

PROPOSED NORTH EASTERN
EXTENSION, BROMLEY FARM
QUARRY, UPPER CUMBERWORTH,
WEST YORKSHIRE

HYDROGEOLOGICAL IMPACT
ASSESSMENT

Prepared for

Silkstone Environmental Limited

December 2022
Ref:033/56/bfqext/1222



S M Foster Associates Limited
Hydrological and Hydrogeological Consultants

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1. Introduction

- 1.1 This report has been prepared in response to instruction dated 11th April 2022 from Silkstone Environmental Limited. The report presents a Hydrogeological Impact Assessment (HIA) related to a proposed north eastern extension to Bromley Farm Quarry, Upper Cumberworth, West Yorkshire. An HIA is required to support a planning application for the proposed development.
- 1.2 The proposed extension would result in the excavation of Lower Coal Measures mudstone for use in the manufacture of clayware products. Incidental coal extraction would also take place. Existing workings at Bromley Farm Quarry have now been fully restored by placement of overburden and inert waste materials under the conditions of a recovery permit aimed at achieving stable excavation faces and ensuring development of a surface profile suitable for gravity drainage of surface water.
- 1.3 Hydrogeological impact assessment has been based on a detailed review of local hydrological, geological and hydrogeological conditions at the proposed extension Site and surrounding area. The assessment has been supported by reference to recent and past ground investigation results, including the installation of six groundwater monitoring boreholes.
- 1.4 The application Site extends to a total area of approximately 8ha, within which the proposed extraction area would extend to a surface area of approximately 5ha, with a base of excavation at approximately 203mAOD. On completion, the Site would be restored by placement of overburden and inert waste materials to form a stable landform designed to promote effective surface water drainage.

2. Baseline assessment

Site location and hydrological context

- 2.1 Bromley Farm Quarry is located 500m east of the village of Upper Cumberworth in West Yorkshire. Site location is shown on Figure 1. The former quarry workings have now been fully restored by placement of overburden and inert waste materials as part of a recovery activity. The proposed extension would extend to an area of approximately 5ha, with access from the existing site internal access road. Land to the south and south east of the Site has been subject to mineral extraction and waste deposition in the past. As shown in Figure 2, surrounding land to the north and east is predominantly rural with the village of Upper Cumberworth to the west. The Site is bounded to the north by Cumberworth Lane. Cumberworth railway tunnel is located approximately 250m to the east.

Figure 1: Site location © Ordnance Survey

- 2.2 Bromley Farm Quarry is established on elevated ground between the Dearne Valley to the south and Shepley Dike to the north. Ground levels at the site achieve a maximum elevation of 232mAOD at the northern boundary with Cumberworth Lane, reducing to a minimum of 225mAOD at the southern Site boundary. The existing quarry access from a track connecting from Barnsley Road is established at approximately 220mAOD.

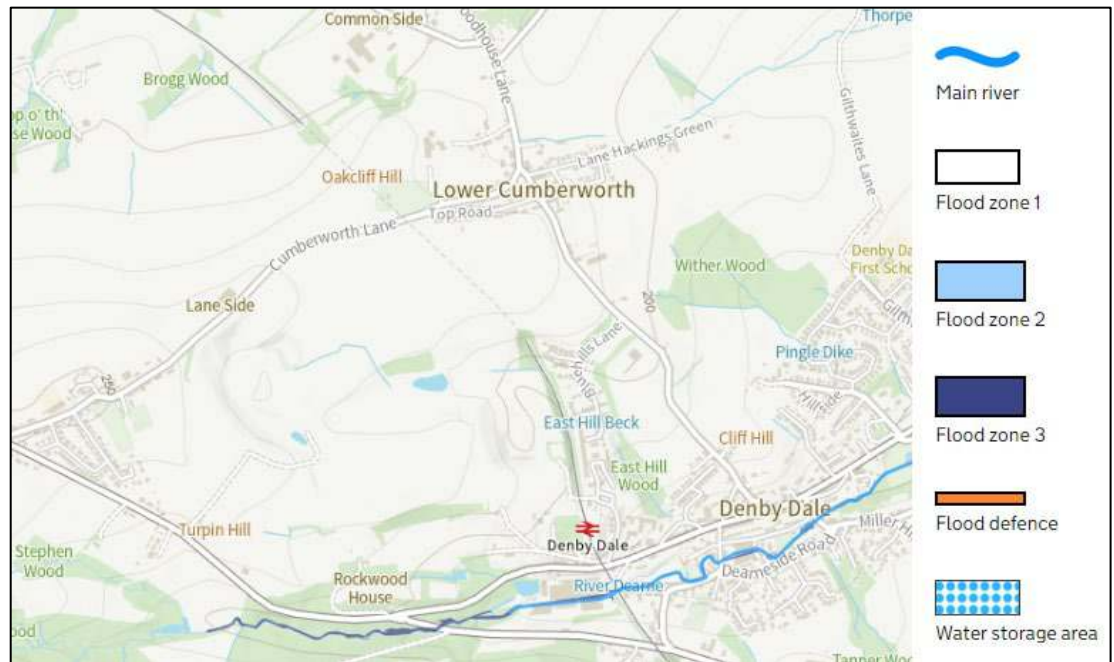
Figure 2: Aerial view of the site and surrounding area © Ordnance Survey

- 2.3 The majority of the proposed extension area is situated in the surface water catchment of the River Dearne, via East Hill Beck. The River Dearne flows west to east approximately 600m south of the application Site. East Hill Beck rises at issues 100m south east of the application Site, passing beneath the railway line to emerge in open channel at the northern end of Denby Dale. Hydrological evidence included on Envirocheck datasheets at Appendix A, indicates that East Hill Beck is connected to the small pond immediately south of the Site, and the upstream field drain that flows around the south western Site boundary. On this basis, surface water runoff from the majority of the Site is currently draining indirectly to East Hill Beck. Ground levels in the north eastern area of the Site fall towards the north west.
- 2.4 Flood Estimation Handbook (FEH) catchment models confirm that, downstream of the Site, East Hill Beck drains a catchment area of 0.5km², including the majority of the application Site. The East Hill Beck catchment area is indicated on Figure 3.

Figure 3: FEH catchment boundary for East Hill Beck adjacent to the application Site



- 2.5 The existing quarry workings have been restored to establish ground levels that allow gravity drainage of surface water runoff towards the Site entrance. Surface water from the restored site drains via a small settlement pond at the site entrance to a small field drain adjacent to the access track for final discharge to the East Hill Beck system. The location of the application Site in relation to local surface water hydrology is shown on Drawing 033/56/01.
- 2.6 The elevated location of the Site ensures that it is at low risk of fluvial flooding, as shown on the Environment Agency Flood Map for Planning, an extract from which is included as Figure 4, and also at low risk of surface water flooding as indicated on the Environment Agency Long Term Flood Risk Map, included as Figure 5. Reference to Defra's Magic map application confirms that the Site is not within a source protection zone and is not subject to any surface water or groundwater quality designation.

Figure 4: Flood Map for Planning extract © Environment Agency**Figure 5: Surface water flood risk map extract** © Environment Agency

- 2.7 As discussed at Section 3, whilst operational, the proposed development would be drained by pumping to a water treatment area with off-site outfall to the existing field drainage tributary of East Hill Beck. Once completed and restored, surface water runoff from restored surfaces would drain naturally towards the south for discharge to the same field drainage system. Surface water drainage to East Hill Beck would therefore continue throughout the operational life of the development and post Site restoration.

Local Geology

- 2.8 British Geological Survey (BGS) mapping of the area indicates that the Site is underlain by Lower Coal Measures bedrock consisting of mudstone with subordinate sandstones and thin coals. Quarry workings would be primarily established in a weathered mudstone formation with two relatively thin sandstone units and thin coal horizons. There is no record of superficial deposits above the bedrock. The geology of the Site and surrounding area is indicated in Figure 6.

Figure 6: Local geology © BGS



- 2.9 Regional geological mapping, as shown in Figure 6, indicates the presence of a Lower Coal Measures sandstone, above the Black Band Seam (BD), beneath the majority of the Site. Boreholes drilled at the Site demonstrate that this sandstone occurs at shallow depth and is underlain by a thick sequence of Lower Coal Measures mudstone. As shown on Figure 6, the area is extensively faulted. The Kirkburton Fault, trending north west to south east, is located close to the western boundary of the former Bromley Farm Quarry workings and the Holm Fault runs west to east approximately 500m to the south. Geological mapping indicates the presence of a south west – north east trending fault through the northern part of the application Site. The fault is downthrown to the north west. Site-specific ground investigation suggests that downthrow on this fault is approximately 3m.
- 2.10 Extensive faulting in the area results in variation in local stratigraphic dip. Available evidence indicates that strata to the north of the Site dip gently to the north west. To the south of the Site strata dip at an angle of 2-5° towards the south east. There is local evidence to indicate a shallow north easterly stratigraphic dip within the proposed extension area.
- 2.11 A total of 6 boreholes have been drilled at the Site during the period 2011 to 2021. All 6 boreholes have been logged and fitted with piezometer installations for gas and groundwater monitoring. Borehole locations are shown on Drawing 033/56/02. Borehole logs are included for reference at Appendix B.

- 2.12 Four boreholes (PZ3, BH01, BH02 and BH03) are located around the perimeter of the proposed extension area. As shown in borehole logs at Appendix B, the general geological succession in the proposed extension area is as indicated in Table 1.

Table 1: General geological succession in the extension area

Formation	Thickness (m)
Weathered sandstone	2.6 – 4.5
Coal	0.4 – 1.6
Mudstone	6.3 - 15.6
Sandstone	2.5 – 3.9
Mudstone	10.1 – 15.0
Sandstone	1.4 – 1.6
Mudstone	>12.8

- 2.13 The top of the upper sandstone horizon is present at an elevation of 206.4mAOD to 212.4mAOD with stratigraphic dip to the north east (subject to variation due to faulting). The top of the lower sandstone unit is present at an elevation of 192.0mAOD to 198.4mAOD.

Hydrogeology

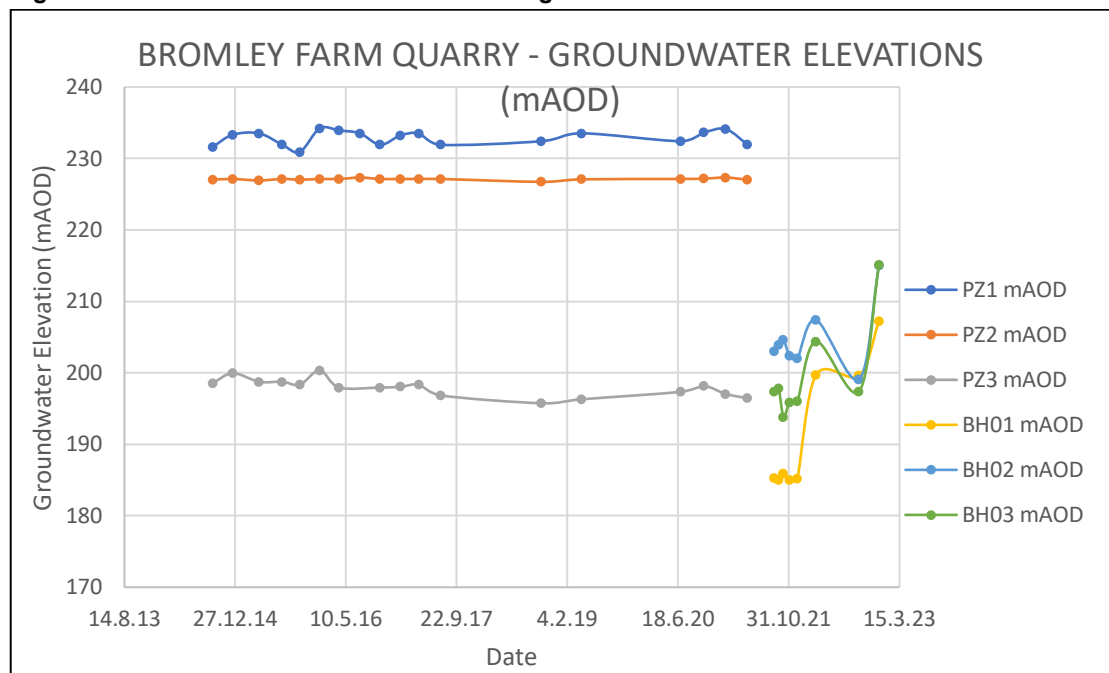
- 2.14 Lower Coal Measures strata at the Site and surrounding area are designated Secondary A Aquifers, by the Environment Agency. However, it is generally accepted that coal measures mudstones are rarely productive, and hence the Secondary A Aquifer designation is usually related to the more permeable sandstone units. The absence of any superficial cover results in a Site-wide groundwater vulnerability designation of medium-high. There are no source protection zones (SPZ's) at the Site or in the surrounding area.
- 2.15 The presence of discrete sandstone horizons, within low permeability mudstone formations, and the presence of extensive local faulting tends to result in both vertical and lateral partitioning of local groundwater systems. As a result, groundwater systems in faulted coal measures strata tend to be localised with discharge to the surface water system influenced by stratigraphic boundaries and fault location.

Groundwater levels and hydraulic gradients

- 2.16 At a regional scale there are few indicators of the presence of groundwater in coal measures sandstones. Springs at Stephen Wood approximately 900m south west of the application Site may be related to the same geological sequence but, at an elevation of approximately 225mAOD, are too high to be related to groundwater beneath the Site. A spring present at Oakcliff Hill 300m to the north appears to originate from a fault at a sandstone/mudstone junction, separated by intermediate faulting between the spring and the application Site. At an elevation of approximately 205mAOD, this spring is below estimated groundwater elevation within the Site but unlikely to originate from a continuous groundwater system.
- 2.17 All 6 boreholes established at Bromley Farm Quarry have been fitted with piezometer installations. Groundwater level and quality monitoring has been undertaken since 2011. Groundwater levels were recorded in the 2011 boreholes (PZ1, PZ2 & PZ3) during the period September 2014 to April 2021. Groundwater levels have been recorded in the 2021 boreholes

(BH01, BH02 & BH03) since August 2021. Groundwater levels are shown graphically in Figure 7.

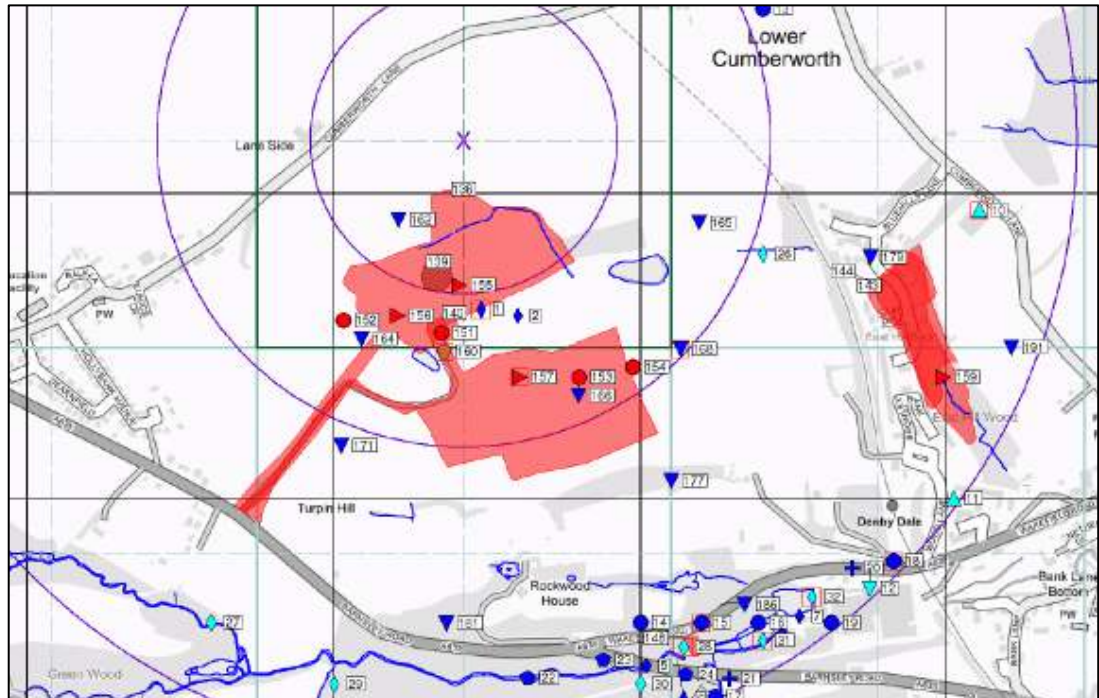
Figure 7: Groundwater levels in Site monitoring boreholes



- 2.18 PZ3 is located close to BH01 and there is reasonable consistency between observed groundwater levels at both locations, at 195mAOD-200mAOD, once levels at BH01 stabilised. Observed groundwater levels at BH02 and BH03 are slightly higher but exhibit the same seasonal response suggesting that they are likely to be monitoring the same system. In contrast, the observed groundwater levels at PZ1 and PZ2 are significantly higher at around 230mAOD. It is notable that there is no seasonal variability in PZ2. Reference to the borehole logs for PZ1 and PZ2 demonstrates that the response zone in both boreholes is restricted to the mudstone below the lower sandstone. It is therefore likely that observed groundwater levels in these boreholes reflect accumulation of water in the borehole, from mudstone seepage, with a potential threshold at the elevation of the coal seam/void. Groundwater levels in PZ1 and PZ2 are not therefore indicative of groundwater levels in the coal measures sandstones.
- 2.19 On the basis that any groundwater present in strata beneath the proposed extension area would be present within the two sandstone units identified in boreholes, an indicative direction of groundwater flow can be derived from comparative analysis of groundwater levels in boreholes PZ3, BH01, BH02 and BH03. As indicated on Drawing 033/56/02, monitoring data indicates a shallow hydraulic gradient to the south east. It is noted that the pond located close to the south eastern Site boundary is established at approximately 210mAOD which is too high to be an outlet for groundwater beneath the Site.
- 2.20 Indicative groundwater contours for the sandstone units are presented on Drawing 033/56/02. The elevation of East Hill Beck upstream of the railway line is approximately 180mAOD and the elevation of the small stream at Rockwood House 600m to the south of the application Site is approximately 200mAOD. These are the lowest surface water features in the vicinity of the Site. Indicative groundwater contours suggest that, if Hydrogeologically continuous, groundwater levels in the sandstones would be below 200mAOD at both locations.

- 2.21 As confirmed on Envirocheck datasheets at Appendix A, substantial areas of land to the south and south east of the application Site have previously been subject to mineral extraction and subsequent infilling with waste materials. An extract from the datasheet is included for reference as Figure 8.

Figure 8: Land use in the vicinity of the application Site



- 2.22 The shaded red areas on Figure 8 represent former mineral workings that are registered as historic landfill sites. Comparison of groundwater flow directions, as shown on Drawing 033/56/02, with Figure 8, demonstrates that historic landfill areas are situated down-gradient of the application Site and may obstruct groundwater flow in a south and south easterly direction. It is considered likely that the sandstone units will have been worked through in historic mineral workings, removing potential for down-gradient drainage through sandstone units. On the basis of available evidence it is considered that the most likely receptor of any groundwater flowing in the sandstone units beneath the application Site is backfilled land in former mineral workings. There may remain potential for seepage to East Hill Beck upstream of the railway line during periods when groundwater levels are elevated.
- 2.23 Reference to BGS mapping of the area, as shown on Geological Sheet 86 Glossop, indicates that the proposed base of working in the extension area would remain approximately 100m above more regionally significant coal measures sandstone aquifers such as the Grenoside Sandstone and the Greenmoor Rock. The intervening strata consists of a sequence of thick low permeability mudstone with intermittent sandstone. Coal Measures strata to be worked at Bromley Farm Quarry is considered to be fully hydraulically isolated from such deeper aquifers.

Groundwater Abstractions

- 2.24 A survey of licensed surface water and groundwater abstractions has been undertaken. Full details are presented in the Envirocheck Report at Appendix A. There are no licensed groundwater abstractions within a 500m radius of the Site. There are four licensed

groundwater abstractions within a 1km radius of the Site. A summary of licenced groundwater abstractions within a 1km radius of the Site is presented in Table 2.

Table 2: Licenced groundwater abstractions within 1km radius of the application Site

No.	Ref	NGR	Owner	Source	Distance
25	2/27/11/124	421800 408197	Hepworth Pipe Company	CM Spring	522
29	2/27/08/053	422500 408200	Hinchcliffe & Sons	Groundwater	912
31	2/27/08/144	422200 408270	Hinchcliffe & Sons	Borehole	951
32	2/27/08/144/R01	422259 408307	Hinchcliffe & Sons	Borehole	952

- 2.25 Abstraction No.25 relates to abstraction from a spring near Oakcliff Hill to the north of the application Site. As discussed above, the spring appears to originate from a fault at a sandstone/mudstone junction, separated by intermediate faulting between the spring and the application Site. The other three licenced abstractions are located at Hinchcliffe & Sons textile works located 950m south east of the application Site, south of the A636 Wakefield Road and south of the River Dearne. Reference to geological mapping of the area indicates that the site of these abstractions may be underlain by the same geological strata as present beneath the application Site. However, all three abstractions appear to be related to the route of Holm Fault and may therefore be associated with fault-related groundwater systems rather than groundwater that originates in sandstones beneath the application Site.

Groundwater quality

- 2.26 The quality of groundwater at Bromley Farm Quarry has been monitored on a quarterly basis since 2012. Samples have been obtained from monitoring boreholes PZ1, PZ2 and PZ3 located around the perimeter of the former quarry workings. As discussed above, groundwater present in borehole PZ3 is considered to be most representative of groundwater in the coal measures sandstones present beneath the proposed extension area. Groundwater in PZ1 and PZ2 is likely to represent groundwater accumulating from slow seepage from more permeable horizons within the mudstone units.
- 2.27 Reference to the groundwater contour map included as Drawing 033/56/02, demonstrates that boreholes PZ2 is located at the up-gradient side of the quarry site, in common with borehole BH02 at the northern side of the proposed extension area. Boreholes PZ1 and PZ3 are located partially down-gradient of the former quarry workings. More recent boreholes BH01 and BH03 are similarly located partially down-gradient of groundwater flowing in sandstone units beneath the proposed extension area.
- 2.28 Groundwater analysis over the monitoring period has been undertaken to include a comprehensive suite of determinants related to the UK Drinking Water Standards (DWS). Groundwater analysis has consistently demonstrated, with a small number of departures, an absence of hydrocarbons, including PAH's from local groundwater in all monitoring boreholes. A summary of groundwater quality data for boreholes PZ1, PZ2 and PZ3 is presented in Tables 3, 4 and 5 respectively.

Table 3: Groundwater quality summary 2012 - 2022 for borehole PZ1

Analyte	Units	UK DWS	MRV's	Min	Max	Mean
Barium (total)	mg/l	1		0.0258	1.85	0.3620
Cadmium (total)	mg/l		0.0001	0.00036	0.0089	0.0014
Chromium (total)	mg/l	0.050		0.002	0.024	0.0065
Copper (total)	mg/l	2.000		0.009	0.233	0.0234
Lead (total)	mg/l		0.0002	0.003	0.082	0.0115
Mercury (total)	mg/l		0.00001	0.00001	0.00084	0.0002
Molybdenum (total)	mg/l	0.07		0.003	0.232	0.0159
Nickel (total)	mg/l	0.02		0.003	0.11	0.0230
Zinc (total)	mg/l	5.00		0.02	0.293	0.0464
Ammoniacal Nitrogen as N	mg/l	0.5		0.02	0.41	0.0627
Chloride	mg/l	250		13.6	47.3	32.5360
Sulphate	mg/l	250		30.6	61.9	43.8555
Fluoride as F	mg/l	1.5		0.098	0.4	0.1838
EH >C6 - C40	ug/l	10		10	29	17.5746
PAH, Total	ug/l	0.1		0.021	0.17	0.0620
Antimony, Total as sb	mg/l	0.005		0.0016	0.0112	0.0035
Selenium, Total as Se	mg/l	0.01		0.0011	0.0055	0.0023
Arsenic, total as As	mg/l		0.005	0.001	0.033	0.0062

Table 4: Groundwater quality summary 2012 – 2022 for borehole PZ2

Analyte	Units	UK DWS	MRV's	Min	Max	Mean
Barium (total)	mg/l	1		0.045	0.6509	0.1359
Cadmium (total)	mg/l		0.0001	0.00002	0.0084	0.0004
Chromium (total)	mg/l	0.050		0.002	0.0289	0.0063
Copper (total)	mg/l	2.000		0.007	0.122	0.0231
Lead (total)	mg/l		0.0002	0.006	0.189	0.0224
Mercury (total)	mg/l		0.00001	0.00002	0.0002	0.0000
Molybdenum (total)	mg/l	0.07		0.004	0.14	0.0165
Nickel (total)	mg/l	0.02		0.004	0.093	0.0128
Zinc (total)	mg/l	5.00		0.02	0.385	0.0426
Ammoniacal Nitrogen as N	mg/l	0.5		0.02	0.06	0.0346
Chloride	mg/l	250		8.1	46	14.3222
Sulphate	mg/l	250		19	70	37.2065
Fluoride as F	mg/l	1.5		0.037	0.3	0.1393
EH >C6 - C40	ug/l	10		15	229	35.5028
PAH, Total	ug/l	0.1		0.01	0.651	0.0958
Antimony, Total as sb	mg/l	0.005		0.0016	0.0037	0.0024

Selenium, Total as Se	mg/l	0.01		0.00061	0.0103	0.0014
Arsenic, total as As	mg/l		0.005	0.0011	0.037	0.0058

Table 5: Groundwater quality summary 2012 – 2022 for borehole PZ3

Analyte	Units	UK DWS	MRV's	Min	Max	Mean
Barium (total)	mg/l	1		0.0777	8.783	0.3243
Cadmium (total)	mg/l		0.0001	0.00004	0.0826	0.0010
Chromium (total)	mg/l	0.050		0.001	0.2584	0.0075
Copper (total)	mg/l	2.000		0.004	0.81	0.0200
Lead (total)	mg/l		0.0002	0.004	1.12	0.0206
Mercury (total)	mg/l		0.00001	0.00002	0.00025	0.0000
Molybdenum (total)	mg/l	0.07		0.002	0.013	0.0054
Nickel (total)	mg/l	0.02		0.003	0.526	0.0178
Zinc (total)	mg/l	5.00		0.017	2.07	0.0572
Ammoniacal Nitrogen as N	mg/l	0.5		0.02	1.13	0.3325
Chloride	mg/l	250		16.4	97.2	40.1224
Sulphate	mg/l	250		33.4	244	78.3808
Fluoride as F	mg/l	1.5		0.058	0.2	0.0985
EH >C6 - C40	ug/l	10		11	94	31.9058
PAH, Total	ug/l	0.1		0.01	1.05	0.0617
Antimony, Total as sb	mg/l	0.005		0.0016	0.0049	0.0028
Selenium, Total as Se	mg/l	0.01		0.00064	0.0683	0.0027
Arsenic, total as As	mg/l		0.005	0.001	0.191	0.0058

- 2.29 As shown in Tables 3 to 5, groundwater quality data is compared to UK DWS for non-hazardous substances and to the minimum reporting value (MRV) for hazardous substances. If groundwater quality data in PZ2 is considered to be up-gradient of the former quarry site, and also up-gradient of the proposed extension area, background groundwater quality can be compared to groundwater quality at boreholes PZ1 and PZ3 located part way down-gradient of the restored quarry boundary.
- 2.30 Groundwater quality analysis at borehole PZ2 indicates the presence of hazardous substances, cadmium, mercury, lead and arsenic, at concentrations that exceed the MRV in up-gradient groundwater. The concentration of several non-hazardous substances, barium, nickel and selenium, plus ammoniacal nitrogen, occasionally exceed the relevant DWS. Elevated metals concentrations can be typical of groundwater in coal measures strata, although the sulphate concentration in groundwater is relatively low for such formations. Land use up-gradient of the quarry site is generally rural, although Commonsides Landfill Site is located approximately 300m to the north, and up-gradient of the northern site boundary.
- 2.31 DWS and MRV exceedances for the same substances are observed at monitoring boreholes PZ1 and PZ3. The exceedance frequency and magnitude in groundwater from PZ1 and PZ3 is comparable to that observed in up-gradient groundwater at PZ2. On that basis, there is no evidence to indicate that mineral extraction or subsequent restoration by inert waste placement

in the former Bromley Farm Quarry workings has resulted in any adverse impact on groundwater quality. The proposed extension would involve working the same sequence of mudstone and sandstone formations as the former quarry, with restoration by placement of overburden and inert waste materials to form a stable, free-draining landform. On the basis of the detailed hydrogeochemical data available for the Site there is no expectation that the proposed development would represent a risk to groundwater quality.

3. Conceptual hydrogeological model

- 3.1 The results of the hydrological and hydrogeological baseline assessment have been used to develop a conceptual hydrogeological model of the proposed extension area and surrounding land. The conceptual model provides the basis for subsequent assessment of potential development impacts on groundwater resources. The conceptual hydrogeological model is shown schematically as Drawing 033/56/02.
- 3.2 The conceptual hydrogeological model aims to define groundwater flow characteristics for defined water-bearing strata using the standard source-pathway-receptor approach. Development of the conceptual model has been based on a combination of baseline hydrogeological assessment and analysis of Site-specific hydrogeological data.

Sources

- 3.3 The proposed development would extend to a minimum elevation of 203mAOD. The minimum base of working would therefore extend below the elevation of the upper water-bearing sandstone formation identified in on-Site monitoring boreholes. There would be potential for groundwater drainage into the excavation area which would extend below the piezometric elevation of groundwater in both sandstone formations.
- 3.4 Mineral extraction would not involve the use of any potentially contaminative substances at the Site, with the exception of fuel and lubricants used in mobile plant. There is no evidence to indicate the presence of ground contamination within the Site.
- 3.5 During the operational life of the workings, mineral extraction would lead to the liberation of fine particulate materials that would be subject to distribution within the Site by entrainment in surface water runoff. However, it is noted that mineral extraction would take place with a hydraulic excavator, without requirement for blasting, and therefore the potential for formation of fine particulates would be reduced. As shown on development phasing drawings at Appendix C, the excavation area would consist of a vertical excavation contained on all sides with progressive restoration. All water accumulating within the excavation area would be pumped to a water treatment area. With a low permeability mudstone base to the excavation area there is unlikely to be any risk of particulate matter migration to underlying groundwater systems.
- 3.6 As all materials used to achieve the proposed restoration profile would be inert, there would be no significant source of potential risk to groundwater quality. The proposed water treatment area would act as an attenuation pond for the restored site on completion. Infilling of the excavation void may result in local obstruction to groundwater flow in the upper sandstone unit.

3.7 Sources of potential risk to local groundwater resources can therefore be summarised as follows:

- Localised dewatering of sandstone units
- Accidental spillage of hydrocarbons from mobile plant
- Groundwater flow obstruction due to excavation backfilling

Pathways

3.8 Baseline hydrogeological assessment has demonstrated that groundwater is present in the sandstone units between thick mudstone formations beneath the Site and that groundwater is flowing in a southerly to south easterly direction beneath the Site. The two sandstone units represent the only potential pathways for groundwater to enter or leave the proposed excavations. Localised dewatering of the upper sandstone would lead to inflow of groundwater from the surrounding area. As the excavations would be contained, there would be no potential for discharge of Site water to the sandstone and hence no pathway from the Site.

3.9 Progressive restoration of the excavation area, as shown on development phasing drawings at Appendix C, would result in the placement of overburden and inert waste materials against the upper sandstone unit in some areas of the excavation boundary. Unless fully sealed by waste placement, there would be potential for seepage of groundwater into the base of the restored Site leading to saturation of material below the rest groundwater elevation in the upper sandstone i.e. c. 210mAOD on average. Any contaminants present in the inert waste material could potentially drain down-gradient to the sandstone aquifer at the southern site boundary.

3.10 Potential impact pathways can therefore be summarised as follows.

- Groundwater flow or contaminant migration through the upper sandstone aquifer

Receptors

3.11 Baseline hydrogeological analysis has demonstrated that the only potential receptor of groundwater flowing in the sandstone aquifer within the strata to be excavated at the Site is the upstream end of East Hill Beck. The presence of a thick sequence of low permeability mudstone beneath the proposed extraction area would mitigate risk of contaminant migration to deeper aquifers.

3.12 As summarised in Table 2, there are four licenced groundwater abstractions within a 1km radius of the Site. The spring source at Commonsides Wood 500m north of the Site, originates from a separate aquifer unit, up-gradient of the proposed excavation area. The three other licenced abstractions are located at a textile mill to the south of the River Dearne with abstraction borehole locations associated with the route of Holm Fault. Available evidence indicates that these abstractions are not sourced from groundwater flowing beneath the Site.

3.13 Defra Magic mapping indicates that there are no statutory or non-statutory groundwater dependent ecological or landscape designations or features within a 1km radius of the Site.

4. Hydrogeological impact assessment

- 4.1 The potential impact of the proposed development on local hydrogeology has been evaluated by reference to the conceptual hydrogeological model, supporting hydrological and hydrogeological data sets and by definition of aspects of the proposed development with potential relationship to local surface water and groundwater systems.

Hydrological aspects of the proposed development

- 4.2 The application Site extends to a total area of approximately 8ha of which the proposed excavation area would extend to a surface area of approximately 5ha. Development phasing drawings, included at Appendix C, indicate that minimum quarry floor elevation would be 203mAOD. This is below the top of the upper sandstone in some parts of the Site and below the groundwater elevation in the upper sandstone across the entire Site. It is therefore anticipated that as the excavation develops, groundwater will enter the excavation area and be removed by pumping to a water treatment area to be located at the southern Site boundary.
- 4.3 Topsoils and subsoils would be excavated in advance of extraction on a phased basis and stored separately around the perimeter of the Site as indicated at Appendix C. There are no superficial geological deposits at the Site. A perimeter screening bund would be established around the excavation area. The proposed final excavation configuration and restoration profile are included at Appendix C. Surface water runoff from soil storage bunds would be managed through installation of a perimeter drainage system that would direct runoff to the proposed water treatment area prior to off-site discharge.
- 4.4 The excavation area would be progressively restored by placement of overburden and inert waste materials in the excavation void. Backfill materials would have a relatively low permeability. Extraction of parts of the upper sandstone unit and replacement with low permeability inert materials would potentially reduce hydraulic connectivity across the Site.

Hydrogeological impact assessment

- 4.5 Coal Measures sandstones typically have low intergranular porosity but may contain secondary fracture-based porosity, providing a mechanism for storage and transmission of groundwater. However, bulk hydraulic conductivity of the coal measures sandstone is expected to be relatively low and hence groundwater flow rates into the Site during mineral extraction are likely to be relatively low.
- 4.6 The upper sandstone aquifer extends northwards in an up-gradient direction from the Site. Geological mapping of the area indicates that the groundwater catchment area is constrained by the presence of faulting and stratigraphic outcrop. As discussed at Section 3, there is no evidence to indicate the presence on any groundwater dependent features in this area. With a potentially low groundwater inflow rate, small catchment area and absence of upstream receptors it is concluded that minor inflow of groundwater to the excavation area is unlikely to have any adverse impact on local groundwater resources.
- 4.7 Excavation of mudstone would remove part of the unsaturated zone above the sandstone aquifer. However, as coal measures mudstone is considered to be non-productive strata with

no significant potential for storage or transmission of groundwater, loss of unsaturated zone would have no adverse impact on local groundwater resources.

- 4.8 Mineral extraction would provide a direct pathway from the excavation to the upper sandstone aquifer. Groundwater level monitoring has demonstrated that the sandstone constitutes a confined aquifer with groundwater under an excess pressure of several metres hydraulic head. Whilst the workings form an open excavation there would be a head gradient into the excavation, mitigating risk of contaminant migration to the sandstone aquifer.
- 4.9 The Site would be restored by progressive restoration with overburden and imported inert waste materials. Whilst, by definition, inert waste materials should not contain potential contaminants at a concentration that would represent a risk to water resources and therefore restoration proposals should have no potential to affect groundwater quality, it is appropriate to consider the nature of any residual hydrogeological risk in the context of local geological conditions.
- 4.10 The proposed excavation would be underlain by a 9m thick Lower Coal Measures Mudstone. Laboratory hydraulic conductivity testing on coal measures mudstone at a nearby location returned a value of 8.8×10^{-13} m/sec. However, it is acknowledged that this is a rock mass hydraulic conductivity and may not be representative of mudstone hydraulic conductivity at site-scale when fracture induced secondary porosity is accounted for, if present.
- 4.11 With regard to deposition of inert waste as part of the restoration scheme, the underlying mudstone would form a natural geological barrier to mitigate downward migration of any contaminants present in inert waste materials. For reference, it is noted that for inert landfill installations the geological barrier requirement is a thickness of 1m with a maximum hydraulic conductivity of 1×10^{-7} m/s. Allowing for secondary fracture porosity, it is concluded that the average hydraulic conductivity of the underlying Lower Coal Measures Mudstone would remain several orders of magnitude lower than the specified inert landfill requirement.
- 4.12 Restoration with low permeability fill materials may interrupt groundwater flow from north to south through the upper sandstone aquifer. Under such conditions groundwater in the sandstone may tend to flow around the eastern boundary of the Site, through unworked sandstone with potential for discharge to East Hill Beck, as at present. There may also be potential for increase in up-gradient groundwater elevation, although there is no surface outfall in this area. It is important to note that the sandstone aquifer is confined and an increase in hydraulic head does not imply emergence of groundwater at surface. Given that groundwater flow rates are expected to be low, and recharge is restricted to a relatively small catchment area, there is no evidence to indicate that elevated groundwater levels up-gradient of the Site would have adverse effect on local groundwater resources.

Mitigation and management

- 4.13 Hydrogeological impact assessment, based on a robust understanding of baseline hydrological and hydrogeological conditions, has demonstrated that the proposed development has low potential for adverse impact on groundwater resources throughout the operational and post-operational lifetime of the development.

- 4.14 It is understood that, in common with previous quarry operations at Bromley Farm Quarry, extractive and subsequent backfilling operations at the proposed extension area would be undertaken in accordance with the provisions of a standard pollution prevention plan and environmental monitoring programme. No other mitigation or management measures are proposed.

5. Summary and conclusions

- 5.1 This Hydrogeological Impact Assessment (HIA) has been prepared to support a planning application for a north eastern extension to Bromley Farm Quarry, Upper Cumberworth, West Yorkshire. The assessment has been undertaken by reference to published data sets, hydrological survey, groundwater level and quality monitoring data assessment and new hydrogeological analysis.
- 5.2 Baseline hydrological, geological and hydrogeological analysis has led to the development of a robust conceptual hydrogeological model for the Site and surrounding area. The model defines discrete aquifer units beneath the proposed extension area. Each aquifer is overlain by a substantial thickness of low hydraulic conductivity Lower Coal Measure mudstone. Available evidence indicates that the base of the proposed workings would extend below average groundwater elevation in a thin sandstone unit within the mudstone sequence.
- 5.3 Hydrogeological impact assessment has demonstrated that the proposed extension area is situated in a location of relatively low hydrogeological sensitivity. Proposed extractive, and subsequent restoration, operations are considered to represent a low risk to groundwater resources. No sensitive surface water or groundwater receptors have been identified within the potential area of influence of the proposed development.
- 5.4 It is understood that, in common with previous quarry operations at Bromley Farm Quarry, extractive and subsequent backfilling operations at the proposed extension area would be undertaken in accordance with the provisions of a standard pollution prevention plan and environmental monitoring programme. No other mitigation or management measures are proposed.
- 5.5 It is concluded that the proposed development would represent low risk to groundwater resources and could therefore be established in full compliance with both local and national policy and practice with regard to groundwater protection.

For S M Foster Associates Limited

Redacted

Stephen M Foster
BSc MSc CGEOL MCIWEM CSi CEnv FIQ
Principal Consultant

Drawings



Approximate site boundary

CLIENT:

Silkstone Environmental Ltd

PROJECT:

PROPOSED EASTERN EXTENSION,
BROMLEY FARM QUARRY, UPPER
CUMBERWORTH, WEST YORKSHIRE

**HYDROGEOLOGICAL IMPACT
ASSESSMENT**

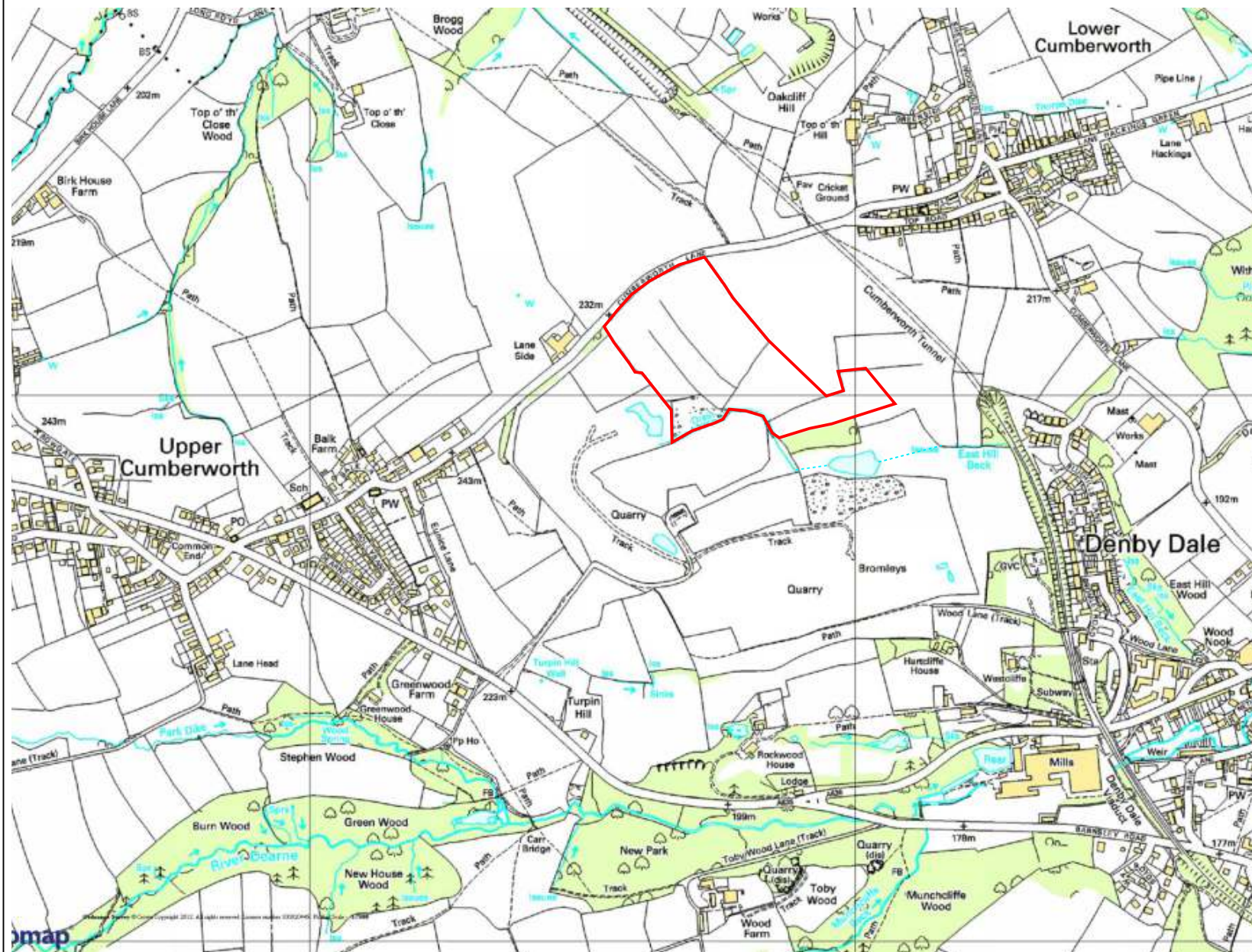
Ref: 033/56/01/1222

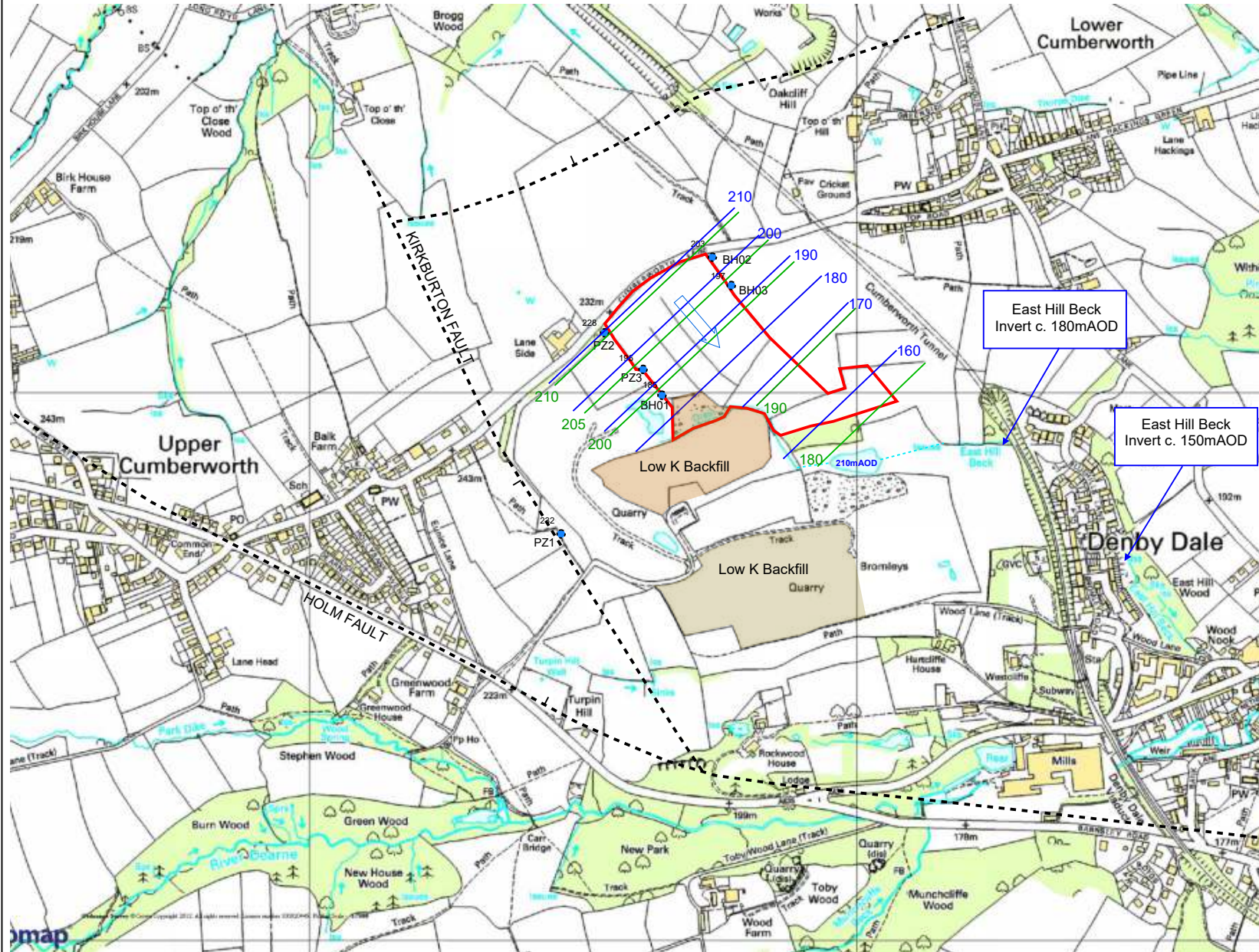
Date: December 2022

Approved:

Rev:

**DRAWING 033/56/01
SITE LOCATION AND
HYDROLOGY**





- Approximate site boundary
- Historic landfill
- 180 Groundwater elevation (mAOD)
Sandstone (August)
- 200 Groundwater elevation (mAOD)
Sandstone (March)
- Geological fault
- PZ1 Monitoring borehole
- ➔ General direction of
Groundwater flow

CLIENT:
Silkstone Environmental Ltd

PROJECT:
PROPOSED EASTERN EXTENSION,
BROMLEY FARM QUARRY, UPPER
CUMBERWORTH, WEST YORKSHIRE

**HYDROGEOLOGICAL IMPACT
ASSESSMENT**

Ref: 033/56/02/1222 Date: December 2022

Approved: Rev:

**DRAWING 033/56/02
CONCEPTUAL
HYDROGEOLOGICAL MODEL**

Appendix A

Envirocheck Datasheets

Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

304985535_1_1

Customer Reference:

Bromley 2

National Grid Reference:

421710, 409090

Slice:

A

Site Area (Ha):

0.01

Search Buffer (m):

1000

Site Details:

Star Inn, 64
Barnsley Road
Upper Cumberworth
HUDDERSFIELD
HD8 8NS

Client Details:

Mr S Foster
SM Foster Associates Ltd
7 Bownas Road
Boston Spa
Leeds
LS23 6EX

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	31
Hazardous Substances	38
Geological	39
Industrial Land Use	48
Sensitive Land Use	50
Data Currency	51
Data Suppliers	55
Useful Contacts	56

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			7	9
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 6				6
Local Authority Pollution Prevention and Control Enforcements	pg 7				1
Nearest Surface Water Feature	pg 7		Yes		
Pollution Incidents to Controlled Waters	pg 7				12
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 9				1
River Quality Biology Sampling Points	pg 9				2
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 10				3
Water Abstractions	pg 10				16 (*15)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 18	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 18	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 19		1	5	98

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 31		2	2	8
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 33				1
Licensed Waste Management Facilities (Locations)	pg 33			4	
Local Authority Landfill Coverage	pg 34	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Registered Landfill Sites	pg 34		1	4	1
Registered Waste Transfer Sites	pg 37			2	
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 38				1
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 39	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 39		1	8	33
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 46	Yes	n/a	n/a	n/a
Mining Instability	pg 46	Yes	n/a	n/a	n/a
Man-Made Mining Cavities	pg 46			2	1
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 46	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 46		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 47	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 47		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 47		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 48			1	13
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland	pg 50				3
Areas of Adopted Green Belt	pg 50	1			
Areas of Unadopted Green Belt	pg 50	1			
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 50		1		
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	0	1	421712 409086
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	107	1	421650 409000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	177	1	421600 408950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	212	1	421550 408950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	232	1	421850 408900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	239	1	421750 408850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	252	1	421800 408850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	253	1	421500 408950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	265	1	421900 408900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	283	1	421500 408900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	287	1	421550 408850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	293	1	421650 408800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	302	1	421900 408850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13SE (SE)	302	1	421950 408900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	308	1	421600 408800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	319	1	422000 408950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	339	1	421750 408750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	343	1	422000 408900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (S)	355	1	421600 408750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	365	1	422050 408950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	386	1	421712 408700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	391	1	421650 408700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	398	1	422100 409000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	412	1	422050 408850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	459	1	422150 408950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	482	1	422100 408800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	486	1	421712 408600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	490	1	421650 408600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	496	1	422200 409000
1	Discharge Consents Operator: Braithwaite Excavations Limited Property Type: MINERAL/GRAVEL EXTRACTION/QUARRYING Location: Kitson Quarry Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire, Hd8 8pd Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C5121 Permit Version: 3 Effective Date: 15th June 2005 Issued Date: 15th June 2005 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of East Hill Beck Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A13SE (S)	278	2	421740 408810
1	Discharge Consents Operator: Hepworth Building Products Ltd Property Type: MINERAL/GRAVEL EXTRACTION/QUARRYING Location: Kitson Quarry Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire, Hd8 8pd Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C5121 Permit Version: 2 Effective Date: 5th July 1988 Issued Date: 5th July 1988 Revocation Date: 14th June 2005 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of East Hill Beck Status: Transferred from COPA 1974 Positional Accuracy: Located by supplier to within 10m	A13SE (S)	278	2	421740 408810

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	Discharge Consents Operator: Sita (Kirklees) Ltd Property Type: MINERAL/GRAVEL EXTRACTION/QUARRYING Location: Kitson Quarry Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire, Hd8 8pd Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4893 Permit Version: 2 Effective Date: 26th July 2012 Issued Date: 26th July 2012 Revocation Date: 30th September 2014 Discharge Type: Trade Discharges - Site Drainage Discharge: Onto Land Environment: Receiving Water: Land Adjacent To The Site Status: Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 100m	A13SW (S)	287	2	421700 408800
1	Discharge Consents Operator: Hepworth Building Products Property Type: Undefined Or Other Location: Bromley Farm Landfill Site, Surface, Water Run-Off Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C5121 Permit Version: 1 Effective Date: 3rd July 1988 Issued Date: 3rd July 1988 Revocation Date: 4th July 1988 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of East Hill Beck Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A13SW (S)	287	2	421700 408800
1	Discharge Consents Operator: Calderdale Mbc Property Type: MINERAL/GRAVEL EXTRACTION/QUARRYING Location: Kitson Quarry Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire, Hd8 8pd Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4894 Permit Version: 1 Effective Date: 9th December 1987 Issued Date: 9th December 1987 Revocation Date: 31st August 1994 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: Ditch To River Dearne Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m	A13SW (S)	287	2	421700 408800
1	Discharge Consents Operator: Sita (Kirklees) Ltd Property Type: MINERAL/GRAVEL EXTRACTION/QUARRYING Location: Kitson Quarry Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire, Hd8 8pd Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4893 Permit Version: 1 Effective Date: 9th December 1987 Issued Date: 9th December 1987 Revocation Date: 25th July 2012 Discharge Type: Trade Discharges - Site Drainage Discharge: Onto Land Environment: Receiving Water: Land Adjacent To The Site Status: Transferred from COPA 1974 Positional Accuracy: Located by supplier to within 100m	A13SW (S)	287	2	421700 408800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	Discharge Consents Operator: West Yorkshire Waste Disposal Authority Property Type: FARMS (NOT HOUSE)/CROP + ANIMAL REARING/PLANT NURSERY Location: Bromley Farm Landfill Site-Site Dra, Inage To East Hill Beck Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 3814 Permit Version: 1 Effective Date: 29th August 1984 Issued Date: 29th August 1984 Revocation Date: 19th July 1994 Discharge Type: Trade Effluent Discharge: Freshwater Stream/River Environment: Receiving Water: East Hill Beck Status: Authorisation revoked Positional Accuracy: Located by supplier to within 100m	A13SE (S)	300	2	421800 408800
3	Discharge Consents Operator: Hepworth Building Products Ltd Property Type: Undefined Or Other Location: Hepworth Pipe Co Ltd, Ponker Quarry, , Lower Cumberworth Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wr.56 Permit Version: 1 Effective Date: 17th March 1976 Issued Date: 17th March 1976 Revocation Date: 17th May 1994 Discharge Type: Trade Discharge - Process Water Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Shepley Dike Status: Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	775	2	422110 409750
4	Discharge Consents Operator: Blackthorn Recycling Ltd Property Type: WASTE COLLECTION/TREATMENT/DISPOSAL/MATERIALS RECOVERY Location: Cumberworth Works Coal Pit Lane, Lower Cumberworth, Denby Dale, Kirklees Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wa6409 Permit Version: 1 Effective Date: 21st June 1991 Issued Date: 21st June 1991 Revocation Date: 19th February 2010 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Shepley Dike Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A18NE (N)	805	2	421720 409890
5	Discharge Consents Operator: Yorkshire Water Services Ltd Property Type: Undefined Or Other Location: Catch Bar Barnsley Road, Denby Dale, Nr Holmfirth, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wadc806 Permit Version: 1 Effective Date: 18th September 1989 Issued Date: 18th September 1989 Revocation Date: 14th May 2004 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dearne Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A8SE (S)	907	2	422010 408230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consents Operator: Yorkshire Water Services Ltd Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Catch Bar Cso Off Wakefield Road, Denby Dale, Huddersfield, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra8022 Permit Version: 1 Effective Date: 31st March 2004 Issued Date: 10th February 2004 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: River Dearne Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A9SW (S)	915	2	422060 408240
7	Discharge Consents Operator: Z.Hinchliffe & Sons Ltd. Property Type: Undefined Or Other Location: Hartcliffe Mills, Denby Dale, Huddersfield Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4889 Permit Version: 1 Effective Date: 9th December 1987 Issued Date: 9th December 1987 Revocation Date: 5th August 1992 Discharge Type: Trade Effluent Discharge: Not Supplied Environment: Receiving Water: Not Supplied Status: Authorisation revoked Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	950	2	422260 408310
8	Discharge Consents Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Dearnside Road, DENBY DALE, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Aire And Calder Navigation Reference: S/UD/68 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge: Unknown Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	995	2	422610 409515
8	Discharge Consents Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Bank Lane, DENBY DALE, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Aire And Calder Navigation Reference: S/UD/68 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge: Unknown Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	998	2	422610 409520

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	Discharge Consents Operator: Yorkshire Water Services Ltd Property Type: Not Given Location: Lane Hackings Green, DENBY DALE, West Yorkshire Authority: Environment Agency, North East Region Catchment Area: Aire And Calder Navigation Reference: S/UD/68 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Storm /emergency overflow Discharge: Unknown Environment: Receiving Water: Not Supplied Status: Not Supplied Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	1000	2	422615 409515
9	Discharge Consents Operator: Mr Michael Walsh Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 2 Wood Nook Long Royd Lane, Upper Cumberworth, Huddersfield, West Yorkshire, Hd8 8xl Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Npswqd009618 Permit Version: 1 Effective Date: 6th November 2009 Issued Date: 6th November 2009 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Shepley Dike Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	997	2	420950 409728
10	Local Authority Pollution Prevention and Controls Name: S I Wordsworth Ltd Location: 230 Cumberworth Lane, Denby Dale, Hd8 8xn Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Epa W 136 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/16 Mobile screening and crushing processes Status: Not Supplied Positional Accuracy: Manually positioned to the address or location	A14SE (E)	844	3	422547 408963
10	Local Authority Pollution Prevention and Controls Name: Denby Dale Cast Products Ltd Location: 230 Cumberworth Lane, Denby Dale, Huddersfield, Hd8 8pr Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Ppc W 158 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/1 Blending, packing, loading and use of bulk cement Status: Permitted Positional Accuracy: Manually positioned to the address or location	A14SE (E)	844	3	422546 408955
10	Local Authority Pollution Prevention and Controls Name: S I Wordsworth Location: 230 Cumberworth Lane, Denby Dale, Lower Cumberworth, Huddersfield, West Yorkshire, HD8 8PR Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Epa W 75 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/16 Mobile screening and crushing processes Status: Not Supplied Positional Accuracy: Automatically positioned to the address	A14SE (E)	845	3	422548 408962
10	Local Authority Pollution Prevention and Controls Name: S I Wordsworth Location: 230 Cumberworth Lane, Denby Dale, Lower Cumberworth, Huddersfield, West Yorkshire, HD8 8PR Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Epa W 74 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/16 Mobile screening and crushing processes Status: Not Supplied Positional Accuracy: Automatically positioned to the address	A14SE (E)	845	3	422548 408962

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	Local Authority Pollution Prevention and Controls Name: S I Wordsworth Ltd Location: 230 Cumberworth Lane, Denby Dale, HUDDERSFIELD, HD8 8PR Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Epa W143 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG3/16 Mobile screening and crushing processes Status: Not Supplied Positional Accuracy: Manually positioned to the address or location	A14SE (E)	849	3	422553 408968
11	Local Authority Pollution Prevention and Controls Name: Hargreaves Ash Marketing Ltd Location: Westleigh House, Wakefield Road, Denby Dale, Hd8 8qj Authority: Kirklees Metropolitan Borough Council, Environmental Health Department Permit Reference: Ppc W 143 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/16 Mobile screening and crushing processes Status: Permitted Positional Accuracy: Manually positioned to the address or location	A9NE (SE)	992	3	422511 408498
12	Local Authority Pollution Prevention and Control Enforcements Location: Victoria Mill, Wakefield Road, Denby Dale, Huddersfield, Hd8 8rp Type: Air Pollution Control Enforcement Notice Reference: EPA W77 Date Issued: Not Supplied Enforcement Date: Not Supplied Details: Failure To Comply With Enforcement Notice Positional Accuracy: Manually positioned to the road within the address or location	A9SW (SE)	962	3	422374 408388
	Nearest Surface Water Feature	A13SE (SE)	124	-	421765 408975
13	Pollution Incidents to Controlled Waters Property Type: Farm Location: Mouth/Source Holme Af Authority: Environment Agency, North East Region Pollutant: Miscellaneous - No Visible Pollution/Nothing Found Note: Not Supplied Incident Date: 27th March 1993 Incident Reference: 142426 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	533	2	422200 409300
14	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 24th May 1991 Incident Reference: 122765 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	837	2	422000 408300
15	Pollution Incidents to Controlled Waters Property Type: Highway/Car Park Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Surface Water Note: Not Supplied Incident Date: 19th January 1994 Incident Reference: 149702 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	877	2	422100 408300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	Pollution Incidents to Controlled Waters Property Type: Sewerage: Other Location: River Dearne At, DENBY DALE Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Pollution Found; No Fish Killed Incident Date: 10th April 1996 Incident Reference: SH960124 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	881	2	422100 408295
15	Pollution Incidents to Controlled Waters Property Type: Sewerage: Other Location: River Dearne At, DENBY DALE Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: No Fish Killed Incident Date: 10th April 1996 Incident Reference: SH960124 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	884	2	422105 408295
16	Pollution Incidents to Controlled Waters Property Type: Other General Premises Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Natural Note: Not Supplied Incident Date: 2nd August 1990 Incident Reference: 113313 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	925	2	422200 408300
17	Pollution Incidents to Controlled Waters Property Type: Surface Water Sewers Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 1st February 1991 Incident Reference: 119275 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	972	2	422100 408195
18	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 29th May 1989 Incident Reference: 6950 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	972	2	422400 408400
18	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 21st July 1990 Incident Reference: 112933 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	975	2	422405 408400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
18	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Heating Oil Note: Not Supplied Incident Date: 27th September 1989 Incident Reference: 103858 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	975	2	422400 408395
18	Pollution Incidents to Controlled Waters Property Type: Miscellaneous Premises: Unknown Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 15th June 1989 Incident Reference: 100264 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9SE (SE)	979	2	422405 408395
19	Pollution Incidents to Controlled Waters Property Type: Industrial Premises Location: Bretton/Source Dearne Afu Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 22nd November 1989 Incident Reference: 105349 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	982	2	422300 408300
	River Quality Name: River_Dearne GQA Grade: River Quality B Reach: Denby_Dale_Hinchcliffe' Estimated Distance (km): 2.1 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A8SE (S)	965	2	421909 408142
20	River Quality Biology Sampling Points Name: Dearne Reach: Hinchcliffe'S To Park Gate Dyke Estimated Distance: 6.60 Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 1995 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2000 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2002 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2003 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 2004 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2005 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2006 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2007 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2008 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2009 GQA Grade: River Quality Biology GQA Grade B - Good	A9SW (SE)	942	2	422346 408389

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	River Quality Biology Sampling Points Name: Dearne Reach: Denby Dale To Hinchcliffe'S Estimated Distance: 2.10 Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 1995 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2000 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2002 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2003 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2004 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2005 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2006 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2007 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2008 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2009 GQA Grade: River Quality Biology GQA Grade B - Good	A9SW (SE)	980	2	422146 408208
22	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 3rd March 2006 Incident Reference: 381252 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Oils And Fuel: Kerosene And Aviation Fuel	A8SE (S)	884	2	421816 408209
23	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 8th January 2009 Incident Reference: 644912 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Contaminated Water: Suspended Solids	A8SE (S)	905	2	421971 408219
24	Substantiated Pollution Incident Register Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 8th March 2009 Incident Reference: 659669 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Other Pollutant	A9SW (SE)	983	2	422130 408197
25	Water Abstractions Operator: Hepworth Pipe Co Ltd Licence Number: 2/27/11/124 Permit Version: 100 Location: Spring - Coal Measures - Day Hole Workings Authority: Environment Agency, North East Region Abstraction: Mineral Products: General Use(High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 27 Yearly Rate (m3): 6800 Details: Workings At Cumberworth, Nr. Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 26th May 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18SE (N)	522	2	421800 409600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	Water Abstractions Operator: Naylor Clayware Limited Licence Number: 2/27/08/032 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 27 Yearly Rate (m3): 9092 Details: Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A14SW (E)	522	2	422200 408900
27	Water Abstractions Operator: Yorkshire Water Authority Licence Number: 2/27/08/050 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: Water Undertaking Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 682 Yearly Rate (m3): 248894 Details: Coal Measures Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	888	2	421300 408300
28	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 101 Location: River Dearne And Munchcliffe Beck Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 November Authorised End: 31 May Permit Start Date: 24th December 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	901	2	422070 408260
28	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: Ne/027/0008/017 Permit Version: 1 Location: Munchcliffe Beck Transfer Authority: Environment Agency, North East Region Abstraction: Industrial, Commercial and Public Services: Transfer Between Sources (Post Water Act 2003) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 November Authorised End: 31 May Permit Start Date: 24th January 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	928	2	422119 408252

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	Water Abstractions Operator: Z. Hinchcliffe & Son Ltd Licence Number: 2/27/08/053 Permit Version: Not Supplied Location: Hartcliffe Mills, Denby Dale, HUDDERSFIELD, West Yorkshire Authority: Environment Agency, North East Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 125 Yearly Rate (m3): 45460 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A8SW (S)	912	2	421500 408200
30	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 101 Location: River Dearne & Munchcliffe Bk Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 November Authorised End: 31 May Permit Start Date: 24th December 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8SE (S)	932	2	422000 408200
31	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/144 Permit Version: 1 Location: Borehole - Coal Measures - Greenmoor Rock - Denby Dale Authority: Environment Agency, North East Region Abstraction: Textiles & Leather: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st January 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	951	2	422200 408270
31	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/144 Permit Version: 1 Location: Borehole - Coal Measures - Greenmoor Rock - Denby Dale Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st January 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	951	2	422200 408270

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/121 Permit Version: 100 Location: Borehole - Coal Measures - Denby Dale Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 500 Yearly Rate (m3): 52000 Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th January 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	951	2	422200 408270
31	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/121 Permit Version: 100 Location: Borehole - Coal Measures - Denby Dale Authority: Environment Agency, North East Region Abstraction: Textiles & Leather: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 16th January 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	951	2	422200 408270
32	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/144/R01 Permit Version: 1 Location: Borehole - Coal Measures - Greenmoor Rock - Denby Dale Authority: Environment Agency, North East Region Abstraction: Industrial, Commercial and Public Services: Transfer Between Sources (Post Water Act 2003) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	952	2	422259 408307
32	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 101 Location: Reservoir Near Munchcliffe Beck Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 November Authorised End: 31 May Permit Start Date: 24th December 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	954	2	422280 408320

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 102 Location: River Dearne - Reservoir Near Munchcliffe Beck Authority: Environment Agency, North East Region Abstraction: Textiles & Leather: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th January 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	955	2	422284 408322
32	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 102 Location: River Dearne - Reservoir Near Munchcliffe Beck Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 24th January 2017 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	955	2	422284 408322
33	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 101 Location: River Dearne & Munchcliffe Bk Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 188 Yearly Rate (m3): 68190 Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 November Authorised End: 31 May Permit Start Date: 24th December 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	968	2	422100 408200
	Water Abstractions Operator: D M & J Shaw Licence Number: 2/27/08/005 Permit Version: 100 Location: Well X2 - Coal Measures - Denby Dale Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 0 Yearly Rate (m3): 123 Details: Giltwhaites Farm, Denby Dale, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th January 1985 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15NE (E)	1504	2	423200 409300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 106 Location: Borehole - D - S2 - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowle, Shepley Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 6th December 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1587	2	420150 409360
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 106 Location: Borehole - B - S2 - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowle, Shepley Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 6th December 2021 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1687	2	420026 409089
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 105 Location: Borehole - B - S2 - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowle, Shepley Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2020 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A11NW (W)	1687	2	420026 409089
	Water Abstractions Operator: Shepley Spring Ltd Licence Number: 2/27/11/189 Permit Version: 1 Location: Borehole-Coal Measures-Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: The Knowle, Shepley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1713	2	420000 409090

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: J & W Blackburn Limited Licence Number: 2/27/11/163 Permit Version: Not Supplied Location: Pennine Nirseries, Shelley, HUDDERSFIELD Authority: Environment Agency, North East Region Abstraction: Unclassified (Other) Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 91 Yearly Rate (m3): 13700 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NW (NW)	1761	2	420805 410595
	Water Abstractions Operator: J & W Blackburn Limited Licence Number: 2/27/11/164 Permit Version: Not Supplied Location: Pennine Nurseries, Shelley, HUDDERSFIELD Authority: Environment Agency, North East Region Abstraction: Spray Irrigation Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 91 Yearly Rate (m3): 23000 Details: Status: Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NW (NW)	1764	2	420800 410595
	Water Abstractions Operator: Shelley Textiles Ltd Licence Number: 2/27/11/165 Permit Version: Not Supplied Location: Weir On Shepley/Barncliffe Dike , At Se 208 106 Authority: Environment Agency, North East Region Abstraction: Unclassified (Other) Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 0 Yearly Rate (m3): 0 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A22NW (NW)	1768	2	420800 410600
	Water Abstractions Operator: Shepley Spring Ltd Licence Number: 2/27/11/189 Permit Version: 1 Location: Borehole-Coal Measures-Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: The Knowle,Shepley,Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1800	2	419940 409400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Mr D Pell Licence Number: 2/27/08/079 Permit Version: 100 Location: Well X2 - Coal Measures - High Flatts Authority: Environment Agency, North East Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 2 Yearly Rate (m3): 830 Details: Pogg Hall Farm, High Flatts, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 13th July 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1931	2	421300 407200
	Water Abstractions Operator: Hinchcliffe & Sons Ltd Licence Number: 2/27/08/052 Permit Version: 101 Location: River Dearne And Munchcliffe Beck Authority: Environment Agency, North East Region Abstraction: Textiles And Leather: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Hartcliffe Mills, Denby Dale, Huddersfield Authorised Start: 01 November Authorised End: 31 May Permit Start Date: 24th December 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NW (SW)	1951	2	420120 407960
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 104 Location: Borehole - S2 - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowle, Shepley Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 20th February 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1997	2	419840 409780
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 103 Location: Borehole - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowle, Shepley Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 21st February 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1997	2	419840 409780

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 102 Location: Borehole - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowle, Shepley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1997	2	419840 409780
	Water Abstractions Operator: Penmoor Uk Ltd Licence Number: 2/27/11/030 Permit Version: 101 Location: Borehole - Lower Coal Measures - Shepley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Eastfield Mills, The Knowles, Shepley, Huddersfield Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st July 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1997	2	419840 409780
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A13NE (NE)	0	4	421712 409086
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NE (NE)	0	4	421712 409086
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 334.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A13SE (SE)	124	5	421765 408975
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A13SE (SE)	287	5	421892 408863
36	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 95.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A13SE (SE)	320	5	421950 408872
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 118.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: East Hill Beck Catchment Name: Don and Rother Primacy: 1	A13SE (SE)	394	5	422045 408876
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: East Hill Beck Catchment Name: Don and Rother Primacy: 1	A14SW (E)	483	5	422160 408905
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 250.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (N)	485	5	421581 409553
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 98.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: East Hill Beck Catchment Name: Don and Rother Primacy: 1	A14SW (E)	507	5	422187 408907
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 165.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12NE (NW)	562	5	421202 409321
42	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 295.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: East Hill Beck Catchment Name: Don and Rother Primacy: 1	A14SW (E)	597	5	422281 408907

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 27.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8NW (S)	599	5	421625 408493
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 71.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8NW (S)	622	5	421622 408471
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8NW (S)	624	5	421627 408469
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 144.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8NW (S)	627	5	421629 408465
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 121.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SE (NW)	638	5	421211 409480
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 189.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SE (NW)	656	5	421290 409587
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 117.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Thorpe Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	671	5	422229 409512
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SE (S)	696	5	421754 408392
51	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 37.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SE (S)	696	5	421764 408392

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 84.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SE (S)	698	5	421801 408394
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (NW)	710	5	421398 409722
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (NW)	731	5	421404 409748
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 140.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SE (S)	734	5	421882 408372
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 103.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18SW (NW)	740	5	421405 409759
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 23.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SE (NW)	761	5	421042 409445
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 30.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Thorpe Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	763	5	422344 409513
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 47.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	780	5	421033 409467
60	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 232.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	780	5	421033 409467

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 76.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SE (SE)	788	5	422018 408360
62	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 112.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Thorpe Dike Catchment Name: Don and Rother Primacy: 1	A19SW (NE)	791	5	422375 409517
63	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	801	5	422088 408379
64	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 57.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18NW (N)	833	5	421410 409862
65	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 49.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A14NE (E)	847	5	422559 409108
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 616.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A8SW (S)	850	5	421564 408249
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 46.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	858	5	422173 408363
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 160.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A8SW (S)	863	5	421488 408253
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 152.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	869	5	420859 408925

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 254.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: East Hill Beck Catchment Name: Don and Rother Primacy: 1	A9NE (SE)	870	5	422491 408699
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	877	5	421241 408348
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 163.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A8SW (S)	878	5	421502 408234
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 144.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	882	5	421323 408295
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 15.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A14NE (E)	886	5	422597 409113
75	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 30.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18NW (N)	888	5	421407 409919
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 91.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	890	5	420930 409509
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 131.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Thorpe Dike Catchment Name: Don and Rother Primacy: 1	A19SE (NE)	891	5	422485 409530
78	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 21.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	894	5	422218 408349

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 244.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	894	5	421242 408326
80	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 265.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A14NE (E)	895	5	422607 409102
81	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A7SE (SW)	906	5	421350 408256
82	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 482.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	908	5	420877 409441
83	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	910	5	421344 408254
84	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A7SE (SW)	912	5	421355 408248
85	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 34.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A7SE (SW)	912	5	421355 408248
86	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 50.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	913	5	422236 408339
87	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 22.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	913	5	422236 408339

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 97.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18NW (N)	916	5	421405 409949
89	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 45.5 Watercourse Level: Underground Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	918	5	422072 408242
90	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	919	5	422114 408260
91	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	919	5	422116 408261
92	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	919	5	422116 408261
93	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	920	5	422118 408260
94	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: Underground Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	924	5	422227 408319
95	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 59.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	926	5	422161 408276
96	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 18.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	926	5	422223 408314

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
97	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	927	5	421345 408235
98	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: Underground Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	928	5	422119 408252
99	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 22.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Munchcliffe Beck Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	928	5	422119 408252
100	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	928	5	422158 408273
101	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	928	5	422209 408303
102	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 45.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	929	5	422120 408252
103	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 327.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Pingle Dike Catchment Name: Don and Rother Primacy: 1	A14NE (E)	930	5	422629 409236
104	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 39.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	930	5	421342 408233
105	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	935	5	422213 408297

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 47.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	936	5	421345 408226
107	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	936	5	421345 408226
108	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	938	5	420938 409614
109	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A7SE (S)	939	5	421363 408215
110	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	943	5	422107 408230
111	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	944	5	422111 408231
112	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	944	5	422217 408289
113	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 89.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A7SE (S)	946	5	421352 408212
114	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 63.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	947	5	422165 408255

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A9SW (SE)	948	5	422219 408285
116	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Munchcliffe Beck Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	949	5	422121 408230
117	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Munchcliffe Beck Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	951	5	422121 408228
118	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	953	5	422221 408281
119	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 90.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	953	5	421042 408410
120	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 46.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A7SE (SW)	954	5	421304 408225
121	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 213.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	955	5	422284 408322
122	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 75.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	955	5	420936 409641
123	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 125.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Park Dike Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	958	5	421044 408401

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
124	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 239.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	960	5	422240 408285
125	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 52.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	960	5	420756 409015
126	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 185.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12SW (W)	960	5	420756 409015
127	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	968	5	420951 409684
128	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 150.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A12NW (W)	974	5	420746 409199
129	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 294.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Munchcliffe Beck Catchment Name: Don and Rother Primacy: 1	A9SW (SE)	976	5	422130 408204
130	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A7SE (SW)	982	5	421263 408214
131	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Don and Rother Primacy: 2	A7SE (SW)	992	5	421266 408200
132	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 94.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Dearne Catchment Name: Don and Rother Primacy: 1	A7SE (SW)	993	5	421268 408199

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
133	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 274.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	995	5	420949 409723
134	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 14.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	995	5	420948 409722
135	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18NW (N)	997	5	421440 410045
136	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 184.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A18NW (N)	999	5	421421 410042
137	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 208.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Aire and Calder Primacy: 1	A17SW (NW)	999	5	420936 409714

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
138	Historical Landfill Sites Licence Holder: W W M Hepworth Landfill Limited Location: Upper Cumberworth, Denby Dale, West Yorkshire Name: Bromley Farm Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHL30216 First Input Date: 31st December 1982 Last Input Date: 31st December 1990 Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0786 BGS Ref: Not Supplied Other Ref: 4700/WDL0289, 4700_0289_818, 4400(98)	A13SE (S)	80	2	421712 409006
139	Historical Landfill Sites Licence Holder: West Yorkshire Waste Management Limited Location: Upper Cumberworth, Denby Dale Name: Bromley Farm Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHL04267 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4700/WDL1260	A13SW (S)	202	2	421672 408888
140	Historical Landfill Sites Licence Holder: West Yorkshire Waste Management Limited Location: Upper Cumberworth, Denby Dale, West Yorkshire Name: Bromley Farm Quarry Operator Location: Chantry House, 123 Kirkgate, Wakefield Boundary Accuracy: As Supplied Provider Reference: EAHL30239 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert, Industrial, Commercial and Household Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0786 BGS Ref: Not Supplied Other Ref: 4700/WDL/1087, WY144, 4700/1087	A13SW (S)	283	2	421686 408804
141	Historical Landfill Sites Licence Holder: Cumberworth Pipe Limited Location: Coal Pit Lane, Cumberworth Name: Land at Cumberworth Pipe Limited Operator Location: Queen Street, Woodesford, Leeds Boundary Accuracy: As Supplied Provider Reference: EAHL04791 First Input Date: 31st December 1983 Last Input Date: 31st December 1992 Specified Waste: Deposited Waste included Inert, Industrial and Commercial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0811 BGS Ref: Not Supplied Other Ref: 4400/0379	A18SE (N)	498	2	421822 409571
142	Historical Landfill Sites Licence Holder: Blackthorn Recycling Limited Location: Coal Pit Lane, Upper Denby, Huddersfield, West Yorkshire Name: Coal Pit Lane Landfill Operator Location: Scapegoat Hill, Huddersfield, West Yorkshire Boundary Accuracy: As Supplied Provider Reference: EAHL36096 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 210080 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A18SE (N)	569	2	421734 409654

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
143	Historical Landfill Sites Licence Holder: Naylor Brothers (Clayware) Limited Location: Denby Dale, Huddersfield, West Yorkshire Name: Bromley Works Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04795 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 60993 Regis Ref: YQ3/L/NAY001 WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4400/W1158	A14SW (E)	704	2	422374 408848
144	Historical Landfill Sites Licence Holder: Naylor Brothers (Clayware) Limited Location: Denby Dale Name: Bromley Works Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04197 First Input Date: 31st December 1983 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4700/0747 BGS Ref: Not Supplied Other Ref: 4700/WDL0160	A14SW (E)	706	2	422379 408855
145	Historical Landfill Sites Licence Holder: Not Supplied Location: Lower Cumberworth Name: Shelley Woodhouse Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD35069 First Input Date: 1st January 1990 Last Input Date: 31st December 1990 Specified Waste: Deposited Waste included Inert Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A19SW (NE)	709	2	422265 409530
146	Historical Landfill Sites Licence Holder: Hepworth Building Products Location: Shelley, Woodhouse Lane, Lower Cumberworth Name: Ponker Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04790 First Input Date: 1st June 1991 Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert, Industrial and Commercial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4400/(786)	A19NW (NE)	833	2	422147 409796
147	Historical Landfill Sites Licence Holder: Not Supplied Location: Shelley Woodhouse Lane, Lower Cumberworth Name: Cumberworth Common Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04242 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4400/0259	A19NW (NE)	844	2	422149 409807

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	Historical Landfill Sites Licence Holder: Not Supplied Location: Denby Dale Name: Junction A635 and A636 Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD35061 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Deposited Waste included Inert and Industrial Waste Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: Not Supplied	A9SW (SE)	886	2	422068 408275
149	Historical Landfill Sites Licence Holder: Not Supplied Location: Toby Wood Lane Name: Disused Quarry Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04800 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste: Not Supplied Type: EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4400/(106)	A8SE (S)	949	2	421873 408151
150	Licensed Waste Management Facilities (Landfill Boundaries) Name: Coal Pit Lane Landfill Licence Number: 210080 Location: Coal Pit Lane Landfill, Coal Pit Lane, Upper Denby, Huddersfield, West Yorkshire, HD8 8UF Licence Holder: Blackthorn Recycling Limited Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Inert LF Max Input Rate: Not Supplied Licence Status: Closure Issued: 5th May 2006 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A18SE (N)	569	2	421734 409654
151	Licensed Waste Management Facilities (Locations) Licence Number: 61061 Location: Bromley Farm H W R C, Barnsley Road, Upper Cumberworth, Huddersfield, West Yorkshire, HD8 8PD Operator Name: Suez Recycling And Recovery Kirklees Limited Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Household Waste Amenity Sites Licence Status: Modified Issued: 8th March 1996 Last Modified: 5th September 2017 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SW (S)	317	2	421676 408772
152	Licensed Waste Management Facilities (Locations) Licence Number: 102620 Location: Bromley Farm Quarry, Barnsley Lane, Upper Cumberworth, South Yorkshire, HD8 8PD Operator Name: Braithwaite Excavations Limited Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Use of waste in a deposit for recovery op Licence Status: Modified Issued: 9th May 2013 Last Modified: 7th March 2017 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	355	2	421515 408792

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	Licensed Waste Management Facilities (Locations) Licence Number: 60993 Location: Bromley Works, Denby Dale, Huddersfield, West Yorkshire Operator Name: Naylor Bros (Clayware) Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings) Licence Status: Surrendered Issued: 22nd December 1983 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 27th September 1999 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	457	2	421900 408670
154	Licensed Waste Management Facilities (Locations) Licence Number: 0 Location: Bromley Works, Denby Dale, Huddersfield, West Yorkshire Operator Name: Naylor Bros (Clayware) Ltd Operator Location: Clough Green, Cawthorne, Barnsley, S Yorks, S75 4AD Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfills Taking Other Wastes (Construction, Demolition, Dredgings) Licence Status: Surrendered Issued: 22nd December 1983 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 27th September 1999 IPPC Reference: Not Supplied Positional Accuracy: Manually positioned within the geographical locality	A8NE (SE)	462	2	421988 408716
	Local Authority Landfill Coverage Name: Kirklees Metropolitan Borough Council - Has not been able to supply Landfill data		0	6	421712 409086
155	Registered Landfill Sites Licence Holder: West Yorks Waste Management Licence Reference: WY 98 Site Location: Bromley Farm Quarry (Wyjwmc), Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire Licence Easting: 421700 Licence Northing: 408850 Operator Location: Chantry House, 123 Kirkgate, WAKEFIELD, West Yorkshire, WF1 1YG Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st February 1982 Preceded By: Not Given Licence: Superseded By: Wy 135 Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: House, Com + Ind.Waste Prohibited Waste: Poisonous, Noxious, Polluting Wastes Special Wastes	A13SW (S)	237	2	421700 408850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
156	Registered Landfill Sites Licence Holder: W.W.M. Hepworth (Landfill) Ltd Licence Reference: 289 Site Location: Bromley Farm Quarry, Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire Licence Easting: 421600 Licence Northing: 408800 Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 26th January 1982 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: House, Com + Ind.Waste Prohibited Waste: Poisonous, Noxious, Polluting Wastes Special Wastes	A13SW (S)	308	2	421600 408800
157	Registered Landfill Sites Licence Holder: West Yorks Waste Management Licence Reference: WY 144 Site Location: Bromley Farm Phase 3, Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire Licence Easting: 421800 Licence Northing: 408700 Operator Location: 54 Bradford Road, BRIGHOUSE, West Yorkshire, HD6 1RY Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1991 Preceded By: Wy 135 Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Ash Bulky Household Waste Com. & Ind. Waste Foundry Sand Garden Waste/Plant Material General Household Waste Scrap Metal Uncontam. Constr'N/Demolition Waste Uncontam. Earth & Excavation Waste Prohibited Waste: Special Wastes Waste N.O.S.	A8NE (S)	396	2	421800 408700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
157	Registered Landfill Sites Licence Holder: West Yorks Waste Management Licence Reference: WY 135 Site Location: Bromley Road Quarry Extension, Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire Licence Easting: 421800 Licence Northing: 408700 Operator Location: 54 Bradford Road, BRIGHOUSE, West Yorkshire, HD6 1RY Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill - with civic amenity Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st October 1987 Preceded By: WY 98 Licence: Superseded By: Wy 144 Licence: Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: House, Com + Ind.Waste Prohibited Waste: Difficult Wastes Hazardous Wastes Liable To Cause Enviromental Hazards Poisonous, Noxious, Polluting Wastes Special Wastes	A8NE (S)	396	2	421800 408700
158	Registered Landfill Sites Licence Holder: Cumberworth Pipe Ltd Licence Reference: 379 Site Location: Coal Pit Lane, Cumberworth, Denby Dale, HUDDERSFIELD, West Yorkshire, HD8 8PL Licence Easting: Not Supplied Licence Northing: Not Supplied Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 4th August 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Positioned by the supplier Boundary Accuracy: Moderate Authorised Waste: Brick Making Wastes Prohibited Waste: Excavated Natural Materials \$ Poisonous, Noxious, Polluting Wastes	A18SE (N)	498	2	421833 409568
159	Registered Landfill Sites Licence Holder: Naylor Bros (Clayware) Ltd Licence Reference: WD20 W1158 MOD 4 (160 Site Location: Naylor Bros, Bromley Works, Denby Dale, Huddersfield, West Yorkshire Licence Easting: 422490 Licence Northing: 408700 Operator Location: Clough Green, Cawthorne, BARNSELEY, South Yorkshire, S75 4AD Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: Waste produced/controlled by licence holder Restrictions: Status: Licence has completion certificateSurrendered Dated: 22nd December 1983 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Boiler Ash Excavation Waste Max.Waste Permitted By Licence Solid Clayware Prohibited Waste: Liable To Cause Environmental Hazards Poisonous, Noxious, Polluting Wastes Special Wastes (As In '96 Regs) Waste N.O.S.	A9NE (SE)	869	2	422490 408700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
160	Registered Waste Transfer Sites Licence Holder: Kirklees Waste Services Ltd Licence Reference: WD20 W1157 (1623) Site Location: Bromley Farm H.W.Site, Huddersfield Road, Upper Cumberworth, Huddersfield, West Yorkshire Operator Location: Vine Street, Leeds Road, HUDDERSFIELD, West Yorkshire, HD1 6NT Authority: Environment Agency - North East Region, Ridings Area Site Category: Civic Amenity Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source: No known restriction on source of waste Restrictions: Licence Status: Operational as far as is knownOperational Dated: 8th March 1996 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Breeze Blocks, Building Sand, Gravel, Tiles, Other Ceramic Mats, Slate Animal, Food And Kitchen Wastes Ash From Solid Fuel Central Heating Domestic Appliances Dusty Wastes From D.I.Y Empty Paint & Solvent Drums Garden Waste General Household Refuse Household Waste Which May Include Max.Storage In Licence Max.Waste Permitted By Licence Other Scrap Metal Parts From Private Vehicles Uncontam. Earth/Excav'N Waste Uncontam.Brick,Stone,Solid Concrete, Waste Oil From Private Vehicles Prohibited Waste: Difficult Wastes (As In Wmp.26) Special Wastes (As In S17 1980) Waste Likely To Pollute Environment Waste N.O.S. Waste With Pot'L Harm Human Health	A13SW (S)	318	2	421680 408770
160	Registered Waste Transfer Sites Licence Holder: West Yorks Waste Management Licence Reference: WY 98 Site Location: Bromley Road Quarry, Upper Cumberworth, Denby Dale, Huddersfield, West Yorkshire Operator Location: 54 Bradford Road, BRIGHOUSE, West Yorkshire, HD6 1RY Authority: Environment Agency - North East Region, Ridings Area Site Category: Civic Amenity Max Input Rate: Undefined Waste Source: No known restriction on source of waste Restrictions: Licence Status: Record supersededSuperseded Dated: 1st February 1982 Preceded By: Not Given Licence: Superseded By: Not Given Licence: Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Civic Amenity/Refuse Amenity Waste Prohibited Waste: Poisonous, Noxious, Polluting Wastes Special Wastes	A13SW (S)	318	2	421680 408770

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
161	Control of Major Accident Hazards Sites (COMAH) Name: Hepworth Clay Products Ltd Location: Coal Pit Lane, Lower Cumberworth, HUDDERSFIELD, West Yorkshire, HD8 8PL Reference: Not Supplied Type: Lower Tier Status: Record Ceased To Be Supplied Under COMAH Regulations Positional Accuracy: Manually positioned to the address or location	A18SE (N)	671	7	421810 409749

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13NE (NE)	0	1	421712 409086
162	BGS Recorded Mineral Sites Site Name: Bromley Quarry Location: Upper Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 2564 Type: Opencast Status: Ceased Operator: Hepworth Building Products Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	166	1	421605 408960
163	BGS Recorded Mineral Sites Site Name: Oakcliff Hill Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94896 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A13NW (N)	261	1	421703 409346
164	BGS Recorded Mineral Sites Site Name: Bromley Quarry Location: Upper Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 226985 Type: Opencast Status: Ceased Operator: Hepworth Building Products Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	362	1	421545 408766
165	BGS Recorded Mineral Sites Site Name: Bromleys Fireclay Mine Location: Denby Dale, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 226988 Type: Underground Status: Ceased Operator: Naylor Clayware Ltd Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Fireclay Positional Accuracy: Located by supplier to within 10m	A14SW (E)	406	1	422096 408956
166	BGS Recorded Mineral Sites Site Name: Bromleys Quarry Location: Denby Dale, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 226986 Type: Opencast Status: Ceased Operator: Naylor Clayware Ltd Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A8NE (SE)	453	1	421899 408674

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
167	BGS Recorded Mineral Sites Site Name: Oakcliff Hill Mine Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94864 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	466	1	421750 409550
167	BGS Recorded Mineral Sites Site Name: Oakcliff Hill Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94873 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	491	1	421722 409576
168	BGS Recorded Mineral Sites Site Name: Bromleys Quarry Location: Denby Dale, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 2565 Type: Opencast Status: Active Operator: Naylor Clayware Ltd Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Fireclay Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	488	1	422065 408750
168	BGS Recorded Mineral Sites Site Name: Bromleys Quarry Location: Denby Dale, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 2565 Type: Opencast Status: Active Operator: Naylor Clayware Ltd Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	488	1	422065 408750
169	BGS Recorded Mineral Sites Site Name: Oakcliff Hill Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94874 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	527	1	421727 409612
170	BGS Recorded Mineral Sites Site Name: Oakcliff Hill Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94875 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	532	1	421763 409615

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
170	BGS Recorded Mineral Sites Site Name: Oakcliff Hill Coal Pit Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94865 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	556	1	421803 409634
171	BGS Recorded Mineral Sites Site Name: Turpin Hill Location: Upper Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 95821 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8NW (S)	534	1	421512 408592
172	BGS Recorded Mineral Sites Site Name: Brogg Wood Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94869 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	588	1	421300 409505
173	BGS Recorded Mineral Sites Site Name: Cumberworth Brick Yard Shaft Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94866 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A18SE (N)	591	1	421904 409644
174	BGS Recorded Mineral Sites Site Name: Lower Cumberworth Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 2569 Type: Opencast Status: Ceased Operator: Hepworth Building Products Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18SE (N)	616	1	421750 409700
175	BGS Recorded Mineral Sites Site Name: Addy'S Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 12850 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A18SE (N)	631	1	421855 409700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
175	BGS Recorded Mineral Sites Site Name: Cumberworth Brick Yard Shaft Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94867 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A18SE (N)	643	1	421897 409701
176	BGS Recorded Mineral Sites Site Name: Brogg Wood Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94870 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	636	1	421416 409648
176	BGS Recorded Mineral Sites Site Name: Brogg Wood Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94871 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	660	1	421383 409657
176	BGS Recorded Mineral Sites Site Name: Brogg Wood Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94872 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A18SW (NW)	674	1	421399 409682
177	BGS Recorded Mineral Sites Site Name: Bromleys Fireclay Mine Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 2566 Type: Underground Status: Ceased Operator: Naylor Clayware Ltd Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	647	1	422050 408535
178	BGS Recorded Mineral Sites Site Name: Common Side Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94856 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (N)	656	1	421582 409728

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
179	BGS Recorded Mineral Sites Site Name: Bromleys, East Of Railway Location: Denby Dale, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 5854 Type: Opencast Status: Ceased Operator: Naylor Clayware Ltd Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	A14SW (E)	689	1	422375 408900
180	BGS Recorded Mineral Sites Site Name: Cumberworth Brick Yard Shaft Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94868 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Mineral Positional Accuracy: Located by supplier to within 10m	A18NE (N)	722	1	421879 409788
181	BGS Recorded Mineral Sites Site Name: Hartcliff Location: Upper Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 97447 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Greenmoor Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8SW (S)	784	1	421683 408303
182	BGS Recorded Mineral Sites Site Name: Common Side Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94855 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	805	1	421723 409890
183	BGS Recorded Mineral Sites Site Name: Kirk Stiles Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94857 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (NW)	818	1	421399 409841
184	BGS Recorded Mineral Sites Site Name: Ponker Hill Clay Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94863 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Fireclay Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	857	1	422234 409765

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
185	BGS Recorded Mineral Sites Site Name: Common Side Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94853 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	860	1	421486 409915
186	BGS Recorded Mineral Sites Site Name: Hartcliffe Common Quarry Location: Denby Dale, Holmfirth, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 95818 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	864	1	422130 408330
187	BGS Recorded Mineral Sites Site Name: Kirk Stiles Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94852 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	892	1	421378 409912
188	BGS Recorded Mineral Sites Site Name: Common Side Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94854 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	892	1	421539 409960
189	BGS Recorded Mineral Sites Site Name: Ponker Hill Clay Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94862 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Fireclay Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	925	1	422370 409736
190	BGS Recorded Mineral Sites Site Name: Kirk Stiles Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94847 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	932	1	421430 409974

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	BGS Recorded Mineral Sites Site Name: Cumberworth Lane Coal Pit Location: Denby Dale, Holmfirth, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 95822 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14SE (E)	954	1	422605 408752
192	BGS Recorded Mineral Sites Site Name: Ponker Hill Clay Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94860 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Fireclay Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	963	1	422173 409931
193	BGS Recorded Mineral Sites Site Name: Kirk Stiles Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94851 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	970	1	421489 410029
193	BGS Recorded Mineral Sites Site Name: Kirk Stiles Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94850 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	980	1	421465 410034
194	BGS Recorded Mineral Sites Site Name: Toby Wood Quarry Location: Denby Dale, Holmfirth, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 95825 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Grenoside Sandstone Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8SE (S)	973	1	421851 408123
195	BGS Recorded Mineral Sites Site Name: Kirk Stiles Coal Pits Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94848 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17NE (N)	975	1	421370 409998

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
196	BGS Recorded Mineral Sites Site Name: Ponker Hill Clay Mines Location: Lower Cumberworth, Huddersfield, West Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 94861 Type: Underground Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Pennine Lower Coal Measures Formation Commodity: Fireclay Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	976	1	422315 409853
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NE (NE)	0	8	421712 409086
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NE (NE)	0	-	421712 409086
	Mining Instability Mining Evidence: Conclusive Rock Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NE (NE)	0	-	421712 409086
	Man-Made Mining Cavities Easting: 422100 Northing: 408900 Distance: 430 Quadrant Reference: A14 Quadrant Reference: SW Bearing Ref: SE Cavity Type: Not supplied Commodity: Fireclay Solid Geology Detail: No Details Superficial Geology No Details Detail:	A14SW (SE)	430	9	422100 408900
	Man-Made Mining Cavities Easting: 422200 Northing: 409000 Distance: 496 Quadrant Reference: A14 Quadrant Reference: SW Bearing Ref: E Cavity Type: Not supplied Commodity: Fireclay Solid Geology Detail: No Details Superficial Geology No Details Detail:	A14SW (E)	496	9	422200 409000
	Man-Made Mining Cavities Easting: 422300 Northing: 409800 Distance: 925 Quadrant Reference: A19 Quadrant Reference: NW Bearing Ref: NE Cavity Type: Not supplied Commodity: Fireclay Solid Geology Detail: No Details Superficial Geology No Details Detail:	A19NW (NE)	925	9	422300 409800
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	124	1	421759 408972

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	94	1	421654 409013
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	166	1	421572 408997
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	214	1	421602 409268
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	124	1	421759 408972
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	58	1	421672 409045
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	214	1	421602 409268
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	0	1	421712 409086

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
197	Contemporary Trade Directory Entries Name: Sita Ltd Location: Barnsley Road, Upper Cumberworth, Huddersfield, HD8 8NN Classification: Waste Disposal Services Status: Active Positional Accuracy: Automatically positioned to the address	A13SW (S)	313	-	421677 408775
198	Contemporary Trade Directory Entries Name: John L Turner Location: 41, Cumberworth Lane, Upper Cumberworth, Huddersfield, HD8 8PD Classification: Engineers - General Status: Active Positional Accuracy: Automatically positioned to the address	A12SE (W)	545	-	421202 408897
199	Contemporary Trade Directory Entries Name: Artifex Ltd Location: 3, Lane Hackings Green, Lower Cumberworth, HUDDERSFIELD, HD8 8PW Classification: Aluminium Fabricators Status: Inactive Positional Accuracy: Automatically positioned to the address	A19SW (NE)	680	-	422291 409442
200	Contemporary Trade Directory Entries Name: Star Chem-Dry Location: 35, Hollybank Avenue, Upper Cumberworth, Huddersfield, HD8 8NY Classification: Carpet, Curtain & Upholstery Cleaners Status: Inactive Positional Accuracy: Automatically positioned to the address	A7NE (SW)	692	-	421165 408664
201	Contemporary Trade Directory Entries Name: Northern Event Structures Location: 45, Shelley Woodhouse Lane, Lower Cumberworth, Huddersfield, HD8 8PL Classification: Marquee Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	820	-	422117 409798
201	Contemporary Trade Directory Entries Name: London & Scandivian Metallurgical Co Ltd Location: 45, Shelley Woodhouse Lane, Lower Cumberworth, Huddersfield, HD8 8PL Classification: Crushing Plants Status: Inactive Positional Accuracy: Automatically positioned to the address	A19NW (NE)	820	-	422117 409798
202	Contemporary Trade Directory Entries Name: Photogenic Location: A, 15, Cumberworth Lane, Upper Cumberworth, Huddersfield, HD8 8NU Classification: Photographic Processors Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	834	-	420939 408775
202	Contemporary Trade Directory Entries Name: B T Scott & Son Location: 16, Cumberworth Lane, Upper Cumberworth, Huddersfield, HD8 8NU Classification: French Polishing Status: Active Positional Accuracy: Automatically positioned to the address	A7NW (SW)	838	-	420950 408739
203	Contemporary Trade Directory Entries Name: Denby Dale Cast Products Ltd Location: 230, Cumberworth Lane, Lower Cumberworth, HUDDERSFIELD, HD8 8PR Classification: Concrete Products Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	837	-	422537 408943
203	Contemporary Trade Directory Entries Name: Denby Dale Cast Products Ltd Location: 230, Cumberworth Lane, Lower Cumberworth, Huddersfield, HD8 8PR Classification: Concrete Products Status: Inactive Positional Accuracy: Automatically positioned to the address	A14SE (E)	845	-	422548 408962
204	Contemporary Trade Directory Entries Name: Myers Building Suppliers Location: Station Yard, Wakefield Road, Denby Dale, Huddersfield, HD8 8QE Classification: Builders' Merchants Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	880	-	422414 408556
205	Contemporary Trade Directory Entries Name: A P Hollingworth Location: 71, Barnsley Road, Upper Cumberworth, Huddersfield, HD8 8NS Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	944	-	420827 408760

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
205	Contemporary Trade Directory Entries Name: A P Hollingworth Ltd Location: 71, Barnsley Road, Upper Cumberworth, Huddersfield, HD8 8NS Classification: Road Haulage Services Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (W)	944	-	420827 408760
206	Contemporary Trade Directory Entries Name: Pferd Location: Westleigh Hall, Wakefield Road, Denby Dale, Huddersfield, HD8 8QJ Classification: Tool Design, Manufacturers & Makers Status: Active Positional Accuracy: Automatically positioned to the address	A9NE (SE)	993	-	422509 408494

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
207	Ancient Woodland Name: Munchcliffe And Ward Woods Reference: 1103226 Area(m ²): 124835.07 Type: Plantation on Ancient Woodland	A8SW (S)	796	10	421521 408314
208	Ancient Woodland Name: New House Green And Burn Woods Reference: 1103223 Area(m ²): 149951.38 Type: Plantation on Ancient Woodland	A7SE (SW)	868	10	421255 408349
209	Ancient Woodland Name: Wither Wood Reference: 1103229 Area(m ²): 63056.56 Type: Plantation on Ancient Woodland	A14NE (E)	877	10	422589 409086
210	Areas of Adopted Green Belt Authority: Kirklees Metropolitan Borough Council Plan Name: Kirklees Unitary Development Plan Status: Adopted Plan Date: 1st March 1999	A13NE (NE)	0	11	421712 409086
211	Areas of Unadopted Green Belt Authority: Kirklees Metropolitan Borough Council Plan Name: Kirklees Local Plan Status: Submission Draft Plan Date: 25th April 2017	A13NE (NE)	0	11	421712 409086
212	Nitrate Vulnerable Zones Name: River Dearne Nvz Description: Surface Water Source: Environment Agency, Head Office	A13SW (SW)	5	4	421709 409083

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Environment Agency - Head Office Kirklees Metropolitan Borough Council - Planning Services	January 2020 June 2020 October 2017	Annual Rolling Update Annually Annual Rolling Update
Discharge Consents Environment Agency - North East Region	October 2022	Quarterly
Enforcement and Prohibition Notices Environment Agency - North East Region	March 2013	
Integrated Pollution Controls Environment Agency - North East Region	January 2009	
Integrated Pollution Prevention And Control Environment Agency - North East Region	July 2022	Quarterly
Local Authority Integrated Pollution Prevention And Control Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Environmental Health Department	April 2014 April 2014	Variable Variable
Local Authority Pollution Prevention and Controls Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Environmental Health Department	April 2014 April 2014	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Environmental Health Department	April 2014 April 2014	Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2022	
Pollution Incidents to Controlled Waters Environment Agency - North East Region	December 1998	
Prosecutions Relating to Authorised Processes Environment Agency - North East Region	July 2015	
Prosecutions Relating to Controlled Waters Environment Agency - North East Region	March 2013	
Registered Radioactive Substances Environment Agency - North East Region	June 2016	As notified
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	April 2012	
River Quality Chemistry Sampling Points Environment Agency - Head Office	April 2012	
Substantiated Pollution Incident Register Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	July 2022 July 2022	Quarterly Quarterly
Water Abstractions Environment Agency - North East Region	October 2022	Quarterly
Water Industry Act Referrals Environment Agency - North East Region	October 2017	
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually

Agency & Hydrological	Version	Update Cycle
Source Protection Zones Environment Agency - Head Office	September 2022	Bi-Annually
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2022	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2022	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2022	Quarterly
Flood Defences Environment Agency - Head Office	August 2022	Quarterly
OS Water Network Lines Ordnance Survey	October 2022	Quarterly
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	As notified
Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	November 2002	As notified
Historical Landfill Sites Environment Agency - Head Office	November 2022	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - North East Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	October 2022 October 2022	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	July 2022 July 2022	Quarterly Quarterly
Local Authority Landfill Coverage Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Planning Services	February 2003 February 2003	Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards Kirklees Metropolitan Borough Council - Planning Services	October 2018 October 2018	
Registered Landfill Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	March 2006 March 2006	Not Applicable Not Applicable
Registered Waste Transfer Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	April 2018 April 2018	
Registered Waste Treatment or Disposal Sites Environment Agency - North East Region - Ridings Area Environment Agency - North East Region - Yorkshire Area	June 2015 June 2015	

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	January 2022	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHS) Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements Kirklees Metropolitan Borough Council - Planning Services Barnsley Metropolitan Borough Council - Planning Department	August 2015 January 2016	Variable Variable
Planning Hazardous Substance Consents Kirklees Metropolitan Borough Council - Planning Services Barnsley Metropolitan Borough Council - Planning Department	August 2015 January 2016	Variable Variable
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2022	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	As notified
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	As notified
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	September 2022	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	September 2022	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2022	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2022	Quarterly
Gas Pipelines National Grid	October 2021	Bi-Annually
Underground Electrical Cables National Grid	May 2021	Bi-Annually
Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	February 2021	Bi-Annually
Areas of Adopted Green Belt Barnsley Metropolitan Borough Council - Planning Department Kirklees Metropolitan Borough Council	July 2022 July 2022	Quarterly Quarterly
Areas of Unadopted Green Belt Barnsley Metropolitan Borough Council - Planning Department Kirklees Metropolitan Borough Council	July 2022 July 2022	Quarterly Quarterly
Areas of Outstanding Natural Beauty Natural England	August 2022	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	February 2021	Bi-Annually
Marine Nature Reserves Natural England	July 2019	Bi-Annually
National Nature Reserves Natural England	January 2021	Bi-Annually
National Parks Natural England	February 2018	Bi-Annually
Nitrate Sensitive Areas Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 June 2017	Bi-Annually
Ramsar Sites Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest Natural England	February 2021	Bi-Annually
Special Areas of Conservation Natural England	July 2020	Bi-Annually
Special Protection Areas Natural England	February 2021	Bi-Annually

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Kirklees Metropolitan Borough Council - Environmental Health Department West Riding House, 9 Manchester Road, Huddersfield, West Yorkshire, HD1 3HH	Telephone: 01484 221000 Email: customer.relations@kirklees.gov.uk Website: www.kirklees.gov.uk
4	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	Kirklees Metropolitan Borough Council - Planning Services PO BOX B93, Civic Centre III, Off Market Street, Huddersfield, West Yorkshire, HD1 2JR	Telephone: 01484 221000 Fax: 01484 221613 Website: www.kirklees.gov.uk
7	Health and Safety Executive 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
8	The Coal Authority - Property Searches 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
9	Stantec UK Ltd Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
10	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
11	Kirklees Metropolitan Borough Council Town Hall, Civic Centre, Huddersfield, West Yorkshire, HD1 2TA	Telephone: 01484 221000 Fax: 01484 442768 Website: www.kirklees.gov.uk
12	Barnsley Metropolitan Borough Council - Planning Department Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN	Telephone: 01226 770770 Fax: 01226 772599 Website: www.barnsley.gov.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

Industrial Land Use Map

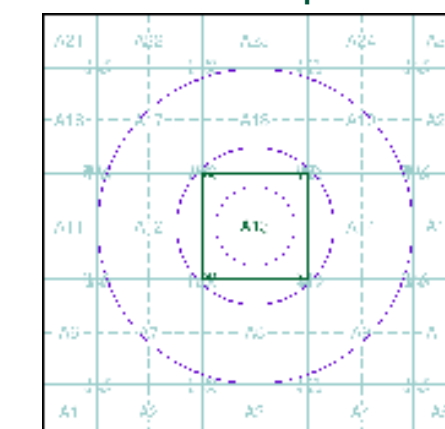
General

- Amenity Filter
- Specified Exclusion
- Boiling Reference Point
- Site
- Map ID

Industrial Land Use

- Coalmine - Trade Wreck - Fuel
- Coalmine - Fuel
- Gas Pipeline
- Underground Pipeline Closure

Industrial Land Use Map - Slice A



Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth,
 HUDDERSFIELD, HD8 8NS

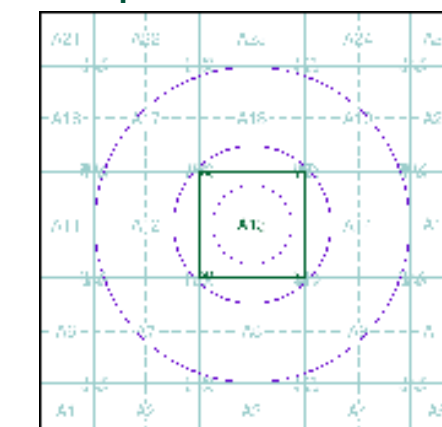
General

- Study Area
- Search Buffer
- Exclusion Zone

Agency and Hydrological (Flood)

- Flooded from River or Lake or Sea within 100m (Zone 1)
- Flooded from River or Lake or Sea within 100m (Zone 2)
- Area Benefiting from Flood Defence
- Flood Risk along Roads
- Flood Defence

Flood Map - Slice A



Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth,
 HUDDERSFIELD, HD8 8NS

General

- Station Location
- Station Boundary
- ✕ Boundary Line
- Map 7
- Station Boundary

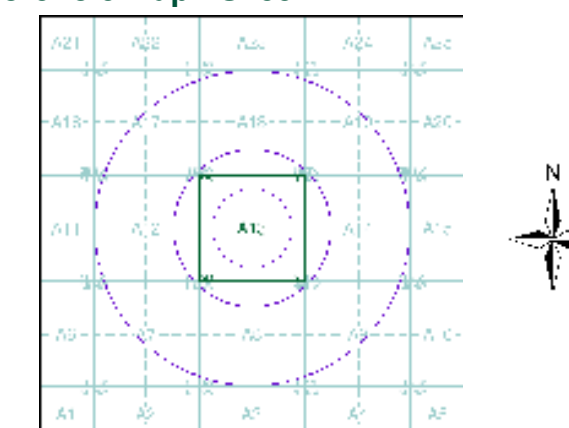
Agency and Hydrological (Boreholes)

- Borehole
- Borehole
- Borehole
- Borehole
- Borehole
- Borehole

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth,
 HUDDERSFIELD, HD8 8NS

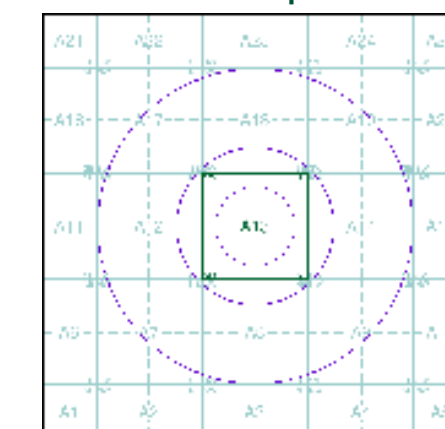
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data

- | | |
|--------------|-------------------------|
| Canal | Drain |
| Reservoir | Other |
| Foreshore | Lake |
| Marsh | Transfer |
| Tidal River | Lock Or Flight Of Locks |
| Inland River | Sea |

OS Water Network Map - Slice A

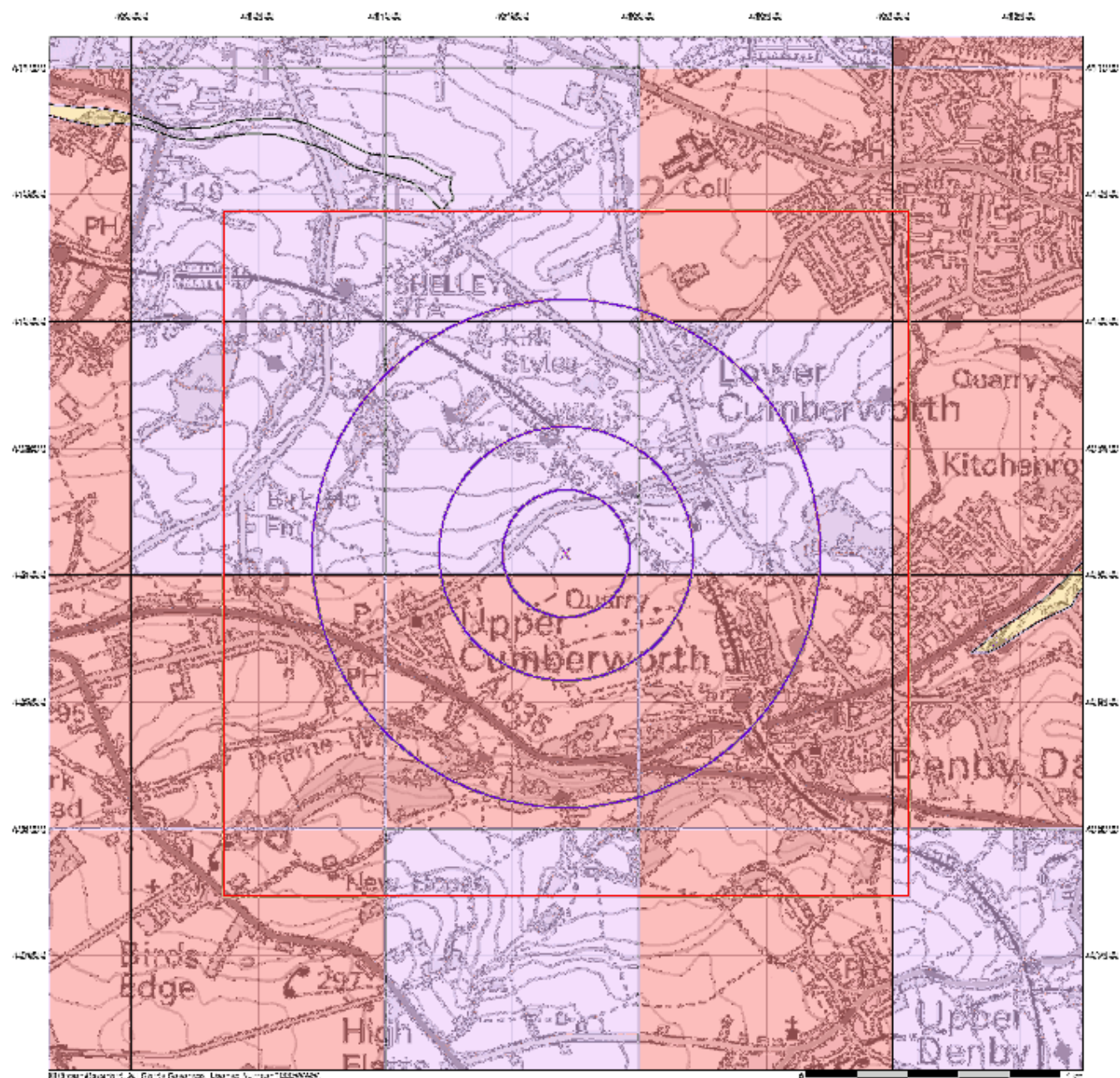


Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth,
 HUDDERSFIELD, HD8 8NS



11/10/2022 14:12:12

Envirocheck[®]

LANDMARK INFORMATION GROUP

Groundwater Vulnerability

General

Boundary Line
 Search Buffer
 Existing Reference Point
 Slice
 Road

Agency and Hydrological

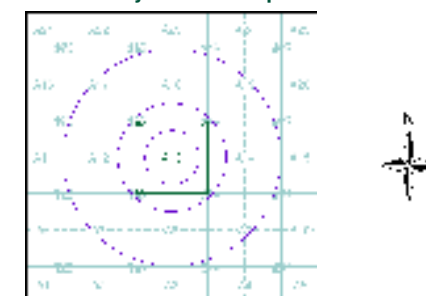
Bedrock Aquifers

High Vulnerability, Principal Aquifer
 High Vulnerability, Secondary Aquifer
 Medium Vulnerability, Principal Aquifer
 Medium Vulnerability, Secondary Aquifer
 Low Vulnerability, Principal Aquifer
 Low Vulnerability, Secondary Aquifer
 Unproductive Aquifer
 Soluble Rock

Superficial Aquifers

High Vulnerability, Principal Aquifer
 High Vulnerability, Secondary Aquifer
 Medium Vulnerability, Principal Aquifer
 Medium Vulnerability, Secondary Aquifer
 Low Vulnerability, Principal Aquifer
 Low Vulnerability, Secondary Aquifer

Site Sensitivity Context Map - Slice A



Order Details

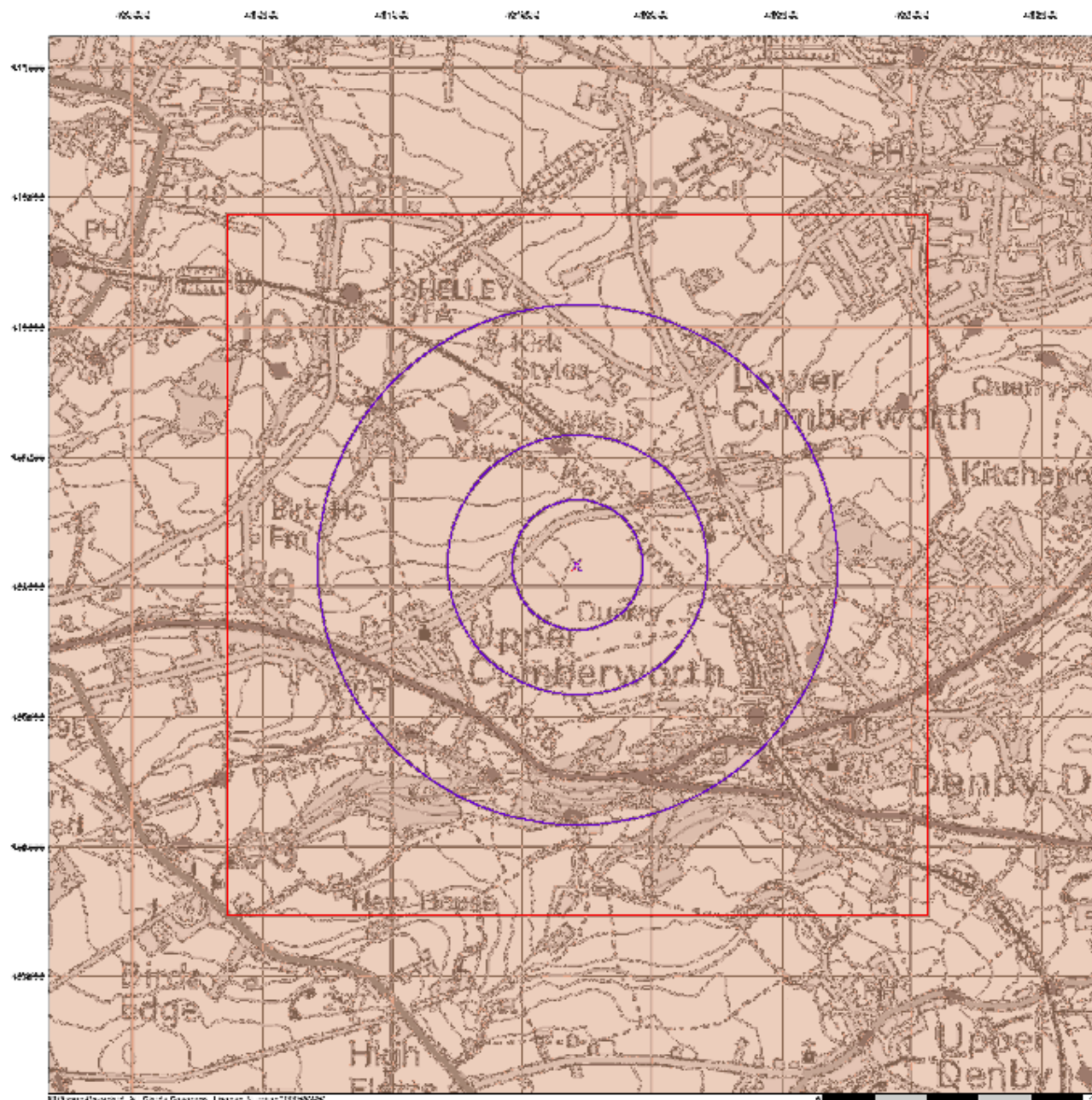
Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth, HUDDERSFIELD, HD8 8NS

Landmark
 LANDMARK INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk



11/10/2022 14:14:14 - 11/10/2022 14:14:14 - 11/10/2022 14:14:14

Bedrock Aquifer Designation

General

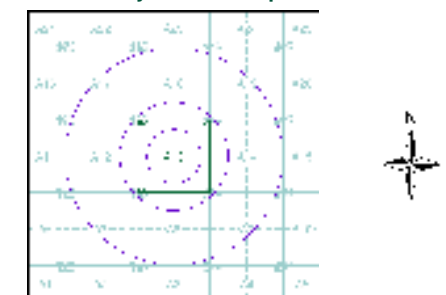
- Boundary Line
- Search Buffer
- Bedrock Point
- Site
- Grid

Agency and Hydrological

Geological Classes

- Productive Aquifer
- Secondary Aquifer
- Secondary Aquifer
- Secondary Underlain
- Unproductive Strata
- Unknown
- Unknown (area and land use)

Site Sensitivity Context Map - Slice A

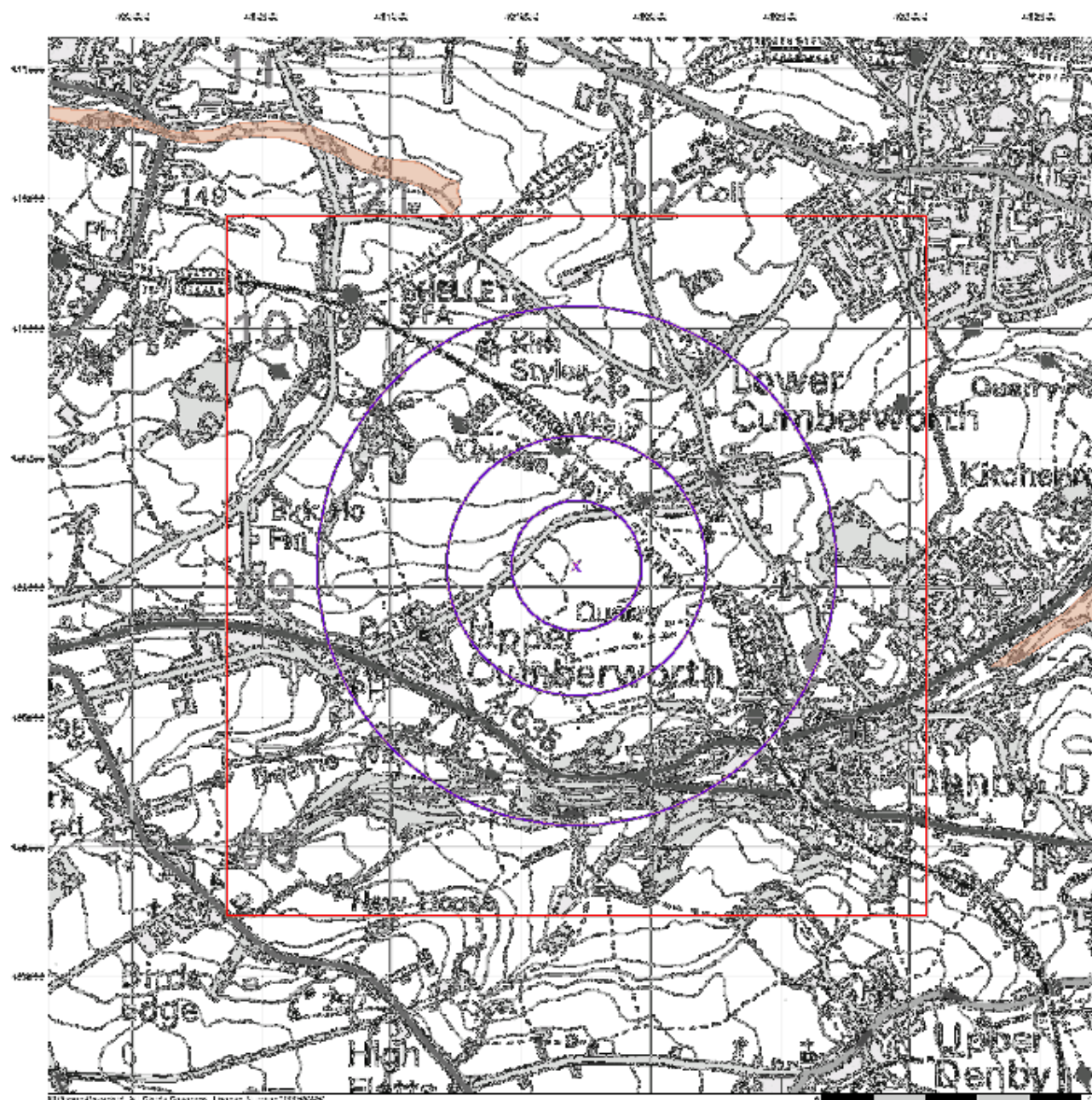


Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth, HUDDERSFIELD, HD8 8NS



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Superficial Aquifer Designation

General

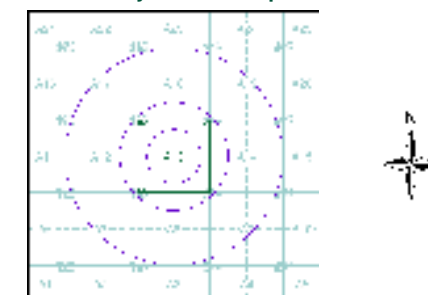
- Boundary ID
- Search Buffer ID
- Existing Reference Point
- Slice
- Grid ID

Agency and Hydrological

Geological Classes

- Productive Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (seas and land slip)

Site Sensitivity Context Map - Slice A

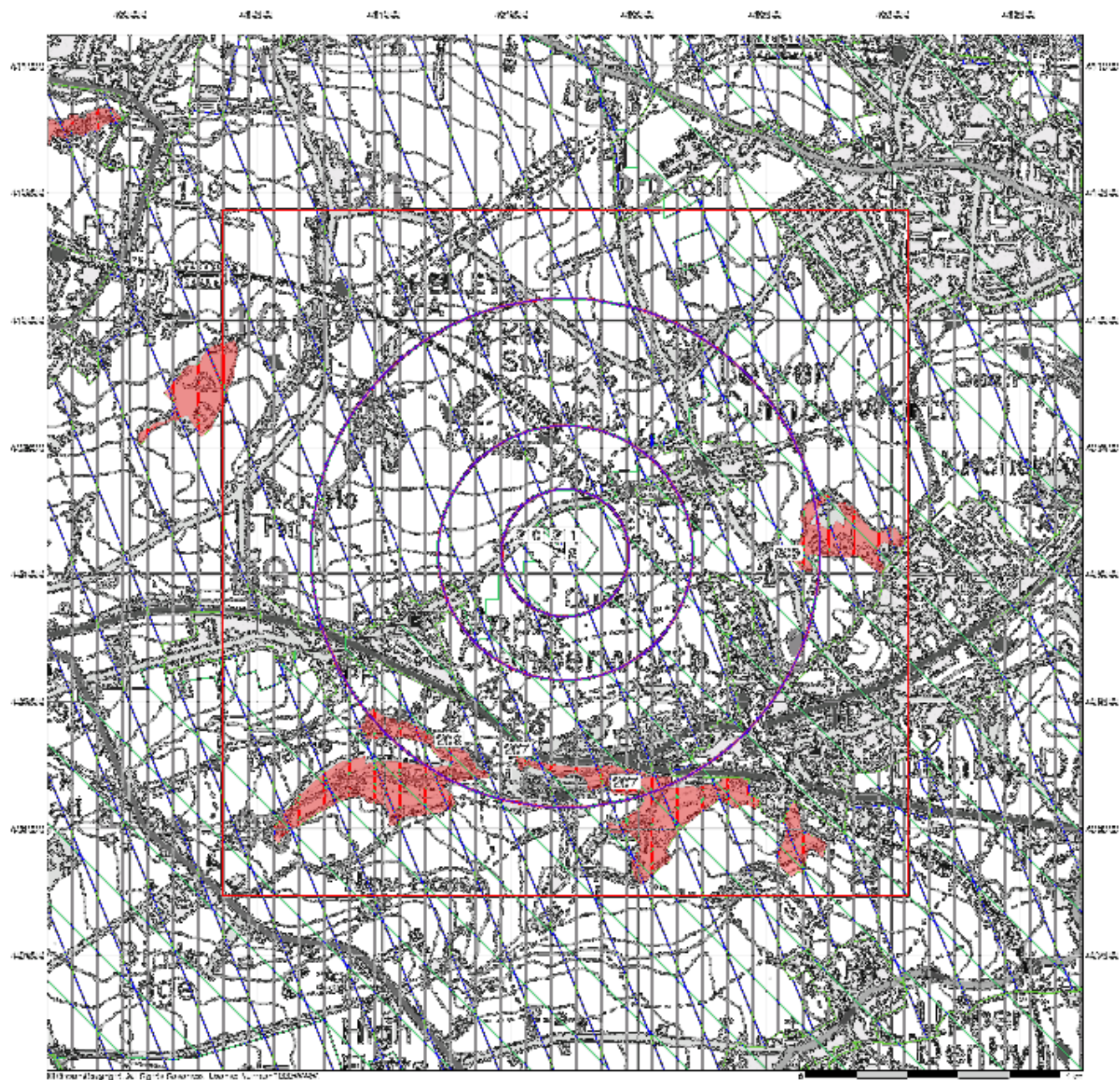


Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

Star Inn, 64, Barnsley Road, Upper Cumberworth, HUDDERSFIELD, HD8 8NS



Sensitive Land Uses

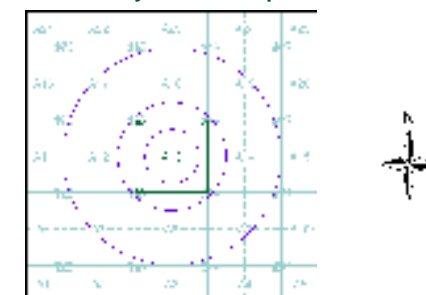
General

- Boundary Line
- Search Buffer (m)
- Existing Reference Point
- Slice
- Road

Sensitive Land Uses

- Ancient Woodland
- Ancient Wooded Grassland
- Ancient Wooded Pasture
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)
- Ancient Wooded Pasture (Moorland)

Site Sensitivity Context Map - Slice A



Order Details

Order Number: 304985535_1_1
 Customer Ref: Bromley 2
 National Grid Reference: 421710, 409090
 Slice: A
 Site Area (Ha): 0.01
 Search Buffer (m): 1000

Site Details

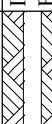
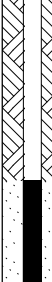
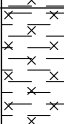
Star Inn, 64, Barnsley Road, Upper Cumberworth, HUDDERSFIELD, HD8 8NS

Appendix B

Borehole Logs

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1	
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2		
Contractor Site Investigation Services				Sheet 1 of 8	

RUN DETAILS						STRATA			Geology	Instrument/Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			236.72		(0.40) 0.40			TOP SOIL		
			235.72		(1.00) 1.40			Orange/brown silty CLAY		
			235.32		(0.40) 1.80			Stiff brown silty CLAY with brown stone fragments		
			234.72		(0.60) 2.40			Moderately strong light grey/brown MUDSTONE		
			233.12		(1.60) 4.00			Moderately strong light brown SILTSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water strike at 20m strong
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

AGS3 UK DH BROMLEY FARM PIEZO GPJ GINT STD AGS 3_1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2	
Contractor Site Investigation Services				Sheet 2 of 8

[illegible]

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
					6.5						water strike at 20m strong
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2	
Contractor Site Investigation Services				Sheet 3 of 8

[illegible]

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water strike at 20m strong
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1	
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2		
Contractor Site Investigation Services				Sheet 4 of 8	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
Date						Discontinuities	Detail	Main		
								Moderately strong grey MUDSTONE <i>(continued)</i>		
			223.12		14.00					
					(1.50)			Moderately strong light grey SHALE		
			221.62		15.50					
					(0.50)			Black MUDSTONE		
			221.12		16.00					

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water strike at 20m strong
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2	
Contractor Site Investigation Services				Sheet 5 of 8

RUN DETAILS						STRATA		Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Main		
							Strong light grey MUDSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
					20						water strike at 20m strong
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44					Logged By Driller/DS

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1	
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2		
Contractor Site Investigation Services				Sheet 6 of 8	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								Strong light grey MUDSTONE <i>(continued)</i>		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water strike at 20m strong

All dimensions in metres Scale 1:25	Client Wavin	Method/ Plant Used Berretta T44	Logged By Driller/DS
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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2	
Contractor Site Investigation Services				Sheet 7 of 8

RUN DETAILS					STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail		
							Strong light grey MUDSTONE <i>(continued)</i>		
			210.12		27.00		Strong to very strong grey MUDSTONE with layers of iron pyrites		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water strike at 20m strong
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

GS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 1	
Job No 11013	Date 23-05-12 23-05-12	Ground Level (m) 237.12	Co-Ordinates () E 421,461.8 N 408,735.2		
Contractor Site Investigation Services				Sheet 8 of 8	

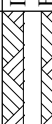
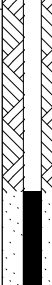
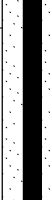
RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								Strong to very strong grey MUDSTONE with layers of iron pyrites <i>(continued)</i>		
	</									

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water strike at 20m strong
All dimensions in metres Scale 1:25			Client	Wavin			Method/ Plant Used	Berretta T44			Logged By Driller/DS

AGS3 UK DH BROMLEY FARM PIEZO GPJ GINT STD AGS 3_1.GDT 27/06/12

DRILLHOLE LOG

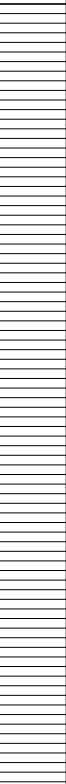
Project Bromley Farm Piezometer Installation				DRILLHOLE No 2	
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0		
Contractor Site Investigation Services				Sheet 1 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			232.93		(0.40) 0.40			TOPSOIL		
			231.93		(1.00) 1.40			Silty CLAY BACKFILL		
			231.33		(0.60) 2.00			Soft sandy CLAY		
			229.33		(2.00) 4.00			Weak light brown SILTSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2	
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0		
Contractor Site Investigation Services				Sheet 2 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			228.33		(1.00) 5.00			Weak light brown SANDSTONE		
			227.93		(0.40) 5.40			lost flush		
					(3.60)			MUDSTONE flush return		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2	
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0		
Contractor Site Investigation Services				Sheet 3 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			224.33		9.00			MUDSTONE flush return <i>(continued)</i>		
								Moderately strong grey MUDSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 4 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
					14.5						water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44					Logged By Driller/DS

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 5 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 6 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 7 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 8 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

GS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 9 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 10 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2	
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0		
Contractor Site Investigation Services				Sheet 11 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								Moderately strong grey MUDSTONE <i>(continued)</i>		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
All dimensions in metres Scale 1:25							Client Wavin	Method/ Plant Used Berretta T44			Logged By Driller/DS

AGS3 UK DH BROMLEY FARM PIEZO GPJ GINT STD AGS 3_1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 2
Job No 11013	Date 24-05-12 25-05-12	Ground Level (m) 233.33	Co-Ordinates () E 421,540.3 N 409,107.0	
Contractor Site Investigation Services				Sheet 12 of 12

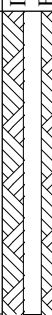
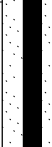
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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											water seepage noted at 14.50 on pulling of rods
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4		
Contractor Site Investigation Services				Sheet 1 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			229.15		(1.00) 1.00			TOP SOIL		
			228.35		(0.80) 1.80			Light brown sandy SILTSTONE		
			227.75		(0.60) 2.40			Light brown SILTSTONE weathered		
			226.65		(1.10) 3.50			Moderately strong dark brown MUDSTONE		
								Moderately strong light brown MUDSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4		
Contractor Site Investigation Services				Sheet 2 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
					(1.30)			Moderately strong light brown MUDSTONE <i>(continued)</i>		
			225.35		4.80			Moderately strong light grey MUDSTONE		
					(6.00)					

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

AGS3 UK DH BROMLEY FARM PIEZO GPJ GINT STD AGS 3_1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4		
Contractor Site Investigation Services				Sheet 3 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								Moderately strong light grey MUDSTONE <i>(continued)</i>		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				
				Sheet 4 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				Sheet 5 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44					Logged By Driller/DS

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				Sheet 6 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4		
Contractor Site Investigation Services				Sheet 7 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
					(8.00)			Moderately strong grey MUDSTONE <i>(continued)</i>		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				
				Sheet 8 of 12

[illegible]

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
					32						very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44					Logged By Driller/DS

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				
				Sheet 9 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4		
Contractor Site Investigation Services				Sheet 10 of 12	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								Strong grey MUDSTONE <i>(continued)</i>		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25			Client	Wavin			Method/ Plant Used	Berretta T44			Logged By Driller/DS

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				Sheet 11 of 12

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.15	Co-Ordinates () E 421,610.3 N 409,036.4	
Contractor Site Investigation Services				Sheet 12 of 12

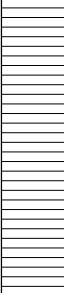
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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
											very slow water noticed at 32m
All dimensions in metres Scale 1:25		Client Wavin				Method/ Plant Used Berretta T44				Logged By Driller/DS	

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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3A	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.00	Co-Ordinates () E 421,610.0 N 409,046.0		
Contractor Site Investigation Services				Sheet 1 of 4	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			229.20		(0.80) 0.80			TOP SOIL		
			228.60		(0.60) 1.40			Brown CLAY		
			228.30		(0.30) 1.70			Light brown SILTSTONE weathered		
			227.00		(1.30) 3.00			Moderately strong light brown SILTSTONE		
					(1.50)			Moderately strong grey MUDSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3A	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.00	Co-Ordinates () E 421,610.0 N 409,046.0		
Contractor Site Investigation Services				Sheet 2 of 4	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
			225.50		4.50			Moderately strong grey MUDSTONE <i>(continued)</i>		
								Moderately strong light grey MUDSTONE		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	

All dimensions in metres Scale 1:25	Client Wavin	Method/ Plant Used Berretta T44	Logged By Driller/DS
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DRILLHOLE LOG

Project Bromley Farm Piezometer Installation				DRILLHOLE No 3A
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.00	Co-Ordinates () E 421,610.0 N 409,046.0	
Contractor Site Investigation Services				
				Sheet 3 of 4

RUN DETAILS					STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
					Discontinuities	Detail	Main		
					(7.00)		Moderately strong light grey MUDSTONE <i>(continued)</i>		
			218.50		11.50				
			218.30		(0.20) 11.70		COAL		
							Void		

[illegible]

All dimensions in metres Scale 1:25	Client Wavin	Method/ Plant Used Berretta T44	Logged By Driller/DS
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AGS3 UK DH BROMLEY FARM PIEZO.GPJ GINT STD AGS 3 1.GDT 27/06/12

DRILLHOLE LOG

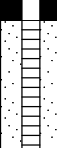
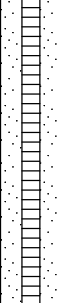
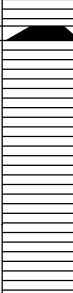
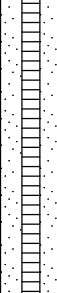
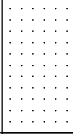
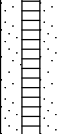
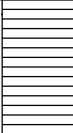
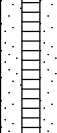
Project Bromley Farm Piezometer Installation				DRILLHOLE No 3A	
Job No 11013	Date 24-05-12 24-05-12	Ground Level (m) 230.00	Co-Ordinates () E 421,610.0 N 409,046.0		
Contractor Site Investigation Services				Sheet 4 of 4	

RUN DETAILS						STRATA		Geology	Instrument/ Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
Date						Discontinuities	Detail		
							Void <i>(continued)</i>		
			215.80		(2.50) 14.20				
					(0.80) 15.00		Soft/loose ground		
			215.00		15.00				

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing	Core Dia mm	Strike	Water Standing	From	To	Type	Returns	
All dimensions in metres Scale 1:25			Client Wavin			Method/ Plant Used Berretta T44			Logged By Driller/DS		

BOREHOLE LOG

Project Bromley Farm Extension Monitoring Boreholes				BOREHOLE No BH1	
Job No 21067	Date 28-06-21 29-06-21	Ground Level (m)	Co-Ordinates ()		
Contractor Ace Drilling Services				Sheet 1 of 2	

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology	Instrument/Backfill
						0.30	TOPSOIL (Dark brown sandy SILT)		
						0.70	Slightly sandy, silty CLAY		
						(3.50)	Grey Weathered Mudstone		
						4.20	Gray Mudstone		
						(6.70)			
						10.90	Coal		
						11.20	Grey Mudstone with occasional Ironstone bands		
						(5.40)			
						16.60	Sandstone		
						(3.10)			
						19.70	Grey Mudstone with occasional Ironstone bands		
						(10.10)			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											1 - Extensive notes relating to the borehole kept on site diary sheets.

All dimensions in metres Scale 1:156.25	Client Hepworth-Wavin	Method/ Plant Used Dando Truck-Mounted	Logged By SEL/Ace Drilling
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BH LOG 20M 21067 BROMLEY FARM EXTENSION GPJ GINT STD AGS 3.1.GDT 6/8/21

BOREHOLE LOG

Project Bromley Farm Extension Monitoring Boreholes				BOREHOLE No BH1	
Job No 21067	Date 28-06-21 29-06-21	Ground Level (m)	Co-Ordinates ()		
Contractor Ace Drilling Services				Sheet 2 of 2	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						29.80	Grey Mudstone with occasional Ironstone bands (<i>continued</i>)		
						30.60	Dark grey Mudstone		
						(1.60) 32.20	Sandstone		
						(12.80)	Grey Mudstone		
						45.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
30-07-21	00.00	45.00			36						1 - Extensive notes relating to the borehole kept on site diary sheets.

All dimensions in metres Scale 1:156.25	Client Hepworth-Wavin	Method/ Plant Used Dando Truck-Mounted	Logged By SEL/Ace Drilling
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BH LOG 20M 21067 BROMLEY FARM EXTENSION GPJ GINT STD AGS 3.1 GDT 6/8/21

BOREHOLE LOG

Project Bromley Farm Extension Monitoring Boreholes				BOREHOLE No BH2
Job No 21067	Date 01-07-21 02-07-21	Ground Level (m)	Co-Ordinates ()	
Contractor Ace Drilling Services				Sheet 1 of 2

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						0.30	TOPSOIL (Dark brown sandy SILT)		
						0.60	Sandy CLAY		
						(4.50)	Weathered Sandstone (Sand & Gravel)		
						5.10			
						(1.60)	Coal with clay bands		
						6.70			
						6.90	Seatearth		
							Grey Mudstone with clay bands (clay bands reducing with depth)		
						(10.50)			
						17.40			
						17.70	Coal		
						(3.90)	Grey Mudstone with occasional Ironstone bands		
						21.60			
						(3.90)	Sandstone		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											1 - Extensive notes relating to the borehole kept on site diary sheets.

All dimensions in metres Scale 1:156.25	Client Hepworth-Wavin	Method/ Plant Used Dando Truck-Mounted	Logged By SEL/Ace Drilling
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BH LOG 20M 21067 BROMLEY FARM EXTENSION GPJ GINT STD AGS 3.1 GDT 6/8/21

BOREHOLE LOG

Project Bromley Farm Extension Monitoring Boreholes				BOREHOLE No BH2	
Job No 21067	Date 01-07-21 02-07-21	Ground Level (m)	Co-Ordinates ()		
Contractor Ace Drilling Services				Sheet 2 of 2	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						25.50			
						(8.60)	Grey Mudstone with occasional Ironstone bands		
						34.10			
						(1.90)	Dark grey Mudstone		
						36.00			
						(1.40)	Sandstone		
						37.40			
						(7.60)	Grey Mudstone with occasional Ironstone bands		
						45.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
03-07-21	00.00	45.00			14.2						1 - Extensive notes relating to the borehole kept on site diary sheets.

All dimensions in metres Scale 1:156.25	Client Hepworth-Wavin	Method/ Plant Used Dando Truck-Mounted	Logged By SEL/Ace Drilling
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BH LOG 20M 21067 BROMLEY FARM EXTENSION GPJ GINT STD AGS 3.1 GDT 6/8/21

BOREHOLE LOG

Project Bromley Farm Extension Monitoring Boreholes				BOREHOLE No BH3
Job No 21067	Date 30-06-21 30-06-21	Ground Level (m)	Co-Ordinates ()	
Contractor Ace Drilling Services				Sheet 1 of 2

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology	Instrument/Backfill
						0.30	TOPSOIL (Dark brown sandy SILT)		
						0.60	Sandy CLAY		
						(2.60)	Weathered Sandstone (Sand & Gravel)		
						3.20			
						(1.20)	VOID		
						4.40			
							Grey Mudstone with occasional Ironstone bands		
						(11.90)			
									
									
					16.30				
					16.60	Coal			
						Grey Mudstone with occasional Ironstone bands			
					(3.10)				
					19.70				
						Sandstone			
					(3.60)				
					23.30				
						Grey Mudstone			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											1 - Extensive notes relating to the borehole kept on site diary sheets. 2 - Casing utilised to 5m (underside of encountered void).

BBH LOG 20M 21067 BROMLEY FARM EXTENSION.GPJ GINT STD AGS3 1.GDT 6/8/21

All dimensions in metres Scale 1:156.25	Client	Hepworth-Wavin	Method/ Plant Used	Dando Truck-Mounted	Logged By SEL/Ace Drilling
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BOREHOLE LOG

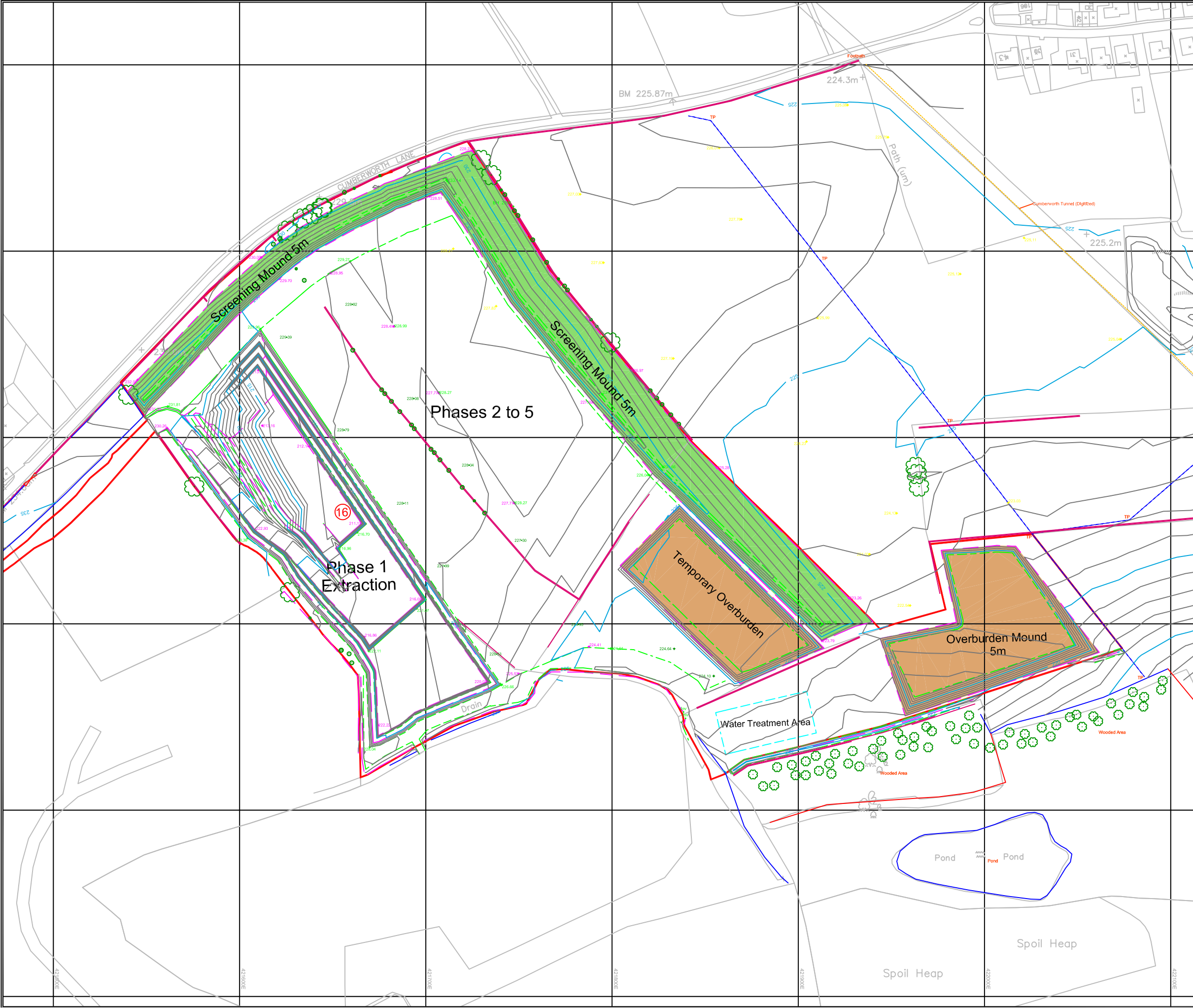
Project Bromley Farm Extension Monitoring Boreholes				BOREHOLE No BH3
Job No 21067	Date 30-06-21 30-06-21	Ground Level (m)	Co-Ordinates ()	
Contractor Ace Drilling Services				Sheet 2 of 2

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	Geology	Instrument/Backfill
							Grey Mudstone <i>(continued)</i>		
						(10.90)			
						34.20			
						(1.60) 35.80	Sandstone		
							Grey Mudstone with occasional Ironstone bands		
						(9.20)			
						45.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
01-07-21	00.00	45.00			16.1						1 - Extensive notes relating to the borehole kept on site diary sheets. 2 - Casing utilised to 5m (underside of encountered void).

Appendix C

Development Phasing & Restoration Drawings



Planning Application Area (8.4 Hectares)

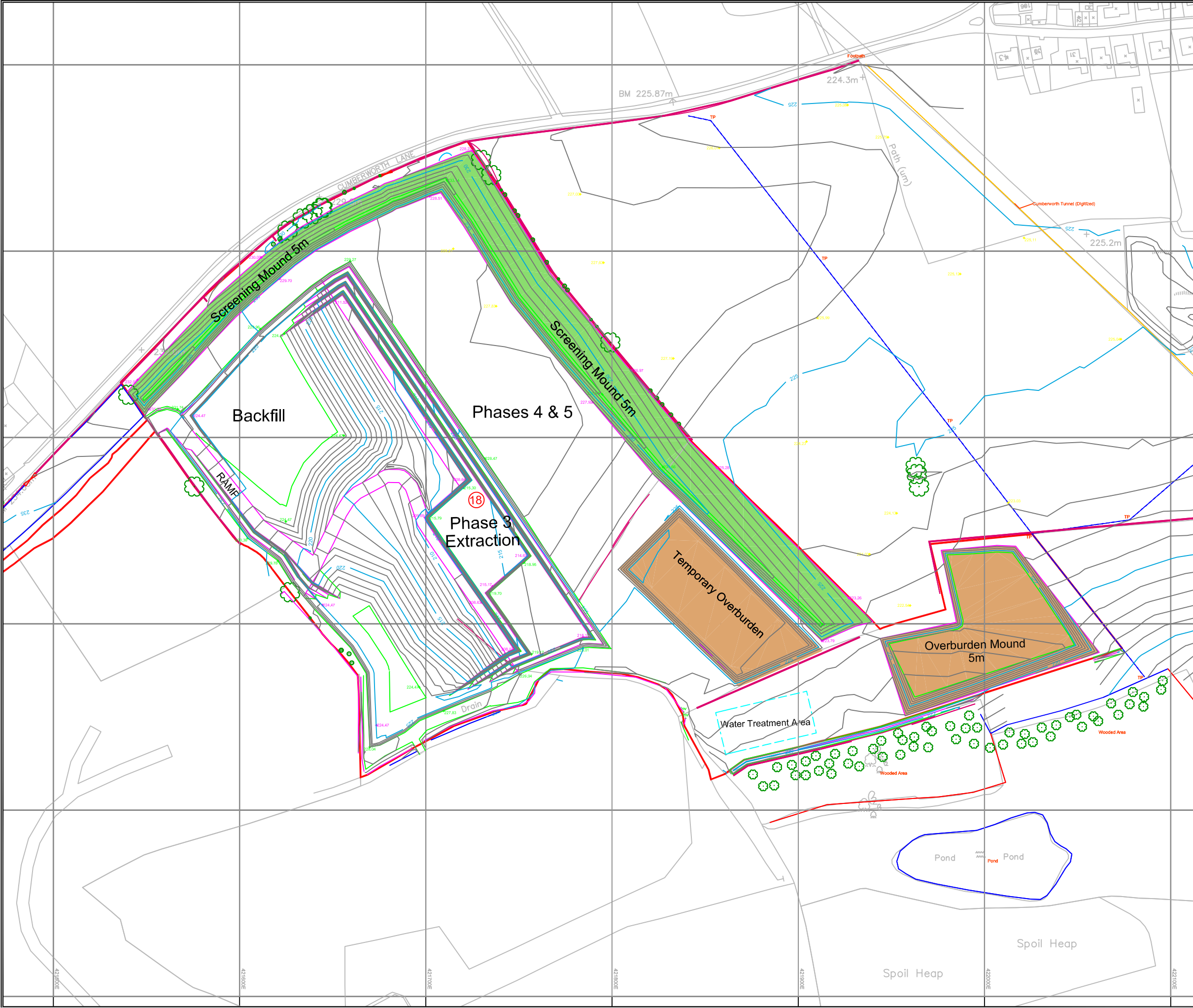
Top soil and subsoil screening mound

Overburden storage mound

16

Depth of Base

Rev	Description	Date	Drawn	Chkd
Client:				
				
Project:				
BROMLEY FARM QUARRY EXTENSION				
Plan Title:				
PHASE 1 EXTRACTION				
Silkstone Environmental Ltd www.silkstoneenvironmental.co.uk 7, Hall Annex, Thorncliffe Park, Chapeltown, Sheffield, S35 2PH Tel (0114) 2573487 Fax (0114) 2573459				
Project No. 22007		Dwg No. X22007/503		Rev
Date: Dec 22	Drawn: MS	Chkd: MB	Scale: 1:2000 @ A3	
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Planning Application Area (8.4 Hectares)

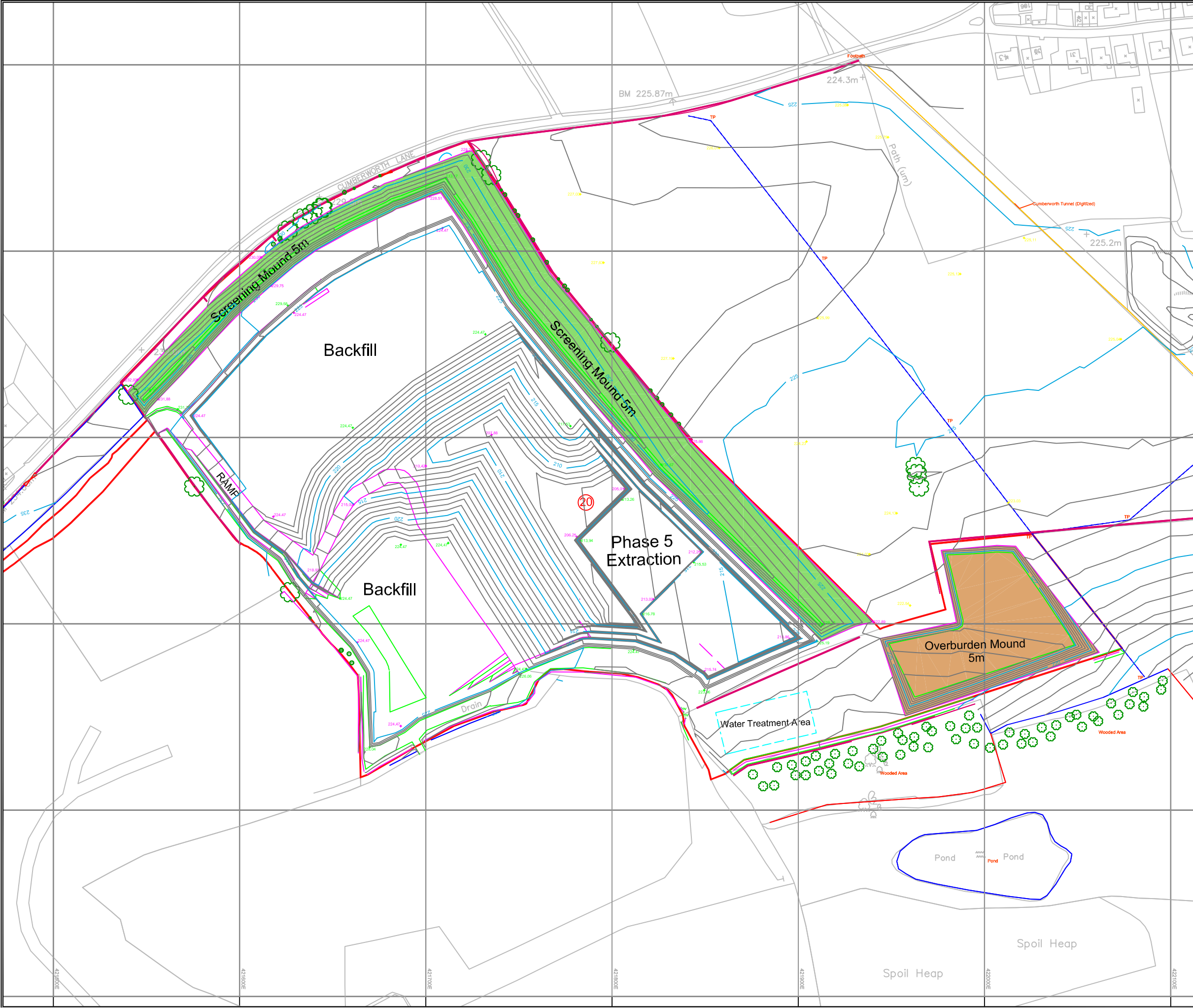
Top soil and subsoil screening mound

Overburden storage mound

16

Depth of Base

Rev	Description	Date	Drawn	Chkd
Client: 				
Project: BROMLEY FARM QUARRY EXTENSION				
Plan Title: PHASE 3 EXTRACTION				
Silkstone Environmental Ltd www.silkstoneenvironmental.co.uk 7, Hall Annex, Thorncliffe Park, Chapeltown, Sheffield, S35 2PH Tel (0114) 2573487 Fax (0114) 2573459				
Project No. 22007		Dwg No. 22007/504		Rev
Date: Dec 22	Drawn: MS	Chkd: MB	Scale: 1:2000 @ A3	
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Planning Application Area (8.4 Hectares)

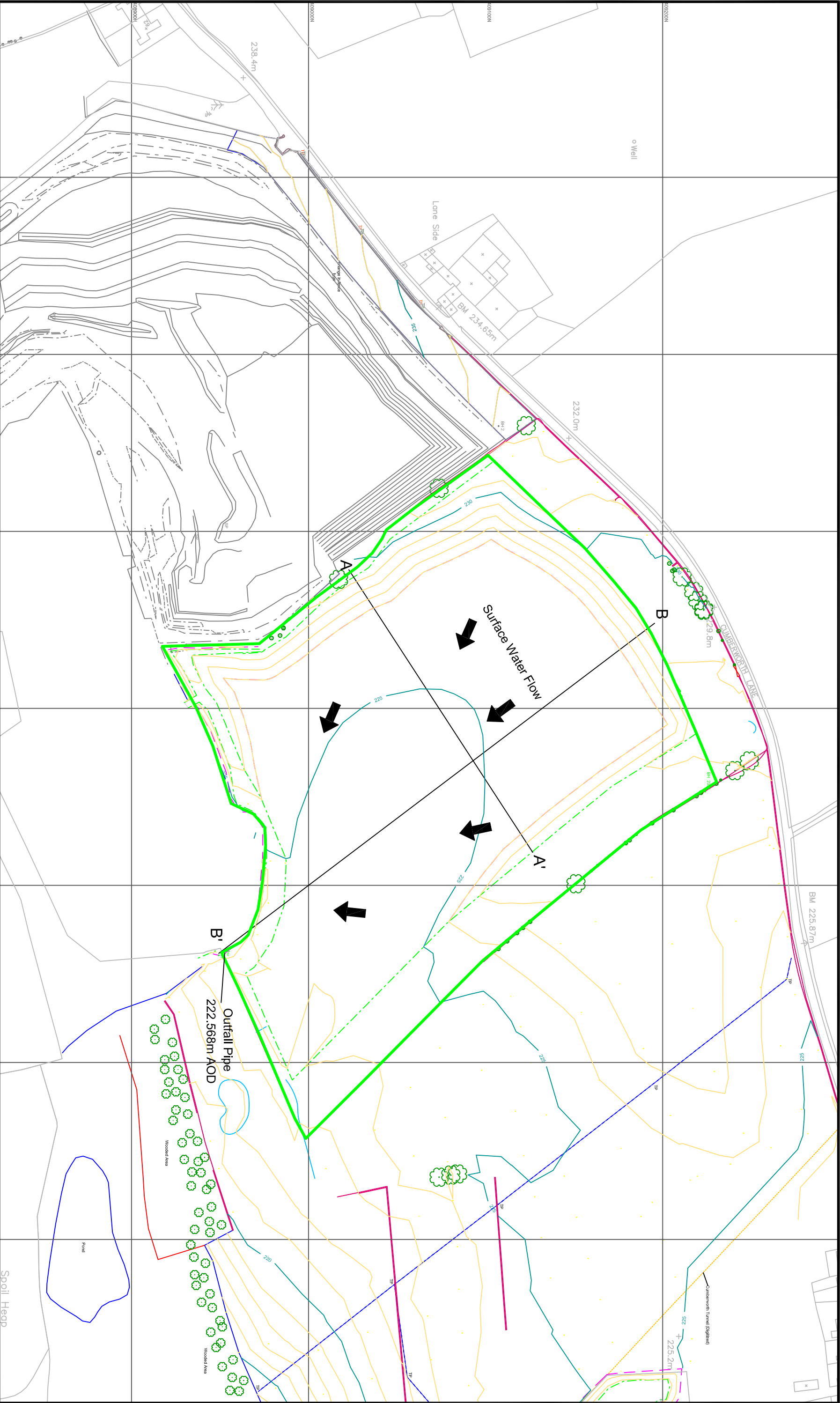
Top soil and subsoil screening mound

Overburden storage mound

16

Depth of Base

Rev	Description	Date	Drawn	Chkd
Client: 				
Project: BROMLEY FARM QUARRY EXTENSION				
Plan Title: PHASE 5 EXTRACTION				
Silkstone Environmental Ltd www.silkstoneenvironmental.co.uk 7, Hall Annex, Thorncliffe Park, Chapeltown, Sheffield, S35 2PH Tel (0114) 2573487 Fax (0114) 2573459				
Project No. 22007		Dwg No. 22007/505		Rev
Date: Dec 22	Drawn: MS	Chkd: MB	Scale: 1:2000 @ A3	
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Silkstone

Environmental Ltd

www.silkstoneenvironmental.co.uk
7, Hall Amex, Thornecliffe Park, Chapelown, Sheffield, S35 2PH
Tel (0114) 2573487 Fax (0114) 2573459



Waste Recovery
Area



Normal contour
(mAOD)



Prominent contour
(mAOD)

A—————A'

Cross section location

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Rev	Description	Date	By	Chkd
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Client:



Project: **BROMLEY FARM EXTENSION**

Plan Title: **Proposed restoration profile**

Drawing No.
14138/600

Rev

Project No. 14138

Date: Mar '15

Scale: 1:2000 @ A3

Drawn: MS

Chkd: PS