



**ENVIRONMENTAL PERMIT VARIATION APPLICATION
ENVIRONMENTAL AND ACCIDENT RISK ASSESSMENT**

**SKELBROOKE QUARRY EXTENSION
STRAIGHT LANE
SKELBROOKE
DONCASTER
SOUTH YORKSHIRE
DN6 8LY**

**Document Reference: WR7640/08.R1
August 2022**



**Project Quality Assurance
Information Sheet**

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ACCIDENT RISK ASSESSMENT
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DN6 8LY**

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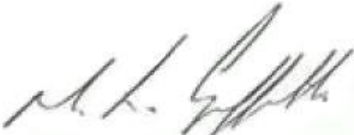
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1.0 INTRODUCTION

1.1 Scope

1.1.1 This document presents an assessment of the risks to the environment and amenity posed by the operation of a waste recovery operation within the Skelbrooke Quarry Extension Area at Skelbrooke Quarry, Doncaster.

1.1.2 This risk assessment has been undertaken in accordance with the Environment Agency (EA) Guidance on 'Risk Assessments for your Environmental Permit'; (updated 25th March 2021).

1.2 Site Setting

Site Description

1.2.1 Skelbrooke Quarry Extension Area is located approximately 280m south of Skelbrooke village centre and ~1.30km to the north-west of the village of Skellow, South Yorkshire. The A1 Great North Road runs approximately 720m to the east of the site. Skelbrooke Quarry Extension Area is located approximately 10km north-west of Doncaster city centre. The site is centred at National Grid Reference (NGR): SE 50964 11690 and has the postcode DN6 8LY. The Quarry Extension Area extends over an area of approximately 4.5 Ha.

1.2.2 Access to and egress from the extension site is available via Straight Lane which connects to Hazel Lane to the south-west and Doncaster Lane to the north-east. There are no public rights of way within the site.

1.2.3 The site is bounded by a Doncaster Lane to the east and Straight Lane to the north; beyond both lies agricultural land. The agricultural land to the east, beyond Doncaster Lane, overlies the restored Doncaster Metropolitan Borough "dilute and attenuate" Landfill. The extension area is bounded to the south and west by the Skelbrooke restored Landfill Site. A tributary of the River Skell lies approximately 320m to the east of the extension area, with the main river body running ~360m to the north. The site location is depicted in **Drawing No. WR7640/10/ESSD1**.

1.2.4 The dominant land use in the areas surrounding the site is agricultural, with residential areas in the form of scattered villages and small towns; such as South Elmsall ~3km to the west of the site. Approximately 770m to the east of the extension area lies an industrial area consisting of rock drilling; operated by R&B Rockdrillers Limited. Furthermore, a commercial area lies ~2km to the west of the site which comprises large warehouses for Next, Asda, Superdrug, Booker, Gather & Gather, Harris CM, Finlay Beverages and Moseley. An area of similar land use is also situated ~2.7km south-east of the site and contains warehouses for Asda, B&Q and DFS. Carcroft enterprise park also lies 3.5km to the south-east of the Skelbrooke Quarry Extension Area.

1.2.5 The Upton Country Park Local Nature Reserve is located approximately 2.5km to the north-west of the site.

1.2.6 There are no Sites of Special Scientific Interest (SSSI) located within 2km of the extension area at Skelbrooke Quarry. The SSSI's in the closest proximity are situated at a distance between 2 – 6km from the site. These include the South Elmsall Quarry SSSI located ~2.4km west of the site, the Owston Hay Meadows SSSI ~4.1km to the east, the Shirley Pool SSSI located ~5.4km to the east and the Brockadale SSSI which lies approximately 5.1km to the north of the extension area.

1.2.7 There are no Ramsar sites, National Nature Reserves (NNR), Special Areas of Conservation (SAC) or Special Protection Areas (SPA) located within 5km of the site. Furthermore, the site does not lie within a Groundwater Source Protection Zone (SPZ).

1.2.8 **Table EARA1** summarises the potential sensitive receptors that have been identified through a desk top study of the locality and the corresponding minimum distance from the permit boundary of the Skelbrooke Quarry Extension Area. It should be noted that the site operations will be restricted to the central area of the site and the distances between waste operation and receptors to the north and south of the site will be increased. The locations of the receptors are shown in **Drawing No. WR7640/10/ESSD9**.

Table EARA1: Potential Sensitive Receptors identified within 1km of the site

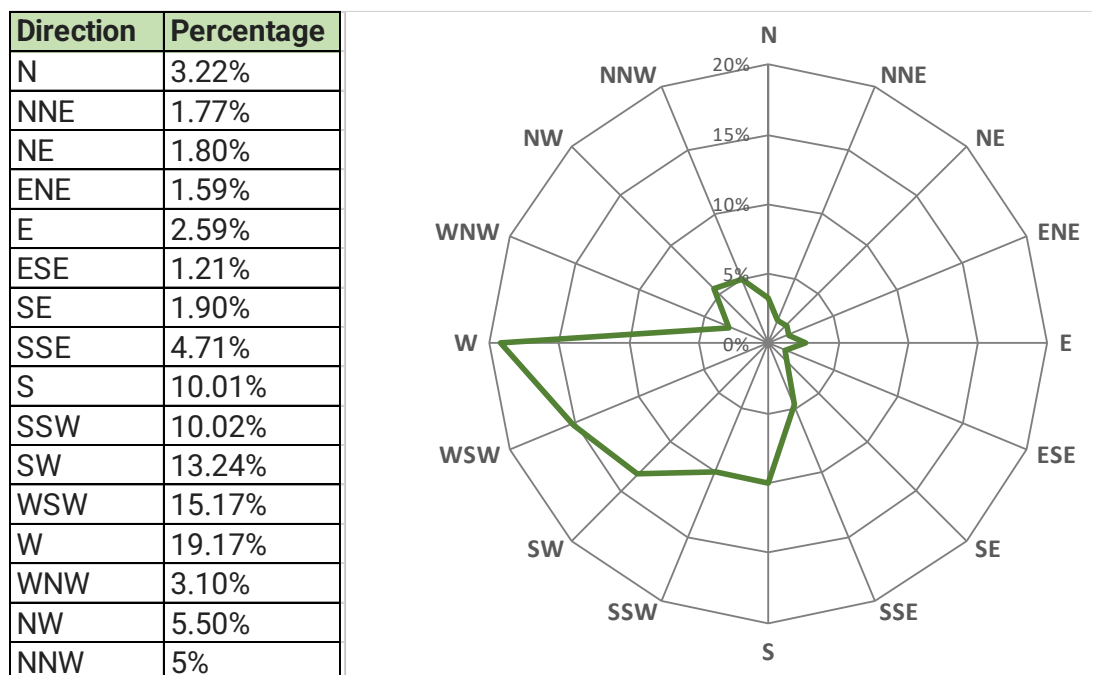
ID	Receptor Name	Type of Receptor	Approximate nearest distance from the permit boundary	Direction from proposed Quarry footprint
R1	Principle Aquifer	Groundwater	Underlying	N/A
R2	Doncaster Lane	Public Highway	Adjacent	North
R3	Straight Lane	Public Highway	Adjacent	West
R4	Public Footpaths / Bridle Ways	Public Right of Way	Adjacent – 500m	East / North-East / West / South
R5	Skelbrooke Village	Residential Properties	15 – 500m	North / North-East
R6	Agricultural Land	Agricultural	10-500m	North / East / South / West
R7	Bannister Lane	Public Highway	50m	North
R8	Spring	Spring	290m	East
R9	Stream (Tributary of The Skell)	Waterway	320m	North-East
R10	Skelbrooke Park	Local Wildlife Site (Woodland - Deciduous)	320m	North-East
R11	The Skell River	River	360m	North
R12	Harry Wood	Local Wildlife Site (Woodland - Deciduous)	440m	South
R13	Skelbrooke Reign	Local Wildlife Site (Woodland - Deciduous)	560m	South
R14	Sleep Hill Lane	Public Highway	680m	North
R15	Hampole and Skelbrooke Cricket Ground	Recreational Area	690m	North-East
R16	Duckhole Wood	Local Wildlife Site (Woodland - Deciduous)	710m	South-East
R17	A1 Great North Road	Public Highway	720m	East
R18	Hill Farm	House	730m	North
R19	Manor Farm	House	770m	East
R20	Scorcher Hills Woods	Local Wildlife Site (Woodland - Deciduous)	800m	North-East
R21	Hawthorn Cottages	House	820m	North
R22	Robin Hood's Well	Historical Landmark	830m	East

ID	Receptor Name	Type of Receptor	Approximate nearest distance from the permit boundary	Direction from proposed Quarry footprint
R23	Hazel Lane Quarry	Local Geological Site	850m	South-West
R24	Whitegates	House	900m	North-East
R25	Priority Farm	House	900m	South-East
R26	Hazel Close Plantations	Commercial / Office	950m	South-West
R27	Railway Cottage	House	980m	South
R28	Skell Woods	Local Wildlife Site (Woodland - Deciduous)	985m	East
R29	Hollins Farm	House	995m	North-West

Meteorological Conditions

- 1.2.9 The local wind speed and direction data has been obtained from the meteorological station located at Leeds East Airport, Church Fenton (Station EGXG). This monitoring station is situated approximately 26km north of Skelbrooke Quarry Extension Area. The wind direction data recorded at this observing station are appropriate for characterising the wind climate at the Quarry Extension Area. Wind direction data and a wind rose for the period 2000-2010 (inclusive) are presented in **Figure EARA1**.

Figure EARA1: Wind Direction Data and Wind Rose for Church Fenton Meteorological Recording Station 2000-2010 (Source: RenSMART):



- 1.2.10 The predominant wind direction is from the western quadrant with the prevailing winds from the west-southwest, with significant contributions from also the south. Wind from the north-eastern quarter occurs less frequently, with winds from the north-east and south-east occurring very infrequently.
- 1.2.11 Rain gauge data for the period 1981 – 2010 has been supplied by the Met Office's Church Fenton climate station (located 26km north of the site, as previously mentioned). The long-term annual average rainfall for the area is 603.2mm.

1.3 Risk Assessment

Risk Assessment Criteria

- 1.3.1 The risk assessments will be prepared using the widely accepted source-pathway-receptor methodology, and is the preferred method specified in the EA guidance. Where any complete source-pathway-receptor linkage exists the magnitude of any such risk is qualified by the probability and consequence of any such risk occurring. The criteria to be adopted for the risk assessment are present in **Table EARA2**.

Table EARA2: Risk Assessment Criteria

Probability ⇨ Consequence ⇩	Very Low	Low	Moderate	High
Very Low	Negligible	Very Low	Low	Low-Moderate
Low	Very Low	Low	Low-Moderate	Moderate
Moderate	Low	Low-Moderate	Moderate	High
High	Low-Moderate	Moderate	High	Very high

- 1.3.2 An environmental and accident risk assessment for the waste recovery operations is presented in **Appendix EARA1**. The assessment covers the following potential risks;

- Fugitive emissions to air;
- Mud and Debris on the road
- Bird, Vermin and Insects
- Noise & Vibration;
- Odour;
- Fugitive emissions to water.