secure the large level of investment required to set up, maintain and modernise existing brick making plant.

2.5.2 National Context

While brick clays are found in many parts of England only parts of specific geological formations have the physical and chemical properties suitable for use in the manufacture of bricks, pipes and tiles, or for environmental and engineering uses. Some particularly valuable clays are nationally scarce, for example clays of the Etruria Formation and fireclay. The Etruria Formation occurs in a limited number of locations mainly in Staffordshire and other parts of the West Midlands. The outcrop area of this clay is very limited. Demand for brick clays nationally has been fairly stable at 8 million tonnes per annum over recent years.

Fireclay is found in association with certain coal seams and is mainly secured from opencast coal workings in the West Midlands and the North of England. There are existing stockpiles of fireclays in the East Midlands which provide materials for brickworks in the West Midlands.

Paragraph 9 in MPS1 sets out the national objectives for mineral planning and the ancillary policy objectives for brick clay are set out in Annex 2 to MPS1 in paragraph 2.1:

- to maintain and enhance the diversity of brick clay produced by making appropriate provision for supply in Mineral Planning Authorities (MPA's) local development documents;
- to provide and make available brick clays at a level that reflects the high initial investment in, and high levels of capital expenditure required to maintain and improve, new and existing brick making plant and equipment; and
- To safeguard and where necessary, stockpile supplies of clays, especially specific "premium" brick clays such as those from the Etruria formation and fireclays.

2.5.3 Regional Policy Context

The policy framework for determining proposals for brick clay development is set out in Policy M1 in the existing RSS and the draft revised RSS.

There are no specific policies in the existing WMRSS relating to regional brick clay provision

In the West Midlands, the principal brick clay resource is the Etruria formation and the main outcrops occur in Staffordshire. Nationally, the Etruria formation covers only 1% of the total outcrop area of the brick clay resources. Despite the small size of the outcrop it is a very important brick clay resource and is covered by planning permissions over 9% of its area. However, 35.3% of the resource is sterilised by urban development. This resource of premium quality clay has a relatively small and fragmented outcrop which is almost exclusively in an area with a high population density.

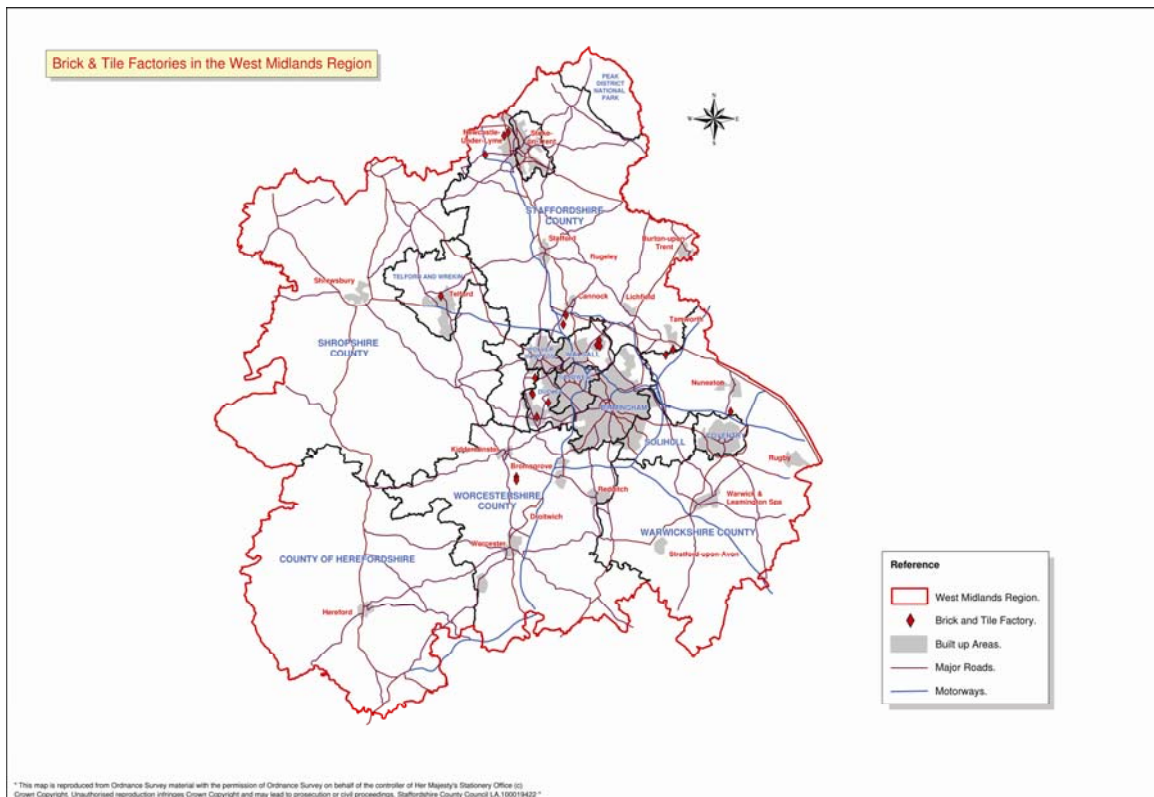
The largest users of clay are the brick industry in the West Midlands reflecting the concentration of working around the West Midlands conurbation and Stoke on Trent.

The Phase 2 revision to the WMRSS (up to 2026) proposes major new housing development across the region. The demand for bricks primarily reflects activity in the house building sector, although bricks are being used for other forms of development. An average three bedroom house requires some 8,500 bricks (25 tonnes of clay) in its construction.

In 2007 the West Midlands delivered some 589million bricks some 25% of the national total making it the highest producer of all the 8 regions. The average delivery of bricks by the region over the 11years between 1997 and 2007 was 586 million and deliveries peaked in 2003 at 629 million. The majority of these bricks were commons (facings) and engineering bricks. The West Midlands produced 12,562 million commons in 2007 making it the 5th highest producer out of the 8 regions reflecting the quality of the local resources.

Paragraph 3.4 in Annex 2 to MPS1 requires MPA's to provide a stock of permitted reserves normally sufficient for 25 years of production at new and existing manufacturing plant.

In the region there are 18 (only figures for 17 are available) brickworks and tileries which need future supplies of clays and of these one has yet to be built. A map showing the location of the various plant in the region is set out below:



Up to 31 December 2007 the 16 operational brickworks/tileries consumed 1.925 Million tonnes of clay from within the region and 107,000 tonnes of fireclay giving a Total consumption figure for the region of 2,132 million tonnes.

One of the brickworks is wholly dependent upon imports from within the region.

There are 33 clay quarries in the West Midlands of which 14 are non-operational.

One clay quarry exports materials to a site in the East Midlands.

To provide each of the 16 brickworks/tileries with supplies of clay sufficient for 25 years production will require annual clay resources of 2.102 million tonnes to be made available from the region. The total level of consumption by the 16 brickworks/tileries across the region for the next 25 years is calculated at 52.55 million tonnes. However, the quarries supplying the brickworks/tileries have only permitted reserves of 39.57 million tonnes leaving a shortfall of 12.98 million tonnes.

Of the 16 brickworks/tileries 7 have sufficient supplies of clay available to them to sustain production for 25 years (see Table 1).

Five of the 16 brickworks/tileries imports fireclays from within the region. Assuming that those brickworks/tileries consume the current rate of fireclay over 25 years, then 2.675 million tonnes will be required. Based on information supplied by the industry the various operators have reserves of 0.888 million tonnes leaving a shortfall of 1.787 million tonnes.

TABLE 1: BRICKWORKS/TILERIES IN THE REGION

Authority	No. of Brickworks/Tileries	Brickworks/Tileries with 25 years supply of clay	Brickworks/Tileries with less than 25 years supply of clay
Staffordshire	7* ¹	3	4
Telford	1	1	-
Dudley	3	-	3
Walsall	3	1	2
Worcestershire	2	2	-
Warwickshire	2* ²	-	1
	Total 17	Total 7	Total 10

*1 Includes one not yet built

*2 Data only available from one site

In summary in the region there are 18 brickworks and tileries which need future supplies of clay, but only 17 are currently operational. Of the 17 brickworks/tileries data is only

currently available for 16 and those 16 will require annual clay resources of 2.102 million tonnes in total to be made available during the period of the RSS.

Seven of the brickworks/tileries have sufficient supplies of clay available to them to sustain production for 25 years. In order to meet the needs of the remaining 9 facilities an additional 13 million tonnes of clay needs to be made accessible and available to the industry over the plan period.

2.5.4 Future Supply Options

The clay resource requirement could be met by the following means:-

- appropriate provision in LDF's within and/or outside the region and subsequent planning permission being granted;
- specific sites falling outside allocations being granted planning permission;
- prior extraction of minerals where practical and environmentally acceptable from non-mineral development;
- Planning permission being granted for off site strategic stockpiles of materials.
- The MPA's in the region with clay resources could make provision to meet the regional shortfall in resources over the plan period.

In order to ensure that the growth in new housing development in the region is delivered, MPA's could be required individually and/or collectively to work together to maintain resource support for all the new/existing brickworks/tileries in the region.

The level of new housing development may increase pressure on the remaining outcrops of clay resources in the region leading to possible sterilisation of valuable minerals. Prior extraction of minerals is a means of preventing sterilisation but that will be dependent upon practical and environmentally acceptable schemes of working coming forward from developers working in close liaison with the brick and mineral operators.

With some manufacturing plant having limited on site storage available there will be a need for off site storage facilities to be identified and secured and operated by the brick industry. The creation of strategic stockpiles across the region especially in the MUA's offers the opportunity to prevent sterilisation and maintain supplies to the brick industry over the medium to long term. **MPAs in the MUAs should therefore identify sites where strategic stockpiles of clays can be developed**

2.5.5 Fireclays

Paragraph 16 of MPG3 sets out the national policy context for facilitating the efficient and economic working of other mineral deposits when extracting coal from a site and this includes fireclays.

Fireclays are derived from coal measures, although almost exclusively as a by-product of opencast coal extraction. Although comprising less than 7 per cent of total consumption, these are important premium quality clays which are used in relatively high value buff brick products manufactured at sites across the Midlands.

The West Midlands is a net importer of fireclays with 65% being imported from the Durham and Leicestershire/South Derbyshire coalfields. If indigenous resources of fireclay can be fully utilised then they can play an important part in maintaining the supply of raw materials to the regional brick industry.

Paragraph 3.4 of Annex 2 to MPS1 says that:

“Where scarce reserves of Etruria Formulation clays or fireclays cannot be used when extracted, consideration should be given to the potential for stockpiling the material on an environmentally acceptable site, either on or in the ground, until it is needed. Proper account should be taken of the environmental impacts that are associated with stockpiling sites when considering whether these should be provided.”

As with brick clays the creation of strategic stockpiles of fireclays offers the opportunity to avoid the permanent sterilisation of these valuable minerals and to provide medium to long term supplies. MPAs should investigate the opportunities to identify locations in these areas where fireclay stockpiling can be carried out and develop policies to ensure that fireclays that are released during the working of other minerals are protected for long term future use by the regional brick industry.

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3. Reference

1. MPS1 "Minerals and Planning" together with the Practice Guide
2. Brick Clays : Issues for Planning
3. The Economic Importance of Minerals in the UK. (ODPM 2004)
4. Minerals Planning Fact sheets - Brick Clays and Fireclays. (BGS)
5. MPG3 Coal Mining and Colliery Spoil Disposal

This document forms part of a suite of material:

- 1 RSS Phase Three - Options Consultation Document
- 2 Rural Renaissance - Critical Rural Services Background Paper
- 3 Communities for the Future - Gypsies, Travellers and Travelling Showpeople Background Paper
- 4 Culture, Sport and Tourism Background Paper
- 5 Quality of the Environment Background Paper
- 6 Minerals Background Paper**

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