

DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

**Towards a Minerals Local Plan:
Spring 2018 Consultation**

**Site Allocations:
Revised Initial Site Assessment
Mouselow**

December 2017

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1. Introduction and Background

- 1.1 The allocation of specific sites for mineral working forms part of the proposed way of planning for an adequate and steady supply of brick clay, as set out in Chapter 7 of the Proposed Approach. The implementation of this approach requires the Plan to allocate suitable sites that will commence working during the Plan period to 2030.
- 1.2 In order to assess the suitability of sites the MPAs have developed a Site Assessment Methodology which has been refined following previous consultations. Further information can be found in the following Background Paper.

Towards a Minerals Local Plan: Spring 2018 Consultation
Revised Site Assessment Methodology Hard Rock Quarries,
December 2017

- 1.3 The revised Site Methodology has been used to carry out a revised Initial Assessment on the 'hard rock' sites that have been promoted for working during the Plan period. This Paper contains a Revised Initial Assessment of the promoted extension site at Mouselow Quarry.

2. Mouselow Quarry

- 2.1 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.

- 2.2 Recent brick clay production at Mouselow is around 45,000 tonnes per annum (tpa); there is no anticipated increase in output in the immediate future however output may increase to approximately 54,000 tpa in the medium to longer term if the economy improves. Sandstone extraction is anticipated to remain at approximately 10,000 tpa.
- 2.3 A key factor in the suitability of the shale for brick making purposes is the level of sulphur and carbon. The Upper Shales are the main source of brick making material. Below these shales lie the Lower Shales which are high in sulphur and carbon. Historically these have been blended with the Upper Shales but it is increasingly difficult for the Denton Brickworks to meet increasingly strict air quality requirements if the Lower Shales are used. The Company has decided to use the Upper Shales only which means that the existing approved reserves of 180,000 tonnes will only last 4 years. The Company are therefore promoting a small extension to the quarry (1.5 Ha) that would generate an additional 850,000 tonnes of high quality brick making shale and last approximately for 19 years. Planning permission to extract the Lower Shales would be relinquished. The combination of the existing reserves and the promoted extension sites would last for approximately 23 years in total, resulting in a planned end date for the quarry of 2040.
- 2.4 The promoted extension site is smaller (in area and tonnage) than that previously promoted by Wienerberger and which was the subject of an Initial Assessment in 2016/2017. The smaller site will now be the subject of this revised Initial Assessment.

3 Sources of Information for Assessment

- 3.1 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

EM1 0617 16 Request for Pre Application Advice for the extension of Mouselow Quarry and supporting documents, June 2017

- 3.2 More detail about the sources of information used to inform the assessment can be found in the following Background Paper:

Towards a Minerals Local Plan: Spring 2018 Consultation
Revised Initial Site Assessment Background Information:
Mouselow, December 2017

- 3.3 The following information has been mapped:

Site location, resource, noise and indicator zones, public rights of way and 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:

Towards a Minerals Local Plan: Spring 2018 Consultation
Revised Initial Site Assessment Maps, Mouselow,
December 2017

4. Site Assessment

Initial Assessment of Sites

The Initial Assessment involves an assessment of each promoted site against the economic, social and environmental criteria set out in Table 1. The purpose of this Initial Assessment is to discover any positive factors that would support the allocation of the site and any negative factors that would constrain its' allocation. These factors are then categorised as having a major or minor impact. In some cases the criteria have been categorised as only having a minor impact on the potential allocation of the site from the outset; no other weightings will be applied to the criteria. The assessment criteria will be applied on an individual basis and therefore what is considered a major impact for one criterion should not be compared to a major impact for another criterion. The Initial Assessment is not intended to be a stop/go process hence even where negative factors have been identified further detailed assessment will take place to ascertain if those factors can be mitigated or avoided to enable a site to progress towards allocation.

The Initial Assessment will be undertaken by appropriately qualified personnel specifically identified to conduct assessments based on their respective professional fields. Much of the Assessment is desk based using existing data and information. A field visit has also been undertaken to view the site in the context of its surroundings.

The main generic sources of information are:

- Relevant environmental, infrastructure and land use GIS datasets,
- Mineral resource information reports, maps and survey data,
- Current and historic planning permissions and planning applications, and

- Landscape Character Study assessments, Biodiversity Action Plans, Historic Environment Record (Sites and Monuments record)
- Local Transport Plan
- District Council prepared Local Plans

Scale of Impact

The scale of impact is recorded as follows:

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

None/Few/Some/Many

For some indicators the Assessment provides an indication of the number of properties affected by a criterion by using the general terms none, few, some and many. These general terms have been assigned numbers to provide an indication of the number of properties involved.

None – 0, Few – 1-5, Some – 6-19, Many 20+

Sensitive Receptors

For some indicators the Assessment refers to impacts on sensitive receptors; examples of such receptors are set out below:

Visual sensitive receptors: Residences, Retirement Homes, Hospitals, Community Facilities, Hotels, Footpath/Trail users etc

Noise Sensitive receptors: Residences, Retirement Homes, Hospitals, Schools, Places of Worship, Offices, Farms, Hotels etc

Dust Sensitive receptors: Residences, Retirement Homes, Hospitals, Schools, Farms, Hotels, Some industries such as food processing, hi-tech etc

Additional Note

The Criteria Numbers in Table 1 have changed from previous consultation versions of Table 1 as criteria have been added or deleted.

Table 1: Revised Initial Assessment

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
Economic Criteria					
Need for mineral	01	<p>NPPF requires that local plans should plan for an adequate and steady supply of industrial minerals. Additionally 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).</p> <p>Is there an identified need for additional reserves to maintain supply throughout the Plan period?</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMAJ</p>	<p>Detailed evidence to support the need for additional reserves to be worked at that quarry over the Plan period</p> <p>Some evidence to support the need for additional reserves to be worked at that quarry over the Plan period</p> <p>Insufficient evidence to support the need for additional reserves to be worked at that quarry over the Plan period</p>	<p>PMAJ (See Map 1)</p> <p>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 total 180,000 tonnes and will only last for 4 years i.e. not until the end of the plan period, 2030.</p>
Quality/yield of mineral	02	<p>NPPF requires that local plans should plan for an adequate and steady supply of industrial minerals. In order to assess whether a site will meet an identified need it is important to determine the scale and nature of the promoted mineral resource. Has the operator provided sufficient information about the quality/yield of the resource?</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMAJ</p>	<p>Detailed geological evidence to support the quality/yield of the deposit (boreholes)</p> <p>Some geological evidence to support the quality/yield of the deposit (mapped)</p> <p>Insufficient evidence to support the quality/yield of the deposit</p>	<p>PMAJ</p> <p>The Company has provided detailed resource information in the promotion of the site for working.</p>

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
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 site to market areas	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 for its intended market. Is the site appropriately located in relation to the market areas 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 and principally serves the Manchester conurbation. 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 in considering the suitability of new sites and extensions to existing sites. 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 Mobile 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).
Conservation of Resources	06	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. In some cases it might be that if a site isn't allocated to be worked as part of a current	PMIN NMIN	Yes The site is likely to remain unworked if not allocated No The site is likely to be worked if not allocated due to its scale/location	PMIN Hard rock quarries are expensive to develop and therefore if this site isn't worked as an extension to the existing quarry it is unlikely to be worked in the future.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
		operation its' scale or location would affect the likelihood of it being worked in the future. If the site wasn't allocated is it likely that the site would remain unworked due to its location/scale?			
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 in considering the suitability of new sites and extensions to existing sites.</p> <p>Would the proposal create new jobs? Would the proposal lead to the retention of jobs at a currently operational site? Would the proposal create new jobs but lead to job losses elsewhere?</p>	PMAJ PMIN	A new operation which would result in the creation of new jobs The continuation of an operation leading to the retention of existing jobs or a new operation which would result in the creation of new jobs but which would result in job losses elsewhere.	PMIN 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.
Social Criteria					
Duration of mineral extraction	08	NPPF requires the cumulative impact of proposals to be taken into account. The duration of the operation should be a consideration as it will affect the overall scale of impact on local communities. What is the intended timeframe for working the site in addition to any existing permitted reserves?	PMAJ PMIN NMIN NMAJ	Short term 0-10 years Medium term 10-20 years Long term 20-30 years Very long term 30+ years	NMIN Working the site is a long term proposal estimated to be around 23 years.
Visual Intrusion	09	NPPF requires that mineral operations do not have unacceptable adverse visual impacts. Visual intrusion covers impact of the workings in relation to visually sensitive receptors e.g. nearby communities, PROW users The Assessment makes a judgement on the visual impact of working on 'sensitive receptors'. The assessment takes into account as far as possible; proximity to sensitive receptors, topography of site and existing screening measures.	PMAJ PMIN NMIN NMAJ	<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 parts (or more than one part) of the site will be visible from them.</p>	<p>NMIN (See Map 2)</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.</p> <p>The site is well screened in this direction by existing woodland and vegetation and no parts of the site will be visible from nearby sensitive receptors.</p> <p>The greatest visual impact of the promoted allocation area, however, would be on the higher ground receptors to the south and west within 3km of the site. This includes parts</p>

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
					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 some of the hillside to the south west would only marginally increase the visual exposure of the existing quarry and this will be offset by the progressive restoration of the existing quarry void. There will be views of the working from PROW; particularly from footpaths 102 and 133 which lie to the south and east of the quarry.
Noise	10	NPPF requires that mineral operations do not have unacceptable adverse noise impacts. At the planning application stage it is likely that a Noise Assessment study will need to be undertaken. At this stage however it is possible to indicate where noise might be an issue by assessing the number of noise sensitive receptors and their distance from the site. In the absence of detailed information about the sources of noise the site boundary has been used from which to measure potential impacts. The assessment takes into account the number of 'noise 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	NMIN (See Map 3) 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.
Dust	11	NPPF requires that mineral operations do not have unacceptable adverse dust impacts. NPPG sets out further guidance on this matter. At the planning application stage it is likely that a Dust Assessment Study will need to be undertaken. At this stage, however, it is possible to indicate where dust might be an issue by assessing the number of dust sensitive receptors and their distance from the site. The IAQM study ¹ has been used to classify receptors as having high/medium/low sensitivity to dust. In the	PMAJ PMIN NMIN NMAJ	The site has no high/medium dust sensitive receptors within 400m of the boundary of the site The site has no or few high/medium dust sensitive receptors within 100m of the boundary of the site and some within 400m The site has no or few high/medium dust sensitive receptors within 100m of the boundary of the site and many within 400m The site has many high/medium dust sensitive receptors within 100m of the boundary of the site	NMIN (See Map 4) The site has no or few dust sensitive receptors within 100m of the site and many within 400m. The nearest sensitive receptors to the site lie to the north east at Shaw where many properties lie beyond 100 metres but within 400 metres of the site. Many properties at Higher Dinting to the south east of the site lie also lie within 100 – 400 metres. A few isolated properties around Mouselow Farm and Hilltop Farm also lie within this zone.

¹ Guidance on the Assessment of Mineral Dust Impacts for Planning, IAQM, May 2016 (v1.1)

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
		<p>absence of detailed information about the sources of dust the site boundary has been used from which to measure potential impacts.</p> <p>Dust arising from a quarry can reduce amenity in the local community due to visible dust plumes and dust soiling. The generally coarser dust that leads to these effects may, therefore, be referred to as 'dis-amenity dust'. The smaller dust particles can remain airborne longer, potentially increasing local ambient concentrations of suspended particulate matter (e.g. PM10 and to a lesser extent PM2.5), which is associated with a range of health effects. Mineral site impacts are more likely to result in PM10 particulates rather than PM2.5 matter.</p> <p>The IAQM study states that adverse dust impacts are uncommon beyond 400m of hard rock quarries. The greatest potential for high rates of dust deposition and elevated PM10 concentrations will be within 100m of a source and this can include both large (>30um) and small dust particles. Intermediate sized particles (10um to 30um) may travel up to 400m, with occasional elevated levels of dust deposition and PM10 possible. Particles of less than PM10 have the potential to persist beyond 400m but with minimal significance due to dispersion. These bands have been used to define indicators for assessment.</p>			
Dust - Air Quality/ Human Health	12	NPPG advises that additional measures to control PM10s might be necessary if the actual source of the emission is in close proximity to any residential property or sensitive use. PM10s make up a small proportion of dust emitted from most mineral workings but can travel up to 1km.	PMIN NMIN NMAJ	Site does not lie within 1000 m of an AQMA Site lies within 1000m of an AQMA Site lies within an AQMA	PMIN The site does not lie within 1000m of an AQMA

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
		<p>NPPG sets out an assessment framework for analysing the impacts of PM10s. The initial step is to ascertain if sensitive receptors lie within 1km of the site activity and/or PM10 levels are likely to exceed Air Quality Objectives (AQO). These objectives relate to the protection of human health and include maximum levels of PM10s. A detailed analysis of dust sources and/or PM10 levels would need to be undertaken at the planning application stage.</p> <p>We do, however, know the location of Air Quality Management Areas which are designated because Air Quality Objectives are not being met. Unacceptable levels of PM10s are one factor that may result in the establishment of an Air Quality Management Area to address the problem. The presence of an AQMA is an indicator that air quality is poor which might constrain the location of additional dust generating development. Given that PM10s can travel up to and over 1000m, this distance has been used as a cut-off point.</p>			
Transport – Local Amenity	13	<p>NPPF requires that mineral operations do not have unacceptable adverse traffic impacts. 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.</p> <p>Will associated mineral traffic pass through sensitive areas on the way to the strategic</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>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)</p> <p>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)</p> <p>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)</p>	<p>PMIN (See Map 5)</p> <p>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.</p> <p>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.</p>

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
		road network?			
Transport - Safe and effective access to and from the site	14	What are the existing or proposed access arrangements for the site?	PMAJ NMIN NMAJ	Existing approved access to current highway standards Existing approved access not to current highway standard but 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.	PMAJ The purpose built existing site access appears to conform to current highway standards with no safety issues evident.
Transport – Export route (vehicular)	15	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	16	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.
Environmental Criteria					
Water Environment – Flood Risk	17	NPPF requires that mineral operations do not have unacceptable adverse impacts on flood risk. 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	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 6) The site lies in flood zone 1 which has the lowest probability of flooding.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
		<p>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.</p> <p>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.</p>			
Water Environment –groundwater	18	<p>NPPF requires that mineral operations do not have unacceptable adverse impacts on groundwater. The EA designates Groundwater Source Protection Zones for important groundwater abstraction sources such as wells, boreholes and springs used for drinking water supply, and defines them according to the groundwater travel time to an abstraction. It is important within these Zones not to interrupt the flow or to pollute the groundwater. In principle, source protection zones 1 are the most important to protect form harmful development.</p>	PMAJ PMIN NMIN NMAJ	<p>Site lies outside a groundwater protection zone 3 Site lies within a groundwater protection zone 3 Site lies within a groundwater protection zone 2 Site lies within a groundwater protection zone 1</p>	PMAJ (See Map 6) The site lies outside a groundwater protection zone
Water Environment - aquifer protection	19	<p>NPPF requires that mineral operations do not have unacceptable adverse impacts on groundwater. 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 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.</p>	PMIN NMIN NMAJ	<p>Site lies on a Non Aquifer Site lies on a Secondary Aquifer Site lies on a Principal Aquifer</p>	NMIN (See Map 7) The site lies on a secondary aquifer.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
Ecology – existing impacts from mineral extraction	20	NPPF requires that mineral operations do not have unacceptable adverse impacts on protected wildlife or geodiversity sites. Distinctions should be made between the hierarchy of international, national and locally designated sites. So that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. Is there a 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	21	NPPF requires that mineral operations do not have unacceptable adverse impacts on protected wildlife or geodiversity sites. Distinctions should be made between the hierarchy of international, national and locally designated sites. So that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. Is there a 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 8) 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
Ecology – ecological coherence: Natural Areas/Wildlife Corridors/link ages	22	NPPF requires that mineral operations do not have unacceptable adverse impacts on protected wildlife or geodiversity sites. Distinctions should be made between the hierarchy of international, national and locally designated sites. So that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. 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

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
Ecology – Habitat Creation	23	NPPF requires that mineral operations do not have unacceptable adverse impacts on protected wildlife or geodiversity sites. Distinctions should be made between the hierarchy of international, national and locally designated sites. So that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks. 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	24	NPPF requires that mineral operations do not have unacceptable adverse impacts on the landscape character of an area. What are the existing impacts on the landscape from any nearby mineral extraction?	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 There are localised moderate to high impacts associated with past mineral extraction however phased restoration is mitigating and reducing the impact with the infilling of old quarry, seeding and the establishment of advanced planting.
Landscape – Strength of Landscape Character	25	NPPF requires that mineral operations do not have unacceptable adverse impacts on the landscape character of an area. 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)	NMIN (See Map 9) The allocation of all the proposed site would remove a parcel of land that is currently down to pastoral farming and a small section of existing woodland. Although this land accords with the established landscape character of the wider area it is well contained by a low hill landform, woodland, and drystone walls. In the wider area the landscape is generally intact and in good condition in places but includes detracting areas of disturbed land associated with the urban fringe.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
Landscape – impact on the Peak District National Park	26	NPPF requires that mineral operations do not have unacceptable adverse impacts on nationally protected landscapes (including 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 NMAJ	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 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	PMAJ The site is not close to the PDNP boundary although parts of the site may be visible from it
Historic Environment –designated sites and settings	27	NPPF requires that mineral operations do not have unacceptable adverse impacts on the historic environment. It requires that heritage assets are conserved in a manner appropriate to their significance, and places great weight on the conservation of designated heritage assets. Would working the site impact on a designated heritage asset/site and/or its setting?	PMIN NMIN NMAJ	No perceivable impact on a designation and/or its setting Impact on Grade II Listed Building/Registered Historic Park and Garden, Conservation Area and/or its setting Impact on Grade I or II* Listed Building/Registered Historic Park and Garden, Scheduled Monument, World Heritage Site and/or its setting.	PMIN (See Map 10) 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	28	NPPF requires that mineral operations do not have unacceptable adverse impacts on the historic environment including archaeological assets. What is the archaeological importance of the site?	PMAJ PMIN NMIN NMAJ	Few or no 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	29	NPPF requires that mineral operations do not have unacceptable adverse impacts on the historic environment including historic landscape character. 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 by earlier developments.
Best and most versatile agricultural land	30	NPPF requires that the long term potential of the best and most versatile agricultural should be safeguarded from the impacts of mineral working.	PMAJ PMIN	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	PMIN (See Map 11) 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
		<p>At this stage we do not have detailed working and restoration proposals to assess how much BMV land will be affected, neither do we have detailed information about the location of BMV land. We have decided to use 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.</p> <p>What is the likelihood of the site containing best and most versatile (BMV) agricultural land?</p>	NMIN	<p>bmv).</p> <p>The site lies within an area where there is a high likelihood of bmv land (more than 60% is likely to be bmv).</p>	
Conformity with other local plans (policies and allocations)	31	<p>NPPF requires local planning authorities to co-operate on strategic cross border issues which includes ensuring that local plans are compatible</p> <p>Is the site in conformity with other local plans?</p>	PMAJ NMIN NMAJ	<p>The site is in conformity with other local plans</p> <p>The site is not in conformity but the issue is likely to be resolvable</p> <p>The site is not in conformity with other local plans and the issue is unlikely to be resolved</p>	PMAJ The site is in conformity with other local plans.

5. Conclusions

Revised Initial Assessment

5.1 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.

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

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

- Working would extend the duration of the quarry to around 2049
- The greatest visual impact of the promoted allocation area would be on the higher ground receptors to the south and west within 3km of the site. 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 some of the hillside to the south west would only marginally increase the visual exposure of the existing quarry and this will be offset by the progressive restoration of the existing quarry void.

- The allocation of the promoted sites would remove a parcel of land that is currently down to pastoral farming and a small section of existing woodland. Although this land accords with the established landscape character of the wider area it is well contained by a low hill landform, woodland, and drystone walls. In the wider area the landscape is generally intact and in good condition in places but includes detracting areas of disturbed land associated with the urban fringe.

Summary of Revised Initial Assessment – Mouselow

Criteria	PMAJ	PMIN	NMIN	NMAJ	Criteria	PMAJ	PMIN	NMIN	NMAJ
Economic Criteria					Environmental Criteria				
01Need for mineral	*				17Water Environment – Flood Risk	*			
02Quality/yield of mineral	*				18Water Environment –groundwater	*			
03Use of mineral resources	*				19Water Environment-aquifer protection			*	
04Location of Processing Plant		*			20Ecology – existing impacts from mineral extraction			*	
05Existing Infrastructure		*			21Ecology – UK, regional and local BAP priority species and habitats		*		
06Sterilisation of Resources		*			22Ecology – ecological coherence: Natural Areas/ Wildlife Corridors/linkages		*		
07Employment		*			23Ecology – Habitat Creation		*		
Social Criteria					24Landscape- existing impacts from mineral extraction		*		
08Duration of mineral extraction			*		25Landscape – Strength of Landscape Character			*	
09Visual Intrusion			*		26Landscape – impact on the Peak District National Park		*		
10Noise			*		27Historic Environment –designated sites and settings		*		
11Dust			*		28Historic Environment – Archaeology	*			
12Air Quality/ Human Health		*			29Historic Environment –historic landscape		*		
13Transport – Local Amenity		*			30Best and most versatile agricultural land		*		
14Transport - Safe and effective access to and from the site	*				31Conformity with other local plans (policies and allocations)	*			
15Transport – Export route (vehicular)		*							
16Transport - Capacity for sustainable transport options			*						

Further Assessment

- 5.4 The MPA has set out that where potential negative impacts have been identified it would carry out further detailed work, in consultation with appropriate bodies, to ascertain if that impact could be mitigated or avoided to enable the site to progress forward for allocation.
- 5.5 Whilst there are several key negative factors that have been identified in the initial assessment, the Company has submitted information in support of their pre application enquiry (EM1/0617/16) for the promoted site and has had preliminary site visits with the MPA to discuss matters of concern.
- 5.6 Key negative aspects requiring further assessment:

Duration of operation

- 5.7 Whilst working the promoted area would prolong the life of the site to around 23 years, this timescale is in line with NPPF policy which requires landbanks for brick clay to be maintained at a minimum of 25 years to support investment in the maintenance and improvement of plant.

Landscape and Visual impacts on sensitive visual receptors and PDNP

- 5.8 At the 2016/2017 Consultation stage a larger area was promoted for allocation and this was assessed as having a major negative impact in terms of impacts on sensitive visual receptors, landscape and the PDNP. Of particular concern was the removal of the entire hillside which would expose large parts of the existing quarry to visual receptors on the higher ground to the south and west of the site. These receptors lie some distance away but includes parts of the PDNP. In response to this concern a reduced area is now being promoted which would see less of the hillside removed; it has reassessed as having a minor negative impact which would not constrain the site from going forward for allocation.
- 5.9 Following consideration of the key negative factors that would constrain the allocation of the site and having regard to more detailed pre application

discussions it is considered that the site should be put forward for allocation in the Proposed Approach.

6. Outcome for the Proposed Approach

- 6.1 Allocate the promoted extension at Mouselow Quarry for mineral extraction to commence during the Plan period.