DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

Towards a Minerals Local Plan:

Spring 2018 Consultation

Site Allocations:

Revised Initial Site Assessment

Whitwell

Background Information Paper

December 2017

DERBYSHIRE County Council

Derby City Council

1. Purpose of this Paper

1.1 The purpose of this Paper is to set out the sources of information that have been used to carry out the Initial and Revised Initial Assessments of promoted hard rock sites.

2. Sources of Background Evidence

2.1 Sources of information for Assessment:

Derbyshire and Derby MLP Questionnaire for promoted sites

Revised Initial Assessment Maps, December 2017 (Maps showing site location, resource, noise and dust indicator zones, public rights of way and transport features, water designations, nature and heritage assets, landscape character, predictive agricultural land)

Whitwell Quarry Development Strategy 2013 2 13

Planning Statement accompanying planning application CM5-0416-4

Environmental Statement accompanying planning application CM5-0416-4

3. Table 1: Assessment Criteria

Economic Criteria

Criteria 01 Need for Mineral

Source of Information: CM5/0416/4 Planning Statement

Is there an identified need for additional reserves to maintain supply throughout the Plan period?

3.1 The Planning Statement at 6.1 states that, 'The mineral resource at Whitwell Quarry comprises high purity Magnesian Dolomitic Limestone referred to as dolomite. The chemistry of the dolomite changes with depth and the mineral generally is extracted at three levels or benches to generate the raw material for different uses and products. The upper two benches generate mineral with a higher iron content than that in the bottom bench, with higher iron content in the top bench and lower iron content in the middle bench. The higher and lower iron content stone are both used in the kilns at Whitwell Lime Works and are referred to collectively as kiln feed. The mineral from the bottom bench is used in the production of construction aggregates for use in applications such as civil engineering and agricultural lime and is referred to as civils grade stone. The kilns and the adjacent Whitwell Lime Works are operated by Lhoist.'

3.2 Paragraph 4.11 adds, 'It is anticipated that the sales of mineral from the site will continue at the same average rate as currently hence 500,000 tonnes per annum (tpa) of kiln feed stone and 500,000tpa of civils stone**.'**

3.3 Reserve information is set out at paragraph 4.7; the total consented reserves of dolomite at Whitwell Quarry at the end of 2015 were approximately 21.9 million tonnes. The distribution of the stone is as follows:

Reserve Area	**Kiln Feed Reserves (tonnes)**	**Civils Stone Reserves (tonnes)**	**Total (tonnes)**
Railway Tunnel	4,513,000	2,372,000	6,885,000
Southern Area	1,996,000	1,537,000	3,533,000
South East Area	0	252,000	252,000
North East Area	0	263,000	263,000
Eastern Quarry Area (Belph)	4,479,000	6,508,000	10,987,000
Total	10,988,000	10,932,000	21,920,000

Industrial Limestone Assessment

3.4 Existing permitted reserves of industrial limestone remain at two areas of current working (southern and eastern areas) and total some 6.5 million tonnes (mt) which at a rate of extraction of 0.5 mtpa should last for almost 13 years i.e.2028. Industrial limestone reserves in the vicinity of the railway tunnel total some 4.5 mt; this permission consented currently under a ROMP (R5/0705/13) permission expires in 2019. Whilst the company intends to work these reserves, this operation will require the diversion of the Robin Hood railway line which will need to be the subject of a Transport and Works Act 1992 application. In view of this, the timing and contribution of these reserves is uncertain and supports the need for additional reserves at the quarry. The evidence suggests that there is a need for additional reserves of industrial limestone by 2028 which is towards the end of the Plan period of 2030.

Aggregate (Civils) Limestone Assessment

3.5 Existing permitted reserves of aggregate remain at all areas of current working and total some 8.5 million tonnes (mt) which at a rate of extraction of 0.5 mtpa should last for almost 22 years i.e.2032. Reserves in the vicinity of the railway tunnel total some 2.4 mt; this permission consented currently under a ROMP (R5/0705/13) permission expires in 2019. Whilst the company intends to work these reserves, this operation will require the diversion of the Robin Hood railway line which will need to be the subject of a Transport and Works Act 1992 application. In view of this, the timing and contribution of these reserves is uncertain, however the evidence suggests that there are sufficient reserves of aggregate mineral to maintain production throughout the Plan period to 2030.

Promoted extension areas

3.6 Reserve information on the promoted areas is set out at paragraph 4.10 of the Planning Statement. The calculated kiln feed resource and civil stone resource in the proposed extension areas are presented below:

Extension Area	Kiln Feed Reserves (tonnes)	Civils Stone Reserves (tonnes)	Total (tonnes)
North extension	2,300,000	730,000	3,030,000
North East extension	640,000	520,000	1,160,000
East extension	56,000	37,000	93,000
South East extension	230,000	260,000	490,000
Total	3,226,000	1,547,000	4,773,000

Industrial Limestone

3.7 The proposed four extension sites will generate an additional 3.23 mt of industrial limestone thereby providing a supply of kiln grade stone for a further 6 years beyond the existing permitted reserves. These small extensions represent the last economic industrial limestone reserves at Whitwell Quarry from within the Plan area.

Aggregate (Civils) Limestone

3.8 The proposed four extension sites will generate an additional 1.5 mt of aggregate limestone thereby providing a supply of material for a further 3 years beyond the existing permitted reserves.

Need Assessment: Industrial Limestone

3.9 NPPF doesn't set out any requirements for how much industrial limestone should be provided but it requires the MPA to assess the likely demand and make provision to ensure that an adequate and steady supply can be maintained. Based on existing permitted reserves and anticipated demand there is a need for additional reserves to maintain production to the end of the Plan period i.e. 2030.

Need Assessment: Aggregate Limestone

3.10 NPPF requires the MPA to plan for an adequate and steady supply of Aggregates and, for crushed rock, to maintain a land bank of permitted reserves to provide for at least a 10 years supply. The LAA 2016 estimates that the crushed rock landbank is 74 years based on current production rates and therefore there are sufficient permitted reserves to last well beyond the end of the Plan period, 2030. Nevertheless, Whitwell is the only quarry located in the east of the County and could supply infrastructure projects that have been identified across the border in Nottinghamshire e.g. improvements to the A1/A46 junction near to Newark.[1]

Criteria 02 Quality/Yield of Mineral

Source of Information: Map 1 Site Location and Mineral Resource, CM5/0416/4 Planning Statement

Has the operator provided sufficient information about the quality/yield of the resource?

3.11 Paragraph 3.1 of this Paper provides information on the geology of the deposit and details on the quality and scale of yield from both the existing permitted reserves and reserves in the promoted extension areas.

Criteria 03 Use of Mineral Resource

Source of Information: CM5/0416/4 Planning Statement

Is the end use proposed appropriate for the type of mineral?

3.12 NPPF acknowledges that since minerals are a finite resource and can only be worked where they are found it is important to make the best use of them to secure their long term conservation. Promoters of sites are expected to submit evidence to justify that the end use of the mineral is appropriate for the type of mineral resource. Paragraph 3.1 of this Paper provides evidence on the end

[1] Source: Nottinghamshire and Nottingham LAA, January 2017

uses of the mineral which are considered to be appropriate for the type of mineral.

Criteria 04 Location of site to Market Areas
Source of Information: CM5/0416/4 Planning Statement

Is the site appropriately located in relation to the market areas it is intended to serve?

3.13 The Planning Statement at paragraph 1.1 notes that the high purity dolomite extracted at Whitwell is processed in the adjacent works, operated by Lhoist, for use in refractory products and steel manufacture. Whitwell is the only active quarry in the UK producing such specialist dolomite; markets are both national and international. Dolomite not suitable for kiln use is used to produce construction aggregates and agricultural lime. In terms of aggregate mineral the quarry well located to serve the eastern part of the Plan area and cross border markets in Nottinghamshire and South Yorkshire.

Criteria 05 Existing Infrastructure

Source of Information: CM5/0416/4 Planning Statement

Is there existing infrastructure that would be utilised by the proposed operation to process the mineral?

3.14 The Planning Statement at paragraph 1.1 notes that mineral will be processed via the existing complex and the adjacent Whitwell Works operated by Lhoist. The Works area is not included in the planning application area because it is operated as a separate entity from Tarmac.

Criteria 06 Conservation of Resources

Source of Information: CM5/0416/4 Environmental Impact Assessment (EIA), April 2016

If the site wasn't allocated is it likely that the site would remain unworked due to its location/scale?

3.15 The four promoted extension areas to Whitwell Quarry are small in scale and effectively represent the last of the economic 'industrial dolomitic limestone'

resources at Whitwell from within the Plan area. The EIA at section 6 sets out information on alternative dolomitic sources revealing the importance of the mineral at Whitwell Quarry.

Criteria 07 Employment

Source of Information: CM5/0416/4 Planning Statement

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?

3.16 Paragraph 1.2 of the Planning Statement notes that the Whitwell Quarry complex supports more than 220 jobs and makes a contribution to the local economy of over £6 million per year.

Criteria 08 Duration of Mineral Extraction

Source of Information: CM5/0416/4 Planning Statement

What is the intended timeframe for working the site?

3.17 Information on the timescale for working the existing permitted reserves and the proposed extension areas is set out in paragraphs 3.3 to 3.10. The anticipated lifespan of the site will be between 25 and 30 years, the latter years for aggregates production only.

Social Critieria

Site 1: North Extension

3.18 The Criteria in this section are applied to the four promoted extension sites separately.

Criteria 09 Visual Intrusion

Source of Information: Map 2 PROW, Site Visit, CM5/0416/4 EIA

What is the visual impact on sensitive receptors?

3.19 Section 9 of the EIA sets out information on the visual impact of the proposal on sensitive visual receptors. This information has been used to provide baseline evidence verified on site.

3.20 The closest residential property to the North extension is 205m from the extraction boundary to the north off Franklin Avenue in Whitwell. Other residences lie just beyond 200 metres and form the southern edge of Whitwell village. There are currently no views into the quarry from this property or others within this location. There are currently two Public Rights of Way that run in close proximity to the North extension (Footpaths Whitwell 73 and 20) as shown on Figure ES2. Users are currently well screened from operations in the northern quarry by temporary soil storage bunds lying to the south of the footpaths. Where Footpath Whitwell 20 runs along the top of the railway tunnel there are open views into both the northern and southern quarry areas.

Criteria 10 Noise

Source of Information: Map 3a: Noise Indicator Zones, Site Visit, CM5/0416/4 EIA

What is the impact of noise on sensitive receptors?

3.21 Section 12 of the EIA sets out information on the noise impact of the proposal on sensitive noise receptors. This information has been used to provide baseline evidence verified on site.

3.22 The closest noise sensitive property to the North extension is 205m from the extraction boundary to the north off Franklin Avenue in Whitwell; other residences forming the southern edge of Whitwell village lie just beyond 200 metres. The southern part of the village lies within 500 metres of the site.

There are currently two public Rights of Way that run in close proximity to the North extension (Footpaths Whitwell extension (Footpaths Whitwell 73 and 20) as shown on Figure ES2.

Criteria 11 Dust

Source of Information: Map 4a: Dust Indicator Zones, CM5/0416/4 EIA

What is the impact of dust on sensitive receptors?

3.23 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. This information has been used to provide baseline evidence, verified on site.

3.24 There are no high/medium dust sensitive properties lying within 100 metres of the site. The closest dust sensitive property to the North extension is 205m from the extraction boundary to the north off Franklin Avenue in Whitwell; other residences forming the southern edge of Whitwell village lie just beyond 200 metres. The southern part of the village lies within 400 metres to the north of the site. There are currently two Public Rights of Way that run in close proximity to the North extension (Footpaths Whitwell extension (Footpaths Whitwell 73 and 20) as shown on Figure ES2.

Criteria 12 Dust – Air Quality/Human Health

Source of Information: Source of Information: DEFRA Air Quality Management Areas Map 2017, CM5/0416/4 EIA

What is the impact of dust on air quality/human health?

3.25 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. The bulk of Whitwell village and the northern edge of Creswell lie within 1km of the site and therefore there is the potential for wind-blown dust to be transported to sensitive receptors. There are, however, no Air Quality Management Areas within 1km of the site which would indicate existing air quality issues.

Site 2: North East Extension

Criteria 09 Visual Intrusion

Source of Information: Map 2 PROW, Site Visit, CM5/0416/4 EIA

What is the visual impact on sensitive receptors?

3.26 Section 9 of the EIA sets out information on the visual impact of the proposal on sensitive visual receptors. This information has been used to provide baseline evidence verified on site.

3.27 The nearest sensitive receptors to the site are residences which lie over 250 metres away on the south eastern edge of Whitwell; none have views into the active quarry. The site is effectively screened by a belt of young trees and vegetation between the former mineral line and Southfield Lane.

Criteria 10 Noise

Source of Information: Map 3a: Noise Indicator Zones, Site Visit, CM5/0416/4 EIA

What is the impact of noise on sensitive receptors?

3.28 Section 12 of the EIA sets out information on the noise impact of the proposal on sensitive noise receptors. This information has been used to provide baseline evidence verified on site.

3.29 The site has no noise sensitive properties within 200 metres of its boundary. The nearest residences lie over 250 metres away and form part of the south eastern edge of Whitwell. This Assessment concludes that the site has a no or few properties within 200 metres of the site and many within 500 metres.

Criteria 11 Dust

Source of Information: Map 4a Dust Indicator Zones, Site Visit, CM5/0416/4 EIA

What is the impact of dust on sensitive receptors?

3.30 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. This information has been used to provide baseline evidence, verified on site.

3.31 There are no high/medium dust sensitive properties lying within 100 metres of the site; the nearest residences are over 250 metres away on the south eastern edge of Whitwell. There are many properties within this south east area which lie within 400 metres of the site.

Criteria 12 Dust – Air Quality/Human Health

Source of Information: Source of Information: DEFRA Air Quality Management Areas Map 2017

CM5/0416/4 EIA

What is the impact of dust on air quality/human health?

3.32 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. The bulk of Whitwell village lies within 1km of the site and therefore there is the potential for wind-blown dust to be transported to sensitive receptors. There are, however, no Air Quality Management Areas within 1km of the site which would indicate existing air quality issues.

Site 3: East Extension

Criteria 09 Visual Intrusion

Source of Information: Map 2 PROW, Site Visit, CM5/0416/4 EIA

What is the visual impact on sensitive receptors?

3.33 Section 9 of the EIA sets out information on the visual impact of the proposal on sensitive visual receptors. This information has been used to provide baseline evidence verified on site.

3.34 There is only one sensitive receptor near to this site; Hennymoor Farm lies some 500 metres away to the south east. However well-established vegetation covers the land along the eastern edge of the site negating any views.

Criteria 10 Noise

Source of Information: Map 3c: Noise Indicator Zones, Site Visit, CM5/0416/4 EIA

What is the impact of noise on sensitive receptors?

3.35 Section 12 of the EIA sets out information on the noise impact of the proposal on sensitive noise receptors. This information has been used to provide baseline evidence verified on site.

3.36 The site has no sensitive properties within 500 metres of its boundary. Hennymoor Farm lies some 500 metres away to the south east.

Criteria 11 Dust

Source of Information: Map 4c Dust Indicator Zones, Site Visit CM5/0416/4 EIA

What is the impact of dust on sensitive receptors?

3.37 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. This information has been used to provide baseline evidence, verified on site.

3.38 The site has no high/medium dust sensitive receptors within 400 metres of its boundary. Hennymoor Farm lies some 500 metres away to the south east.

Criteria 12 Dust – Air Quality/Human Health

Source of Information: Source of Information: DEFRA Air Quality Management Areas Map 2017

CM5/0416/4 EIA

What is the impact of dust on air quality/human health?

3.39 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. There are a few residences within 1km of the site and therefore there is some potential for wind-blown dust to be transported to sensitive receptors. There are, however, no Air Quality Management Areas within 1km of the site which would indicate existing air quality issues.

Site 4: South East Extension

Criteria 09 Visual Intrusion

Source of Information: Map 2 PROW, Site Visit, CM5/0416/4 EIA

What is the visual impact on sensitive receptors?

3.40 Section 9 of the EIA sets out information on the visual impact of the proposal on sensitive visual receptors. This information has been used to provide baseline evidence verified on site.

3.41 The site has few sensitive receptors; Hennymoor Farm lies approximately 350 metres to the east; Crags Lodge and Creswell Crags visitor centre lay some 160 and 330 metres respectively to the south. The southern end of the existing quarry is well screened by peripheral acoustic bunds/fencing and an existing plantation. Some gaps in the plantation allow glimpses into the site from Bridleway 5.

Criteria 10 Noise

Source of Information: Map 3d: Noise Indicator Zones, Site Visit, CM5/0416/4 EIA

What is the impact of noise on sensitive receptors?

3.42 Section 12 of the EIA sets out information on the noise impact of the proposal on sensitive noise receptors. This information has been used to provide baseline evidence verified on site.

3.43The site has one sensitive property within 200 metres of the site and few within 500 metres. Hennymoor Farm lies approximately 350 metres to the east; Crags Lodge and Creswell Crags visitor centre lie some 160 and 330 metres respectively to the south.

Criteria 11 Dust

Source of Information: Map 4d Dust Indicator Zones, Site Visit CM5/0416/4 EIA

What is the impact of dust on sensitive receptors?

3.44 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. This information has been used to provide baseline evidence, verified on site.

3.45 The site has no high/medium dust sensitive property within 100 metres of the site and few within 400 metres. Hennymoor Farm lies approximately 350 metres to the east; Crags Lodge and Creswell Crags visitor centre lie some 160 and 330 metres respectively to the south.

Criteria 12 Dust – Air Quality/Human Health

Source of Information: Source of Information: DEFRA Air Quality Management Areas Map 2017

CM5/0416/4 EIA

What is the impact of dust on air quality/human health?

3.46 Section 17 of the EIA sets out information on the dust impact of the proposal on sensitive receptors. There are a few residences within 1km of the site and therefore there is some potential for wind-blown dust to be transported to sensitive receptors. There are, however, no Air Quality Management Areas within 1km of the site which would indicate existing air quality issues.

Criteria 13,14,15,16 Transport

Source of Information: Map 5 Transport, CM5/0416/4 EIA

What are the traffic and transport impacts of the proposal?

3.47 Section 11 of the EIA sets out information on the traffic and transport impacts of the proposal. A separate Transport Assessment has been prepared for the proposal which has been agreed with the County Council.

3.48 The following information is taken from the Transport Statement. Aggregates and the products from the readymix concrete plant as well as those from the adjacent Whitwell Works will continue to be removed by HGVs. The site is accessed by HGV traffic through a dedicated entrance on Crags Road; a separate exit is provided on Southfield Lane. HGVs are directed to access and depart the site along Southfield Lane, Crags Road and Hennymoor Lane to the A60 an approved route, subject to a legal agreement, which avoids neighbouring villages and provides short connections to the primary road network.

3.49 The current production rates of approximately 500,000t per annum for supply to the kilns and 500,000t per annum of construction aggregates will be maintained. Therefore, the current volume of HGV traffic generated by the quarry of approximately 70,000 one-way movements per year will be maintained. This equates to an average of 262 one-way movements per day and an hourly average of 24 one-way movements.

3.50 Existing traffic counts show that the local highway network (Hennymoor Lane) operates well within capacity. It is therefore concluded that the rest of the local highway network (Southfield Lane, Crags Road and the A60) operate within capacity and will continue to do so over the life of the quarry extension.

Environmental Criteria

Criteria 17, 18, 19 Water Environment

Source of Information: Maps 6, 7, Water Issues, CM5/0416/4 EIA

3.51 Section 13 of the EIA sets out information on the potential impacts of the proposal on the water environment.

Based on information provided by the Environment Agency the site is situated in Flood Zone 1. This zone has the least probability for flooding and mineral working is appropriate development in this location

Site lies outside a groundwater source protection zone.

Site lies on a Principal Aquifer. The EIA maintains that any impacts on the aquifer are acceptable. The base of the quarry is below the groundwater level and therefore the quarry is dewatered to maintain dry working area. The impact of dewatering on groundwater levels decreases with distance from the quarry. The areal extent of the groundwater level depression will be limited by leakage to groundwater from existing watercourses. Following restoration of the quarry pumping will cease and groundwater levels are anticipated to recover.

3.52 Criteria 20,21,22,23 Ecology

Source of Information: Map 8 Ecological Assets

3.53 Criteria 24, 25, 26, Landscape

Source of Information: Map 9 Landscape Character Type Areas

3.54 Criteria 27, 28, 29 Historic Environment

Source of Information: Map10 Heritage Assets

Revised Initial Assessments of the impact of working the site on Ecology, Landscape and the Historic Environment have been undertaken by the County Council's Conservation and Design Section.

3.55 **Criteria 30 Best and Most Versatile Agricultural Land**

Source of Information: Map11, DEFRA's predictive agricultural land classification map 2001, CM5/0416/4 EIA

Section 13 of the EIA sets out information on the potential impacts of the proposal on Soil Resources. The only area of undisturbed agricultural land on the four extension areas is in the North East extension. This area comprises rough grassland which may be an artificial landform created as part of the construction of the adjacent disused railway sidings. An Agricultural Land Classification Survey has been undertaken on the North East extension site. The majority of soils (2.1ha, 86%) are assessed as subgrade 3b which is classed as moderate quality agricultural land. A small area (0.4ha, 16%) has been classed as subgrade 3a i.e. good quality best and most versatile agricultural land.

All agricultural topsoils and particularly those of best and most versatile grade will be used in the restoration of land that will be used for agriculture resulting in no overall loss of agricultural land.

3.56 **Criteria 31: Conformity with other local plans (policies and allocations)**

Source of Information: Bolsover District Local Plan Draft October 2016

Bolsover DC is producing a new local plan. The draft Plan published October 2016 identifies a strategic housing site for a minimum of 200 dwellings at the former Whitwell Colliery. This proposal would bring some housing to approximately 350 metres from the north eastern extension. It is considered that any impacts are likely to be capable of mitigation.