

DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

SITE ASSESSMENT ASHWOOD DALE

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 industrial limestone; including whether to opt for the identification (allocation) of specific sites to

ensure future supply. Information was included about sites that were being promoted by operators for inclusion in the Plan. The 2015 2016 Consultation also included a Paper which set out the 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 Ashwood Dale quarry.

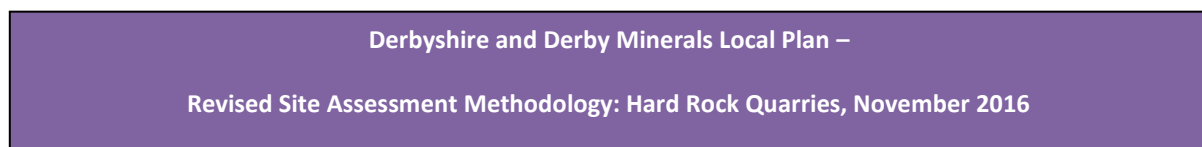
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1. Introduction and Background

The 2015/2016 Consultation 'Towards a Minerals Local Plan' included a Paper about developing a Strategy for Industrial Limestone. This Paper included several Options for ensuring supply. The most favoured option requires the identification (allocation) of specific sites for industrial limestone 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. Ashwood Dale Quarry

Ashwood Dale Quarry, operated by Omya UK Ltd, lies within the Carboniferous Limestone resource around the Buxton area. Limestone is extracted for both industrial and aggregate purposes; information from the operator indicates that estimated annual future production rates amount to 135,000 tonnes of limestone for industrial purposes and 65,000 tonnes for aggregate uses. All stone processing occurs at Ashwood where the stone is crushed and milled.

The quarry principally produces industrial limestone products which are high purity, fine powders; these are used in the following markets: ceramic tiles and refractories, glass production, adhesives and sealants, and resin polymers and fillers. The quarry supplies both local and national markets with industrial minerals.

The colour and chemical purity of the limestone are critical for the sale of industrial products. The quarry contains two types of limestone the lighter coloured high quality

industrial stone and the darker aggregate stone. The light stone is capable of producing industrial products without blending, however the darker stone cannot produce industrial products unless it is blended with the lighter stone. The promoted extension area would yield approximately 4.8 Mt of predominantly light stone although the dark stone here is of better quality than the dark stone in the existing quarry. It is proposed to blend the light and dark stone within the extension area at a ratio of 71%/29% in order to maximise the amount of industrial stone produced. All the stone from the extension area would be used for industrial products. A planning application, CM1/0315/158, has been submitted to work this site; planning application CM1/0315/139 to extend the time limit for working the existing quarry has also been submitted.

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

Planning applications CM1/0315/158 and CM1/0315/159 and supporting documents

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: Ashwood Dale

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
Economic Criteria					
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 Map1) Whilst this quarry produces both industrial and aggregate limestone its primary function is as an industrial limestone quarry. The current permitted reserves total approximately 14.7 million tonnes in total. Approximately 1.4 mt are light coloured stone suitable for industrial products and 13.3 mt are dark coloured stone suitable for aggregates. At the proposed production rates the permitted reserves of light coloured stone will last for about 10 years and therefore run out during the Plan period; the dark limestone would last for more than 200 years. This does not allow for blending of materials to increase the amount of industrial limestone products.

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					The proposed extension area would yield approximately 4.8 mt of predominantly light stone and even the dark stone is of better quality than the dark stone in the existing quarry. The light and dark stone will be blended so that all of the stone from the extension area will be used to produce industrial products. The forecast production rates for the light stone would extend the life of the quarry to 2066 i.e. $6,200,000/135,000 = 61$ years.
Quality/yield of mineral	02	NPPF requires local plans to deliver development and therefore the economic viability of development is an important consideration. Is the reserve quality/yield sufficient to suggest extraction would be economically viable during the plan period?	PMAJ PMIN NMAJ	Detailed geological evidence to support the quality/yield of the deposit (boreholes) Some geological evidence to support the quality/yield of the deposit (mapped) Insufficient evidence to support the quality/yield of the deposit	PMAJ Drilling has been carried out on site and borehole data submitted. Borehole information confirms that the Bee Low limestone is all suitable for the production of industrial products. The Woo Dale limestone is of better quality than elsewhere in the quarry and could be blended with the Bee Low limestone. It is anticipated that the extension area can be worked and blended at a ratio of 71%/29% Bee Low to Woo Dale Limestone in order to maximise the production of industrial products.
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 quarry primarily produces industrial limestone products which are high purity, fine powders with exacting colour requirements and impurity constraints. Sales of industrial limestone products from Ashwood Dale are made up of 60% of various industrial powders, 20% animal feeds and 20% agricultural lime. The industrial powders are used in the following markets: Ceramic tiles and refractories, Glass production, Adhesives and sealants, Resin polymers and fillers. The lower grade material is sold for aggregate for road construction, concrete, drainage and general fill material.
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 Markets for industrial limestone are both local and national. The Carboniferous Limestone resource around Buxton in Derbyshire is a well-established industrial limestone producing area of the Country.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
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 The mineral will be processed on site using existing infrastructure
Sterilisation of Resources	06	NPPF recognises that minerals are a finite resource and therefore it is important to make the best use of them, including avoiding their sterilisation, 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 operation its' scale or location would affect the likelihood of it being worked in the future effectively sterilising the resource. If the site wasn't allocated would the mineral resources be sterilised from future working due to its location/scale? In many cases a new operation will not be the result of an existing site being abandoned and this will not be an issue.	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 scale/location	PMIN Limestone 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.
Employment	07	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. 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?	PMAJ PMIN NMIN	A new operation which would result in new jobs 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 A new operation which would result in job losses elsewhere	PMIN A total of seven local people are employed full time at the quarry. In addition four contractors are periodically employed on site for maintenance and repair work and over 60 HGV drivers visit the site during the year to collect products. Functions such as accounts, technical and commercial are provided by Omya staff from other sites. In 2013 the quarry had a turnover of £3 million and almost half of this expenditure was made locally on staff, maintenance, haulage and purchases.
Social Criteria					

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
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. The duration of mineral extraction will affect the overall scale of impact on local communities. What is the intended timeframe for working the site (i.e. short term 0-10 years etc.?)	PMAJ PMIN NMIN NMAJ	Short term 0-10 years Medium term 10-20 years Long term 20-30 years Very long term 30+ years	NMAJ Working the site is a very long term proposal well in excess of 30 years.
Visual Intrusion	09	NPPG advises that visual intrusion is a consideration that needs to be taken into account. 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 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	PMAJ PMIN NMIN NMAJ	The site has few or no visually sensitive receptors and/or only small parts of the site will be visible from them. The site has few visually sensitive receptors but large parts (or more than one part) of the site will be visible from them. The site has some visually sensitive receptors and/or some parts of the site will be visible from them. The site has many visually sensitive receptors and/or large parts (or more than one part) of the site will be visible from them.	NMIN (See Map2) The site has some visually sensitive receptors and/or some parts of the site will be visible from them. There are no residences lying within 200 metres of the sites. Housing lying further away to the west of the site on the edge of Buxton will be adequately screened. Further housing in this area has been proposed in the adopted High Peak Borough Local Plan (see Criteria Ref. 37) for more details and will require adequate screening. There are several Public Rights Of Way from which large parts of the site will be visible. A footpath runs along Cuningdale on the northern quarry boundary .Two footpaths lead off this towards Bailey Flat Farm to the north of the site. A permissive path passes through part of the extension area. To the south of the quarry across the A6 the Midshires Way footpath leads from Cowdale to Staden on higher ground resulting in long distance views of the quarry.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
Noise	10	<p>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.</p> <p>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.</p> <p>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).</p> <p>The assessment takes into account the number of sensitive receptors within 200 and 500m of site.</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>The site has no noise sensitive receptors within 500m of the boundary of the site</p> <p>The site has no or few noise sensitive receptors within 200m of the boundary of the site and some within 500m</p> <p>The site has no or few noise sensitive receptors within 200m of the boundary of the site and many within 500m</p> <p>The site has many noise sensitive receptors within 200m of the boundary of the site</p>	<p>NMIN (See Map2)</p> <p>The site has no or few noise sensitive receptors within 200m of the boundary of the site and many within 500m. It lies within 300 metres from residences on the eastern edge of Buxton. Further housing, lying closer to the site, has been proposed in the adopted High Peak Borough Local Plan (see Criteria Ref. 37) for more details. Safeguards in the Plan require new housing to be a minimum distance of 200m from any blasting.</p>
Nuisance Dust	11	<p>NPPG advises that dust is a consideration that needs to be taken into account. This criteria 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</p>	<p>PMAJ</p> <p>PMIN</p> <p>NMIN</p> <p>NMAJ</p>	<p>The site has no high/medium dust sensitive receptors within 500m of the boundary of the site</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>NMIN (See map2)</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. It lies within 300 metres from residences on the eastern edge of Buxton. Further housing, lying closer to the site, has been proposed in the adopted High Peak Borough Local Plan (see Criteria Ref. 37) for more details. Safeguards in the Plan require new housing to be a minimum distance of 200m from any blasting.</p>

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		<p>altering local wind patterns. Large dust particles (>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. Large/intermediate particles are classed as nuisance dust. 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>			
Air Quality/ Human Health	12	<p>Smaller particles (< 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 (PM₁₀) 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 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.</p>	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
Blasting /Vibration	13	<p>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</p>	PMIN NMIN	Distance to nearest sensitive receptor is over 200 metres Distance to the nearest sensitive receptor is within 200 metres.	PMIN (See map2) The distance to the nearest sensitive receptor is over 200 metres. Further housing, lying closer to the site, has been proposed in the adopted High Peak Borough Local Plan (see Criteria Ref. 37) for more details. Safeguards in the Plan require

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		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.			new housing to be a minimum distance of 200m from any blasting.
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)	PMAJ (See Map 3) The existing site fronts directly onto the A6 strategic route for which there is an established access. No collisions have occurred at this junction over the previous 3 year period. A proportion of movements generated by the site pass through Buxton town centre. The site also abuts the Wye Valley SSSI. Irrespective of the above, the reported production and associated vehicle movements aren't anticipated to increase, therefore the changed impact on sensitive receptors is likely to remain unchanged.
Transport - Safe and effective access to and from the site	15	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.	NMIN The access appears to generally conform to current highway standards, however, forward visibility at existing junction marginally restricted to the east from the egress. No collision issue identified.
Transport – Export route (vehicular)	16	What is the main export route (vehicular) from the site?	PMAJ PMIN NMIN	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	PMAJ The export route is directly onto the strategic network (A6) which fronts the site. 70% to the west and 30% to the east.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
			NMAJ	network Direct on to minor roads 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	PMAJ Economic-industrial limestone from this quarry is an important raw material for many downstream industries Environmental – the proposals includes the relinquishment of reserves form three quarry benches below the quarry floor, an area along the northern boundary and an area to the east. This relinquishment would produce environmental benefits particularly for the adjoining SAC and water regime Social – Continued local employment
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.
Environmental Criteria					
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	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. Hard rock quarrying is classed as less vulnerable development which is appropriate in flood zones 1, 2 and 3a.

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		<p>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.</p>			
Water Environment – groundwater	21	<p>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.</p>	PMIN NMIN	Site lies outside a groundwater protection zone Site lies within a groundwater protection zone	PMIN (see Map 4) The site lies outside a groundwater protection zone
Water Environment - aquifer protection	22	<p>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 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	Site lies on a Non Aquifer Site lies on a Secondary Aquifer Site lies on a Principal Aquifer	NMAJ (see Map 5) The site lies on the Carboniferous Limestone designated as a Principal Aquifer by the Environment Agency. The existing and proposed extraction is not below the water table which negates the need for pumping and any associated groundwater drawdown.

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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 site lies outside of any designated sites of ecological value, but in between two dale systems, Ashwood Dale and Cuning Dale, the latter of which is designated as a SSSI and SAC, and the former is (in part) Local Wildlife Site. The existing Ashwood Dale Quarry is the only working in the immediate vicinity, and has not directly impacted on the most important ecological features such as the Dale systems. In the wider area however there are more extensive quarry workings (Tunstead, Old Moor, and Dove Holes Quarries, the A515 quarries), and more locally at Cowdale, Topley Pike etc. Nevertheless, in the vicinity of the proposed extension, impacts from existing workings have been minimal and localised, and in the wider context, quarry sites have largely respected the most valuable ecological features
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) Outside of the extension boundary, there are both locally and statutorily designated sites (of national and international value) immediately adjacent to the site No land within the extension area is covered by local or statutory nature conservation designations, and there is no evidence to suggest that habitats within the site are of notable ecological value. The grasslands on site will not be without some ecological interest, we have no evidence that these will be of significant ecological interest meriting protection or retention.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
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 site appears to support managed, likely agriculturally improved grasslands. This accords with a very common land use in this area. However, the key ecological receptors in this area are the unimproved species rich grasslands, woodland sand scrub of the dales systems in this area. The site therefore does not make a significant contribution to the ecological coherence in the area
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 key ecological resources in this area are the habitats associated with the limestone dales systems. Whilst the quarry working will leave worked quarry faces and benches which drop to the quarry floor, opportunities to recreate manageable daleside habitats will be limited by quarry face profile, accessibility, stability and the availability of fill. Habitat creation on the quarry floor has the potential to produce species rich grasslands and other habitats which could be complementary too, if different from, those found within the dales systems. Restoration of or natural regeneration on benches could offer additional complementary habitat gains whilst not strictly replicating habitats found in the dale systems.
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	NMIN A simple landscape with few landscape characteristics that can be employed in the satisfactory mitigation/restoration of the quarry

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 Existing site plant can be readily accessed from the proposed extension area.
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)	NMIN (See map 7) The extension area comprises a number of pastoral fields enclosed by limestone walls that characterise the wider landscape although many of these walls are in poor condition. The site is close to the Peak District National Park.
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	NMIN There are some sensitive visual receptors (footpaths and dwellings) to the north and the south of the site that will be able to gain views of part of the extension area including views from the National Park.

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
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 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	NMIN 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
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) Scheduled monument DDR8210 Limekilns and associated structures at Cow Dale Quarry lie to the south east of the area but these are associated with earlier limestone quarrying so impact on setting should be considered negligible.
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	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 There are no known archaeological earthworks in the area and no known archaeological finds. There remains archaeological potential as the fields are currently permanent pasture so little possibility for the discovery of flint tools or other indicative artefacts.
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)	NMIN The proposed area is small but elements of the wider but now truncated field patterns are still visible. There is a small area of fossilised strip fields, part of the once much more extensive area of enclosed common fields. To the east of tongue Lane are some more regular fields, probably part of the later enclosure of the commons.
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 existing quarry is partially designated as a RIGS site, although little is known about the current validity of this designation. No part of the extension area is designated for its geological interest, whilst working within the extension should not impact on designations beyond its boundary
Best and most	36	NPPG advises that the impacts on soil resources	PMAJ	The site lies within an area where there is a low likelihood of	PMAJ (see map 9)

Criteria	Criteria Ref.	Considerations	Scale of impact	Indicators	Assessment
versatile agricultural land		<p>should be taken into account.</p> <p>What is the likelihood of the site containing bmv land? i.e. grade 1,2 or 3a of the Agricultural Land Classification Scheme.</p> <p>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 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>PMIN</p> <p>NMIN</p>	<p>bmv land (less than 20% of the land is likely to be bmv).</p> <p>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).</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>	<p>The site lies in an area where there is a low likelihood of bmv (less than 20% is likely to be bmv)</p> <p>Detailed evidence from the planning application suggests that the proposals would affect 6.5 ha of grade 4 or 5 grazing land which would be replaced in the restoration scheme for the quarry.</p>
Duty to Cooperate					
Conformity with other local plans (allocations)	37	<p>NPPF requires local planning authorities to cooperate 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>	<p>PMAJ</p> <p>NMIN</p> <p>NMAJ</p>	<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>	<p>PMAJ</p> <p>The site is in conformity with the adopted High Peak Local Plan. A duty to cooperate matter regarding the impacts of the quarry extension on a proposed housing allocation was successfully resolved during the local plan process which resulted in modifications to the Plan and to the quarry extension proposal.</p>

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:

- Nationally important resource; the quarry principally supplies high quality fine industrial powders for a variety of applications
- The quarry serves national markets for industrial applications and local markets for aggregates it is well located to serve markets in the Manchester conurbation to the north east of the Plan area
- Detailed borehole information available justifying quality of deposit
- Important local employer and provider of wealth to local economy in a predominantly rural area where mining is a traditional important local employer
- Whilst transport is road based HGV's would not pass sensitive receptors to reach the strategic road network
- The relinquishment of permitted reserves below the water table would potentially benefit the adjoining SAC

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

- Working would extend the duration of the quarry to around 2066 (taking account of only the light stone)
- There are some sensitive visual receptors (footpaths and dwellings) to the north and the south of the site that will be able to gain views of part of the extension area including views from the National Park.
- Working the site will lead to the loss of an area that generally accords with the established landscape character and the loss of some historic landscape features
- There are few landscape characteristics that can be employed in the satisfactory mitigation/restoration of the quarry; careful consideration needs to be given to achieve its acceptable restoration
- The promoted site would extend mineral working towards existing and proposed housing on the edge of Buxton; appropriate safeguards would need to be in place to protect local amenity from the impact of mineral working
- The quarry lies on a principal aquifer, appropriate safeguards would need to continue to protect the water regime

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 – Ashwood Dale

Criteria	PMAJ	PMIN	NMIN	NMAJ	Criteria	PMAJ	PMIN	NMIN	NMAJ
Economic Criteria					Environmental Criteria				
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		*		
Social Criteria					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			*		Duty to Cooperate				
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 industrial limestone, 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: Ashwood Dale

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