The process of refining the preliminary CSM, involves semi quantitative risk assessment, which is split into two parts:

- The comparison of the soil analysis results against generic soil screening values, to establish sources of contamination (Generic Quantitative Risk Assessment); and,

- A qualitative risk assessment to identify any plausible pollutant linkages from contaminant through to receptor.

If the screening levels are exceeded and the qualitative risk assessment identifies a plausible pollutant linkage, then assessment could move onto another stage, which includes more sophisticated Detailed Quantitative Risk Assessment (DQRA), or remedial action taken to break the pollutant linkages. The benefits of undertaking a DQRA must be weighed against the likelihood that it will bring about cost savings in the proposed remediation.

The initial screening levels currently used by Sirius are as follows:

CLEA (2002).
The current best practice soil screening values for use in UK are derived using CLEA (2002) published by DEFRA. A number of standard land uses are defined within CLEA (2002) for which generic soil guideline values (SGVs) can be derived. Currently, published SGVs are only available for a limited number of parameters. SGVs for other determinants are currently awaited.

Sludge (Use in Agriculture) Regulations (1989).
In the case of assessing phytotoxic risk from contaminants such as copper, zinc, nickel, mercury, lead and cadmium, comparison of site soil results has been made to generic criteria set out in the Sludge (use in agriculture) Regulations (1989).

Dutch Ministry of Housing, Spatial Planning and Environment (2000).
In the absence of SGVs for various determinants reference is first made to the intervention and target values established by the Dutch Ministry of Housing, Spatial Planning and Environment 2000.

Soil Leachability and Groundwater Results.
For the purposes of this report, a screening assessment has been carried out using leachability data obtained from tests performed on soils for this site, to asses the potential risks to local controlled waters and additionally selected groundwater samples have been tested. The results of the analysis have been compared against a variety of generic criteria from various guidance sources as detailed below:

- Water Supply (Water Quality) Regulations 1989 and 2001.
- Environment Agency (2002) Technical advice to third parties on pollution of controlled waters for Part IIA, EPA1990.

- Dutch Ministry of Housing, Spatial Planning and Environment (2000) Intervention Values and Target Values – soil quality standards and groundwater standards.
- BRE (2005) Special Digest No. 1; 3rd Edition, Concrete in Aggressive Ground.

The qualitative risk assessment carried out as part of this report assumes a residential end use with plant uptake.

8.3 Results.

Total concentrations in soils.

The results of the soils analysis are summarised below.

Summary of total concentrations in soils and Generic Quantitative Risk Assessment.

Parameter	Screening value (mg/kg, unless otherwise stated)	No. of samples above screening value	No. of samples tested	Maximum concentration above screening value (mg/kg, unless otherwise stated)
Metals/Metalloids				
Arsenic	20 [(a)]	5	28	78 TP 43 (0.50m)
Cadmium	1 (pH 6) [(a)] 2 (pH 7) 8 (pH 8)	10	28	1.9 (pH 6.6) TP8 (1.00m)
Chromium (Total)	130 [(a)]	0	28	
Lead	450 [(a)]	0	28	
Mercury	8 [(a)]	0	28	
Selenium	35 [(a)]	0	35	
Copper	80 (pH 5 to <5.5) [(b)] 100 (pH 5.5 to <6) 135 (pH 6 to 7) 200 (pH >7)	2	28	170 WS4 (0.20m)
Nickel	50 [(a)]	0	28	
Zinc	200 (pH 5 to 7) [(c)] 300 (pH >7)	0	28	
Inorganics				
pH	<5	0	28	
Total Sulphate	2,400 [(d)]	1	28	3,700 TP43 (0.50m)
Water Soluble Sulphate	0.5 g/l [(d)]	1	28	1.8g/l TP43 (0.50m)
Organics				
Monohydric Phenol	78 (1% SOM) [(a)] 150 (2.5% SOM) 280 (5% SOM)	0	28	
*Benzo(a)pyrene	0.62 [(f)]	1	28	9.8 WS5 (1.80m)
**Naphthalene	56 [(g)]	0	28	
Others				
Calorific Value	2 MJ/kg (h)	2	3	2.9 MJ/kg WS1 (0.05m)

(a) DEFRA soil guideline values for 'residential with plant uptake' end-use.
(b) The Sludge (Use in Agriculture) Regulations 1989 and Amendment 1990.
(c) Department of Environment, 1989 (revised 1996). Code of Practice for Agricultural Use of Sewage Sludge. Advisable limits for zinc.

(d) BRE (2005) Special Digest 1, 3rd Edition, Concrete in aggressive ground. Upper limits for DS-1 Design Sulphate Class concrete.
(e) Ministry of Housing, Spatial Planning and Environment (2000) Intervention values for soil and groundwater in the Netherlands. Intervention values for xylenes derived using recommended correction factors for soils with <10% SOM.
(f) Sirius' in-house soil screening values (risk assessment methodology can be provided on request)
(g) USEPA (1996) 2nd Edition, Soil screening guidance: user's guide. Levels for 'residential end use' (with dermal exposure).
(h) The Hazardous Waste (England and Wales) Regulations 2005. 'Inert' waste threshold.
(i) ICRCL (1986) Guidance Note 61/84, 2nd Edition, Notes on the fire hazards of contaminated land.
* Risk driver for 'toxic' PAHs (non threshold)
** Risk driver for 'volatile' PAHs (threshold)
SOM Soil Organic Matter

Testing revealed the reworked topsoil to contain very slightly elevated concentrations of cadmium in seven of the ten samples tested. Statistical analysis undertaken in accordance with CLR7 indicates an Upper Bound Value (UBV) of 1.22mg/kg; above the SGV.

Testing of the granular fill at the western end of the site also revealed a slightly elevated cadmium concentration.

The black organic clay recovered from within the backfilled railway cutting was revealed to have occasional elevated concentrations of arsenic and sulphate (total and water soluble).

Granular fill (including ash and clinker) recovered from within the railway embankment along the southern boundary of the site was recorded to contain elevated concentrations of arsenic, cadmium, copper and benzo(a)pyrene.

No elevated concentrations of the analytes tested were recorded in the natural soil.

Leachability Testing

Leachability testing was conducted on thirteen samples (nine of made ground and four of natural soil). The results of the leachability testing are summarised in the table below. Where EQS values are given the threshold has been derived using a hardness of 400mg/l in the receiving water (from the groundwater results) assuming protection of cyprinid fish.

Summary of Soil Leachate Concentrations and Generic Quantitative Risk Assessment

Parameter	Screening value (units µg/l unless otherwise stated)	No. of samples above screening value	No. of samples tested	Maximum concentration above screening value (units µg/l, unless otherwise stated)
Metals/Metalloids				
Arsenic	10 [(b)] (50) [(a)]	0	13	
Cadmium	5 [(a, b)]	0	13	
Chromium	250 [(a)] (50) [(b)]	0	13	
Lead	250 [(a)] (25) [(b)]	0	13	
Mercury	1 [(a, b)]	0	13	
Selenium	10 [(b)]	0	13	
Copper	28 [(a)] (2,000) [(b)]	0	13	
Nickel	200 [(a)] (50) [(b)]	0	13	
Zinc	500 [(a)] (3,000) [(b)]	0	13	
Organics				
Phenol	0.5 [(b)] (30 [300]) [(a)]	3 0	13 13	0.91 TP43 (0.50m)
Total PAH	0.1 [(b)]	1	13	0.21ug/l WS1 (0.05m)
Others				
pH	6-9 pH units [(c)]	2	15	5.1 TP2 (1.00m)

(a) Environment Agency (2002) Environment Agency technical advice to third parties on pollution of controlled waters for Part IIA of the EPA 1990. Freshwater EQS.
(b) The Water Supply (Water Quality) Regulations 1989 and (Amendment) 2001.
(c) The Surface Waters (Fishlife) (Classification) Regulations 1997.
For some organic parameters (e.g. phenol 300 [30] µg/L) two values are given, which relate to an acceptable annual average followed by the maximum admissible peak concentration.

The concentrations of the analytes tested were all below the relevant threshold levels with the exception of phenol, total PAH and pH.

Elevated levels of phenols were recorded within three samples (including natural clay) which exceed the maximum admissible concentration specified in the Water Supply (Water Quality) Regulations 1989. A maximum concentration of 0.91ug/l within TP43 (0.50m) was detected, in comparison to a screening value of 0.5ug/l. All samples were well below the EQS threshold value.

One sample exceeded the concentration specified in the Water Supply (Water Quality) Regulations 1989 for total PAH. Total leachable PAH concentrations reached a maximum of 0.21µg/l in a sample of the embankment fill recovered from WS1 at a depth of 0.05m bgl.

The pH of two samples tested fell outside the screening range. A pH of 5.1 was recorded within TP2 at 1.0m (natural clay).

Groundwater Testing

The results of groundwater analysis, as received from the laboratory, are presented in Appendix E to this report, and are summarised in the following table.

Where a range of freshwater EQS values is given, the most appropriate value has been determined based on the recorded hardness of the waters analysed. It is assumed that the most likely receiving surface water is cyprinid.

Summary of groundwater concentrations and generic quantitative risk assessment

Parameter	Screening value (units µg/l unless otherwise stated)	No. of samples above screening value	No. of samples tested	Maximum concentration above screening value (units µg/l unless otherwise stated)
Metals/Metalloids				
Arsenic	10 [(b)] (50) [(a)]	0	3	
Cadmium	5 [(a, b)]	0	3	
Chromium	250 [(a)] (50) [(b)]	0	3	
Lead	250 [(a)] (25) [(b)]	0	3	
Mercury	1 [(a, b)]	0	3	
Selenium	10 [(b)]	0	3	
Copper	28 [(a)] (2,000) [(b)]	0	3	
Nickel	200 [(a)] (50) [(b)]	0	3	
Zinc	500 [(a)] (3,000) [(b)]	1(0)	3	510 R6
Inorganics				
Sulphate	250 mg/L [(b)] (400 mg/L) [(a)]	0	3	
Organics				
Phenol	0.5 [(b)] (30 [300]) [(a)]	0	3	
Total PAH	0.1 [(b)]	0	3	
Others				
pH	6-9 pH units [(c)]	1	3	5.7 R5

(a) Environment Agency (2002) Environment Agency technical advice to third parties on pollution of controlled waters for Part IIA of the EPA 1990. Freshwater EQS.
(b) The Water Supply (Water Quality) Regulations 1989 and (Amendment) 2001. EQS values adjusted assuming an average hardness of the receiving water of 195mg/l (as taken from WS2 and WS3A), and assuming receiving water cyprinid.
(c) The Surface Waters (Fishlife) (Classification) Regulations 1997.
(d) The Surface Waters (Abstraction for Drinking Water) (Classification) Regulations 1996.
(e) USEPA Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Third Edition, Volume One, Section 5.
For some organic parameters (e.g. phenol 300 [30] µg/L) two values are given, which relate to an acceptable annual average followed by the maximum admissible peak concentration.

Groundwater testing within two samples revealed a slightly elevated concentration of zinc compared to the EQS, with a maximum recorded concentration of 510ug/l within borehole R6.

A pH value of 5.7 was recorded in the water sample collected from borehole R5.

8.4 Qualitative Risk Assessment.

As discussed in Section 8.2 risk assessment is based on source > pathway > target principles. With respect to the subject land and the analytical results these can be defined as follows:

Identified Contaminants of Concern

- Very slightly elevated concentrations of cadmium in the reworked topsoil across the site, and in the granular fill at the western end of the site.
- Elevated concentrations of arsenic and sulphate (total and water soluble) in the “black clay” in the backfilled railway cutting
- Elevated concentrations of arsenic, cadmium, copper and benzo(a)pyrene in the granular fill within the railway embankment.
- Occasional slightly elevated concentrations of leachable PAH and phenols.
- Occasional very slightly elevated zinc concentrations in the groundwater.

Pathways

- Dermal contact.
- Direct and indirect ingestion.
- Inhalation.
- Leaching to controlled waters.

Targets/Receptors

- End users, including plant growth.
- Controlled waters.
- Construction and maintenance workers.
- Built development.

In assessing risk, the following categorisation has been developed:

Term	Description
Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without appropriate remedial action.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remedial action.
Moderate Risk	It is possible that without appropriate remedial action harm could arise to a designated receptor. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard. It is likely that, at worst if any harm was realised any effects would be mild.
Negligible Risk	The presence of an identified hazard does not give rise to the potential to cause harm to a designated receptor.

The above is intended to be an aid in assessing the degree of risk. It should be noted that in terms of the Environmental Protection Act 1990, there is no differing degree of risk, it is either 'significant' or not.

End Users / Landscaping

Based on the source > pathway > target philosophy, and the chemical results obtained as part of this investigation, it is considered that the majority of the soils tested pose a **low** risk to proposed end users/landscaping, principally based on slightly elevated concentrations of cadmium.

Fill in the backfill railway cutting and embankment is considered to pose a moderate risk to end users.

Based on current results the fill encountered in this backfilled railway cutting and railway embankment is considered unsuitable in proposed gardens/areas of public open space on site. It should either be removed to a suitably licensed landfill facility, be placed below hardstand or be capped using a suitable thickness of "clean" natural subsoil/topsoil. If the latter option is chosen, a minimum capping thickness of 600mm is suggested for provisional design purposes. This is subject to regulatory approval. Deep rooted plants would need to be potted.

Based on the results of this investigation and using tier 1 screening values, the reworked topsoil and granular made ground encountered at the western end of the site, would be considered unsuitable as a topsoil/subsoil in private gardens. It is considered likely however that with further work (including bio accessibility testing and detailed quantitative risk assessment) cadmium would be eliminated as a contaminant of concern.

Gas protective measures are discussed in Section 9 of this report.

Controlled Waters

This investigation has revealed that both the natural and made ground contains occasionally very slightly elevated leachable concentrations of phenol and PAH. Based on the presence of low permeability clay below the site and the absence of ground and surface water abstractions within 750m of the site it is considered that the soils tested pose a negligible risk to controlled waters. As such no remedial action is considered necessary.

This conclusion is subject to regulatory approval.

Construction and Maintenance Workers

It is recommended that normal health and safety procedures should be adopted by ground workers including no eating, drinking or smoking on-site, designated clean and wash areas and protective clothing. It is also recommended that procedures outlined in the HSE document "Protection of Workers and the General Public during Redevelopment of Contaminated Land" be followed.

This report should be forwarded to construction/maintenance workers in order for them to assess the level of PPE required.

Built Development

Based on the samples tested, and in accordance with BRE Special Digest 1 (2005), a Design Sulphate Class of DS-1 and an ACEC Class of AC-1s should be used, for the majority of the site. For concrete placed through fill encountered in the backfilled railway cutting the design sulphate class should be changed to DS-3 and the ACEC class AC-2s.

Chemical results should be forwarded to the appropriate utility companies in order to determine the necessity for service protection.

9.0 HAZARDOUS GAS MONITORING.

9.1 General.

The desk study indicates that there is one registered landfill located on site. From information provided by Barnsley MBC it is reported that this landfill was infilled with inert material. Further landfills are located approximately 50m to the south east and 190m to the north east. Fill included construction and demolition waste. Geological/anecdotal evidence indicates, that a backfilled canal immediately north of the site and a backfilled reservoir approximately 50m north east of the site, contains domestic waste.

In addition to the aforementioned possible sources of land fill gas, mines gas could be present associated with the underlying strata.

In light of these potential sources of gas, wells were installed in eight boreholes (R5 R6, R10, R11, R13, WS5, WS6 and WS7). Wells in the rotary boreholes were sealed into the natural ground. Wells in the window sample holes were sealed into the made ground. The wells have been monitored on four occasions for concentrations of methane and carbon dioxide. The results of the monitoring are enclosed as Appendix F to this report.

Methane is a flammable gas and a mixture containing between 5 and 15% v/v in air is explosive. Carbon dioxide is an asphyxiant and toxic.

Approved Document C to the Department of the Environment's Building Regulations 2004, requires that a gas risk assessment is undertaken, which may require investigation and monitoring. Notwithstanding the requirements for a risk assessment Approved Document C states that ground gas monitoring is required for the following conditions.

- There is landfill within 250m of the site.
- There is wide scale deposition of biodegradable substances.
- The site has been subject to wide spread spillages of petrol, oil or solvents.
- The site is in an area of naturally occurring methane or carbon dioxide.

Where there may be gaseous contamination of the ground but the level of methane is unlikely to exceed 1% by volume, the ground floor of any house or similar small building shall be constructed of suspended concrete and ventilated as described in BRE Digest Report "Construction of New Buildings on Gas Contaminated Land". The document also requires specific design measures to be taken if a level of 5% volume carbon dioxide exists or is exceeded within the ground.

The Construction Industry Research and Information Association (CIRIA) have also issued several guidance documents on landfill gas namely:

CIRIA Report 149	'Protecting Development from Methane' (1995)
CIRIA Report 150	'Methane Investigation Strategies' (1995)
CIRIA Report 151	'Interpreting Measurement of Gas in the Ground' (1995)
CIRIA Report 152	'Risk Assessment for Methane and other gases from the ground' (1995)

The above documents are intended to provide advice on how to investigate and deal with gas contaminated ground with respect to development.

VOC concentrations were assessed using the HSE (2000) 'Occupational exposure limits, EH40/2000' which gives long term (8 hour) time weighted average exposure limits for workers to benzene of 5ppm (parts per million). Adopting a conservative approach, assuming that any VOCs detected are due to benzene, VOC levels in excess 5ppm may be regarded as posing a potential health risk.

9.2 Monitoring Procedure.

The gas monitoring wells were monitored for methane, carbon dioxide and oxygen using a LMSx multi gas analyser and flow pod. Groundwater levels were taken using an electronic dip meter.

VOC concentrations were measured on three occasions using a portable Photo Ionisation Detector (PID).

The gas monitoring was undertaken in accordance with the guidance given in CIRIA Report 151 'Interpreting Measurements of Gas in the Ground' (1995).

The results of the gas monitoring are presented in Appendix F.

9.3 Results.

Gas monitoring was carried out at atmospheric pressures of between 1006 and 1019mb.

Methane has not been detected in any of the boreholes during the monitoring visits.

A maximum concentration of 3.6% v/v carbon dioxide has been recorded, in borehole WS6, on the 13th July 2006.

Slightly depleted oxygen concentrations (<18% v/v) were recorded in WS5, WS6 and WS7, reaching a minimum of 15.2% v/v.

Constant flow rates were not detectable. The highest instantaneous flow rate recorded was 0.8l/hr, in R6, on 30th June 2006.

With the exception of R10, WS5 and WS6 the PID typically recorded 1ppm or less VOCs. PID readings of 19.4ppm and 31.7ppm were recorded in WS6 and WS5 respectively, on 13th July 2006 and a reading of 8.2ppm was recorded in R10 on the 19th July 2006.

9.4 Discussion.

The results of the gas monitoring indicate slightly elevated concentrations of carbon dioxide and VOCs in wells installed into the fill in the railway embankment on the site and slightly elevated VOCs in the borehole R10. The slightly elevated PID readings in WS5 and WS6 are considered likely to be associated with the low levels of polyaromatic hydrocarbons recorded in the soil. The source of the slightly elevated VOC concentration in borehole R10 is as yet unknown.

In accordance with Ciria 149 Report 'Protecting Development from Methane' the monitoring to date indicates that the site falls in the characteristic Situation 2. By using the refined approach presented in Wilson and Cards paper 'Reliability and risk in gas protection design' (Ground engineering 1999) which considers risk in terms of a combining factor of concentration and flow, the site falls into Characteristic Situation 1.

Preliminary findings indicate that the majority of the site is not being impacted by hazardous gases. This is with the exception of insitu generation of slightly elevated VOC and carbon dioxide concentrations within the railway embankment on site and slightly elevated VOC concentrations in borehole R10. Further boreholes and monitoring are required to establish a reliable data set to draw conclusions. In the meantime, and for the purpose of estimating abnormal costs, it is suggested that the following gas protection means be assumed in all buildings.

- A well constructed ground floor slab
- A gas proof, hydrocarbon resistant (e.g. polypropylene) welded membrane, sealed around service penetrations and across wall cavities.
- Minimum penetration of ground slab by services
- Ventilation of confined spaces within buildings.

According to the BGS basic radon protective measures are currently required for development on this site. The above measures are adequate to address this risk.

10.0 CONCLUSIONS AND RECOMMENDATIONS.

10.1 General.

Sirius were commissioned by Hallam Land Management Ltd to undertake a geoenvironmental appraisal of land at Barugh Green, Barnsley.

It is understood that Hallam Land Management Ltd are considering purchasing the site with a view to developing the site with residential properties (two and three storey) and associated access roads, garages, parking areas, gardens and landscaping. No development layout was available at the time of writing.

The anticipated building loads were not known at the time of writing.

For the purpose of this report it is assumed that ground levels will remain broadly as existed at the time of the investigation.

10.2 Flooding.

According to the Environment Agency (EA) land immediately to the north east of the site is recorded as being within a fluvial indicative flood plain.

It is recommended that consultation be undertaken with the EA to determine the implication (if any) of potential flooding on the proposed development.

The following recommendations assume that flooding will not affect the proposed development.

10.3 Mining and Quarrying.

Based on desk study information a potential risk exists to surface stability at the site from mine workings in the Top and Low Haigh Moor coal seams. From information provided by the Coal Authority, it is known that Barugh Colliery formerly existed some 250m to the south of the site from which the Top Haigh Moor coal seam was mined. Workings are recorded to encroach into the central south part of the site.

In order to investigate the risk posed to surface stability by former mining, rotary boreholes (31 no.) were drilled.

The Top and Low High Moor coal seams dip to the north east (i.e. beneath the site). The shallowest seam was encountered at 6.00m -7.00m bgl in borehole R5 in the west of the site, and at 18.80m to 19.80m bgl in borehole R27 (the deepest this top seam was encountered). This seam is on average 1.00m thick (ranged between 0.20m and 1.50m). A second seam was encountered in six of the eleven boreholes advanced to 30m. This seam was encountered at 14.70m to 15.00m bgl in the west and 23.00m to 23.50m in the central eastern part of the site. It had an average thickness of 0.56m, ranging between 0.30m and 0.80m. Intervening strata ranged between 5.50m and 8.50m (average 7.50m) in thickness.

Voids and/or broken ground were encountered in boreholes R14, R16, R30 and R31, located in the southern-central part of the site, at depths of between 9.00m and 10.80m bgl, assumed to be associated with the working of the Top Haigh Moor coal seam. The voids found in the southern-central part of the site are consistent with the recorded extent of workings in the Top Haigh Moor coal seam from Barugh Colliery.

The depth and thickness of the workings, in the central southern part of the site, have the potential to affect surface stability in this part of the site and will therefore require consolidation through drilling and pressure grouting. Elsewhere the upper seam of coal has the potential to affect surface stability, but no evidence of workings have been encountered. It is considered likely that a proportion of the site (outside the area already identified) will be affected by shallow mine workings in the Top Haigh Moor coal seam. Any housing development on site is likely to require proof drilling for all plots, and will require grouting where workings are found within influencing distance of the surface. At this stage a contingency should be included for such an eventuality.

The possibility of encountering unrecorded mine entries on site cannot be discounted, and indeed the likelihood is considered to be quite high. Following a topsoil strip the entire area should be inspected for evidence of mine workings. Additionally, it is recommended that all excavations be examined for evidence of mine entries. If a mine entry is suspected works should cease and the advice sought of a suitably qualified consultant.

Inspection of historical OS plans has revealed no evidence of quarrying on the site.

10.4 Foundations.

It is understood that the proposed development is of residential properties (two and three storey) with gardens, hard surfaced roads and parking areas, and limited areas of landscaping. Column/line loads, for the proposed development were not available to Sirius at the time of writing of this report, nor was a development layout.

The following recommendations assume that shallow mine workings are limited to the area shown on drawing No. C1277/2, in Appendix A. If the area affected by mine workings is proven to be more extensive by further work, our conclusions and recommendations will need to be altered.

This investigation has revealed the shallow soils comprise a thin veneer of made ground, over soft to firm, becoming stiff clay, over weathered coal measures.

The made ground where it is present is considered unsuitable for foundations in its present condition due to possible variability in consistency and content.

In the area proven to be underlain by shallow mine workings in the central southern part of the site it should be assumed that edge beam rafts are required at this stage.

Elsewhere shallow spread foundations should be taken to the firm/stiff clay or bedrock. For preliminary design purposes the natural firm/stiff clay can be assumed to have a net bearing capacity of 100kN/m^2 and the mudstone/sandstone 150kN/m^2. Greater bearing capacities are likely to be achievable in the rock subject to confirmatory field testing.

Laboratory testing has indicated that the natural clays are of low to medium volume change potential. Therefore, foundations in natural clay should be placed a minimum of 0.90m below finished or original ground level, whichever is the lower of the two.

Over deepening to trenchfill footings is likely to be required for a number of houses located at the western area of the site were a greater depth of made ground was encountered. At this stage pile foundations should be assumed in the backfilled railway cuttings.

Foundations on clay should be protected/deepened near trees in accordance with NHBC Standards Chapter 4.2.

In accordance with NHBC guidelines suspended floor slabs should be used where made ground exceeds 600mm in thickness.

To prevent deterioration of the founding stratum all foundation excavations should be blinded after excavation.

If any relic foundations/substructures are encountered foundations should be taken to a greater depth than the existing foundations into natural ground of adequate bearing capacity.

Foundations should be taken below a line drawn up at 45° from the base of any existing or proposed services or similar.

In accordance with the results of this investigation and BRE Special Digest 1 (2005) concrete should be designed for an ACEC Class of AC-1s and a design sulphate class of DS-1, assuming brownfield and static groundwater conditions. For concrete placed in the fill in the backfilled railway cutting the design sulphate class should be changed to DS3 and the ACEC class to AC-2s.

10.5 Excavations.

Excavation should be suitable for standard plant although the use of hydraulic or pneumatic breakers may be required for excavations extending into rock and where existing foundations or other buried structures are encountered.

Shallow excavations through the made ground should be assumed to be unstable and an allowance should be made for suitable shoring. No man entry into unsupported excavations should be allowed without an appropriate risk assessment. Reference to CIRIA 97 Trenching Practice should be made to establish suitable means of support or battering of excavation sides during construction.

Excavations are generally expected to remain dry. Seepages or minor inflows could occur locally. It should be possible to deal with these by pumping from sumps.

10.6 Road Pavement Design.

For preliminary design purposes a CBR value of less than 2% is suggested for areas of made ground, and 2% for natural clays. It is recommended that CBR values for the finished sub grade be determined by laboratory testing or on site testing once levels have been finalised.

Treatment of the soils below the proposed highways should be discussed with the local highways authority.

10.7 Contamination Constraints to Development.

The desk study has indicated that the majority of the site has been undeveloped land over the recorded period, with the exception of a railway cutting/embankment and cooling ponds. The cutting/cooling ponds have been backfilled.

Varying thicknesses of made ground have been encountered across the site, with the deeper areas generally being attributable to features shown by the historical plans; the exception to this being the far south west corner of the site, which is not shown to have any previous development, or notable features and yet made ground could not be fully penetrated in one of the trial pits in this area (>3.40m).

Made ground is relatively consistent across the site, predominantly comprising reworked natural material. A black clay (with a hydrogen sulphide odour) and ash and clinker fill has been proven in the backfilled railway cutting and railway embankment respectively.

The results of analytical testing, and a qualitative risk assessment, are provided in Section 8 of this report.

The reworked topsoil and granular fill encountered at the western end of the site, has been proven to contain very slightly elevated concentrations of cadmium. Fill in the railway cutting and embankment contains a number of elevated contaminants including arsenic, sulphate, copper, cadmium and benzo(a)pyrene.

Based on the results of the investigation, and using tier 1 screening values, the reworked topsoil and granular made ground encountered at the western end of the site, would be considered unsuitable as a topsoil/subsoil in private gardens. It is considered likely, however with further work (including bioaccessibility testing and detailed quantitative risk assessment) cadmium would be eliminated as a contaminant of concern.

Fill encountered in the backfilled railway cutting/railway embankment is considered unsuitable in proposed gardens/areas of public open space. It should either be removed to a suitably licensed landfill facility, be placed below hardstand or be capped using a suitable thickness of ”clean” natural topsoil/subsoil. A minimum thickness of 600mm is suggested for the provisional design purpose.

Based on the results of this investigation and the sites environmental settings, no remedial action is considered necessary to protect controlled waters.

Health and safety precautions for groundworkers are discussed in Section 8.4, as are recommendations for protection to buried services/structures.

It is possible that areas of more significant contamination may be encountered on site during redevelopment. If any areas of obvious contamination are identified, further advice should be sought from a suitably qualified consultant.

Any material removed from site should be undertaken in accordance with the Duty of Care Regulations 1991, and the Landfill Directive.

10.8 Hazardous Gas.

In light of the potential risk from mines gas, and gas from the landfill located on site and a further two landfills within 250m of the site, a hazardous gas investigation has been undertaken.

Preliminary findings of a limited gas investigation indicate that the majority of the site is not being impacted by hazardous gases. This is with the exception of insitu generation of slightly elevated VOC and carbon dioxide concentrations within the railway embankment on site and a slightly elevated VOC concentration in borehole R10. Further boreholes and monitoring are required to establish a reliable data set to draw definitive conclusions. In the meantime, and for the purpose

of estimating abnormal costs, it is suggested that the following gas protection measures be assumed in all buildings:

- A well constructed ground floor slab
- A gas proof, hydrocarbon resistant welded membrane (e.g. polypropylene), sealed around service penetrations and across wall cavities.
- Minimum penetration of slab by services.
- Ventilation of confined spaced within buildings.

According to the BGS basic radon protective measures are currently required for development on this site. The above measures are adequate to address this risk.

10.9 Overhead Electricity Cables.

Consideration should be given to constraints imposed by overhead electrical cables in site development plans.

11.0 REGULATORY APPROVAL.

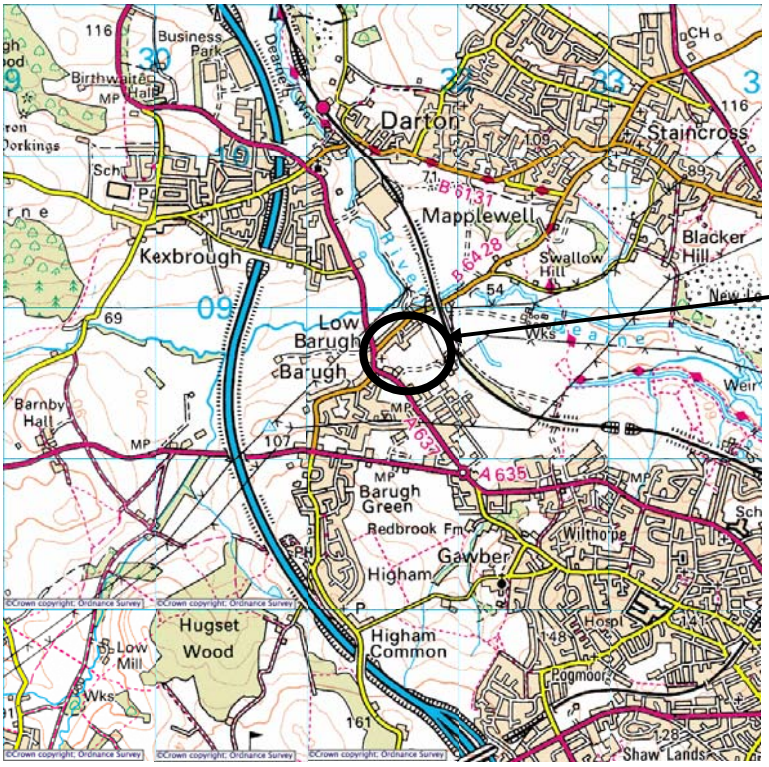
The conclusions and recommendations presented above are considered practical based on the findings of this investigation. The conclusions and recommendations cannot however be guaranteed to gain regulatory approval, and therefore this report should be passed to the regulators (local authority, NHBC and Environment Agency) for their comment/approval prior to undertaking any works on site.

It is recommended that any conditions placed on any planning permission be discharged prior to commencement of site works.

APPENDIX A
DRAWINGS

Site Location Plan

Contract Number	**C1277**
Contract	**Barugh Green, Barnsley**
Client	**Hallam Land Management Ltd**



N

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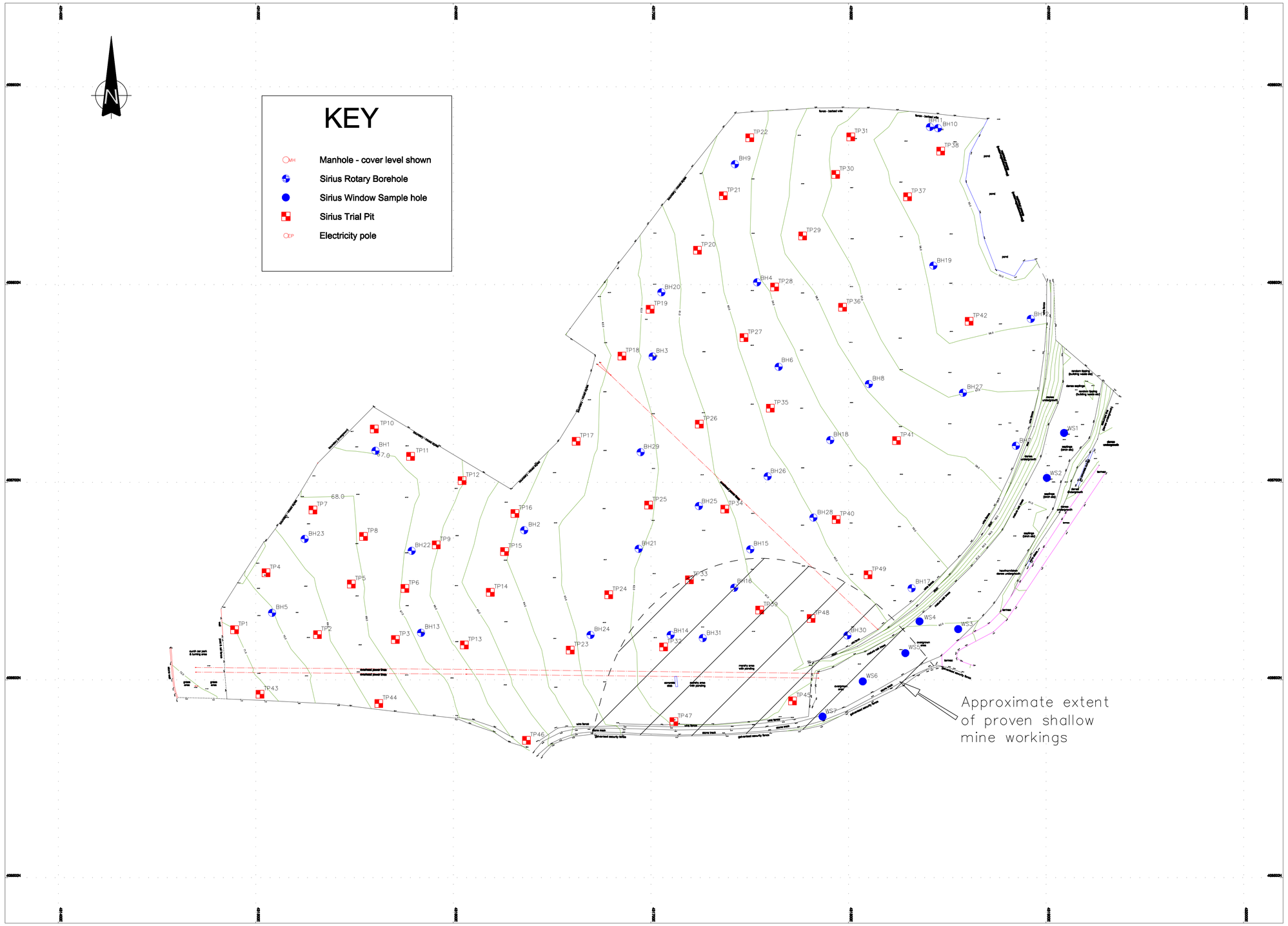
Sirius Geotechnical & Environmental Ltd, Suite 2, Russel House, Mill Road, Langley moor, Durham DH7 8HJ.
Licence No. 100042005

Scale	**1:50,000**	
Drawn by	**RS**	**Approved**
Drawing Number	**C1277/1**	



NOTES

REVISION	
0	>>
A	>>
B	>>
C	>>
D	>>

SIRIUS GEOTECHNICAL & ENVIRONMENTAL LTD.

TEL: 01937 842744
FAX: 01937 842063

CLIENT

HALLAM LAND MANAGEMENT LTD

SITE

BARUGH GREEN, BARNSLEY

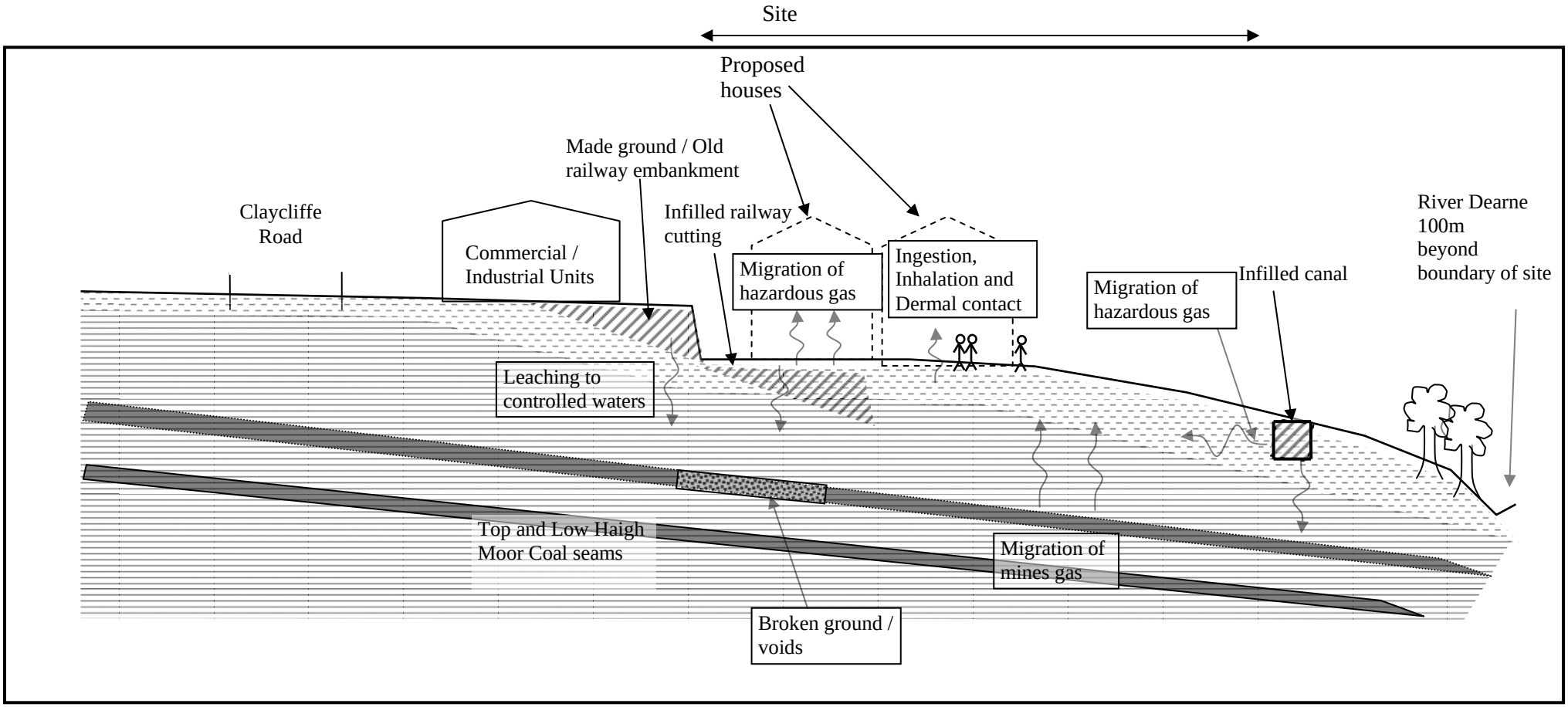
DRAWING TITLE

EXPLORATORY HOLE LOCATION PLAN

DRAWING NO.	REVISION NO.
C1277/2	

DRAWN BY	APPROVED BY
JLC	

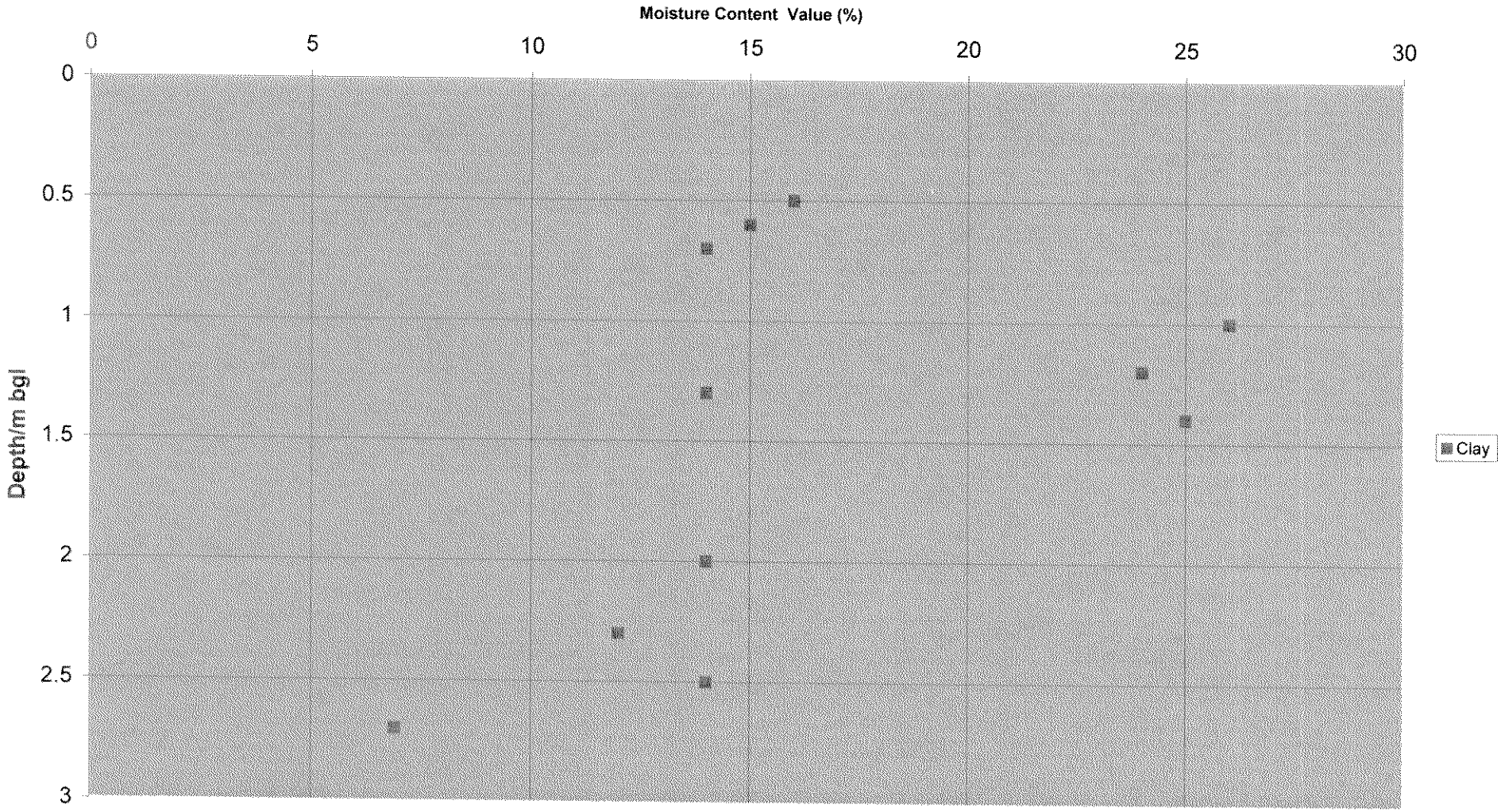
DATE	SCALE	PAPER SIZE
26/07/2006	1:1000	A1

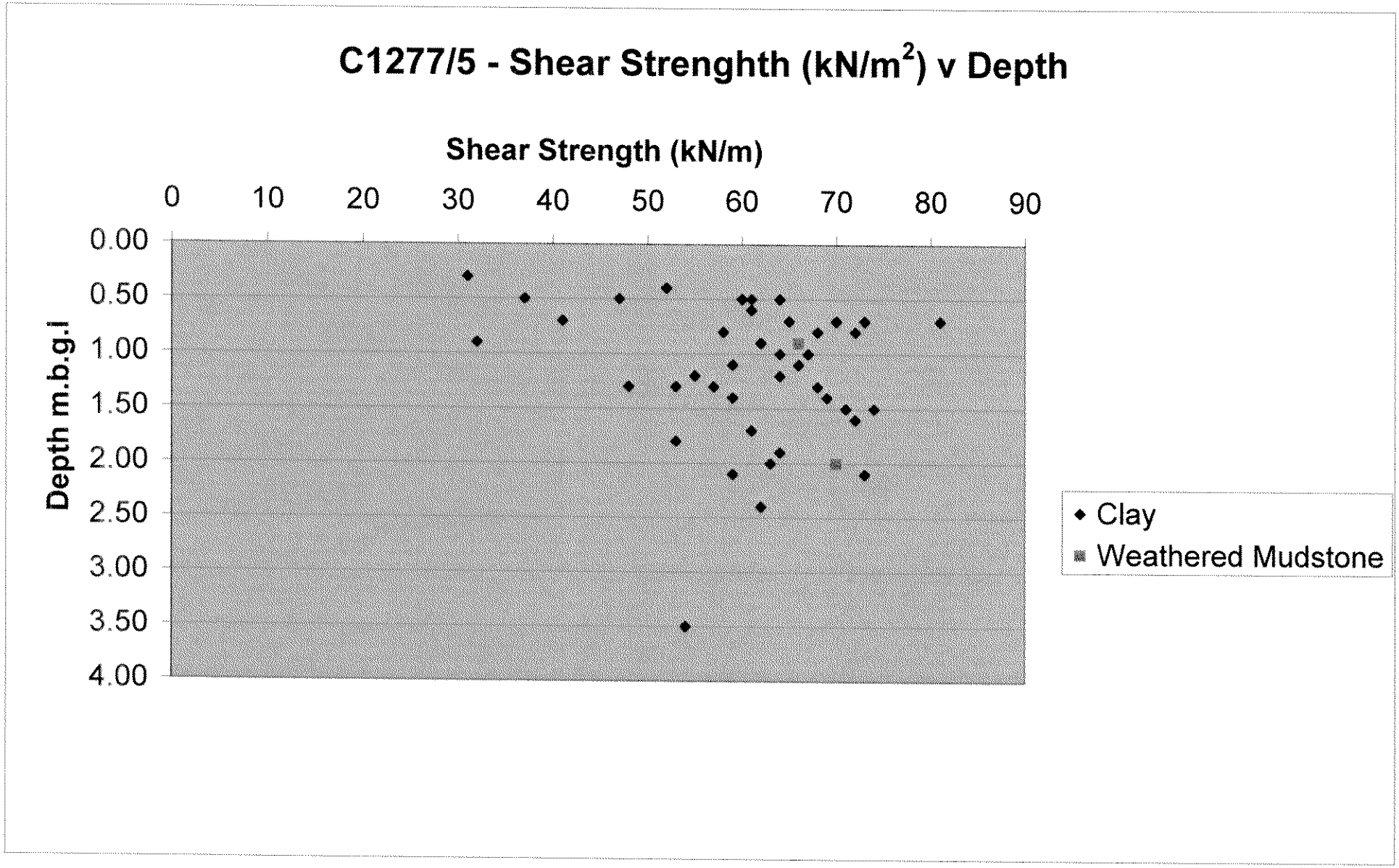


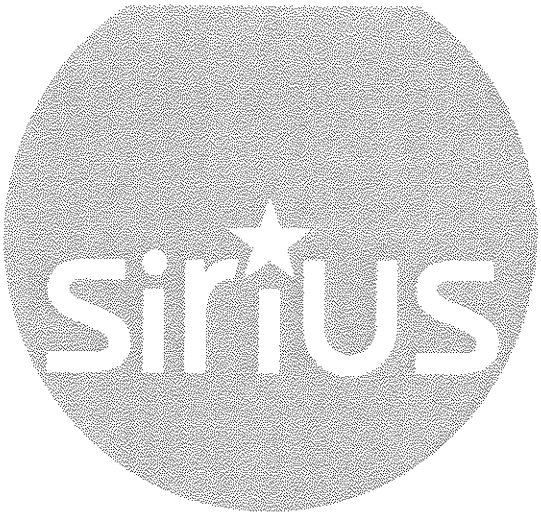
Contract Number	C1277/3	**Scale**	NTS
Contract	Barugh Green, Barnsley	**Drawn by** MB	**Approved**
		Drawing Number	C1277/3
Client	Hallam Land Management Ltd		

Conceptual Site Model

C1277/4: Moisture Content vs Depth Plot




C1277/5 - Shear Strenghth (kN/m²) v Depth
Shear Strength (kN/m)
0
10
20
30
40
50
60
70
80
90
Depth m.b.g.l
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
Clay
Weathered Mudstone



APPENDIX B
ENVIROCHECK REPORT

Envirocheck® Report

Datasheet

Report on:
Barugh Green
Barnsley
S75 1JJ

National Grid Reference :

431690, 408730

Site Area (Ha) :

8.93

Prepared For :
Sirius Geotechnical & Environmental
Suite 3 Bowcliffe Grange
Bowcliffe Hall Estate
Leeds
LS23 6LP

Your Reference:

MR R Howells,C1277

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BGS Borehole Order Form

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 Datasheet places great emphasis on statutory data provided by the Environment Agency and the Scottish Environment Protection Agency; it also incorporates data from English Nature (and the Scottish and Welsh equivalents), the Environment Agency (and the Scottish equivalent) 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 legend database to 1km from a single point or a site boundary provided by the client

In the attached 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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Data Type	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological				
Local Authority Pollution Prevention and Controls		3	2	3
Local Authority Pollution Prevention and Control Enforcements				
Contaminated Land Register Entries and Notices				
Discharge Consents		2	6	20
Enforcement and Prohibition Notices				
Integrated Pollution Controls				1
Integrated Pollution Prevention And Control				
Local Authority Integrated Pollution Prevention And Control				
Nearest Surface Water Feature	Yes			
Pollution Incidents to Controlled Waters		17	2	7
Substantiated Pollution Incident Register				
Prosecutions Relating to Authorised Processes				1
Prosecutions Relating to Controlled Waters				
Water Industry Act Referrals				
Registered Radioactive Substances				
River Quality		3		2
River Quality Biology Sampling Points		1		
River Quality Chemistry Sampling Points		1	1	
Water Abstractions				1
Groundwater Vulnerability	Yes			
Source Protection Zones				
Extreme Flooding from Rivers or Sea without Defences	Yes			
Flooding from Rivers or Sea without Defences	Yes			
Areas Benefiting from Flood Defences				
Flood Water Storage Areas		Yes		
Flood Defences		Yes		
River Flood Data (Scotland)				

Data Type	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste				
BGS Recorded Landfill Sites				
Integrated Pollution Control Registered Waste Sites				
Licensed Waste Management Facilities (Landfill Boundaries)				
Licensed Waste Management Facilities (Locations)				
Local Authority Recorded Landfill Sites	1	2	3	6
Registered Landfill Sites		1	2	7
Registered Waste Transfer Sites				
Registered Waste Treatment or Disposal Sites				
Hazardous Substances				
Control of Major Accident Hazards Sites (COMAH)				
Explosive Sites				
Notification of Installations Handling Hazardous Substances (NIHHS)				
Planning Hazardous Substance Consents				
Planning Hazardous Substance Enforcements				
Geological				
BGS Boreholes		10	25	86
BGS Recorded Mineral Sites				1
BGS 1:625,000 Solid Geology	Yes			
Brine Compensation Areas				
Coal Mining Affected Areas	Yes			
Shallow Mining Hazards	Yes	Yes		
Potential for Collapsible Ground Stability Hazards				
Potential for Compressible Ground Stability Hazards		Yes		
Potential for Ground Dissolution Stability Hazards				
Potential for Landslide Ground Stability Hazards	Yes	Yes		
Potential for Running Sand Ground Stability Hazards		Yes		
Potential for Shrinking or Swelling Clay Ground Stability Hazards		Yes		
Mining Instability	Yes			
Natural and Mining Cavities				
Radon Affected Areas	Yes			
Radon Protection Measures	Yes			
Industrial Land Use				
Contemporary Trade Directory Entries		16	11	18
Fuel Station Entries				1

Data Type	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Uses				
Areas of Adopted Green Belt	1			
Areas of Unadopted Green Belt				
Areas of Outstanding Natural Beauty				
Environmentally Sensitive Areas				
Forest Parks				
Local Nature Reserves				
Marine Nature Reserves				
National Nature Reserves				
National Parks				
National Scenic Areas				
Nitrate Sensitive Areas				
Nitrate Vulnerable Zones	1			
Ramsar Sites				
Sites of Special Scientific Interest				
Special Areas of Conservation				
Special Protection Areas				

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Local Authority Pollution Prevention and Controls				
1	Name: Wordsworth Crushing Ltd Location: Whaley Road,Barugh Green,Barnsley,S75 1HT Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Ppc/B/46 Dated: 29th March 2005 Process Type: Local Authority Air Pollution Control Description: PG3/16 Mobile screening and crushing processes **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	SE	156	1	431900 408460
	Local Authority Pollution Prevention and Controls				
2	Name: Wordsworth Crushing Ltd Location: Whaley Road,Barugh Green,Barnsley,S75 1ht Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Ppc/B/02 Dated: 26th November 2003 Process Type: Local Authority Air Pollution Control Description: PG3/8 Quarry processes including roadstone plants and the size reduction of bricks, tiles and concrete **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	SE	161	1	431890 408450
	Local Authority Pollution Prevention and Controls				
2	Name: Compass Engineering Limited Location: Whaley Road,BARUGH GREEN,BARNSLEY,South Yorkshire,S75 1HT Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Epa92 Dated: 14th December 1998 Process Type: Local Authority Air Pollution Control Description: PG6/23 Coating of metal and plastic **Status: Authorised** Positional Accuracy: Automatically positioned in the proximity of the address	SE	164	1	431890 408450
	Local Authority Pollution Prevention and Controls				
3	Name: Braithwaite Excavations Ltd Location: Claycliffe Road,Barugh Green,Barnsley,S75 1hs Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Ppc/B/19 Dated: 28th November 2002 Process Type: Local Authority Air Pollution Control Description: PG3/16 Mobile screening and crushing processes **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	S	452	1	431870 408140
	Local Authority Pollution Prevention and Controls				
3	Name: Malcolm Smith Motor Repairs Location: Claycliffe Road,BARNSLEY,South Yorkshire,S75 1HS Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Epa61 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	S	472	1	431910 408120

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Local Authority Pollution Prevention and Controls					
4	Name:	R C Jones (Motor) Group	SE	584	1	432000 408040
	Location:	Claycliffe Road,Barugh,BARNSLEY,South Yorkshire,S75 1HS				
	Authority:	Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards				
	Permit Reference:	Ppc/B/38				
	Dated:	20th July 1993				
	Process Type:	Local Authority Air Pollution Control				
	Description:	PG6/34 Respraying of road vehicles				
	Status:	**Authorised**				
	Positional Accuracy:	Manually positioned to the address or location				
	Local Authority Pollution Prevention and Controls					
5	Name:	Pentagon Toyota	SW	614	1	431360 407990
	Location:	Barugh Green Road,Barugh Green,BARNSLEY,S75 2RS				
	Authority:	Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards				
	Permit Reference:	Epa86				
	Dated:	30th September 1996				
	Process Type:	Local Authority Air Pollution Control				
	Description:	PG6/34 Respraying of road vehicles				
	Status:	**Authorisation revoked**				
	Positional Accuracy:	Manually positioned to the road within the address or location				
	Local Authority Pollution Prevention and Controls					
6	Name:	D C Cook	SW	651	1	431170 408010
	Location:	Barugh Green Road,Barugh Green,BARNSLEY,South Yorkshire,S75 1JT				
	Authority:	Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards				
	Permit Reference:	Not Supplied				
	Dated:	Not Supplied				
	Process Type:	Local Authority Air Pollution Control				
	Description:	PG6/34 Respraying of road vehicles				
	Status:	**Authorisation revoked**				
	Positional Accuracy:	Automatically positioned in the proximity of the address				
	Discharge Consents					
7	Operator:	Yorkshire Water Services Ltd	NE	207	2	431940 409080
	Property Type:	Sewerage Network - Sewers				
	Location:	Dearne Hill Road,LOW BARUGH,South Yorkshire				
	Authority:	Environment Agency, North East Region				
	Catchment Area:	Dearne				
	Reference:	S/UD/51				
	Permit Version:	Not Supplied				
	Effective Date:	Not Supplied				
	Issued Date:	5th June 1963				
	Revocation Date:	Not Supplied				
	Discharge Type:	Sewage Effluent Discharge-Storm Effluent				
	Discharge Environment:	Unknown				
	Receiving Water:	Not Supplied				
	Status:	**Not Supplied**				
	Positional Accuracy:	Located by supplier to within 100m				

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
7	Operator: Yorkshire Water Services Ltd Property Type: Undefined Or Other Location: Dearne Hall Road, Low Barugh Cso,Dearne Hall Road (B6428),Barugh Green,Barnsley Authority: Environment Agency, North East Region Catchment Area: Calder Reference: Wra8637 Permit Version: 1 Effective Date: 1st April 2005 Issued Date: 11th March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River 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	NE	210	2	431950 409080
	Discharge Consents				
8	Operator: Powerscreen International Plc Property Type: Undefined Or Other Location: Prism Works,Claycliffe Road,Barugh,Barnsley Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4750 Permit Version: 1 Effective Date: 14th August 1987 Issued Date: 14th August 1987 Revocation Date: 20th July 1993 Discharge Type: Trade Discharges - Site Drainage (Contaminated Surface Water, Not Waste Sites) Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 100m	S	277	2	431800 408300
	Discharge Consents				
8	Operator: Powerscreen International Plc Property Type: Undefined Or Other Location: Prism Works,Claycliffe Road,Barugh,Barnsley Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4750 Permit Version: 2 Effective Date: 21st July 1993 Issued Date: 21st July 1993 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 The River Dearne **Status: Revised Consent, by Notice (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	S	277	2	431800 408300

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents					
9	Operator:	Yorkshire Water Services Ltd	NE	277	2	431950 409150
	Property Type:	Sewerage Network - Sewers				
	Location:	Darton Lane Sws,BARNSLEY,South Yorkshire				
	Authority:	Environment Agency, North East Region				
	Catchment Area:	Dearne				
	Reference:	WA6007				
	Permit Version:	Not Supplied				
	Effective Date:	Not Supplied				
	Issued Date:	Not Supplied				
	Revocation Date:	Not Supplied				
	Discharge Type:	Surface Water Effluent				
	Discharge Environment:	Freshwater Stream/River				
	Receiving Water:	Dearne				
	Status:	**Not Supplied**				
	Positional Accuracy:	Located by supplier to within 100m				
	Discharge Consents					
10	Operator:	Paddock House	NE	337	2	432200 408990
	Property Type:	Coal Extraction, Surface				
	Location:	Barugh Bridge R. Dearne Occs Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire				
	Authority:	Environment Agency, North East Region				
	Catchment Area:	Don Tributaries				
	Reference:	Wra8062				
	Permit Version:	1				
	Effective Date:	1st April 2004				
	Issued Date:	17th November 2003				
	Revocation Date:	19th July 2005				
	Discharge Type:	Trade Discharges - Site Drainage				
	Discharge Environment:	Freshwater Stream/River				
	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 10m				
	Discharge Consents					
11	Operator:	Paddock House	NE	338	2	432180 409040
	Property Type:	Coal Extraction, Surface				
	Location:	Barugh Bridge R. Dearne Occs Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire				
	Authority:	Environment Agency, North East Region				
	Catchment Area:	Don Tributaries				
	Reference:	Wra8606				
	Permit Version:	1				
	Effective Date:	12th January 2005				
	Issued Date:	12th January 2005				
	Revocation Date:	30th June 2005				
	Discharge Type:	Trade Discharges - Site Drainage				
	Discharge Environment:	Freshwater Stream/River				
	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				

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
12	Operator: Barnsley M.B.C. Property Type: Undefined Or Other Location: Barnsley Metropolitan Borough Counc,Il, Leisure And Amenities Depart,Ment Depot, Barugh Lane, Barugh,Green, Barnsley Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C4608 Permit Version: 1 Effective Date: 21st April 1987 Issued Date: 21st April 1987 Revocation Date: 10th December 1993 Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: Not Supplied **Status: Consent revoked: Discharge ceased (Water Resources Act 1991, Schedule 10 & 6)** Positional Accuracy: Located by supplier to within 100m	SW	389	2	431200 408300
	Discharge Consents				
13	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 4 Effective Date: 18th October 1999 Issued Date: 18th October 1999 Revocation Date: 30th September 2000 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	608	2	432500 408970
	Discharge Consents				
13	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 4 Effective Date: 18th October 1999 Issued Date: 18th October 1999 Revocation Date: 30th September 2000 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	608	2	432500 408970

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
13	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 5 Effective Date: 1st October 2000 Issued Date: 18th October 1999 Revocation Date: 31st December 2000 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	608	2	432500 408970
	Discharge Consents				
13	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 7 Effective Date: 1st January 2001 Issued Date: 18th October 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	608	2	432500 408970
	Discharge Consents				
13	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 5 Effective Date: 1st October 2000 Issued Date: 18th October 1999 Revocation Date: 31st December 2000 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	617	2	432510 408970

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
13	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 7 Effective Date: 1st January 2001 Issued Date: 18th October 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	617	2	432510 408970
	Discharge Consents				
14	Operator: Darton Rural District Council Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 6 Effective Date: 17th January 1966 Issued Date: 17th January 1966 Revocation Date: 22nd December 1988 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 100m	E	682	2	432600 408900
	Discharge Consents				
14	Operator: Darton Rural District Council Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 6 Effective Date: 17th January 1966 Issued Date: 17th January 1966 Revocation Date: 22nd December 1988 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 100m	E	682	2	432600 408900

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
14	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 4 Effective Date: 18th October 1999 Issued Date: 18th October 1999 Revocation Date: 30th September 2000 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	711	2	432620 408940
	Discharge Consents				
14	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 5 Effective Date: 1st October 2000 Issued Date: 18th October 1999 Revocation Date: 31st December 2000 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	711	2	432620 408940
	Discharge Consents				
14	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 7 Effective Date: 1st January 2001 Issued Date: 18th October 1999 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Varied by Application - (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	E	711	2	432620 408940

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
15	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 1 Effective Date: 23rd December 1988 Issued Date: 23rd December 1988 Revocation Date: 12th July 1990 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 10m	E	773	2	432700 408860
	Discharge Consents				
15	Operator: YORKSHIRE WATER SERVICES LTD Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 2 Effective Date: 13th July 1990 Issued Date: 13th July 1990 Revocation Date: 31st December 1992 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: RIVER DEARNE **Status: Transferred from Water Act 1989** Positional Accuracy: Located by supplier to within 10m	E	773	2	432700 408860
	Discharge Consents				
15	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 1 Effective Date: 23rd December 1988 Issued Date: 23rd December 1988 Revocation Date: 12th July 1990 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from COPA 1974** Positional Accuracy: Located by supplier to within 10m	E	773	2	432700 408860
	Discharge Consents				
15	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 2 Effective Date: 13th July 1990 Issued Date: 13th July 1990 Revocation Date: 31st December 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from Water Act 1989** Positional Accuracy: Located by supplier to within 10m	E	773	2	432700 408860

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents				
15	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 3 Effective Date: 1st January 1993 Issued Date: 13th July 1990 Revocation Date: 17th October 1999 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from Water Act 1989** Positional Accuracy: Located by supplier to within 10m	E	773	2	432700 408860
	Discharge Consents				
15	Operator: Yorkshire Water Services Ltd Property Type: Sewage Disposal Works - Water Company Location: Darton Wwtw Dearne Hall Road,Low Barugh,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 2026 Permit Version: 3 Effective Date: 1st January 1993 Issued Date: 13th July 1990 Revocation Date: 17th October 1999 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Transferred from Water Act 1989** Positional Accuracy: Located by supplier to within 10m	E	773	2	432700 408860
	Discharge Consents				
16	Operator: Yorkshire Water Services Ltd Property Type: Undefined Or Other Location: Redbrook Road Cso,Redbrook Road,Barnsley,South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra8507 Permit Version: 1 Effective Date: 31st March 2005 Issued Date: 31st March 2005 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Red Brook **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	SE	918	2	432160 407740

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Discharge Consents					
16	Operator:	Yorkshire Water Services Ltd	SE	923	2	432150 407730
	Property Type:	Sewerage Network - Sewers				
	Location:	Redbrook Road,REDBROOK,South Yorkshire				
	Authority:	Environment Agency, North East Region				
	Catchment Area:	Dearne				
	Reference:	S/UD/51				
	Permit Version:	Not Supplied				
	Effective Date:	Not Supplied				
	Issued Date:	30th June 1993				
	Revocation Date:	Not Supplied				
	Discharge Type:	Sewage Effluent Discharge-Storm Effluent				
	Discharge Environment:	Unknown				
	Receiving Water:	Not Supplied				
	Status:	**Not Supplied**				
	Positional Accuracy:	Located by supplier to within 100m				
	Discharge Consents					
16	Operator:	Yorkshire Water Services Ltd	SE	928	2	432150 407730
	Property Type:	Sewerage Network - Sewers				
	Location:	Redbrook-Redbrook Road,South Yorkshire				
	Authority:	Environment Agency, North East Region				
	Catchment Area:	Dearne				
	Reference:	S/UD/51				
	Permit Version:	Not Supplied				
	Effective Date:	Not Supplied				
	Issued Date:	5th June 1963				
	Revocation Date:	Not Supplied				
	Discharge Type:	Sewage Effluent Discharge-Storm Effluent				
	Discharge Environment:	Unknown				
	Receiving Water:	Not Supplied				
	Status:	**Not Supplied**				
	Positional Accuracy:	Located by supplier to within 100m				
	Integrated Pollution Controls					
17	Name:	Dalkia Utilities Services Plc	N	904	2	431380 409720
	Location:	Dearne Mills,Darton,BARNSLEY,South Yorkshire,S75 5NH				
	Authority:	Environment Agency, North East Region				
	Permit Reference:	AF6529				
	Dated:	1st November 1993				
	Process Type:	IPC new application				
	Description:	1.3 A (C) Combustion processes within the Fuel & Power Industry				
	Status:	**Authorisation revoked**				
	Positional Accuracy:	Unknown				
	Nearest Surface Water Feature					
			NE	0	-	431870 408820
	Pollution Incidents to Controlled Waters					
18	Property Type:	Fire Water	NE	8	2	431800 408900
	Location:	In Stretch Of River Dearne At,And Below Shaw Carpets				
	Authority:	Environment Agency, North East Region				
	Pollutant:	Not Given				
	Note:	No Fish Killed				
	Incident Date:	11th April 1997				
	Incident Reference:	SH970155				
	Catchment Area:	Dearne Tributaries				
	Receiving Water:	Freshwater Stream/River				
	Cause of Incident:	Not Given				
	Severity of Incident:	Category 3 - Minor Incident				
	Positional Accuracy:	Located by supplier to within 100m				

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Pollution Incidents to Controlled Waters				
19	Property Type: Other General Premises Location: Road Bridge B6428 /,Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 18th May 1989 Incident Reference: 100102 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	NE	27	2	431900 408900
	Pollution Incidents to Controlled Waters				
20	Property Type: Industrial Premises Location: Footbridge/Footbridge Dearne 18 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 15th November 1991 Incident Reference: 128384 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	S	73	2	431700 408500
	Pollution Incidents to Controlled Waters				
21	Property Type: Construction/Demolition Location: Footbridge/ Road Bridge B6428 Dearne 19 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 14th February 1990 Incident Reference: 107856 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	SW	91	2	431500 408500
	Pollution Incidents to Controlled Waters				
22	Property Type: Water Company Sewage: Sewage Treatment Works Location: Dearne Between Darton And Low,BARUGH Authority: Environment Agency, North East Region Pollutant: Sewage - Treated Effluent Note: River Dearne; No Fish Killed Incident Date: 4th July 1998 Incident Reference: SH980265 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	N	108	2	431800 409000
	Pollution Incidents to Controlled Waters				
23	Property Type: Water Company Sewage: Sewage Treatment Works Location: Road Bridge B6428 /,Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 30th August 1991 Incident Reference: 125810 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	N	113	2	431710 409000

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Pollution Incidents to Controlled Waters				
23	Property Type: Coal Location: River Dearne Authority: Environment Agency, North East Region Pollutant: Unknown Note: No Fish Killed Incident Date: 27th November 1994 Incident Reference: SH950072 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	N	115	2	431700 409000
	Pollution Incidents to Controlled Waters				
23	Property Type: Industrial Premises Location: Road Bridge B6428 /,/ Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 27th November 1994 Incident Reference: 154591 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	N	119	2	431700 409000
	Pollution Incidents to Controlled Waters				
24	Property Type: Private Sewage (Non-PLC): Combined Sewer Overflow Location: BARUGH Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: Fish Killed: No Information Incident Date: 2nd June 1997 Incident Reference: SH970244 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	NE	120	2	431900 409000
	Pollution Incidents to Controlled Waters				
25	Property Type: Rail Location: River Dearne ,Between Darton,& Staincross,DARTON Authority: Environment Agency, North East Region Pollutant: Oils - Other Oil Note: Watercourse :River Dearne; From New Lodge To Old Mill; Fish Killed: No Information Incident Date: 22nd February 1998 Incident Reference: SH980060 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	N	202	2	431800 409100
	Pollution Incidents to Controlled Waters				
25	Property Type: Industrial Premises Location: Road Bridge B6428 /,/ Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 10th November 1993 Incident Reference: 148784 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	N	207	2	431800 409100

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Pollution Incidents to Controlled Waters				
26	Property Type: Not Given Location: Medina Way,BARUGH Authority: Environment Agency, North East Region Pollutant: Rubbish Note: Pollution Found; No Fish Killed Incident Date: 21st August 1996 Incident Reference: SH960381 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	SW	203	2	431400 408400
	Pollution Incidents to Controlled Waters				
27	Property Type: Water Company Sewage: Sewage Treatment Works Location: Low Mill Farm,Silkstone,BARNSLEY Authority: Environment Agency, North East Region Pollutant: Storm Sewage Note: No Fish Killed Incident Date: 9th August 1995 Incident Reference: SH950128 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	N	211	2	431700 409100
	Pollution Incidents to Controlled Waters				
27	Property Type: Fire Water Location: River Dearne At,DARTON Authority: Environment Agency, North East Region Pollutant: Chemicals - Detergents/Surfactant Note: No Fish Killed Incident Date: 25th July 1997 Incident Reference: SH970370 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	N	216	2	431700 409100
	Pollution Incidents to Controlled Waters				
28	Property Type: Water Company Sewage: Storm Overflow Location: LOW BARUGH Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: River Dearne; Fish Killed: No Information Incident Date: 16th August 1998 Incident Reference: SH980317 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	NE	213	2	431900 409100
	Pollution Incidents to Controlled Waters				
28	Property Type: Miscellaneous Premises: Unknown Location: Road Bridge B6428 /,Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Mining Water Note: Not Supplied Incident Date: 14th April 1991 Incident Reference: 121394 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	NE	218	2	431900 409100

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Pollution Incidents to Controlled Waters				
29	Property Type: Water Company Sewage: Storm Overflow Location: Dearne Hall Road,BARUGH Authority: Environment Agency, North East Region Pollutant: Sewage - Storm Overflow Note: No Fish Killed Incident Date: 26th September 1997 Incident Reference: SH970516 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	NE	249	2	432000 409100
	Pollution Incidents to Controlled Waters				
30	Property Type: Water Company Sewage: Foul Sewer Location: Road Bridge B6428 /,Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 21st June 1989 Incident Reference: 100461 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	NE	387	2	432200 409100
	Pollution Incidents to Controlled Waters				
31	Property Type: Water Company Sewage: Foul Sewer Location: Footbridge/ Road Bridge B6428 Dearne 19 Authority: Environment Agency, North East Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 17th March 1993 Incident Reference: 145877 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	NE	451	2	432200 409200
	Pollution Incidents to Controlled Waters				
32	Property Type: Industrial Premises Location: Road Bridge B6428 /,Road Brdg B6131 Dearne 20 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 4th September 1989 Incident Reference: 102905 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	NW	579	2	431100 409100
	Pollution Incidents to Controlled Waters				
33	Property Type: Water Company Sewage: Sewage Treatment Works Location: Footbridge/ Road Bridge B6428 Dearne 19 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 14th June 1990 Incident Reference: 111764 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Severity of Incident: Category 1 - Major Incident Positional Accuracy: Located by supplier to within 100m	E	584	2	432500 408900

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Pollution Incidents to Controlled Waters					
33	Property Type:	Water Company Sewage: Sewage Treatment Works	E	585	2	432500 408900
	Location:	Footbridge/ Road Bridge B6428 Dearne 19				
	Authority:	Environment Agency, North East Region				
	Pollutant:	Sewage Sludge				
	Note:	Not Supplied				
	Incident Date:	11th April 1989				
	Incident Reference:	6849				
	Catchment Area:	Not Given				
	Receiving Water:	Freshwater Stream/River				
	Cause of Incident:	Not Given				
	Severity of Incident:	Category 2 - Significant Incident				
	Positional Accuracy:	Located by supplier to within 100m				
	Pollution Incidents to Controlled Waters					
33	Property Type:	Water Company Sewage: Sewage Treatment Works	E	589	2	432510 408900
	Location:	Footbridge/ Road Bridge B6428 Dearne 19				
	Authority:	Environment Agency, North East Region				
	Pollutant:	Unknown				
	Note:	Not Supplied				
	Incident Date:	16th June 1990				
	Incident Reference:	111816				
	Catchment Area:	Not Given				
	Receiving Water:	Freshwater Stream/River				
	Cause of Incident:	Not Given				
	Severity of Incident:	Category 1 - Major Incident				
	Positional Accuracy:	Located by supplier to within 100m				
	Pollution Incidents to Controlled Waters					
34	Property Type:	Industrial Premises	N	658	2	431500 409500
	Location:	Road Bridge B6428 /,/ Road Brdg B6131 Dearne 20				
	Authority:	Environment Agency, North East Region				
	Pollutant:	Not Given				
	Note:	Not Supplied				
	Incident Date:	4th January 1990				
	Incident Reference:	106536				
	Catchment Area:	Not Given				
	Receiving Water:	Freshwater Stream/River				
	Cause of Incident:	Not Given				
	Severity of Incident:	Category 2 - Significant Incident				
	Positional Accuracy:	Located by supplier to within 100m				
	Pollution Incidents to Controlled Waters					
35	Property Type:	Water Company Sewage: Storm Overflow	SE	824	2	432400 408000
	Location:	LOW BARUGH				
	Authority:	Environment Agency, North East Region				
	Pollutant:	Sewage - Storm Overflow				
	Note:	No Fish Killed				
	Incident Date:	19th August 1997				
	Incident Reference:	SH970421				
	Catchment Area:	Dearne Tributaries				
	Receiving Water:	Freshwater Stream/River				
	Cause of Incident:	Not Given				
	Severity of Incident:	Category 3 - Minor Incident				
	Positional Accuracy:	Located by supplier to within 100m				
	Pollution Incidents to Controlled Waters					
36	Property Type:	Industrial Premises	NW	838	2	431300 409600
	Location:	Road Bridge B6428 /,/ Road Brdg B6131 Dearne 20				
	Authority:	Environment Agency, North East Region				
	Pollutant:	Not Given				
	Note:	Not Supplied				
	Incident Date:	28th May 1990				
	Incident Reference:	111136				
	Catchment Area:	Not Given				
	Receiving Water:	Freshwater Stream/River				
	Cause of Incident:	Not Given				
	Severity of Incident:	Category 2 - Significant Incident				
	Positional Accuracy:	Located by supplier to within 100m				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Prosecutions Relating to Authorised Processes					
37	Location:	Barnsley Road,Darton,Barnsley,Yorkshire,S75 5NT	NW	594	-	431290 409270
	Prosecution Text:	EA News Release 04/03/1999, Found guilty of knowingly permitting controlled waste to be deposited without a licence.				
	Prosecution Act:	EPA90				
	Hearing Date:	4th March 1999				
	Verdict:	Guilty				
	Fine:	500				
	Costs:	1240.1				
	Positional Accuracy:	Manually positioned to the road within the address or location				
	River Quality					
	Name:	River_Dearne	N	69	2	431750 408960
	GQA Grade:	River Quality C				
	Reach:	Cawthorne_Dyke_New_Lodg				
	Estimated Distance of Reach (km):	2				
	Flow Rate:	Flow less than 0.62 cumecs				
	Flow Type:	River				
	Year:	2000				
	River Quality					
	Name:	Cawthorne_Dyke	N	180	2	431600 409020
	GQA Grade:	River Quality C				
	Reach:	Silkstone_Beck_River_Dearn				
	Estimated Distance of Reach (km):	2.1				
	Flow Rate:	Flow less than 0.31 cumecs				
	Flow Type:	River				
	Year:	2000				
	River Quality					
	Name:	River_Dearne	N	195	2	431620 409040
	GQA Grade:	River Quality C				
	Reach:	Wooley_Minewater_Cawthorne_Dyk				
	Estimated Distance of Reach (km):	3.3				
	Flow Rate:	Flow less than 0.31 cumecs				
	Flow Type:	River				
	Year:	2000				
	River Quality					
	Name:	Cawthorne_Dyke	W	975	2	430480 408660
	GQA Grade:	River Quality C				
	Reach:	Tanyard_Beck_Silkstone_Bec				
	Estimated Distance of Reach (km):	2.6				
	Flow Rate:	Flow less than 0.31 cumecs				
	Flow Type:	River				
	Year:	2000				
	River Quality					
	Name:	Silkstone_Beck	W	975	2	430480 408660
	GQA Grade:	River Quality B				
	Reach:	Banks_Bottom_Dyke_Cawthorne_Dyk				
	Estimated Distance of Reach (km):	3.2				
	Flow Rate:	Flow less than 0.31 cumecs				
	Flow Type:	River				
	Year:	2000				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	River Quality Biology Sampling Points					
38	Name:	Dearne	N	180	2	431630 409030
	Reach:	Cawthorne Dyke To New Lodge				
	Estimated Distance:	2.00				
	Positional Accuracy:	Located by supplier to within 10m				
	Year:	1990				
	GQA Grade:	Not Supplied				
	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 C - Fairly Good				
	River Quality Chemistry Sampling Points					
39	Name:	River Dearne	NE	119	2	432000 408900
	Reach:	Cawthorne Dyke New Lodge				
	Estimated Distance:	2.00				
	Objective:	River Ecosystem Class 3: Fairly Good Quality				
	Positional Accuracy:	Located by supplier to within 100m				
	Year:	1990				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Not Supplied				
	Year:	1993				
	GQA Grade:	River Quality Chemistry GQA Grade D - Fair				
	Compliance:	Marginal				
	Year:	1994				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Compliant				
	Year:	1995				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Compliant				
	Year:	1996				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Significant Failure				
	Year:	1997				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Significant Failure				
	Year:	1998				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Significant Failure				
	Year:	1999				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	2000				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Compliant				
	Year:	2001				
	GQA Grade:	River Quality Chemistry GQA Grade B - Good				
	Compliance:	Compliant				
	Year:	2002				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Compliant				
	Year:	2003				
	GQA Grade:	River Quality Chemistry GQA Grade D - Fair				
	Compliance:	Marginal				
	Year:	2004				
	GQA Grade:	River Quality Chemistry GQA Grade D - Fair				
	Compliance:	Marginal				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	River Quality Chemistry Sampling Points					
40	Name:	Cawthorne Dyke	NW	297	2	431300
	Reach:	Silkstone Beck River Dearne				408900
	Estimated Distance:	2.10				
	Objective:	River Ecosystem Class 2: Good Quality				
	Positional Accuracy:	Located by supplier to within 100m				
	Year:	1990				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Not Supplied				
	Year:	1993				
	GQA Grade:	River Quality Chemistry GQA Grade B - Good				
	Compliance:	Compliant				
	Year:	1994				
	GQA Grade:	River Quality Chemistry GQA Grade B - Good				
	Compliance:	Compliant				
	Year:	1995				
	GQA Grade:	River Quality Chemistry GQA Grade B - Good				
	Compliance:	Compliant				
	Year:	1996				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	1997				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	1998				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	1999				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Significant Failure				
	Year:	2000				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Significant Failure				
	Year:	2001				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	2002				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	2003				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Year:	2004				
	GQA Grade:	River Quality Chemistry GQA Grade C - Fairly Good				
	Compliance:	Marginal				
	Water Abstractions					
41	Operator:	Shaw Carpets Ltd	N	881	2	431400
	Licence Number:	2/27/08/114				409700
	Permit Version:	Not Supplied				
	Location:	Po Box. 4,Darton,BARNSLEY				
	Authority:	Environment Agency, North East Region				
	Abstraction:	Commercial Use(pubs etc)				
	Abstraction Type:	Not Supplied				
	Source:	Groundwater				
	Daily Rate (m3):	312				
	Yearly Rate (m3):	85072				
	Details:	Licence Status: Active				
	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				

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability				
	Geological Classification: Minor Aquifer (Variably permeable) - These can be fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability including unconsolidated deposits. Although not producing large quantities of water for abstraction, they are important for local supplies and in supplying base flow to rivers Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 11 South Pennines Scale: 1:100,000	S	0	2	431710 408640
	Groundwater Vulnerability				
	Geological Classification: Minor Aquifer (Variably permeable) - These can be fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability including unconsolidated deposits. Although not producing large quantities of water for abstraction, they are important for local supplies and in supplying base flow to rivers Soil Classification: Soils of High Leaching Potential (H1) - Soils which readily transmit liquid discharges because they are either shallow, or susceptible to rapid by-pass flow directly to rock, gravel or groundwater Map Sheet: Sheet 11 South Pennines Scale: 1:100,000	-	0	2	431690 408730
	Drift Deposits				
	Description: None	-	-	-	-
	Extreme Flooding from Rivers or Sea without Defences				
	Flood Plain Type: Fluvial Source: Environment Agency, Head Office Boundary Accuracy: As Supplied	NE	0	2	431880 408830
	Flooding from Rivers or Sea without Defences				
	Flood Plain Type: Fluvial Source: Environment Agency, Head Office Boundary Accuracy: As Supplied	NE	0	2	431890 408830
	Areas Benefiting from Flood Defences				
	Description: None	-	-	-	-
	Flood Water Storage Areas				
	Type: Flood Water Storage Areas Reference: EA1231302580101R80 Source: Environment Agency, Head Office	N	87	2	431650 408960
	Flood Defences				
	Type: Flood Defences Reference: 1231302560601L02 Source: Environment Agency, Head Office	N	155	2	431710 409050
	River Flood Data (Scotland)				
	Description: None	-	-	-	-

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage				
	Name: Barnsley Metropolitan Borough Council - Has supplied landfill data	-	0	1	431690 408730
	Local Authority Recorded Landfill Sites				
42	Location: Not Supplied Reference: 151 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	S	0	1	431690 408610
	Local Authority Recorded Landfill Sites				
43	Location: Not Supplied Reference: 97 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	42	1	431890 408590
	Local Authority Recorded Landfill Sites				
44	Location: Not Supplied Reference: 98 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	NE	189	1	431860 409080
	Local Authority Recorded Landfill Sites				
45	Location: Not Supplied Reference: 51 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SW	369	1	431450 408220
	Local Authority Recorded Landfill Sites				
46	Location: Not Supplied Reference: 84 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	425	1	432040 408230
	Local Authority Recorded Landfill Sites				
47	Location: Not Supplied Reference: 69 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	NE	490	1	432250 409210

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
48	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 76 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	N	540	1	431710 409430
49	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 81 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	544	1	432110 408130
50	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 160 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	667	1	432250 408080
51	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 87 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	674	1	432200 408040
52	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 80 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	802	1	432250 407920
53	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 135 Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards **Last Reported Status:** **Unknown** Types of Waste: Not Supplied Date of Closure: Not Supplied Positional accuracy: Positioned by the supplier Boundary Quality: Moderate	SE	830	1	432470 408050

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Registered Landfill Sites					
54	Licence Holder:	C Langfield	SE	115	2	431950 408550
	Licence Reference:	WD20 B 488 MOD 2				
	Site Location:	Claycliffe Road Industrial Estate,Barugh Green,Barnsley,South Yorkshire				
	Licence Easting:	431950				
	Licence Northing:	408550				
	Operator Location:	3 The Balk,Stancross,BARNSLEY,South Yorkshire,S75 6JG				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence revoked				
	Dated:	21st October 1985				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Asphalt/Cold Millings From Road Excav. Construction And Demolition Wastes Excavated Natural Materials $ Hardcore And Rubble				
	Prohibited Waste	Asbestos Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.				
	Registered Landfill Sites					
55	Licence Holder:	R & J Masters Ltd	SW	397	2	431420 408200
	Licence Reference:	WD20 B 559				
	Site Location:	Barugh Green Road,Barugh Green,Barnsley,South Yorkshire				
	Licence Easting:	431420				
	Licence Northing:	408200				
	Operator Location:	Redbrook Road,BARNSLEY,South Yorkshire,S75 2RS				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st July 1987				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Inert,Excavation Waste Soil/Subsoil Solid,Non-Haz. Constr'N/Demol. Waste				
	Prohibited Waste	All Forms Of Asbestos Liq/Slurry In Drums/Cont'Rs > 4l Cap Poisonous, Noxious, Polluting Wastes				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Registered Landfill Sites					
56	Licence Holder:	C Birkinshaw & Sons Ltd	N	410	2	431850 409300
	Licence Reference:	WD20 B 490				
	Site Location:	Between Darton Lane,& Dearne Hall Road,Darton,Barnsley,South Yorkshire				
	Licence Easting:	431850				
	Licence Northing:	409300				
	Operator Location:	Oaks Farm,Darton Lane,Darton,Barnsley,South Yorkshire				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence revoked				
	Dated:	21st October 1985				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Construction And Demolition Wastes Excavated Natural Materials $ Hardcore And Rubble				
	Prohibited Waste	Asbestos Biodegradable/Putrescible Waste Combustible/Potentially Combustible Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.				
	Registered Landfill Sites					
57	Licence Holder:	Amco Industrial Holdings Ltd	SE	539	2	432250 408250
	Licence Reference:	WD20 B 375				
	Site Location:	Whaley Road,Barugh,Barnsley,South Yorkshire				
	Licence Easting:	432250				
	Licence Northing:	408250				
	Operator Location:	As Site Address				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st April 1983				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Construction And Demolition Wastes Excavated Natural Materials $				
	Prohibited Waste	Asbestos Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Registered Landfill Sites					
58	Licence Holder:	Shaw Carpets Ltd	N	565	2	431680 409450
	Licence Reference:	WD20 B 265				
	Site Location:	Barnsley Road,Darton,Barnsley,South Yorkshire				
	Licence Easting:	431680				
	Licence Northing:	409450				
	Operator Location:	As Site Address				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Very Small (Less than 10,000 tonnes per year)				
	Waste Source Restrictions:	Only waste produced on site				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st April 1980				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Construction And Demolition Wastes Ind. Non-Haz. Waste Soil & Subsoil				
	Prohibited Waste	Asbestos Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.				
	Registered Landfill Sites					
59	Licence Holder:	N.C.B.	NE	596	2	432350 409250
	Licence Reference:	WD20 B 176 MOD 1				
	Site Location:	Quarry At Spark Lane,Mapplewell,Darton,Barnsley,South Yorkshire				
	Licence Easting:	432350				
	Licence Northing:	409250				
	Operator Location:	Barnsley Area Off. Grimethorpe,Barnsley,South Yorkshire				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Very Small (Less than 10,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st July 1983				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Construction And Demolition Wastes				
	Prohibited Waste	Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Registered Landfill Sites					
60	Licence Holder:	Amco Industries Holdings Ltd	SE	612	2	432250 408150
	Licence Reference:	WD20 B 502 MOD 1				
	Site Location:	Whaley Road,Barugh,BARNSLEY,South Yorkshire,S75 1HG				
	Licence Easting:	432250				
	Licence Northing:	408150				
	Operator Location:	As Site Address				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st March 1986				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Construction And Demolition Wastes Hardcore And Builders Rubble Road Excavation Waste Soil/Subsoil, Road Sub-Base Materials				
	Prohibited Waste	All Forms Of Asbestos Liq/Slurry In Drums > 4 L Capacity Liquid/Slurry In Drums > 4 L Capacity Putrescible Waste				
	Registered Landfill Sites					
61	Licence Holder:	Bayford Mining Ltd	SE	706	2	432200 408000
	Licence Reference:	WD20 B 392 MOD 1				
	Site Location:	South Yorkshire Industrial Estate,Redbrook,Barnsley,South Yorkshire				
	Licence Easting:	432200				
	Licence Northing:	408000				
	Operator Location:	Pepper Road,LEEDS,West Yorkshire,LS10 2NQ				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st September 1983				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Construction And Demolition Wastes Hardcore Road Excavation Waste Soil, Subsoil				
	Prohibited Waste	All Forms Of Asbestos Liquids In Drums/Cont'Rs Over 4l Cap'Y Slurry In Drums/Cont'Rs Over 4l Cap'Y				

Map ID	Details		Compass Direction	Estimated Distance From Site	Contact	NGR
	Registered Landfill Sites					
62	Licence Holder:	Autogel Ltd	SE	824	2	432400 408000
	Licence Reference:	WD20 B1050 MOD 1				
	Site Location:	Whaley Road (East Of),Barugh Green,BARNSLEY,South Yorkshire,S75 1JF				
	Licence Easting:	432400				
	Licence Northing:	408000				
	Operator Location:	Bence Lane,Darton,BARNSLEY,South Yorkshire,S75 5PA				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence has completion certificate				
	Dated:	11th March 1994				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Inert Non-Combust Constr'N/Demol.Waste Max.Waste Permitted By Licence				
	Prohibited Waste	Any Other Biodegrable Waste Asbestos In Any Form Paper Plasterboard Putrescible Waste Timber Waste N.O.S.				
	Registered Landfill Sites					
63	Licence Holder:	Tara Civil Engineering Ltd	SE	862	2	432250 407850
	Licence Reference:	WD20 B 390				
	Site Location:	Wilthorpe Road,Redbrooke,Barnsley,South Yorkshire				
	Licence Easting:	432250				
	Licence Northing:	407850				
	Operator Location:	High Street,South Elmsall,Pontefract,West Yorkshire				
	Authority:	Environment Agency - North East Region, Ridings Area				
	Site Category:	Landfill				
	Maximum Input Rate:	Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year)				
	Waste Source Restrictions:	No known restriction on source of waste				
	Status:	Licence lapsed/cancelled/defunct/not applicable/surrendered				
	Dated:	1st September 1983				
	Preceded By Licence:	Not Given				
	Superseded By Licence:	Not Given				
	Positional Accuracy:	Manually positioned to the address or location				
	Boundary Accuracy:	Not Applicable				
	Authorised Waste	Excavated Natural Materials $				
	Prohibited Waste	Asbestos Liquid Wastes				

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	BGS Boreholes				
64	BGS Reference: Se30nw24 Drilled Length (m): 149.66 Borehole Name: Dodworth Colliery No.4 Ugbh	SE	101	3	431870 408510
	BGS Boreholes				
65	BGS Reference: Se30nw629 Drilled Length (m): Not Supplied Borehole Name: Barugh Sub Station Extension 4	SE	142	3	431990 408550
	BGS Boreholes				
65	BGS Reference: Se30nw626 Drilled Length (m): Not Supplied Borehole Name: Barugh Sub Station Extension 1	SE	143	3	431970 408530
	BGS Boreholes				
65	BGS Reference: Se30nw627 Drilled Length (m): Not Supplied Borehole Name: Barugh Sub Station Extension 2	SE	157	3	431990 408530
	BGS Boreholes				
65	BGS Reference: Se30nw628 Drilled Length (m): Not Supplied Borehole Name: Barugh Sub Station Extension 3	SE	163	3	432010 408540
	BGS Boreholes				
66	BGS Reference: Se30nw142 Drilled Length (m): 5 Borehole Name: Barugh Green Darton Bh 3	SW	186	3	431390 408420
	BGS Boreholes				
66	BGS Reference: Se30nw141 Drilled Length (m): 6 Borehole Name: Barugh Green Darton Bh 2	SW	195	3	431420 408410
	BGS Boreholes				
66	BGS Reference: Se30nw143 Drilled Length (m): 7 Borehole Name: Barugh Green Darton Bh 4	SW	216	3	431410 408380
	BGS Boreholes				
67	BGS Reference: Se30nw140 Drilled Length (m): 6 Borehole Name: Barugh Green Darton Bh 1	SW	204	3	431440 408390
	BGS Boreholes				
68	BGS Reference: Se30nw614 Drilled Length (m): 8.8 Borehole Name: Amco Barugh 2	SE	215	3	431990 408450
	BGS Boreholes				
69	BGS Reference: Se30nw549 Drilled Length (m): 8.05 Borehole Name: Manor Farm Barugh Lane 2	SW	283	3	431460 408310
	BGS Boreholes				
69	BGS Reference: Se30nw550 Drilled Length (m): 10.8 Borehole Name: Manor Farm Barugh Lane 3	SW	283	3	431460 408310
	BGS Boreholes				
69	BGS Reference: Se30nw551 Drilled Length (m): 9.6 Borehole Name: Manor Farm Barugh Lane 4	SW	283	3	431460 408310
	BGS Boreholes				
69	BGS Reference: Se30nw548 Drilled Length (m): 7.5 Borehole Name: Manor Farm Barugh Lane 1	SW	283	3	431460 408310
	BGS Boreholes				
70	BGS Reference: Se30nw17 Drilled Length (m): 71.32 Borehole Name: Old Colliery Dodsword Road	NW	292	3	431510 409060

Map ID	Details	Compass Direction	Estimated Distance From Site	Contact	NGR
	BGS Boreholes				
71	BGS Reference: Se30nw287 Drilled Length (m): 15 Borehole Name: Barugh Green Barnsley Bh 3	S	362	3	431750 408210
	BGS Boreholes				
71	BGS Reference: Se30nw286 Drilled Length (m): 10 Borehole Name: Barugh Green Barnsley Bh 2	S	363	3	431700 408210
	BGS Boreholes				
72	BGS Reference: Se30nw285 Drilled Length (m): 15 Borehole Name: Barugh Green Barnsley Bh 1	S	365	3	431650 408210
	BGS Boreholes				
72	BGS Reference: Se30nw291 Drilled Length (m): 13 Borehole Name: Barugh Green Barnsley Bh 7	S	395	3	431650 408180
	BGS Boreholes				
73	BGS Reference: Se30nw288 Drilled Length (m): 15 Borehole Name: Barugh Green Barnsley Bh 4	S	381	3	431500 408210
	BGS Boreholes				
74	BGS Reference: Se30nw289 Drilled Length (m): 13 Borehole Name: Barugh Green Barnsley Bh 5	S	385	3	431550 408200
	BGS Boreholes				
75	BGS Reference: Se30nw290 Drilled Length (m): 13 Borehole Name: Barugh Green Barnsley Bh 6	S	389	3	431600 408190
	BGS Boreholes				
76	BGS Reference: Se30nw292 Drilled Length (m): 10 Borehole Name: Barugh Green Barnsley Bh 8	S	403	3	431700 408170
	BGS Boreholes				
76	BGS Reference: Se30nw293 Drilled Length (m): 10 Borehole Name: Barugh Green Barnsley Bh 9	S	412	3	431740 408160
	BGS Boreholes				
77	BGS Reference: Se30nw557 Drilled Length (m): 91.44 Borehole Name: Low Temperature Carbonization Ltd	SE	420	3	432260 408450
	BGS Boreholes				
77	BGS Reference: Se30nw8/A Drilled Length (m): Not Supplied Borehole Name: Coalite Works No.1	SE	426	3	432260 408440
	BGS Boreholes				
78	BGS Reference: Se30nw294 Drilled Length (m): 13 Borehole Name: Barugh Green Barnsley Bh 10	S	431	3	431490 408160
	BGS Boreholes				
79	BGS Reference: Se30nw295 Drilled Length (m): 10 Borehole Name: Barugh Green Barnsley Bh 11	S	436	3	431540 408150
	BGS Boreholes				
80	BGS Reference: Se30nw296 Drilled Length (m): 13 Borehole Name: Barugh Green Barnsley Bh 12	S	440	3	431590 408140
	BGS Boreholes				
80	BGS Reference: Se30nw297 Drilled Length (m): 10 Borehole Name: Barugh Green Barnsley Bh 13	S	446	3	431630 408130