



Minerals and Waste Planning
Environmental Permitting
Quarry Consultant

**A PLANNING APPLICATION TO DEEPEN AND EXTEND WINDY RIDGE QUARRY,
INCREASE THE NUMBER OF HGV MOVEMENTS PERMITTED, EXCAVATE A FORMER
LANDFILL TO RECOVER RECYCLABLE MATERIALS (RETROSPECTIVE),
TEMPORARILY STORE SOILS ON PART OF THE PREVIOUSLY RESTORED QUARRY
AREA (RETROSPECTIVE), FORM A NEW ACCESS AND RESTORE THE SITE BY
LANDFILL OPERATIONS TO INCLUDE THE IMPORTATION OF INERT WASTE AT
WINDY RIDGE QUARRY, CARTWORTH MOOR ROAD, HOLMFIRTH HD9 2RL.**

**SUBMITTED ON BEHALF OF
WINDY RIDGE RECYCLING LTD
CARTWORTH MOOR ROAD, HOLMFIRTH HD9 2RL**

**SUPPORTING STATEMENT
(REVISION 23/01/2023)**

SEPTEMBER 2022

Contents

	PAGE
SUPPORTING STATEMENT	
1 INTRODUCTION	1
2 SITE DESCRIPTION	3
3 GEOLOGY, MINERAL RESERVES AND INFILL VOLUME	5
4 PROPOSED OPERATIONS AND RESTORATION	8
5 FLOOD RISK ASSESSMENT	11
6 IMPACT ON RIGHTS OF WAY	12
7 PLANNING HISTORY	12
8 PLANNING POLICY	13
9 ENVIRONMENTAL IMPACTS	20
9.2 ECOLOGY ASSESSMENT	20
9.3 LANDSCAPE ASSESSMENT	23
9.4 SOUND IMPACT ASSESSMENT	25
9.5 DUST ASSESSMENT	27
9.6 TRANSPORT ASSESSMENT	33
9.7 HYDROGEOLOGICAL RISK ASSESSMENT	37
10 CONCLUSION	39

LIST OF FIGURES AND TABLES

FIGURE 1	SITE LOCATION	1
FIGURE 2	EXTRACT FROM KIRKLEES LOCAL PLAN	17
	POLICIES MAP	
TABLE 1	DUST SOURCES	31

LIST OF DRAWINGS

10193A/01	LOCATION PLAN
10193A/02	SITE PLAN
10193A/03	MAXIMUM EXCAVATION
10193A/04	RESTORATION SCHEME
10193A/05	CABIN ELEVATIONS
10193A/06	CROSS SECTIONS

1769-201 PRELIMINARY ACCESS PROPOSALS

1769-101A HIGHWAY IMPROVEMENTS

APPENDICES

- 1 DECISION NOTICE FOR 2020/70/92410/W
- 2 MATERIALS MANAGEMENT PLAN
- 3A PRELIMINARY ECOLOGICAL APPRAISAL
- 3B HABITATS REGULATION ASSESSMENT
- 4 SOUND IMPACT ASSESSMENT
- 5 TRANSPORT ASSESSMENT
- 6 HYDROGEOLOGICAL RISK ASSESSMENT

1 INTRODUCTION

- 1.1 We are instructed by Windy Ridge Recycling Ltd (The Applicant) to submit a planning application to deepen and extend windy ridge quarry, increase the number of HGV movements permitted, excavate a former landfill to recover recyclable materials (retrospective), temporarily store soils on part of the previously restored quarry area (retrospective), form a new access and restore the site by landfill operations to include the importation of inert waste at Windy Ridge Quarry, Cartworth Moor Road, Holmfirth HD9 2RL. Drawing 10193A/01 shows the Quarry location and the planning application boundary. The Decision Notice for the existing planning permission 2020/70/92410/W is attached as Appendix 1.
- 1.2 The Quarry was operated by S & RM Peel for many years but was purchased by Windy Ridge Recycling Ltd in 2021.
- 1.3 The Planning Application covers an area of 4.31 ha, including the 1.9 ha of permission 2020/70/9241/W. The Site in its location is shown in Figure 1 below and on drawing 10193A/01.

Figure 1: Site Location



- 1.4 The application includes the extraction of sandstone for use as masonry stone, walling stone, garden stone and aggregate, the restoration of the excavation to

agricultural use by means of infill, and the processing of construction, demolition and excavation waste to manufacture a secondary aggregate. The walling and garden stone is hand dressed within the quarry and aggregate is produced using a crusher and screen also located within the quarry. The masonry stone will be removed as block stone for sawing elsewhere.

- 1.5 As extraction and infill proceed in a southerly direction, the location of the crushers, screens and storage will need to move with it, remaining on the quarry floor at all times. Towards the end of infill operations, the recycling plant will have to be located on infill but will be removed off site when it can no longer be screened by the quarry faces. The final stages of infill will therefore be completed by the placement of materials from which all recyclables will have been removed off-site.
- 1.6 The Application also seeks permission to temporarily store soils on an area of restored land. The soils arise from the treatment of the former landfill in the south west corner of the Quarry. This area is located within the boundary of permission 2002/62/91422/WO which lapsed on 31 March 2013, but outside the area of the current planning permission 2020/70/92410/W. The storage is needed to accommodate soils recovered from the former landfill as there is insufficient storage capacity within the existing quarry. The temporary stockpile will be removed by the end of 2024.
- 1.7 The Quarry currently operates under planning permission reference 2020/70/92410/W dated 5 January 2021. The 2020 permission varied conditions 7 and 8 on the previous permission (reference 2012/93305) to continue the extraction of sandstone and deepen the quarry to 323m aod, to restore the quarry to agricultural use by means of infill and to recycle construction, demolition and excavation waste.
- 1.8 A restoration and surface water drainage scheme was approved to discharge conditions 24 and 25 of the earlier planning permissions 2002/62/91422/WO and 2002/70/91421/WO. This scheme, which is based on full backfill of the quarry void, has been incorporated into the proposed restoration scheme submitted with subsequent permissions granted in 2013 (2012/62/93305/WO) and the 2021 planning permission. Condition 19 of the 2021 permission requires the submission of a scheme to restore the site to grassland and moorland within 6 months of the date of the permission. This has not been done due to the sale of the Quarry to the new owner.

- 1.9 This planning application provides for the continuation of mineral extraction within the area of permission reference 2020/70/92410/W together with the deepening of the Quarry by 10m to a maximum depth of 313m AOD. The recovery of materials from the landfill in the southern part of the permission area will be required, in order to access the mineral reserve beneath. The contents of the former landfill will be recycled by crushing and screening, and it is anticipated that over time, the entire contents of the landfill can be removed for re-use elsewhere.
- 1.10 The Application also includes the extension of the Quarry over two fields to the south amounting to 1.75ha and the formation of a new access road onto Cartworth Moor Road. The maximum depth of excavation would rise from 313m aod at the northern boundary to 320m aod at the southern boundary.
- 1.11 As part of the infill operations, any recyclable materials in the imported wastes. would also be recovered by crushing and screening to produce a secondary aggregate.
- 1.12 Extraction of the stone reserve is expected to take around 12 years, with backfill completed within an additional 10 years. Final restoration should be achieved after 23 years.
- 1.13 Monitoring of groundwater fed spring sources immediately to the west and east of the Quarry has been undertaken in the past. The monitoring records indicated that the Quarry and its closed landfill have had no impact on water quality. Groundwater issuing from the shale below the Huddersfield White Rock has provided domestic water supplies to surrounding dwellings in the past. However the operator of the adjacent Hillhouse Edge Quarry installed a supply of mains water to Hillhouse on White Gate Road. The majority of the dwellings in the locality have tapped into this mains supply.

2 SITE DESCRIPTION

- 2.1 Windy Ridge Quarry is situated on the western edge of Cartworth Moor, approximately one kilometre to the south west of Holmfirth. The Quarry lies at the top of the eastern slope of the River Holme Valley, between 330 and 346 metres above ordnance datum. The Quarry is accessed from Cartworth Moor Road, 520 metres to the south of its junction with Gill Lane/Cartworth Bank Road. Drawing 10193A/02 shows the site topography together with the immediate locality.
- 2.2 The existing quarry working area now covers 1.9 ha, excavation of the former landfill having commenced. Immediately to the south of the Quarry is the restored southern part of the landfilled quarry workings. This area formed a separate field with a poorly

restored surface, now occupied by a soil mound constructed of soils recovered from the former landfill.

- 2.3 The current layout of the Quarry is shown on drawing 10193A/02.
- 2.4 The quarry workings are of some antiquity and the Site was formerly several smaller quarries. There are a number of other quarries in the vicinity, of which one is currently operational; Hillhouse Edge Quarry, which lies immediately to the north of this site. The closed Woodhouse Quarry is down slope to the west.
- 2.5 Windy Ridge Quarry is located on the edge of the escarpment feature formed by the Huddersfield White Rock, between 25 and 27 metres above White Gate Road, which runs north to south at the foot of the escarpment. The Quarry is excavated into the dip slope of the Huddersfield White Rock, which dips to the north east. The southern part of the Quarry lies at 346 metres above ordnance datum, and the ground slopes down to 330 to 335 metres above ordnance datum at the northern boundary of the planning application area.
- 2.6 The escarpment to the east is steep and heather clad, with many loose boulders strewn over the slope. A track leads down from the Windy Ridge Quarry workings at the top of the slope. The track is not used by the quarry operator but the local farmer does use the track to gain access to the fields on the Moor.
- 2.7 The general landscape around the quarry is largely treeless and dry stone walls form all the field boundaries. There are no mature trees within the site boundary.
- 2.8 There are a number of dwellings within 300 metres of the site boundary. The closest, 90 metres distant to the south east, is the farmstead of Moorfield House. As all of the quarry workings are below ground level and the dwelling is at a lower level relative to ordnance datum, there is no clear line of sight into the workings other than with surface soil stripping operations and the new access road. The house is thus well shielded from quarry operations, however the soil mounds at the southern end will be visible.
- 2.9 Upper and Lower Woodhouse Farms lie at distances of 242 metres and 322 metres respectively from the western edge of Windy Ridge Quarry. They are however at a much lower level below the Huddersfield White Rock escarpment and are shielded by the topography of the land.
- 2.10 The hamlet of Hill House is around 300 metres to the north. The four houses in the hamlet lie at 288 metres above ordnance datum at the foot of the Huddersfield White Rock escarpment and are thus also well shielded from site operations. The dwelling

at Hill House Edge lies 450 metres to the north, within a disused quarry and will not be affected by Windy Ridge operations.

- 2.11 Another small hamlet at Well House, comprises 12 houses and is situated around 600 metres to the north east, down the dip slope at a height of 300 metres above ordnance datum.
- 2.12 Because of the topography, none of the surrounding dwellings have a view into the existing quarry workings. The Quarry lies at high level and there are few views afforded of the workings, except from the immediate locality around Cartworth Moor Road. With the exception of the southern soil mound, the site is almost invisible in the general landscape to the south of Holmfirth.
- 2.13 The local road network is largely composed of narrow country lanes characterised by sharp bends and most are unsuitable for heavy goods vehicles. The existing quarry access emerges onto Cartworth Moor Road as shown on Drawing 10193A/01, a straight road running north north east to south south west. The new quarry access will come off Cartworth Moor Road 180m to the south west of the existing access, running parallel with and on the south side of an existing dry stone wall.
- 2.14 Cartworth Moor Road ends at a crossroads with Gill Lane and Cartworth Bank Road 520 metres to the north of the quarry access. Cars and light traffic can travel towards Holmfirth either via Gill Lane, Stoney Gate and northwards along Hill House Road or via Cartworth Bank Road. Neither route is suitable for heavy goods vehicles.
- 2.15 Heavy goods vehicles from the Quarry travel along Cartworth Moor Road, which is unmade for part of its length, to join Linshaw's Road 1300 metres to the south. From this junction, traffic can travel to the east towards the B6106 (Penistone to Holmfirth) and the A616 (Sheffield to Huddersfield).

3 GEOLOGY, MINERAL RESERVES AND INFILL VOLUME

- 3.1 The sandstone worked at Windy Ridge Quarry is the Huddersfield White Rock, one of the primary sources of high quality masonry stone in West Yorkshire. At Cartworth Moor, the White Rock is approximately 26 metres thick and consists of a succession of alternating layers of shale, sandy shale and flagstone. The most important horizon is a 5 metre thick bed of fine-grained, grey, massive sandstone, which can be described as "Hard York Sandstone", and lies towards the base of the White Rock. It is this bed that provides the high quality masonry stone that can be sawn to create building and architectural products.

- 3.2 However, Windy Ridge Quarry, because of the depth limitation (no working below 323m AOD) contained in the current planning permissions, only works the top horizons. Nevertheless, the walling and garden stone which is produced at the Quarry, is of high quality and is sold all over the United Kingdom for use in house building and garden landscaping.
- 3.3 With the exception of the south eastern corner of the quarry, there are limited stone reserves above the current maximum permitted depth. The operator now seeks to deepen the quarry by a further 10m to 313m AOD to provide access to the "Hard York Sandstone", and to extend the working area to the south. This will enable the Quarry to continue to produce block stone in addition to walling stone, garden stone and aggregate.
- 3.4 The proposal is also to remove and recycle the contents of the former landfill to enable the stone reserves below to be recovered.
- 3.5 The Huddersfield White Rock is one of the major sandstone members which comprise the Marsdenian measures of the Namurian or Millstone Grit Series. Together with the Greenmoor Rock, the Huddersfield White Rock is the main source of blockstone for masonry purposes and general purpose stone for walling and gardens. Other than Cartworth Moor, the only other source of the White Rock in the Huddersfield area is Johnsons Wellfield Quarries Ltd at Crossland Moor.
- 3.6 A typical section through the northern quarry face would show the following:
- | | |
|----------------------------------|--------|
| Weathered sandstone | 1.75 m |
| Bedded sandstone and shale "Rag" | 2 m |
| Sandstone | 14 m |
| Sandstone "Ashlar" | 3 m |
| Bedded sandstone and shale "Rag" | 3 m |
| Shale | below |
- 3.7 The main Sandstone horizon including the Ashlar, provides the best quality stone. The Rag and weathered sandstone is of variable quality and although usable stone can sometimes be pulled from it, most is only suitable for use as aggregate. The depth of rock above the Ashlar increases to the south.
- 3.8 The Huddersfield White Rock has a general dip to the north east and this is reflected in surface levels which are at 344 metres aod at the southern end of the quarry and drop to 335 metres aod on the northern boundary of the application area. Local boreholes show that the base of the Huddersfield White Rock is 19 metres deep immediately to the north of the Quarry.

- 3.9 The permitted reserve of stone remaining in the Quarry is small and the additional 10m depth would release an additional 100,000m³, including the stone underneath the closed landfill. At 2.3 tonnes/m³ and assuming 20% wastage, this would yield approximately 184,000 tonnes of saleable stone.
- 3.10 The southern extension would add a further 214,800m³ which on the same basis would bring the reserve up to 580,000 tonnes. The 20% rejects at 63,000m³ would be backfilled into worked out areas of the Quarry.
- 3.11 Previous sales of walling and garden stone products averaged 1,350 tonnes per annum and aggregate sales have averaged 2,650 tonnes per annum. However, the increase in HGV movements sought would allow the Applicant to increase production to 50,000 tonnes per annum. The sandstone reserve, if the planning application was to be approved, would provide sufficient stone for around 11.6 years.
- 3.12 The existing planning permission allows for the restoration of the quarry by means of infill with inert waste, comprising construction, demolition and excavation materials. The southern parts of the Quarry had been infilled under the terms of a waste management licence, but the landfill had to close in the early 2000s due to the costs of transferring to a new environmental permit. The permit has been surrendered.
- 3.13 The recovery of stone from under the landfill in the south west corner of the Quarry would require the removal of the landfill. The landfill consists of inert waste deposited in the period before 2005, primarily demolition rubble and soils. The Applicant intends to treat the deposited waste to manufacture aggregate and reserve the reject materials ("soils"), to redeposit in the quarry.
- 3.14 The Environmental Permitting regime has now changed and it would be possible to fill the quarry in order to give final long-term stable side slopes under the provisions of a "recovery" permit, a bespoke environmental permit which allows the use of waste materials to perform the obligation contained in the planning permission to restore the Quarry to the approved restoration landform. To complete the restoration process, soils will need to be screened from the imported inert wastes, both in the form of subsoils and topsoils.
- 3.15 However, any infill cannot be put into the Quarry until sufficient working space is available within worked out areas. It is unlikely that any significant fill capacity will be available for at least the next 5 years, with infill operations commencing in the north west corner and proceeding southward. However, the most appropriate restoration scheme remains to fill the quarry to original ground levels and the operator wishes to

retain the ability to do so. The anticipated total backfill volume is approximately 415,000m³.

- 3.16 Although the inert wastes that will be imported will be carefully selected at the sites where they originate, some of the materials such as brick and concrete will be capable of meeting a much higher specification than that required for an engineering fill. The use of these higher specification materials in the backfill will be to waste a valuable resource and so they will be exported for use as aggregate. The anticipated recovery rate would be around 80%. An environmental permit is in place for the manufacture of aggregate and soils.
- 3.17 Overall, it would be expected that the Quarry could be infilled and restored by 2044, 10 years after stone extraction had been completed.

4 PROPOSED OPERATIONS AND RESTORATION

- 4.1 Stone extraction has proceeded at a faster rate since the Quarry was purchased by the Applicant in 2020 with significantly more aggregate being produced. The intention is to lower the quarry floor in stages and at the same time to extend southwards to create a larger working area. There is very limited space available in the current working area due to the small size of the permitted area.
- 4.2 As the soils are stripped in annual stages, they will be stored in 3m high mounds around the perimeter of the extension area. The mounds will be initially formed in the south east corner as a means of providing a noise screen for Moorfield House. Soils will only be handled when soil moisture conditions are suitable so as not to cause unnecessary damage to soil structure. The soils will be stripped using an excavator and dump truck, with all topsoils removed prior to the formation of the access and internal roads.
- 4.3 Excavation of the landfill has begun together with its treatment by screening and crushing to manufacture a recycled aggregate and soils. The materials within the landfill that cannot be recycled have been temporarily stockpiled above ground on the restored surface of the landfill to the south of the existing quarry. The stockpile is 4m in height and will be grassed during winter 2022/3.
- 4.4 The excavation, treatment and redeposit of the tipped material will be carried out in accordance with a Materials Management Plan, which is set out in Appendix 2.
- 4.5 Drawings 10193A/03 P1, 10193A/03 P2 and 10193A/03 P3 illustrate the method of working within three phases, commencing in Phase 1 with excavation beginning to move southward into the extension area and infill in the NW corner. As soon as infill

has progressed to the extent where the new access road has been formed with a ramp down onto the quarry floor, the existing access road will cease to be used. The Bridleway will then be re-instated to a design to be agreed with the Planning Authority.

- 4.6 Phase 2 will see the infill to close to original ground levels at the northern end of the quarry as excavation proceeds southward. Phase 3 sees the restoration of the completed infill progressing further in a southward direction with extraction reaching its maximum extent, together with the relocation of the access ramp onto the quarry floor. The final phase would be the complete infill of the quarry as shown on drawing 10193A/04,
- 4.7 Drawings 10193A/06 P1, 10193A/06 P2 and 10193A/06 P3, show cross sections through the quarry in each phase illustrating the progress of excavation and infill.
- 4.8 The final shape of the quarry faces will be determined by geotechnical assessment to provide safe working conditions.
- 4.9 Block excavated from the quarry will be loaded directly from the working area into road lorries. Stone for crushing will be processed through the quarry crusher and screened and stockpiled close to the conveyor discharge points.
- 4.10 Waste and reject stone will initially be placed against the north western quarry face, with infill following the completion of excavation moving southward. A ramp will be maintained within the infill to allow access to the quarry floor.
- 4.11 Once sufficient space has been created within a worked out part of the quarry, imports of suitable waste materials would start. Recyclable materials will be removed from the imported wastes and processed through a crusher and screens to manufacture secondary aggregate and soils for sale. The remaining materials will be processed as required to manufacture a civil engineering fill and used to backfill the excavation. At all times, the crusher and screen will remain below surrounding ground levels in order to minimise noise and dust impacts.
- 4.12 Within 24 months of a grant of permission, the proposed new access road would be surfaced with road planings where it crosses the field between Cartworth Moor Road and the quarry extension, and brought into use. The layout of the new access road with a passing place and kerb radii is shown on drawing 1769 201. The visibility splays can be provided within land under the control of the Applicant. The existing access would then be left for use as a field access track and bridleway.

- 4.13 The passing places on Cartworth Moor Road will be formed within 12 months of the grant of planning permission, with details of dimensions and construction to be agreed with the Planning Authority. The number of HGV movements will not be increased until the passing places have been formed.
- 4.14 The Site office/amenity cabin would be moved to the position shown on drawing 10193A/03 P1. The cabin elevations are shown on drawing 10193A/05.
- 4.15 Drawing 10193A/04A shows the proposed restoration contours and the areas to be restored to agriculture and moorland. The restoration landform and after uses are based on those approved under condition 19 of the current planning permission.
- 4.16 A minimum of 250mm of soil making material will be laid as subsoil on the area to be restored to agriculture. This material will consist of soils and sandy material screened from imported inert waste and from quarry waste. A further minimum 150mm of topsoil will be laid over the subsoil, obtained from retained site soils and screened imported inert waste.
- 4.17 The top 0.5m of inert waste will be selected to be free of large blocks or stones and loose tipped to minimise compaction. The surface will be graded before the application of subsoil. Once the subsoil has been laid, it will be subsoiled to a depth of 450mm at a spacing of not more than 780mm, ensuring that the tines penetrate at least 150mm below the subsoil. All stones exceeding 75mm in any direction will be removed from the subsoil surface.
- 4.18 Topsoil will then be spread evenly over the subsoil, subsoiled, cultivated and stone picked prior to seeding. Topsoil samples will be taken and fertiliser applied as appropriate to control nutrient deficiencies and to promote grass growth. The spreading of subsoil and topsoil will only be carried out when the soils and the ground on which they are to be placed and in a dry and friable condition.
- 4.19 The land around the site perimeter free drains vertically downwards into the underlying sandstone. The sloping restoration surface will allow surface water run-off to travel to the edge of the backfilled area where it will drain down into the sandstone. Final levels will tie into surrounding ground contours.
- 4.20 A catch drain, dug to a depth of 0.5m, will be installed along the top of the slope in the north western corner of the site to prevent erosion of the steeper slope below. The drain will drain to a small sump constructed in the position shown on drawing 10193A/04. The sump will straddle the edge of the backfilled area and will allow vertical drainage of water down into the sandstone.

- 4.21 As part of the aftercare scheme and in the event that settlement results in the formation of hollows in the land surface, topsoils will be laid in these areas to raise the surface and remove the hollows.
- 4.22 The objective of seeding on the agricultural land will be to establish a permanent grass sward for hay or for stock grazing. The nature of the local climate is likely to exclude any other agricultural uses and precludes tree growth. The mix to be used will be British Seed Houses Grade A Mix 15 (Reclamation Landfill Sites) or an appropriate equivalent.
- 4.23 The slope identified for moorland restoration on drawing 10193A/04A will be covered with 0.25m of soil making material recovered from imported soils. This material will not be screened, but will be free of bricks and concrete and will be loose tipped. Sandstone blocks reserved from the quarry will be placed on the slope to assist in anchoring the soils and to replicate the appearance of the adjacent natural slopes. The slope will be seeded with a grass mix based on British Seed Houses Acid Sub-Mountain mix (Regional RE7) or similar. The surface will be dressed with heather brush cut from adjacent slopes in late autumn.
- 4.24 As part of the restoration scheme, the new access road will be removed with soils spread over the surface and treated in accordance with the details set out above. New field gates will be installed at either end of the new access road. New dry stone walls will be laid as shown on drawing 10193A/04A.
- 4.25 Following the completion of restoration, the land will be subject to a five year aftercare plan which will aim to develop vegetation on the site. Full details of the aftercare scheme will be submitted for the approval of the mineral planning authority prior to any restoration taking place.

5 FLOOD RISK ASSESSMENT

- 5.1 The area occupied within the Application boundary is 4.31 Ha and falls entirely within Flood Zone 1 where all uses of land are appropriate as noted in Table 1 of The National Planning Policy Framework Technical Guidance. However all developments of 1 ha or over require a Flood Risk Assessment.
- 5.2 The open-fractured nature of the Huddersfield White Rock ensures that the Quarry is free-draining. The direction of drainage from the base of the Quarry is expected to be controlled by the extent and presence of fracturing in the underlying sandstone rather than direction of local stratigraphic dip. It is therefore concluded that the landfill is

draining sub-vertically to the water table in the Huddersfield White Rock at a depth of approximately 3m below the proposed new quarry floor.

- 5.3 There is therefore no requirement for off-site drainage as all precipitation will percolate down through the quarry floor as it does currently. The rate of run-off or downward percolation will not increase as a result of deepening the Quarry.
- 5.4 The surface of the infilled and restored quarry will slope downwards to the west, north and east. The surface will therefore shed water to the margins where run-off will be able to percolate vertically downwards into the underlying permeable strata.
- 5.5 The proposed development therefore satisfies the requirements of the Framework with regard to flood risk.

6 IMPACT ON RIGHTS OF WAY

- 6.1 Bridleway HOL/94/10 passes along the Quarry access road and continues down the hillside across White Gate Road and on to Woodhouse Lane. The Quarry access road also functions as the farm access to the fields to the south of the road.
- 6.2 The access road has been in use for the Quarry for many decades. It is straight for the length between Cartworth Moor Road and the Quarry and the occasional quarry vehicle is very visible to pedestrians and horse riders.
- 6.3 Bridleway HOL/94/20 is a continuation of Bridleway HOL/94/10 between White Gate Road and Woodhouse Lane. Footpath HOL/93/10 also runs between White Gate Road and Woodhouse Lane further to the north. Footpath HOL/178/40 leaves Cartworth Moor Road and travels eastward. None of the rights of way other than HOL/94/10 will be affected by quarry activities.
- 6.4 The proposed quarry extension also provides for a new access road off Cartworth Moor Road. When the new access is brought into use, the existing access would be closed, so that quarry traffic would no longer run along the Bridleway. The new access would be brought into use 24 months after this Application was approved..

7 PLANNING HISTORY

- 7.1 Although quarries have existed on this site for in excess of 138 years, as shown by the 1854 Ordnance Survey map, the first planning permissions were granted under reference HO2793 (dated 17 May 1961) and HO4320 (dated 22 May 1964) by West Riding County Council. These permissions were renewed in 1996 as 94/70/91802/WO and 94/70/91802/WO but lapsed on 31 March 2001. Planning

permission to continue quarrying was granted in March 2003 under reference 2002/62/91422/WO and lapsed on 31 March 2013.

- 7.2 Planning permission was obtained for an extension of the quarry to the east in 1981 under reference 79/62/05800/C1. This permission was limited in condition 2 to a period of 10 years, ending on 22 January 1991. The permission was renewed in 1994 under permission 91/62/00024/WO with stone extraction to end by 30 June 2000 and infill to be completed by 30 June 2005. The permission was renewed again in 2003 under reference 2002/70/91421/WO, which lapsed on 31 March 2013.
- 7.3 Permission was granted under reference 2012/62/93305/W dated 26 March 2013 to continue quarrying to 31 March 2028 and to deepen extraction to 323m AOD. This permission was varied under reference 2020/70/92410/W to increase the number of vehicles that could transport minerals and waste materials to and from the Quarry to 16 per day.

8 PLANNING POLICY

- 8.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 (“the Act”) requires that all planning applications should be determined in accordance with the development plan unless material considerations indicate otherwise. In this instance, the statutory development plan consists of The Kirklees Local Plan (2019).
- 8.2 National policy as set out in the National Planning Policy Framework 2021 (Framework) is also an important material consideration.

The National Planning Policy Framework

- 8.3 The Framework sets out the purpose of the planning system as contributing to the achievement of sustainable development.

Sustainable Development

- 8.4 At the heart of the Framework is a presumption in favour of sustainable development. In essence this means that development proposals that accord with the development plan should be approved. Where the development plan policies lack relevance, planning permission should be granted unless the adverse effects of doing so would outweigh the benefits when assessed against the Framework policies taken as a whole. The corollary is that where there is conflict with an up to date development plan, planning permission should be refused unless material considerations are strong enough to outweigh the conflict and justify approval.

- 8.5 A definition of sustainable development is set out in the Framework's introduction, and is taken from the World Commission on Environment and Development in 1987: *"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*
- The Framework describes the three dimensions to sustainable development as economic, social and environmental, and seeks positive improvements in the quality of the built, natural and historic environment.
- 8.6 Paragraph 11 of the Framework sets out the presumption in favour of sustainable development, which for decision-taking means: *"approving development proposals that accord with an up-to-date development plan without delay; or where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:*
- i. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or*
 - ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole."*
- 8.7 The proposals would enable the Applicant to continue the supply of aggregate, walling stone and block stone to the market. In terms of both walling stone and block stone, the market extends nationally, whereas aggregate is supplied within West and South Yorkshire. The production of aggregates and walling stone is secondary to the supply of high quality block stone which is a scarce resource and is in much demand for architectural purposes. The block stone is not processed on site but is supplied to masonry stone companies with the necessary stone saw equipment.
- 8.8 A grant of planning permission to deepen and extend the Quarry would provide a continuing source of stone for another 11.6 years. The benefits arising from the supply of the stone to the construction industry will significantly outweigh any environmental impacts.
- 8.9 The provision of the mineral resource would also contribute to the economic and social needs of the present and because of the limited environmental impact, would do so without compromising the wellbeing of future generations. The proposal is in accordance with an up-to-date development plan and therefore as a sustainable development, the Framework presumption in favour should apply.

Climate Change and Flooding

- 8.10 The locality is not shown on the Environment Agency Flood Map as being at risk of flooding from any source. As the Quarry area is greater than 1 hectare in size, a Flood Risk Assessment has been carried out and is presented in Section 6 above.
- 8.11 In the absence of risk to the site or surrounding area there is no requirement for any additional flood risk mitigation or management measures for the Quarry. Site operations are therefore compliant with the National Planning Policy Framework and local authority policy related to development and flood risk.

The Natural Environment

- 8.12 Paragraph 174 states that the planning system should contribute to and enhance the natural and local environment by:
- "preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability."*
- 8.13 The proposed development has no impact on any designated ecological sites and can be operated without any significant noise or other environmental impacts on the adjacent residential areas.
- 8.14 The Quarry is located in the Green Belt. The Framework in paragraph 150, notes that *"Certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it."* These include mineral extraction and engineering operations. The use of land for the disposal of waste is not included as a not inappropriate use, but in this case is a means of restoring a mineral working. It should therefore be considered to be an essential part of the use of the land for mineral extraction.
- 8.15 The issue of openness is addressed further under paragraphs 9.36 to 9.42 following.

The Sustainable Use of Minerals

- 8.16 The Framework advises in paragraph 209 that:
- "It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation."*

- 8.17 The Framework also directs that great weight should be given to the benefits of mineral extraction, including to the economy. Paragraph 211(g) recommends that local authorities "*recognise the small-scale nature and impact of building and roofing stone quarries, and the need for a flexible approach to the duration of planning permissions reflecting the intermittent or low rate of working at many sites*".
- 8.18 The Huddersfield White Rock found at Windy Ridge Quarry is one of the premier Yorkshire masonry stone sources, much in demand for repairs to existing buildings and for new build in the vernacular. This is a small scale quarry reflecting the low rate of working, typical of this type of quarry.
- 8.19 The Technical Guidance to the NPPF sets out detailed considerations to be applied to Mineral Working, including those dealing with dust, noise, surface stability, restoration and aftercare. The approved proposed working method has incorporated the need to minimise dust impacts. Water based dust control systems are fitted to crushing and screening plant as required under local authority environmental permitting controls. The operator will ensure that the site operates under a full dust control system which will provide effective controls.
- 8.20 All mobile plant will operate below ground level for the majority of the time, and the crushing and screening plant is located on the floor of the Quarry. Only when restoration levels approach the surface will mobile plant operate without the benefit of acoustic screening. Given the low level of activity and the fact that there are only a small number of nearby dwellings which are all shielded by the local topography, noise impacts will be within accepted limits and the site can comply with the Framework Technical Guidance. The operator is not aware of any complaints regarding noise or dust impacts that have arisen in the past 10 to 15 years.
- 8.21 Restoration will be to original ground levels as required by the current approved scheme under the three existing and previous planning permissions.
- 8.22 There is therefore no doubt therefore that a satisfactory restoration can be achieved.
- 8.23 The benefits arising from the continuation of operations at the Quarry significantly outweigh environmental impacts and therefore the proposed development is a sustainable development. As a sustainable development, the Framework presumption in favour should apply.

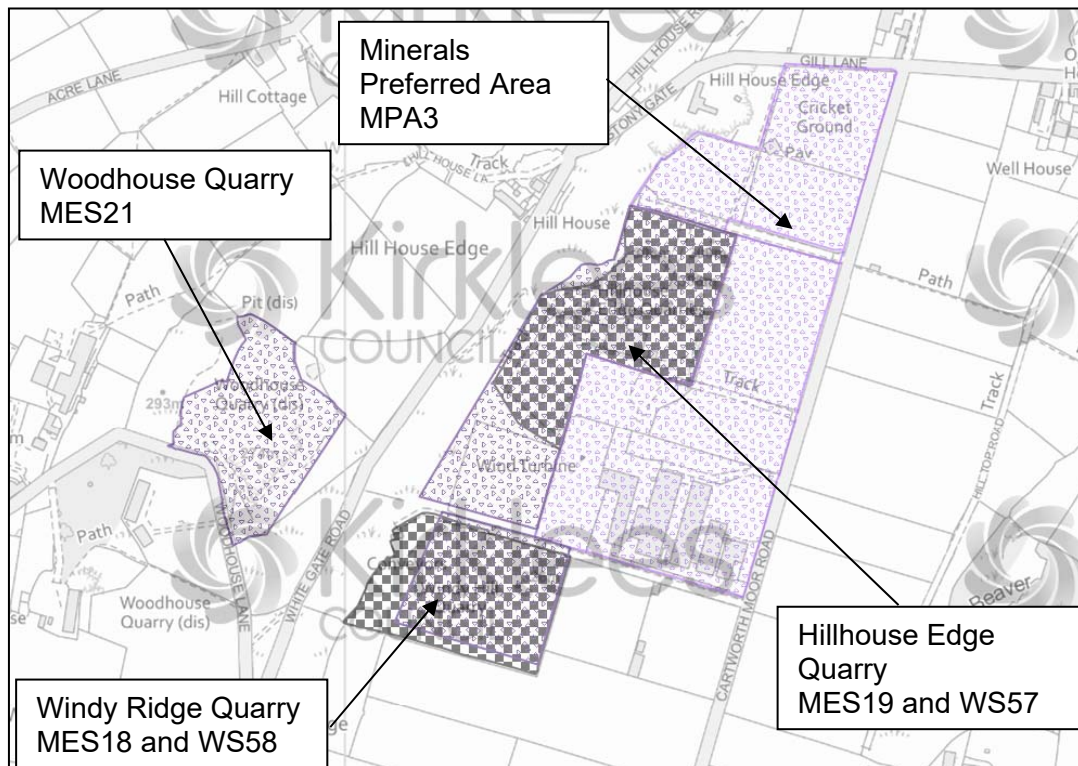
The Kirklees Local Plan

- 8.24 Paragraph 15.7 acknowledges the importance of blockstone quarries in Kirklees, stating that:

"The blockstone produced in the western side of the district represents some of the highest quality building stone in the UK and is used for facing civic buildings and major private sector developments throughout the UK and therefore satisfies a national need. The stone combines resistance to weathering with an attractive colour and appearance. This stone is vital to the success of local building projects and to enable construction projects in Conservation Areas and on listed buildings to be completed."

- 8.25 The importance of Windy Ridge Quarry is recognised in that it is denoted as an existing minerals extraction MES18 (erroneously labelled as Whitegate Quarry) and waste allocation WS58 in the Local Plan. The area covered is shown in Figure 2 below, which is an extract from the Plan Policies Map.

Figure 2: Extract from Kirklees Local Plan Policies Map



- 8.26 The Allocation is described on page 233 of the Local Plan Allocations and Designations document. It notes that this is an operational quarry where all constraints have been identified and mitigation is in place. Assessment is required for the presence of habitats that are important for off-site foraging by South Pennine Moors SPA qualifying bird species. The Quarry is described as an operational site that will be expected to continue to conform with the planning permission, associated conditions and agreed site restoration and aftercare plans.

8.27 The Quarry is also listed on page 248 of the document as a Kirklees Rural safeguarded waste management site under Policy LP45.

8.28 The extension to the Quarry is not allocated as an Area of Search or Preferred Area, but it is within a Mineral Safeguarding Area (Sandstone).

8.29 Policy LP36 deals with the issues involved with mineral extraction, and states that proposals will be considered having regard to:

- "a. the impact on the environment including water resources and the best and the most versatile agricultural land;*
- b. the impact on residential amenity, highway safety and local heritage assets;*
- c. the impact on human health;*
- d. any cumulative effects arising from multiple impacts from individual sites and/or a number of sites in a locality."*

Proposals for mineral extraction will be permitted providing they will not:

- "a. cause unacceptable detriment to the landscape including its character or local visual amenity during or subsequent to extraction;*
- b. be materially detrimental to interests of nature conservation, cultural heritage, geological or archaeological importance;*
- c. cause nuisance or materially significant disturbance to local residents as a consequence of the generation of dust, noise or vibration by site operations or associated transport;*
- d. prejudice highway safety through the volume or nature of vehicle movements generated;*
- e. result in pollution of water resources or soils or the interruption of land drainage;*
- f. cause materially significant permanent change to local rights of way networks; or*
- g. result in permanent loss of best and most versatile agricultural land."*

The policy also notes that, *"subject to compliance with the above criteria the Council will support development proposals for the provision of local stone types which are specifically required to carry out heritage asset repairs within the district."*

8.30 The criteria set out above are met by these proposals, which have been designed to minimise environmental and amenity impacts. Assessments have been carried out on traffic, noise, dust and groundwater impacts, as set out in section 10 following.

8.31 Restoration and aftercare are dealt with by Policy LP37. The proposals set out in section 5 above have been designed to meet these requirements, with the proposed use following restoration being for agriculture and amenity.

- 8.32 Chapter 16 of the Local Plan covers Waste and Policy LP46 deals with waste disposal. The Policy states that *"Sites for the disposal of waste will only be permitted where they meet a need which cannot be met by treatment higher in the waste hierarchy. If it can be demonstrated that there is a proven need for additional landfill capacity because all other options are not suitable or feasible, this will be provided at existing or former quarry sites shown on the Policies Map."*

Windy Ridge Quarry has been allocated for waste disposal as site WS58 within the existing quarry.

- 8.33 However, the use of waste to restore the Quarry should not be regarded as simply disposal. This would qualify as a Recovery Operation, with the objective being to restore the quarry to original ground levels rather than primarily to dispose of waste.

- 8.34 Chapter 19 covers Green Belt and Open Space and the area around and including the Quarry lies within the Green Belt as shown on the Plan Policies Map.

- 8.35 As noted in Paragraph 146 of the Framework, mineral working is not an inappropriate development in the Green Belt, providing that openness is preserved and there is no conflict with the purposes of including land within it. These principles are set out in paragraphs 19.6 to 19.8 of the Local Plan.

- 8.36 Paragraph 134 of the Framework sets out the five purposes of including land in the Green Belt. These are:

- a) to check the unrestricted sprawl of large built-up areas;*
- b) to prevent neighbouring towns merging into one another;*
- c) to assist in safeguarding the countryside from encroachment;*
- d) to preserve the setting and special character of historic towns; and*
- e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.*

The proposed development does not conflict with the purposes identified in a) and b), and neither does it conflict with d) and e).

- 8.37 With regard to c), safeguarding from encroachment, provision can be and would be made for the restoration of the quarry. The development is therefore not permanent and as a temporary use of land, it would be restored in accordance with an agreed detailed restoration scheme and aftercare management.

- 8.38 In terms of the openness of the Green Belt, the Quarry lies on the top of a plateau formed by Cartworth Moor. There are three active or recently active quarries in close proximity, and older disused quarries litter the landscape. Quarrying therefore forms

part of the landscape character of the area. Windy Ridge Quarry lies below ground level with the exception of the perimeter soil storage mounds, which do not have a significant impact due to the many dry stone walls in the locality. These factors all form the openness context to the Quarry.

- 8.39 In dealing with openness, spatial as well as visual impacts are essential considerations. Spatial impacts relate to the absence of development, and the site will remain undeveloped after restoration has taken place. There will therefore be no spatial impact arising from the proposed scheme.
- 8.40 The conclusion can be drawn that the proposed development does not adversely affect the openness of the Green Belt or any of the purposes of including land within it.
- 8.41 However, without prejudice to the above position, even if this was considered inappropriate development in the Green Belt it is considered that there are very special circumstances which, on balance, would justify the granting of this permission. This includes that the existing Quarry has been allocated for mineral extraction in the Local Plan, and its extension is in accordance with the mineral policies in the Local Plan.
- 8.42 In addition any alternative mineral resource would potentially also need to be in the Green Belt given the spatial distribution of the Huddersfield White Rock and the need to locate quarries away from settlements. Any harm to the openness of the Green Belt resulting from the proposal, is clearly outweighed by other considerations including meeting the demand for scarce minerals of the type found at this Quarry such that very special circumstances arise.

9 ENVIRONMENTAL IMPACTS

- 9.1.1 The development plan policies require that consideration be given to the environmental impact of the proposed development. This supporting statement has addressed the issues of ecology, landscape, traffic, noise, dust and groundwater.

9.2 Ecology Assessment

- 9.2.1 A Preliminary Ecological Assessment has been prepared by RDF Ecology of Rotherham. The Assessment is attached as Appendix 3A.
- 9.2.2 An extended phase 1 habitat survey of the site was completed on 18 April 2022 with all habitats within the site being surveyed. Fauna and flora present at the time of survey were recorded and the site was assessed for its potential to support

notable and/or protected species that could be impacted by development following CIEEM guidance (CIEEM, 2017 and 2018).

- 9.2.3 The Site is not covered by any statutory nature conservation designations. However there is a single site covered by statutory nature conservation designations within 2 km of the Site boundary. This is the Dark Peak SSSI. Three sites are covered by European designations within 10km of the Site boundary, and these are the South Pennine Moors SAC/SSSI and the Peak District Moors (South Pennine Moors Phase 1) SPA/SSSI.
- 9.2.4 The Site is not covered by any non-statutory nature conservation designations; however the desktop study indicates that there are five Local Wildlife Sites (LWS's) within 2km of the site boundary. These are Malkin House Wood (900m north), Yateholme Reservoirs and Plantations (1.1 Km west), Digley Reservoir/Marsden Clough (1.2Km west), Carr Green Meadows Holmbridge (1.5Km north west) and New Laith Fields Holmbridge (1.7Km north west).
- 9.2.5 The Site does not fall within an area identified in the Kirklees Wildlife Habitat Network and the closest point of the site to an area within the KWHN is the proposed new site entrance which lies approximately 30m west of the KWHN.
- 9.2.6 The Phase 1 habitat types identified were Improved Grassland (B4), Tall Ruderal Vegetation (C3.1) and the existing Quarry (12.1).
- 9.2.7 The quarry extension comprises two fields of improved agricultural grassland. The dominance of agricultural grasses and low abundance of broad-leaved and other species suggests that the grassland has is intensively managed as a silage crop followed by livestock grazing. During the field survey the sward was dense and lush and had achieved a height of between 15-20cm and the fields were being grazed by sheep.
- 9.2.8 Around the margins of the fields where grass cutting was more difficult the vegetation comprised a mixture of improved grassland and areas of ruderal vegetation. To the north and west of the site is the existing quarry which supports areas of bare ground and established ruderal vegetation containing creeping thistle, common nettle, broad-leaved dock and coarse grasses. The site boundaries are marked by dry stone walls with some ruderal vegetation along the bases with creeping thistle, common nettle and occasional ragwort.
- 9.2.9 No evidence of protected species were observed during the survey visit with the exception of wild birds. However, a nocturnal survey of the site completed looking

for golden plover did not record any golden plover activity within the site or within the immediately adjacent fields.

- 9.2.10 The Assessment noted that all habitats within the Site boundary would be lost including approximately 1.8 Ha of improved agricultural grassland. However, The habitats within the site do not appear to be suitable for use by feeding golden plover (*Pluvialis apricaria*) for which the nearby SPA's have been designated.
- 9.2.11 The Assessment reached a number of conclusions and made recommendations for mitigation and additional work.
- 9.2.12 The improved agricultural grassland and ruderal vegetation habitats within the site have no intrinsic botanical value supporting a very limited range of common and widespread species and their loss would only be felt within zone of influence of the development. No compensation or mitigation measures are proposed and no further survey or assessment work is recommended with regard to their botanical value.
- 9.2.13 Potential impacts upon nesting birds can be prevented during construction by ensuring that vegetation removal is programmed to occur outside of the bird nesting season (March to September inclusive). Where this is not possible vegetation removal should be done under the supervision of a suitably qualified and experienced ecologist.
- 9.2.14 No significant impacts upon nesting birds were predicted and no further ornithological survey work was recommended other than for nocturnal feeding golden plover.
- 9.2.15 Potential impacts upon reptiles can be prevented during the works proposed by completing them in accordance with standard mitigation measures and under the guidance of a reasonable avoidance measures method statement which sets out methods of working and timing of works.
- 9.2.16 Because the Site is within 2.5KM of the South Pennine Moors SPA, a project level Habitat Regulations Assessment has been prepared by RDF Ecology and is attached as Appendix 3B. The Assessment reached the following conclusions:
- The habitats within the application site were assessed to be of limited potential value to nocturnal feeding golden plover and an analysis of existing ornithological data provided by WYE and Huddersfield Bird Club in light of the known ecology and behaviour of the species and concluded that the habitats within the application site are not used by foraging golden plover, in particular with birds linked to the South Pennines SPA breeding population and that the

site would not be considered functionally linked to the SPA, but that its use by golden plover could not be conclusively ruled out.

- Survey work in accordance with the West Yorkshire Ecology Service DRAFT SPA Bird Survey Methodology was undertaken in 2022 to examine potential nocturnal use of the application site by foraging male golden plover. This survey work did not record any use of the site by golden plover and supports the conclusion of the site assessment and analysis of existing ornithological survey data
- Consequently, the loss of grassland habitat arising from approval of the current application to extend the existing quarry south into the two fields to the south of the existing Windy Ridge Quarry is not predicted to impact upon the SPA breeding population of golden plover and would not affect the favourable conservation status of the species.
- Granting of planning permission for this development would not be in contravention of the site conservation objectives for the Peak District Moors (South Pennine Moors Phase 1) Special Protection Area which are to:
“Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;
 - *The extent and distribution of the habitats of the qualifying features*
 - *The structure and function of the habitats of the qualifying features*
 - *The supporting processes on which the habitats of the qualifying features rely*
 - *The population of each of the qualifying features, and,*
 - *The distribution of the qualifying features within the site”*

9.3 Landscape Assessment

- 9.3.1 The Site lies within the Peak Fringe Upland Pastures Landscape Character Area of the Moorland Fringes/Upland Pastures Landscape Character Type. This Area is characterised as a broad terrace lying between 200m and 350m altitude flanking the slopes and valleys to the east of the South Pennine, Wessenden and Meltham Moors. The Underlying geology of Millstone Grit is heavily influenced by glacial erosion, which creates a complex landform of open footslopes contrasting with more enclosed valleys. Generally the landscape is sparsely wooded due to exposure.
- 9.3.2 The site itself lies on the top of the Cartworth Moor plateau, on the eastern side of the Holme Valley, formed by the dip slope of the Huddersfield White Rock. The existing quarry is close to the western edge of the plateau between 330m and 346m

aod. The high point of the Cartworth Moor plateau is 355m aod, 400m to the south of Windy Ridge Quarry, and the Moor surface dips to the north east to around 250m aod to the south of Holmfirth itself.

- 9.3.3 Cartworth Moor lies at the limit for successful tree growth and the only mature trees around the Quarry are to be found in sheltered positions and in the valley on the eastern side. There are no mature trees within the planning application area or in its immediate locality.
- 9.3.4 The steep escarpment formed by the Huddersfield White Rock on the western boundary of Cartworth Moor is approximately 25m to 30m high and is uncultivated. The vegetation is largely heather and bracken and there are numerous scars left by old tracks leading to the quarries at the top of the slope and by ancient quarry workings and spoil heaps.
- 9.3.5 The Moor itself is under agricultural use for grazing and dry stone walls form the field boundaries. There are a few isolated farm dwellings on the Moor and a large intensive chicken rearing unit with a wind turbine is sited close to the north east boundary of the quarry.
- 9.3.6 There are a number of dwellings within 500m of the quarry boundaries but these are all in positions where they do not have a view into the quarry itself. However, one (Moorfield House) will have a view onto the soil mounds at the southern end of the Application area.
- 9.3.7 There is a break of slope in the field between the eastern Application boundary and Cartworth Moor Road, which prevents a view onto the Application area from the Road. The new access road will be readily apparent, but so is the existing access which has been in use for many decades.
- 9.3.8 The residential areas of Holmfirth and Holmbridge are mainly on the valley floor to the north and west. Although residential development has spread up the western side of the Holme Valley to elevated levels, there are very few dwellings at a level above the quarry and these will be at least 2 kilometres distant. At this separation, the quarry itself will have no impact on visual amenity.
- 9.3.9 The temporary soil mound in the south west part of the quarry is visible, but will be greened up in winter 2022/3. In the distant views from the west, it is barely perceptible, but is visible when viewed from White Gate Road.
- 9.3.10 There are also a number of isolated dwellings and farmsteads to the east in the direction of Hade Edge, but these are between 1 and 2 km distant.

- 9.3.11 The Kirklees Way footpath passes along the higher ground to the south of the site and views onto the site may be afforded from the Crow Hill section of the path, at a distance of just over 1 kilometre.
- 9.3.12 Bridleway HOL/9410 also skirts the northern boundary of the quarry, leading from Cartworth Moor Road and passing down the escarpment slope to the junction of White Gate Road and Woodhouse Lane. Pedestrians and horse riders are able to see over the dry stone boundary wall into the quarry workings. However, the Cartworth Moor Quarries are features of some antiquity and there are many disused quarries and spoil heaps in the locality. These features are essentially part of the landscape and contribute to its interest.
- 9.3.13 In overall terms, the Quarry and its extension have a limited visual impact. The highest impact would arise from the new access road, but this is a replacement for an existing access road which has the same level of impact. Once restoration has been completed, all trace of the quarry will have been removed.

9.4 Sound Impact Assessment

- 9.4.1 A Sound Impact Assessment has been prepared by S&D Garritt Ltd of Doncaster, and is attached as Appendix 4.
- 9.4.2 The Assessment concluded that activity from the proposed quarry extension is predicted to fall within the 10 dBA above background limit at all receptors apart from Moorfield Farm. The predictions were based on a series of worst case assumptions and the approximation that barrier effect will attenuate sound by 10 dBA, which is likely to be conservative at this site. In reality it is likely that the predictions would be slightly more favourable than those given in the report.
- 9.4.3 There appears to be no further practicable reduction in quarry sound without placing unreasonable burden on the operator, and the requirement to not exceed 55 dB LAeq,1 hour under these conditions would be met at all times and at all dwellings. The predicted sound levels at dwellings during temporary phases when machinery may be visible at the closest dwellings were also comfortably within the temporary 70 dB LAeq limit.
- 9.4.4 The calculation procedures adopted in the Assessment are generally conservative and give a reasonable worst-case, but are based on well recognised principles of acoustics. Overall, It was concluded that the development proposed at the site can be undertaken in compliance with the noise criteria given in the Framework.

- 9.4.5 Planning permission 2020/70/92410/W carries a number of conditions covering amenity and noise, including condition 28 which sets working hours to between the hours of 08:00 to 17:30 on weekdays and 08:00 to 12:30 on Saturdays. No operations other than environmental monitoring and water pumping at the site are to take place on Sundays or Bank or National Holidays.
- 9.4.6 Condition 29 sets a maximum noise limit of 45dB(A) 1 hour at any noise sensitive property, including residential accommodation and buildings housing farm animals, during all site operations. The Sound Impact Assessment predicted a worst case of 53.6 Db LA₉₀ at Moorfield House, However, the report noted that the barrier effect used was conservative and the Applicant is confident that a limit of 45 dB(A) can be met.
- 9.4.7 Condition 30 limits the times when the 70 dB(A) 1 hour higher limit applies. Finally, condition 31 limits the times when servicing, maintenance and testing of plant can be carried out, and condition 32 requires maintenance to manufacturer's specifications and the use of effective silencers.
- 9.4.8 These conditions were set in January 2021 and there is no reason why they cannot be adhered to. There are no activities proposed which are different from any carried out over the lifetime of the Quarry and the Applicant would accept the carrying forward of these conditions onto a new planning permission.
- 9.4.9 For the vast majority of the time, quarry plant will continue to work below ground levels, and only the soil handling activities will be on the ground surface. These activities can be conducted within the recommended limit of 70 dB LA_{eq} which is available for up to 8 weeks per year. It is anticipated that noise generated by quarry operations, with the exception of soil stripping and replacement, can meet a limit of 45 dB LA_{eq}. The Applicant is unaware of any complaints regarding noise over the previous 16 year period.
- 9.4.10 The Applicant intends to implement the following noise control measures
- The fitting and maintenance of effective silencers on all plant and equipment;
 - All engines/generators will wherever practical be operated with doors or cowls in the closed position;
 - All extraction operations will be carried out below ground levels;
 - The avoidance of undue revving of engines;
 - The design, where possible, of haul roads with gentle gradients and curves;
 - The maintenance of haul roads with graded surfaces pothole free;
 - All plant will be maintained in accordance with manufacturers schedules; and

- When complaints are received, the complaint will be investigated and remedial measures undertaken where necessary.

9.5 **Dust Assessment**

- 9.5.1 This assessment deals primarily with the potential for dust emissions arising from the Site.
- 9.5.2 The exhaust emissions from Site mobile plant, generators and from road transport are likely to be very small when compared with ambient NO₂ and particulate levels due to the low level of activity. Guidance published by Environmental Protection UK (EPUK and the Institute of Air Quality Management (IAQM) "Land-Use Planning and Development Control: Planning for Air Quality 2015", suggests that assessment of exhaust emissions is only necessary with a change of HGV traffic flows in excess of 100 movements per day Average Annual Daily Traffic AADT where the site is not within or adjacent to a declared Air Quality Management Area (AQMA). This is not exceeded at Hillhouse Edge Quarry.
- 9.5.3 The assessment has therefore concentrated on the issue of prevention rather than measurement of background air quality levels and comparison with quantitative predictions.
- 9.5.4 The National Planning Policy Framework describes the policy context in relation to pollutants including air pollutants. The Government's objective is that planning should help to deliver a healthy natural environment for the benefit of everyone and safe places which promote wellbeing. To achieve this objective;
"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement."
- 9.5.5 Further guidance to the Framework is set out in the web based Planning Practice Guidance.
- 9.5.6 Kirklees Council has declared nine AMQAs, all of which are within the urban areas of Huddersfield and Dewsbury. None of are located within the vicinity of the Quarry.
- 9.5.7 Dust sensitive receptors in the locality are limited to a small number of dwellings which are within 300 metres of the Application boundary. Moorfield House lies 90m to the south east. The hamlet of Hill House is 300m from the northern application

boundary. The four houses in the hamlet lie at 288m aod at the foot of the Huddersfield White Rock escarpment and are thus also well shielded from site operations. Quarry House on Gill Lane is 435m distant to the north and is situated within a disused quarry at a depth of approximately 9m below original ground level. The house is thus well shielded from quarry operations.

- 9.5.8 A small hamlet at Well House, comprises 12 houses and is situated around 600m to the north east, down the dip slope at a height of 300 metres above ordnance datum. There are a number of other isolated dwellings, mainly farms, within 500 metres of the site boundary. These dwellings are however, either well below the quarry level and to the west, or further down the dip slope to the north and east.
- 9.5.9 There are no ecologically designated sites in the immediate vicinity of the Quarry. Deciduous Woodland Habitat is recorded 350m to the east, but is unlikely to be affected by quarry operations, as is the South Pennine Moors SAC/SPA and Dark Peak SSSI which is located 1.5km to the south. The woodland and surrounding agricultural land are in any case considered as low sensitivity receptors.
- 9.5.10 Prevailing winds will blow from sectors in the south and west which will not deposit dust on any of the nearby dwellings.
- 9.5.11 All of the operations and activities proposed on site have the potential to generate dust. In quarrying, dust is generally created by firstly the breaking of materials, secondly by the handling of previously broken materials, and thirdly by the movement of mobile plant and lorries over the ground.
- 9.5.12 For dust to become airborne, energy is required to overcome the gravitational and cohesive forces binding dust particles together or to a surface. Dust particles are dispersed by suspension in moving air, and the area of dispersal is affected by particle size and wind speed as well as by particle shape and density.
- 9.5.13 The largest proportion of dust likely to be emitted from site operations will be large dust particles of size greater than 30 μm , which will largely be deposited within 100m of their source. Finer dusts of size up to 30 μm may travel further, but concentrations will decrease rapidly with distance from the source, due to dispersion and dilution.
- 9.5.14 Dust control will be concentrated on the prevention of dust emissions beyond the site boundary and will be centred on the use of water to condition materials and damp down running surfaces. However, in dry windy conditions it can become difficult to maintain effective dust controls and so when dust is observed to leave

the Site boundary, all site operations would be suspended that have the potential to give rise to fugitive dust emissions beyond the Site boundaries.

- 9.5.15 The existing planning permission carries condition 34 relating to dust. It states::
"The site shall be operated at all times in accordance with the dust suppression measures detailed in section 9.4 of the supporting statement produced by LDP Planning and dated October 2012, pursuant to planning permission 2012/93305."
There is no reason why a similar conditions should not be attached to a new planning permission.

Activities with the potential to give rise to dust emissions

- 9.5.16 The primary sources of dust at the Quarry will be:
- the stockpiling of "soils" from the treatment of the site landfill waste;;
 - the mineral extraction operation;
 - the mineral processing, stockpiling and loading out operations;
 - the movement of mobile plant around the site and lorries leaving and entering the site. This is likely to be the main source of Site emissions;
 - the placement of soils as part of the restoration process.
- 9.5.17 The creation and dispersion of dust will be highly dependent on weather conditions. Wind speed can determine the amount of dust raised, while wind direction determines those areas that may be affected. Higher wind speed increases the potential for airborne dust to be generated with the suspension and entrainment of particles in airflow. Precipitation will suppress dust generation.
- 9.5.18 The amount of dust generated by each activity depends on the size of particles and, crucially, upon their moisture content.

Soils Handling

- 9.5.19 The protection of soil resources require that the stripping and replacement of soils can only take place in dry conditions, usually between April and October, and fugitive dust emissions are therefore possible. The soil stripping and replacement processes are very similar to normal agricultural operations such as ploughing and cultivation which already take place on and around the site. Soil handling operations are however transitory and are only likely to occur over a period of a few weeks. The only realistic means of controlling dust emissions is to suspend operations when fugitive dust emissions are likely to impact on residential, woodland and agricultural areas external to the site boundary and that is in dry windy conditions.

- 9.5.20 There is a potential for short term moderate to high levels of dust emissions in the absence of mitigation measures.

Excavation Activities

- 9.5.21 Mineral extraction will take place all year round using mechanical methods. The potential for dust generation arising from these operations is therefore considered to be low to moderate without mitigation measures.

Processing Plant and Stockpiles

- 9.5.22 Excavated rock from the quarry face would be transported to the crushers and screens which manufacture aggregate. These will be located on the quarry floor and transportation distances will be short. The operation of the processing plant would be controlled through an Environmental Permit with strict controls relating to dust emissions.
- 9.5.23 Processed material would be transferred to stockpiles using a wheeled loading shovel which would also load lorries taking the aggregate offsite.
- 9.5.24 Blockstone would be lifted from the strata and placed to one side to be loaded onto road-going vehicles. This activity will liberate very little dust.
- 9.5.25 The handling and processing of the rock has the potential to generate significant volumes of dust. The location of the plant and handling operations on the floor of the quarry would reduce the potential for dust movement across the site boundary due to the physical barrier created by the quarry faces and as a result, the potential for dust generation is considered to be moderate.
- 9.5.26 Stockpiles of processed aggregate would be located on the quarry floor close to where the processing plant would be located, thus minimising transportation distances. The deposit onto and loading out from the stockpiles can have significant potential to generate dust, especially in dry windy weather. Stockpiles containing fines would have the highest potential for generating dust, whilst those containing coarse products would have the lowest. Stockpiles including fines tend to develop surface crusts which limit dust emissions unless disturbed and crusting can be encouraged using water sprays and coagulation agents. The potential for dust generation is considered to be high.

Transportation

- 9.5.27 Raw materials would be transported within the quarry using wheeled loaders over relatively short distances. The areas traversed would be the quarry floor, comprising

un-paved hard rock. Such "haul" routes would have a covering of loose material, some of which will arise from erosion of the rock surface. Dust emissions in such circumstances increase with the transporting vehicle weight and speed. Internal haul roads are therefore considered to have a high potential for dust generation.

Mitigation Measures

9.5.28 Table 1 following summarises the different activities and their potential for dust generation.

9.5.29 Industry good practice measures are based on guidance issued by the Minerals Industry Research Organisation (MIRO) and Process Guidance notes published by Defra. The later includes PG 3/08 (12) Quarry Processes and PG 3/16 (12) MobileCrushing and Screening.

Table 1: Dust Sources

Activity	Emission Magnitude	Location
Soil Stripping and Replacement	Moderate to High	Original ground surface and quarry floor
Excavation	Low to Moderate	Levels below original ground surface
Processing	Moderate	Quarry floor
Stockpiling and Handling	Moderate to High	Quarry floor
Transportation	High	Quarry floor

Soil Replacement

9.5.30 The primary mitigation that would be implemented would be the avoidance of soil activities during inclement weather conditions when the wind speeds create the potential for dust to be blown well beyond the area of soil handling itself. The duration and frequency of soil handling would be minimised.

Excavation

9.5.31 Where material handling takes place, double handling would be avoided wherever possible and drop heights from machine buckets would be minimised. Spillage from machine buckets would also be minimised by avoiding overloading. The use of portable water sprays would be considered if necessary.

Processing Plant

- 9.5.32 The Environmental Permit controlling the processing plant would require a number of mitigation measures to be applied, including the following:
- The use of variable height conveyors, wind boards and chutes on conveyors;
 - The use of dust spray bars on crusher or dust arrestment if available;
 - All conveyors should be fitted with belt scrapers and dust catch plates; and
 - All materials should be deposited carefully into screens and crushers by reducing drop heights.

Stockpiling and Handling

- 9.5.33 All stockpiles, with the exception of the reject "soils" would be located on the quarry floor in discrete areas where machines or other vehicles are at least risk of running over the stockpiled materials. All stockpiles containing files would be conditioned with water where necessary and the area around the stockpiles will be maintained in a clean and tidy condition.

Internal Haul Routes

- 9.5.34 All vehicle speeds will be restricted but the main mitigation measure would be the use of a water bowser in dry windy conditions.

Quarry Access Road

- 9.5.35 The road would be damped down with a water bowser as and when required.

Conclusions

- 9.5.36 This Assessment has covered the continued operation of the Quarry including the stockpiling of "soils" on the southern area. It has considered the various site activities and the potential for dust impacts to arise from them. Impacts from traffic and plant emissions have been screened out as below the relevant criteria and so not considered significant.
- 9.5.37 The Assessment has been based on a qualitative approach and no quantitative measurements have been taken. The sources and impacts of deposited dust have been described and potential receptors identified. Risk levels were determined for sensitive receptors on the basis of distance and wind direction.
- 9.5.38 Given the mitigation measures proposed, it is considered that the risk of impacts on nearby dwellings are assessed as insignificant or acceptable. Similarly, the risk of impacts on adjacent woodland and agricultural operations are assessed as insignificant or acceptable.

- 9.5.39 Once quarrying has ceased and restoration completed, all sources of potential dust nuisance will have been removed and so there will be no residual impacts.

9.6 **Transport Assessment**

- 9.6.1 A Transport Assessment has been prepared by Paragon Highways of Wakefield, which has assessed the capacity of the local highway network and made recommendations for the appropriate mitigation measures. The Assessment is attached as Appendix 5.
- 9.6.2 The site is accessed from an existing track that connects the Quarry with Cartworth Moor Road to the east. The single width track contains a compacted stone surface and generally ranges between 3m and 3.5m in width. There are two junction areas prior to reaching the far west side quarry entrance that can be used as informal passing places. The track is around 600m in length and travels in a western direction from Cartworth Moor Road.
- 9.6.3 The track forms part of the public right of way network (No 94) and is a bridleway that runs between Cartworth Moor Road and White Gate Road. It is signed from Cartworth Moor Road and White Gate Road and along the HGV access route. It contains grass verges on both sides providing step off areas for pedestrians and cyclists should a HGV be travelling along the track.
- 9.6.4 The track joins Cartworth Moor Road via an unmarked priority junction. Visibility at the junction is good given the alignment of Cartworth Moor Road and is considered to be proportionate to the general traffic speeds experienced along the road.
- 9.6.5 Cartworth Moor Road is a local access road providing access to a small number of commercial and farmstead properties in addition to the application site and Hillhouse Edge Quarry. It is subsequently subject to light traffic volumes throughout the day. The Road is a two way single carriageway road with grass verges provided on both sides. The first 350m length of this road south from the site access track contains a bituminous and sealed surface that is in fair condition.
- 9.6.6 The carriageway width is generally between 4.4m and 5.0m and provides good intervisibility for approaching vehicles to position at wider areas to allow for two way flow. Further to the south the road changes to a compacted stone surface that ranges between 3.4m and 6.6m in width. There is currently very little opportunity for opposing vehicles to simultaneously pass until the road meets White Gate Road/Linshaws Road junction around 1km further south.

- 9.6.7 From the point where Cartworth Moor Road deviates from a bitumen surface to compacted stone surface, there are only a total of two passing places where HGVs can pass one another along the full 1km length. One of the passing places currently has a width of around 6.0 and the other 6.6m. There is some partial widening approximately half way down the track which has a width of approximately 5.1m, which allows for a car to pass an HGV but not for two HGVs to pass.
- 9.6.8 There are significant stretches between the passing places along Cartworth Moor Road, and proposals for additional passing places have been put forward as part of the application as shown on drawing 1769-101A. Whilst the road contains an unmade surface for the majority of its length it does form part of the highway network and is maintained in character.
- 9.6.9 Cartworth Moor Road joins White Gate Road via an unmarked priority junction. White Gate Road joins with Linshaws Road and Bare Bones Road as a continuous route between Cartworth Moor Road and Dunford Road some 2.58km in length. These roads do not contain any frontage development and are subject to light traffic volumes throughout the day.
- 9.6.10 The carriageways of White Gate Road, Linshaws Road and Bare Bones Road are generally between 5 and 5.5m allowing an HGV to pass a car or for opposing HGVs to simultaneously pass for the majority of its length. It is acknowledged that there are narrow sections of around 4.1m in some isolated areas, however these are generally preceded by wide sections of carriageway that can be up to 6m wide, with good intervisibility between opposing motorists. The carriageway is in fair condition and considered to be suitable for its day to day use. The road contains grass verges on both sides and does not contain any street lighting. Subsequently, the road is subject to the national speed limit (60mph) although actual traffic speeds are much lower given the layout of the road.
- 9.6.11 Bare Bones Road meets Dunford Road via a priority junction complete with give way markings and signing. Dunford Road is a much higher status road and contains a wider two way single carriageway of around 7.3m in width and contains grass verges on both sides. The road is subject to the national speed limit, and in the vicinity of the Bare Bones Road junction does not contain street lighting. Dunford Road provides a connection between Hade Edge and Holmfirth to the north and Dunford Bridge and the A628 to the south, the latter of which is a primary route that connects the towns of Barnsley and Pontefract to the east with Greater Manchester to the west and is one of the key routes across the Pennines.

- 9.6.12 Dunford Road is generally subject to light traffic volumes with a noticeable increase during the network peak periods. Dunford Road also provides a connection to Flight Hill opposite the Bare Bones Road junction. This route connects with Low Common Road and provides a direct route to the B6106 Penistone Road, which also provides a good connection to the A616 and the A628 to the southeast.
- 9.6.13 The reported injury accident record along the access roads used by quarry traffic is good. There is no indication of a road safety problem that would warrant treatment as a result of the slight change in HGV traffic volumes using the route between the site and Dunford Road.

Proposed Mitigation

- 9.6.14 Cartworth Moor Road runs for a stretch of approximately 1km between the White Gate Road junction and the Quarry access. Along this stretch there are only 2 areas with the suitable width to allow two HGVs to pass one another.
- 9.6.15 It is therefore proposed to add an additional two passing places with a width of 5.5m, which meets the width stated in the Kirklees Highway Design Guide for two HGVs to pass. To match the existing materials on Cartworth Moor Road, the proposed passing places will be made up of crushed stone construction, and will be entirely within the highway boundary. The location of the proposed passing places is shown on drawing 1769-101A.
- 9.6.16 Cartworth Moor Road is a straight road that provides good intervisibility. The proposed passing places have been positioned to provide an appropriate distance between two areas where HGV's can pass. This should not only improve highway safety for HGV's but will also make Cartworth Moor Road much safer for the private vehicles associated with the small number of commercial and farmstead properties along the route.
- 9.6.17 Cartworth Moor Road has been subject to HGV use for a number of years now and in places the crushed stone and soil has begun to wear away causing large pot holes and an uneven surface to form along the track. Isolated surface restoration work is therefore proposed along the road. This will be in the form of crushed stone to match the passing places with any protruding rocks removed and the void filled with appropriate matching material.

Existing and Proposed Traffic Movements

- 9.6.18 The current planning permission restricts the hours of operation to between 08:00 and 17:30 hours Monday to Friday, and between 0800 and 1230 hours on

Saturdays. Condition 6 of the approval also restricts the number of HGVs to no more than 16 per day (8 in and 8 out).

- 9.6.19 The existing site therefore generates a maximum of 2 HGV trips per hour. The quarry vehicles differ depending on what is being transported. The transport of block stone is in 25 tonne loads on flatbed wagons with the walling, paving, and garden stone transported in 15 tonne loads often in trailers, vans and pickups. The aggregate and imported material are generally exported/imported in 20 tonne loads, using rigid tipper wagons.
- 9.6.20 There is no evidence that the HGV traffic associated either with the quarry or the adjacent quarry, has caused a problem on the local highway network given the good road safety record over the 5 year study period. Notwithstanding the status of some of the roads, they appear suitable to enable the continued quarry operations at the site and the neighbouring quarry.
- 9.6.21 During the first 12 years, the quarry would export 10 loads of stone per day, with 5 loads of waste material imported per day, and 4 loads of recycled materials exported (as return loads). This would provide a maximum of 30 HGV movements per day.
- 9.6.22 During the following 10 year period once stone extraction is completed, there would be 15 loads per day of imported waste material and up to 15 loads out of recycled material (return loads). This would provide a maximum of 30 HGV movements per day for the infill operations once stone extraction is completed.
- 9.6.23 Having regard to the layout of the site access and local highway network along the HGV route it is considered that a dedicated route from the quarry site directly onto Cartworth Moor Road can only improve highway safety. It would remove the potential impact between HGVs and horse riders using the existing bridleway (HOL/94/10).
- 9.6.24 The proposed increase in HGVs trips would equate to an extra 1 or 2 HGV movements (generally a 20-tonne rigid vehicles) per hour using the local roads and gaining access to the site (via the new access). This would generate a total of 3 to 4 HGV trips per hour associated with Windy Ridge Quarry.
- 9.6.25 The proposals will therefore increase the total HGV quarry traffic from 2 trips per hour to between 3 or 4 trips per hour. This increase of 1 to 2 HGVs per hour would be generally unrecognisable from the level of HGV traffic already experienced along the route linking the quarry with Dunford Road.

- 9.6.26 Given the layout of the local highway network together with the proposed addition of passing places, the proposed increase in the number of daily HGV trips should not be a significant cause of concern for the LPA.
- 9.6.27 The Assessment concluded that the road safety record along the route and within the locale does not indicate a road safety problem. The proposed slight increase in daily HGV movements associated with the quarry would not be material or significant. The increase has been balanced with the appropriateness of the adjacent highway network and proposed improvements to Cartworth Moor Road, and the construction of a dedicated site access.

9.7 **Hydrogeological Risk Assessment**

- 9.7.1 Given the sensitivity of the groundwater environment on Cartworth Moor, a Hydrogeological Risk Assessment (HRA) was commissioned and is attached as Appendix 6. The Assessment was prepared by SMF Associates of Boston Spa.
- 9.7.2 Windy Ridge Quarry is a stone quarry established in the Huddersfield White Rock, part of which has been used for disposal of inert waste. Planning permission to allow mineral extraction to a minimum elevation of 323mAOD was granted in 2012. However, detailed hydrogeological assessment at the site has previously demonstrated that this elevation is well above the elevation of groundwater in the Huddersfield White Rock.
- 9.7.3 There have been several previous hydrogeological studies at the site. Hydrogeological assessments related to mineral extraction and inert waste disposal were prepared by S M Foster Associates Limited (SMFA) in 2004, 2008 and 2012. Previous studies, which included a detailed review of local hydrogeological conditions at the site, have been expanded and updated as part of the current HRA.
- 9.7.4 Hydrogeological risk assessment at the site has been informed by the results of a programme of groundwater quality monitoring at up-gradient and down-gradient groundwater monitoring points, undertaken as a requirement of the past Environmental Permit for inert waste disposal. The HRA was therefore based on detailed knowledge of past quarrying and landfilling operations and several years' experience of groundwater monitoring at the Quarry. The assessment incorporated a review of previous conceptual hydrogeological models and new analysis of the potential impact of proposed quarry deepening on local groundwater resources. The report concluded with recommendations related to future groundwater monitoring and management.

- 9.7.5 Cartworth Moor is situated between the valleys of the River Ribble in the east and the River Holme in the west. The catchment boundary runs south west to north east close to the eastern edge of Windy Ridge Quarry. The steeper western scarp slope of Cartworth Moor drains westwards to the River Holme with the shallower dip slope draining north eastwards to the River Ribble. The Quarry is located close to the catchment boundary but just within the River Holme catchment area. The majority of land to the immediate south and south west of the quarry drains away from the quarry towards Dobb Dyke, a tributary of the River Holme.
- 9.7.6 With the exception of minor field drains and gullies, there are no significant drainage features on Cartworth Moor itself. This is consistent with the fact that the moor is underlain by free draining sandstone formations of the Millstone Grit series, a sequence of interbedded sandstones and shales that allow rapid infiltration of surface water.
- 9.7.7 Windy Ridge Quarry is situated on the Huddersfield White Rock near to its western boundary with the underlying shales. Quarry excavations at the adjacent Hillhouse Edge Quarry allow confirmation that the Huddersfield White Rock is 'blocky' with extensive sub-parallel fracturing. The upper few metres of this sandstone become locally 'flaggy' grading to a thin friable material near surface.
- 9.7.8 The derived groundwater contours indicate that groundwater level in the Huddersfield White Rock beneath the site ranges from approximately 307mAOD at the northern boundary to 317mAOD at the southern site boundary. A policy of maintaining a minimum 3m thickness of unsaturated zone has been successfully implemented at other quarries in the area. On this basis the minimum excavation elevation would be approximately 310.0mAOD at the northern boundary, increasing to 320.0mAOD at the southern boundary. It should be noted that in designing the maximum excavation extent, the depth limit has been set at 313m at the northern boundary, 3m above the level recommended by the HRA.
- 9.7.9 In common with the current quarry excavations, the extension area is expected to be freedraining with no requirement for off-site discharge of surface water. Any particulate matter in infiltrating rainwater would be subject to filtration in the unsaturated zone as at present. On completion, the proposed excavation area would be restored to original ground levels by deposition of quarry overburden and inert fill as necessary. To avoid any increase in the rate of surface water runoff post-restoration the restoration scheme would include provision to maintain the current capacity for soil infiltration.

- 9.7.10 Windy Ridge Quarry is located to the immediate south of Hillhouse Edge Quarry which is also established in the Huddersfield White Rock on Cartworth Moor. It is noted that the permitted minimum depth of excavation at Hillhouse Edge Quarry is 293mAOD which is approximately 3m above the local groundwater elevation in the Huddersfield White Rock. On the basis of available information, there is no evidence to indicate any adverse impact on water resources as a result of mineral extraction at Hillhouse Edge Quarry.
- 9.7.11 The development of deeper quarry workings adjacent to the former landfill area may create the potential to induce drainage from the landfill area into the quarry excavations. However, the presence of a vertical drainage profile beneath the landfill is likely to limit the potential for lateral seepage into the quarry void. Restoration of the site by infilling with inert construction, demolition and excavation materials is not expected to introduce any additional risk to groundwater quality.
- 9.7.12 The overall conclusions from the Assessment were that:
- The proposed development is unlikely to have any adverse impact on local groundwater recharge, groundwater flows or groundwater levels at the site or in the surrounding area;
 - The proposed development would not represent a risk to local groundwater quality; and
 - There is no evidence to indicate that the development would have any adverse impact on local springs and wells.
- 9.7.13 Furthermore, as hydrogeological risk associated with the proposed development has been demonstrated to be low there is no basis suggest any requirement for additional groundwater monitoring or management measures. No such measures are therefore proposed.

10 CONCLUSION

- 10.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that all planning applications should be determined in accordance with the Development Plan unless material considerations indicate otherwise. The Government's National Planning Policy Framework also sets a presumption in favour of sustainable development at the heart of the planning system whilst maintaining the need to accord with the Development Plan.
- 10.2 The proposal to deepen and extend the Quarry together with the associated activities has been shown to achieve an acceptable level of impacts on the environment. It

complies with the requirements for sustainable development by meeting a local demand for masonry stone and waste recycling. Waste would also be used to restore the Quarry to original ground levels as a waste recovery operation. Employment levels are maintained as is the contribution of the operation to local economic activity.

- 10.3 The Development Plan contains a number of policies against which a subjective professional judgement on compliance has to be made. This appraisal has demonstrated that the proposed development is fully in compliance with key Development Plan policies, is classed as a sustainable development and that the benefits outweigh any harm caused.

APPENDIX 1

Decision Notice for Planning Permission reference 2020/70/92410/W

MWP Planning

APPENDIX 2

Materials Management Plan

Materials Management Plan

Covering the excavation, treatment and redeposit of materials within the former landfill

1 Excavation

- 1.1 Excavation will proceed carefully working east to west, minimising the risk of tipped materials falling into the quarry excavation and maintaining stable slopes. Any materials which would not qualify as inert, will be recovered, segregated and placed within dedicated skips close to the western side of the Quarry, prior to treatment. These materials may include wood, plastic and metals
- 1.2 Periodically, the skips holding non-inert materials will be removed off-site to authorised recycling or disposal facilities. The skips will be loaded and handled carefully to avoid spillage. Where necessary, the skips will be covered to minimise the ingress of water.
- 1.3 In the event that any materials representing a risk to employees or the environment are identified by sight or smell prior to excavation, samples will be taken for analysis to enable identification, and the Environment Agency notified within 24 hours. The sampling standards are set out in Appendix 1 following.

2 Treatment

- 2.1 The excavated materials will be placed to a stockpile from where they will be loaded into a hopper prior to crushing and screening into separate graded products. Products which meet the WRAP Aggregate Protocol will be stored in segregated stockpiles prior to removal off-site for sale. The remaining materials will be stockpiled prior to re-deposit within the quarry.

3 Redeposit

- 3.1 Prior to redeposit within the site, representative samples of the material will be taken and will be analysed for the standards set out in Appendix 1. Any reject materials will be removed off-site for appropriate disposal. All remaining material will be placed in worked out areas of the quarry to form part of the restoration process.

APPENDIX 3A

Preliminary Environmental Assessment

APPENDIX 3B

Habitats Regulation Assessment

APPENDIX 4

Sound Impact Assessment

APPENDIX 5

Transport Assessment

APPENDIX 6

Hydrogeological Risk Assessment