Went Valley Aggregates & Recycling Limited

Import of Materials at Land at Went Edge Quarry

Environmental Setting and Site Design Report

Job No 203040

October 2024

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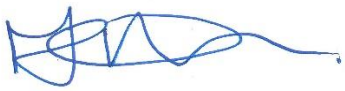

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1.0 SITE DETAILS AND ENVIRONMENTAL CONTEXT

Site land use and other application details

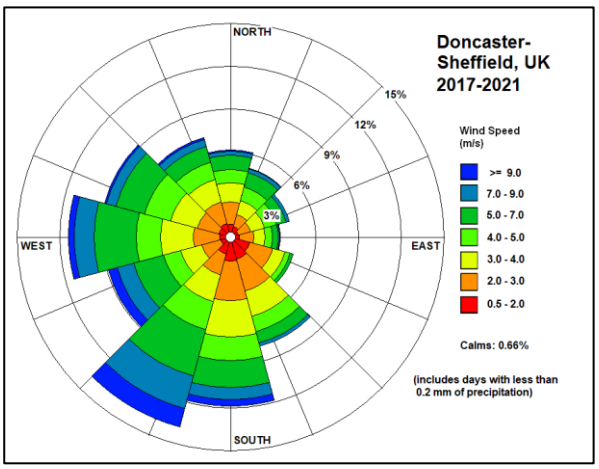
1.1 Went Edge Quarry is located circa 25 km south east of Leeds and 15 km north west of Doncaster in Wentedge, WF8 3LU. The National Grid Reference is SE 49978 17081. The site location is shown in drawing 203040/D/001. The site is primarily an active quarry however also has various industrial estate land use in the north west of the site.

1.2 Directly to the north of the site is the Brockadale SSSI. The west and east of the site are bordered by agricultural land. The south of the site is bordered by Wentedge Road. There are several commercial/industrial units located within the north west corner within an industrial estate. The nearest residential properties are approximately 265 m north west of the site. There is a public right of way (PRoW) which is located at the north west corner of the site. There is also a PRoW through the Brockadale SSSI to the north of the site. These are considered the most sensitive receptors, due to their nature and distance from the site

1.3 The site is located approximately 75 m south of the River Went. The site is not located within the floodplain. The topography of the site at top of void is 55 m AOD to the south and 50 m AOD at the northern extent. The quarried void extends to circa 25 m AOD with a void depth of circa 30 m from top to base.

1.4 Detailed information about the site's sensitive receptors, hydrological setting, ecological setting and cultural heritage are shown in drawings 203040/D/002, 203040/D/003A, 203040/D/003B and 203040/D/003C.

Air Quality / Climate



1.5 Meteorological wind data, for five years, has been acquired. The wind data has been taken from the Met Office station in Doncaster, which is located circa < 23 km south east of the site. The prevailing wind direction is from the south quadrant.

1.6 The proposed site is not located within an existing Air Quality Management Area although sections the A1 to the west is a designated AQMA for the potential exceedance of the annual mean nitrogen dioxide (NO_2) air quality objective.

1.7 Further baseline information can be found in Appendix E regarding the baseline air quality. The conclusion of the assessment was that a Dust Emissions Management Plan (DEMP) will be implemented. A DEMP is within the permit application.

Geology and Hydrogeology

1.8 There are no superficial deposits on site. The underlying bedrock geology is Cadeby Formation – Dolostone across the site. The bedrock mineral has been extracted on site.

1.9 The bedrock geology is designated as a Principal Aquifer.

1.10 There are no historic British Geological Survey (BGS) boreholes within the site.

1.11 The site is not located within a Groundwater Source Protection Zone, and there are none within 1 km of the site. There is limited potential for groundwater flooding to occur at the site.

1.12 The site is located within a Nitrate Vulnerable Zone.

1.13 There are no active surface water abstractions within the site boundary or within 1 km of the site. There are no groundwater abstractions registered within 1 km of the site.

1.14 There are two registered discharge consents at the site or within 1 km of the site.

Hydrology

1.15 Currently, surface water runoff passively drains to the underlying strata, ultimately draining northwards towards the River Went.

1.16 The site is located approximately 75 m south of the River Went. The site sits within Flood Zone 1. There are flood defences in the nearby village of Wentbridge to the west of the site. The flood zones are shown in drawing 203040/D/003A.

1.17 The nearest pollution incident was a Category 3 Minor Incident recorded on the 6th April 1994, within the site boundary. This involved vegetation/cuttings being discharged into the river from a residential property.

Historic Land Use and Man-made Subsurface Pathways

1.18 The historic mapping shows that the site has been an active quarry since the mid-1900s. There has been a depot area on the site since the 1980s. Expansion of the quarry into the northern area of the site began in 2013. In 2018, operations were expanded into the western area of the site. the site has planning permission to extract further to the east of the site.

1.19 There is a historic landfill registered at the site. The landfill is registered to 'Senior Reinforcements Limited', having operated between 1980 to 1992. The landfill was known as 'Smeaton Lineworks' and accepted inert and industrial waste. This is underneath the

Noise

1.20 The surrounding area noise profile is in keeping with the proposed waste activity. The area is an industrial estate with other waste and industrial processes on site. Furthermore, the proposed source is temporary and is part of continued restoration of the site. The proposed works are also likely within the void of the existing quarry (up to 30 m deep) providing natural noise attenuation. The ambient noise levels are expected to be high during the day due to the presence of the A1 public highway and the existing quarry operations. Furthermore, the duration of the infilling works are temporary construction works and will not cause continuous fixed noise for more than 5 years.

1.21 SD Garritt undertook a noise impact assessment as part of the Planning application in 2017. There is some background baseline information regarding noise levels at receptors and source noise. The assessment is included for information only and not for review. The assessment is in line with the NPPF and is not a BS4142 assessment.

Environmental Setting & Cultural and Natural Heritage

1.22 The Brockadale SSSI is located immediately north of the site and is comprised of broadleaf, mixed and yew woodland, calcareous grassland and inland rock. Wentbridge Ings SSSI is located circa 2.1 km north west of the site. The river to the north of the site is a migratory route for the European eel.

1.23 There are no LNRs within 2 km of the site.

1.24 There are no European Protected Species within the site and wider area.

1.25 The nearest Priority Habitat is in the Brockadale SSSI (deciduous woodland and lowland calcareous grassland), immediately north of the site. There are also areas of Good Quality Semi Improved Grassland to the north and north east of the site across the River Went. The wider ecological setting is shown in drawing 203040/D/003b.

1.26 There are some Grade II listed buildings located in the wider area. These are situated 340 m, 660 m 850 m and 1015 m north west of the site. There are no further statutory or non-statutory historic buildings within 1 km of the site.

1.27 There are no scheduled Monuments within 1 km of the site.

1.28 The nearest school is the Barton Moss Community Primary School, circa 1.7 km east of the site, and there are no hospitals within 1 km of the site. A detailed plan of sensitive receptors is shown in drawing 203040/D/002.

Previous Reports

1.29 There have not been any previous investigations on site.

2.0 SOURCE PATHWAY LINKAGES AND CONCEPTUAL MODEL

2.1 Human Health / Loss of Amenity – Noise and Vibration. The works involve the importation and placement of suitable material. Plant involved in the operation will include tipper lorries, bull dozers, and excavators. The plant will be screened well within the quarry void providing natural noise attenuation. The nearest sensitive receptors to noise and vibration are the residential properties 265 m north and 580 m west of the site; and users of the footpaths which are situated to the north and north west of the site. There are other industrial processes within the quarry which will increase the baseline noise profile. Subject to the working controls, which are set out in the Operational Plan (203040/OP), the site is expected to have a low residual risk of noise. Only standard construction plant or machinery will be operated. No activities will take place outside of normal working hours. The activities are a temporary construction development and are not permanent.

2.2 Human Health / Natural Heritage / Loss of Amenity – Dust and Mud. The works involve the importation and placement of suitable material, which will involve tipper lorries, dozers and excavators. There is no processing at the site. The nearest sensitive receptors are the workers and visitors at neighbouring industrial and commercial estates, and at the Brockadale SSSI, the residential properties 265 m north, 580 m west of the site, and users of the footpaths to the north and west. Road users on A1 might also be affected by dust emissions. During the works there will be an internal haul route and wheel wash at the site. Without suitable working controls the operation may potentially cause fugitive emissions and mud on the road and a loss of amenity and potential nuisance. The dust emissions management plan (203040/DEMP) sets out the working controls for the site activities.

2.3 Cultural Heritage and Natural Heritage – Direct and Indirect Impact: Given the distance and type of operations, there is a very low risk of direct or indirect impact on the Listed Structures or any Schedule Ancient Monuments. The Brockadale SSSI is located directly north of the site. However, given the sites current use as a quarry, it is unlikely that the works will have a significant impact on the SSSI.

2.4 Controlled Waters – Pollution: The import of potentially contaminated materials or spillages of oils and hydrocarbons creates a risk of potential pollutants entering the surface water. There are no specific pollution control measures required. The implementation of the Importation Protocol (203040/IP) will ensure only acceptable fill material is imported. Due to the proposed permitted waste streams to be imported and importation controls to be applied, it is assessed that the fill material will pose a low risk to the controlled water environment. The importation criteria use the appropriate human health criteria and leachable criteria (in accordance with the site-specific Hydrogeological Risk Assessment).

2.5 Ground gas – Given the development will be constructed with materials with a low organic content, the risk posed by the generation of ground gases is not considered significant and monitoring is not proposed. Although the proposed infilling will be below the wider ground level, this will only be on one-side and the fill will have an open façade with preferential pathway to the open quarry use. The end land use is agricultural and/or open-air side slope. The final land use is not at risk of the impacts of ground gas. No quantitative gas risk assessment or monitoring is deemed necessary.

2.6 Stability - The final land use is not at risk of the impacts of stability. Given the accepted waste types are limited to mineral / aggregate only, the risk of instability is not considered significant. The works will be in accordance with the principles of the approved design. The designed slope is shallower than 1:2.5 gradient which was assessed by Key GS in July 2015 as part of the supporting assessment to the restoration as part of the Planning Permission. The report is shown in Appendix C. The Operator will use well known earthworks compaction techniques to ensure material is suitably compacted during construction.

2.7 The H1 Risk Assessment is attached in Appendix A. A Site Condition Report detailing the current baseline conditions is submitted with the application.

DRAWINGS

APPENDIX A
H1 Risk Assessment

APPENDIX B
Envirocheck Maps

APPENDIX C
Stability Risk Assessment (Key GS, July 2015)

APPENDIX D

Noise Impact Assessment (SD Garritt, 2017)
FOR INFORMATION ONLY, NOT FOR AQMAU ASSESSMENT

APPENDIX E
Air Quality Assessment (Dust Scan, 2018)