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<b>REPORT TO:</b>	<b>ENVIRONMENTAL AND DEVELOPMENT SERVICES COMMITTEE</b>	<b>AGENDA ITEM: 8</b>
<b>DATE OF MEETING:</b>	<b>03 MARCH 2016</b>	<b>CATEGORY</b>
<b>REPORT FROM:</b>	<b>DIRECTOR OF COMMUNITY AND PLANNING</b>	<b>OPEN</b>
<b>MEMBERS' CONTACT POINT:</b>	<b>KEVIN EXLEY (EXT 8717)</b> <a href="mailto:Kevin.exley@south-derbyshire.gov.uk">Kevin.exley@south-derbyshire.gov.uk</a>	<b>DOC:</b>
<b>SUBJECT:</b>	<b>DERBY AND DERBYSHIRE MINERALS LOCAL PLAN</b>	<b>REF:</b>
<b>WARD(S) AFFECTED:</b>	<b>DISTRICT</b>	<b>TERMS OF REFERENCE: EDS03</b>

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## **1.0 Recommendations**

That Members note that hydrocarbons are likely to be restricted to block SK43 (around Shardlow, Elvaston and Ambaston) given that no further PEDL areas are currently located in the District and having regard to the likely unsuitability of Coal deposits in the District for non-conventional gas extraction

That Derbyshire County Council and Derby City Council, in their role as Minerals Planning Authority, (MPA) be informed that:

- That Members Support Option 1 in respect of Issue two and identify only those areas that are licenced for hydrocarbon exploration drilling and production within the Minerals Local Plan.
- That Members Support Option 2: Identify constraints for current PEDL areas and also for those parts of the Plan area where hydrocarbon resources are known to be present given that the effects of some types of hydrocarbons developments could take place outside of areas currently licenced for hydrocarbon development.
- That Members support the need for a hydraulic fracturing policy (rather than a general hydrocarbons policy) on the basis that this type of development could give rise to impacts that are significantly different to other forms of hydrocarbons extraction.
- That Members note the methodology used by the MPA to inform the site selection of sand and gravel sites and the findings in respect of site suitability for sand and gravel working.
- This Authority notes and supports the MPAs proposal to exclude from the Minerals Local Plan those sites identified as having low potential for working based on the combined assessment of economic, social and environmental effects.

## **2.0 Purpose of Report**

- 2.1 To inform Members on the proposals, as updated, set out in the current consultation on the Minerals Local Plan being undertaken by the Minerals Planning Authorities for Derbyshire, (Derby City Council and Derbyshire County Council).
- 2.2 Responses are required to be submitted to Derbyshire County Council by the 3<sup>rd</sup> April 2016. A copy of the draft documents are available online at [www.tiny.cc/MinsPlan](http://www.tiny.cc/MinsPlan)

### **3.0 Executive Summary**

- 3.1 The Minerals Local Plan will set out the detailed planning strategy and policies to enable the delivery of minerals development within Derby and Derbyshire to 2030. The Plan will seek to ensure that sufficient opportunities for mineral development are provided in order to maintain the adequate and steady supply of minerals to support growth, regeneration and economic development, whilst protecting the environment and local communities from any significant adverse impacts from extraction.
- 3.2 The current consultation has been updated to provide additional information regarding sand and gravel site assessments and the assessment methodology, as well as supporting papers in respect of a range of hydrocarbon topics including conventional oil and gas, unconventional oil and gas (including fracking) and gas from coal as well as the publication of a Sustainability Appraisal Scoping report. This information supplements the consultation materials issued by the MPA in early 2015 and considered by this Committee on the 20 August 2016. This report having previously considered a series of thematic based papers considering issues such as sand and gravel, hard rock; coal and brick clay and fireclay as well as overarching issues such as cumulative impacts of minerals working and a strategy for the River Valleys. The result of this updated consultation will inform the emerging Draft Minerals Local Plan and will be used to develop the vision, objectives, strategies and policies (including allocations) to be included in the Plan.
- 3.3 Once adopted the Minerals Local Plan will provide the main policy guidance for assessing planning applications for minerals and hydrocarbon development in Derbyshire and Derby City.

### **4.0 Detail**

- 4.1 The County of Derbyshire has a wide ranging mix of mineral resources. Minerals extraction and development has, for a long time, been a part of the Derbyshire Landscape and an important part of the Local Economy. The County Council and City Council jointly (as the Minerals Planning Authorities for Derbyshire) are seeking to bring forward a Minerals Local Plan to set out the future scale and location of minerals working in Derby and Derbyshire to support economic growth whilst protecting the environment and local communities.

4.2 The preparation of the Plan commenced in 2009 when a stakeholder event was held by the Authorities to scope in issues to be addressed in the Plan. An Issues and Options Consultation was then held in 2010. This was followed by a number of drop in sessions which were held in the autumn of 2012 in respect of sand and gravel extraction. A further consultation was held on the Local Aggregate Assessment (LAA) which identified the amount of aggregate minerals (crushed rock and sand & gravel) that each MPA will need to provide to maintain continuity of production for a seven year period was consulted upon in 2012. A rolling consultation was then held over the summer and autumn of 2015 considering a range of thematic topics such as sand and gravel, hard rock; coal and brick clay and fireclay as well as overarching issues such as cumulative impacts of minerals working and a strategy for the River Valleys. This consultation has continued to remain open and a number of additional supporting papers mainly in respect hydrocarbons and climate change and sand and gravel site assessments were published for consultation by the MPA at the end of 2015 and early in 2016.

#### **Climate Change Supporting Paper**

4.3 This supporting paper has been updated from that previously published in June 2015 to highlight that the County Council has a Climate Change Charter Adopted in 2014. It also has been updated to emphasise the importance to wildlife of ensuring that water is managed so that waterbodies, water courses and wetlands are receiving and storing water for the benefit of wildlife and highlights that creating space for flood waters can also provide new habitats for wildlife. Beyond these minor additions there have been now substantive amendments to the Climate Change Supporting Paper previously published.

#### **Towards a Strategy For Hydrocarbons**

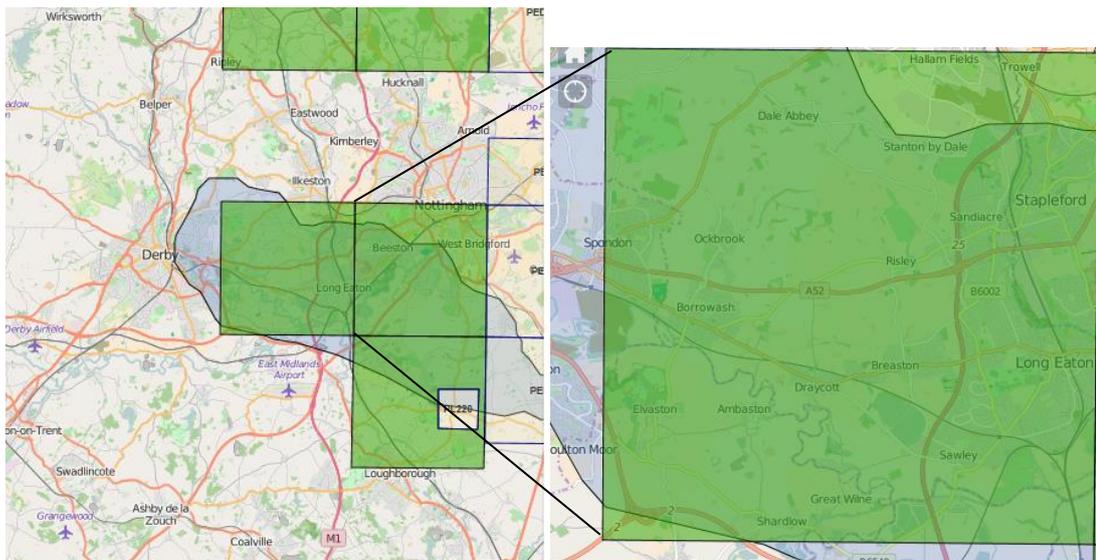
4.4 Hydrocarbons are simple organic compounds which contain hydrogen and Carbon. They are frequently used for energy production and are therefore an important mineral resource. However like all minerals development they can contribute to the prosperity of the area and the national economy, although they can have detrimental effects on local communities and the environment. The Minerals Local Plan will include policies which can balance the need for such developments against the likely environmental and social impacts of development.

4.5 The County Council have published a range of documents setting out their potential approach towards hydrocarbons. Perhaps the most significant of these being 'Towards a Strategy for Hydrocarbons'. This document sets out a range of issues and options for delivering appropriate development. These issues and options are considered later in this report. Ahead of this, however, it is worth trying to put into context the extent to which hydrocarbons development could take place in South Derbyshire within the Plan period to 2030. Much of this information is provided in a number of supporting papers to the consultation as follows:

- Conventional Oil and Gas Supporting Paper
- Gas from Coal Supporting paper
- Unconventional Gas -Shale Gas Supporting Paper

- 4.6 In respect of conventional oil and gas in Derbyshire this tends to be located in the East of the County in the East Midlands Petroleum Province. Historically there has been oil and gas exploitation at Heath and Calow (gas), and Hardstoft (oil) and exploratory wells have been sunk at four other sites at Whitwell, Bramley Moor, Golden Valley and Sawley. None of these locations are located in South Derbyshire. The Conventional Oil and Gas Supporting Paper indicates that geological conditions are such that it is possible that further oil or gas accumulations, in commercial quantities, could be found in the area east of Calow, Hardstoft and Ironville. It then goes on to note later that recent developments have been intermittent and small-scale. The scale of resources remaining underground in Derbyshire are also very limited in national and global terms, but the need to maximise the development of indigenous sources of energy and the move towards carbon reduction means that future development proposals are likely and remain an issue for the new Minerals Local Plan to address. However, given that historically there has been no commercial conventional oil and gas exploitation in South Derbyshire and that prospective areas highlighted in the supporting paper are some distance from the District it is reasonable to conclude that there is only limited potential for conventional oil and gas to be extracted in South Derbyshire.
- 4.7 Unconventional hydrocarbons refer to oil and gas which comes from sources such as shale or coal seams which act as the reservoir as opposed to conventional oil and gas which is extracted from Sandstone and Limestone.
- 4.8 Extraction of shale gas can be through a variety of methods. By either a single and direct vertical well to the shale bed being drilled or horizontal drilling in which the well trajectory is turned horizontally, sometimes running for thousands of feet along a layer of rock. A single horizontal well can access a much larger volume than a vertical well, reducing the number of wells that need to be drilled, and thereby the overall cost of production.
- 4.9 Whereas conventional gas is found in reservoirs, shale gas is trapped in small gaps in the shale. The shale therefore has to be broken down to allow access to these pockets of gas. Hydraulic fracturing or “fracking” is a relatively new technique for extracting gas from shale. It is a technique that uses fluid, usually water, pumped at high pressure into the rock to create narrow fractures which form pathways allowing the gas to flow into the well bore and up to the surface. The water normally contains small quantities of other substances to improve the efficiency of the operation, which can include sand as well as chemicals and lubricants.
- 4.10 On the 18 August 2015, the Oil and Gas Authority (OGA) announced the latest licence approvals granted under the 14 onshore Oil and Gas Licensing Round. Only one area within South Derbyshire was offered in this Round, this is located on the north eastern fringe of the District around Elvaston, Ambaston and Shardlow.

Fig 1: Licence Area for SK43



4.11 There are currently no other areas where licences for oil or gas extraction (from conventional or unconventional sources) have been issued in South Derbyshire. This block however does fall within a Shale Prospective Area (the blue outline that is visible in the above maps) and the oil and gas exploration company awarded this licence has indicated that it will be testing the potential of the deeper, shale formations. There is therefore some potential for exploration, appraisal and where commercially workable reserves are found unconventional extraction in this block in South Derbyshire. However it is worth emphasising that this Block (SK43) covers a large area most of which is located in Erewash. On this basis should economically recoverable reserves be identified anywhere in this block development may not be South Derbyshire.

### **Gas from Coal**

- 4.12 Coalbed Methane (CBM) is methane gas extracted from unworked coal seams. Whilst Coal Mine Methane and Abandoned Mine Methane (CMM and AMM) collects methane uses the gases that escape from underground coal seams during mining operations, creating serious risks from explosions and other health hazards. In order to minimise these risks working mines are ventilated, and the methane is sometimes extracted and used for energy production.
- 4.13 The supporting statement on Gas from Coal, published by the MPA indicates that there are no working mines within the South Derbyshire Coalfield and therefore no potential for CMM developments. According to independent reports collated by the British Geological Survey, AMM and CBM prospects are poor due to low measured seam methane contents of only 1.3m<sup>3</sup>/tonne of coal. Having reviewed the supporting statements issued by the MPA, and having regard to the potential for hydrocarbons development in South Derbyshire it is worth noting that there is limited potential gas from coal or conventional hydrocarbons due to the unsuitability of resource and lack of currently licenced areas. The area where there could be most potential for hydrocarbons extraction is to the north of the A50 and east of the A6 in South Derbyshire.

This area, although licenced has not been subject to either unobtrusive environmental and geological reviews, or appraisal and as such may not represent a commercially workable area. However there is limited potential that drilling for appraisal or extraction could come forward in this area within the Plan period although it's worth restating that most of this block lies outside of the District.

- 4.14 Having considered the potential for hydrocarbons this report will now consider the six issues identified by the MPA in respect of oil and gas in their 'Towards a Strategy for Hydrocarbons' document and the options identified to deliver their strategy.

**Issue 1: Emerging approach to the provision for hydrocarbons**

- 4.15 As indicated above, the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG) require minerals planning authorities to plan for the steady and adequate supply of minerals, to identify and include policies for the steady and adequate supply of minerals, to identify and include policies for the extraction of mineral resources of local and national importance in their area and set out environmental criteria against which planning applications will be assessed.

- 4.16 It is intended that the new MLP will adopt an approach to the provision of hydrocarbon minerals in accordance with the policy guidance of the NPPF and NPPG. The Plan, as a minimum, will identify on a plan the areas currently subject to Petroleum Licences and also any operational sites at the time of publication but will not seek to identify specific sites for future development due to the limitations of the existing information. The Plan may be able to identify areas where hydrocarbons resources are present and where development could be undertaken. The Plan will also set out criteria for the assessment of planning applications. The NPPG indicates the use of separate criteria policies for each of the three phases of development (exploration, appraisal and production) but in practice there may be little or no difference in the criteria that could be used for the first two phases. The number and form of criteria policies to be included in the Plan will be determined following consultation.

**Issue 2: Identification of hydrocarbon resources within the plan area**

- 4.17 The NPPG states that the exploratory, appraisal or production phase of hydrocarbon extraction can only take place in areas where the Department of Energy and Climate Change (or any successor) has issued a licence under the Petroleum Act 1998. The new Minerals Local Plan will identify Petroleum License Areas and any existing oil and gas extraction sites which are present in the Plan area. In addition the NPPG also encourages MPAs to make provision for hydrocarbons by the use of published data on the location of conventional and unconventional hydrocarbons, use of ordnance survey based policies maps and available data on existing wells. It states that this approach will allow mineral planning authorities to highlight areas where proposals for hydrocarbon extraction may come forward, as well as managing potentially conflicting objectives for use of land. The NPPG also suggests that potential new working sites could be identified where these have been brought forward by the industry. It does not advocate the need to create mineral safeguarding areas

specifically for the extraction of conventional and unconventional sources of hydrocarbons given the depth of the resource, the ability to utilise directional drilling and the small surface area requirements of well pads.

4.18 Having regard to the above the MPA have identified three options in respect of this Issue:

- Option 1: Identify on a plan the information required by new Government guidance – that is current Petroleum Exploration Development Licence areas and existing working sites.
- Option 2: In addition to Government guidance requirements - Identify on a plan the extent of other areas where conventional and unconventional oil and gas resources are known to be present.
- Option 3: In addition to Government guidance requirements - Identify on a plan the extent of other areas where conventional and unconventional oil and gas resources are known to be present and other areas where geological conditions indicate that further resources of hydrocarbons may be found.

### **Comment**

4.19 Having identified these broad options the MPA then goes on to state that there are practical limitations concerning the extent to which the new Minerals Local Plan can identify areas where hydrocarbon extraction may be possible and also potentially acceptable. The level and accuracy of information which is currently available about the location, scale and the economic viability of the remaining hydrocarbon resource is very limited. In the absence of detailed information about an specific areas and how the hydrocarbon would be extracted it is difficult to assess the acceptability of working the resource. Given the above it is recommended that Option 1 be supported. To identify further areas where hydrocarbons may theoretically be present, but are outside of a licensed block and of unknown commercial value (and hence suitability) could just stand to blight local communities, and offer no realistic prospect of stimulating additional appraisal or exploitation of resources. Option 1 would represent a practical option within the information currently available and would satisfy the requirements of current Government guidance.

### **Issue 3: Area of the Plan in which constraints will be identified**

4.20 The NPPF states that constraints should be identified for those parts of the Plan area that are within Petroleum Exploration and Development Licence (PEDL) areas. Current PEDL areas in Derbyshire and Derby do not cover the whole of the Plan area and it is possible that further licences could be issued over the Plan period. The options identified by the MPA in respect of this issue are as follows:

- Option 1: Identify constraints for current PEDL areas only.
- Option 2: Identify constraints for current PEDL areas and also for those parts of the Plan area where hydrocarbon resources are known to be present.

4.21 Option 1 would accord with current Government guidance but it is possible that further PEDL licences could be granted during the Plan period to 2030 which could require the Plan to be reviewed and updated. Option 2 would provide a comprehensive picture of constraints for all areas where hydrocarbon extraction

could possibly take place and would avoid the need for further consultations in the future if and when new PEDLs were issued.

### **Comment**

4.22 Although it may be appropriate to limit the areas identified as having hydrocarbon potential in respect of hydrocarbons (see option 2 above), the County Council and indeed other local governance agencies hold comprehensive information regarding potential constraints to hydrocarbons and indeed all types of development across the County. Given that further licences could be issued in due course, that the quality and extent of constraints data is likely to be extensive and recognising that development to serve proposals for hydrocarbons extraction within a licenced block could impact on areas outside of the licenced block option 2 would represent the most appropriate approach to identifying constraints.

4.23 In respect of the constraints identified by the MPA which need to be reflected in any policies to control hydrocarbon development, it is worth noting that Landscape, Biodiversity/Ecology, Heritage, Archaeology, Geology/Geomorphology, Water Protection/Flood Zones, Green Belt and Contaminated Land are identified as potential constraints. It is worth noting that block SK43 which falls partially in South Derbyshire is located in an area of high flood risk, is within the Nottingham - Derby Greenbelt and has the potential to affect areas of heritage or archaeological significance including Elvaston Castle Park and Garden as well as Local Nature Reserves and County Wildlife Sites. Moreover it is also noted that the MPA plan to have regard to social, economic and cumulative constraints. Again such an approach should be welcomed as it could allow the effects of any hydrocarbons development (should these come forward) to be considered in combination with wider development projects being brought forward in the vicinity as well as the likely community impacts and economic case for development to be considered during the planning application process.

### **Issue 4: The use of criterion based policies for conventional and unconventional hydrocarbon developments**

#### **a) The use of separate policies for each stage of hydrocarbon developments**

4.24 The NPPF states that mineral planning authorities should include criteria policies in minerals local plans to assess and determine development proposals. NPPG states that planning permission is required for each of the separate phases of the overall development; that is exploration, appraisal and production and that minerals local plans should include criteria based policies for each of the phases. The MLP will therefore include criteria based policies covering all these stages of development. However, based on the experience gained by the MPA from processing previous mineral development proposals there are unlikely to be significant differences between the issues which are relevant to the exploration and appraisal stages. Indeed these stages are often combined in to one planning application.

- Option 1: Include only two separate criteria policies; one for exploration and appraisal and another for production.

- Option 2: Include separate criteria policies for each of the three stages of development.

### **Comment**

4.25 Whilst there is no reason for separating out policies for the different stages of hydrocarbons appraisal/development, combining policies could simplify the Plan. However care would be need to ensure that that policies are sufficiently robust and detailed to provide the necessary protections to local communities and the natural environment appropriate to the stage of development and activity planned. Clearly if a policy to control exploration and appraisal is amalgamated this would need to be appropriate in scope and have sufficient detail to provide the necessary safeguards against environmental effects associated with both stages of hydrocarbons development.

### **b) The use of additional criteria policies for oil or gas, for conventional or unconventional sources or for different extraction technologies**

4.26 With regard to the use of criteria policies, National Guidance does not differentiate between the various sources of hydrocarbons or the different methods of production. For example, it does not indicate whether plans should include separate criteria based policies for the extraction of oil or gas, for hydrocarbons from conventional or unconventional sources, or for methods of extraction utilising different technologies (e.g. hydraulic fracturing or coal bed gasification). Developments in these different categories raise different issues which could merit the inclusion of additional criteria policies specific to those forms of development. This consultation presents a number of options as follows:

- Option 1: Include only two or three separate criterion based policies for the three phases of hydrocarbon developments (as determined by the responses to the options above).
- Option 2: Include a separate set of criterion based policies for the phases of each of the different types of hydrocarbon (e.g. conventional oil and natural gas, gas from coal measures and gas from unconventional sources such as the hydraulic fracturing of shale deposits).
- Option 3: In addition to Option 1 include only an additional set of criterion based policies specifically for hydraulic fracturing.

### **Comment**

4.27 Whilst it is acknowledged that Option 1 broadly represents the approach advocated in Government guidance, the inclusion of one set of criteria policies for the phases of all forms of hydrocarbon developments would provide a succinct framework for the assessment and determination of development proposals, there are substantial differences between the different hydrocarbons extraction methods identified by the MPA. These, as a matter of fact, do have different impacts on the environment and these should merit the inclusion of criteria policies specifically tailored to each type of extraction method. And whilst a single policy could seek to control and guide all types of development this could potentially make any policy unwieldy and difficult to implement, or even undermine its effectiveness. As a minimum Members may wish to request that a separate policy for hydraulic fracturing (fracking) be included in the Plan – (option 3) not least because this technology could result in impacts

some distance from actual physical development on the ground in a way which is unlikely with conventional extraction techniques and any policy should seek to reflect this.

**Issue 5: The range of criteria to be included in the policies for conventional and unconventional hydrocarbons.**

4.28 The NPPG clarifies the issues which are matters for other regulators and which mineral planning authorities should not take into account in their assessment of development proposals. Criteria based on these matters would therefore not be appropriate for inclusion in the policies. The issues which are identified to be matters for other regulatory regimes include seismic risks, well design, construction and integrity, operation of other surface equipment on the well pad, mining waste, chemical content of hydraulic fracturing fluid, flaring and venting, off-site disposal of water and well decommissioning.

4.29 The issues below are those identified by the MPA as being potentially suitable criteria against which to consider any planning applications.

- Criteria for noise associated with the operation.
- Criteria for the assessment of dust.
- Criteria for the assessment of the impact on air quality.
- Criteria for assessing lighting.
- Criteria for the assessment of the level of visual intrusion into the local setting, and the wider landscape caused by the placement of any building or structure within the application site area.
- Criteria for the assessment of the impacts on landscape character.
- Criteria to assess the importance of archaeological and heritage features.
- Criteria to assess the generation and impact of traffic.
- Criteria to assess the level of risk of contamination of land.
- Criteria to assess the impact on soil resources.
- Criteria to assess the impact on the best and most versatile agricultural land.
- Criteria for flood risk.
- Criteria to assess the impact on the water environment.
- Criteria for land stability and subsidence.
- Criteria to assess the impact on internationally, nationally or local designated wildlife sites, protected habitats and species, and ecological networks.
- Criteria to assess impact on nationally protected geological and geomorphological sites and features.
- Criteria to establish site restoration and aftercare requirements.

**Comment**

4.30 This is a comprehensive list of potential criteria to be considered in assessing the likely effects of development. However there may also be limited potential for odour effects from new developments. This should be added as a potential issue with an air quality policy. In addition it could also be appropriate to assess harm to the openness of the greenbelt which covers much of Block SK43.

**Issue6: Criteria to be applied to proposals for the hydraulic fracturing of shale gas.**

4.31 The MPA have stated through this consultation that hydraulic fracturing is an aspect of mineral working that must be addressed in the Minerals Local Plan. Whilst hydraulic fracturing proposals could be assessed and determined using a set of policies which apply to all hydrocarbon developments, consultees could view it as such a major issue that it merits individual consideration.

**Comment**

4.32 For the reasons set out already in this report, including the nature of effects, which can vary from other types of hydrocarbon development, as well as the potential for this form of development to have effects beyond licensed area. On this basis Members may wish to request that should this form of development, should come forward within the Plan period in Derbyshire, it be considered through a specific policy, or set of policies to ensure that impacts can be carefully scrutinised or controlled through a policy targeted at 'fracking' proposals rather than general hydrocarbons development.

**Sand and Gravel Site Assessments**

4.33 Members may recall that they previously considered the MPAs approach to site selection in August 2015. Since then further information on the MPAs approach to site selection have been published. This additional information consists of a methodology for 'scoring' the sites as well as completed site assessments including their 'score' against the proposed methodology.

- SG01 - Extension to Willington Quarry (Cemex)
- SG02 - Northern extension to Swarkestone Quarry (Tarmac)
- SG03 - Southern extension to Swarkestone Quarry (Tarmac)
- SG04 - Extension to Elvaston Quarry (Tarmac)
- SG05 - Chapel Farm, Great Wilne (Tarmac)
- SG06 - Repton/Foremark (Hansons)
- SG07 - Foston (Hansons)
- SG08 - Egginton (Hansons)

4.34 Location Plans of these sites are available at Appendix 1 and appraisal matrices can be found at [www.tiny.cc/MinsPlan](http://www.tiny.cc/MinsPlan)

4.35 As previously stated at paragraph 5.15 of the Report to EDS Committee dated 20 August 2015 the County Council has not sought to weight individual sites based on location. As a result no sites are identified as less appropriate for development on the basis of which general area or river valley they fall within. However, it is worth noting that the MPA does set out a preference for extensions rather than the opening up of new sites partially on the basis of guidance included in the National Planning Policy Guidance.

4.36 Also included in the Scoring Methodology adopted by the MPA are a range of economic, social and environmental considerations. This methodology is weighted heavily towards environmental considerations and indeed these comprise more than half the total points which can be scored by a site (56 points), against a maximum of 29 points for social issues and 24 for economic

considerations. A summary of the site assessment criteria, is set out at Appendix 2 of this report.

- 4.37 The site assessment methodology prepared by the MPA considers the relative merits shortcomings of sand and gravel working in the Trent and Derwent Valleys and the Lower Dove Valley. In essence this report concludes that the main differences between the two broad areas are that:
- The Dove Valley has not experienced the impacts of mineral working to the extent which the Trent and Derwent valleys have. The landscape in the Dove Valley therefore remains largely intact.
  - There are opportunities for extensions to existing quarries in the Trent and Derwent valleys but not in the Dove Valley.
  - This, however, results in ongoing cumulative impact of quarrying on communities in the Trent and Derwent valleys, whereas this is not an issue in the Dove valley.
  - Also, birdstrike is not so much of an issue in the Dove Valley, whereas it is in the majority of the Trent and Derwent valleys.
- 4.38 Based on the site analysis undertaken using the proposed methodology outlined by the Authority the sites proposed for sand and gravel workings, all of which are in South Derbyshire, have been assigned the following rankings:
- SG01 Willington – High Overall Potential for working
  - SG02 Swarkestone North – Medium potential for working
  - SG03 Swarkestone South - Medium potential for working
  - SG04 Elvaston - Medium potential for working
  - SG05 Chapel Farm – Low potential for working
  - SG06 Repton/Foremark - Low potential for working
  - SG07 Foston - Medium potential for working
  - SG08 Egginton - Low potential for working
- 4.39 It is worth noting that in the analysis of results set out in the Sand and Gravel Sites Assessment documents that *“sites with high potential are deemed as potential allocations in this Minerals Plan. Sites in the medium category may have the potential to be considered as allocations if there are insufficient sites in the "High" category to meet the remaining requirement, or if during the Plan period, monitoring indicates that the allocated sites are not being, or will not be, delivered as anticipated. Sites with low potential will not be considered for allocation in the plan, and are likely to be protected from mineral extraction”*.

#### **Comment**

- 4.40 The methodology adopted by the MPA seeks to score the economic, social and environmental performance of potential sites. However whilst economic and social scores have been simply added together and these ranked, with the highest scoring sites receiving the highest ranking indicating the suitability of sites to meet minerals need the environmental scores for the sites have been added up and this used to indicate a low, medium or high environmental performance. This has then been considered together with work being undertaken to map environmentally sensitive areas in the Trent Valley and an environmental ranking assigned each site. These economic, social and environmental ranking have then been combined and an overall total assigned

to each site. This has then been used to rate individual sites as having low, medium, or high potential for working, as illustrated below:

Figure 2 Site performance against Assessment Methodology

Ref.	Site	Economic score	Economic ranking	Social score	Social ranking	Environmental score	Environmental ranking	Combined ranking total	Overall potential for working
SG01	Willington	20	6.5	22	8	4	5.5	20	High
SG02	Swarkestone – North	20	6.5	17	2.5	12	8	17	Medium
SG04	Elvaston	20	6.5	19	5	4	5.5	17	Medium
SG03	Swarkestone – South	20	6.5	17	2.5	4	5.5	14.5	Medium
SG07	Foston	15	1	20	7	4	5.5	13.5	Medium
SG05	Chapel Farm	17	2.5	19	5	2.5	2.5	10	Low
SG08	Egginton	17	2.5	19	5	1.5	1	8.5	Low
SG06	Repton/Foremark	18	4	11	1	2	2.5	7.5	Low

Low potential for working= 3-10

Medium potential for working = 11-17

High potential for working = 18-24

4.41 The approach adopted by the County Council to assess the likely environmental performance of potential sites is complex. However it is likely to provide an holistic approach to protecting those areas of the Trent and Dove Valleys identified as being the most environmentally sensitive by including within the site assessment methodology some consideration of those areas which have been identified as more sensitive in respect of ecology, the historic environment and landscape. Such an approach to differentiate between areas of lower and higher sensitivity is obviously very useful where it can steer development away from the most sensitive locations.

4.42 However as noted in paragraph 5.19 of the previous report to this committee on the emerging Minerals Local Plan (dated 20 August 2015), although an approach to steer development away from the most environmentally sensitive locations should be supported it is likely that development will be steered towards the eastern part of the Trent Valley where evidence indicates that there is greater capacity to accommodate further minerals sites. Clearly this could lead to cumulative impacts given that extensive minerals working have taken place in this broad area in the past (and indeed working is still taking place at a number of sites). It is therefore crucial that both successive effects (for example arising from extensions to existing sand and gravel sites) and simultaneous effects (arising from the additive effects of a number of sites in relatively close proximity) be considered through the plan-making process and appropriate policies included in the Plan to ensure that local communities and the local environment are not unacceptably impacted by minerals development

4.43 Finally it is worth reiterating that the MPA is seeking to use an sequential approach to selecting minerals sites, with those with the highest or of moderate potential (based on economic, social and environmental considerations) being selected for inclusion in The Minerals Local Plan to meet identified need. The documentation produced by the County Indicates that a further 3.75million tonnes of sand and gravel needs to be provided for through the plan period. This could be met by the inclusion of one or perhaps more likely two additional sites being allocated given the annual and total production figures outlined in the site appraisals. In light of this it would seem appropriate to discount, at this early stage of the Plan preparation process, those sites performing worst against the assessment criteria as proposed by the MPA.

## **5.0 Financial Implications**

5.1 None.

## **6.0 Corporate Implications**

6.1 Proposals will have a short to medium-term impact negative impact on a number of the Councils Corporate objectives. Not least those to enhance the quality of life for all South Derbyshire Residents and to protect the environment now and for the benefit of future generations. However, the policies included in the plan should help ameliorate the worst effects of minerals development during extraction and in the longer term proposals could allow progress against both these objectives depending on the after use of sites.

## **7.0 Community Implications**

7.1 Proposals will have a significant negative impact of a number of local communities within the District particularly in the short-term to medium term. The after use of site can have a significant beneficial impact to local communities in the longer-term through the provision of new green infrastructure including recreational or leisure uses.

## **8.0 Background Papers**

8.1 Report to Environmental and Development Services – [Derby and Derbyshire Minerals Local Plan](#) (Dated 20/08/2015) ref EDS32.

8.2 [Towards a Strategy for Hydrocarbons](#) (16 November 2015)

8.3 [Conventional Oil and Gas Supporting Paper](#) (16 November 2015)

8.4 [Gas from Coal Supporting Paper](#) (16 November 2016)

8.5 [Unconventional Gas - Shale Gas Supporting Paper](#) (16 November 2016)

8.6 [Climate Change Supporting Paper Update](#) (12 January 2016)

8.6 [Sand and Gravel Site Assessments](#) (27 January 2016)

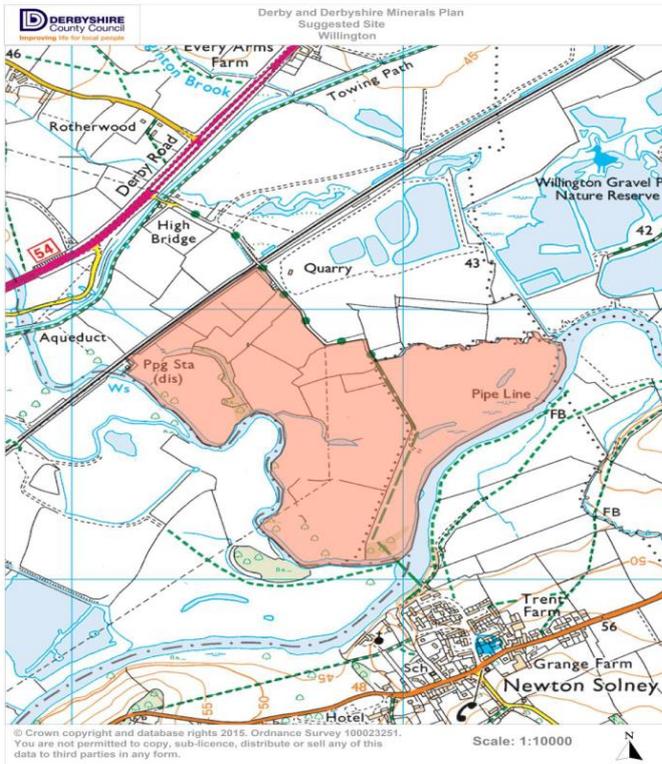
8.7 [Sand and Gravel Site Assessments](#) (12 January 2016)

8.8 [Sand and Gravel Sites - Assessment Methodology](#) (14 January 2016)

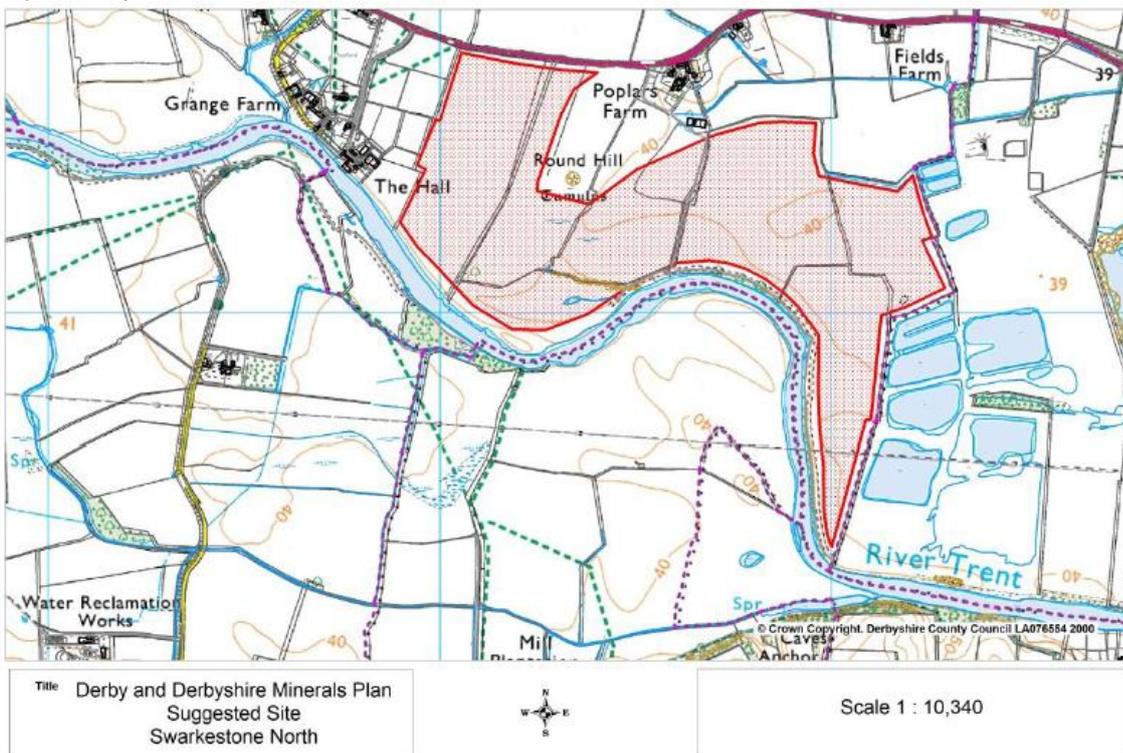
(note 8.2—8.8 all available by following the link or at: [www.tiny.cc/MinsPlan](http://www.tiny.cc/MinsPlan))

# APPENDIX 1: SITE LOCATION PLANS

Site Name: Willington  
 Reference Number: SG01  
 Proposed By: Cemex

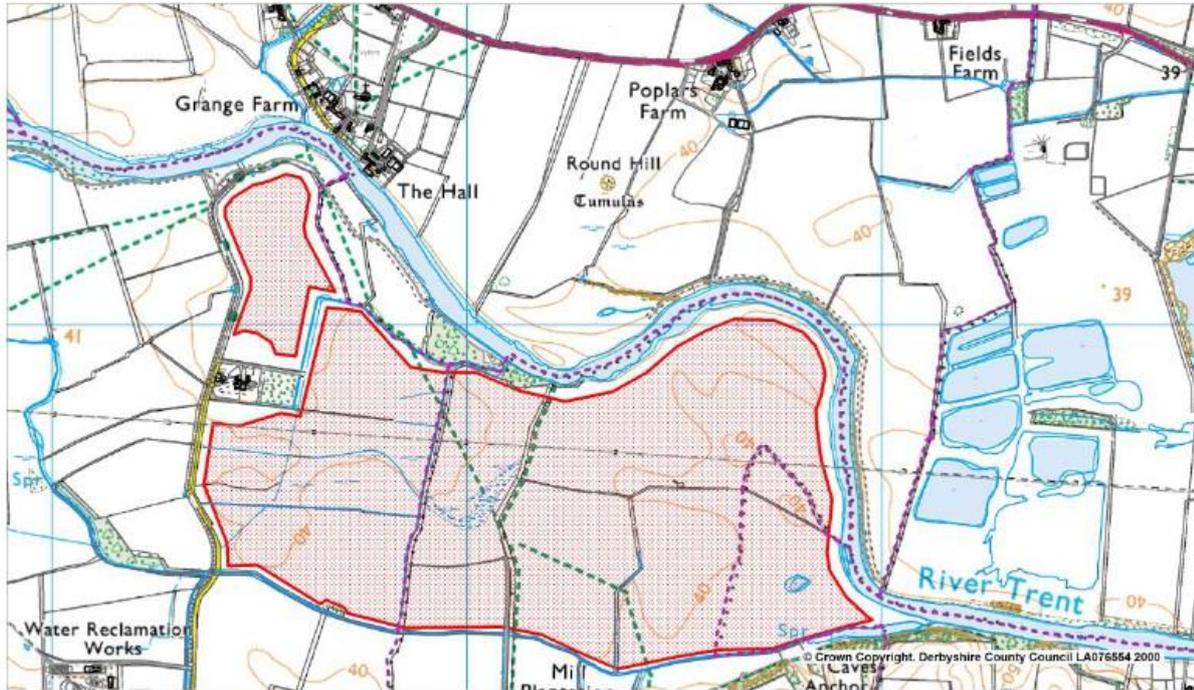


Site Name: Swarkestone North  
 Reference Number: SG02  
 Proposed By: Tarmac



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Site Name: Swarkestone South  
Reference Number: SG03  
Proposed By: Tarmac



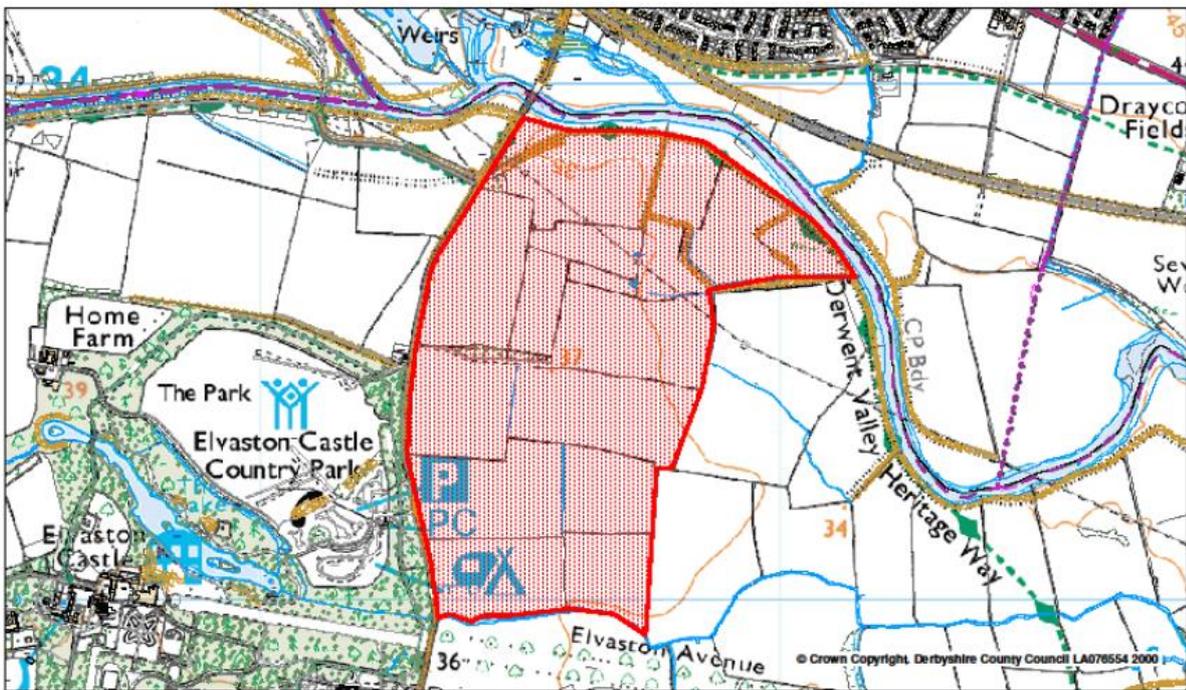
Title Derby and Derbyshire Minerals Plan  
Suggested Site  
Swarkestone South



Scale 1 : 10,340

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Site Name: Elvaston  
Reference Number: SG04  
Proposed By: Tarmac



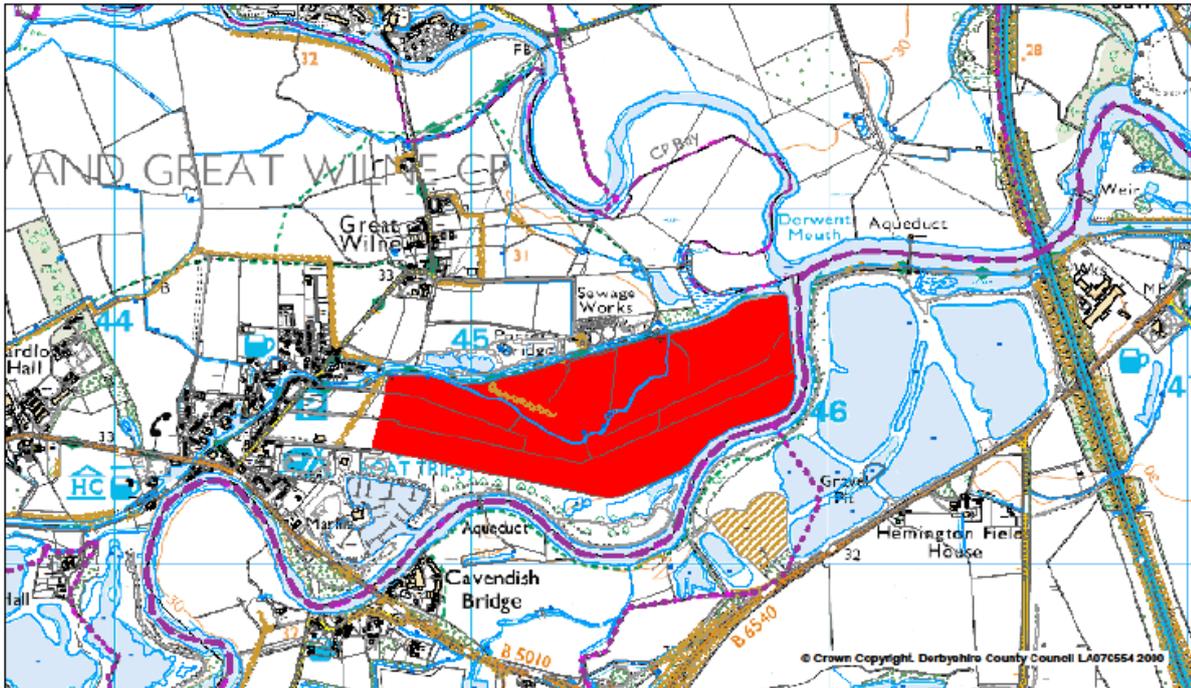
Title Derby and Derbyshire Minerals Plan  
Proposed Site  
Elvaston



Scale 1 : 8,211

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Site Name: Chapel Farm  
 Reference Number: SG05  
 Proposed By: Tarmac

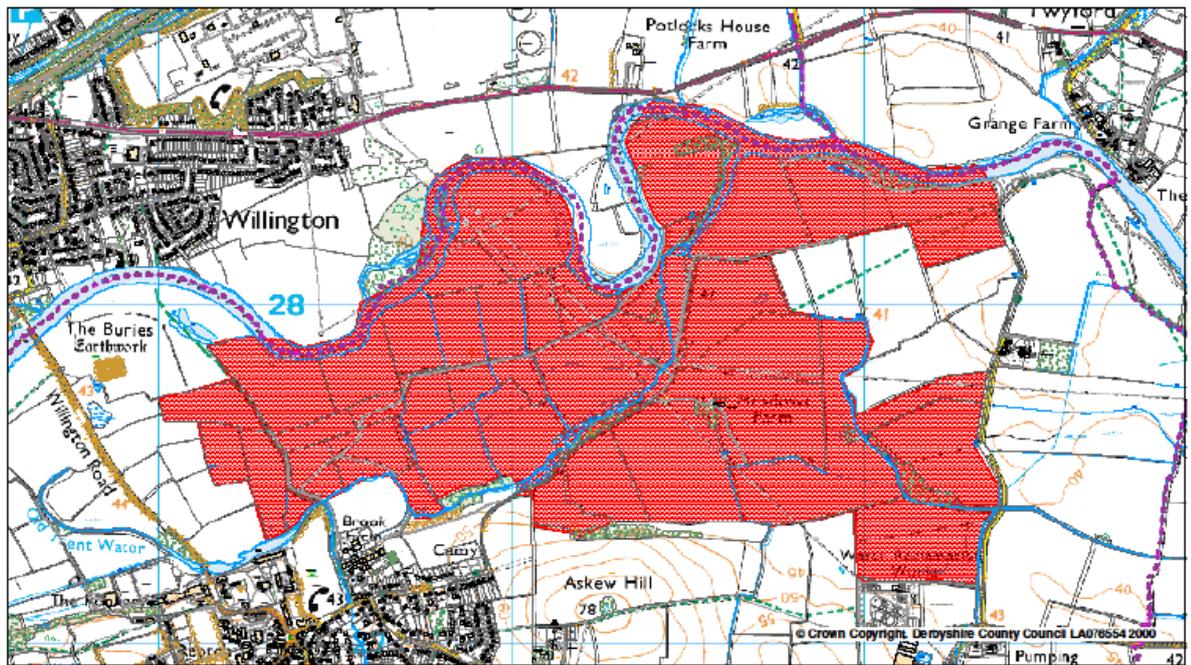


The Derby and Derbyshire Minerals Plan  
 Suggested Site  
 Chapel Farm

Scale 1 : 12,000

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Site Name: Repton/Foremark  
 Reference Number: SG06  
 Proposed By: Hansons

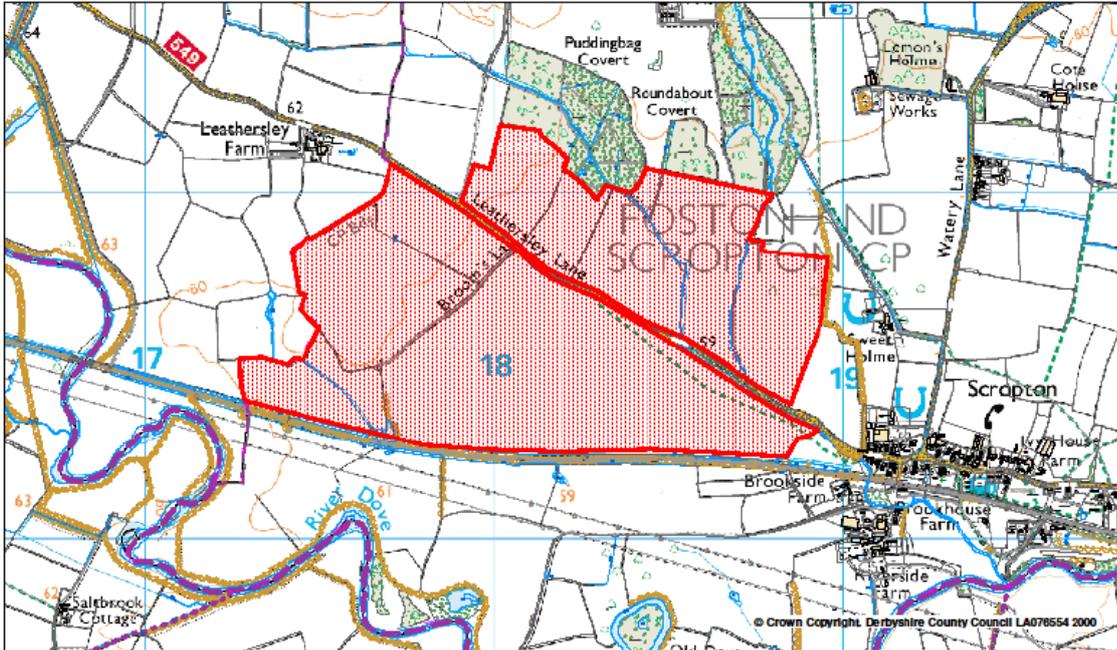


The Derby and Derbyshire Minerals Plan  
 Suggested Site  
 Foremark

Scale 1 : 12,070

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Site Name: Foston  
Reference Number: SG07  
Proposed By: Hansons

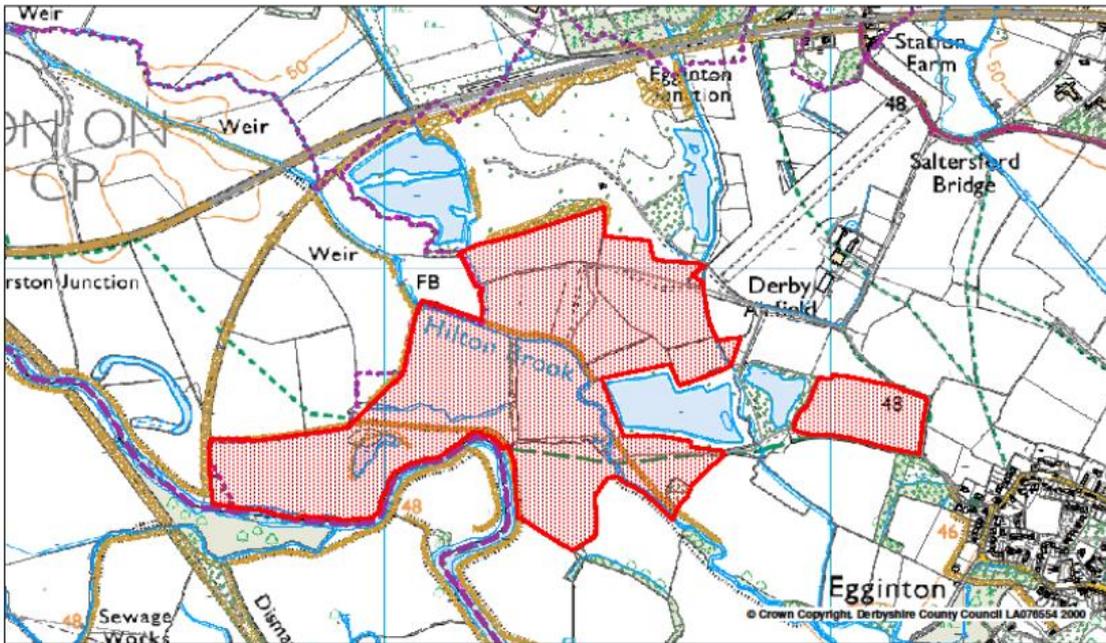


Title Derby and Derbyshire Minerals Plan  
Proposed Site  
Foston

Scale 1 : 11,590

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Site Name: Egginton  
Reference Number: SG08  
Proposed By: Hansons



Title Derby and Derbyshire Minerals Plan  
Proposed Site  
Egginton

Scale 1 : 8,974

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[https://consultations.derbyshirepartnership.gov.uk/gf2.ti/f/414754/18509317.1/PDF/-/Site\\_Assessment\\_Methodology.pdf](https://consultations.derbyshirepartnership.gov.uk/gf2.ti/f/414754/18509317.1/PDF/-/Site_Assessment_Methodology.pdf)

## **APPENDIX 2 SUMMARY OF SAND AND GRAVEL SITE CRITERIA**

### **ECONOMIC CRITERIA**

Existing Infrastructure (i.e. will existing infrastructure be reused)  
Sterilisation of Resources  
Employment (i.e. retention of existing jobs)  
Access arrangements to the site (i.e. classification of road serving site or whether new access will be required)  
Transport – mode of transport to market  
Transport – distance to markets  
Resources: Yield

### **SOCIAL CRITERIA**

Visual Intrusion  
Noise  
Nuisance - Dust  
Air quality/ Human health  
Transport – Local Amenity  
Benefits from the proposed after-use  
Cumulative impact  
Airport Safeguarding Birdstrike Issue –potential risk to aircraft safety

### **ENVIRONMENTAL CRITERIA**

Water Environment – Flood Risk  
Water Environment –groundwater  
Water Environment – aquifer protection  
Ecology – existing impacts from mineral extraction  
Ecology – UK, regional and local BAP priority species and habitats  
Ecology – ecological coherence: Natural Areas/ Wildlife Corridors/linkages  
Ecology – Habitat creation  
Landscape – existing impacts from mineral extraction  
Landscape – Existing infrastructure  
Landscape – Strength of Landscape Character  
Landscape/– visual impact  
Historic Environment –designated sites and settings  
Historic Environment – Archaeology  
Historic Environment –historic landscape  
Best and most versatile agricultural land

A full version of the site assessment criteria for Sand and Gravel sites can be found in the [Sand and Gravel Sites - Assessment Methodology](#) (14 January 2016)