

**Leeds Local Development Framework
Natural Resources and Waste Development Plan Document**

Minerals Topic Paper

Final

October 2010

Minerals Topic Paper

SUMMARY

This minerals topic paper provides the basis for supporting the minerals strategy in the Natural Resources and Waste Development Plan Document (NRWDPD). It is a linking document between the NRWDPD submission and the detailed supporting evidence the strategy and policies are based on. The topic paper sets out how Leeds must plan for minerals over the plan period (upto 2026).

An analysis of the current mineral resources available is provided, and the targets for recycling of aggregates and the minerals set out.

Overall the NRWDPD provides for Leeds to manage current mineral reserves and safeguard future resources where practical. The plan sets out to encourage recycling of mineral resources where possible to mitigate demand on primary resource extraction:

- **Support recycling measures to reduce pressure on resources.**
- **Create Mineral Safeguarding Areas to prevent sterilisation of resources that would stop them being used in the future.**
- **Safeguard existing mineral extraction sites to ensure supply.**
- **Identify preferences for where future mineral activities should take place.**
- **Identify how to sustainably manage mineral extraction sites.**
- **Support the sustainable transport of minerals.**

Definitions and Glossary - A glossary is provided in the main Submission report covering the terms used within this Topic Paper.

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1.0 Introduction

- 1.1 As the Mineral Planning Authority (MPA), Leeds City Council has a responsibility to prepare planning policies for the provision of minerals within the district. The purpose of this topic paper is to provide an introduction to minerals planning in Leeds.
- 1.2 Using the most up to date information drawn from a number of sources including the Annual Monitoring Reports¹ and British Geological Survey Maps² this paper seeks to explore the issues surrounding planning for minerals development. References to information sources are given as footnotes throughout the paper.
- 1.3 The paper takes as its starting point the national, regional and local policy context for minerals planning. It then goes on to provide an overview of individual mineral types within the district, where they are to be found and their importance in economic terms.
- 1.4 Minerals are a finite resource and can only be worked where they arise. The extraction and processing of minerals can be detrimental to social, economic and environmental conditions therefore it is essential that a balance is achieved between the need for minerals and the need to protect and preserve both the mineral resource and the environment. This topic paper sets out the factors and issues that will shape how minerals policies for Leeds are to be developed.

2.0 National, Regional and Local Policy Context

2.1 National Guidance

- 2.1.1 National policy relating to mineral planning is set out in a series of Mineral Planning Guidance notes (MPGs) and Statements (MPSs). The most important of these are MPS 1: Planning and Minerals 3 and the accompanying Practice Guide. The key objective of national policy is to ensure the prudent, efficient and sustainable use of mineral resources. It seeks to ensure closer integration of minerals planning policy with national policy on sustainable construction and waste management and other applicable legislation for the protection of the environment. This necessitates the steady provision of an adequate supply of minerals within the environmental limits of the district.
- 2.1.2 Based on the best available information MPAs must identify Mineral Safeguarding Areas (MSAs) to protect proven resources and to alert non-mineral developers to the presence of valuable mineral resources. Wherever possible MPAs should encourage the prior extraction of minerals in order to prevent sterilisation by other forms of development.
- 2.1.3 In addition to MPS1 there are two further key guidance documents. These are the *National and Regional Guidelines for Aggregates Provision in England 2005 – 2020*⁴ and *A Guide to Mineral Safeguarding in England*⁵. These two papers set out how MPAs should incorporate the key aspects

¹ Yorkshire and Humber Region Aggregates Working Party Annual Report 2008 Aggregates Monitoring 2008

² British Geological Survey Maps, England & Wales, Sheets 70 Leeds, 69 Bradford, 77 Huddersfield & 78 Wakefield

³ Minerals Policy Statement MPS1: Planning and Minerals (DCLG; November 2006) and the accompanying Practice Guide (DCLG; November 2006)

⁴ National and Regional Guidelines for Aggregates Provision in England 2005 – 2020

⁵ A Guide to Mineral Safeguarding in England (British Geological Survey October 2007)

of national policy into their own development plans. Different mineral types are covered in detail later in this paper.

2.2 Regional Policy Context

2.2.1 Notwithstanding recent legislative changes (May 2010) specifying that Regional Spatial Strategies (RSSs) are no longer to be regarded as a material consideration, the *Yorkshire and Humber Plan – Regional Spatial Strategy to 2026*⁶ translated national minerals policy into a regional context. It supported the key objectives of national minerals policy and provided guidance for regional and sub-regional levels of aggregate provision.

2.2.2 These levels are based on the work of the Yorkshire and Humber Regional Aggregate Working Party (YHRAWP), a body made up of representatives from MPAs and the minerals industry. This group is responsible for producing annual monitoring reports detailing levels of aggregate production and reserves for the region. The supporting background information relating to the required levels of provision at sub regional level produced for the RSS therefore remains the most relevant and up to date information relating to the provision of aggregates in the Leeds district and is discussed in more detail in Section 4 of this topic paper.

2.3 Local Policy Context

2.3.1 At local level, the current development plan containing specific policies relating to minerals within the Leeds district is the Unitary Development Plan (UDP). This was originally prepared and adopted in 2001 and subsequently reviewed in 2006.⁷

2.3.2 In 2007 the Secretary of State put in place provisions to ensure that policies remained valid during the transition period from the adopted UDP, through the preparation of individual elements of the Local Development Framework (LDF). Minerals policies carried forward in the UDP Review have been saved by the Secretary of State's Direction and remain in force until such time as they are succeeded by the policies within the Core Strategy and the NRWDPD.

3.0 Context and Characteristics

3.1 Underlying Geology

3.1.1 The Leeds Mineral Resource Map (Figure 2.2 NRWDPD Publication Document) depicts the economic geology present within the Leeds District and where strata have been worked over part of their extent in the past. Whilst Leeds has limited mineral resources which are of high economic value, it does have extensive resources which are of more modest value in economic terms.

3.1.2 Also shown on Fig 2.2 are gravels, sandstone, coal and various clays have been worked very extensively in the past but only a few active extraction sites remain. There have also been quarries, usually small in scale, which exploited very local sandstones and clays in the uncoloured area of the Mineral Resource Map.

⁶ The Yorkshire and Humber Plan – Regional Spatial Strategy to 2026; CLG/GOYH May 2008

⁷ Leeds Unitary Development Plan Review 2006

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- 3.1.3 Sand and gravel, coal, sandstone, limestone and clays continue to be worked in the Leeds district. Although the aggregate produced is not of sufficient quality for road building or wide use in concrete, significant added value is very often achieved by working processes such as brickmaking and stone sawing in particular.
- 3.1.4 Magnesian Limestone - Although extensive over the eastern quarter of the district this is generally of low quality and is unsuitable for most aggregate uses. However there are discrete horizons within the succession which are suitable for building stone.
- 3.1.5 Sandstone – Within the district the Thornhill Rock, Stanningley Rock, Elland Flags, Rough Rock, Woodhouse Grit, Guiseley Grit, Carlton Grit and Bramhope Grit strata all contain areas of proven economic deposits. These are primarily at or near to existing or recently worked quarries although it should be noted that there are no active quarries in the extensive Elland Flags/ Stanningley Rock Series. Both aggregate and building stone can be produced from these resources though the former is not suitable for most concreting use or as roadstone. The variability of the strata means it is not possible to identify new proven deposits without detailed surveying and costly feasibility studies.
- 3.1.6 Clay – Various shales, mudstones and clays including valuable fireclay occur extensively within the coal measure series within Leeds. However there are no specifically identifiable geological horizons of specific economic value.
- 3.1.7 Sand and Gravel – Mapped deposits of alluvial sand and gravels are extensive within the Wharfe valley in Leeds, the Aire valley and around the confluence of the Rivers Aire and Calder. Through the City the alluvium has been completely built over and in much of the lower Aire valley the alluvium has been buried with colliery spoil or removed via the opencast working of coal. Nonetheless a significant resource remains around Methley and in most of the Wharfe valley (see Fig 2.2 Publication document).
- 3.1.8 Surface Coal - The surface coalfield within Leeds is shown on Fig. 2.2 in the Publication document. Within this area seams of coal can sometimes lie just beneath the soil, or much deeper, depending on the local geology. Generally the likelihood of encountering economic amounts of surface coal increases from west to east and from north to south, but coal can be found in some surprising places; for example at Leeds Bradford Airport.

4.0 Key Issues

4.1 Ensuring an adequate and steady supply of minerals

Provision of Aggregates

- 4.1.1 The requirement for MPAs to secure an adequate and sustainable supply of minerals is outlined in national policy. To meet this policy objective, central government sets national and regional aggregates supply figures calculated over a 16 year period. The latest national figures were published in June 2009 for the period 2005 – 2020 inclusive.⁸ In general these figures represented a downwards revision in relation to landwon aggregates but increased the figure for alternative materials to 65 million tonnes per annum. The regional guidelines for Yorkshire and Humber for the period are 78 million tonnes of sand and gravel and 212 million tonnes crushed rock.

⁸ *National and Regional Guidelines for Aggregates Provision in England 2005 – 2020; CLG 2009*

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- 4.1.2 In addition to this MPAs are required to ensure that a sufficient stock or landbank of planning permissions is maintained to ensure steady supply of land won aggregates for a period of 7 years.
- 4.1.3 Regional figures are broken down or “apportioned” on a sub regional basis taking into account technical advice from the Yorkshire and Humber RAWP. The current sub - regional apportionment for West Yorkshire is 5.5 million tonnes of sand and gravel and 17.8 million tonnes of crushed rock for the specified period between 2001 to 2016⁹. This equates to a West Yorkshire apportionment of 0.34 million tonnes per annum of sand and gravel and 1.1 million tonnes per annum of crushed rock
- 4.1.4 Historically it has proved difficult to establish existing levels of sub-regional provision due to financial confidentiality constraints which are applied by the industry in West Yorkshire. However the Yorkshire and Humber RAWP Report indicates that total sales of primary aggregates in the region have been relatively consistent over the five year period to 2007, but fell in 2008 due to the downturn in economic conditions. The report identifies that in most areas within the region, including Leeds, the landbank for crushed rock remains well in excess of 10 years. With reserves of some 40 million tonnes identified at 31st December 2008. The landbank for crushed rock in West Yorkshire stands at 37 years.
- 4.1.5 In contrast, the landbank for sand and gravel is now below the required 7 year period. In West Yorkshire the landbank based on the sub regional apportionment of 0.34 million tonnes per annum, stood at 1.1 years at the end of 2008 and relied on the one active sand and gravel quarry in Leeds.
- 4.1.6 Enquiries made to other MPAs in West Yorkshire have revealed that although there are potential resources in the Upper and Lower Aire Valley and to the west and east of Ilkley in the Wharfe valley area of the Bradford District, these are heavily constrained and in Calderdale there are no sand and gravel resources remaining. In contrast Kirklees has five pockets of sand and gravel in the Calder Valley offering a potential yield of 6 million tonnes and Wakefield also has potentially several yielding sites.
- 4.1.7 Within Leeds there are areas within the Wharfe Valley between Otley and Boston Spa which could provide a yield in excess of 20 million tonnes although some of this area may well be constrained. There also a small resource at Rodley in the Aire Valley and a larger one at the confluence of the Aire and Calder valleys which could provide several million tonnes.
- 4.1.8 Consented reserves within the District are however relatively low with one active site at Methley where there is as little as 200 thousand tonnes remaining. There has been an expression of interest in extending this site, which could provide a significant contribution of over 2 million tonnes.
- 4.1.9 The Midgely Farm, site at Otley has formerly been identified as part of the Unitary Development Plan as an appropriate site for extraction of sand and gravel yielding some 1.6 million tonnes, However this allocation has not been taken up by industry.

Provision of recycled materials

- 4.1.10 The 2009 national and regional figures for the provision of aggregates were revised to take account of increased targets for the provision of alternative materials i.e. recycled materials and this is supported by the *Survey of Arisings and Use of Alternatives to Primary Aggregates in England*

⁹ Yorkshire and Humber Region Aggregates Working Party Annual Report 2008 Aggregates Monitoring 2008

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2005¹⁰. However, the report emphasises that although the national estimates appear reasonably robust, this is less true at local level because response rates were not high enough.

- 4.1.11 Regional and sub- regional figures are best estimates and there is considerable uncertainty attached to them. Leeds MPA is committed to reducing the amount of primary mineral used and recycling where possible mineral waste and other appropriate forms of waste such as Construction, Demolition and Excavation Wastes. This is addressed in detail in the Waste Topic Paper.¹¹

4.2 Mineral Safeguarding Areas

- 4.2.1 Minerals can only be extracted where they occur. Once permanent structures are built on ground that is known to have minerals beneath it the mineral is sterilised because it can no longer be extracted. To prevent this, national planning policy requires areas with key mineral deposits to be identified as Mineral Safeguarding Areas (MSAs). This designation is designed to protect the mineral and alert non mineral developers to the presence of this potentially valuable resource. It does not preclude non - mineral development, set aside land solely for the use of minerals development, or imply that planning permission for minerals development will be granted.

- 4.2.2 In some circumstances where built development is proposed it may be appropriate to encourage prior extraction of any resources where this is practicable. The MPA will need to identify MSAs for key minerals. These are listed below in mineral types and identified in the NRWDPD Publication Document, Map Book (Map A3 Sand & Gravel). Taking into account all of the foregoing the following allocations would appear to be necessary in order to afford full protection to known resources.

- 4.2.3 Magnesian Limestone – There is a surplus landbank for crushed rock in West Yorkshire. In view of the absence of information from the industry identifying areas of proven deposit of interest to them it is not proposed to identify any areas for possible aggregate production. It is therefore not considered necessary to identify areas of the magnesian limestone for potential working, other than for building stone in the vicinity of proven deposits.

4.3 Mineral Preferred Areas and Sites

- 4.3.1 Where there are existing permitted sites these should be identified on the Minerals Site Map and sites which are considered to include proven deposits of limestone building stone such as High Moor Quarry and an area at Hook Moor should be identified as Preferred Areas for the extraction of this mineral. A third site near Thorner, which the owner requests should be identified for safeguarding, has not been shown to contain proven deposits and there is insufficient information to assess the location at this time.

- 4.3.2 Sandstone - With the exception of Howley Park Quarry, no requests have been made for allocations or resources to be identified in other ways by existing operators, or by those from outside of Leeds. It is therefore proposed to identify existing permitted sites on the Mineral Sites Map and identify Preferred Areas for stone and aggregate production at Moor Top Quarry Guiseley, Blackhill Quarry Bramhope, and Howley Park Quarry, Morley. At Hawksworth Quarry there is an extensive permission which will, if worked, extend beyond the plan period; Britannia Quarry already has

¹⁰ Survey of Arisings and Use of Alternatives to Primary Aggregates in England 2005: Capita Symonds for CLG 2007

¹¹ Leeds CC Waste Topic Paper

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consent for all the potential resource available and at Arthington Quarry the indication is that stone working will be concluded when the existing reserve is exhausted.

- 4.3.3 Local stone has been used to construct buildings in Leeds which now have a special character. There may be no quarry currently able to supply the correct stone to repair or refurbish these buildings, but it may be possible to supply stone from old closed quarries or new sites at locations where a large quarry would not be acceptable. Consideration has therefore been given to inclusion of a Special Stone Policy which will apply where the construction and repair of local buildings requires local stone of an identical or special character (such as colour, texture, porosity, durability etc.) and cannot be supplied from an existing approved quarry. In such cases the Council will give particular consideration to the desirability of allowing the extraction of such stone to take place.
- 4.3.4 Clay - It is not considered necessary to identify areas of clay for protection, other than in the vicinity of active or recently active sites. Existing permitted sites should be identified together with Preferred Areas for Clay working at Howley Park Quarry, Morley. At Swillington Quarry where working is suspended an application which the council has resolved to approve would secure sufficient reserves for the plan period.
- 4.3.5 Sand and Gravel – As stated above there are significant proven sand and gravel resources within the district. In order to protect these, the Plan should identify the whole of sand and gravel resource as an MSA. The existing permitted site at Methley should be identified on the Minerals Site Plan and an Area of Search around Methley should be designated to indicate where possible extension may take place. The previously approved site at Midgely Farm at Otley should be allocated on the Plan.
- 4.3.6 Surface Coal – The Leeds district is to a greater degree underlain by coal. The area proposed as a Coal MSA is shown in the NRWDPD Map Book (Map A3 - Coal). The economics of extracting coal will vary depending on such matters as the global price for coal, the thickness of the coal seam, how deep it is, the extent of the area over which it occurs and how necessary it is to provide support to adjoining land and property. Larger sites can be worked economically to a greater depth.
- 4.3.7 Development of open land could sterilise economically recoverable coal. Conversely, re-development of previously developed land might provide a second opportunity to remove coal which was not removed when the site was originally developed. Policies to ensure that surface coal will be safeguarded and the circumstances under which extraction will be considered will need to be included in the Development Plan Document.

5.0 Prudent use of resources

- 5.1 As mineral resources are finite their prudent and efficient use is important if the wider principles of sustainable development in planning which are central to this Development Plan Document are to be applied. The Minerals section of this DPD will therefore need to include a policy which sets out how proposals for the extraction of minerals will be assessed and managed. In Leeds, mineral production is limited to a small number of working sites. Production levels do not currently meet local consumption (with the exception of clay for brick making) due to both geographic constraints on production and the quality of the minerals produced. From the most up to date information available it is clear that Leeds will continue to rely on the importation of some types of minerals for the foreseeable future. Where possible cross boundary working with neighbouring MPAs will be considered to ensure that all minerals related decisions are taken with the benefit of full knowledge of prevailing conditions and trends.

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