

# DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

## SITE ASSESSMENT MOUSELOW

DECEMBER 2016

Derbyshire County Council and Derby City Council (the mineral planning authorities) are working together to prepare a joint minerals local plan. It will be called the Derbyshire and Derby Joint Minerals Local Plan and cover the geographical area of Derbyshire, excluding the Peak District National Park. It will cover the period to 2030.

Minerals are essential raw materials, which are used to provide the infrastructure, buildings, energy and goods that our country needs. They are vital for economic growth and our quality of life. They are, however, a finite resource and can only be worked where they are found. It is important therefore, that we make the best use of them to enable their long term conservation.

The Plan area has a wealth of mineral resources. Mineral extraction and development has, for a long time, been a part of the Derbyshire landscape and an important part of the local economy, making an important contribution to the national, regional and local need for minerals. Whilst mineral working can also provide environmental benefits, residents and local businesses are often concerned about any unwelcome impacts.

**The Councils carried out extensive consultation during 2015 and 2016 in the form of series of papers, which sought to develop further the emerging vision and objectives, strategies and policies of the Minerals Local Plan. The comments and suggestions made at this stage will be used to feed into the Draft Minerals Local Plan which will be published in 2017. We will ask for your views on this document later in the process.**

**During the 2015 and 2016 Consultation the Councils sought your views on issues relating to the development of a strategy for the provision of brick clay; including whether to opt for the identification (allocation) of specific sites to ensure future**

supply. Information was included about a site that was being promoted by an operator for inclusion in the Plan. The 2015 2016 Consultation also included a Paper which set out a Site Assessment Methodology that would be used to assess hard rock quarries for their suitability to be allocated in the Plan, should that option be chosen as the best way to ensure supply.

The Site Assessment Methodology has been refined in the light of comments made to the previous Consultation Paper and used to carry out an initial assessment of hard rock sites that have been promoted by operators for working. At this stage the Assessment process is intended to discover any positive factors that would support the allocation of the site and any negative factors against its allocation. An allocation of land in a local plan is acceptance, in principle, that a site is suitable for working subject to satisfying detailed planning considerations.

This Paper is about the assessment of a promoted site at Mouselow Quarry.

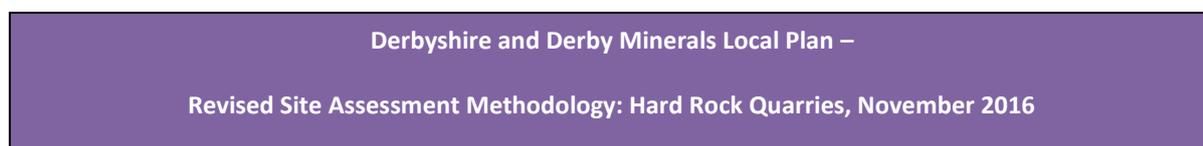
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## Introduction and Background

The 2015/2016 Consultation 'Towards a Minerals Local Plan' included a Paper about developing a Strategy for Brick Clay and Fireclay. This Paper included several Options for ensuring supply including two which required the identification (allocation) of specific sites for brick clay working. The 2015/2016 Consultation also contained a Paper setting out a methodology for assessing the sites that had been put forward for possible allocation in the Plan. On the whole the proposed methodology received favourable comments; it has been amended slightly to address concerns raised during the Consultation process. The revised methodology will be used to carry out an initial assessment of the promoted sites.

The revised Site Assessment Methodology can be found in the following Paper:



## 2. Mouselow Quarry

Mouselow Quarry, operated by Wienerberger Ltd, lies on the Millstone Grit Group which consists of an interbedded sequence of shales, mudstones and sandstones. The quarry is worked primarily to extract shale for use in brick making. Sandstone is also extracted; the majority is used as a high quality building stone whilst small amounts of lesser quality stone is used for aggregate purposes. The Brick Clay is used exclusively to supply Wienerberger UK's Denton Brickworks, in east Manchester. Mouselow clay and shale supplies over 50% of the brick making material used at the Denton plant and is essential for the continued operation of the brick works.

Recent brick clay production at Mouselow is around 45,000 tonnes per annum (tpa); if the economy improves in the longer term, output is anticipated to rise to approximately 54,000 tpa. Sandstone extraction is approximately 10,000 tpa.

A key factor in the suitability of the shale for brick making purposes is the level of sulphur and carbon. The Company estimate that they only have shale of sufficient quality for brick

making to last for approximately 9 years and therefore are proposing a small extension to the existing permitted working area. This site will yield approximately 1.4 mt of low sulphur shale which will ensure the supply of brick making material beyond the Plan period.

### **3 Sources of Information for Assessment**

The following documents provide the main sources of information used to assess the site:

Derbyshire and Derby MLP Questionnaire for promoted sites

Email containing additional supporting information from Wienerberger dated 28 1 2015

Planning application CM1/0214/162 - variation of condition to CM1/0310/24 to allow for an extension of time for working, January 2014 and supporting documents – granted 18/12/2014

The following information has been mapped:

Site location, resource, buffer zones, transport features, water designations, nature and heritage assets, landscape character, predictive agricultural land

The site assessment should be read alongside the mapped information which can be found in the following Paper:

Derbyshire and Derby Minerals Local Plan –

Site Assessment Maps: Mouselow

## 4. Site Assessment

The Assessment process is intended to discover any positive factors that would support the allocation of the site and any negative factors against its allocation. These factors are then categorised as having a major or minor impact. In some cases the criteria has been categorised as only having a minor impact on the potential allocation of the site from the outset.

PMAJ - Major positive factor in favour of allocation

PMIN - Minor positive factor in favour of allocation

NMIN - Minor negative factor against favouring an allocation

NMAJ – Major negative factor against favouring an allocation

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
<b>Economic Criteria</b>					
Need for mineral	01	NPPF requires that local plans should plan for an adequate and steady supply of minerals. For aggregate minerals the level of provision is determined through the LAA. For some industrial minerals, especially those used in cement production and brick clay the NPPF sets out specific requirements for providing a stock of permitted reserves (land bank) to maintain supply. Is there an identified need for additional reserves to be worked over the Plan period?	PMAJ PMIN NMAJ	Detailed evidence to support the need for additional reserves to be worked at that quarry over the Plan period Some evidence to support the need for additional reserves to be worked at that quarry over the Plan period Insufficient evidence to support the need for additional reserves to be worked at that quarry over the Plan period	PMAJ (see Map 1) The Company has submitted detailed evidence to justify the need for additional reserves of Upper Shales from Mouselow to support brick making. Current reserves of this quality will only last for 9 years i.e. not until the end of the plan period, 2030.
Quality/yield of mineral	02	NPPF requires local plans to deliver development and therefore the economic viability of development is an important consideration.	PMAJ PMIN	Detailed geological evidence to support the quality/yield of the deposit (boreholes) Some geological evidence to support the quality/yield of the deposit (mapped)	PMAJ The Company has provided detailed resource information in the promotion of the site for working.

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		Is the reserve quality/yield sufficient to suggest extraction would be economically viable during the plan period?	NMAJ	Insufficient evidence to support the quality/yield of the deposit	
Use of mineral resources	03	NPPF recognises that minerals are a finite resource and therefore it is important to make the best use of them in order to ensure their long term conservation. Is the end use proposed appropriate for the type of mineral?	PMAJ PMIN NMAJ	Detailed evidence provided to justify that the end use is appropriate for the mineral Some evidence provided to justify that the end use is appropriate for the mineral Insufficient evidence provided to justify that the end use is appropriate for the mineral	PMAJ The Company has submitted detailed evidence to justify the end use of the extracted minerals i.e. shales for brick making purposes; sandstone for building stone use and less quality sandstone for aggregate uses.
Location of Processing Plant	04	Market areas vary greatly for minerals depending on their type from international, national or more local. Where relevant an assessment will be made on the appropriateness of the location of the site to intended market. Is the site appropriately located in relation to the market it is intended to serve?	PMIN NMIN	The site is well located to serve its intended market The site is not well located to serve its intended market	PMIN Denton Brickworks is approximately 10 miles away. Mouselow quarry clay and shale is essential for the continued operation of the brickworks. The quarry operator and brickworks owner Wienerberger is one of the leading brick manufacturers in the UK and markets are nationwide. Markets for the high quality sandstone are nationwide, generally for high value projects in major cities.
Existing Infrastructure	05	Mineral processing plant/infrastructure can be expensive to develop and therefore NPPG states that economic considerations such as the utilisation of existing plant and infrastructure should be taken into account. Is there existing infrastructure that would be utilised by the proposed operation to process the mineral?	PMIN NMIN	Yes existing infrastructure exists on or adjacent to the site No new infrastructure would be required to process the mineral	PMIN Infrastructure exists on site to process the sandstone for aggregates. The shale is processed at Denton. The sandstone blocks are processed off site at Woodkirk Quarry (Leeds). No new infrastructure would be required to process the mineral.
Sterilisation of Resources	06	NPPF recognises that minerals are a finite resource and therefore it is important to make	PMIN NMIN	Yes The site is likely to be sterilised if not allocated No The site is unlikely to be sterilised if not allocated due to its	PMIN Hard rock quarries are expensive to develop and therefore if

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		<p>the best use of them, including avoiding their sterilisation, in order to ensure their long term conservation.</p> <p>In some cases it might be that if a site isn't allocated to be worked as part of a current operation its' scale or location would affect the likelihood of it being worked in the future effectively sterilising the resource.</p> <p>If the site wasn't allocated would the mineral resources be sterilised from future working due to its location/scale?</p> <p>In many cases a new operation will not be the result of an existing site being abandoned and this will not be an issue.</p>		scale/location	this site isn't worked as an extension to the existing quarry it is unlikely to be worked in the future.
Employment	07	<p>The minerals industry can provide an important source of local employment. NPPG states that economic considerations such as the retention of jobs should be taken into account.</p> <p>Is it likely that the proposal would lead to the retention of jobs at a currently operational site to the benefit of the local community? Would it be the continuation of an existing operation or a new operation?</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMIN</p>	<p>A new operation which would result in new jobs</p> <p>Working of the site would enable a continuation of the operation leading to the retention of existing jobs at an existing quarry or A new operation that would not result in net job losses</p> <p>A new operation which would result in job losses elsewhere</p>	<p>PMIN</p> <p>Working of the site would enable the continuation of employment at the quarry and additionally secure direct and indirect employment at the Denton Brickworks which supports over 60 employees. Additional employment is generated through the sandstone extraction which is used as high grade building stone by the Park Royal Group.</p>
<b>Social Criteria</b>					
Duration of mineral extraction	08	<p>NPPF requires the cumulative impact of proposals to be taken into account; the duration of the operation should be a consideration.</p> <p>The duration of mineral extraction will affect the overall scale of impact on local communities.</p> <p>What is the intended timeframe for working the site (i.e. short term 0-10 years etc.?)</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>Short term 0-10 years</p> <p>Medium term 10-20 years</p> <p>Long term 20-30 years</p> <p>Very long term 30+ years</p>	<p>NMAJ</p> <p>Working the site is a very long term proposal in excess of 30 years.</p>
Visual Intrusion	09	<p>NPPG advises that visual intrusion is a consideration that needs to be taken into account.</p> <p>Visual intrusion covers impact of the workings in relation to nearby communities and impact on landscape during and after working. This section covers impact on communities. Impact on</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>The site has few or no visually sensitive receptors and/or only small parts of the site will be visible from them.</p> <p>The site has few visually sensitive receptors but large parts (or more than one part) of the site will be visible from them.</p> <p>The site has some visually sensitive receptors and/or some parts of the site will be visible from them.</p> <p>The site has many visually sensitive receptors and/or large</p>	<p>NMIN</p> <p>The nearest residential properties are located to the south of the quarry at Higher Dinting, to the west of the railway line off Shaw Lane and to the east at Howard Park. There are also isolated farm properties close to the site to the north and east. The site is well screened in this direction by existing woodland and vegetation and no parts of the site will be visible from</p>

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		landscape character will be dealt with separately. Assessment makes a judgement of visual impact on 'sensitive receptors'. In terms of visual impact these have been classed as occupied residential properties and places where people go e.g. schools/hospitals/community centres/leisure facilities. Public Rights of Way have also been included in this assessment. The assessment takes into account as far as possible; proximity to sensitive receptors topography of site existing screening measures		parts (or more than one part) of the site will be visible from them.	nearby sensitive receptors. However, working of the site would expose parts of the quarry to distant higher ground receptors to the south and west.
Noise	10	NPPG advises that noise is a consideration that needs to be taken into account particularly where noise sensitive properties are affected. The effects of noise need to be evaluated, controlled or mitigated. At this stage the only factor that we can measure is the proximity of the site to noise sensitive areas and properties which would be adversely affected by an increase in noise levels. These would normally include dwellings/places of worship/educational establishments/hospitals/ livestock farms/ some factories or any other property likely to be adversely affected by an increase in noise levels. NPPG states that Mineral planning authorities should aim to establish a noise limit, through a planning condition, at the noise-sensitive property that does not exceed the background noise level ( $L_{A90,1h}$ ) by more than 10dB(A) during normal working hours (0700-1900). The assessment takes into account the number of sensitive receptors within 200 and 500m of site.	PMAJ PMIN NMIN NMAJ	The site has no noise sensitive receptors within 500m of the boundary of the site The site has no or few noise sensitive receptors within 200m of the boundary of the site and some within 500m The site has no or few noise sensitive receptors within 200m of the boundary of the site and many within 500m The site has many noise sensitive receptors within 200m of the boundary of the site	PMIN (see Map 2) The site has no or few noise sensitive receptors within 200m of the site and few within 500m. The nearest sensitive receptors to the site lie to the north east at Shaw. About half a dozen properties at Shaw lie close to the 200 m boundary, with the remaining properties at Shaw within 500m. Properties at Higher Dinting to the south east of the site lie within 200 – 500 metres. A few isolated properties around Mouselow Farm and Hilltop Farm also lie within this zone.
Nuisance Dust	11	NPPG advises that dust is a consideration that needs to be taken into account. This criteria	PMAJ	The site has no high/medium dust sensitive receptors within 500m of the boundary of the site	PMIN The site has no or few dust sensitive receptors within 200m of

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		<p>deals with nuisance dust only. Dust likely to cause harm to human health is dealt with under air quality.</p> <p>The location of residential areas, schools and other dust-sensitive land uses should be identified in relation to the site, as well as proposed or likely sources of dust emission from within the site.</p> <p>The assessment should explain how topography may affect the emission and dispersal of site dust, particularly the influence of areas of woodland, downwind or adjacent to the site boundary, and of valley or hill formations in altering local wind patterns.</p> <p>Large dust particles (&gt;30um), which make up the greatest source of dust emitted from mineral workings will largely deposit within 100m of sources. Intermediate sized particles (10-30um) are likely to travel up to 200-500 m.</p> <p>Large/intermediate particles are classed as nuisance dust.</p> <p>Assessment takes into account the number of high/medium dust sensitive properties within 200 and 500 metres of sites i.e. area where large/intermediate dust particles are likely to deposit.</p>	<p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>The site has no or few high/medium dust sensitive receptors within 200m of the boundary of the site and some within 500m</p> <p>The site has no or few high/medium dust sensitive receptors within 200m of the boundary of the site and many within 500m</p> <p>The site has many high/medium dust sensitive receptors within 200m of the boundary of the site</p>	<p>the site and some within 500m. The nearest sensitive receptors to the site lie to the north east at Shaw. About half a dozen properties at Shaw lie close to the 200 m boundary, with the remaining properties at Shaw within 500m. Properties at Higher Dinting to the south east of the site lie within 200 – 500 metres. A few isolated properties around Mouselow Farm and Hilltop Farm also lie within this zone.</p>
Air Quality/ Human Health	12	<p>Smaller particles (&lt; 10um) which make up a small proportion of dust emitted from most mineral workings can travel up to 1000m or more. These small particles (PM10s) are associated with effects on human health. NPPG states that measures to control fine particulates (PM<sub>10</sub>) to address any impacts of dust might be necessary if, within a site, the actual source of emission (e.g. the haul roads, crushers, stockpiles etc.) is in close proximity to any residential property or other sensitive use. Unacceptable levels of PM10s are one factor</p>	<p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>Site does not lie within 1000 m of an AQMA</p> <p>Site lies within 1000m of an AQMA</p> <p>Site lies within an AQMA</p>	<p>PMIN</p> <p>The site does not lie within 1000m of an AQMA</p>

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		that may result in the establishment of an Air Quality Management Area to address the problem. The presence of such an area has been regarded as an indicator that air quality is poor therefore might constrain the location of additional dust generating development. Given that PM10s can travel up to and over 1000m, this has been used as a cut-off point.			
Blasting /Vibration	13	NPPG advises that blast vibration is a consideration that needs to be taken into account. Blasting is often a major cause of concern to residents close to mineral workings. Disturbance is dependent on the quantity of explosive used, the distance to the receptor, the geology of the site and atmospheric conditions. The impact of blasting is a matter not normally addressed in detail at the 'site allocation' stage but as a practical 'rule of thumb' a 200 metre buffer zone is considered more than adequate to protect sensitive receptors from the impacts of blasting.	PMIN NMIN	Distance to nearest sensitive receptor is over 200 metres Distance to the nearest sensitive receptor is within 200 metres.	NMIN The nearest sensitive receptor lies is within 200 metres.
Transport – Local Amenity	14	NPPG advises that traffic is a consideration that should be taken into account. The movements of minerals and importation of fill material for restoration can generate large volumes of traffic, mainly heavy goods vehicle (HGVs). Such traffic can impact on communities causing problems such as public safety, noise and vibration, air pollution and visual intrusion. These problems are most severe where HGVs use roads unsuited to their weight and size, where they pass through sensitive areas and at the access to the site from the public highway. Will associated mineral traffic pass through sensitive areas on the way to the strategic road network?	PMAJ PMIN NMIN NMAJ	HGVs would have to pass no sensitive receptors between the site and the start of the local strategic network (A Class Road or designated freight routes) HGVs would have to pass few sensitive receptors between the site and the start of the local strategic network (A Class Road or designated freight routes) HGVs would have to pass some sensitive receptors between the site and the start of the local strategic network (A Class Road or designated freight routes) HGVs would have to pass many sensitive receptors between the site and the start of the local strategic network (A Class Road or designated freight routes)	PMIN (See Map 3) The HGV route to the strategic network passes a small number of residential properties fronting Dinting Road and Shaw Lane. It is unclear how many additional trips the expansion would generate, however, trips generated by existing operations are negligible (~11 HGV movements per day), therefore the impact associated with movements of this order are also likely to be small. The A57 at Shaw Lane experiences significant peak hour congestion and delay. Again, the anticipated relatively small vehicle movements generated by this operation are unlikely to contribute significantly to the existing situation. There are no recorded safety issues on this route.
Transport - Safe and	15	What are the existing or proposed access arrangements for the site?	PMAJ NMIN	Existing approved access to current highway standards Existing approved access not to current highway standard but	PMAJ The purpose built existing site access appears to conform to

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
effective access to and from the site			NMAJ	no pattern of existing collisions at access location or no existing access , but subject to agreement with local highway authority new access likely to be accepted Existing approved access not to current highway standard and current pattern of existing collisions at access location or no existing access and subject to agreement with local highway authority new access unlikely to be acceptable.	current highway standards with no safety issues evident.
Transport – Export route (vehicular)	16	What is the main export route (vehicular) from the site?	PMAJ PMIN NMIN NMAJ	Direct onto the strategic road network (i.e. and A class road or a road that is a designated freight route. Direct onto a B class road with short haul to strategic road network Direct onto a B class road but with long haul to strategic road network Direct on to minor roads unsuitable for HGVs	PMIN The route to the strategic network (A57) is around 1 km. Although not designated, the route via Dinting Road and Shaw Lane appears suitable for the anticipated number of HGVs. Vehicles routing to the east of the site via Dinting should be avoided as this route is unsuitable for HGVs.
Transport - Capacity for sustainable transport options	17	NPPF promotes the use of alternatives to road transport provided that they are environmentally preferable. This helps to reduce carbon emissions thus reducing the impacts on the climate. Is an alternative mode of transport to road proposed?	PMAJ PMIN NMIN	All material would be transported by rail or canal Some material would be transported by rail or canal All material would be transported by road	NMIN As with existing operations, it is anticipated that all material would be transported by road.
Benefits from the working, restoration and proposed after-use	18	NPPF advises that the positive benefits of mineral working should be taken into account. What are the overall potential benefits from the proposed working, restoration and after-use of the site?	PMAJ PMIN NMIN NMAJ	Economic, social and environmental benefits would arise Two of the above benefits would arise One of the above benefits would arise No benefits would arise	PMIN Economic-shale from this quarry is vital for the continued operation of Denton brickworks Social – Continued local employment in the quarry, brickworks and building stone merchants
Cumulative impact	19	Cumulative impact arises not only from successive mineral operations in the same area, but also coupled with other types of commercial activity, which may have an impact on an area over time.	PMIN NMIN NMAJ	There are no significant impacts of past or present mineral extraction or other significant commercial activity in the area. There are not any current mineral workings in the area but there have been workings in the recent past and there is other commercial activity in the area. There is a concentration of mineral workings and other commercial activity in the areas, which currently have, or have had, impacts either concurrently or successively over a long period of time.	PMIN There are no significant impacts of past or present mineral extraction or other significant commercial activity in the area.

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<b>Environmental Criteria</b>					
Water Environment – Flood Risk	20	The EA designates flood zones which are susceptible to different risks of flooding. Zone 1 has the lowest probability of flooding and Zone 3 the highest. NPPG advises that a risk-based sequential test should be applied to proposals with the aim of steering new development to areas at the lowest probability of flooding. It classifies land uses according to their vulnerability to flooding; mineral workings (other than sand and gravel workings) are classed as ‘less vulnerable’ development which is appropriate development in zones 1, 2 and 3a. However, mineral working should not increase flood risk elsewhere and needs to be designed, worked and restored accordingly. It sets out that it may be possible to locate ancillary facilities such as processing plant and offices in areas at lowest flood risk. Sequential working and restoration can be designed to reduce flood risk by providing flood storage and attenuation.	PMAJ PMIN NMIN NMAJ	Site lies within flood zone 1- lowest probability of flooding Site lies within flood zone 2- medium probability of flooding Site lies within flood zone 3a- high probability of flooding Site lies within flood zone 3b- functional flood plain	PMAJ (See Map 4) The site lies in flood zone 1 which has the lowest probability of flooding.
Water Environment – groundwater	21	NPPG advises that groundwater is a consideration that should be taken into account. The EA designates Groundwater Source Protection Zones for important groundwater sources such as wells, boreholes and springs used for drinking water supply. It is important within these Zones not to interrupt the flow or to pollute the groundwater.	PMIN NMIN	Site lies outside a groundwater protection zone Site lies within a groundwater protection zone	PMIN The site lies outside a groundwater protection zone
Water Environment - aquifer protection	22	NPPG advises that groundwater is a consideration that should be taken into account. Permeable rock deposits that store groundwater are known as aquifers. The EA designates two types of aquifer, superficial drift and bedrock deposits. Aquifers are further classified as Principal or Secondary. Principal aquifers usually	PMIN NMIN NMAJ	Site lies on a Non Aquifer Site lies on a Secondary Aquifer Site lies on a Principal Aquifer	NMIN (see Map 5) The site lies on a secondary aquifer.

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		provide a high level of water storage and may support water supply and/or river base flow on a strategic scale. Consequently they require the greatest protection from development that might be harmful to them.			
Ecology – existing impacts from mineral extraction	23	NPPG advises that impacts on internationally, nationally or locally designated wildlife sites, protected habitats and species and ecological networks should be taken into account. Presence or absence of existing impacts from mineral extraction	PMAJ  PMIN NMIN  NMAJ	Over a wide area habitats have been fragmented by mineral extraction or habitats of limited quality have been created through mineral extraction but have potential to make a major contribution to biodiversity targets Localised but moderate to high impacts Only localised, limited impacts associated with mineral extraction on habitats within or adjacent to the site None or insignificant impacts from mineral extraction on habitats within or adjacent to the site	NMIN The proposed extraction area would form a modest extension to the existing Mouselow Quarry. Whilst the existing quarry has affected habitats within its site boundary, it does not appear to have significantly affected surrounding land, including the proposed extension area. Quarrying activities have not been particularly extensive in the surrounding area
Ecology – UK, regional and local BAP priority species and habitats	24	NPPG advises that impacts on internationally, nationally or locally designated wildlife sites, protected habitats and species and ecological networks should be taken into account. Presence or absence of existing priority habitats and species as identified by UK, regional and local BAPs	PMAJ  PMIN  NMIN  NMAJ	Extensive areas of degraded or biodiversity poor habitats that provide a context for possible allocation with an emphasis on habitat creation contributing to UK priority habitats Some areas of degraded or biodiversity poor habitats that provide a context for possible allocation with an emphasis on habitat restoration or creation contributing to UK and local priority habitats Some areas of positive ecological value including UK or local priority habitats or species which should be considered for protection/conservation Extensive areas of positive ecological value including UK priority habitats or species which should be considered for protection/conservation	PMIN (see Map 6) The land within the proposed extension area is not known to support any habitats or species of ecological value. The habitats on site appear to consist of agriculturally improved grassland

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Ecology – ecological coherence: Natural Areas/ Wildlife Corridors/linkages	25	NPPG advises that impacts on internationally, nationally or locally designated wildlife sites, protected habitats and species and ecological networks should be taken into account. Does the site have strong ecological coherence?	PMAJ PMIN NMIN NMAJ	The proposed site no longer accords with the established habitats over a wider area. The proposed site has few characteristics that accord with the established habitats over a wider area and its internal ecological coherence is poor OR coherence of the wider area is poor The proposed site generally accords with the established habitats over a wider area (or in part) but the condition of habitats is poor OR few features within the site but encompassed by landscapes which have ecological coherence The proposed site accords with the established habitats over a wider area and habitat pattern is strong	PMIN The improved grasslands within the extension area are consistent with land use in the wider area, but not with higher quality habitats nearby
Ecology – Habitat Creation	26	NPPG advises that the proposed restoration of the site should be taken into account. Does the site provide opportunities for habitat creation?	PMAJ PMIN NMIN NMAJ	The proposed site offers excellent opportunities to create or enhance UK priority habitats within the site and offers biodiversity benefit over a wider area e.g. by enhancing a habitat corridor. The site offers some opportunities to create or enhance UK or local priority habitats within its boundaries, making overall habitat gain, but may not make appropriate linkages to wider area. Existing habitats are intact and habitat creation would only provide limited biodiversity enhancement within the site or the wider area. Existing habitats are intact and make a strong contribution to priority biodiversity targets for conservation and there is strong ecological coherence within the site; habitat creation would not enhance the site or the wider area.	PMIN The restoration of the extension area has the potential to deliver restoration targeting habitats complimentary to those proposed for the restoration of the existing site.
Landscape-existing impacts from mineral extraction	27	NPPG advises that impacts on landscape character should be taken into account. A particular issue for hard rock quarries is the scope of the landscape character to accommodate mitigation and thereby reduce potential impacts. What is the character of the existing landscape including its scope to accommodate mitigation?	PMAJ PMIN NMIN NMAJ	A landscape of complex character with many landscape characteristics that can be employed in the satisfactory mitigation/restoration of the site A landscape of varied character with some landscape characteristics that can be employed in the satisfactory mitigation/restoration of the site A simple landscape with few landscape characteristics that can be employed in the satisfactory mitigation/restoration of the site An open and simple landscape with very few landscape characteristics that can be employed in the satisfactory mitigation/restoration of the site	PMIN A landscape of varied character with some landscape characteristics that can be employed in the satisfactory mitigation/restoration of the site

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
Landscape – Existing infrastructure	28	NPPG advises that impacts on landscape character should be taken into account. Is there existing infrastructure that the site could be worked through and what is the impact in landscape terms from connecting to this?	PMAJ PMIN NMIN NMAJ	There is existing infrastructure within the vicinity of the proposed site that can be readily and easily used There is existing infrastructure within the vicinity of the proposed site that could be connected to with slight adverse effects There is existing infrastructure within the vicinity of the proposed site but there would be significant adverse impacts associated with connecting to it. There is no existing infrastructure and this will need to be developed for the proposed site to be operated	PMAJ The quarry has existing vehicular access, a site compound and mobile plant that can be readily and easily used.
Landscape – Strength of Landscape Character	29	NPPG advises that impacts on landscape character should be taken into account. Is the character of the landscape strong and visually coherent?	PMAJ PMIN NMIN NMAJ	The proposed site no longer accords with the established landscape character and the restoration of a 'new' landscape is required (Restore/create) The proposed site has few characteristics that accord with the established landscape character and the condition is poor (Enhance) The proposed site generally accords with the established landscape character (or in part) but the condition could be enhanced (Conserve and enhance) The proposed site accords with the established landscape character and is in good condition (Conserve)	NMAJ (See Map 7) The allocation of all the proposed site would remove a significant portion of landscape which accords with the established landscape character including a low hill landform , woodland, drystone walls and pasture in good condition . In the wider area <i>'the landscape is generally intact and in good condition in places but includes detracting areas of disturbed land associated with the urban fringe'</i> .
Landscape/– visual impact	30	NPPG advises that impacts on landscape character should be taken into account. What would be the visual impact on the landscape of working the site?	PMAJ PMIN NMIN NMAJ	The site has few or no visual receptors and/or only small parts of the site will be visible The site has few visual receptors but large parts (or more than one part) of the site will be visible The site has some visual receptors and/or some parts of the site will be visible The site has many visual receptors and/or large parts (or more than one part) of the site will be visible	NMAJ <i>'The greatest visual impact of the proposed allocation area is on the higher ground receptors to the south and west within 3km of the site'</i> . This includes parts of the Peak District National Park but the views are part of a wider panorama. Whilst the existing quarry site is already visible the removal of the entire hillside down to the road to the south west would expose large parts of the existing quarry. There are some visual receptors but large parts of the site will be visible.
Landscape – impact on the Peak District National Park	31	NPPF requires great weight to be given to conserving landscape and scenic beauty in National Parks. Many of the hard rock quarries within the Plan area lie in close proximity to the Peak District National Park (PDNP). Would working the site impact on the PDNP?	PMAJ PMIN NMIN	The site is not close to the PDNP boundary and no part of the site will be visible from it The site is not close to the PDNP boundary although parts of the site may be visible from it The site lies in close proximity to the PDNP boundary forming part of the wider setting and/or large parts of the site will be visible from it	PMIN The site is not close to the PDNP boundary although parts of the site may be visible from it

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
			NMAJ	The site abuts the PDNP boundary forming part of its immediate setting and/or large parts of the site will be clearly visible from it	
Historic Environment – designated sites and settings	32	NPPG advises that impacts on archaeology and heritage features should be taken into account. Would working the site impact on a designated site or its setting? .	PMIN NMIN NMAJ	No perceivable impact on a designation and/or its setting Impact on a Grade II designation, conservation area and/or its setting Impact on a Grade I or II* designation , SAM and/or its setting	PMIN (see Map 8) The scheduled Monument of Mouselow Castle is c800m to the north west but the current quarry in between. Unlikely to have any impact on setting. Howard Park Conservation Area c600m to the east, unlikely to have any impact but should be considered in any application.
Historic Environment – Archaeology	33	NPPG advises that impacts on archaeology and heritage features should be taken into account. What is the archaeological importance of the site?	PMAJ PMIN NMIN NMAJ	Little or known earthworks and/or known archaeology with low potential for buried archaeology Occasional or localised earthworks (may not be visually evident) and/or known archaeology with limited potential for buried remains Frequent, visible and interpretable earthworks and/or some known archaeology with significant potential for buried remains Extensive, visible and interpretable earthworks and/or known archaeology with high potential for buried remains.	PMAJ Nothing recorded on the site or immediate vicinity and no visible earthworks. May still be some potential for buried remains.
Historic Environment – historic landscape	34	NPPG advises that impacts on archaeology and heritage features should be taken into account. Is the historic character of the landscape strong?	PMAJ PMIN NMIN NMAJ	Historic field pattern largely gone Remnant field patterns with significant boundary loss Recognisable field patterns with some boundary loss Evidence of multi-period landscape and/or intact field pattern (as indicated by 1st edition OS or earlier)	PMIN Some of the field system represented in the proposed area remains to the east but it has largely been comprised bt earlier developments.
Geological and Geomorphological features	35	NPPG advises that the impacts on nationally protected geological and geomorphological sites and features need to be taken into account. What is the geological /geomorphological importance of the site?	PMIN NMIN	No impact on a designated site Impact on a designated site	PMIN The proposed extension area would not affect geological designations
Best and most versatile agricultural land	36	NPPG advises that the impacts on soil resources should be taken into account. What is the likelihood of the site containing bmv land? i.e. grade 1,2 or 3a of the Agricultural Land Classification Scheme. At this stage we do not have detailed working and restoration proposals to assess how much bmv land will be conserved and in many cases we do not have information about the presence of bmv land. We have decided therefore to use	PMAJ PMIN NMIN	The site lies within an area where there is a low likelihood of bmv land (less than 20% of the land is likely to be bmv). The site lies within an area where there is a moderate likelihood of bmv land (20-60% of the land is likely to be bmv). The site lies within an area where there is a high likelihood of bmv land (more than 60% is likely to be bmv).	PMIN (See Map 9) The site lies within an area where there is a moderate likelihood of bmv land (20-60% of the land is likely to be bmv).

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
		DEFRA's predictive agricultural land classification map to indicate whether the site lies within an area where there is a high, moderate or low likelihood of bmv land being present. In principle areas of bmv land should be protected.			
<b>Duty to Cooperate</b>					
Conformity with other local plans (allocations)	37	NPPF requires local planning authorities to cooperate on strategic cross border issues which includes ensuring that local plans are compatible Is the site in conformity with other local plans?	PMAJ NMIN NMAJ	The site is in conformity with other local plans The site is not in conformity but the issue is likely to be resolvable The site is not in conformity with other local plans and the issue is unlikely to be resolved	PMAJ The site is in conformity with other local plans.

## 5. Conclusions

The following commentary seeks to identify those key factors that favour the allocation of the site and those that would constrain the site's allocation. In many cases the impacts are judged to be minor. A tabular summary of the assessment findings is set out below.

The following matters have been assessed as key positive factors favouring allocation:

- Mouselow quarry clay and shale is essential for the continued operation of the brickworks at Denton. The quarry operator and brickworks owner Wienerberger is one of the leading brick manufacturers in the UK and markets are nationwide.
- The quarry is also an important supplier of high quality building stone. Markets are nationwide, generally to high value projects in major cities.
- Important local employer (both quarry and brickworks) and provider of wealth to local economy in a semi-rural area where mining is a traditional important local employer

The following matters have been assessed as key negative factors against allocation:

- Working would extend the duration of the quarry to around 2049
- Working this site would remove a significant portion of landscape which accords with the established landscape character
- Working this site would expose large parts of the existing quarry and result in detrimental visual impact in the wider landscape particularly to higher ground receptors to the south and west within 3 kilometres of the site, including parts of the Peak District National Park.

Where potential negative impacts have been identified the Mineral Planning Authority will carry out further detailed work, in consultation with appropriate bodies, to see if that impact could be mitigated or avoided to enable the site to go forward for allocation.

## Summary of Assessment - Mouselow

Criteria	PMAJ	PMIN	NMIN	NMAJ	Criteria	PMAJ	PMIN	NMIN	NMAJ
<b>Economic Criteria</b>					<b>Environmental Criteria</b>				
Need for mineral	*				Water Environment – Flood Risk	*			
Quality/yield of mineral	*				Water Environment –groundwater		*		
Use of mineral resources	*				Water Environment-aquifer protection			*	
Location of Processing Plant		*			Ecology – existing impacts from mineral extraction			*	
Existing Infrastructure		*			Ecology – UK, regional and local BAP priority species and habitats		*		
Sterilisation of Resources		*			Ecology – ecological coherence: Natural Areas/ Wildlife Corridors/linkages		*		
Employment		*			Ecology – Habitat Creation		*		
<b>Social Criteria</b>					Landscape- existing impacts from mineral extraction		*		
Duration of mineral extraction				*	Landscape – Existing infrastructure	*			
Visual Intrusion			*		Landscape – Strength of Landscape Character				*
Noise		*			Landscape/– visual impact				*
Nuisance Dust		*			Landscape – impact on the Peak District National Park		*		
Air Quality/ Human Health		*			Historic Environment –designated sites and settings		*		
Blasting /Vibration			*		Historic Environment – Archaeology	*			
Transport – Local Amenity		*			Historic Environment –historic landscape		*		
Transport - Safe and effective access to and from the site	*				Geological and Geomorphological features		*		
Transport – Export route (vehicular)		*			Best and most versatile agricultural land		*		
Transport - Capacity for sustainable transport options			*		<b>Duty to Cooperate</b>				
Benefits from the working, restoration and proposed after-use		*			Conformity with other local plans (allocations)	*			
Cumulative impact		*							

## 6. Next Steps

The next stage of Plan preparation involves the publication of a Draft Minerals Local Plan which will set out strategies to ensure the supply of minerals. If the identification of specific sites is considered to be the best option for making provision for brick clay and fireclay, the Plan will include the allocation of any sites that we think should be identified for working during the Plan period. Supporting evidence to the Plan would include a full site assessment to accompany sites that are suitable for allocation as well as those that are considered to be unsuitable. Where sites are proposed for allocation they will be accompanied by a list of planning requirements that would need to be taken into account in the submission of any planning application.

It should be reiterated that an allocation doesn't automatically mean that planning permission will be forthcoming; the site will have to be fully evaluated against detailed planning requirements.

### Site Assessment: Mouselow

Do you have any comments on the Assessment of the site promoted for mineral working at Mouselow Quarry? Please give reasons for your answer.