Old Mill Lane, Barnsley

Phase I Geo-Environmental Assessment

For

Aldi Stores Ltd.

Report Ref	Issue	Prepared by	Date	Reviewed by	Date
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Old Mill Lane, Barnsley

Phase I Geo-Environmental Assessment

CONTENTS

EXECUTIVE SUMMARY ii

1 INTRODUCTION 1

2 THE SITE 3

3 SITE HISTORY 4

4 ENVIRONMENTAL SETTING 5

5 REVIEW OF THE PREVIOUS INVESTIGATIONS 8

6 CONCEPTUAL SITE MODEL 11

7 ENVIRONMENTAL RISK ASSESSMENT 13

8 GEOTECHNICAL CONSIDERATIONS 15

9 FURTHER INVESTIGATIONS 16

Figures

Figure 1 Site Location Plan

Figure 2 Site Photographs

Appendices

Appendix A Proposed Site Layout

Appendix B Historical OS Maps

Appendix C Envirocheck Report

Appendix D Coal Authority Report

Appendix E Previous Remediation Verification Report and drawings

Appendix F Correspondence from Regulators

EXECUTIVE SUMMARY

Land Use	The site is currently unoccupied, level and generally covered by informal granular hardstanding with discrete areas of block work walls concrete slab or tarmac hardstanding. The boundaries are marked by post and wire fencing on the east, west and south with palisade fencing to the north. Old Tannery Lane lies on embankment to the south of the site. During the walkover, no evidence of potential contamination sources was observed.
Site History	The site has been occupied by a gas works since the end of the 19th century, which extended across the land adjacent to the east, west and south. The gas works was redeveloped as a depot in the 1960s, which lasted until it's removal in the last ten years. The surrounding area has supported a paper mill, saw mill, tannery and collieries, since the late 1800's.
Environmental Setting	• Geological information indicates the site to be underlain alluvial deposits which overlie Coal Measures bedrock • Four landfill record within 250m. • River Dearne lies 35m to south. • The underlying solid and drift strata are classed as a Secondary A aquifer. • The site is recorded to be at risk from flooding (Zone 3). • There are no licensed groundwater abstractions within 250m. • There are 9 discharge consents within 250m. • Radon protection measures are not required for future developments. • There are no Local Authority Pollution and Prevention Controls within 250m
Contamination	The site has been subject to extensive remediation works to allow commercial redevelopment. A large volume of contaminated fill material was removed from site, sorted, remediated, validate and then returned to site a suitable fill. A clay cut off wall was to be constructed along the northern site boundary to prevent the migration of contaminants from the neighbouring site where former gas works structures and contaminated soils were present. Following the source removal of grossly contaminated soils and perched waters a program of groundwater monitoring was put in place to assess the natural attenuation in the main groundwater body at depth at determine if remediation was required.
Mining	The Coal Authority record workings beneath the site in 4 seams of coal between 120m and 410m depth. The Coal Authority also believes that the site is in an area where coal exists at or close to the surface which may have been worked at some time in the past. It should be noted that other unrecorded mine entries may be present and there are collieries and a drift mines have been recorded within 500m of the site.
Ground Gas	Ground gas risk is considered low to medium. Gas monitoring is required. Allowance should be made for a hydrocarbon vapour barrier at this stage.
Foundations	Due to the variable nature and depth of the made ground and soft nature of the shallow alluvial deposits, traditional shallow foundations are not considered suitable. Piled foundations or vibro improvement is considered suitable subject to the advice of a specialist contractor and approval of the regulators. Depending on loadings a ground bearing floor slab may be suitable subject to re-engineering or ground improvement (e.g. stone columns).

Ground Investigation	A ground investigation is required to confirm the site conditions. This should include as a minimum: trial pits or mini-percussive holes, rotary drilling, gas monitoring installations, geotechnical and chemical laboratory analysis.

1 INTRODUCTION

1.1 3e Consulting Engineers Ltd (3e) were commissioned by Aldi Stores Ltd to carry out a Phase I Geo-Environmental assessment of land off Old Mill Lane, Barnsley, South Yorkshire. This report highlights ground related environmental and geotechnical considerations in relation to the proposed development which includes the construction of an Aldi Store with associated car parking and soft landscaping, as indicated on the outline site plan included in **Appendix A**.

1.2 The site forms part of a former gas works which is understood to have been remediated by VHE under the supervision of White Young Green (WYG) in between 2007 and 2008 and a validation report was prepared by WYG (Factual Post Remediation Verification Report, Former Gasworks, Old Mill Lane, Barnsley, dated August 2008, ref E7773-PRF-V1). The report also summaries the previous series of geo-environmental assessments of the site completed by WYG between 1996 and 2007. It is recommended that the reports are read in conjunction with this assessment.

1.3 The objectives of this assessment were:

- To establish the historical development of the site and surrounding area.
- To establish the environmental setting of the site.
- To determine if historical or current activities could give rise to significant ground or groundwater contamination.
- To assess the potential for hazardous ground gas.
- To determine the potential risks posed by contamination arising from historical or current activities on or in the vicinity of the site.

1.4 To this end the study has included a site visit on the 16 January 2015, an inspection of historical maps, a review of environmental data held on publicly available registers and other sources as indicated within the report.

1.5 This report presents the factual information available during this appraisal, interpretation of the data obtained and recommendations relevant to the scope of works outlined above. It has been assumed in the production of this report that the site is to be developed for a commercial end use.

1.6 The comments and opinions presented in this report are based on the findings of the available desk study investigation carried out by 3e. Responsibility cannot be accepted for any conditions not revealed by this desk study and which have not been taken into account by this report.

1.7 This report has been prepared for the sole use of Aldi Stores Ltd. No other third party may rely upon or reproduce the contents of this report without the written approval of 3e. If any unauthorised third party comes into possession of this report, they rely on it entirely at their own risk and 3E do not owe them any Duty of Care or Skill.

2 THE SITE

Location and Description

2.1 The site, centred on National Grid Reference 435200, 407310, is located on the east of Old Mill Lane and north of Old Tannery Road in Barnsley, approximately 1km north east of the town centre as shown on **Figure 1**.

2.2 The site is currently unoccupied, level and generally covered by informal granular hardstanding with discrete areas of block work walls concrete slab or tarmac hardstanding. During the walkover, evidence of potential contamination sources was not observed on the surface.

2.3 The boundaries are marked by post and wire fencing on the east, west and south with palisade fencing to the north.

2.4 The adjacent land use is as follows:

- North: Car park and Wickes store beyond.
- South and East: Old Tannery Lane on embankment with unoccupied land and River Dearne beyond.
- East: Agricultural plant yard with other commercial and residential properties beyond.
- West: Old Mill and with on embankment with retail units beyond.

2.5 Photographs of the site are included as **Figure 2**.

3 SITE HISTORY

3.1 In order to establish the site history an inspection was made of historical maps, dating between 1855 and 2014. A summary of the information is provided below and a copy of the maps is included in **Appendix B**. It is not the intention of this report to describe in detail all of the changes that have occurred on or adjacent to the site, only those pertinent to the proposed development.

Map Dates	On-Site Features	Relevant Off-Site Features
1855 - 1892	Open land	Old Mill Lane adjacent to west River Dearne 35m to south
1892 - 1969	Site is part of a larger gas works with a gas holder in the north west part of the site. The main buildings including retort house are located in the centre	Remainder of gas works adjacent to east, west and south. Railway line adjacent to north. Saw Mill, Tannery and Paper Mill beyond River Dearne to south. Numerous collieries and drift mines recorded within 500m of site
1969 - 2006	Site redeveloped as a depot with removal of previous buildings including gas holder	Removal of gas works buildings apart from a single gas holder to south of River Dearne
2006 - 2014	Site shown as open land	Wickes DIY store shown to north. Old Tannery Lane shown by 2014 adjacent to south

3.2 In summary, the site has been occupied by a gas works since the end of the 19th century, which extended across the land adjacent to the east, west and south. The gas works was redeveloped as a depot in the 1960s, which lasted until its removal in the last ten years. The surrounding area has supported a paper mill, saw mill, tannery and collieries, since the late 1800's. Greater detail of the sits history as a gas works is contained with the past reports by WYG discussed in Section 5.

4 ENVIRONMENTAL SETTING

4.1 This section summarises the publicly available information collated within an Envirocheck search, included as **Appendix C**, together with other sources where indicated.

Geology and Mining

4.2 A summary of the site geology, based on available published information, is provided below.

Sources of Information	British Geological Survey (BGS) Sheet 87 Barnsley, 1:50 000 scale, Solid and Drift Editions. Coal Authority Mining Report. A Coal Authority mining report is included as **Appendix D**.
Made Ground	None recorded on published maps. Previous investigations by WYG generally encountered between 1.2m and 4.5m, with deeper fill encountered in the SE part of the site. Within the former gas holder greater than 6.5m of made ground was encountered.
Superficial Deposits (drift)	The site is identified to be underlain by Alluvium, which could comprise clay, silt sand or gravel. Previous investigations by WYG generally encountered soft clay beneath the made ground to depths of about 4m but up to 6.3m in the south of the site. The soft clays were underlain by firm clays beneath the entire site with gravel at depths in excess of 6m in a number boreholes.
Solid Geology	The site is underlain by Kent's Rock sandstone unit of the Late Carboniferous. The Kent's Rock is underlain by the Kent's Thin Coal which is indicated up to 1.9m thick locally.
Mining	The Coal Authority record workings beneath the site in 4 seams of coal between 120m and 410m depth. The Coal Authority also believes that the site is in an area where coal exists at or close to the surface which may have been worked at some time in the past. No mine entry is recorded on or within 20m of the site boundary. It should be noted that other unrecorded mine entries may be present and there are collieries and a drift mines noted within 500m of the site.
Quarrying	None recorded on or within 250mof the site.

Hydrology and Hydrogeology

4.3 A summary of available information pertaining to hydrology, hydrogeology, water abstractions, discharge consents and pollution incidents to controlled waters is provided below.

Watercourses	River Dearne some 35m to the south.
Flood Risk	The site lies within a flood plain considered to be at risk of flooding (Zones 3).
Groundwater Classification	Solid Geology: Secondary A Aquifer Superficial Geology: Secondary A Aquifer
Source Protection Zones	NR.
Springs	NR.
Wells	NR.
Licensed Surface Water Abstractions	Yorkshire Water 369m NW form unnamed stream.
Licensed Groundwater Abstractions	Star Paper Mill 416m to NE.
Discharge Consents	There is nine discharge within 250m mostly for Yorkshire Water storm water overflows into the River Dearne
Pollution Incidents	One significant and 1 minor incident recorded on site in 1994 and 1991 respectively for oils pollution of water course.

NR – None Recorded

Landfill Sites and Waste Management

4.4 A summary of information regarding landfill sites (historical or current) and waste management facilities is provided below.

Local Authority Recorded Landfills	Four historical landfill is recorded within 250m, the closest of which is some 48m south west of the site for inert waste in the SW portion of the former gas works.
BGS / EA Recorded Landfills	NR within 250m.
Other Waste Management Facilities	Site was a registered waste transfer station between 1993 and 2000.

NR – None Recorded

Pollution Controls and Industrial Land Use

4.5 A summary of Pollution Control records and potentially polluting activities (fuel stations) is provided below.

Integrated Pollution Controls (IPC)	NR within 250m.
Integrated Pollution Prevention and Control (IPPC)	NR within 250m.
Pollution Prevention and Controls (PPC)	NR within 250m.
Petrol Filling Stations	One active petrol filling station is recorded within 250m of the site. This is recorded to be approximately 229m SW of the site at the Asda supermarket.

NR – None Recorded

Radon

4.6 Radon protection measures are not required at this location.

Other

4.7 Other sensitive land uses or potentially contaminative activities are listed below. The entries relate to activities within approximately 250m of the site:

- The gas holder 90m to the SW of the site is a registered COMAH and NIHHS site.
- 20 other Contemporary Trade Directory Entries are recorded within 250m.

5 REVIEW OF THE PREVIOUS INVESTIGATIONS

5.1 As part of this Desk Study, historical reports prepared by White Young Green Environmental, which covered a larger site area were reviewed, a list of the reports reviewed is as follows:

- Former Gasworks, Old Mill Lane, Barnsley – Factual Post Remediation Verification Report for National Grid Property Holdings Ltd, Referenced E7773-PRF-1, dated August 2008. This report includes a review of previous investigation referenced in the body of the report.
- Former Gasworks, Old Mill Lane, Barnsley – Supplementary Site Investigation Report – Factual Report for National Grid Property Holdings Ltd, Referenced E7773-SUPP SI FACT 2008-V1, dated December 2008.
- Old Mill Lane, Barnsley – Ground Investigation Factual Report for National Grid Property Holdings Ltd, Referenced E7773-3 GI FACT - V1, dated November 2008.

Soil and Groundwater Conditions

5.2 Made ground was proved to depths of between 1.2m and 4.6m, but typically less than 2.5m and appears to be deepest towards the south west part of the site. Within the former gas holder in the north east part of the site made ground was proven to depths in excess of 6.5m. The made ground was very variable and contained a significant degree of contamination.

5.3 Groundwater was encountered during the excavation of trial pits and sinking of the boreholes, both perched in the made ground and within structures and at depths of between 4.0 and 7.8m in the natural soils. Long term monitoring indicated groundwater at an average depth of 2.9m with a hydraulic gradient towards the River Dearne.

Contamination Assessment

5.4 Site investigations have identified contamination of soils and groundwater as summarised below:

- Hydrocarbon, ammonia, cyanide and tar impacted soils in various locations across the wider site

- Hydrocarbon contamination in perched groundwater associated with historical structures such as purifiers and retort house.

Remedial Strategy

5.5 A remediation statement was agreed with the local authority and Environment Agency (EA) by WYG and VHE which is details in section 1.12 of the WYG Verification report, enclosed as **Appendix E** (test and drawings only).

Soils

5.6 In summary, remediation was the removal from site of contaminated soils and perched groundwater from the majority of the site area and validation of the surrounding materials to confirm that all the contaminated material had been removed. Remediation Criteria were derived from a DQRA for a commercial end use and agreed with the regulators. The contaminated soils were to be taken to another gas works site in Sheffield for treatment and the suitable faction returned to site for fill. A clay cut off wall was to be constructed along the northern site boundary to prevent the migration of contaminants from the neighbouring site where former gas works structures and contaminated soils were present. It should be noted the remediation was concentrated in area where the previous investigation highlighted areas of contamination. i.e. centre and west of the site. No remediation or site turnover was carried out in the south eastern portion of the site (surrounding and south of the gas holder on site).

5.7 In addition, a large number of stands of Japanese Knotweed and Giant Hogweed required removal to enable access for remediation.

Groundwater

5.8 Following the source removal of grossly contaminated soils and perched waters a program of groundwater monitoring was put in place to assess the natural attenuation in the main groundwater body at depth at determine if remediation was required. A verification report is not currently available for the ground water monitoring, however, based on the 2010 factual investigation report the rick of ground water contamination does not appear significant.

Conclusions

5.9 Remediation works commenced in August 2007 and the remediation of the contaminated made ground was substantially completed in March 2008.

5.10 In total some 7,248 tonnes of granular material was imported from the Sheffield remediation site and 11,246 tonnes of granular fill was imported from other sources. In addition, 2,372 tonnes of clay fill was imported to plug the based on the gas holder and construct the clay cut-off wall on the northern site boundary and beneath discrete area in the south west of site.

5.11 Details of the post remediation site constraints are discussed in Section 2.15 of the WYG remediation verification report and are summarised below with respect to the development site:

- Potential differential settlement due to variable depths of made ground which in some areas may differ significantly over a short distance, e.g. infilled gas holder in NE part of site.
- Relict structures.
- Live services, in particular low and medium pressure gas mains.
- Japanese Knotweed and Giant Hogweed potentially present in areas of the site not subject to remediation (generally outside the development site).
- Bats are understood to roost in the culvert now beneath Old Mill Lane.

5.12 As the remediation was designed to make the site suitable for a commercial end use there would not appear to be a requirement to provide a remedial soil capping layer for the site, however, in order to provide growing media for soft landscaped areas, some topsoil will need to be imported. The imported soils will need to be validated prior to placement in order to ensure the materials are suitable for use. Correspondence from Barnsley MBC and EA enclosed in **Appendix F** confirms that they agree the remediation of the site has been satisfactorily carried out.

6 CONCEPTUAL SITE MODEL

6.1 Based on the available desk study information, a conceptual site model (CSM) has been developed for the proposed future land use (commercial). This summarises the understanding of the existing site and its historical development, the site geology, the potential contaminant sources, transport pathways and receptors in order to assess potential pollutant linkages. In assessing the potential contaminants present at the site, reference has also been made to the relevant sections of CLR 8, the Department of the Environment Industry Profile reports and any other relevant supporting documentation.

6.2 The proposed development comprises an Aldi store with associated car parking and landscaping areas, as shown on the proposed site plan included in **Appendix A**. Based on the available information, a summary of the potential contamination sources, pathways and receptors is provided below.

Sources of Contamination

- Contamination associated with historic activities – gas works (un-remediated latent contamination).
- Ground gas from alluvium and nearby landfill site. Possible hydrocarbon vapour risk.

Potential Pollution Pathways

- Humans – direct contact, soil ingestion and dust inhalation.
- Secondary A Aquifers – leaching and vertical migration of contamination.
- River Dearne – leaching and lateral migration of contamination.
- Vertical and lateral migration of ground gas into buildings and service entries (manholes).

Receptors

- Site end users.
- Construction workers.
- Underlying Aquifers (Secondary A).
- River Dearne.

Pollutant Linkage Assessment

6.3 A qualitative risk assessment has been made of the likelihood of any pollutant linkage operating and its potential significance, as summarised in the table below:

Contamination Source	Pathway	Hazard	Potential Receptors	Linkage Complete
Contaminants associated with latent contamination associated with gas works	Direct contact, ingestion, dust inhalation	Human health risk	Site construction workers	Yes, can be removed by the use of appropriate PPE and limited exposure
	Direct contact, ingestion, dust inhalation	Human health risk	Site end users	Yes, mitigated by use of hard cover in development
	Lateral and vertical migration	Pollution of controlled waters	Secondary A Aquifers and River Dearne	Yes, although significant contamination is unlikely based on 2010 monitoring.
Contaminants associated with off site sources	Lateral migration	Human health risk	Site end users	Yes, although unlikely given the measures taken during the remediation works (clay cut off wall) if left undisturbed.
Ground Gas	Vertical migration into buildings or confined spaces	Human health risk. Fire risk	Human health and property	Yes. Possible gas from alluvial soils, nearby landfill, potential made ground and potential hydrocarbon vapours.

6.4 At this stage, it is considered that the recent remedial works will have treated the majority of the contamination at the site. However, as the remediation targeted specific areas rather than carrying out a full site turnover, there remains the possibility of further unrecorded areas of contamination. .

7 ENVIRONMENTAL RISK ASSESSMENT

7.1 The potential environmental risk has been assessed based on the 'source-pathway-target' pollutant linkages identified in the Conceptual Site Model, which requires that for a liability to arise each stage of the pollutant linkage must be present. References to risk classifications are made according to the following definitions:

- **Low risk** – it is unlikely that an issue will arise with respect to causing significant harm to human health or controlled waters.

- **Medium risk** – it is possible that an issue could arise with respect to causing significant harm to human health or controlled waters.

- **High risk** – it is likely that an issue will arise with respect to causing significant harm to human health or controlled waters.

7.2 Having evaluated the information gathered during this study and described in the previous sections the following risk assessment has been produced.

ENVIRONMENTAL RISK ASSESSMENT		
	Risk rating	**Reason**
Contamination potential for:		
On-site contamination	Medium	The site has a remediated former gas works.
Contaminants migrating off site	Low - medium	Based on the site history there is a potential for migration off site, however, the most recent ground water monitoring suggest the contamination burden is low.
Contaminants migrating onto site	Low -medium	Unlikely given the measures taken during the remediation works (clay cut off wall) if left undisturbed.
Other environmental issues giving rise to concern	Low	None identified.
OVERALL RISK	**Low to Medium**	

7.3 Based on the above information gained through the Envirocheck report, the risk of ground gas emissions is considered to be low to moderate. The following summarises the gas risk for the site:

Potential Gas Source	Hazard	Risk Rating	Justification
Made ground (CH_4, CO_2)	Humans: health risk Buildings: explosion	Medium	Possible risk from hydrocarbon vapours.
Nearby landfill site (CH_4, CO_2)	Humans: health risk Buildings: explosion	Low	Landfill off site within 250m, accepting inert waste.
Alluvial Soils	Humans: health risk Buildings: explosion	Low to medium	Underlying alluvial deposit not anticipated to contain significant putrescible fraction.
Coal and historical mining	Humans: health risk Buildings: explosion	Medium	Coal mining recorded within the vicinity of the site and mine gas issues have occurred in district.
Radon	Humans: health risk	N/A	No precautions required.
Overall Risk		**Low - Medium**	

8 GEOTECHNICAL CONSIDERATIONS

8.1 The following geotechnical considerations are given as preliminary guidelines only based on the available data on the ground conditions. Consequently, the following should not be taken as design criteria without further geotechnical data obtained from a suitably designed ground investigation.

Foundations

8.2 It is anticipated that the site is underlain by variable depths and deposits of made ground underlain by alluvial soft clay. Made ground and the soft alluvial clay are considered unsuitable as a bearing stratum using conventional shallow spread foundations due to the potential for excessive total and differential settlements. Either piled foundations or vibro improvement is considered suitable subject to the advice of a specialist contractor and approval of the regulators. It should be noted that the site remediation did not remove all the structures and therefore obstructions may be present within the made ground which may pose a constraint to foundations or services corridors.

Floor Slabs

8.3 It is considered that a ground bearing floor slab will be suitable subject to appropriate re-engineering/treatment of the made ground, alternatively a pile slab will need to be adopted, particularly if the store is situated over the infilled gas holder.

Pavements

8.4 It is anticipated, subject to a ground investigation, that standard construction techniques can be utilised.

Gas Protection Measures

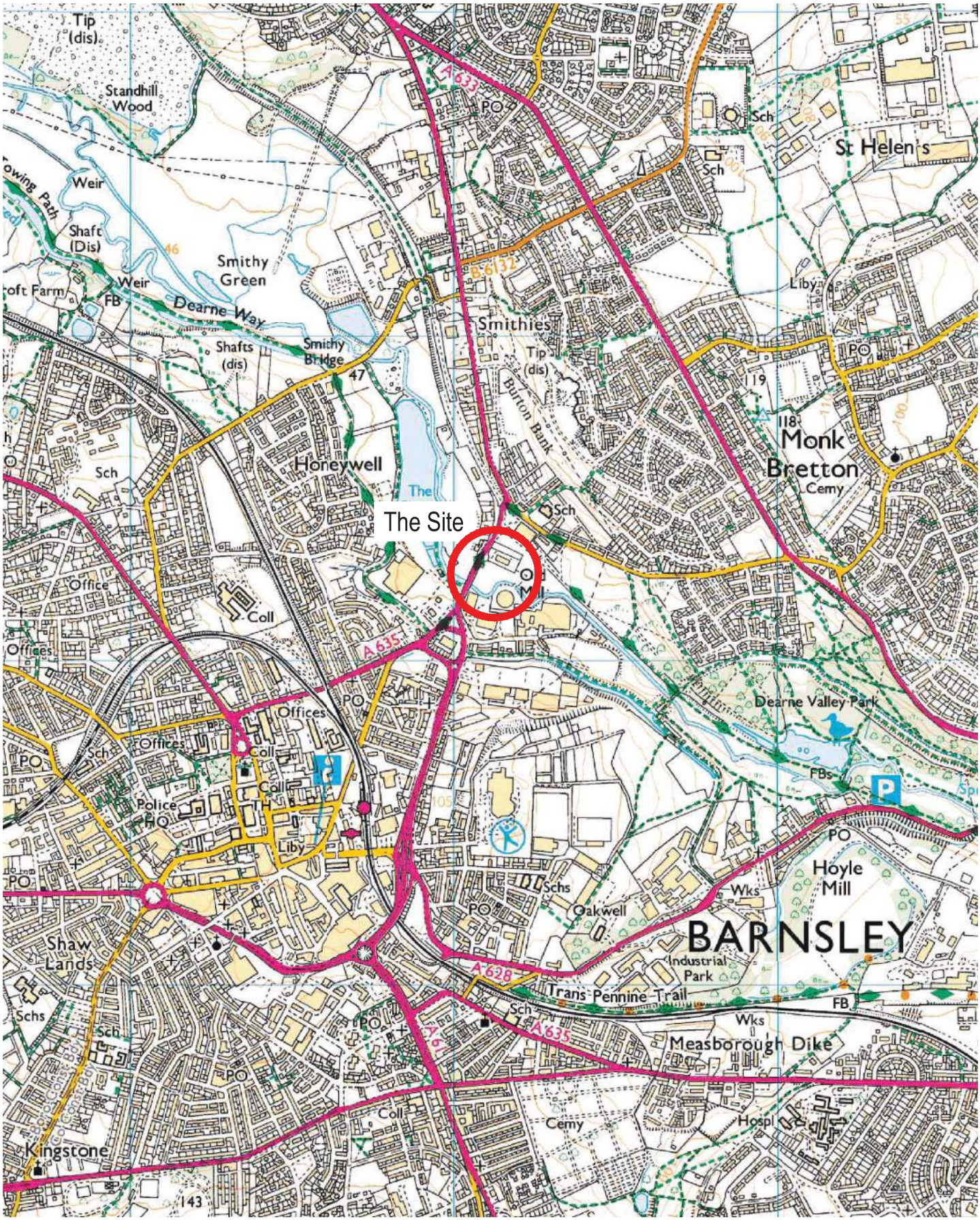
8.5 The preliminary ground gas risk assessment identifies that there is a low to medium risk to the development from ground gas due to the nearby landfill and the presence of alluvium and mine workings beneath the site. However, in view of the previous site use, an allowance should be made for the installation of a hydrocarbon-resistant vapour barrier.

9 FURTHER INVESTIGATIONS

9.1 An intrusive investigation will be required for the proposed development to address the ground related issues discussed above. A summary of the likely scope of works, which should not be taken as an exhaustive list, is provided below.

- Mini percussive drilling and or trial pits to allow the recovery of samples for laboratory testing and confirm the geological profile within the likely foundation depth.
- Rotary drilling to confirm the depth of shallow coal seams and presence of workings.
- Installation of gas monitoring standpipes and monitoring on 6 occasions over a 3 month period.
- Geotechnical and chemical laboratory testing.

Figures



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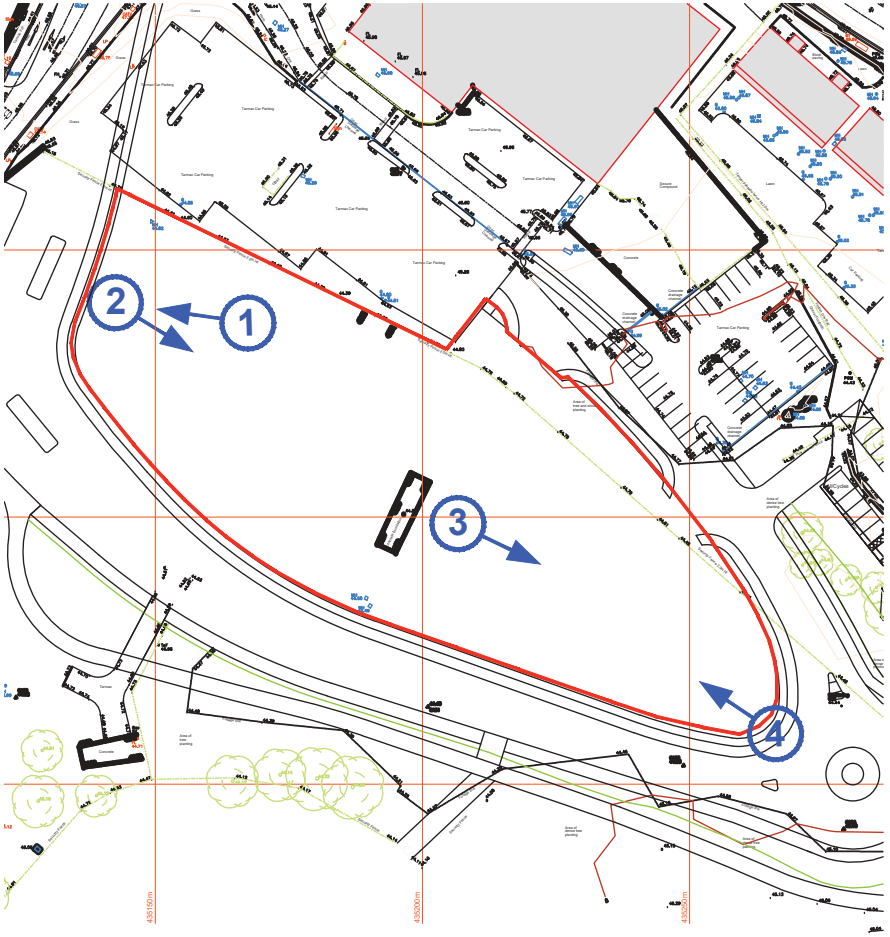
Project	Old Mill Lane, Barnsley For Aldi Stores Ltd.		
Title	Site Location Plan		
Scale 1:25,000	Drawn AHC	Checked ACV	Date Jan '15
Job No. 15004	Drawing No. Figure 1		Rev 0

Photo 1



Photo 2





ection

Photo 3



Photo 4



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Project	Old Mill Lane, Barnsley For Aldi Stores Ltd.			
Title	Site Photographs			
Scale	NTS	Drawn AHC	Checked ACV	Date Jan '15
Job No. 15004	Drawing No. Figure 2			Rev 0

Appendix A

Proposed Site Layout

Key

+000.00 Existing Levels

+000.00 Proposed Levels

EXISTING WICKES STORE

EXISTING WICKES CAR PARK

Assumed Site Boundary
FOODSTORE SITE
approx **1.62** ACRES
(0.65 HA)

Existing Site Access to be modified Subject to S.278 Approval

Aldi Signage

Existing Embankment

93 no. Parking spaces
(2.5m x 5m Bays)

Pedestrian Crossing with drop kerbs and tactile paving

Service Point

Existing Pedestrian Crossing

All levels are subject to engineers details

Proposed
ALDI Foodstore
1765sq.m GIA
1822sq.m GEA
(1254sq.m sales area)

Store Entrance

5 no. Cycle Hoops

Proposed Retaining Wall +1.2m

Proposed low level wall with railings to site boundary

New Pedestrian access Subject to levels

OLD MILL LANE

NOTE:
ASSUMED BOUNDARY INFORMATION IS BASED ON EXISTING FENCE LINE AND SUBJECT TO LEGAL CONFIRMATION .

Rev	Date	Description	Rev By	Chk'd By
-	dd-mm-yy	----	---	---

Project Title	Proposed Foodstore Development Old Mill Lane Barnsley
Client	Aldi Stores Ltd
Status	PLANNING
Scale	1:250
Drawing Size	A1
Date	03/2016
Drawn By	LH
Checked	NJC

Drawing Title	Proposed Site Layout
Job-Dwg No	1210-100
Rev	-

2 St. Johns North, Wakefield, WF1 3QA t. 01924 291800

Carvers Warehouse, 77 Dale Street, Manchester, M1 2HG t. 0161 2388555

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101 London Road, Reading, RG1 5BY t. 0118 9507700

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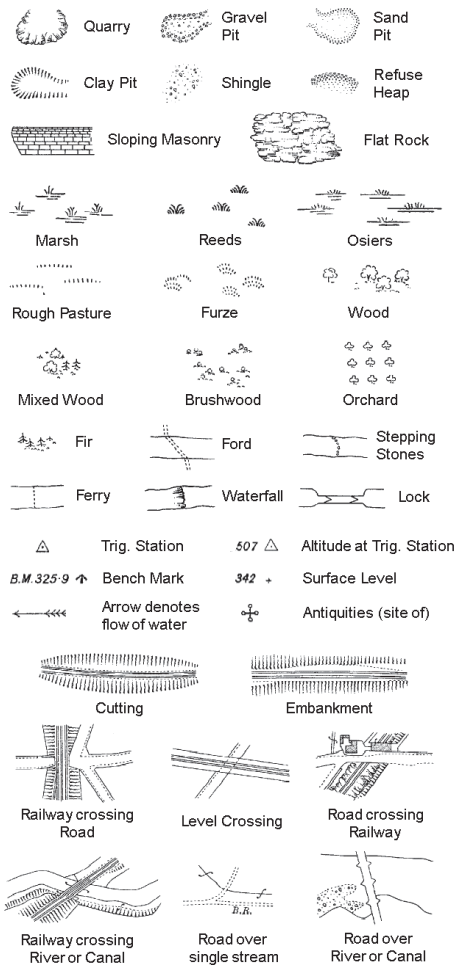
CAD file reference J:\Aldi\ALDI YORKSHIRE REGION\Planning\1210 SDAR - Old Mill Lane, Barnsley

Appendix B

Historical Maps

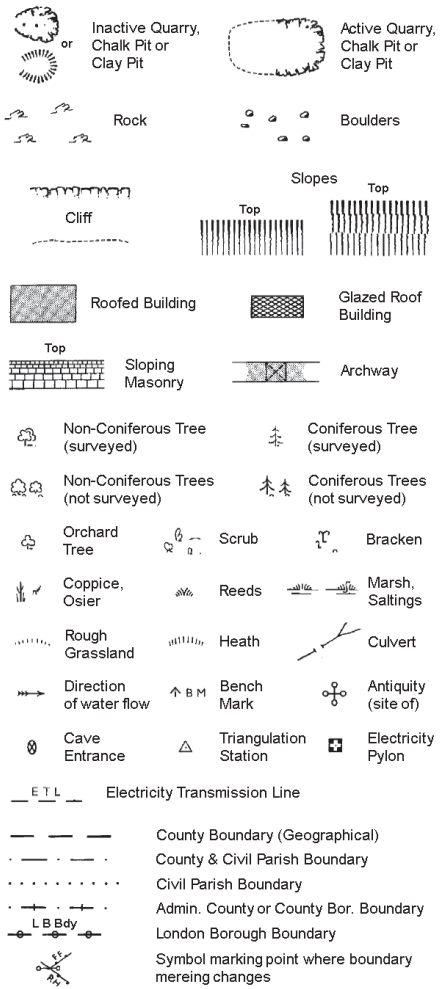
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



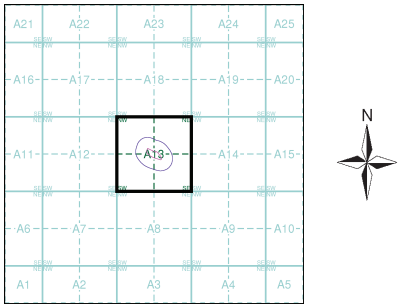
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:2,500	1892	2
Yorkshire	1:2,500	1906	3
Yorkshire	1:2,500	1931	4
Ordnance Survey Plan	1:1,250	1960 - 1962	5
Ordnance Survey Plan	1:2,500	1962	6
Ordnance Survey Plan	1:1,250	1969 - 1977	7
Supply of Unpublished Survey Information	1:1,250	1973 - 1975	8
Ordnance Survey Plan	1:1,250	1975 - 1990	9
Additional SIMs	1:1,250	1977 - 1992	10
Additional SIMs	1:1,250	1982 - 1991	11
Additional SIMs	1:1,250	1988 - 1990	12
Additional SIMs	1:1,250	1991	13
Large-Scale National Grid Data	1:1,250	1993	14
Large-Scale National Grid Data	1:1,250	1994	15

Historical Map - Segment A13



Order Details

Order Number: 63599706_1_1
Customer Ref: 15004
National Grid Reference: 435200, 407310
Slice: A
Site Area (Ha): 0.68
Search Buffer (m): 100

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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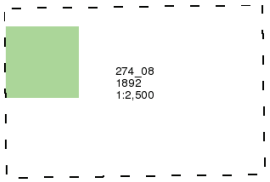
Yorkshire

Published 1892

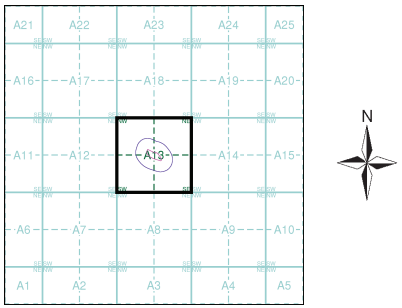
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



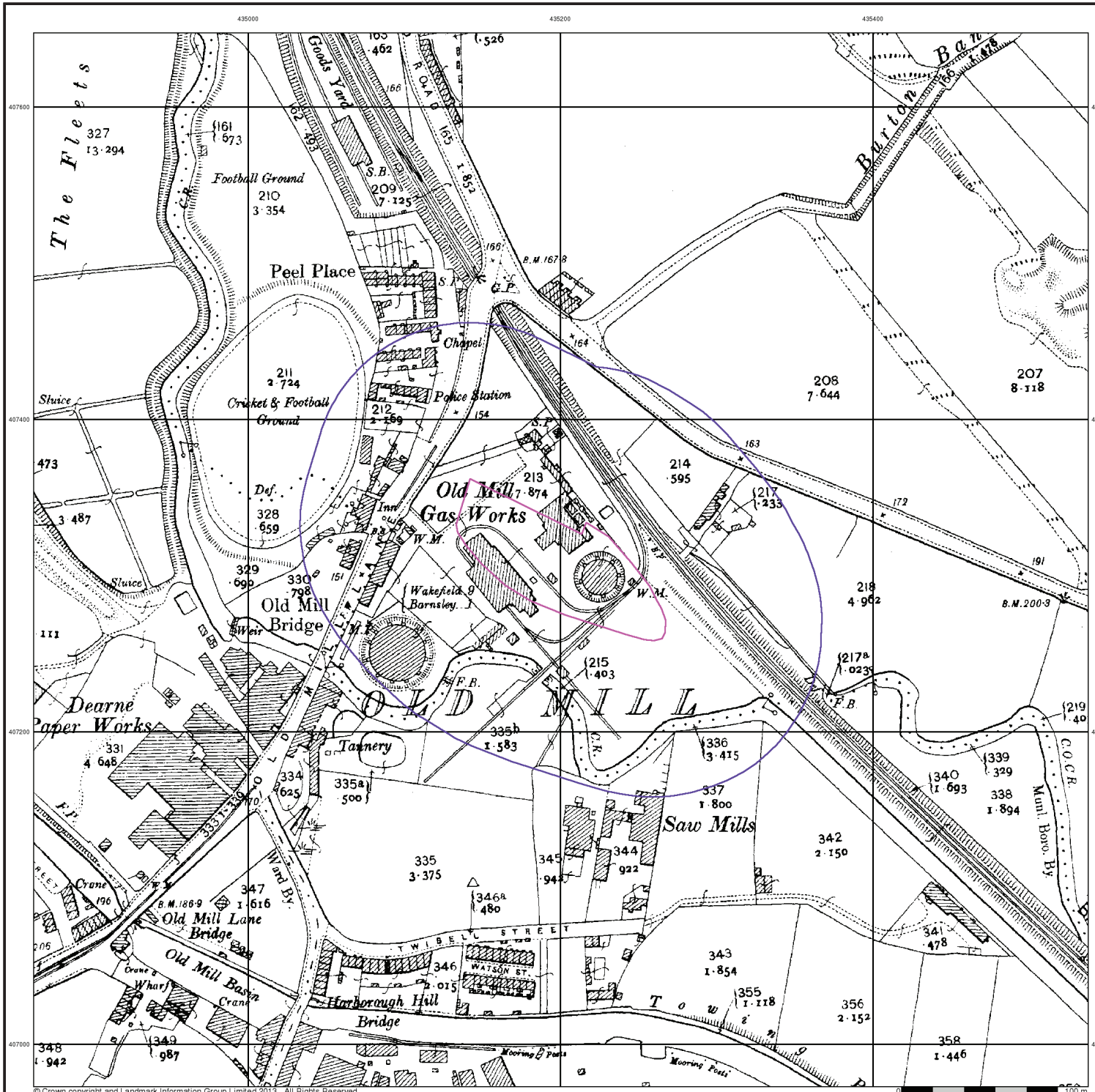
Order Details

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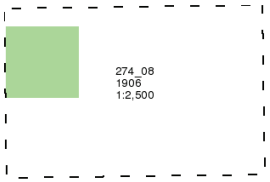
Yorkshire

Published 1906

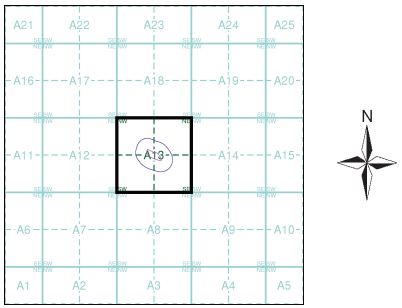
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Map Name(s) and Date(s)



Historical Map - Segment A13



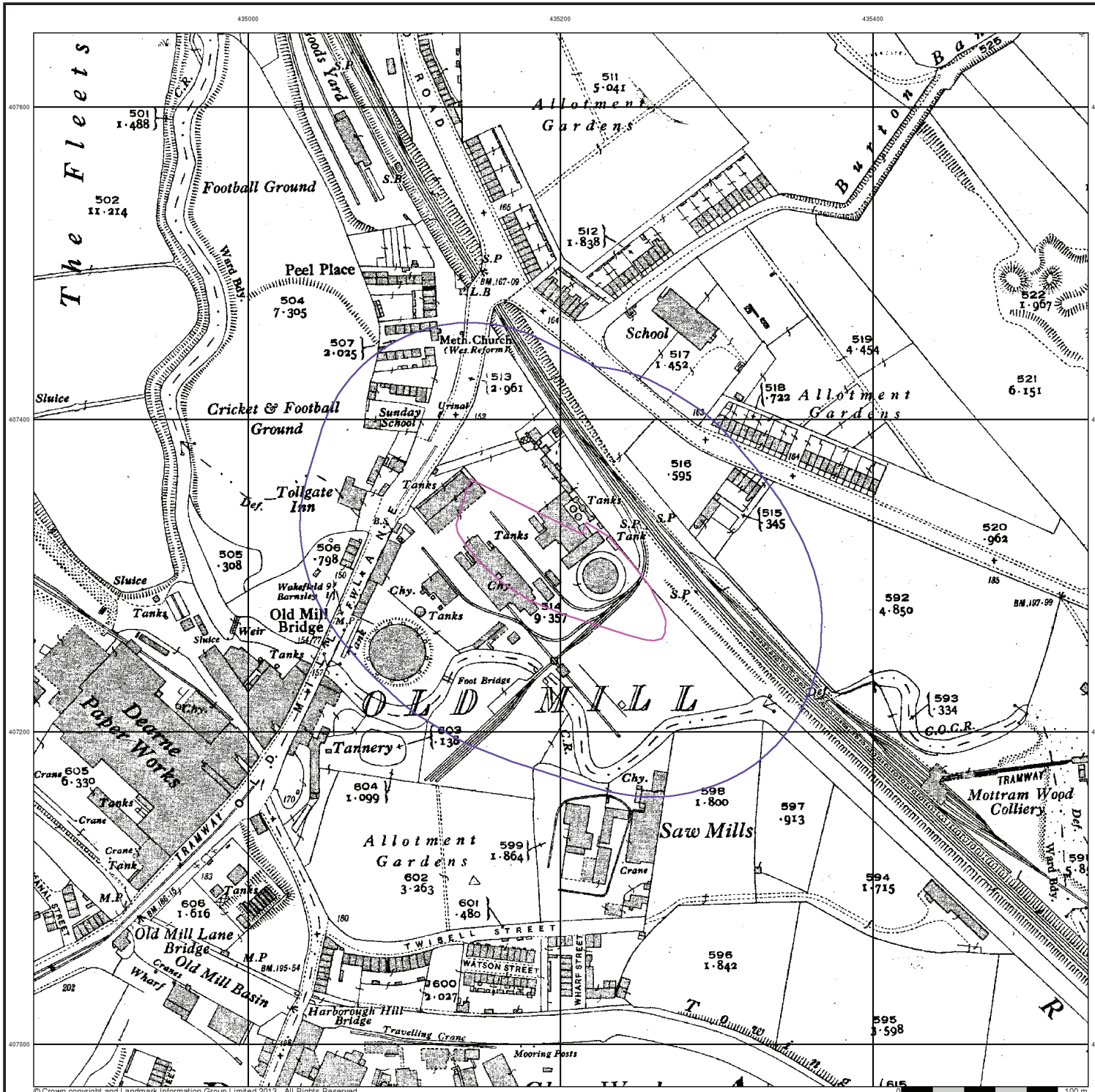
Order Details

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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
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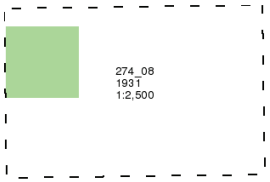
Yorkshire

Published 1931

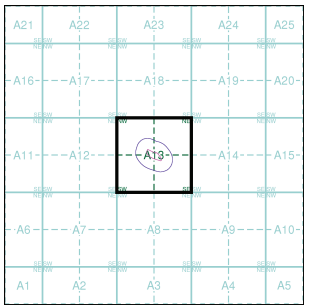
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



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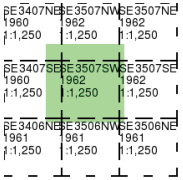
Ordnance Survey Plan

Published 1960 - 1962

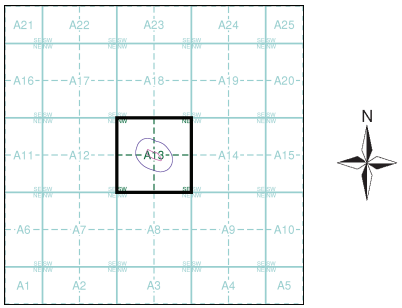
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	100

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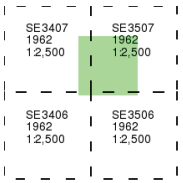
Ordnance Survey Plan

Published 1962

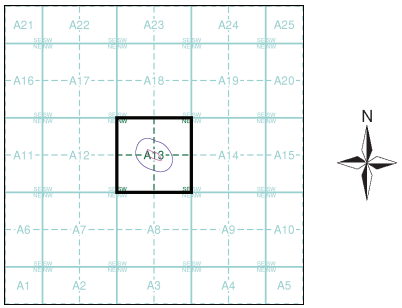
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



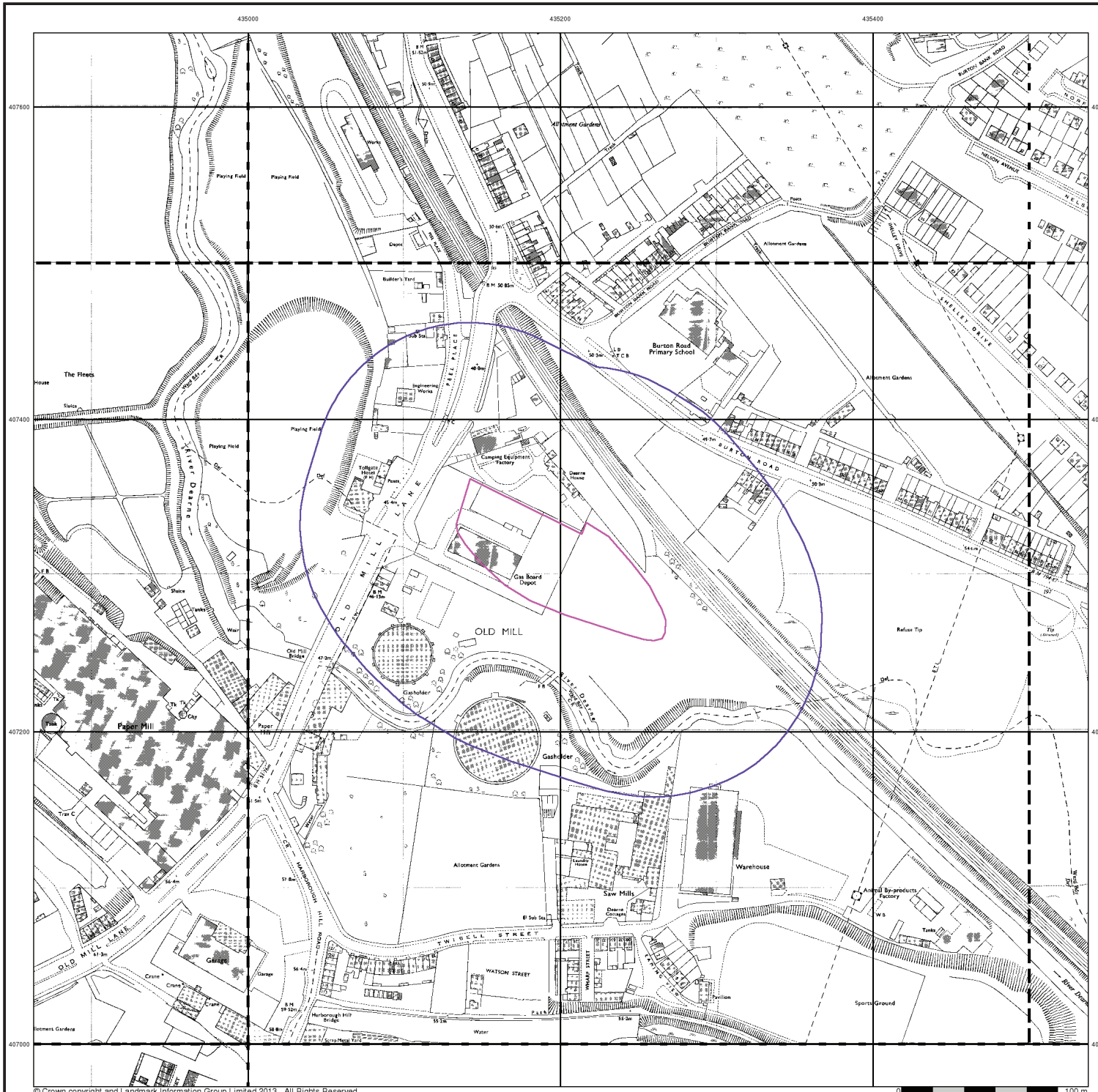
Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	100

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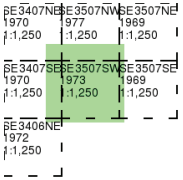
Ordnance Survey Plan

Published 1969 - 1977

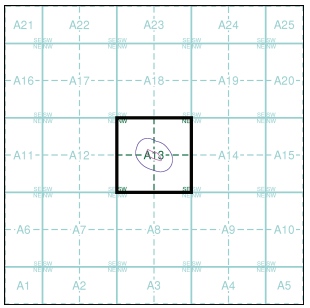
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

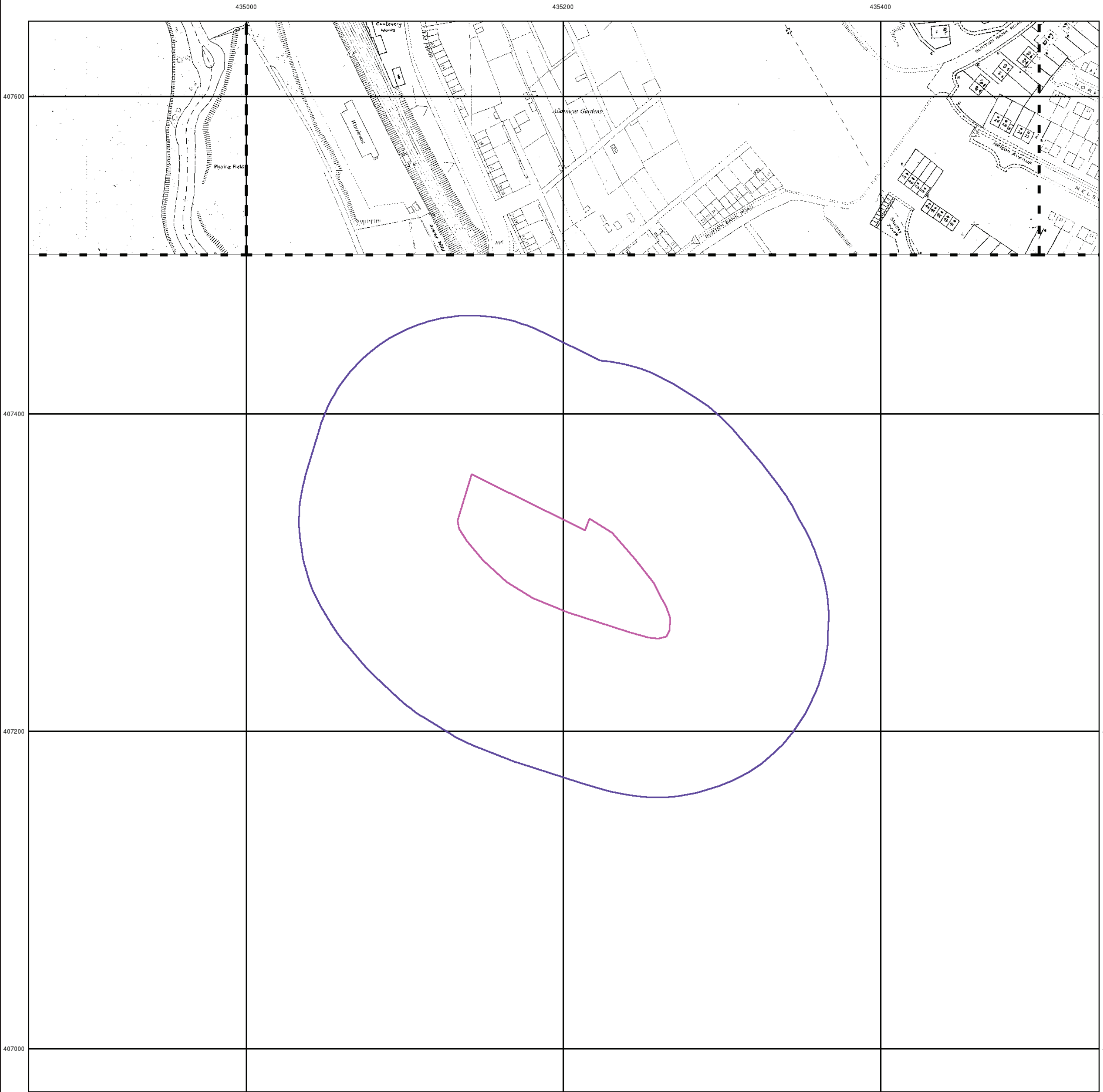
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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	100

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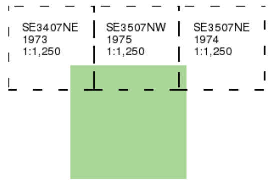
Supply of Unpublished Survey Information

Published 1973 - 1975

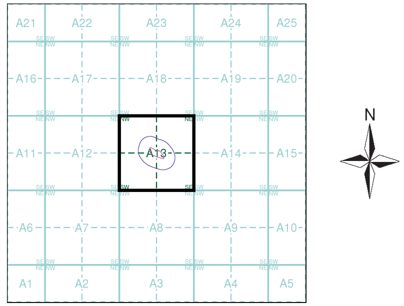
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



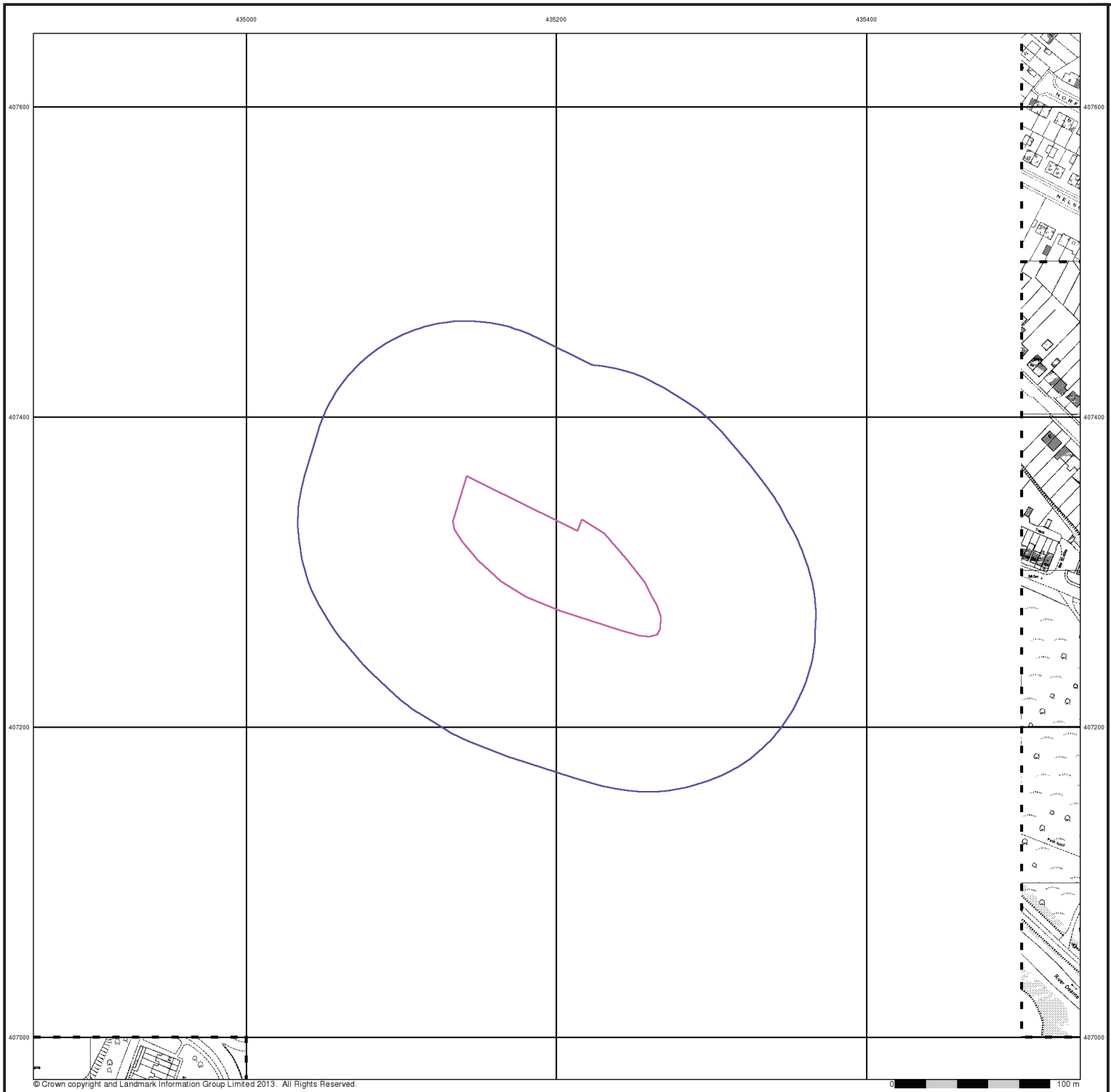
Order Details

Order Number: 63599706_1_1
Customer Ref: 15004
National Grid Reference: 435200, 407310
Slice: A
Site Area (Ha): 0.68
Search Buffer (m): 100

Site Details

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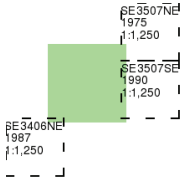
Ordnance Survey Plan

Published 1975 - 1990

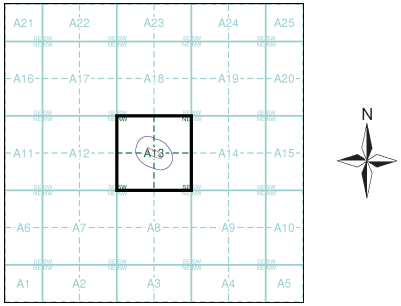
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

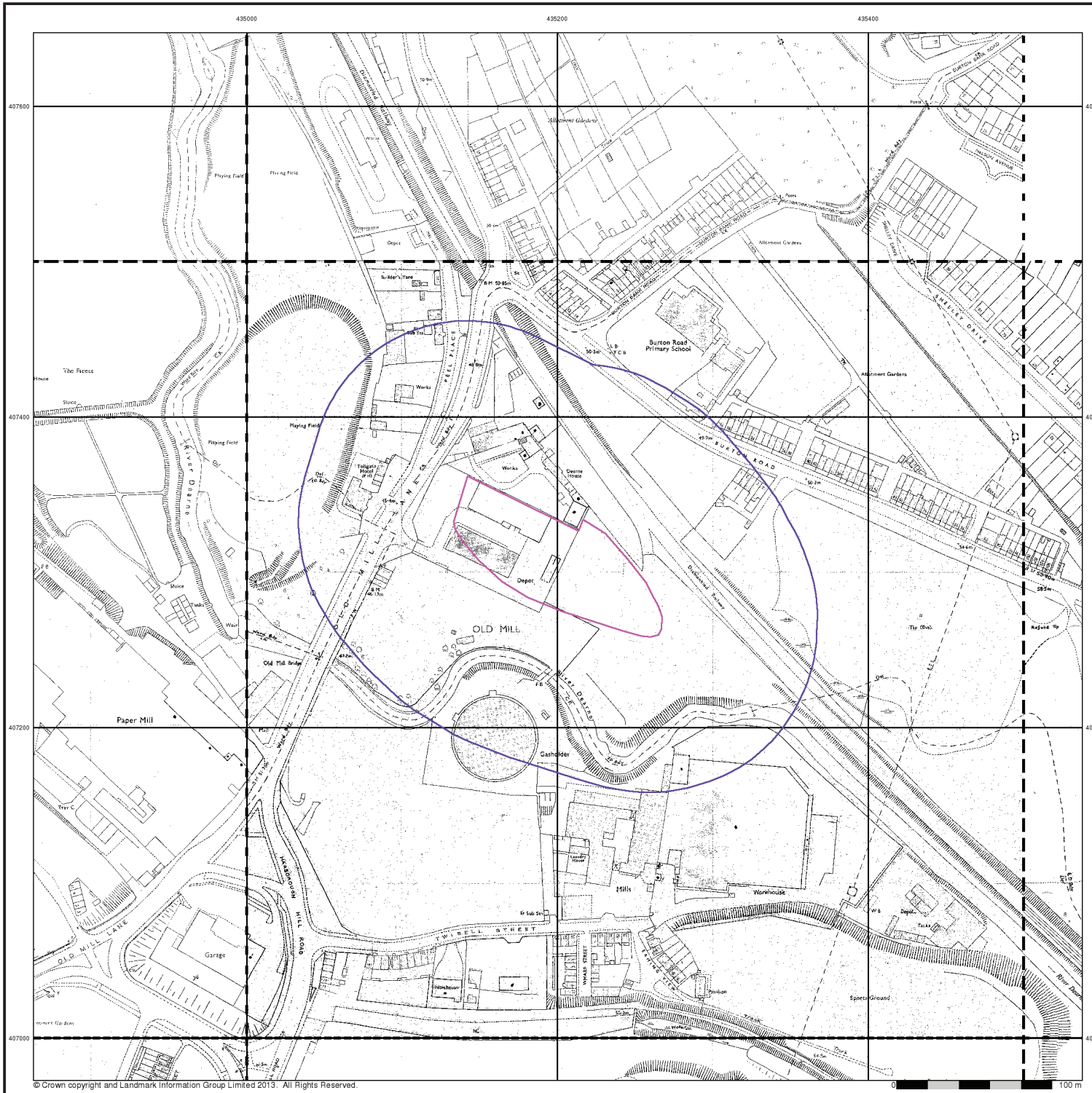
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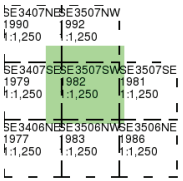
Additional SIMs

Published 1977 - 1992

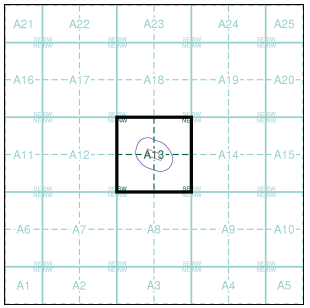
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The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

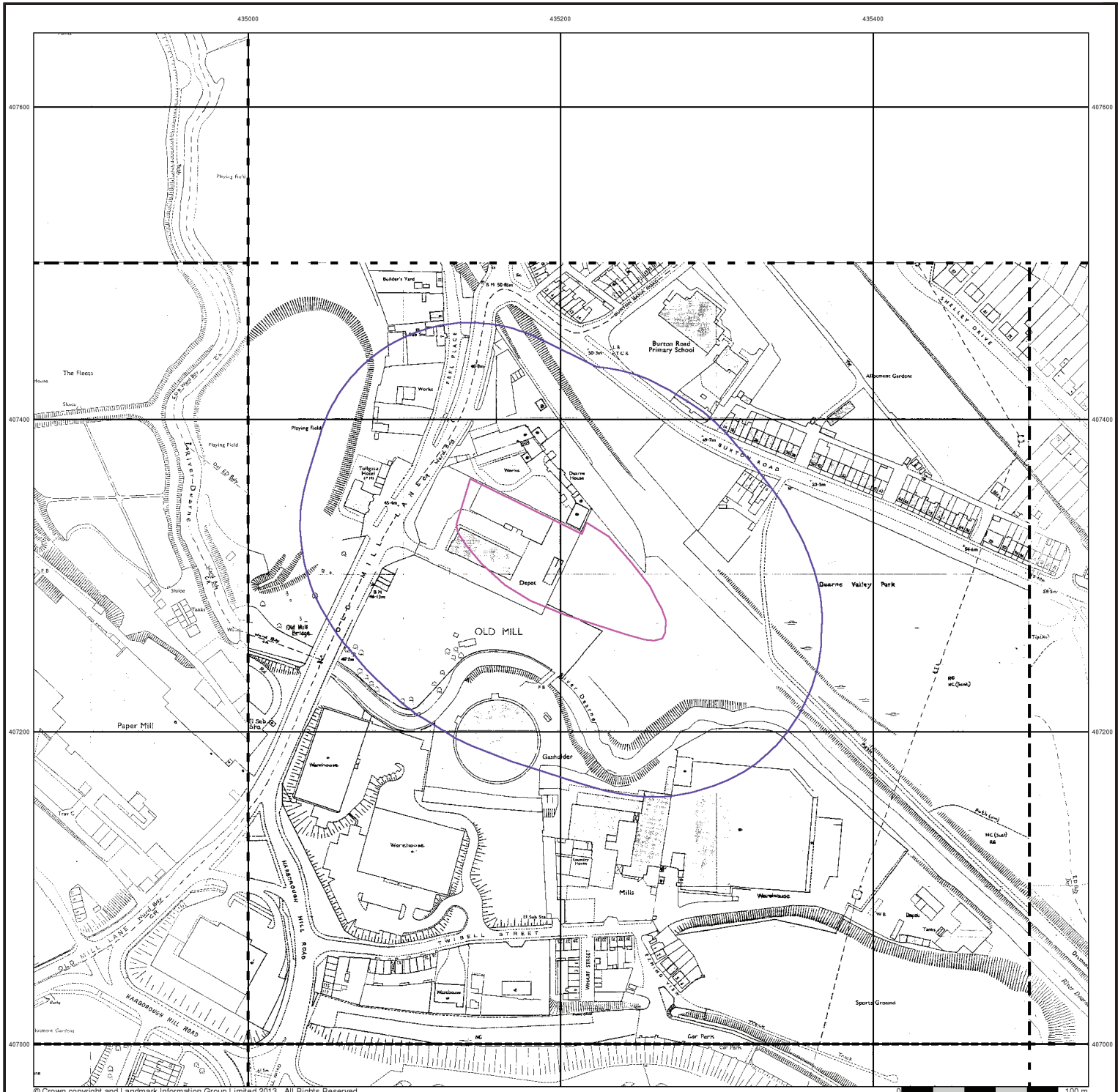
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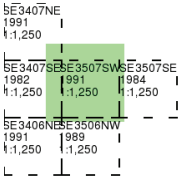
Additional SIMs

Published 1982 - 1991

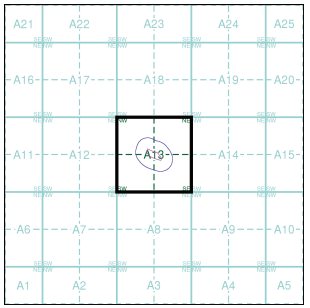
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Historical Map - Segment A13



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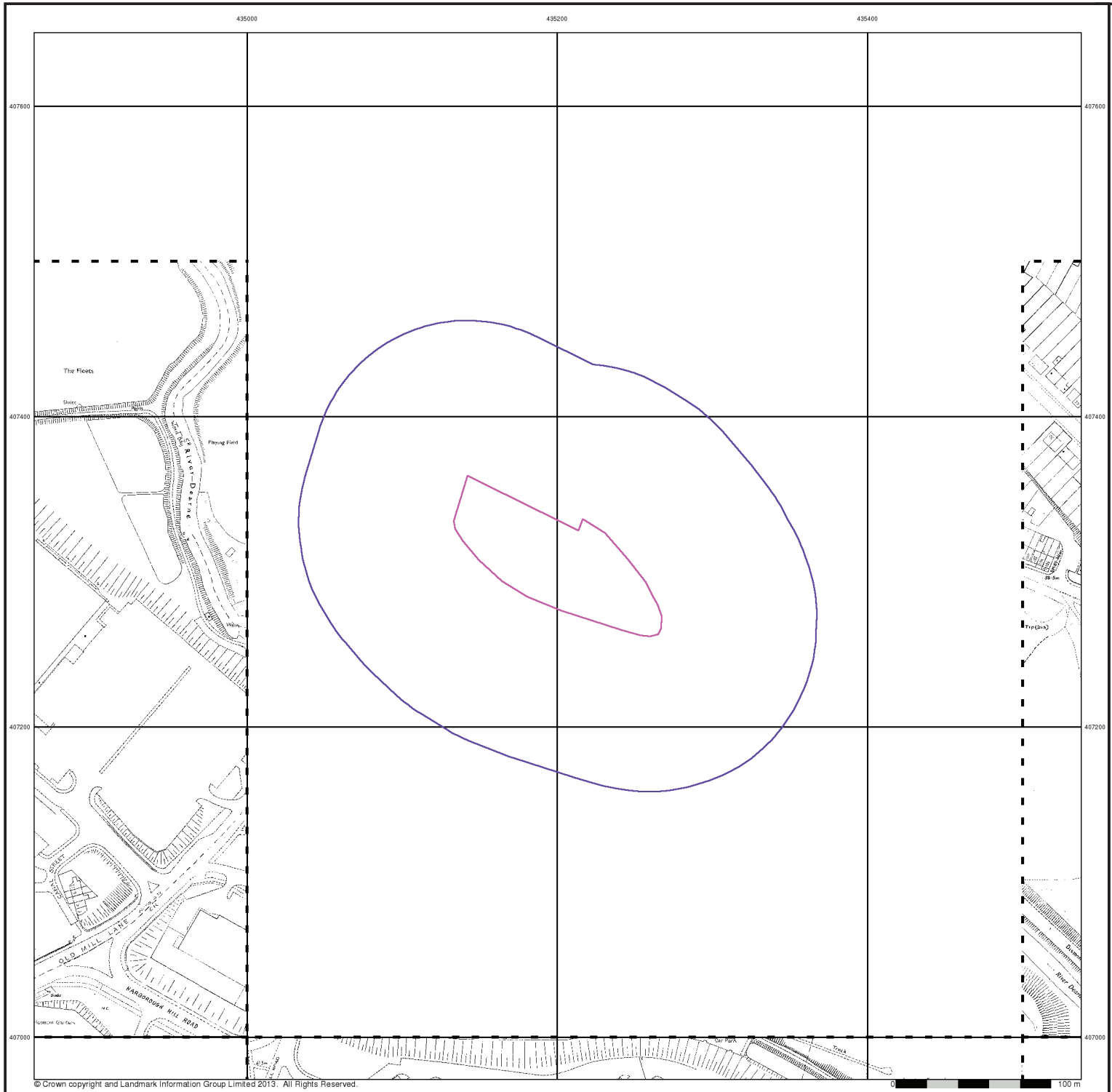
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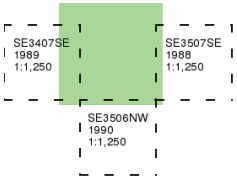
Additional SIMs

Published 1988 - 1990

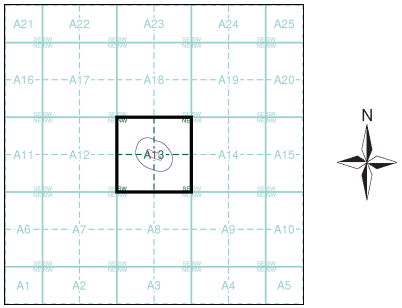
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

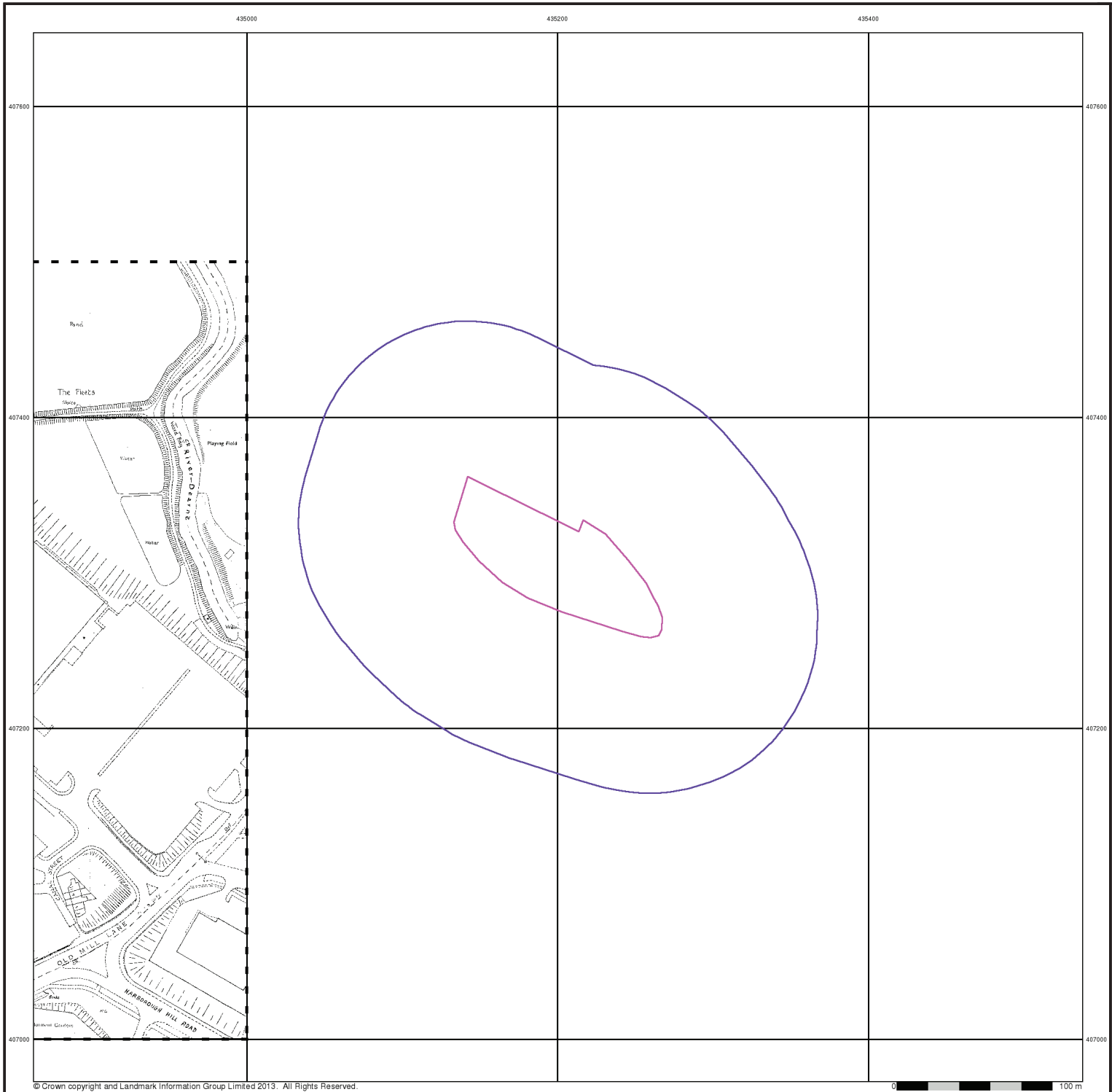
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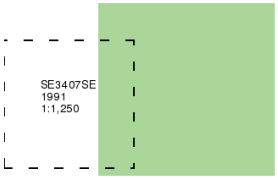
Additional SIMs

Published 1991

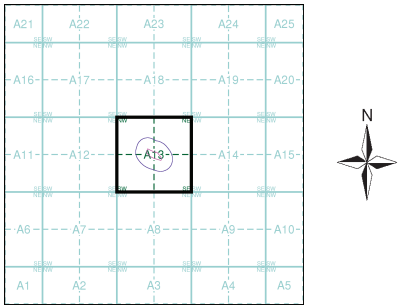
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	100

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

Landmark Information Group

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



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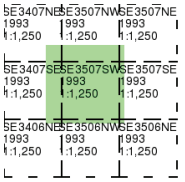
Large-Scale National Grid Data

Published 1993

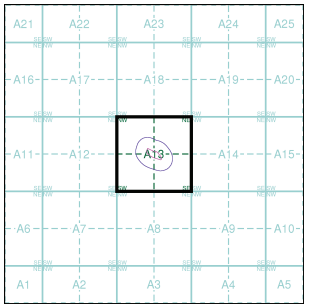
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

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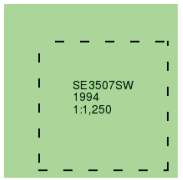
Large-Scale National Grid Data

Published 1994

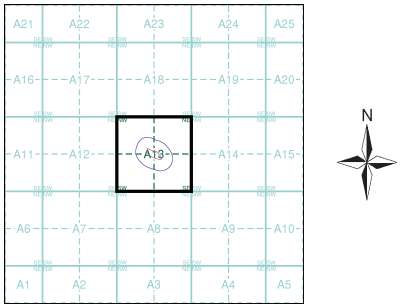
Source map scale - 1:1,250

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Standard Gauge Single Track
Road Under
Road Over
Level Crossing
Foot Bridge
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

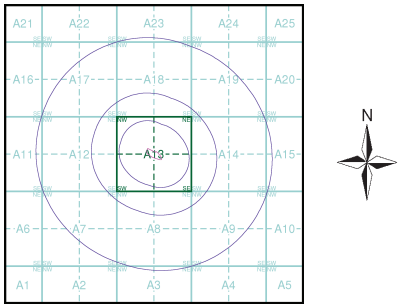
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Yorkshire	1:10,560	1855	2
Yorkshire	1:10,560	1894	3
Yorkshire	1:10,560	1907	4
Yorkshire	1:10,560	1932	5
Yorkshire	1:10,560	1938	6
Yorkshire	1:10,560	1948	7
Ordnance Survey Plan	1:10,000	1955 - 1956	8
Ordnance Survey Plan	1:10,000	1966	9
Ordnance Survey Plan	1:10,000	1973 - 1974	10
Ordnance Survey Plan	1:10,000	1983 - 1984	11
Ordnance Survey Plan	1:10,000	1993	12
10K Raster Mapping	1:10,000	2006	13
VectorMap Local	1:10,000	2014	14

Historical Map - Slice A



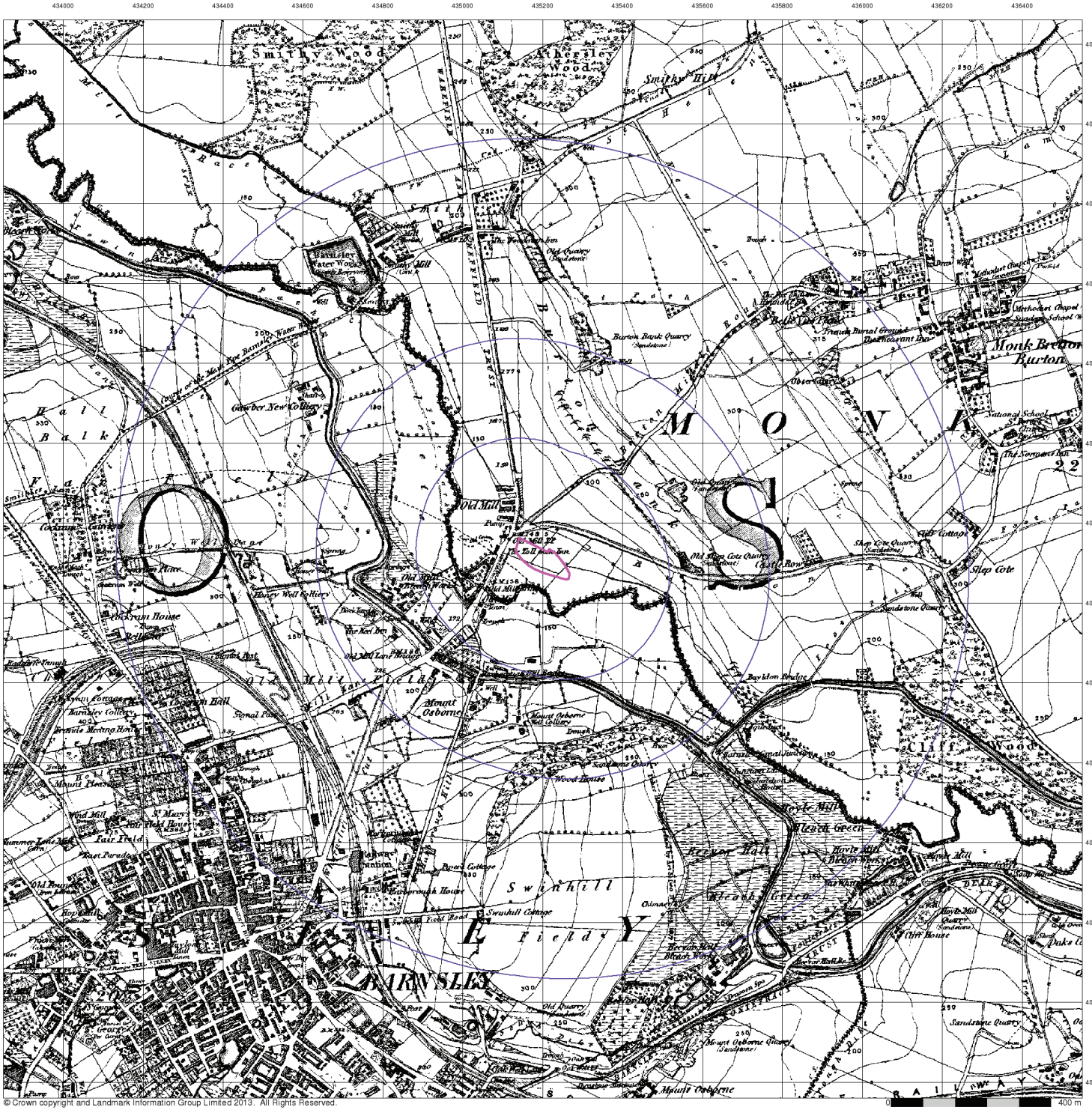
Order Details

Order Number: 63599706_1_1
Customer Ref: 15004
National Grid Reference: 435200, 407310
Slice: A
Site Area (Ha): 0.68
Search Buffer (m): 1000

Site Details

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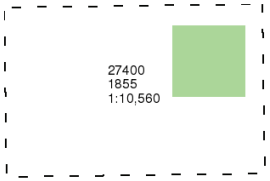
Yorkshire

Published 1855

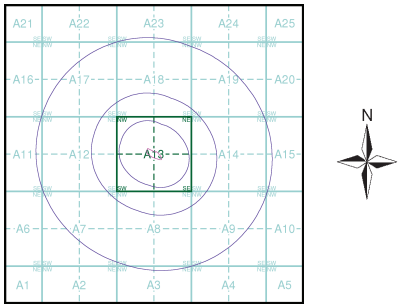
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

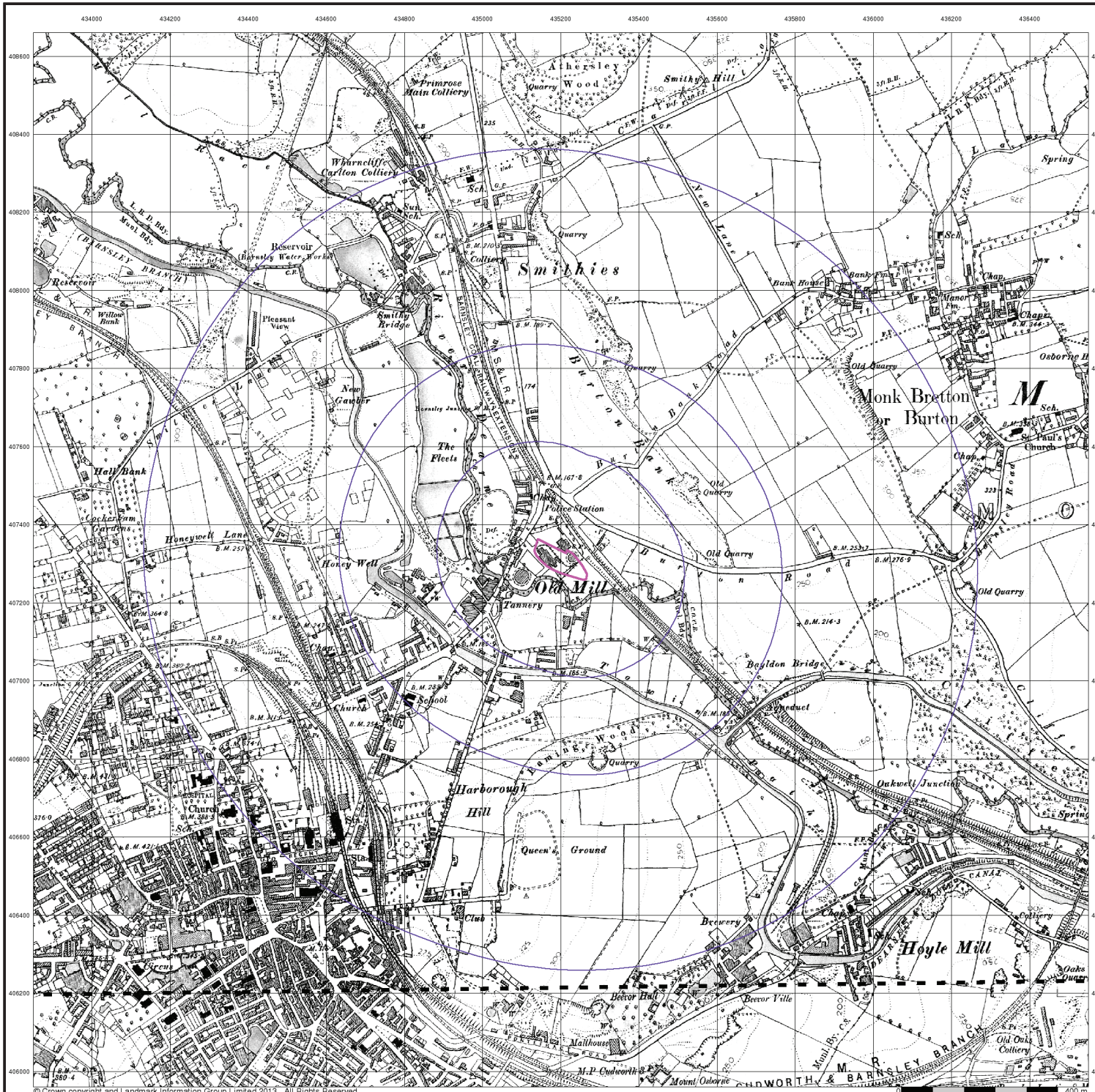
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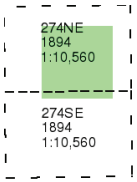
Yorkshire

Published 1894

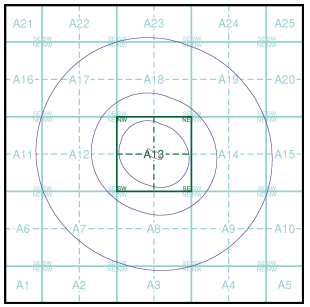
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

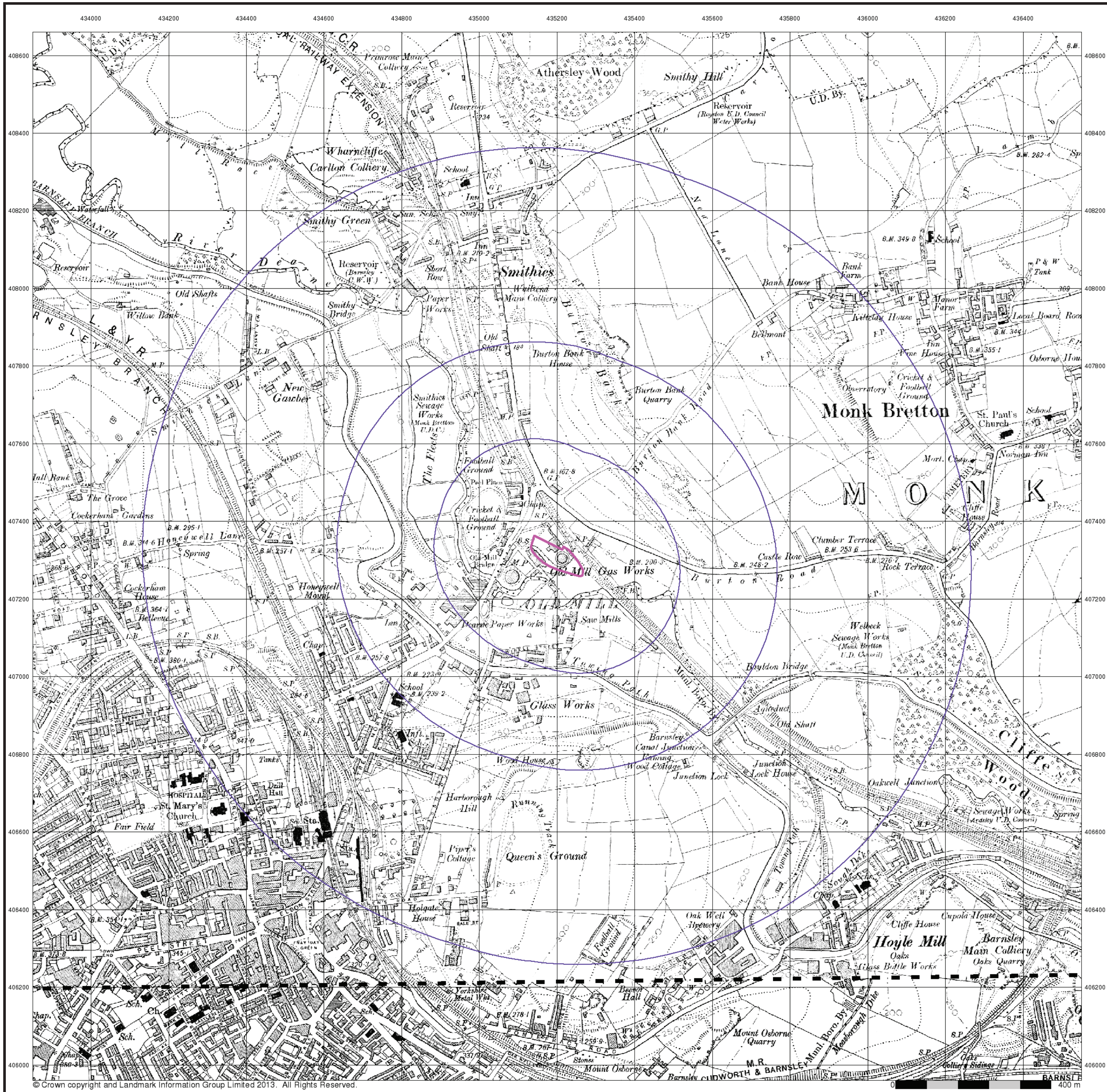
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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

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Yorkshire

Published 1907

Source map scale - 1:10,560

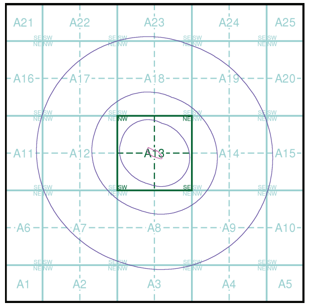
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

274NE
1907
1:10,560

274SE
1907
1:10,560

Historical Map - Slice A



N

Order Details

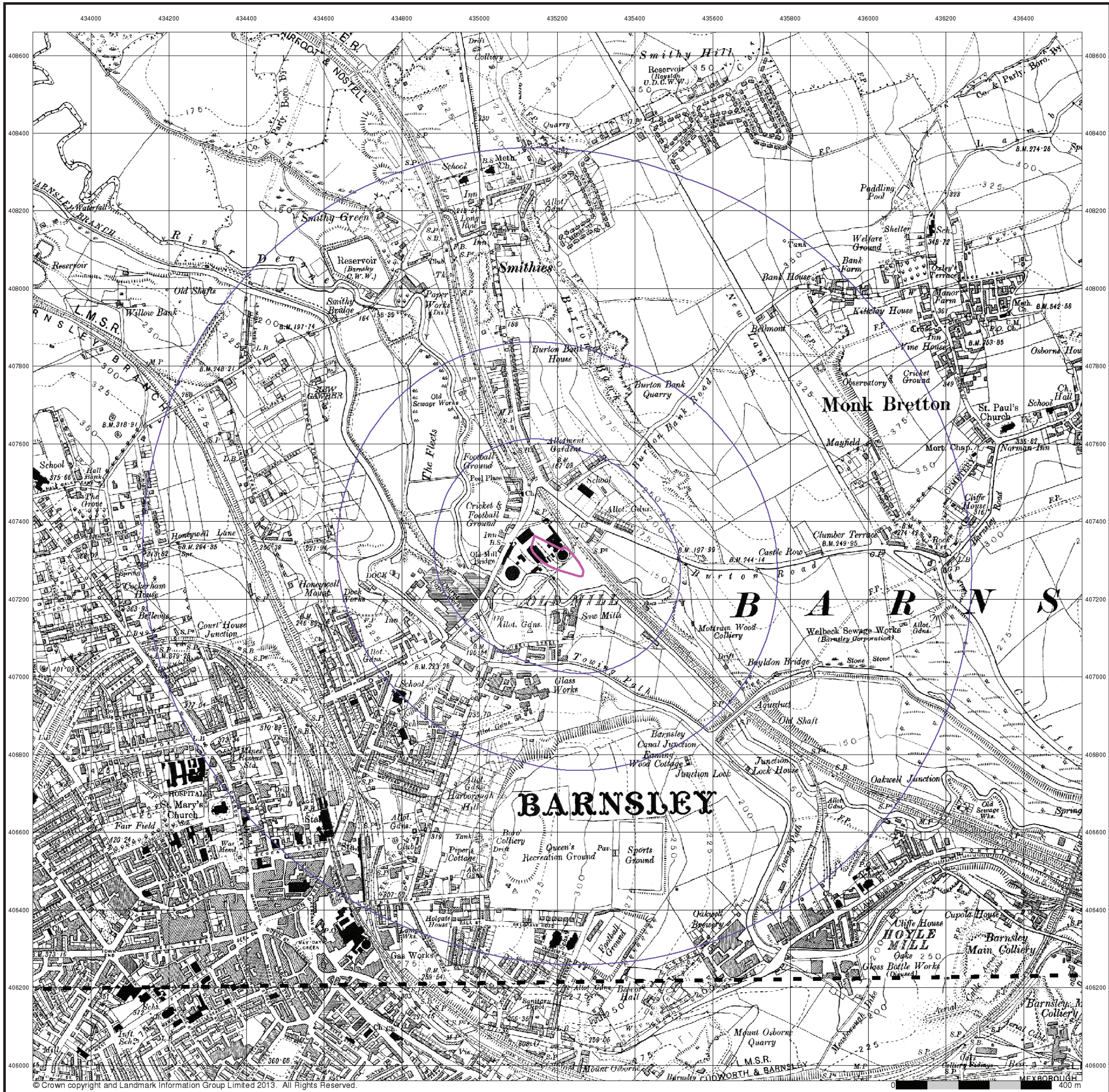
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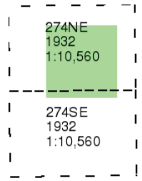
Yorkshire

Published 1932

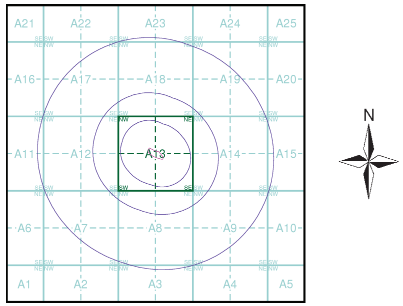
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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

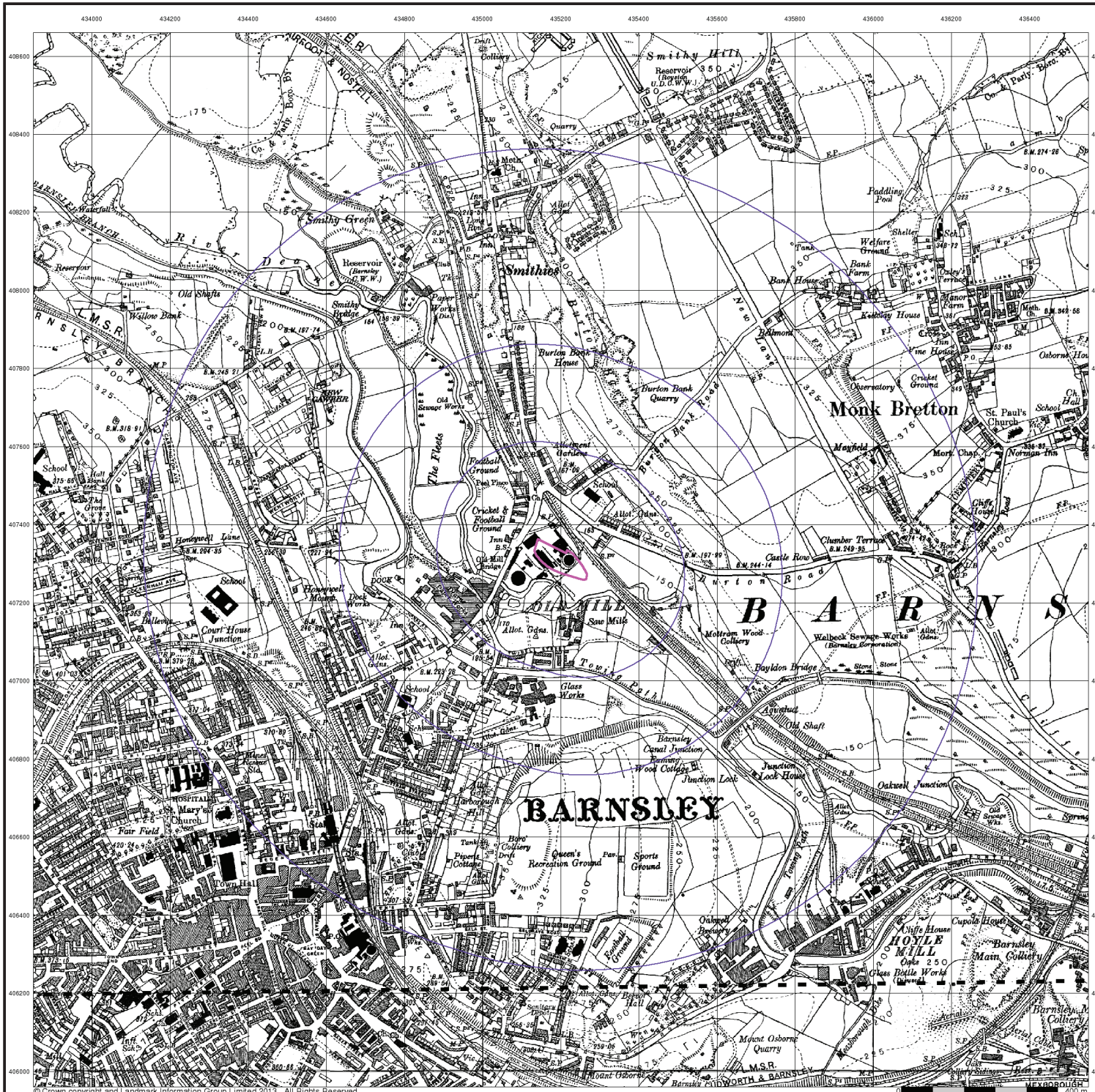
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0 400 m

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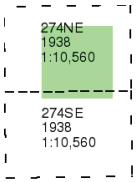
Yorkshire

Published 1938

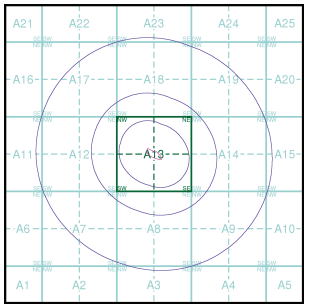
Source map scale - 1:10,560

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Historical Map - Slice A



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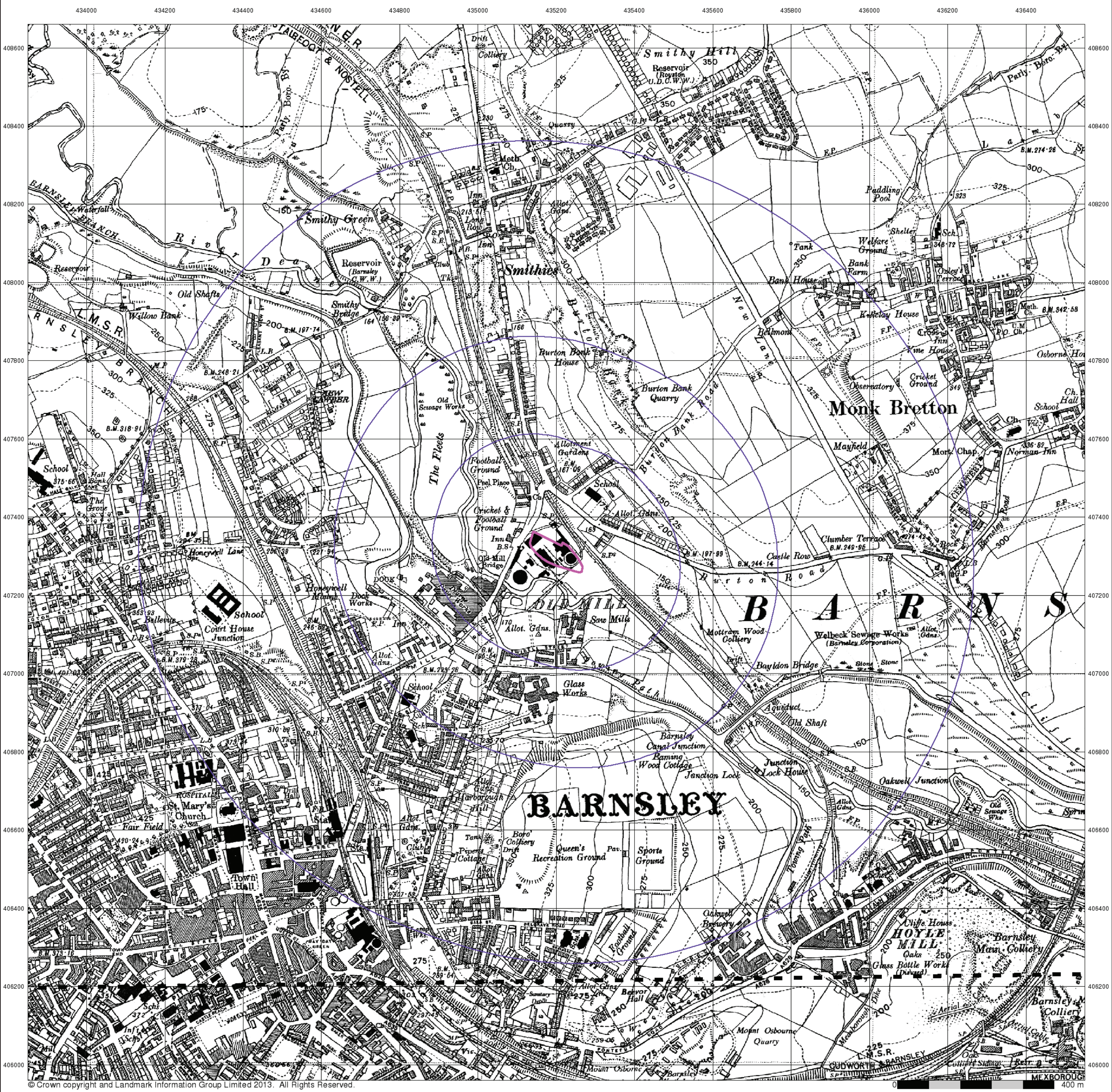
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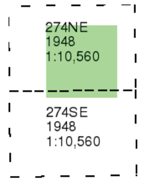
Yorkshire

Published 1948

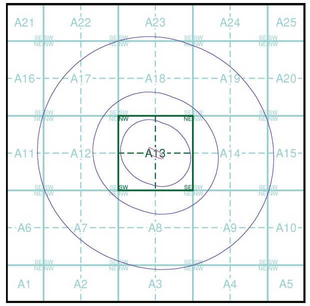
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

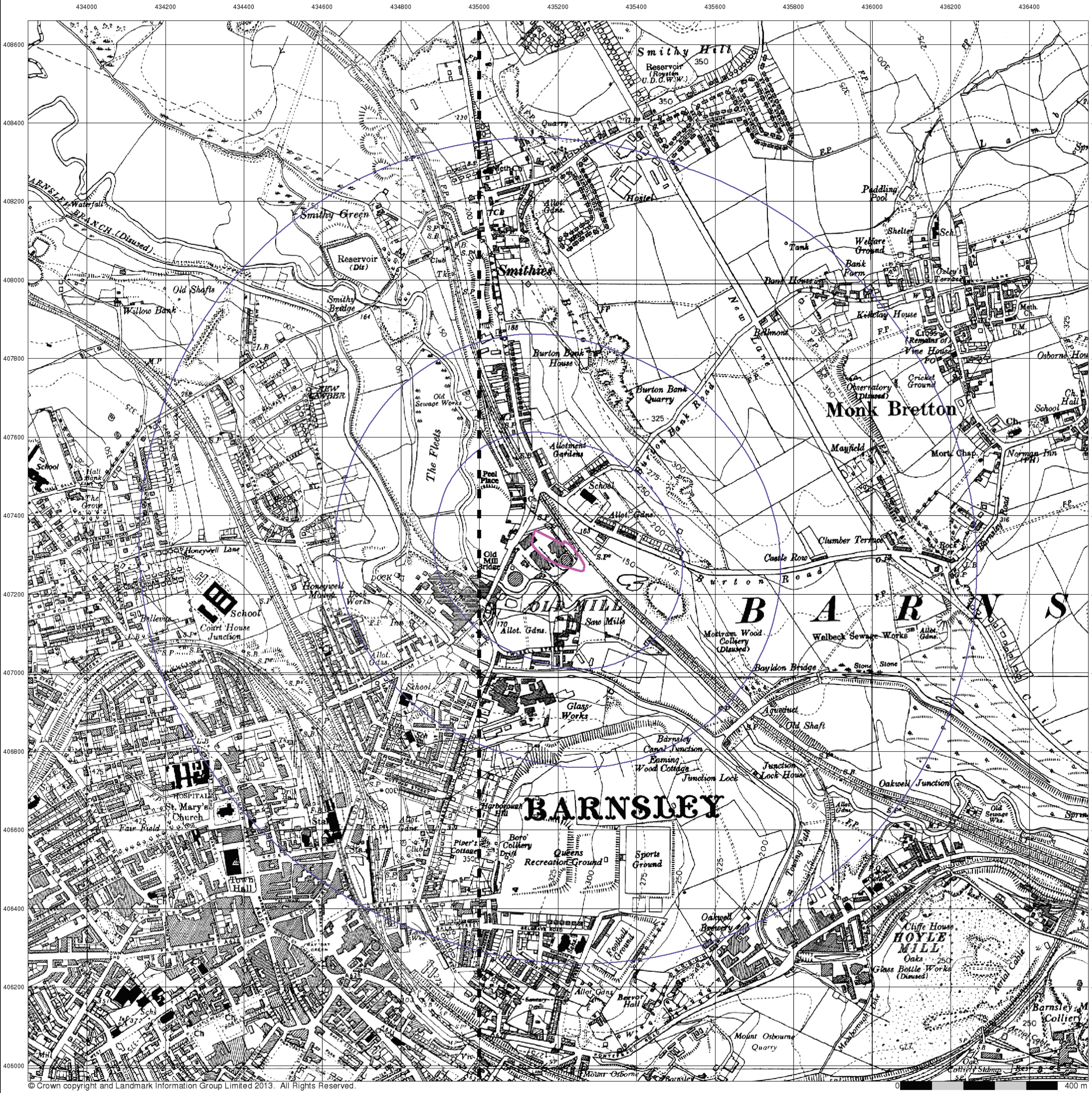
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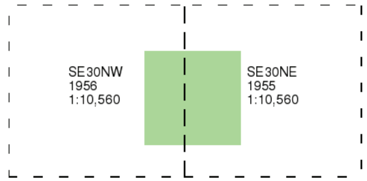
Ordnance Survey Plan

Published 1955 - 1956

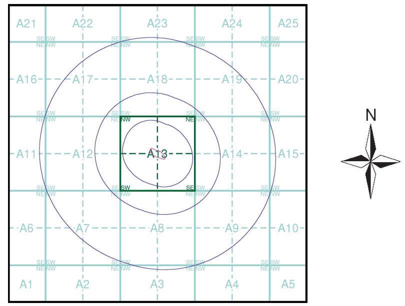
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number: 63599706_1_1
Customer Ref: 15004
National Grid Reference: 435200, 407310
Slice: A
Site Area (Ha): 0.68
Search Buffer (m): 1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

Landmark Information Group

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



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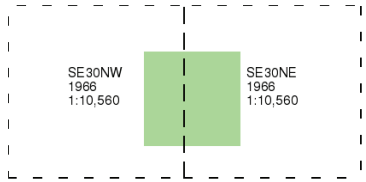
Ordnance Survey Plan

Published 1966

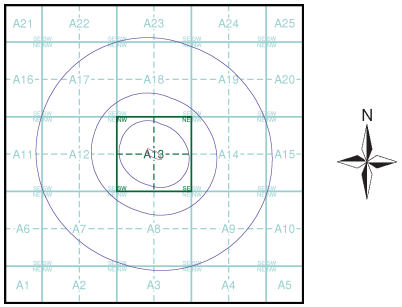
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

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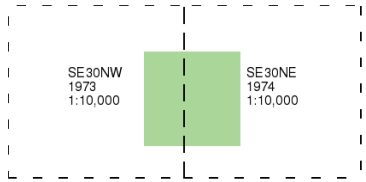
Ordnance Survey Plan

Published 1973 - 1974

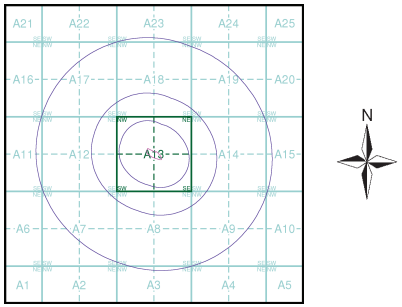
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

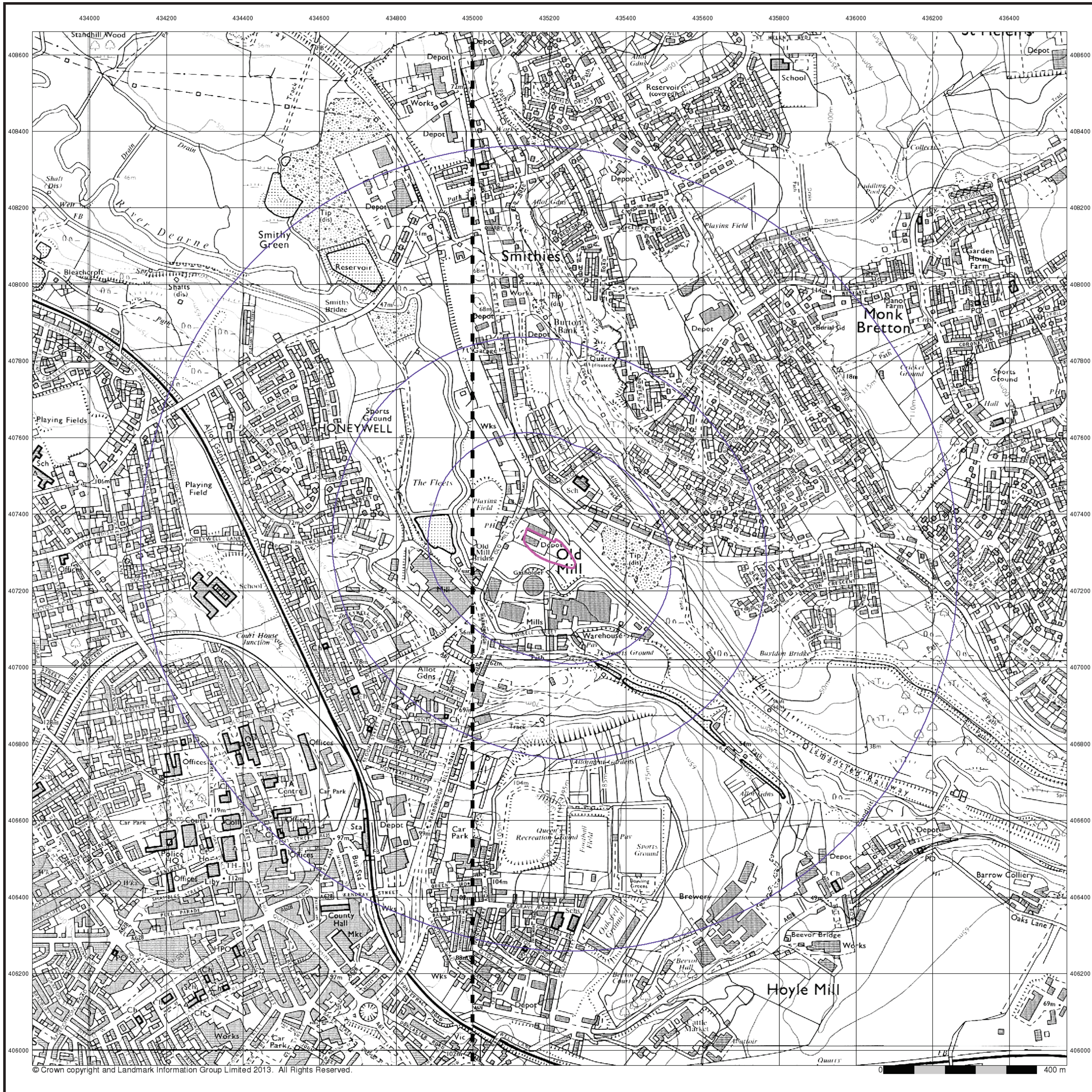
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Customer Ref:	15004
National Grid Reference:	435200, 407310
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Search Buffer (m):	1000

Site Details

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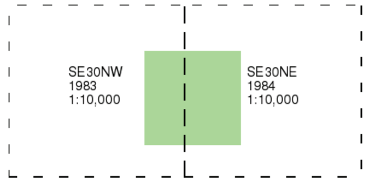
Ordnance Survey Plan

Published 1983 - 1984

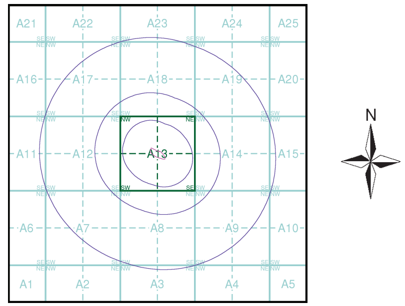
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

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Land off, Old Mill Lane, Barnsley, S71 2GB

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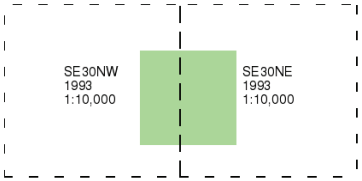
Ordnance Survey Plan

Published 1993

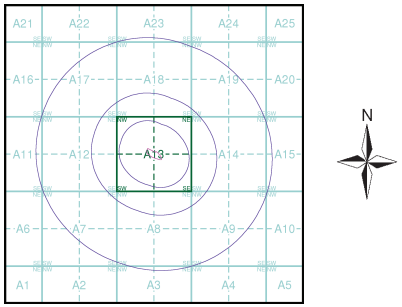
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

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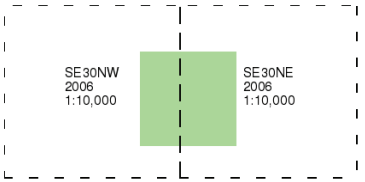
10k Raster Mapping

Published 2006

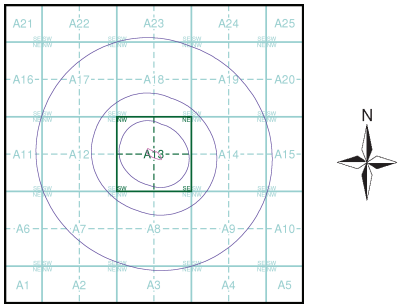
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

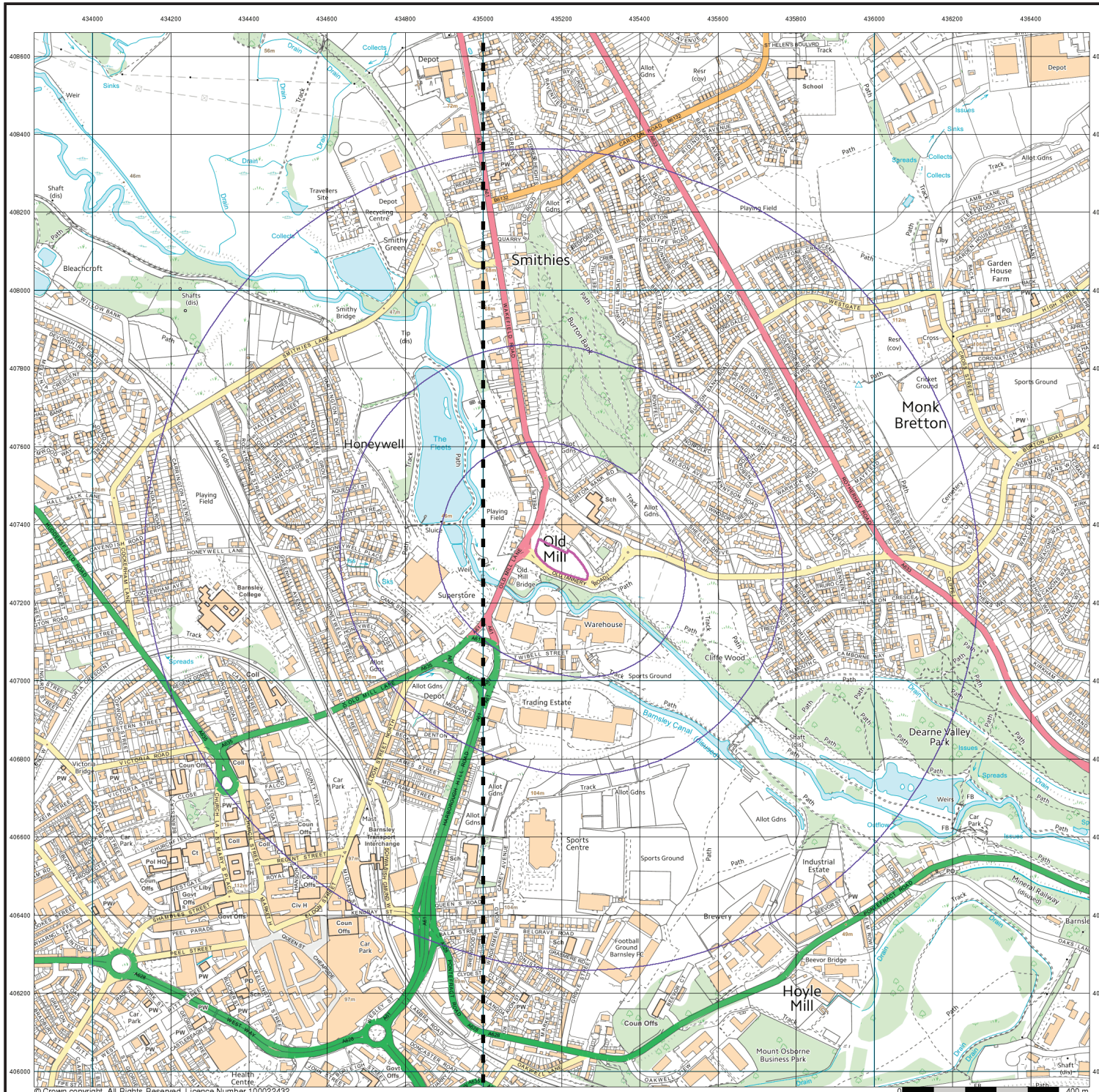
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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

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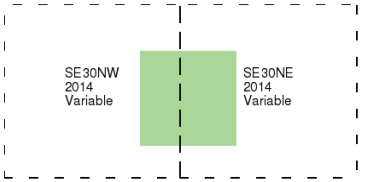
VectorMap Local

Published 2014

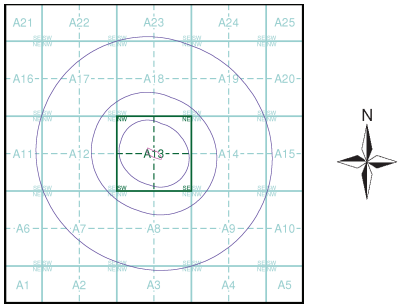
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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Appendix C

Envirocheck Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
63599706_1_1

Customer Reference:
15004

National Grid Reference:
435200, 407310

Slice:
A

Site Area (Ha):
0.68

Search Buffer (m):
1000

Site Details:

Land off
Old Mill Lane
Barnsley
S71 2GB

Client Details:

Mr A Cooper
3e Consulting Engineers Ltd
4 Calder Close
Calder Park
Wakefield
WF4 3BA

Contents

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	17
Hazardous Substances	30
Geological	31
Industrial Land Use	48
Sensitive Land Use	56
Data Currency	57
Data Suppliers	61
Useful Contacts	62

Introduction

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

In 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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Site of Special Scientific Interest, National Nature Reserve, Ramsar, Special Protection Area, Special Conservation Area, Marine Nature Reserve data (derived from Ordnance Survey 1:10000 raster) is provided by, and used with the permission of, Natural England who retain the copyright and Intellectual Property Rights for the data.

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Radon Potential dataset Copyright Notice

Information supplied from a joint dataset compiled by The British Geological Survey and Public Health England.

Report Version v49.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1		10		6
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4			2	4
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5		Yes		
Pollution Incidents to Controlled Waters	pg 5	2	7	2	10
Prosecutions Relating to Authorised Processes					
Prosecutions Relating to Controlled Waters	pg 9		1		
Registered Radioactive Substances					
River Quality	pg 9		1	1	
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 10		1		
Substantiated Pollution Incident Register	pg 10			1	
Water Abstractions	pg 11			3	6 (*5)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 14	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 14	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 15	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas	pg 15	Yes	Yes	n/a	n/a
Flood Defences	pg 15		Yes	n/a	n/a
Detailed River Network Lines	pg 15		Yes	Yes	n/a
Detailed River Network Offline Drainage	pg 15		Yes	Yes	n/a

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites	pg 17				1
Historical Landfill Sites	pg 17		4	3	9
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 20	1			3
Local Authority Recorded Landfill Sites	pg 21		2	4	7
Registered Landfill Sites	pg 23		2	1	6
Registered Waste Transfer Sites	pg 26		2		7
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 30		2		
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 30		1		
Planning Hazardous Substance Consents	pg 30		2		
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 31	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 31	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 41		1	8	14
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
Brine Compensation Area			n/a	n/a	n/a
Coal Mining Affected Areas	pg 44	Yes	n/a	n/a	n/a
Mining Instability	pg 45	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 45	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 45		Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 45	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 46	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 46	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 47	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 47	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 48		20	27	37
Fuel Station Entries	pg 55		1		2
Sensitive Land Use					
Areas of Adopted Green Belt	pg 56	1			
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves	pg 56		1		
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 56	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: British Gas Plc East Midlands Property Type: Trade (Unknown/Other) Location: No.4 Gasholder, Old Mill Depot, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: C3558 Permit Version: 1 Effective Date: 4th August 1981 Issued Date: 4th August 1981 Revocation Date: 25th August 2000 Discharge Type: Trade Discharge - Process Water 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	A13SW (SW)	109	2	435110 407200
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Barnsley Mfi Cso Twibell Street, Harboroughill Road (Off), Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 3671 Permit Version: 2 Effective Date: 31st March 2004 Issued Date: 3rd February 2004 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: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	114	2	435100 407200
1	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Barnsley Mfi Cso Twibell Street, Harboroughill Road (Off), Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 3671 Permit Version: 1 Effective Date: 19th January 1983 Issued Date: 19th January 1983 Revocation Date: 30th March 2004 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	A13SW (SW)	114	2	435100 407200
1	**Discharge Consents** Operator: Ms Davidson Property Type: Sewerage Network - Sewers - Water Company Location: Barnsley Mfi Cso Twibell Street, Harboroughill Road (Off), Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 3558 Permit Version: 1 Effective Date: 4th August 1981 Issued Date: 4th August 1981 Revocation Date: 25th August 2000 Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Authorisation revokedRevoked** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	114	2	435100 407200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: British Gas Plc - Transco Property Type: Sewerage Network - Sewers - Water Company Location: Barnsley Mfi Cso Twibell Street, Harboroughill Road (Off), Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: 3558 Permit Version: 1 Effective Date: 4th August 1981 Issued Date: 4th August 1981 Revocation Date: 25th August 2000 Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: River Dearne **Status: Authorisation revokedRevoked** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	114	2	435100 407200
2	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Pumping Station - Water Company Location: Westhill Cso, Rotherham, . Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: S/Cb/8 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: 31st March 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Varies With Outlet **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	118	2	435055 407237
2	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Old Mill, Old Mill Lane, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/CB/8 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	A13SW (SW)	126	2	435055 407225
2	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Old Mill Lane Cso Old Mill Lane (Adj Warehouse), Old Mill, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra9206 Permit Version: 1 Effective Date: 28th August 2007 Issued Date: 28th August 2007 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	A13SW (SW)	127	2	435050 407230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Old Mill-Old Mill Lane, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Calder Reference: S/B/34 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 31st May 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	A13SW (SW)	127	2	435050 407230
2	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Old Mill-Old Mill Lane, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/CB/8 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 29th May 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	A13SW (SW)	130	2	435050 407225
3	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Trade (Unknown/Other) Location: Regent Street, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Ywucd2/4 Permit Version: 1 Effective Date: 12th November 1997 Issued Date: 12th November 1997 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of 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	A7NE (SW)	511	2	434832 406906
4	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers - Water Company Location: Smithies Lane Cso, Smithies Lane, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wra7958 Permit Version: 1 Effective Date: 28th March 2003 Issued Date: 28th March 2003 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The 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	A17NE (NW)	720	2	434790 407990

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Smithies Lane, Honeywell, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/CB/8 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	A17NE (NW)	729	2	434840 408025
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Sewers Location: Honeywell-Smithies Lane, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Dearne Reference: S/CB/8 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 29th May 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	A17NE (NW)	733	2	434840 408030
5	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Sewerage Network - Pumping Station - Water Company Location: Westhill Cso, Rotherham, . Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: S/Cb/8 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: 31st March 2005 Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Varies With Outlet **Status: Transferred from Rivers (Prevention of Pollution) Act 1951-1961** Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	735	2	434840 408032
6	**Discharge Consents** Operator: Yorkshire Water Services Ltd Property Type: Reservoir/Borehole Site Location: Monk Bretton Service Reservoir, Monk Bretton, Barnsley, South Yorkshire Authority: Environment Agency, North East Region Catchment Area: Don Tributaries Reference: Wadc538 Permit Version: 1 Effective Date: 18th September 1989 Issued Date: 18th September 1989 Revocation Date: 23rd March 2004 Discharge Type: Trade Discharges - Process Effluent - Water Company (Wtw) 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 100m	A19SE (NE)	984	2	436100 407800
7	**Local Authority Pollution Prevention and Controls** Name: Asda Petrol Filling Station Location: Old Mill Lane, Barnsley, South Yorkshire, S71 1LN Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: PPC/B/101 Dated: 7th March 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A12SE (W)	288	3	434860 407240

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Local Authority Pollution Prevention and Controls** Name: Walter Fisher Ltd Location: Meadow Street, Barnsley, S71 1DE 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: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	431	3	434940 406926
9	**Local Authority Pollution Prevention and Controls** Name: Wakefield Road Service Station Location: Wakefield Road, Barnsley, S71 1NJ 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: PG1/14 Petrol filling station **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	615	3	435090 407974
10	**Local Authority Pollution Prevention and Controls** Name: D C Cook Ltd Location: Wakefield Road, Barnsley, S75 1NJ 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 revokedRevoked** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	655	3	435052 408010
11	**Local Authority Pollution Prevention and Controls** Name: Bretton Service Station Location: Rotherham Road, MONK BRETTON, BARNSLEY, South Yorkshire, S71 2DD Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: PPC/B/112 Dated: 29th March 1999 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A14NE (E)	718	3	435928 407551
12	**Local Authority Pollution Prevention and Controls** Name: D Thackray Plant Hire Location: 28 Westgate, Monk Bretton, BARNSLEY, South Yorkshire Authority: Barnsley Metropolitan Borough Council, Environmental Health and Trading Standards Permit Reference: Ppc/B/22 Dated: 10th March 1995 Process Type: Local Authority Pollution Prevention and Control Description: PG3/16 Mobile screening and crushing processes **Status: Site Closed** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	935	3	435928 407948
	Nearest Surface Water Feature	A13SW (S)	35	-	435178 407247
13	**Pollution Incidents to Controlled Waters** Property Type: Surface Water Sewers Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 27th April 1994 Incident Reference: 150742 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	0	2	435200 407295

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Pollution Incidents to Controlled Waters** Property Type: Surface Water Sewers Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 23rd April 1994 Incident Reference: 150748 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	0	2	435200 407300
14	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 20th September 1991 Incident Reference: 126712 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	43	2	435105 407295
14	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Miscellaneous - Foam Note: Not Supplied Incident Date: 21st May 1990 Incident Reference: 110784 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	44	2	435100 407300
14	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 22nd July 1990 Incident Reference: 112937 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	47	2	435100 407295
15	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Footbridge/Footbridge Dearne 18 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 26th February 1992 Incident Reference: 130994 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	70	2	435300 407200
16	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Old Mill Bridge A61, /Smithies Ln Dearne 16 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 11th June 1990 Incident Reference: 111488 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	136	2	435001 407301

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Pollution Incidents to Controlled Waters** Property Type: Food industry Location: Old Mill Lane, BARNSLEY Authority: Environment Agency, North East Region Pollutant: Sewage - Wrong Connection Note: River Dearne; No Fish Killed Incident Date: 23rd August 1998 Incident Reference: SH980456 Catchment Area: Dearne Tributaries Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	154	2	435001 407251
17	**Pollution Incidents to Controlled Waters** Property Type: Industrial: Other Location: River Dearne At, Dearne Valley Park Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: No Fish Killed Incident Date: 1st January 1997 Incident Reference: SH970001 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SE (E)	242	2	435500 407200
18	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewage Treatment Works Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Not Given Note: Not Supplied Incident Date: 20th August 1990 Incident Reference: 113846 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	325	2	434900 407100
19	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Miscellaneous - No Visible Pollution/Nothing Found Note: Not Supplied Incident Date: 2nd July 1992 Incident Reference: 134407 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	361	2	435300 406900
20	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Foul Sewer Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 3rd September 1992 Incident Reference: 136705 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	638	2	434800 407900
21	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Smithies Lane/Foot Bridge Dearne 17 Authority: Environment Agency, North East Region Pollutant: Chemicals - Solvents Note: Not Supplied Incident Date: 5th June 1992 Incident Reference: 133712 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A17SE (NW)	697	2	434700 407900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	**Pollution Incidents to Controlled Waters** Property Type: Fire Water Location: Smithies Reservoir, BARNSLEY Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: River Dearne; Less Than Ten Fish Killed Incident Date: 16th June 1998 Incident Reference: SH980307 Catchment Area: Dearne Receiving Water: Pond/Lake Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	772	2	434700 407995
22	**Pollution Incidents to Controlled Waters** Property Type: Other General Premises Location: Old Mill Bridge A61, /Smithies Ln Dearne 16 Authority: Environment Agency, North East Region Pollutant: Algae Note: Not Supplied Incident Date: 17th September 1990 Incident Reference: 114919 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	777	2	434700 408000
23	**Pollution Incidents to Controlled Waters** Property Type: Surface Water Sewers Location: Old Mill Bridge A61, /Smithies Ln Dearne 16 Authority: Environment Agency, North East Region Pollutant: Road Run-Off Note: Not Supplied Incident Date: 2nd March 1992 Incident Reference: 131001 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	861	2	434700 408100
24	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 1st July 1994 Incident Reference: 152787 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	868	2	436000 406800
25	**Pollution Incidents to Controlled Waters** Property Type: Industrial Premises Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 1st November 1993 Incident Reference: 148570 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SW (S)	895	2	435001 406401
26	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Road Bridge A628, /Old Mill Bridge A61 Dearne 15 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 15th November 1993 Incident Reference: 148792 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	925	2	436000 406700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Foul Sewer Location: Dearne Valley Park, Hoyle Mill, BARNSLEY Authority: Environment Agency, North East Region Pollutant: Crude Sewage Note: River Dearne; No Fish Killed Incident Date: 25th July 1998 Incident Reference: SH980382 Catchment Area: Dearne Receiving Water: Freshwater Stream/River Cause of Incident: Not Given Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9NE (SE)	956	2	436000 406650
27	**Pollution Incidents to Controlled Waters** Property Type: Domestic/Residential Location: Smithies Lane/Foot Bridge Dearne 17 Authority: Environment Agency, North East Region Pollutant: Unknown Note: Not Supplied Incident Date: 10th May 1990 Incident Reference: 110461 Catchment Area: Not Given Receiving Water: No Pollution Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	948	2	434700 408200
28	**Prosecutions Relating to Controlled Waters** Location: Twibell Street, BARNSLEY, South Yorkshire, S71 1DN Prosecution Text: EA News Release 27/05/1998, Causing poisonous, noxious or polluting matter, namely red diesel to enter the River Dearne via surface water drains. Prosecution Act: WRA91 Hearing Date: 27th May 1998 Verdict: Guilty Fine: 7500 Cost: 961 Positional Accuracy: Manually positioned within the geographical locality	A13SE (S)	190	2	435218 407073
	River Quality Name: River_Dearne GQA Grade: River Quality C Reach: New_Lodge_Old_Mil Estimated Distance (km): 3 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A13SW (SW)	82	2	435148 407209
	River Quality Name: River_Dearne GQA Grade: River Quality C Reach: Old_Mill_Lundwood_St Estimated Distance (km): 5.5 Flow Rate: Flow less than 0.62 cumecs Flow Type: River Year: 2000	A13SE (SE)	327	2	435505 407039

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**River Quality Chemistry Sampling Points** Name: River Dearne Reach: New Lodge To Old Mill Estimated Distance: 3.00 Objective: Not Supplied Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied	A13SW (SW)	114	2	435100 407200
30	**Substantiated Pollution Incident Register** Authority: Environment Agency - North East Region, Yorkshire Area Incident Date: 2nd March 2004 Incident Reference: 220137 Water Impact: Category 3 - Minor Incident Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	A13NW (NW)	251	2	435014 407578

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Water Abstractions** Operator: C C Cooper Limited Licence Number: 2/27/08/045 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 295 Yearly Rate (m3): 107522 Details: Licence Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (S)	294	2	435100 407000
32	**Water Abstractions** Operator: Yorkshire Water Plc Licence Number: 2/27/08/057 Permit Version: Not Supplied Location: County Borough Of Barnsley Authority: Environment Agency, North East Region Abstraction: Unclassified (Other) Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 18 Yearly Rate (m3): 2273 Details: Not Supplied Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A12NE (NW)	369	2	434800 407500
33	**Water Abstractions** Operator: Star Paper Mills Licence Number: 2/27/08/042 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: Unclassified Combinations Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 3410 Yearly Rate (m3): 640986 Details: Licence Lapsed Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18SW (NW)	416	2	434900 407700
34	**Water Abstractions** Operator: Barnsley Metropolitan Borough Council Licence Number: 2/27/08/141 Permit Version: 1 Location: River Dearne Authority: Environment Agency, North East Region Abstraction: Municipal Grounds: Make-Up or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Dearne Valley County Park,Pontefract Road,Hoyle Mill,Barnsley,South Yorkshire Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	606	2	435710 406850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
34	**Water Abstractions** Operator: Barnsley Metropolitan Borough Council Licence Number: 2/27/08/122 Permit Version: 101 Location: River Dearne Authority: Environment Agency, North East Region Abstraction: Municipal Grounds: Make-Up or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Dearne Valley County Park,Pontefract Road,Hoyle Mill,Barnsley,South Yorkshire Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 1st August 2002 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9NW (SE)	606	2	435710 406850
34	**Water Abstractions** Operator: Barnsley Metropolitan Borough Council Licence Number: 2/27/08/122 Permit Version: 100 Location: River Dearne Authority: Environment Agency, North East Region Abstraction: Crown and Government: Make-Up or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 87 Yearly Rate (m3): 7800 Details: Dearne Valley County Park,Pontefract Road,Hoyle Mill,Barnsley,South Yorkshire Authorised Start: 01 April Authorised End: 31 October Permit Start Date: 7th October 1998 Permit End Date: Not Supplied Positional Accuracy: Approximate location provided by supplier	A9NW (SE)	606	2	435710 406850
35	**Water Abstractions** Operator: Northern Strip Mining Limited Licence Number: 2/27/08/097 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 114 Yearly Rate (m3): 32000 Details: Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	814	2	434650 408010
36	**Water Abstractions** Operator: Barnsley Metropolitain District Council Licence Number: 2/27/08/115 Permit Version: Not Supplied Location: Dearne Valley Park, BARNSLEY Authority: Environment Agency, North East Region Abstraction: Pond level maintenance Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 18 Yearly Rate (m3): 2464000 Details: Status: Withdrawn 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	A9NE (SE)	847	2	435900 406700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**Water Abstractions** Operator: The Barnsley Brewery Company Ltd Licence Number: 2/27/08/027 Permit Version: Not Supplied Location: Oakwell Brewery, BARNSLEY Authority: Environment Agency, North East Region Abstraction: Cooling/Gen Ind. Abstraction Type: Not Supplied Source: Spring Daily Rate (m3): 136 Yearly Rate (m3): 0 Details: Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Unknown	A9SW (SE)	971	2	435800 406450
	Water Abstractions Operator: The Barnsley Brewery Company Limited Licence Number: 2/27/08/003 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: Cooling/Gen Ind. Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 614 Yearly Rate (m3): 116605 Details: Coal Measures Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	1013	2	435800 406400
	Water Abstractions Operator: Yorkshire Water Plc Licence Number: 2/27/08/058 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, North East Region Abstraction: Unclassified (Other) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 14 Yearly Rate (m3): 1137 Details: Licence Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1NW (SW)	1887	2	433700 406100
	Water Abstractions Operator: Sheldale Developments Ltd Licence Number: 2/27/08/133 Permit Version: 1 Location: Spring - Sandstone&Middle Coal Measures - Barnsley Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 43a Shaw Lane, Barnsley, South Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A1NW (SW)	1913	2	433700 406060

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Sheldale Developments Ltd Licence Number: 2/27/08/110 Permit Version: 101 Location: Spring-Sandstone/Middle Coal Measures-Shaw Lane Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 43a Shaw Lane, Barnsley, South Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th April 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1NW (SW)	1953	2	433700 406000
	Water Abstractions Operator: Sheldale Water Limited Licence Number: 2/27/08/110 Permit Version: 100 Location: Well/Spring - Sandstone/Middle Coal Measures - Shaw Lane Authority: Environment Agency, North East Region Abstraction: Food And Drink: Water Bottling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 200 Yearly Rate (m3): 45000 Details: Land Adjoining To Rear Of 43a Shaw Lane, Barnsley, South Yorkshire Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st December 1999 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1NW (SW)	1953	2	433700 406000
	Groundwater Vulnerability 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	A13SW (SE)	0	2	435200 407308
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (SE)	0	4	435200 407308
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13SW (SE)	0	4	435200 407308
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	0	2	435190 407295
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models and Fluvial Events Boundary Accuracy: As Supplied	A13SE (SE)	49	2	435277 407210
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models and Fluvial Events Boundary Accuracy: As Supplied	A13NW (W)	70	2	435065 407320
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13SE (SE)	142	2	435395 407204
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13SE (SE)	148	2	435364 407150
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (W)	149	2	434988 407363

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	152	2	435365 407146
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13NW (NW)	155	2	435075 407501
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	156	2	435075 407502
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13SE (SE)	173	2	435380 407131
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Events Boundary Accuracy: As Supplied	A13NW (NW)	173	2	435068 407518
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	0	2	435203 407279
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas Type: Flood Water Storage Areas Reference: Not Supplied	A13SE (S)	0	2	435203 407278
	Flood Water Storage Areas Type: Flood Water Storage Areas Reference: Not Supplied	A13NW (W)	140	2	434994 407313
	Flood Water Storage Areas Type: Flood Water Storage Areas Reference: Not Supplied	A13SW (W)	167	2	434981 407261
	Flood Defences Type: Flood Defences Reference: Not Supplied	A13SE (SE)	73	2	435332 407232
38	**Detailed River Network Lines** River Type: Primary River River Name: River Dearne Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Flood Risk Management Indicative/Statutory Main River Water Course Name: RIVER DEARNE Water Course Reference: 0256	A13SW (S)	39	2	435177 407243
39	**Detailed River Network Lines** River Type: Secondary River River Name: Barnsley Hydrographic Area: D004 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	A13SE (S)	274	2	435324 406992
40	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A13NW (N)	216	2	435114 407575

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12SE (W)	408	2	434736 407240
42	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12SE (W)	433	2	434703 407288
43	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A7NE (SW)	490	2	434856 406914

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**BGS Recorded Landfill Sites** Site Name: Smithy Green Tip Location: Smithies Lane, BARNSLEY, Yorks Authority: British Geological Survey, National Geoscience Information Service Ground Water: Information not available Surface Water: Information not available Geology: N/A Positional Accuracy: Positioned by the supplier Boundary Accuracy: Derived	A17NE (NW)	805	4	434635 407986
45	**Historical Landfill Sites** Licence Holder: East Midlands Gas Location: Old Mill Lane, Barnsley Name: Emgas Depot Operator Location: PO Box 145, De Montfort Street, Leicester Boundary Accuracy: As Supplied Provider Reference: EAHLD04898 First Input Date: 31st January 1978 Last Input Date: 11th May 1984 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0473 BGS Ref: Not Supplied Other Ref: WD20 B187, 4400/B187, 20B187(71)	A13SW (SW)	48	2	435132 407259
46	**Historical Landfill Sites** Licence Holder: Mr A Hanson Location: Off Smithies Lane, Barnsley Name: The Fleets Dam Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04358 First Input Date: 30th September 1990 Last Input Date: 31st December 1994 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0516 BGS Ref: Not Supplied Other Ref: WD20 B774, 4400/B774, 20B774	A13NW (NW)	198	2	434971 407460
47	**Historical Landfill Sites** Licence Holder: Star Paper Mills Location: Old Mill Lane, Barnsley Name: Star Paper Limited Operator Location: PO Box 15, Old Mill Lane, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04354 First Input Date: 31st January 1978 Last Input Date: 25th February 1982 Specified Waste Type: Deposited Waste included Inert Waste and Liquid Sludge EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0461 BGS Ref: Not Supplied Other Ref: WD20 B4(i), 4400/B4	A13SW (W)	198	2	434940 407295
48	**Historical Landfill Sites** Licence Holder: Barnsley Trades Council Location: Barnsley Name: Canal to the rear of Twibell Street Operator Location: 8A, Eastgate, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04361 First Input Date: 30th September 1982 Last Input Date: 6th June 1988 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0485 BGS Ref: Not Supplied Other Ref: WD20 B369, 4400/B369, 20B369(83)	A13SE (S)	235	2	435255 407024

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
49	**Historical Landfill Sites** Licence Holder: Star Paper Mills Location: Barnsley Name: Star Paper Mill Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04355 First Input Date: 31st January 1978 Last Input Date: 31st December 1990 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0460 BGS Ref: Not Supplied Other Ref: 4400/B59, WD20/B4(ii)	A13NW (W)	264	2	434870 407356
50	**Historical Landfill Sites** Licence Holder: Barnsley Metropolitan Borough Council Location: Old Mill Lane, Barnsley Name: Disused Canal Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04357 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0425 BGS Ref: Not Supplied Other Ref: 4400/(22)	A13SW (SW)	305	2	434919 407109
51	**Historical Landfill Sites** Licence Holder: Booth Excavations Limited Location: Barnsley Name: Wakefield Road Operator Location: c/c C E Smith Son, 14 Regent Street, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04353 First Input Date: 28th July 1981 Last Input Date: 9th May 1988 Specified Waste Type: Deposited Waste included Industrial and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0481 BGS Ref: Not Supplied Other Ref: 20B320(79), WD20 B320, 4400/B320	A18SW (N)	488	2	435004 407830
52	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Smithies Lane, Barnsley, Yorkshire Name: Smithy Green Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD31669 First Input Date: 31st December 1948 Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Industrial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: 1890 Other Ref: Not Supplied	A17SE (NW)	560	2	434851 407840
53	**Historical Landfill Sites** Licence Holder: White Peace Location: Town Centre, Barnsley Name: Land off Old Mill Lane Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04356 First Input Date: 30th November 1984 Last Input Date: 31st December 1989 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0426 BGS Ref: Not Supplied Other Ref: WD20 B446	A12SE (SW)	649	2	434563 407017

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
54	**Historical Landfill Sites** Licence Holder: Barnsley Metropolitan Borough Council Location: Monk Bretton, Barnsley Name: Rotherham Road Operator Location: Department of Architecture Planning, Regent House, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04359 First Input Date: 13th March 1985 Last Input Date: 4th June 1986 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0496 BGS Ref: Not Supplied Other Ref: 20B456(94), WD20 B456, 4400/B456	A19NW (NE)	828	2	435634 408048
55	**Historical Landfill Sites** Licence Holder: Mr D Thackery Location: Byron Drive, Monk Bretton, Barnsley Name: Land to the rear of Nos. 16 to 26 Byron Drive Operator Location: Westgate, Monk Bretton, Barnsley Boundary Accuracy: As Supplied Provider Reference: EAHLD04896 First Input Date: 30th September 1982 Last Input Date: 31st December 1987 Specified Waste Type: Deposited Waste included Inert and Commercial Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0440 BGS Ref: Not Supplied Other Ref: 3(b), 20B395(37), 4400/B359, WD20 B359	A19SE (NE)	852	2	435917 407831
56	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Smithies Tip, Off Smithies Lane, Barnsley Name: Smithies Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04351 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0543 BGS Ref: Not Supplied Other Ref: 4400/(141)	A17NE (NW)	854	2	434735 408113
57	**Historical Landfill Sites** Licence Holder: Nuttall Lighting Limited Location: Glasstip, Railway Cutting, Beevor Street, Hoyle Mill, Barnsley Name: Former Wood Brothers Tip Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04362 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Commercial and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: WD20 B353, 4400/B353, 20B353, WD20 B353a	A9SE (SE)	899	2	435905 406629
58	**Historical Landfill Sites** Licence Holder: Wood Brothers Glass Company Limited Location: Glasstip, Railway Cutting, Beevor Street Name: Land to the rear of Chapel Street-Beever Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04363 First Input Date: 5th December 1977 Last Input Date: 31st December 1984 Specified Waste Type: Deposited Waste included Inert, Industrial and Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0441 BGS Ref: Not Supplied Other Ref: WD20 B6(I), 4400/B6, 20B6(38), 4400/0573	A9SE (SE)	940	2	435922 406589

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**Historical Landfill Sites** Licence Holder: Mowlem Construction Location: Oakwell Road, Barnsley Name: Barnsley Football Ground Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04364 First Input Date: 1st June 1995 Last Input Date: 31st August 1995 Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: 4400/(164)	A8SE (S)	949	2	435456 406330
60	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Wakefield Road, Barnsley Name: Dalestone Works Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD04352 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4400/0544 BGS Ref: Not Supplied Other Ref: 4400/(142)	A18NW (N)	957	2	434884 408283
61	**Licensed Waste Management Facilities (Locations)** Licence Number: 60545 Location: Old Mill Lane, Barnsley, South Yorkshire Operator Name: British Gas Transco Plc Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Surrendered** Issued: 15th July 1993 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 6th September 2000 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (S)	0	2	435200 407300
62	**Licensed Waste Management Facilities (Locations)** Licence Number: 60598 Location: Harborough Hill Road, Harborough, Barnsley, South Yorkshire, S71 1BD Operator Name: Yorkshire Electricity Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Transfer stations **Licence Status: Surrendered** Issued: 14th September 1992 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 13th May 1999 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	740	2	434800 406650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
63	**Licensed Waste Management Facilities (Locations)** Licence Number: 60609 Location: Smithies Lane H W R C, Smithies Lane, Smithies, Barnsley, South Yorkshire, S71 1NL Operator Name: F C C Recycling (U K) Limited Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Household Waste Amenity Sites **Licence Status: Modified** Issued: 14th June 1993 Last Modified: 23rd November 2012 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18NW (NW)	778	2	434870 408090
64	**Licensed Waste Management Facilities (Locations)** Licence Number: 60547 Location: Rotherham Road, Carlton, Barnsley, South Yorkshire, S27 2AG Operator Name: Yorkshire Water Services Ltd Operator Location: Not Supplied Authority: Environment Agency - North East Region, Yorkshire Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Surrendered** Issued: 31st January 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 1st November 2000 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 100m	A18NE (N)	952	2	435300 408300
	Local Authority Landfill Coverage Name: Barnsley Metropolitan Borough Council - Has supplied landfill data		0	3	435200 407308
65	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 71 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: Unknown Boundary Quality: Not Applicable	A13SW (SW)	75	3	435094 407258
66	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 83 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	A13SE (S)	237	3	435251 407022
67	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 22 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	A13SW (SW)	308	3	434924 407098

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 59 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: Unknown Boundary Quality: Not Applicable	A12NE (W)	328	3	434812 407396
69	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 79 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	A18SW (N)	465	3	435006 407806
70	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 58 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	A18SW (NW)	494	3	434908 407796
71	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 23 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	A12SE (SW)	651	3	434560 407018
72	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 141 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	A17NE (NW)	756	3	434798 408035
73	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 94 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	A19NW (NE)	828	3	435634 408049
74	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 37 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	A19SE (NE)	842	3	435882 407859

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 38 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	A9SE (SE)	934	3	435933 406608
76	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 164 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	A8SE (S)	949	3	435457 406330
77	**Local Authority Recorded Landfill Sites** Location: Not Supplied Reference: 142 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	A18NW (N)	956	3	434886 408283
78	**Registered Landfill Sites** Licence Holder: East Midlands Gas Licence Reference: WD20 B 187 Site Location: Emgas Depot, Old Mill Lane, Barnsley, South Yorkshire Licence Easting: 435100 Licence Northing: 407250 Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st January 1978 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	A13SW (SW)	76	2	435100 407250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
79	**Registered Landfill Sites** Licence Holder: A Hanson Licence Reference: WD20 B 774 MOD 1 Site Location: The Fleets Dam, Smithies Lane, Barnsley, South Yorkshire Licence Easting: 434950 Licence Northing: 407500 Operator Location: Stainborough Fisheries, Low Lane, Stainborough, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max 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: Site exempt from licenceExempt Dated: 1st September 1990 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 Prohibited Waste: Inert Excavation Wastes,Soil & Subsoil All Forms Of Asbestos Hazardous Wastes Liquid/Slurry In Drums/Cont'Rs > 4 L Paper/Cardboard Plasterboard Plastic Wood	A13NW (NW)	237	2	434950 407500
80	**Registered Landfill Sites** Licence Holder: Barnsley Trade Council Licence Reference: WD20 B 369 Site Location: Canal To Rear Of Twibell Street, Barnsley, South Yorkshire Licence Easting: 435300 Licence Northing: 407000 Operator Location: 8a Eastgate, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st September 1982 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 $	A13SE (S)	262	2	435300 407000
81	**Registered Landfill Sites** Licence Holder: Booth Excavations Licence Reference: WD20 B 320 Site Location: Wakefield Road, Barnsley, South Yorkshire Licence Easting: 435000 Licence Northing: 407900 Operator Location: C/O C E Smith & Sons, 14 Regent Street, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Very Large (Equal to or greater than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st July 1981 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	A18SW (N)	557	2	435000 407900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**Registered Landfill Sites** Licence Holder: Star Paper Ltd Licence Reference: WD20 B 4 (I) 12/80 Site Location: Star Paper Ltd, Newbridge Lane, Barnsley, South Yorkshire Licence Easting: 434800 Licence Northing: 407840 Operator Location: Po Box 15, Old Mill Lane, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Undefined Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st January 1978 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: Cellulose Wastes (Natural/Synth.) China Clay And Cellulous Wastes	A17SE (NW)	588	2	434800 407840
83	**Registered Landfill Sites** Licence Holder: White & Peace Licence Reference: WD20 B 446 MOD 2 Site Location: Old Mill Lane, Barnsley, South Yorkshire Licence Easting: 434500 Licence Northing: 407100 Operator Location: Twibell Street, BARNSLEY, South Yorkshire, S71 1D Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st November 1984 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: Demol'N Waste,Brick, Stone Rubble Excavation Waste,Soil,Subsoil Prohibited Waste: All Forms Of Asbestos Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.	A12SW (W)	674	2	434500 407100
84	**Registered Landfill Sites** Licence Holder: D Thackery Licence Reference: WD20 B 359 Site Location: Rear Of 16-26 Byron Drive, Monk Bretton, Barnsley, South Yorkshire Licence Easting: 435900 Licence Northing: 407900 Operator Location: West Gate, Monks Bretton, BARNSLEY, South Yorkshire, S71 2DS Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max 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/surrenderedCancelled Dated: 1st September 1982 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: Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.	A19SE (NE)	883	2	435900 407900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	**Registered Landfill Sites** Licence Holder: Nuttall Lighting Ltd Licence Reference: WD20 B 353 Site Location: Ex Wood Bros Tip, Beever Street, Hoyle Mill, Barnsley, South Yorkshire Licence Easting: 435910 Licence Northing: 406520 Operator Location: High Holborn Road, Codnor Gate, Ripley, Derbyshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max 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/surrenderedCancelled Dated: 1st March 1982 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: Asbestos Cement Sheeting Construction And Demolition Wastes Prohibited Waste: Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.	A9SE (SE)	982	2	435910 406520
86	**Registered Landfill Sites** Licence Holder: Barnsley M.B.C. Licence Reference: WD20 B 456 Site Location: Rotherham Road, Monk Bretton, Barnsley, South Yorkshire Licence Easting: 435700 Licence Northing: 408200 Operator Location: Cleansing Div. Smithies La.Depot, Barnsley, South Yorkshire Authority: Environment Agency - North East Region, Ridings Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st March 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 Hardcore And Rubble Soil/Subsoil Prohibited Waste: Asbestos Liquids In Containers Over 4l Cap. Slurry In Containers Over 4l Cap.	A19NW (NE)	992	2	435700 408200
87	**Registered Waste Transfer Sites** Licence Holder: British Gas Plc East Midlands Licence Reference: WD20 B1013 MOD 1 Site Location: Barnsley Depot, Old Mill Lane, Barnsley, South Yorkshire Operator Location: Greasborough Road, ROTHERHAM, South Yorkshire, S61 4QQ Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Licence Status: Licence has completion certificateSurrendered Dated: 15th July 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Excavation Spoil Ferrous Metal Scrap Max.Waste Permitted By Licence Paper/Pack'G/Sim'R Combustible Waste Polyethylene Pipe	A13SW (SW)	37	2	435150 407260

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**Registered Waste Transfer Sites** Licence Holder: K A Adams Licence Reference: WD20 B1053 Site Location: Adams Yard, Peel Place, Old Mill Lane, Barnsley, South Yorkshire Operator Location: 421 Rotherham Road, Smithies, BARNSLEY, South Yorkshire, S71 1UX Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence has completion certificateSurrendered Dated: 9th June 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Com. & Ind. Non-Haz. Waste Max.Stor. Construction And Demol.Wastes Max.Stor Excavation Waste, Soil/Subsoil Max.St. Max.Waste Permitted By Licence Prohibited Waste: Asbestos Poisonous, Noxious, Polluting Wastes Putrescible Waste	A13NW (N)	139	2	435130 407500
89	**Registered Waste Transfer Sites** Licence Holder: Peary Garden Services Licence Reference: WD20 B 780 Site Location: Hillside, Wakefield Road, Smithies, Barnsley, South Yorkshire, S71 1nh Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max 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 Licence Status: Licence revokedRevoked Dated: 8th February 1991 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Ash & Clinker Building And Demolition Wastes Excavation Waste, Soil, Subsoil Garden Waste Houshold Clearance Waste Max.Storage Permitted By Licence Prohibited Waste: All Forms Of Asbestos Liq./Slurry In Drums/Cont'Rs > 4 L Cap Poisonous, Noxious, Polluting Wastes	A18NW (N)	716	2	435040 408070
90	**Registered Waste Transfer Sites** Licence Holder: Yorkshire Electricity Licence Reference: WD20 B 879 MOD 2 Site Location: Harborough Hill Road, BARNSLEY, South Yorkshire, S71 1BD Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence has completion certificateSurrendered Dated: 1st April 1997 Preceded By Licence: WD20 B 879 Superseded By Licence: Not Given Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Max.Waste Permitted By Licence Mineral Oils And Max.Stor Non-Haz. Building Waste Non-Haz. Com./Ind. Waste Non-Haz. Excavation & Max.Stor Scrap Metal Max.Stor Synthetic Oils Prohibited Waste: Asbestos - Any Type Putrescible Waste Waste N.O.S.	A7NE (SW)	740	2	434800 406650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**Registered Waste Transfer Sites** Licence Holder: Yorkshire Electricity Licence Reference: WD20 B 879 Site Location: Harborough Hill Road, BARNSLEY, South Yorkshire, S71 1BD Operator Location: As Site Address Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Record supersededSuperseded Dated: 14th September 1992 Preceded By Licence: Not Given Superseded By Licence: WD20 B 879 MOD 2 Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Com. + Ind. Non-Haz. Waste Mstor Empty Tins Of Dmi Mstor Non-Haz. Excav'N/Build. Waste Mstor Scrap Metal Mstor Prohibited Waste: Asbestos Of Any Type Putrescible Waste	A7NE (SW)	740	2	434800 406650
91	**Registered Waste Transfer Sites** Licence Holder: B.D.R. Waste Disposal Ltd Licence Reference: WD20 B 975 MOD 3 Site Location: Smithies Lane, Smithies, Barnsley, South Yorkshire Operator Location: Thorncliffe Hall, Thorncliffe Park Estate, Chapeltown, SHEFFIELD, South Yorkshire, S35 2PQ Authority: Environment Agency - North East Region, Ridings Area Site Category: Civic Amenity Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 1st June 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Domestic/Commercial Waste Ferrous/Non-Ferrous Scrap Metal Glass Max.Waste Permitted By Licence Mineral Oils Motor Vehicle Batteries Paper/Cardboard Waste Textiles Prohibited Waste: Asbestos - All Types	A17NE (NW)	813	2	434780 408090
92	**Registered Waste Transfer Sites** Licence Holder: Yorkshire Water Services Ltd Licence Reference: WD20 B1042 MOD 2 Site Location: Carlton Road Depot, BARNSLEY, South Yorkshire, S71 2AG Operator Location: 2 The Embankment, Sovereign Street, LEEDS, West Yorkshire, LS1 4BG Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence has completion certificateSurrendered Dated: 16th September 1997 Preceded By Licence: WD20 B1042 MOD 1 Superseded By Licence: Not Given Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Cast Iron Pipe Max.Stor. Excavation W. From Yorks Pipeline Serv Max.Waste Permitted By Licence Mdpe Plastic Pipe Max.Stor. Packaging/Paper/Plastic/Wood Max.Stor. Prohibited Waste: Liquid Wastes Sludge Wastes	A18NE (N)	952	2	435300 408300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	**Registered Waste Transfer Sites** Licence Holder: Yorkshire Water Services Ltd Licence Reference: WD20 B1042 MOD 1 Site Location: Carlton Road Depot, BARNSLEY, South Yorkshire, S71 2AG Operator Location: 2 The Embankment, Sovereign Street, LEEDS, West Yorkshire, LS1 4BG Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max 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 Licence Status: Record supersededSuperseded Dated: 26th March 1997 Preceded By Licence: WD20 B1042 Superseded By Licence: WD20 B1042 MOD 2 Positional Accuracy: Located by supplier to within 100m Boundary Quality: Not Supplied Authorised Waste: Cast Iron Pipe Max.Stor. Excavation W. From Yorks Pipeline Serv Mdpe Plastic Pipe Max.Stor. Packaging/Paper/Plastic/Wood Max.Stor. Prohibited Waste: Liquid Wastes Sludge Wastes	A18NE (N)	952	2	435300 408300
92	**Registered Waste Transfer Sites** Licence Holder: Yorkshire Water Services Ltd Licence Reference: WD20 B1042 Site Location: Carlton Road Depot, BARNSLEY, South Yorkshire, S71 2AG Operator Location: 2 The Embankment, Sovereign Street, LEEDS, West Yorkshire, LS1 4BG Authority: Environment Agency - North East Region, Ridings Area Site Category: Transfer Max 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 Licence Status: Record supersededSuperseded Dated: 31st January 1994 Preceded By Licence: Not Given Superseded By Licence: WD20 B1042 MOD 1 Positional Accuracy: Approximate location provided by supplier Boundary Quality: Not Supplied Authorised Waste: Asbestos Cement Pipe Max.Stor. Cast Iron Pipe Max.Stor. Excavation W. From Yorks Pipeline Serv Mdpe Plastic Pipe Max.Stor. Packaging/Paper/Plastic/Wood Max.Stor. Prohibited Waste: Liquid Wastes Sludge Wastes	A18NE (N)	952	2	435300 408300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
93	**Control of Major Accident Hazards Sites (COMAH)** Name: Transco Plc Location: Old Mill Lane, BARNSLEY, South Yorkshire, S71 1LT Reference: 1031023 Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	91	5	435159 407195
93	**Control of Major Accident Hazards Sites (COMAH)** Name: National Grid Gas Plc Location: Barnsley Holder Station, Old Mill Lane,Barnsley, South Yorkshire, S71 1LT Reference: Not Supplied Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	97	5	435161 407188
94	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: Transco. Location: Old Mill Lane, Barnsley, S. Yorks., S71 1Lt **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	94	5	435163 407190
95	**Planning Hazardous Substance Consents** Name: British Gas Plc Location: Barnsley Gas Holder Station, Old Mill Lane, BARNSLEY, South Yorkshire, S71 1LT Authority: Barnsley Metropolitan Borough Council, Planning Department Application Ref: Hsc/00/0002/Ba Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 58.01 Application date: 5th April 2000 **Decision: Continuation of consent** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	88	6	435160 407198
95	**Planning Hazardous Substance Consents** Name: British Gas Plc Location: East Midlands, Gas Holder, Old Mill Lane, BARNSLEY, South Yorkshire, S71 1LT Authority: Barnsley Metropolitan Borough Council, Planning Department Application Ref: Hsc/92/5 Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 11602 Application date: 16th November 1992 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	88	6	435159 407198

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Lower Westphalian (mainly Productive Coal Measures)	A13SW (SE)	0	4	435200 407308
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SE)	0	7	435200 407308
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (NE)	15	7	435224 407346
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (W)	20	7	435121 407297
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (S)	85	7	435194 407182
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	117	7	435120 407185
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (W)	134	7	435000 407308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (W)	163	7	435000 407237
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	190	7	435391 407430
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (SW)	231	7	435063 407085
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (SW)	235	7	435000 407126
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	237	7	434998 407125
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (SW)	237	7	435000 407124

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (S)	259	7	435200 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (S)	268	7	435189 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NE (NE)	291	7	435425 407541
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NE (NE)	291	7	435424 407542
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18SW (NW)	334	7	435000 407664
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (SW)	337	7	435000 407000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SE)	347	7	435495 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	360	7	435356 406912
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	372	7	435316 406891
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SW (SW)	383	7	434920 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (SE)	412	7	435632 407073
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (SE)	426	7	435595 406992

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (SE)	502	7	435694 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18SE (N)	549	7	435342 407873
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NW (NE)	573	7	435733 407615
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18SW (N)	606	7	435000 407951
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	638	7	435200 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NE (N)	641	7	435204 408000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 120 - 180 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	654	7	435000 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 120 - 180 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	667	7	434950 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (S)	701	7	435000 406604
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: 150 - 300 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17NE (NW)	706	7	434840 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19SW (NE)	711	7	435579 407945
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17SE (NW)	715	7	434694 407919

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17SE (NW)	715	7	434717 407937
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: 150 - 300 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17NE (NW)	724	7	434800 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: 150 - 300 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17NE (NW)	731	7	434827 408021
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	731	7	434827 408021
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (E)	733	7	436000 407308
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	739	7	435957 407000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	740	7	436000 407171
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19NW (NE)	747	7	435554 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 120 - 180 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	754	7	434906 408078
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (E)	769	7	436026 407145
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	780	7	436000 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SE (NE)	789	7	435913 407732

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	795	7	435000 408144
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NE (SE)	795	7	436000 406957
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9SW (SE)	798	7	435586 406530
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	798	7	436000 407587
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NE (SE)	866	7	436000 406803
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17NE (NW)	873	7	434546 408000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19NW (NE)	890	7	435811 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19NW (NE)	894	7	435816 408000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14SE (E)	902	7	436129 407000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SW (S)	903	7	435000 406393
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A18NW (N)	916	7	435184 408277
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <150 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (W)	983	7	434183 407583

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	**BGS Recorded Mineral Sites** Site Name: Mottram Wood Colliery Location: , Old Mill, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37842 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13SE (SE)	197	4	435443 407176
97	**BGS Recorded Mineral Sites** Site Name: Old Shep Cote Gate Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37837 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14SW (E)	324	4	435589 407300
98	**BGS Recorded Mineral Sites** Site Name: Burton Bank Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37835 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	347	4	435539 407495
99	**BGS Recorded Mineral Sites** Site Name: Mount Osborne Colliery Location: , Old Mill, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37838 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8NW (S)	357	4	435157 406916
100	**BGS Recorded Mineral Sites** Site Name: Burton Bank Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106083 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	408	4	435370 407711
101	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106082 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	442	4	435296 407776

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
102	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106081 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	482	4	435288 407821
102	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106080 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	487	4	435242 407838
103	**BGS Recorded Mineral Sites** Site Name: Eaming Wood Location: , Old Mill, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37860 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A8NE (S)	492	4	435298 406768
104	**BGS Recorded Mineral Sites** Site Name: Burton Bank Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 16756 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18SE (N)	513	4	435340 407835
105	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106076 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (N)	513	4	435006 407856
106	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106078 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (N)	567	4	435168 407928

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
107	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106077 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (N)	578	4	435089 407937
108	**BGS Recorded Mineral Sites** Site Name: Gawber New Colliery Location: , Gawber, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37843 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	648	4	434611 407733
109	**BGS Recorded Mineral Sites** Site Name: Honey Well Colliery Location: , Gawber, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37844 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A12SW (W)	669	4	434467 407282
110	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106075 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	688	4	435016 408038
111	**BGS Recorded Mineral Sites** Site Name: Wallsend Main Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106079 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	743	4	435121 408104
111	**BGS Recorded Mineral Sites** Site Name: Smithies Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37839 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Woolley Edge Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NW (N)	769	4	435157 408130

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**BGS Recorded Mineral Sites** Site Name: Monk Bretton Location: , Monk Bretton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37841 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Oaks Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A19SE (NE)	828	4	435923 407784
113	**BGS Recorded Mineral Sites** Site Name: Shep Cote Gate Location: , Monk Bretton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37836 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Oaks Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A14NE (E)	889	4	436153 407334
114	**BGS Recorded Mineral Sites** Site Name: Shep Gate Location: , Monk Bretton, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37840 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Oaks Rock Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A15SW (E)	982	4	436246 407201
115	**BGS Recorded Mineral Sites** Site Name: Wharncliffe Carlton Colliery Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 37846 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Coal Measures Group Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A17NE (N)	982	4	434807 408285
116	**BGS Recorded Mineral Sites** Site Name: Athersley Wood Pit Location: , Smithies, Barnsley, South Yorkshire Source: British Geological Survey, National Geoscience Information Service Reference: 106071 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Unknown Operator Periodic Type: Carboniferous Geology: Pennine Middle Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A23SW (N)	997	4	435128 408359
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SW (SE)	0	8	435200 407308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13SW (SE)	0	-	435200 407308
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	117	4	435120 407185
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	163	4	435000 407237
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	190	4	435391 407430
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	235	4	435000 407126
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	1	4	435194 407360
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	93	4	435168 407189
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	134	4	435000 407308
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	4	435000 407249
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	1	4	435194 407360
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	74	4	435328 407333
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	87	4	435178 407191
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	93	4	435193 407176
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	134	4	435000 407308
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	4	435000 407249
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	170	4	435271 407086
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	134	4	435000 407308
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	29	4	435244 407223
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	78	4	435199 407194
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	93	4	435300 407386
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	118	4	435102 407195
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	134	4	435000 407308
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	142	4	435027 407232
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	148	4	435000 407267
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	156	4	435411 407334
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	180	4	435039 407165
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	194	4	435142 407070
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	198	4	435000 407179
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	216	4	435019 407135
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	245	4	435430 407079
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	10	4	435194 407360
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NE (E)	74	4	435328 407333
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	87	4	435178 407191
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	107	4	435249 407146
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	134	4	435000 407308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	170	4	435271 407086
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	173	4	435058 407157
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	175	4	435170 407102
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	198	4	435000 407179
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	1	4	435171 407359
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	10	4	435194 407360
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (S)	93	4	435168 407189
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (S)	107	4	435249 407146
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	134	4	435000 407308
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	148	4	435352 407415
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SW (W)	156	4	435000 407249
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	168	4	435081 407149
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	198	4	435000 407179
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308
	Radon Potential - Radon Affected Areas Affected Area: The property is in an intermediate probability radon area, as between 1 and 3% of homes are above the action level Source: British Geological Survey, National Geoscience Information Service	A13SW (SE)	0	4	435200 407308

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
117	**Contemporary Trade Directory Entries** Name: S S Car Sales Location: 1 Peel Pl, Barnsley, South Yorkshire, S71 1LU Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (NW)	49	-	435125 407408
118	**Contemporary Trade Directory Entries** Name: First Call Building Supplies Location: 14, Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Builders' Merchants **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (NW)	100	-	435132 407461
119	**Contemporary Trade Directory Entries** Name: First Stop Location: 1 Peel Pl, Barnsley, South Yorkshire, S71 1LU Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (NW)	113	-	435131 407474
119	**Contemporary Trade Directory Entries** Name: A D G Trailers Location: Peel Pl, Barnsley, South Yorkshire, S71 1LU Classification: Horse Boxes & Transporting **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (NW)	115	-	435130 407476
119	**Contemporary Trade Directory Entries** Name: The M O T Centre Location: Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned in the proximity of the address	A13NW (NW)	119	-	435121 407478
119	**Contemporary Trade Directory Entries** Name: D & G Motorcycle Engineers Location: Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Motor Cycle Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A13NW (NW)	119	-	435121 407478
119	**Contemporary Trade Directory Entries** Name: Tolgate Motors Location: Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A13NW (NW)	119	-	435121 407478
119	**Contemporary Trade Directory Entries** Name: Wintrucks Location: Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A13NW (NW)	119	-	435121 407478
119	**Contemporary Trade Directory Entries** Name: Deborah Services Ltd Location: Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Industrial Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A13NW (NW)	119	-	435121 407478
119	**Contemporary Trade Directory Entries** Name: Form It Uk Ltd Location: 14, Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Concrete Reinforcements **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NW (N)	146	-	435135 407508
119	**Contemporary Trade Directory Entries** Name: 1st Call Building & Garden Supplies Location: 14 Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (N)	146	-	435125 407507
119	**Contemporary Trade Directory Entries** Name: First Call Location: 14 Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (N)	154	-	435120 407514

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	**Contemporary Trade Directory Entries** Name: Maple Aggregates Ltd Location: 1, Peel Place, Barnsley, South Yorkshire, S71 1LU Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13NW (NW)	166	-	435077 407515
120	**Contemporary Trade Directory Entries** Name: John Stones Location: 3, Wakefield Road, Barnsley, South Yorkshire, S71 1LY Classification: Painting & Decorating Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (N)	141	-	435189 407495
121	**Contemporary Trade Directory Entries** Name: Howdens Location: Twibell Street, Barnsley, South Yorkshire, S71 1DL Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	150	-	435062 407186
122	**Contemporary Trade Directory Entries** Name: Comet Group Plc Location: Twibell Street, Barnsley, South Yorkshire, S71 1DL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	184	-	435176 407090
122	**Contemporary Trade Directory Entries** Name: Comet Location: Twibell Street, Barnsley, South Yorkshire, S71 1DL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	184	-	435176 407090
123	**Contemporary Trade Directory Entries** Name: P R G Powerhouse Location: Unit D, Twibell Street, Barnsley, South Yorkshire, S71 1DL Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	186	-	435112 407112
123	**Contemporary Trade Directory Entries** Name: Dennis Bray Location: Unit 1 Twibell St, Barnsley, South Yorkshire, S71 1DG Classification: Breakdown and Recovery **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A13SW (S)	222	-	435129 407066
124	**Contemporary Trade Directory Entries** Name: Spray On Location: Centenary Wk,Wakefield Rd, Barnsley, South Yorkshire, S71 1LY Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13NW (N)	211	-	435153 407572
125	**Contemporary Trade Directory Entries** Name: Klick Photopoint Location: Old Mill Lane, Barnsley, South Yorkshire, S71 1LN Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	289	-	434860 407240
125	**Contemporary Trade Directory Entries** Name: Klick Location: Old Mill Lane, Barnsley, South Yorkshire, S71 1LN Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	289	-	434860 407240
126	**Contemporary Trade Directory Entries** Name: A A & A Honeywell Damp Proofing & Cavity Wall Tie Replacement Location: 42, Shelley Drive, Barnsley, South Yorkshire, S71 2LS Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	337	-	435602 407303
126	**Contemporary Trade Directory Entries** Name: Aa & A Damp Proofing Location: 42, Shelley Drive, Barnsley, South Yorkshire, S71 2LS Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	337	-	435602 407303

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
127	**Contemporary Trade Directory Entries** Name: Currys Location: Dryden Road, Barnsley, South Yorkshire, S71 1JE Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (S)	366	-	435207 406897
128	**Contemporary Trade Directory Entries** Name: Dixon Nissan Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	371	-	435078 407727
128	**Contemporary Trade Directory Entries** Name: Dixon Nissan Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	371	-	435078 407727
129	**Contemporary Trade Directory Entries** Name: Polar Ford Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NF Classification: Car Dealers **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	402	-	435090 407760
129	**Contemporary Trade Directory Entries** Name: 1st Call Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NF Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	404	-	435074 407760
129	**Contemporary Trade Directory Entries** Name: Spray On Ltd Location: Central Garage,Wakefield Rd, Barnsley, South Yorkshire, S71 1NF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18SW (N)	404	-	435074 407760
129	**Contemporary Trade Directory Entries** Name: Rays Mechanical Location: 82, Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	423	-	435070 407779
129	**Contemporary Trade Directory Entries** Name: C T L Repairs Location: 84, Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	432	-	435076 407789
129	**Contemporary Trade Directory Entries** Name: D M Mobile Services Location: 84, Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Garage Services **Status: Active** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	432	-	435076 407789
129	**Contemporary Trade Directory Entries** Name: Tcs Renault Specialists Location: 86, Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	440	-	435073 407796
129	**Contemporary Trade Directory Entries** Name: Tcs Continental Spares Location: 86, Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	440	-	435073 407796
130	**Contemporary Trade Directory Entries** Name: Aa Service Centre Location: Dryden Rd,Off Harborough Hill Rd, Barnsley, South Yorkshire, S71 1JE Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (S)	407	-	435152 406866

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	**Contemporary Trade Directory Entries** Name: Magnet Trade Location: Old Mill Lane, Barnsley, South Yorkshire, S71 1LH Classification: Joinery Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	417	-	434811 407063
131	**Contemporary Trade Directory Entries** Name: Magnet Location: Old Mill Lane, Barnsley, South Yorkshire, S71 1LH Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12SE (SW)	457	-	434794 407021
132	**Contemporary Trade Directory Entries** Name: Roger Wood Ltd Location: Harborough Hill Road, Barnsley, South Yorkshire, S71 1BQ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	432	-	435022 406883
132	**Contemporary Trade Directory Entries** Name: Roger Wood Cars Ltd Location: Harborough Hill Road, Barnsley, South Yorkshire, S71 1BQ Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	432	-	435022 406883
132	**Contemporary Trade Directory Entries** Name: Fires & Fireplaces Location: 111 Harborough Hill Rd, Barnsley, South Yorkshire, S71 1BQ Classification: Fireplaces & Mantelpieces **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	451	-	434984 406879
133	**Contemporary Trade Directory Entries** Name: Walter Fisher Ltd Location: Meadow St, Barnsley, South Yorkshire, S71 1DE Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	436	-	434913 406938
134	**Contemporary Trade Directory Entries** Name: Animal Magic Location: 46, Tennyson Road, Barnsley, South Yorkshire, S71 2LP Classification: Pet Foods & Animal Feeds **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (E)	471	-	435689 407482
135	**Contemporary Trade Directory Entries** Name: Autoshine Location: Central Garage, Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	480	-	435037 407830
136	**Contemporary Trade Directory Entries** Name: Phil Makinson Location: 137, Wakefield Road, Barnsley, South Yorkshire, S71 1ND Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	498	-	435108 407859
136	**Contemporary Trade Directory Entries** Name: Carshop Location: 137, Wakefield Road, Barnsley, South Yorkshire, S71 1ND Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	498	-	435108 407858
136	**Contemporary Trade Directory Entries** Name: Phil Makinson Ltd Location: 137, Wakefield Road, Barnsley, South Yorkshire, S71 1ND Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A18SW (N)	498	-	435108 407859
137	**Contemporary Trade Directory Entries** Name: Denton Street Garage Location: Denton St, Barnsley, South Yorkshire, S71 1DA Classification: Garage Services **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	518	-	434886 406858

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
138	**Contemporary Trade Directory Entries** Name: Scorpion Printing Location: Eldon Street North, Barnsley, South Yorkshire, S71 1LQ Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A7NE (SW)	535	-	434774 406928
139	**Contemporary Trade Directory Entries** Name: Body Guard Autos Location: 143, Wakefield Road, BARNSLEY, South Yorkshire, S71 1ND Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	558	-	435105 407919
140	**Contemporary Trade Directory Entries** Name: M D Car Sales Ltd Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NU Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	576	-	435061 407932
140	**Contemporary Trade Directory Entries** Name: Total Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NG Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SW (N)	625	-	435054 407980
141	**Contemporary Trade Directory Entries** Name: Firex Location: 46, Eldon Street North, Barnsley, South Yorkshire, S71 1LG Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	609	-	434741 406856
141	**Contemporary Trade Directory Entries** Name: D T Metalcraft Location: 32 Rear Of Eldon St North, Barnsley, South Yorkshire, S71 1LF Classification: Wrought Ironwork **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	637	-	434730 406828
142	**Contemporary Trade Directory Entries** Name: Light Commercials Location: 15, Wentworth Street, Barnsley, South Yorkshire, S71 1JW Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (W)	613	-	434530 407439
143	**Contemporary Trade Directory Entries** Name: Autofix Garage Services Location: 5, James Street, Barnsley, South Yorkshire, S71 1BL Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	643	-	434770 406786
143	**Contemporary Trade Directory Entries** Name: Gasco Services Location: 16, Mottram Street, Barnsley, South Yorkshire, S71 1BH Classification: Catering Equipment - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	669	-	434785 406743
144	**Contemporary Trade Directory Entries** Name: Dixon Renault Location: Wakefield Road, Barnsley, South Yorkshire, S71 1NF Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	661	-	434990 408004
145	**Contemporary Trade Directory Entries** Name: Atkinson Fork Truck Solutions Ltd Location: 19, Fleet Hill Crescent, Barnsley, South Yorkshire, S71 1XJ Classification: Fork Lift Trucks **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	681	-	435303 408023
146	**Contemporary Trade Directory Entries** Name: My Car Location: Centenery Way, Barnsley, South Yorkshire, S71 1LZ Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A18NW (N)	681	-	435045 408036

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
147	**Contemporary Trade Directory Entries** Name: Peary Garden Services Location: Hillside, Wakefield Road, Barnsley, South Yorkshire, S71 1NG Classification: Lawnmowers & Garden Machinery - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	714	-	435120 408076
147	**Contemporary Trade Directory Entries** Name: S P S Motorcycle Service Centre Location: Hillside, Wakefield Road, Barnsley, South Yorkshire, S71 1NG Classification: Motor Cycle Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	714	-	435120 408076
147	**Contemporary Trade Directory Entries** Name: Taylor Engineering & Site Services Ltd Location: Unit 3 Hillside,Wakefield Rd, Barnsley, South Yorkshire, S71 1NG Classification: Wrought Ironwork **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	715	-	435120 408076
148	**Contemporary Trade Directory Entries** Name: Leather For Life Location: 21, Wordsworth Road, Barnsley, South Yorkshire, S71 2DF Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	745	-	435882 407697
149	**Contemporary Trade Directory Entries** Name: Jennings Uk Ltd Location: County Way, Barnsley, South Yorkshire, S70 2JW Classification: Photo & Digital Imaging Bureaus **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SW)	750	-	434620 406777
150	**Contemporary Trade Directory Entries** Name: C G Tolson Ltd Location: 4, Westgate, Monk Bretton, Barnsley, South Yorkshire, S71 2DJ Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	778	-	435746 407908
151	**Contemporary Trade Directory Entries** Name: Barnsley Bus & Coach Location: Wakefield Rd, Barnsley, South Yorkshire, S71 1NN Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	789	-	435028 408142
152	**Contemporary Trade Directory Entries** Name: Kj'S Bike Breakers Barnsley Location: 1 Carey Av, Barnsley, South Yorkshire, S71 1AP Classification: Motor Cycle Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8SW (S)	800	-	435043 406488
153	**Contemporary Trade Directory Entries** Name: Np Engineering Services Ltd Location: 31, Thoresby Avenue, Barnsley, South Yorkshire, S71 2LH Classification: Engineering Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	809	-	436057 407446
154	**Contemporary Trade Directory Entries** Name: Queens Rd Mot Centre Ltd Location: 25 Queens Rd, Barnsley, South Yorkshire, S71 1AN Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A8SW (S)	888	-	434979 406415
154	**Contemporary Trade Directory Entries** Name: Heppy'S Location: Dental Surgery, 27, Queens Road, Barnsley, South Yorkshire, S71 1AN Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A8SW (S)	904	-	434938 406412
155	**Contemporary Trade Directory Entries** Name: S Y P T E Barnsley Interchange Location: Exchange Station, 8 Midland Street, Barnsley, South Yorkshire, S70 1SD Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A7SE (SW)	889	-	434701 406536

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
156	**Contemporary Trade Directory Entries** Name: Car Smart Location: 66, Livingstone Crescent, Barnsley, South Yorkshire, S71 2DN Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	921	-	435736 408095
157	**Contemporary Trade Directory Entries** Name: Hills Supplies Location: 18, Carlton Road, Barnsley, South Yorkshire, S71 1UA Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	922	-	435119 408284
158	**Contemporary Trade Directory Entries** Name: D Thackray Location: 28, Westgate, Monk Bretton, Barnsley, South Yorkshire, S71 2DJ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A19SE (NE)	924	-	435918 407942
159	**Contemporary Trade Directory Entries** Name: Prontaprint Location: 51, Church Street, Barnsley, South Yorkshire, S70 2AH Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	960	-	434395 406715
160	**Contemporary Trade Directory Entries** Name: G Hughes Location: Cliffe Lodge, Burton Road, Barnsley, South Yorkshire, S71 2HE Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15NW (E)	972	-	436237 407324
161	**Contemporary Trade Directory Entries** Name: Should Pay.Co.Uk Location: 183, Wakefield Road, Barnsley, South Yorkshire, S71 1NP Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A23SW (N)	975	-	435031 408330
162	**Contemporary Trade Directory Entries** Name: Hoyle Mill Precision Engineering Ltd Location: Beevor Industrial Estate, Beevor Street, Barnsley, South Yorkshire, S71 1HN Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	987	-	435870 406480
162	**Contemporary Trade Directory Entries** Name: Print A Bag Location: Beevor Industrial Estate, Beevor Street, Barnsley, South Yorkshire, S71 1HN Classification: Packaging Materials Manufacturers & Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	987	-	435870 406480
162	**Contemporary Trade Directory Entries** Name: Automatic Transmission Location: Beevor Industrial Estate, Beevor Street, Barnsley, South Yorkshire, S71 1HN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9SW (SE)	987	-	435870 406480
163	**Contemporary Trade Directory Entries** Name: Online Ironing Location: 39, Church Street, Barnsley, South Yorkshire, S70 2AH Classification: Ironing & Home Laundry Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	988	-	434403 406660
164	**Contemporary Trade Directory Entries** Name: Stagecoach Location: 4, Eldon Arcade, Barnsley, South Yorkshire, S70 2JP Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	999	-	434629 406451
164	**Contemporary Trade Directory Entries** Name: Stagecoach Yorkshire Location: 4, Eldon Arcade, Barnsley, South Yorkshire, S70 2JP Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	999	-	434629 406451

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
165	**Fuel Station Entries** Name: Asda Barnsley Location: Old Mill Lane, Barnsley, South Yorkshire, S71 1LN Brand: ASDA Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A13SW (SW)	229	-	434953 407187
166	**Fuel Station Entries** Name: Wakefield Road Service Station Location: Wakefield Road, Smithies,, BARNSLEY, South Yorkshire, S71 3LR Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Located by supplier to within 100m	A18NW (N)	694	-	435127 408055
167	**Fuel Station Entries** Name: Jet Intake 2 Location: Rotherham Road, Barnsley, South Yorkshire, S71 2DD Brand: Jet Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A14NE (E)	717	-	435928 407551

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
168	**Areas of Adopted Green Belt** Authority: Barnsley Metropolitan Borough Council, Planning Department Plan Name: Barnsley Unitary Development Plan **Status: Adopted** Plan Date: 31st December 2000	A13SE (SE)	0	6	435205 407306
169	**Local Nature Reserves** Name: Dearne Valley Park Multiple Area: N Area (m2): 493368.35 Source: Natural England Designation Date: 28th March 2012	A13NE (E)	17	9	435263 407312
170	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A13SW (SE)	0	10	435200 407308

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Wakefield City Metropolitan District Council - Environmental Health	April 2014	Annual Rolling Update
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	July 2013	Annual Rolling Update
Discharge Consents		
Environment Agency - North East Region	November 2014	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North East Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - North East Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - North East Region	November 2014	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	April 2014	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	April 2014	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	April 2014	Annual Rolling Update
Wakefield City Metropolitan District Council - Environmental Health	June 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - North East Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - North East Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - North East Region	March 2013	As notified
Registered Radioactive Substances		
Environment Agency - North East Region	November 2014	Quarterly
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - North East Region - Ridings Area	November 2014	Quarterly
Environment Agency - North East Region - Yorkshire Area	November 2014	Quarterly
Water Abstractions		
Environment Agency - North East Region	October 2014	Quarterly
Water Industry Act Referrals		
Environment Agency - North East Region	November 2014	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	January 2011	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	October 2012	Annually

Agency & Hydrological	Version	Update Cycle
Source Protection Zones		
Environment Agency - Head Office	December 2014	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	October 2014	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	October 2014	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	October 2014	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	October 2014	Quarterly
Flood Defences		
Environment Agency - Head Office	October 2014	Quarterly
Detailed River Network Lines		
Environment Agency - Head Office	March 2012	Annually
Detailed River Network Offline Drainage		
Environment Agency - Head Office	March 2012	Annually
Waste	**Version**	**Update Cycle**
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - North East Region - Ridings Area	August 2014	Quarterly
Environment Agency - North East Region - Yorkshire Area	August 2014	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North East Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North East Region - Ridings Area	August 2014	Quarterly
Environment Agency - North East Region - Yorkshire Area	August 2014	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North East Region - Ridings Area	November 2014	Quarterly
Environment Agency - North East Region - Yorkshire Area	November 2014	Quarterly
Local Authority Landfill Coverage		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	May 2000	Not Applicable
Wakefield City Metropolitan District Council - Environmental Health	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards	May 2000	Not Applicable
Wakefield City Metropolitan District Council - Environmental Health	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - North East Region - Ridings Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North East Region - Ridings Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - North East Region - Ridings Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	January 2015	Bi-Annually
Explosive Sites Health and Safety Executive	October 2014	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Barnsley Metropolitan Borough Council - Planning Department Wakefield City Metropolitan District Council	October 2013 October 2014	Annual Rolling Update Annual Rolling Update
Planning Hazardous Substance Consents Barnsley Metropolitan Borough Council - Planning Department Wakefield City Metropolitan District Council	October 2013 October 2014	Annual Rolling Update Annual Rolling Update
Geological	**Version**	**Update Cycle**
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	August 1996	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	January 2010	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2014	Bi-Annually
Brine Compensation Area Cheshire Brine Subsidence Compensation Board	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Mining Report Service	December 2013	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	July 2014	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2014	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	November 2014	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2014	Quarterly

Sensitive Land Use	Version	Update Cycle
Areas of Adopted Green Belt		
Barnsley Metropolitan Borough Council - Planning Department	November 2014	As notified
Wakefield City Metropolitan District Council	November 2014	As notified
Areas of Unadopted Green Belt		
Barnsley Metropolitan Borough Council - Planning Department	November 2014	As notified
Wakefield City Metropolitan District Council	November 2014	As notified
Areas of Outstanding Natural Beauty		
Natural England	August 2014	Bi-Annually
Environmentally Sensitive Areas		
Natural England	August 2014	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	October 2014	Bi-Annually
Marine Nature Reserves		
Natural England	July 2013	Bi-Annually
National Nature Reserves		
Natural England	September 2014	Bi-Annually
National Parks		
Natural England	August 2014	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	February 2012	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	July 2014	Annually
Ramsar Sites		
Natural England	March 2014	Bi-Annually
Sites of Special Scientific Interest		
Natural England	September 2014	Bi-Annually
Special Areas of Conservation		
Natural England	March 2014	Bi-Annually
Special Protection Areas		
Natural England	September 2014	Bi-Annually

Data Suppliers

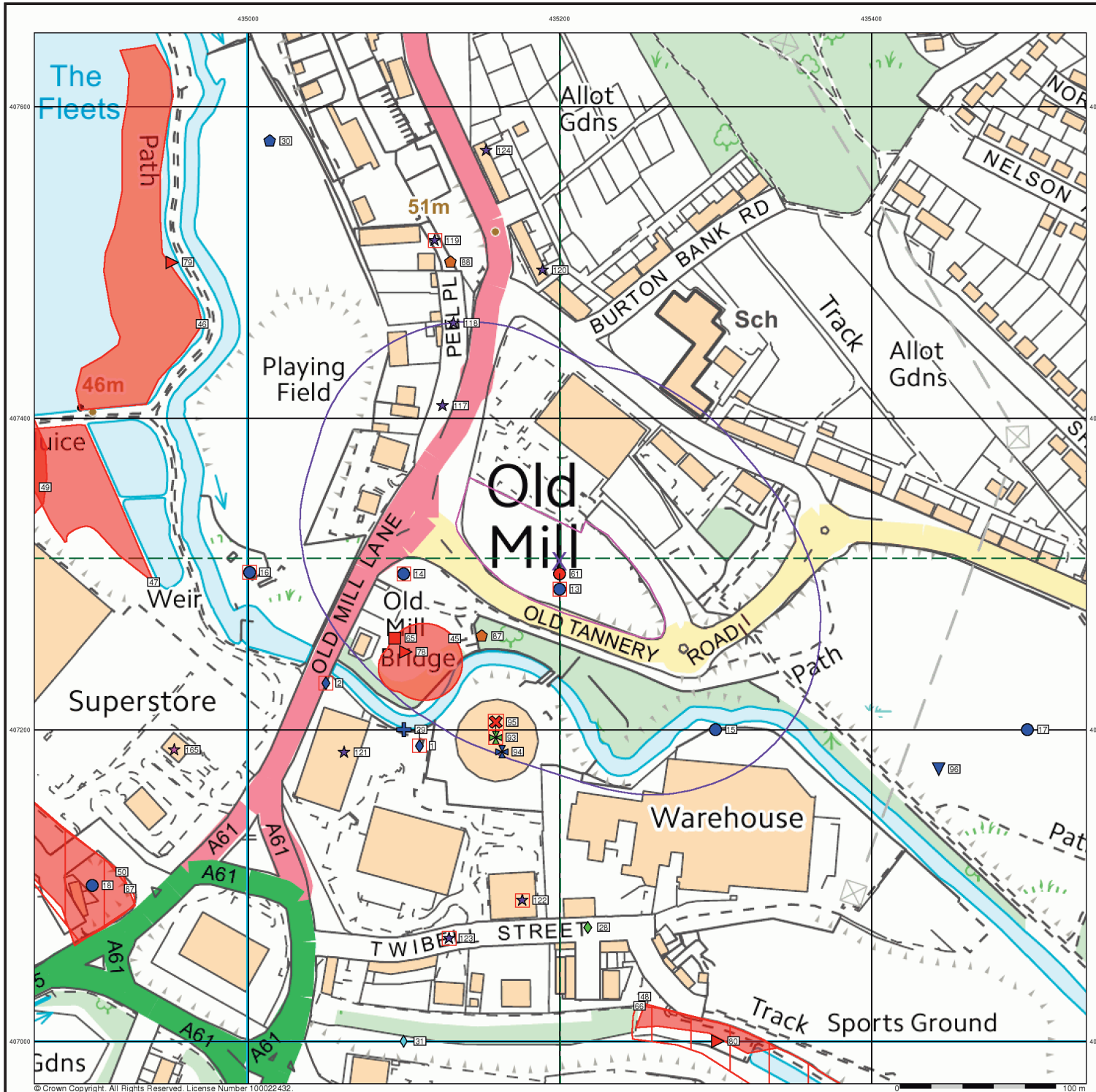
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 08708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Barnsley Metropolitan Borough Council - Environmental Health and Trading Standards** Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN	Telephone: 01226 770770 Fax: 01226 772599 Website: www.barnsley.gov.uk
4	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
5	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
6	**Barnsley Metropolitan Borough Council - Planning Department** Central Offices, Kendray Street, Barnsley, South Yorkshire, S70 2TN	Telephone: 01226 770770 Fax: 01226 772599 Website: www.barnsley.gov.uk
7	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmark.co.uk Website: www.landmark.co.uk
8	**The Coal Authority - Mining Report Service** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0845 7626848 Email: thecoalauthority@coal.gov.uk
9	**Natural England** Suite D, Unex House, Bourges Boulevard, Peterborough, Cambridgeshire, PE1 1NG	Telephone: 0845 600 3078 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
10	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	Telephone: 0113 2613333 Fax: 0113 230 0879
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

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



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General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID
Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Geological

- BGS Recorded Mineral Site

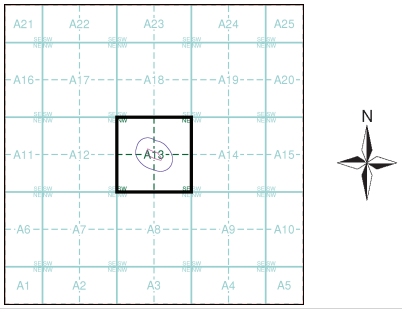
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Segment A13



Order Details

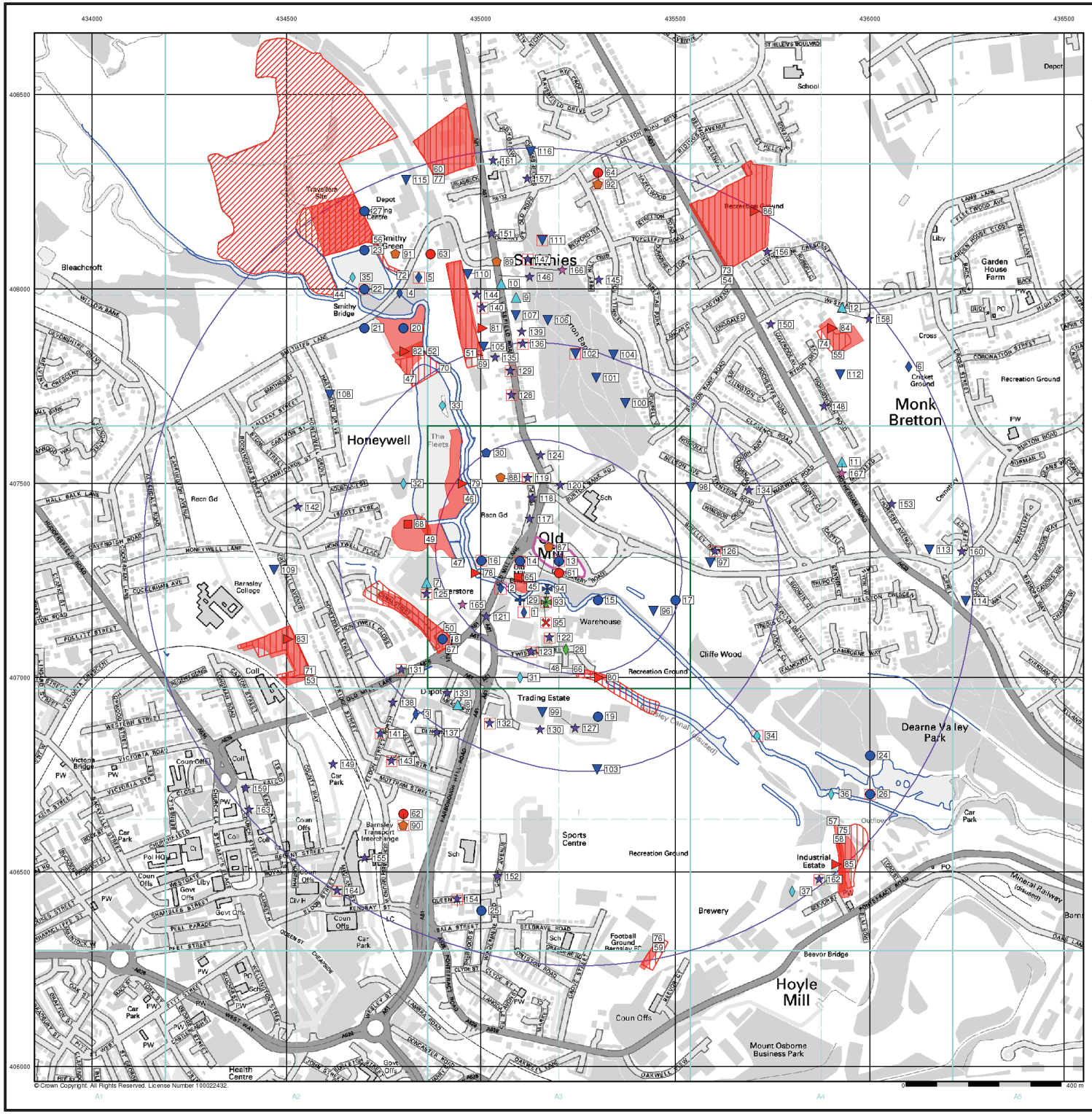
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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

Landmark Information Group

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



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
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- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
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- Pollution Incident to Controlled Waters
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- Water Abstraction
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Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Geological

- BGS Recorded Mineral Site

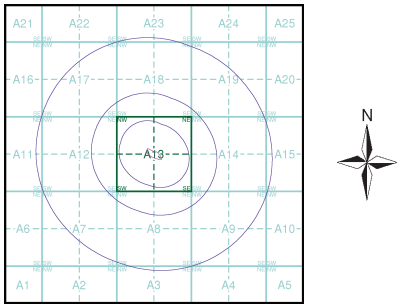
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

Site Sensitivity Map - Slice A



Order Details

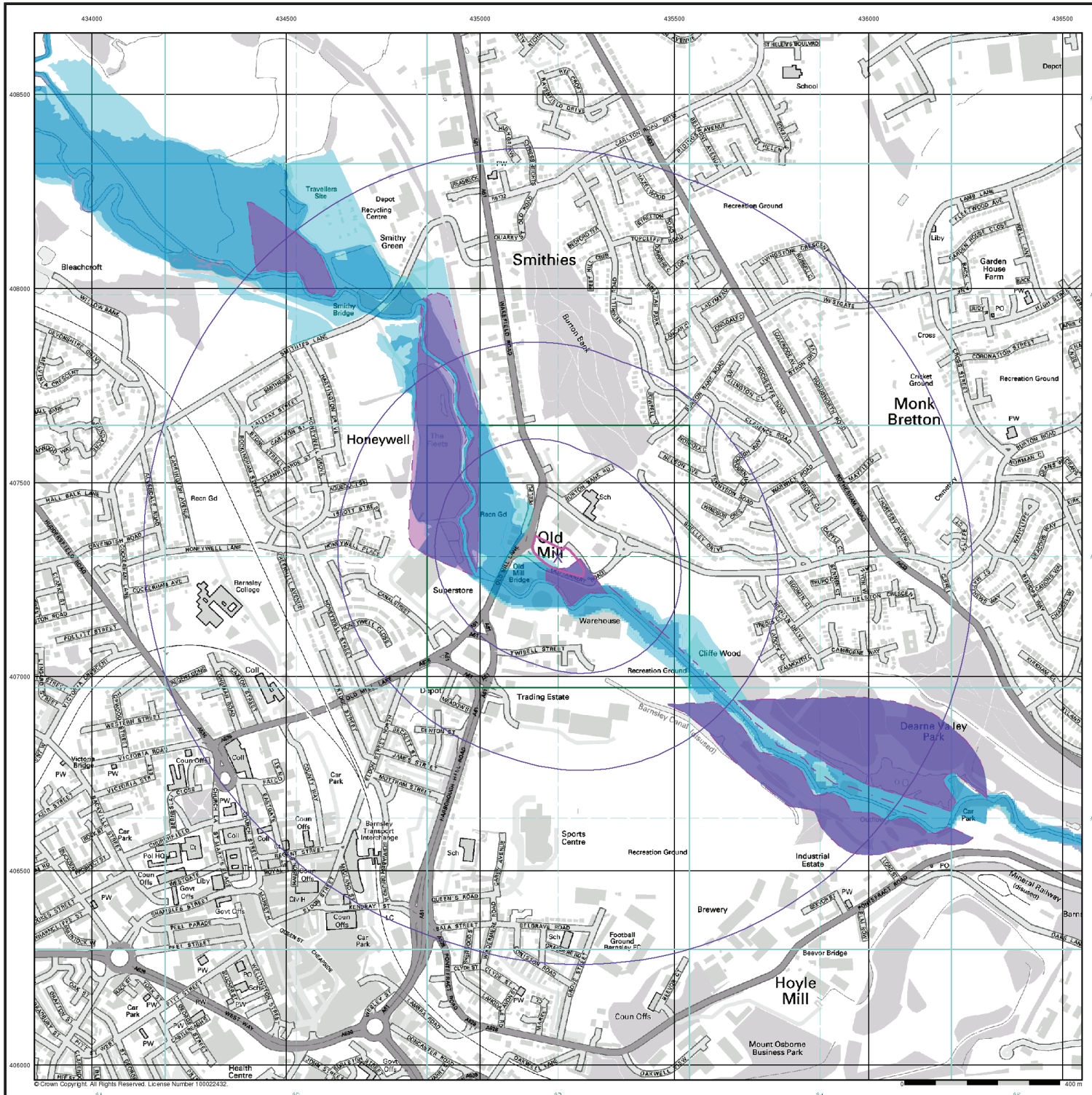
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Customer Ref:	15004
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Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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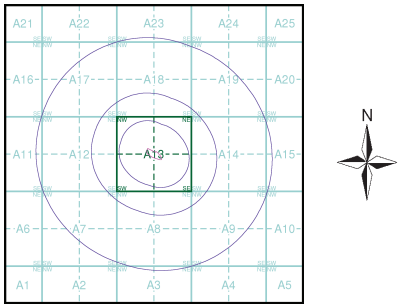
General

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

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

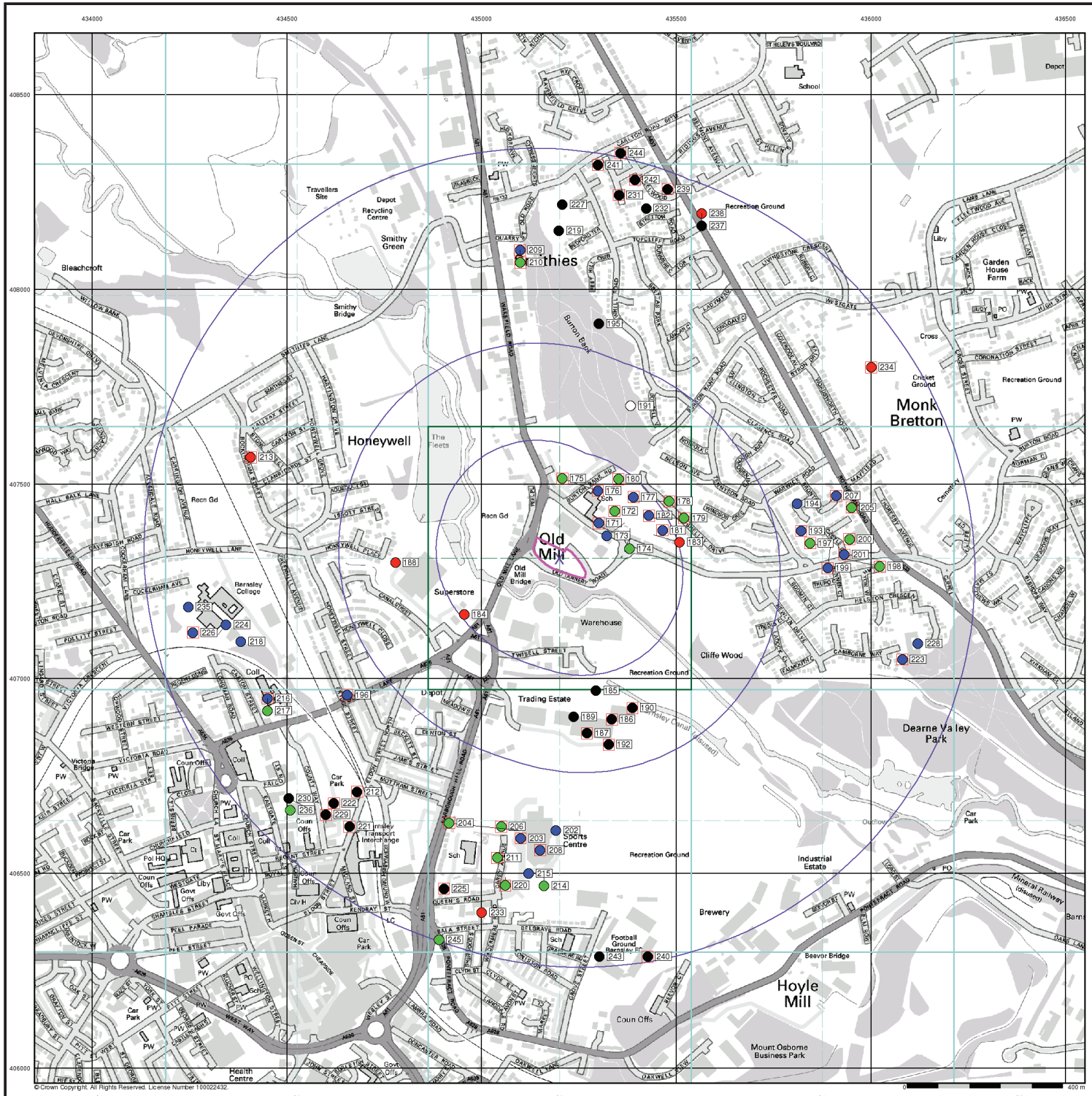
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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

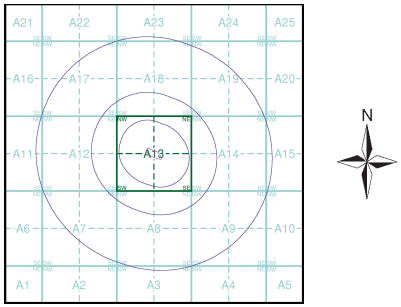
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

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

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

Borehole Map - Slice A



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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General

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

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

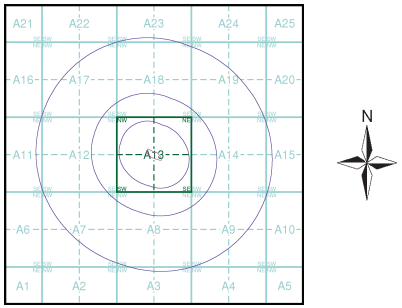
Standard Contour 105 100 95

Master Contour

Spot Height *167.3

- MLW Mean Low Water
- MHW Mean High Water

EA/NRW Detailed River Network Map - Slice A



Order Details

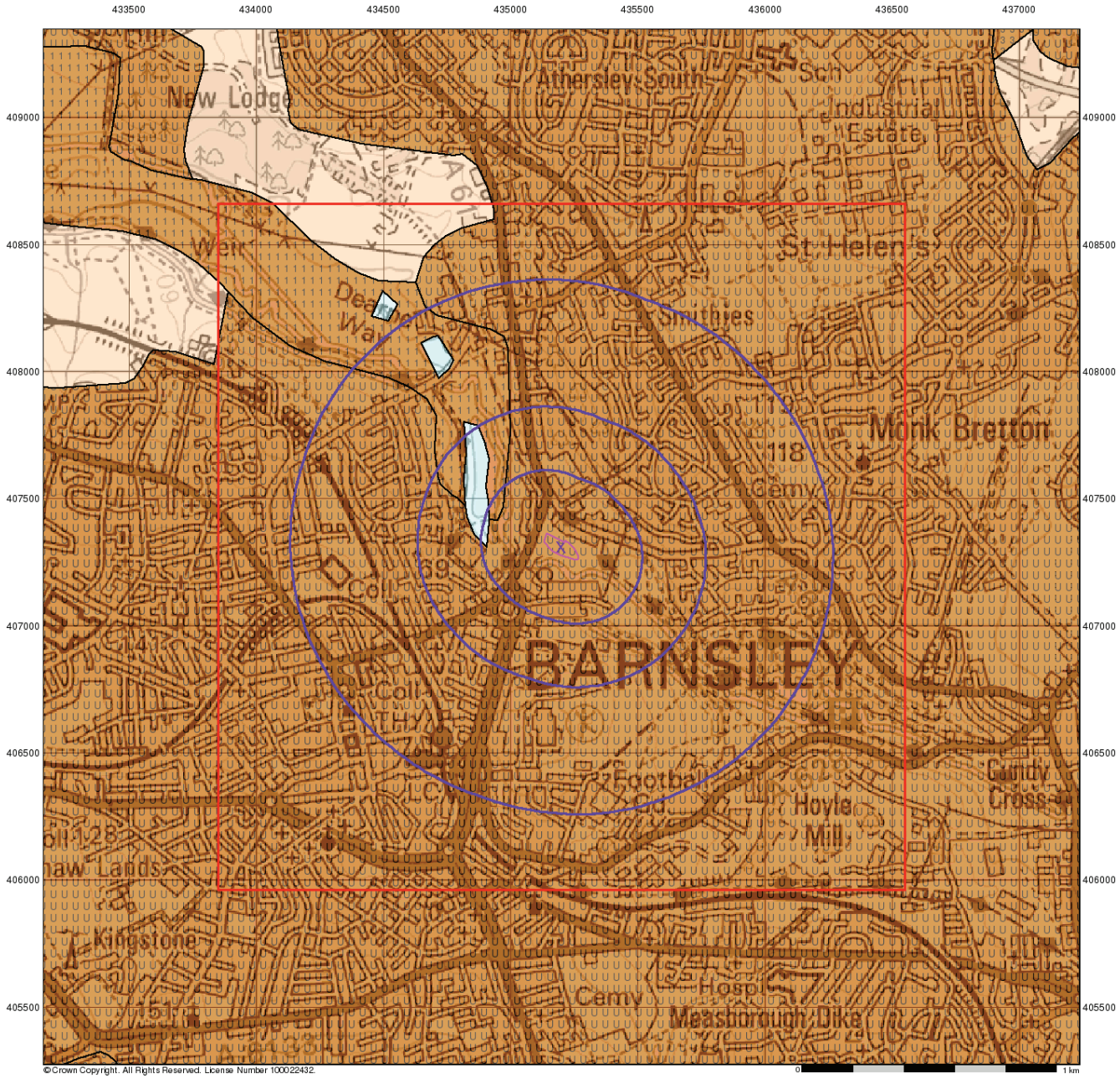
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Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

Landmark Information Group

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Web: www.envirocheck.co.uk



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Groundwater Vulnerability

General

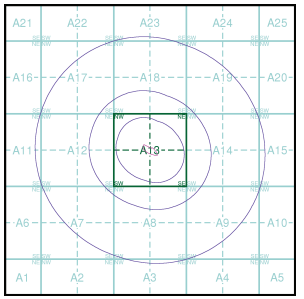
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice A



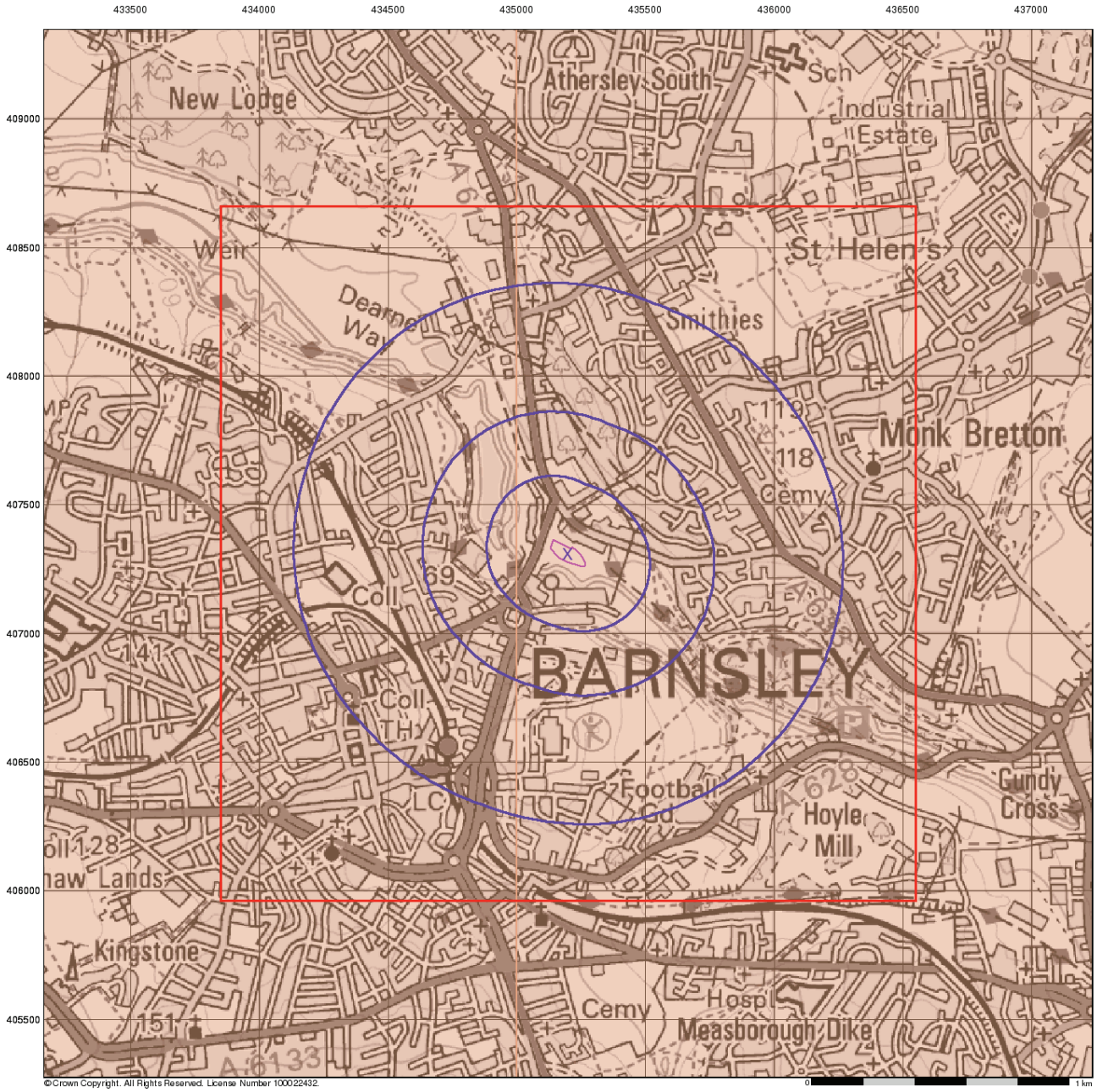
Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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



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Bedrock Aquifer Designation

General

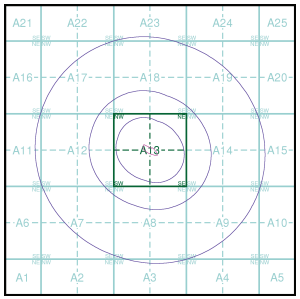
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A



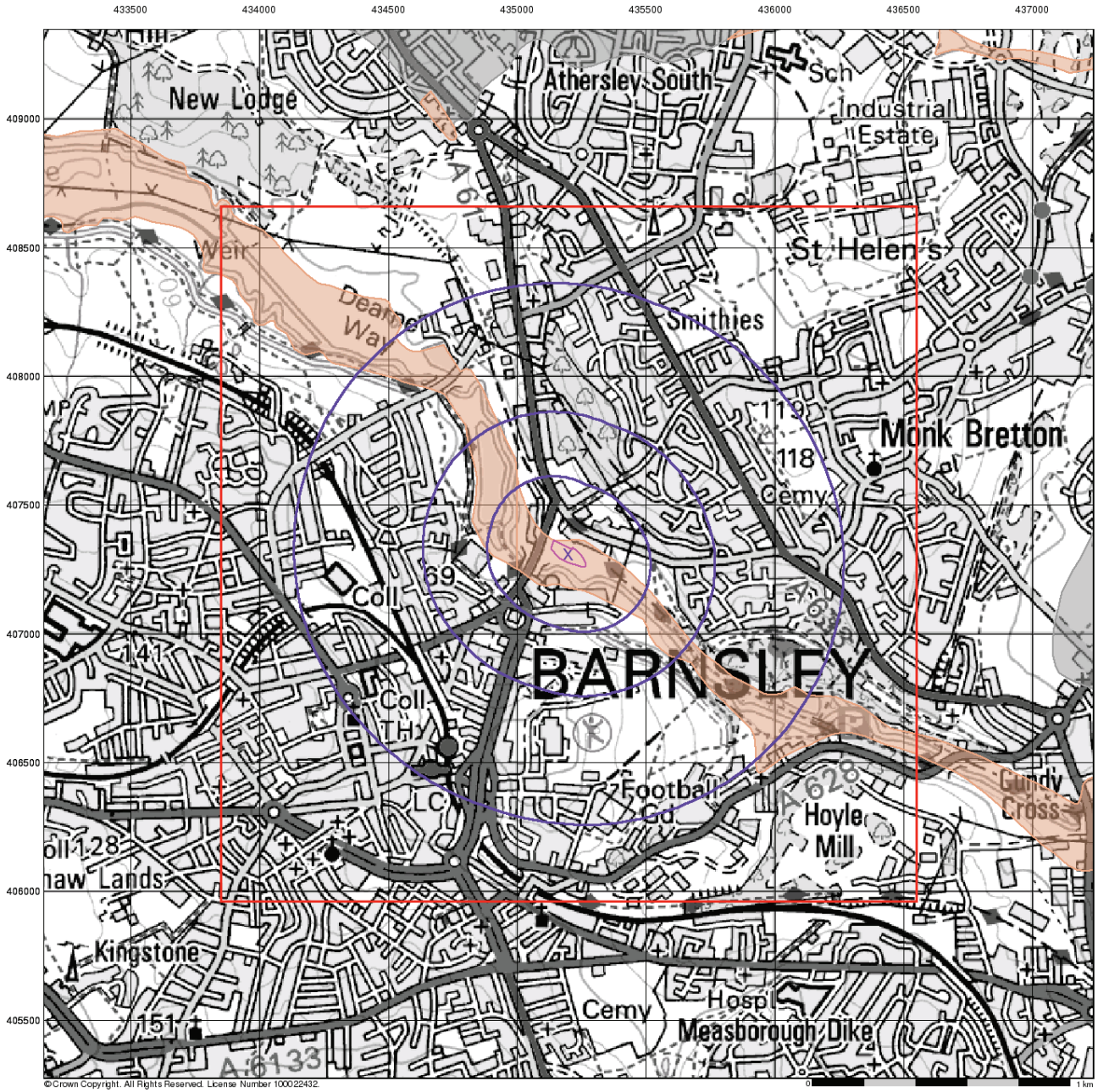
Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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



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Superficial Aquifer Designation

General

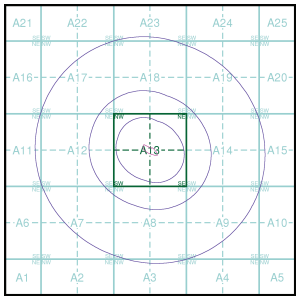
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown

Site Sensitivity Context Map - Slice A

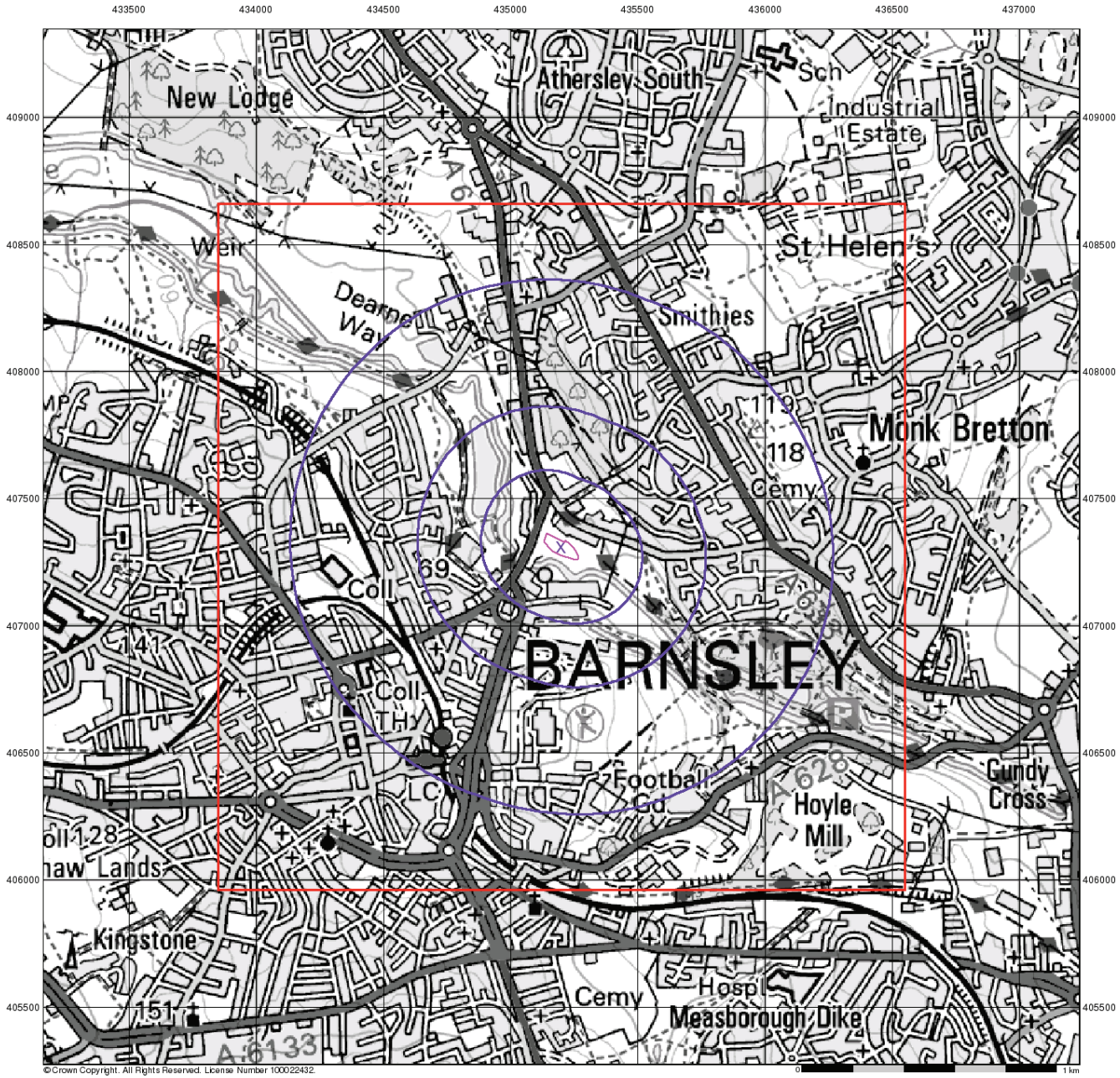


Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB



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Source Protection Zones

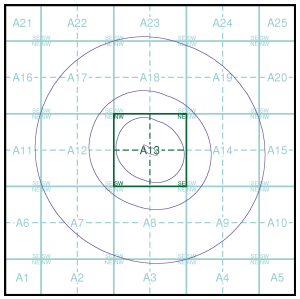
General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Agency and Hydrological

Source Protection Zone I
Source Protection Zone II
Source Protection Zone III
Zone of Special Interest
Source Protection Zone Borehole

Site Sensitivity Context Map - Slice A



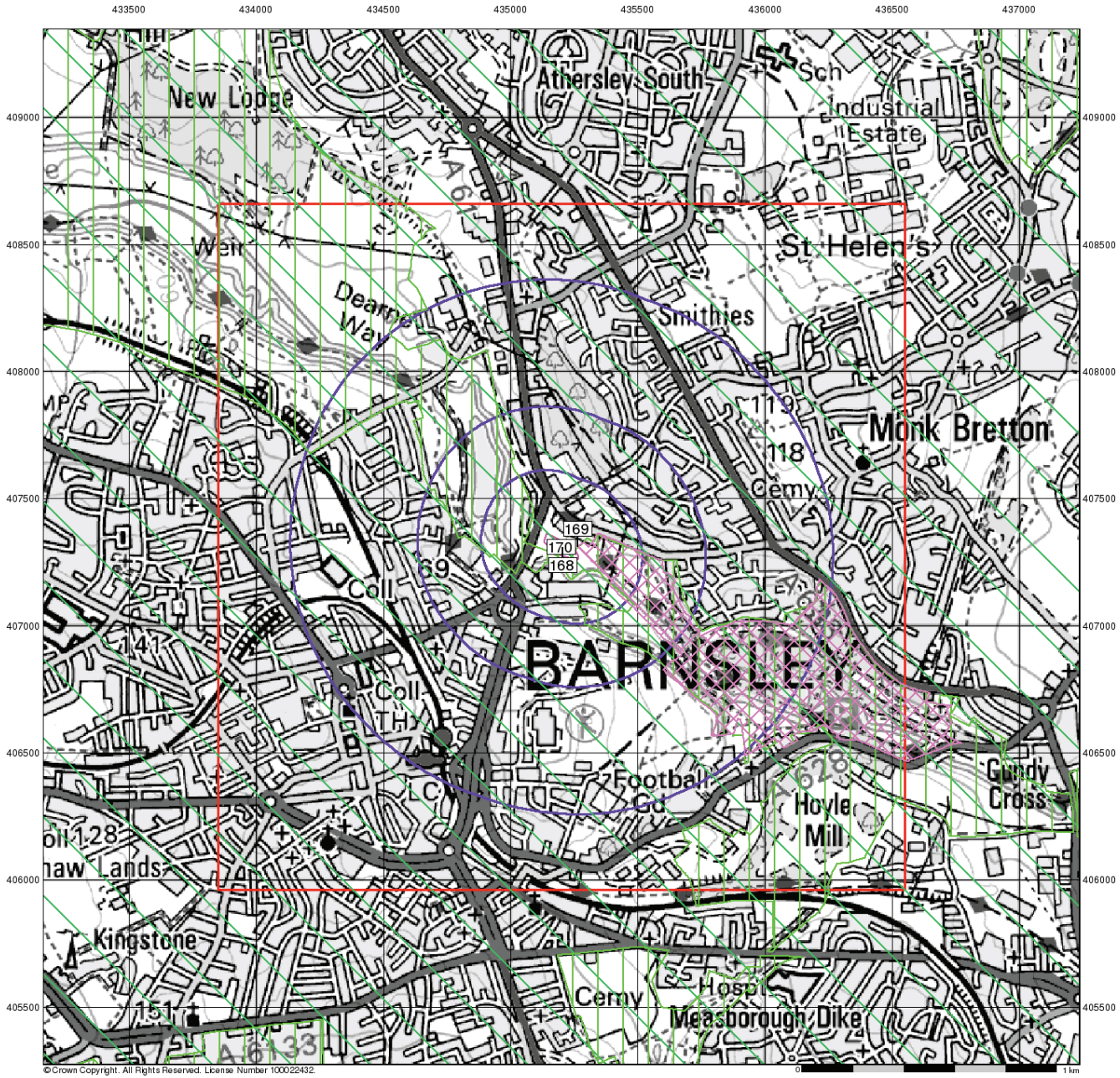
Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

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Sensitive Land Uses

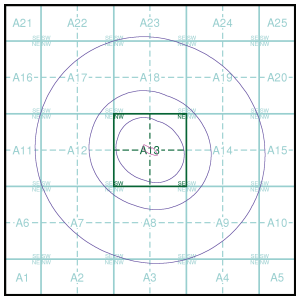
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	63599706_1_1
Customer Ref:	15004
National Grid Reference:	435200, 407310
Slice:	A
Site Area (Ha):	0.68
Search Buffer (m):	1000

Site Details

Land off, Old Mill Lane, Barnsley, S71 2GB

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

Appendix D

Coal Authority Report

The Coal Authority

Issued by:
The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG
Website: www.groundstability.com Phone: 0345 762 6848 DX 716176 MANSFIELD 5

LANDMARK INFORMATION GROUP LIMITED
SOWTON INDUSTRIAL ESTATE
ABBEY COURT
UNIT 5/7 EAGLE WAY
EXETER
DEVON
EX2 7HY

Our reference:	**51000747124001**
Your reference:	**63599706_2|**
Date of your enquiry:	**16 January 2015**
Date we received your enquiry:	**16 January 2015**
Date of issue:	**16 January 2015**

This report is for the property described in the address below and the attached plan.

Non-Residential Coal Authority Mining Report

LAND OFF OLD MILL LANE, BARNSLEY, SOUTH YORKSHIRE,

This report is based on and limited to the records held by, the Coal Authority, and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Coal mining	See comments below
Brine Compensation District	No

Information from the Coal Authority

Underground coal mining

Past

The property is in the likely zone of influence from workings in 4 seams of coal at 120m to 410m depth, and last worked in 1986.

Any ground movement from these coal workings should have stopped by now.

In addition the property is in an area where the Coal Authority believe there is coal at or close to the surface. This coal may have been worked at some time in the past. The potential presence of coal workings at or close to the surface should be considered prior to any site works or future development activity. Your attention is drawn to the Comments on Coal Authority Information section of the report.

Present

The property is not in the likely zone of influence of any present underground coal workings.

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Future

The property is not in an area for which the Coal Authority is determining whether to grant a licence to remove coal using underground methods.

The property is not in an area for which a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area that is likely to be affected at the surface from any planned future workings.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notice of the risk of the land being affected by subsidence has been given under section 46 of the Coal Mining Subsidence Act 1991.

Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

Records may be incomplete. Consequently, there may exist in the local area mine entries of which the Coal Authority has no knowledge.

Coal mining geology

The Authority is not aware of any evidence of damage arising due to geological faults or other lines of weakness that have been affected by coal mining.

Opencast coal mining

Past

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

Present

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

Future

The property is not within 800 metres of the boundary of an opencast site for which the Coal Authority is determining whether to grant a licence to remove coal by opencast methods.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

Withdrawal of support

The property is in an area for which notices of entitlement to withdraw support were published in 1947, 1952, 1981.

The property is not in an area for which a notice has been given under section 41 of the Coal Industry Act 1994, revoking the entitlement to withdraw support.

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Working facilities orders

The property is not in an area for which an Order has been made under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

Payments to owners of former copyhold land

The property is not in an area for which a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Comments on Coal Authority information

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

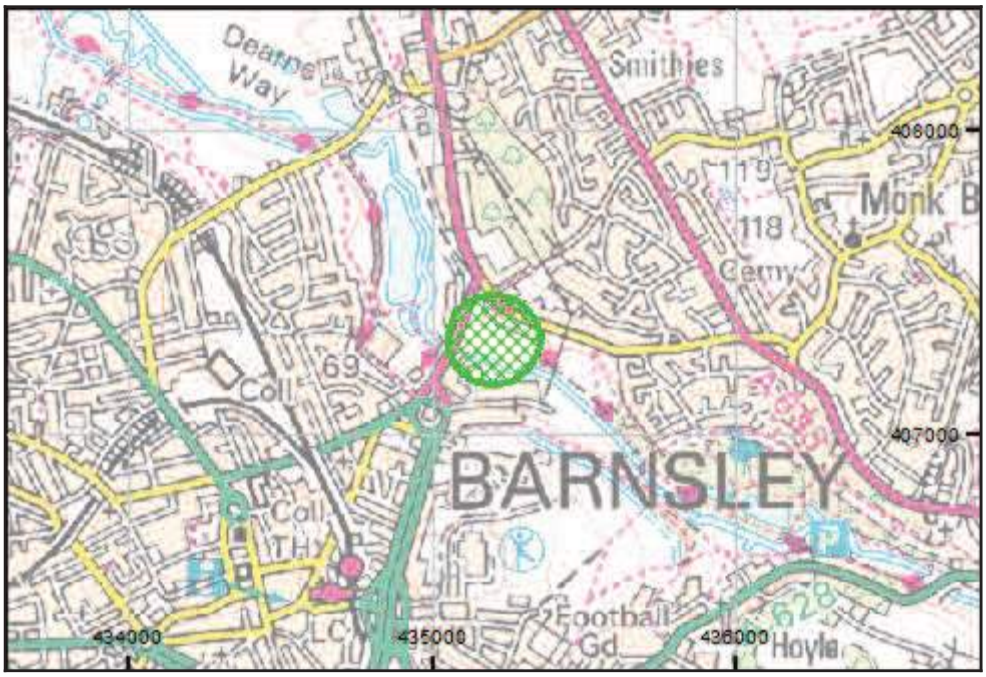
Additional Remarks

This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions 2006.

The Coal Authority owns the copyright in this report. The information we have used to write this report is protected by our database right. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

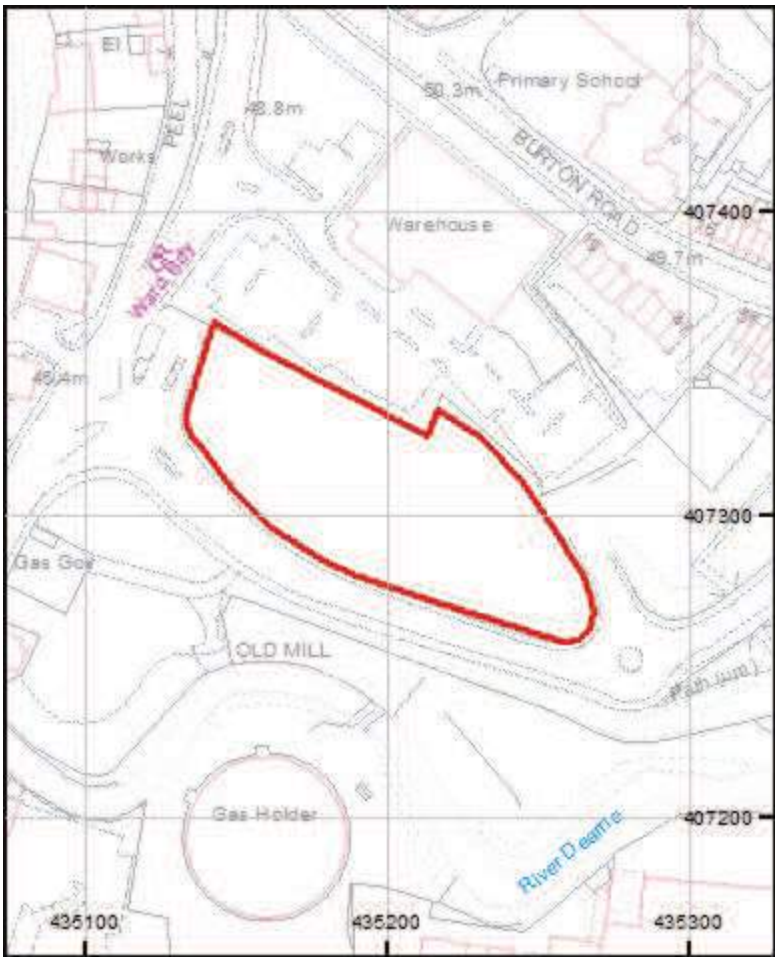
Location map

Approximate position of property



Enquiry boundary

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Key

Approximate position of enquiry boundary shown

Mapping sourced from Ordnance Survey

Appendix E

Previous Remediation Verification Report and drawings

White Young Green

Factual Post Remediation Verification Report

Former Gasworks, Old Mill Lane, Barnsley
(Mentor No. 005016)

for

National Grid Property Holdings Limited

August 2008

thinking beyond construction

White Young Green

Factual Post Remediation Verification Report

Former Gasworks, Old Mill Lane, Barnsley
(Mentor No. 005016)

for

National Grid Property Holdings Limited

August 2008

Reference: E7773-PRF-V1				
Issue		**Prepared by**	**Checked by**	**Verified by**
Draft	May 2008			
V1	August 2008			
		Andrew Priestley	**Patricia Gill**	**Marc Davies**
		Resident Engineer	**Associate**	**Regional Director**
N:\Projects\E7501-E8000\E007773\reports\Validation Report\E7773-PRF-V1 Final (Validation Report).doc				

White Young Green Environmental Limited, Arndale Court, Headingley, Leeds, LS6 2UJ.
Telephone: 0113 278 7111 Facsimile: 0131 275 0623 E-Mail: enquiries@wyg.com

NATIONAL GRID PROPERTY HOLDINGS LTD

POST REMEDIATION FACTUAL REPORT

FORMER GASWORKS, OLD MILL LANE, BARNSLEY

CONTENTS **Page No.**

1.0	**INTRODUCTION**	**1**
1.1	**General**	**1**
1.2	**The Objective**	**1**
1.3	**Proposed End Use**	**2**
1.4	**Site Description**	**2**
1.5	**Site Services**	**3**
1.6	**Site History**	**3**
1.7	**Geology**	**3**
1.8	**Hydrogeology**	**3**
1.9	**Hydrology**	**3**
1.10	**Ecology**	**4**
1.11	**Site Investigation Works**	**4**
	1.11.1 WYGE Ground Investigation Works, May 2007	5
	1.11.2 WYGE Ground Investigation Works, October 2006	5
	1.11.3 WYGE Ground Investigation Works, 2002	5
	1.11.4 WYGE Ground Investigation Factual Report, 1998	5
	1.11.5 WYGE Ground Investigation, 1996	6
	1.11.6 British Gas East Midlands Scientific Services, 1991	6
1.12	**Remediation Strategy**	**6**
1.13	**Tender Details**	**8**
1.14	**Report Format**	**8**
2.0	**REMEDIATION PROJECT**	**9**
2.1	**Overview**	**9**
2.2	**Remediation Target Concentrations**	**9**
2.3	**Works Undertaken**	**10**
	2.3.1 Enabling Works	10
2.4	**Remediation Areas**	**11**
	2.4.1 Summary	11
	2.4.2 Area A1 Gasholder No. 1	12
	2.4.3 Area A2 Retort House and Associated Buildings	15
	2.4.4 Areas A3/A5/A7/A8 Boundary Structures including Tar and Liquor Tanks.	17
	2.4.5 Area A4 Former Purifier House	20
	2.4.6 Areas A6 & B2 CWG Plant and Oil Tank	22
	2.4.7 Area B1 Infilled Gas Holder No.2	24
	2.4.8 Area B3 Benzene in BH103 and Free Product in BH201	25
2.5	**Water Treatment**	**26**
2.6	**Off-Site Disposal**	**26**
	2.6.1 Soils	26
2.7	**CLUSTER Project**	**27**
	2.7.1 Material Management Plan	27
	2.7.2 Deviations to the Material Management Plan	27
	2.7.3 Waste Management and Duty of Care	27
2.8	**Environmental Monitoring**	**28**
	2.8.1 Dust	28
	2.8.2 Air/Vapour	28
	2.8.3 Noise	28
2.9	**Infilling Works**	**28**
	2.9.1 General	28
	2.9.2 Imported Materials	29
	2.9.3 Classification of Materials	29

2.9.4 Clay Cut off Walls & Capping 29
2.9.5 Compliance Testing 29
2.10 Supervision and Management of Works 30
2.11 Quality Assessment 30
2.11.1 Laboratory Testing 30
2.11.2 Waste Management and Duty of Care 30
2.12 Ongoing Groundwater Monitoring 31
2.13 Final Site Conditions 31
2.13.1 Target Levels Achieved 31
2.13.2 Site Progress Report 31
2.14 Regulatory and Statutory Body Involvement 32
2.15 Development Issues 32

3.0 ESSENTIAL WAYLEAVES AND SERVICES 33

4.0 HEALTH, SAFETY AND ENVIRONMENTAL MATTERS 34

5.0 WARRANTIES 35

6.0 CONTACT ADDRESSES AND LICENSE DETAILS 36

7.0 REFERENCES 38

LIST OF TABLES

Table 1.1 Site Location 3
Table 2.1 Remediation Criteria 10
Table 2.2 Area A1 Volume Summary 13
Table 2.3 Area A Disposal and Treatment Summary 14
Table 2.4 Area A2 Volume Summary 16
Table 2.5 Area A2 Reused Material 16
Table 2.6 Area A2 Disposal and Treatment Summary 17
Table 2.7 Areas A3/A5/A7 and A8 Volume Summary 18
Table 2.8 Area A3/A5/A7 and A8 Disposal and Treatment Summary 19
Table 2.9 Area A4 Volume Summary 21
Table 2.10 Area A4 Disposal and Treatment Summary 21
Table 2.11 Area A6 and B2 Volume Summary 23
Table 2.12 Area B1 Volume Summary 24
Table 2.13 Area B1 Suitable Material 25
Table 2.14 Disposal Summary 26
Table 2.15 Import Materials Summary 29
Table 4.1 Reported Accidents and Incidents 34
Table 4.2 Complaints 34

DRAWINGS AND FIGURES

WYGE Drawings	**Drawing No.**
Site Location Plan	E7773/101
Site Layout Plan	E7773/102 Rev C
Service Location Plan	E7773/103 Rev B
Historical Layout Plan	E7773/104 Rev B
Exploratory Hole Location Plan	E7773/105 Rev D
Ecological Constraints	E7773/106 Rev C
Site Layout Including Zones and Proposed End Use	E7773/107 Rev C
Proposed Remediation Areas	E7773/111 Rev G
As Dug Remediation Areas	E7773/129
Lateral Extent of Remediation Areas with Cross Sections	E7773/130

VHE Drawings

Relic Structures	477H_B2
Validation Sample Locations	477H_B3
Geotechnical Test Locations	477H_B4
As-Built Survey (Finished Site Levels)	477H_B5
Location of Imported Quarried Stone	477H_B6
Clay barrier Wall Position	477H_B7
Environmental Monitoring Locations	477H_004

APPENDICES – See Attached CD

Appendix A - Photographs

Appendix B - Regulatory Correspondence

Appendix C - Programme of Works

Appendix D - Licensing Details & Disposal Records
- D.1 Landfill Site Permits
- D.2 Haulier Licenses
- D.3 Treatment Licences
- D.4 Water Discharge Consent
- D.5 Landfill Disposal Summary Records

Appendix E - Chemical Analysis
- E.1 Validation Sample Summary Tables
- E.2 Imported Material Analysis Summary Tables
- E.3 Water Sample Analysis Summary Tables
- E.4 Stockpile Analysis Summary Tables (Reuse)
- E.5 Stockpile Analysis Summary Tables (Unsuitable)
- E.6 Imported Materials
- E.7 Laboratory QA/QC Data
- E.8 Laboratory Test Certificates

Appendix F - Geotechnical Analysis
- F.1 Classification Testing Summary Tables
- F.2 Compliance Testing (In-situ Density Testing)
- F.3 Compliance Testing (Plate Bearing Tests)
- F.4 Laboratory Test Certificates

Appendix G - Method Statements

Appendix H - Monitoring Results
- H.1 Vapour Monitoring
- H.2 Dust Monitoring
- H.3 Noise Monitoring

Appendix I - Ecological Reports

Appendix J - ARCUS Report

1.0 INTRODUCTION

1.1 General

White Young Green Environmental Limited (WYGE) was commissioned by National Grid Property Holdings Limited (NGPH) to investigate and assess actual and potential sources of risk and liability associated with soil and groundwater contamination at the former gas manufacturing site at Old Mill Lane, Barnsley. Following completion of the investigation and assessment, WYGE were retained to design and supervise the remedial works to address issues of principal environmental concern.

The reports listed below detail the results of the investigations and assessment carried out by WYGE:-

- WYGE Detailed Quantitative Risk Assessment Report Report Ref: E7773-DQRA-Issue 1 V2 (April 2007)
- WYGE Ground Investigation 2007 Factual Report ref: E7773-ADD2007GIFACT-Issue 1 (August 2007).
- WYGE Ground Investigation 2006 Factual Report ref: E7773-GIFACT2006-Issue1 (Sept 2006)
- WYGE Additional Ground Investigation - Remediation Phase Factual Report Ref: E1297-AdditionalGIFACT-Issue 1 (October 2003).
- WYGE Ground Investigation Factual Report – Ref: 21306/GI/F (June 1998)
- White Young Ground Investigation Factual Report – 1996

This report describes the remedial works and contains supporting data to demonstrate that the works have been undertaken in the compliance with

- NGPH: Core Remediation Specification, ref. 11867/OR/01Irev-1 Revision I, November 2006
- WYGE Supplementary Specification to National Grid Property Holdings Limited Core Specification (Rev I), Old Mill Lane, Barnsley. Report Ref: E7773-SS-V1 (September 2007)
- WYGE Remediation Strategy, Old Mill Lane, Barnsley Ref: E7773RS-V3 (August 2007)

This report has been prepared for NGPH and other agreed parties in accordance with the current Term Contract agreement between NGPH and WYGE. This report is prepared in consideration of the proposed uses stated herein and should not be used in a different context without reference to WYGE. Also in time, variations or amended legislation may necessitate re-assessment.

1.2 The Objective

The Objective as stated in the brief (March 2004) is that on the date of completion of the Remediation Package:-

- The Site will be suitable for use as part hard cover retail, part hard cover public highway and part soft cover public open space. *It was subsequently agreed that the soft cover open space would not be publicly accessible i.e. it would be fenced*; and

- The Site will be suitable for its current use ("Current Use") as a part secure and vacant site and part Transco operational compound; and

- Any reasonably foreseeable criminal, civil or other liability of the Employer as a result of the presence of contamination in, on, at or under the Site and/or the migration of

contamination from the Site following completion of the Remediation Package given the Current Use of the Site as part secure and vacant site and part Transco operational compound will have been minimised; and

- There will be no reasonably foreseeable risk of any significant migration from the Site of any contaminants presently in, on, at or under the Site and any reasonably foreseeable risk of any significant migration to or into the Site of any contaminants from lands adjacent to or adjoining the Site will have been reduced as far as reasonably practicable; and

- The Site will not be "contaminated land" as that phrase is currently defined at Section 78A(2) of the Environmental Protection Act 1990 ("EPA") (except that, for the purposes of this Objective

- "Contaminated land" shall be deemed not to include any reference to the actual or likely pollution of Waters as provided in Section 78A(2)(b) of the EPA); and

- There will be no reasonably foreseeable risk of any significant pollution or contamination of Waters by or as a result of the condition of the Site at completion of the Remediation Package; and

- There will be no reasonably foreseeable risk of the Site being the subject of any "works notice" under Sections 161A - 161D of the Water Resources Act 1991; and

- There will be no reasonably foreseeable criminal, civil or other liability as a result of the presence of substances in Waters in, on or under the Site or migrating from the Site following completion of the Remediation Package; and

- The Site will satisfy, comply with or fulfil any and all current planning conditions as detailed in BMBC Grant of Planning Permission dated 9th August 2007, health and safety legislation and building regulations relating to the investigation and remediation of contamination and the use (as specified in above) of the Site arising from the Project (as defined in Drawing No. 107).

1.3 Proposed End Use

The current development plan for the Old Mill Lane site is the A61 Quality Bus Corridor and commercial area in the central and northern areas of the Site, defined as Zone A. The southern and south western areas will be utilised as fenced, vegetated open space with no public right of way. This area is defined as Zone B. Drawing No. 107 shows the different zones and the planned route of the Bus Corridor.

1.4 Site Description

The Site overlies the major part of a former gasworks and British Gas Depot, situated off Old Mill Lane, Barnsley, approximately 0.5km to the north east of Barnsley town centre.

All buildings across the Site have been demolished with the exception of a stone building, understood to be an electricity substation, situated along the western boundary to the south of the main access.

To the north of the Site is Wickes, a home improvements store and beyond is a residential area. To the east is an open area, whilst to the south is the River Dearne and across the river is a gas holder and a light industrial area. The western boundary of the Site adjoins Old Mill Lane (A61).

A site location plan is presented as Drawing No. 101. The area of the Site is approximately 2.5 hectares and is shown on Drawing No. 102.

Table 1.1 Site Location

Site Address	Old Mill Lane Barnsley S71 1LS
Telephone Number	No site telephone number. Access can be arranged through National Grid Property Holdings Ltd (NGPH).
Mentor number	005016
NGR	SE 35200 07300 (435200 407300)

1.5 Site Services

Current service location plans from the relevant service providers were obtained prior to the Site investigation. Prior to the commencement of the 2002 site works, service location works were undertaken across the Site by Stanningley Engineering, utilising hand held equipment and hand dug excavations. Prior to the 2006 site investigation, NGPH advised that they were not aware of any changes to services at the Site. Prior to the 2007 site works, ESS attended site to locate further services by hand excavation. Drawing No. 103 shows the services identified during all hand digging activities on site.

1.6 Site History

The Site under NGPH ownership was previously the location of Old Mill Lane Gasworks, constructed in the late 1860's, and known to be in operation for gas manufacture and storage by 1890. A Carburetted Water Gas (CWG) Plant had been constructed on site by 1930. The date at which gas production ceased at the works is uncertain, but previous studies have suggested that much of the gasworks plant had been demolished by 1964. By 1985 a section of the northern area of the Site was in use as a Gas Board Depot, and the north western corner of the Site had been sold off for development as a retail outlet. Demolition of the depot building and associated buildings was undertaken in 2003. The Transco Pressure Regulating System (PRS) was constructed in 2001 in the southwestern corner of the Site. A historical layout plan is included as Drawing No. 104.

1.7 Geology

The geological succession from intrusive ground investigation works has been confirmed to be Made Ground overlying Alluvial Deposits which comprise predominantly clays, becoming increasing granular with depth. The geological plan (sheet 87, 1:50,000, Barnsley) indicates the solid geology of the area to comprise the Woolley Edge Rock, a coarse grained sandstone, and Middle Coal Measures of the Carboniferous Period. During ground investigation works, bedrock, comprising mudstone of the Middle Coal Measures, was encountered at depths between 7.5mbgl and 9.0mbgl and the boreholes were terminated in it.

1.8 Hydrogeology

The Environment Agency (EA) has classified both the Alluvial Deposits and the Carboniferous Middle Coal Measures as minor aquifers. The EA records show no groundwater abstractions within the vicinity of the Site, however, there is the possibility of small scale unrecorded abstractions.

1.9 Hydrology

The River Dearne forms part of the southern boundary of the Site and flows in an easterly direction.

The EA website indicates that the quality of the River Dearne has gradually improved since 1988. In 1988 the stretch of the River Dearne from Old Mill Lane to New Lodge (downstream of the Site) was classified by the General Quality Assessment (GQA) system as Grade E (poor). The most recent chemical classification (2004) is indicated to be chemical Grade D (fair). The biology of the section of the River Dearne between Old Mill Lane and New Lodge is also classified as Grade C (fairly good) during 2002 and 2004. Surface water is abstracted from the River Dearne

located 589m SE of the Site for Dearne Valley Country Park.

There were two culverts identified on plans of the Site, one running from the north western corner of the Site across the central area and discharging into the River Dearne on central southern boundary of the Site. During the remediation works this was identified to be a terracotta pipe rather than a culvert, this was removed where encountered within the remediation excavations (see Section 2.4.5 for details). The other culvert is situated on the western boundary of the Site adjacent to the A61. There are several smaller culverts running under the A61 entering this culvert before it discharges into the River Dearne.

1.10 Ecology

The Envirocheck Report states that there are no Sites of Special Scientific Interest (SSSIs), Special Protection Areas, Special Areas of Conservation or Ramsar sites within 1km of the Site. A Local Nature Reserve, the Dearne Valley, is situated adjacent to the south eastern boundary of the Site. The Site is stated to lie within an area of adopted greenbelt.

Correspondence with English Nature confirmed that there are no SSSIs near to the Site. It was also stated that there are no areas of ancient woodland and no grassland inventory sites near to the Site. The ecological constraints for the Site prior to the remediation works are shown on Drawing No. 106.

The majority of the southern section of the eastern area of the Site under NGPH ownership is covered by a Tree Preservation Order (TPO). The TPO also forms a thin strip along the length of the southern boundary adjacent to the river. WYGE were given permission by Frank Robinson at Barnsley Metropolitan Borough Council (BMBC) to remove small samplings within the TPO to gain access to install boreholes during the 2006 site investigation.

During the Site walkover by a WYGE ecologist in November 2005, a badger sett was noted in the south eastern area of the Site within the TPO. Hence, no ground investigation works have been undertaken within 25m of the sett.

Japanese Knotweed and Giant Hogweed are present along the southern boundary of the Site and in isolated areas. Guidance by the Environment Agency on working adjacent to Japanese Knotweed and Giant Hogweed was followed during the Site investigation works.

Past investigations indicated that a significant colony of Daubenton Bats existed within the culvert which runs along the western boundary of the Site. In December 2002, prior to the commencement of the 2002 ground investigation works, Eric Bennett Consultancy (a local ecological consultancy) undertook a bat survey. It was established that a chamber within the culvert is colonised by bats, though not during winter periods due to the higher water levels within the culvert.

The colony location is likely to be subject to significant vibrations and noise due to its proximity to Old Mill Lane and it is understood that Eric Bennett Consultancy considered that the remediation works would not cause additional disturbance the bats provided precautions are taken to protect the structural integrity of the culvert.

Planning Condition No. 6 relating to the Bats was discharged after agreement was gained from BMBC that the remediation works would not have an impact on the bat colony.

Copies of the ecological reports are presented in Appendix I.

1.11 Site Investigation Works

A number of site investigations works have been undertaken at the Old Mill Lane site. These are reported in the documents listed in this section and have been referred to during the preparation of this report. The locations of all of the trial pits and boreholes undertaken as a part of the investigations shown below are given on Drawing No. 105.

1.11.1 WYGE Ground Investigation Works, May 2007

Reported in: WYGE Ground Investigation 2007 Factual, Old Mill Lane, Barnsley Report ref: E7773-ADD2007GIFACT-Issue 1 (August 2007).

The works were undertaken between 30th May and 1st June 2007 and comprised the following:-

- The construction of 2No. cable percussion boreholes to obtain further information about the benzene plume around BH103 in the south west and to obtain further information regarding the hydrocarbon contamination in the west of the Site, particularly associated with the oil tank and scrubbers and potentially associated with the CWG plant.
- The excavation of a 10No. trial pits using a tracked 360° excavator along the northern boundary to investigate the cross boundary structures and the potential for cross boundary contamination.
- Soil sampling and loggng;
- Contamination and geotechnical laboratory testing;
- Groundwater monitoring and sampling visits.

1.11.2 WYGE Ground Investigation Works, October 2006

Reported in: WYGE Ground Investigation Factual Report, Old Mill Lane, Barnsley (ref: E7773 – GIFACT – Issue 1, October 2006).

The Site investigation was undertaken between March 20th and 27th 2006 with three subsequent groundwater monitoring visits. The investigation comprised the following activities:-

- Excavation of 10No. Trial Pits by JCB 3CX excavator;
- The drilling of 7No. Boreholes using cable percussion techniques to a maximum depth of 10.0mbgl utilising 150mm diameter casing and boring tools;
- The drilling of 3No. Boreholes using a window sampling techniques to a maximum depth of 6.0mbgl utilising a competitor rig;
- Soil sampling and logging;
- Contamination and geotechnical laboratory testing; and
- River sampling on 3No. visits.

1.11.3 WYGE Ground Investigation Works, 2002

Reported in: WYGE Additional Ground Investigation – Remediation Phase, Old Mill Lane, Barnsley (ref: E1297-Additonal GI FACT–Issue 1, October 2003).

The Site investigation was undertaken between 2nd and 10th December 2002 with three subsequent groundwater monitoring visits. The investigation comprised:-

- Excavation of 25 No. Trial Pits by JCB 3CX excavator;
- The drilling of 12 No. Boreholes using cable percussion techniques to a maximum depth of 9.60mbgl with chemical and geotechnical testing;
- Soil sampling and logging;
- Contamination and geotechnical laboratory testing; and
- Sampling of the river.

1.11.4 WYGE Ground Investigation Factual Report, 1998

Reported in: WYGE Ground Investigation Factual Report – 1998 (Ref: 21306/GI/F).

The Site investigation undertaken in 1998 comprised:-

- Excavation of 37 No. Trial Pits;
- The drilling of 5 No. Boreholes;

- Soil sampling and logging; and
- Contamination laboratory testing.

1.11.5 WYGE Ground Investigation, 1996

Reported in: White Young Ground Investigation Factual Report – 1996.

- 24 No. trial pits;
- 5 No. boreholes;
- 39 No. soil samples, 2 No. soil leachate and 5 No. groundwater samples; and
- 2 No. river samples were scheduled for analysis from these excavations.

1.11.6 British Gas East Midlands Scientific Services, 1991

Reported in: British Gas East Midlands Scientific Services (BGEM) Site Investigation Report – 1991.

The Site investigation comprised:-

- The excavation of 28 No. trial pits, to depths of between 0.4mbgl and 3.0mbgl and

38 No. soil samples were analysed for a range of contaminants typical of those associated with former gasworks sites.

1.12 Remediation Strategy

The Remediation Strategy for the works is summarised below.

The aim of the Remediation Strategy was to reduce risks that currently exist due to contaminants to acceptable levels and consequently to limit NGPH's environmental liabilities. In view of the proposed site end uses the primary receptor driving remediation is the River Dearne which is located to the south of the Site.

The locations of the proposed remediation areas identified in the Remediation Strategy are given on Drawing No. E7333/111 Rev F.

The main elements of the remediation works were as follows:-

- Area A1 - Remediation of contaminated soils and perched water contained within Gasholder No.1.
- Area A2 - Remediation of soils and contaminated perched water associated with the retort house and exhausters.
- Area A3 - Remediation of contaminated perched water and potentially some soils associated with tar and liquor tanks and purifiers at the northern site boundary.
- Area A4 - Remediation of soils associated with the purifiers in the north west corner of the Site.
- Area A5 - Remediation of soils and perched water associated with Trial Pit T7, immediately to the north west of Gasholder No. 1.
- Area A6 - Likely remediation of soils and contaminated perched water associated with the CWG plant in the west of the Site.
- Area A7 – Hydrocarbon contamination associated with Tar Tanks at the northern site boundary in the vicinity of Trial Pits T201 and TP202.
- Area A8 – Cyanide, ammonia and hydrocarbon contamination associated with the oxide shed and tar and liquor tanks on the northern site boundary.

- Area B1 - Remediation of the contaminated perched water in Gasholder No. 2.
- Area B2 - Remediation of soils and contaminated perched water associated with the scrubbers and the oil tank in the west of the Site.
- Removal of hydrocarbon free product on the groundwater as identified in Boreholes BH201 between the scrubbers / CWG plant and the River Dearne.
- Potentially localised remediation of the groundwater in the vicinity of Borehole BH103 where isolated benzene impact has been identified in the groundwater.

Groundwater monitoring prior to, during and following source removal to determine if any natural attenuation trends can be identified and to determine the residual risk from contamination within the main groundwater body in the Alluvium / River Terrace Gravels to the River Dearne. This will enable consideration to be given to any requirement for groundwater remediation. It has been agreed with the EA, that groundwater remediation will be not be required if post remediation monitoring shows a general decrease in the levels of Contaminants of Concern (CoCs) within the groundwater in the Alluvium / River Terrace Gravels. It is acknowledged that levels of CoCs in the groundwater may increase initially due to disturbance during the source removal remediation works. It has also been agreed with the EA that a contingency plan for groundwater remediation will be produced and implemented if the levels of CoCs in the groundwater do not show a general decrease in concentrations.

The scope of the Remediation Works was determined from information contained within the reports listed below:-

- WYGE Detailed Quantitative Risk Assessment Report Report Ref: E7773-DQRA-Issue 1 V2 (April 2007)
- WYGE Ground Investigation 2007 Factual Report ref: E7773-ADD207GIFACT-Issue 1 (August 2007).
- WYGE Ground Investigation 2006 Factual Report ref: E7773-GIFACT2006-Issue1 (Sept 2006)
- WYGE Additional Ground Investigation - Remediation Phase Factual Report Ref: E1297-AdditionalGIFACT-Issue 1 (October 2003).
- WYGE Ground Investigation Factual Report – Ref: 21306/GI/F (June 1998)
- White Young Ground Investigation Factual Report – 1996
- British Gas East Midlands Scientific Services (BGEM) Site Investigation Report – 1991

The soils and perched groundwater within the designated remediation areas shown on Drawing No 111 were found to be associated with potential pollutant linkages to the following receptors:-

- Environmental Receptors. Controlled waters (River Dearne located next to the Site to the south and the underlying minor aquifer); and
- Human Health. Future end users of the Site following redevelopment for a commercial hardstanding end-use in the northern part of the Site.

The Environment Agency and Barnsley Metropolitan Borough Council were consulted and agreement to the remediation strategy was obtained prior to commencement of the works. Copies of the correspondence with statutory bodies are located in Appendix B.

The Site Specific Target Levels (Remediation Criteria) used for the remedial works were generally derived from the Detailed Quantitative Risk Assessment as detailed above and have been agreed with the EA and BMBC. The principal objective of the remediation works was to break the pollutant linkages by removing contamination sources, thus reducing environmental liabilities and providing a platform for future redevelopment of the Site.

1.13 Tender Details

White Young Green Environmental Ltd (WYGE) was appointed as Consulting Engineers to NGPH to provide environmental engineering services associated with the design and supervision of the Remedial Works.

The Principal Contractor for the Works was VHE Construction plc (VHE), appointed under their NGPH Term Contract. The remediation Works were started on the 3rd September 2007 and were substantially completed by the 7th March 2008.

1.14 Report Format

The format and content of this report is presented in accordance with the SPH document "Guidance for Assessing and Managing Potential Contamination on Former Gasworks and Associated Sites", Version 3.0 (March 2003).

This report is issued as a hard copy which provides a description of the work undertaken and the final site conditions achieved, together with figures/drawings with an attached CD containing the supporting information including photographs and documentary verification relating to the remedial activities carried out.

2.0 REMEDIATION PROJECT

2.1 Overview

The remediation works were carried out by VHE Construction plc acting as the Principal Contractor whilst WYGE were the Engineer. The works commenced on the 28th August 2007 the main excavation works were delayed by five weeks due to the archaeological requirements defined in the Planning Condition No. 5. The works were substantially complete on the 7th March 2008.

The remediation works were designed to mitigate the risk to identified environmental receptors and future end-users of the Site from identified residual soil and perched groundwater contamination caused by the historical use of the Site for coal (town) gas manufacture.

The main elements of the remediation works carried out were as follows:-

- Excavation and treatment or disposal of contaminated soils from Areas A1 to A8 and Area B2, as shown on Drawing No. 129.
- Excavation of contaminated material from a cross boundary tar and liquor tank in Area A3 (boundary between NGPH site and Wickes site). Approximately 10% of the total volume of the tank was on the NGPH side of the fence and this was remediated during the remediation of Area A3. The remainder of the tank was remediated under a separate contract carried out for Windsor Life Management (Wickes site land owners), Validation of this is reported separately. In summary, based on a visual assessment of the empty tank structure and chemical validation test results, the tank remediation works have achieved the Remediation Criteria within the remaining made ground and within the natural ground. The Works carried out were designed to remediate contaminated soils and water within the footprint of the Tar and Liquor Tank as indicated on the historical plan (Drawing No.104). Contamination may be present within the Wickes site outside of this footprint or below the Tar and Liquor tank structure which remains in the ground. WYGE were not asked to consider the presence or extent of any potential contamination outwith of the above defined area.
- Removal of contaminated perched water from Areas A1 to A8 and B1 and B2 as shown on Drawing No. 129.
- Regular monitoring of Borehole BH103 and additional boreholes drilled during the remediation works where an isolated benzene impact had been identified in the groundwater.
- Groundwater monitoring during the remediation works to determine if the works were having a significant impact on the groundwater beneath the Site. It has been agreed with the EA, that groundwater remediation will be not be required if post remediation monitoring shows a general decrease in the levels of Contaminants of Concern (CoCs) within the groundwater in the Alluvium / River Terrace Gravels.

2.2 Remediation Target Concentrations

The Site Specific Target Levels (Remediation Criteria) used to determine the extent and validate the remedial works, as derived generally from the Detailed Quantitative Risk Assessment (DQRA), are listed in Table 2.1 below.

Table 2.1 Remediation Criteria

Contaminant	Remediation Criteria	
	Soil mg/kg	Leachate mg/l
Zone A Commercial / Highway (See Drawing No. 107)		
Phenol	1,410	
Naphthalene	107	
Benzo(a)pyrene		0.00033
Total Ammonia		5.0
Total Cyanide	140	
Benzene	22	
Toluene	871	
Ethylbenzene	839	
Xylene	1,310	
TPH Aliphatic (C10 to C12)	28,100	
TPH Aliphatic (C12 to C16)	374,000	
TPH Aromatic (C10 to C12)	504	
TPH Aromatic (C12 to C16)	376	
TPH Aromatic (C16 to C21)	1,180	
Zone B Restricted Access Open Space Area (See Drawing No. 107)		
Phenol	1,410	
Naphthalene	107	
Benzo(a)pyrene		0.00033
Total Cyanide	140	
Total Ammonia		9.5
Benzene	22	
Toluene	871	
Ethylbenzene	839	
Xylene	1,310	
TPH Aliphatic (C10 to C12)	92	
TPH Aliphatic (C12 to C16)	89,000	
TPH Aromatic (C10 to C12)	92	
TPH Aromatic (C12 to C16)	90	
TPH Aromatic (C16 to C21)	282	
TPH Aromatic (C21 to C40)	525	

2.3 Works Undertaken

2.3.1 Enabling Works

Prior to the commencement of any remedial excavations, enabling works were undertaken at the Site as detailed below.

Hardstanding

All bitumen bound material present at the surface of Remediation Areas was broken out, excavated and removed from site to a suitably licensed facility as non-hazardous waste. Concrete surfacing was broken out and re-used as fill following crushing and confirmatory geotechnical and chemical testing. Details of the disposal and re-use of materials is summarised on a zone by zone basis in Section 2.4.

Vegetation Clearance

Areas of soft landscaping coinciding with Remediation Areas were cleared of small trees, shrubs and undergrowth prior to undertaking remedial works. The cleared

vegetation was taken off site as 'green waste' under current waste guidance regulations.

Japanese Knotweed identified on the Site and within the excavation areas was cut down and stockpiled separately in a bunded area and covered with Visqueen. This was sent off site with Japanese Knotweed contaminated soil to an appropriately licensed landfill.

Temporary Water Storage and Treatment Facility

All perched groundwater and surface water removed from the works was pumped to temporary storage tanks prior to passing through the treatment plant comprising 3-stage water/oil separators, sand filters and activated carbon filters before being discharged to foul sewer under licence from Yorkshire Water. Absorbent matting was used to remove floating free product, where present, from the primary storage tanks prior to treatment. The treated water was regularly testing to ensure compliance with the conditions of the discharge license.

Temporary Materials Storage and Processing Area

The concrete floor slab of the former gas depot was used for the storage and processing of contaminated soils prior to off site disposal to landfill area. All surface water drainage gullies in the vicinity of the treatment area were sealed to prevent contaminated soils and run-off from entering the Site surface water drainage system. In addition, a 0.5 m high bund formed from low permeability site won soils was maintained around the storage and processing areas to contain surface water run-off/leachate.

All areas used for storage of suspected or known contaminated material were bunded with low permeability site won soils and lined with Visqueen to prevent run-off or infiltration of potentially contaminated leachate.

Archaeological Survey

Planning Condition No. 5 relating to the Site required a watching brief to be undertaken by an archaeological consultant during the excavation works. They logged all structures identified during the works. Structures were only broken out after they had been surveyed in, photographed and recorded by the archaeologist.

A separate report on the archaeology will be produced by ARCUS the sub–contractors appointed by VHE to carry out this work. This is presented in Appendix J.

2.4 Remediation Areas

2.4.1 Summary

The remediation works involved the excavation and controlled off-site disposal of contaminated soil and perched groundwater.

Site investigation works identified several remediation areas where soil and/or perched groundwater contamination exceeded Remediation Criteria. The Remediation Areas are referenced A1, A2, A3, A4, A5, A6, A7, A8, B1 and B2. The As Dug Remediation Areas showing the extent of the final excavations are shown on Drawing No. 130.

A typical sequence of works from each of the remediation areas is summarised below:

- Excavation of pre-classification trial pits to collect samples to pre-classify the material within the remediation areas for re-use or off-site disposal, based on whether the results passed or failed the Remediation Critera.

- Selective excavation of contaminated Made Ground and localised excavation of underlying impacted natural strata. The excavation was locally deepened where contamination had extended into the underlying Alluvial Clay typically through dead roots and fissures. Where the natural Alluvial Clay was absent due to historical structures and services, an increased thickness of impacted Made Ground was typically present directly over the River Terrace Gravels.
- Dewatering and on-site treatment of perched groundwater using conventional sump pumping during excavation prior to licensed discharge to foul sewer;
- An archaeological contractor provided a watching brief during the excavation to survey in any historical structures encountered to meet the planning conditions requirements.
- In agreement with South Yorkshire Archaeological Service breaking out and removal of historical foundations and sub-structures was only carried out if removal was required to facilitate excavation of impacted materials below.
- Confirmatory chemical and geotechnical testing of the stockpiled material and crushed oversize fraction prior to replacement or treatment/disposal as a permanent fill in the works.
- Excavation and 'grubbing out' of tar pipes and drainage channels exposed in the base of the excavation.
- Soils and materials deemed to be unsuitable for re-use on-site were disposed off-site following chemical analysis and waste classification acceptance testing.
- Spent iron oxide and oxide contaminated materials were disposed off site as non-hazardous waste following confirmatory classification testing. Where spent oxide materials contained a significant fraction of demolition rubble, the material was screened to remove particle size fraction greater than 50mm for subsequent crushing and re-use following confirmatory chemical and geotechnical classification testing.
- Following excavation of all visually impacted soils, validation samples were obtained from the base and sides of the excavation to confirm that the residual levels of contaminants within the soils were below the corresponding Remediation Criteria.
- The resultant excavation void was backfilled with processed 'site won' recycled materials and imported fill placed in accordance with the earthworks specification.

The Contract Programme and revisions are presented in Appendix C.

Excavation and stockpile volumes are presented as m^3 as these are measurement units during the works. Final disposal volumes are presented as tonnes in Section 2.6 as these are from the landfill weighbridge summary. Details of duty of care and audit systems are given in Section 2.11.2.

2.4.2 Area A1 Gasholder No. 1

Area A1 Background

The gasholder is located in the north east of the Site and is of brick construction approximately 25m in diameter and 6.5m deep.

Site investigation works carried out in Gasholder No.1 had identified visually contaminated material used to fill the holder. The results of the DQRA showed that the soil and groundwater concentrations of naphthalene, benzo(a)pyrene, total cyanide, total ammonia, benzene and xylene in the gasholder posed a significant risk to the River Dearne.

The ecological survey had identified that Japanese Knotweed was growing within the gas holder structure.

Area A1 Summary of Works

Prior to any excavation works a sump was dug within the gasholder on the southern edge to carry out dewatering before beginning the main excavation works. The main excavation works commenced on 8th October 2007 and were completed on 24th October 2007.

The works comprised the excavation of the whole gasholder to the clay base which was encountered at 6.5mbgl. The clay was not excavated as it was visually and olfactory clean after the upper 250mm was scraped off. Visually contaminated groundwater was penetrating upwords through this clay layer at the base of the gasholder. Additional excavation of this material would have led to the gasholder filling with visually contaminated water therefore potentially causing significant contamination of clean imported material that would be used for backfilling.

The top 3m of material were automatically put in stockpiles for off site disposal due to the presence of Japanese Knotweed. These stockpiles were kept separate from others and covered to prevent the spread of Knotweed around the Site.

The sides of the brick gasholder structure were kept intact with the exception of a section that was broken out to 2.5 metres below the top of the structure to allow access for the excavator to continue excavations within the holder.

Two brick columns were encountered within the gasholder. These were broken out after being surveyed in and photographed and were then crushed for re-use on site as general fill.

The underlying natural ground was not encountered during the excavation of the gasholder.

Following the excavation of the gasholder and following validation of the clay base, to confirm it had met the Remediation Criteria the Gasholder was backfilled with site won and imported fill material.

To minimise the risk of any groundwater penetrating up through the clay base into the gasholder a 1m layer was placed at the base of the gasholder comprising imported low-permeability clay. The barrier was constructed of imported clay meeting the Specification for Highways Works (SHW) Class 7J specification

A summary characterisation of the recorded excavation, off site disposal and reuse volumes of soils is presented below in Table 2.2.

Table 2.2 Area A1 Volume Summary

Total Excavation (m^3)	Materials Excavated		
	Disposed as Hazardous Waste (m^3)	Disposed as Non-Hazardous Waste (m^3)	Reused on Site (m^3)
2,126	179	1,863	84 (Hard Materials)

The vertical and lateral extent of the excavation is shown on VHE Drawing No. 130.

Area A1 Suitable Materials Retained on Site

The only materials retained for re-use were the hard materials from the brick structures and wall sections that were removed from the gasholder structure. These were then crushed to meet SHW Class 6A specification for back filling.

Area A1 Off-Site Disposal & On Site Treatment

Following excavation of the gasholder, visibly impacted material was excavated and stockpiled within the designated quarantine area for laboratory testing to determine suitability for on-site treatment or classification for off site disposal. The material excavated was not suitable for any on-site remediation treatment due to the spent oxide content and the high cyanide levels.

Oversized hard materials were separated for reuse on site during the excavation process. The wet nature of much of the material made screening an unsuitable method for separating out hard materials before disposal of the stockpile.

A summary of the disposal volumes are included in Appendix D.5 and further information on waste management and duty of care are included in Section 2.10. A summary description of each category of material is contained in Table 2.3 below.

Table 2.3 Area A Disposal and Treatment Summary

Stockpile Reference No.	Volume	Description	Waste Classification	Disposal Facility / Treatment
SP1	647m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP2	240m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP3	102m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP5	49m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP6	122m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP7	179m^3	Coal tar and spent oxide Impacted Soils	Hazardous	Teesport (Impetus)
SP7A-E	632m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP10	38m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)

Area A1 Validation Summary

Following the removal of all visually impacted material, the exposed soils in the base of the excavation were sampled and tested to confirm that contaminant concentrations within the residual soils samples were below the respective Remediation Criteria. Three samples were obtained from the base of the gasholder.

The location and level of each validation sampling point was measured and is indicated on VHE Drawing No. 130. A summary of the validation results including the Remediation

criteria are summarised in Appendix E.1 and copies of the laboratory test certificates are included on CD in Appendix E.8.

The validation testing confirmed that levels of contaminants within the clay base were all below the corresponding Remediation Criteria.

Area A1 Infilling Summary

Infilling details are presented in Section 2.8.

2.4.3 Area A2 Retort House and Associated Buildings

Area A2 Background

Area A2 is located in the centre of the Site and comprises the area formally occupied by the Retort House. The area was predominantly covered with a concrete slab left over from the time that the Site was used as a British Gas Depot.

Site investigation works identified elevated levels of cyanide, TPHs, PAHs within this area. Visual evidence in the trial pit logs for the area also indicated the presence of spent oxide.

Area A2 Summary of Works

The supplementary pre classification trial pits identified the presence of hydrocarbon impacted soils and groundwater contained within the retort house structure and to the north of the former exhauster house consequently the area for remediation was amended and divided into 3 Areas A2-A, A2-B and A2-C. An area to the west of this next to Area A4 was also identified as contaminated by cyanide (Area A2-D).

The material in Area A2-A was classified as non-hazardous with the primary elevated contaminants being cyanide and TPHs. The material in Area A2-B was classified as hazardous with elevated PAHs, TPHs, and cyanide. The material Area A2-C was mostly classified as hazardous material overlain by a 1m thick layer of non-hazardous material.

Excavation works commenced on 11th November 2007 and was completed on 26th February 2008. Dewatering was carried out by sump pumping during the excavation works. The material pre classified as non-hazardous was stockpiled separate to be processed through a screener/crusher to recover as much of the oversize material as possible.

A number of brick, concrete and metal structures were encountered during the excavation works. These structures were left in-situ where possible in accordance with the archaeological Planning Condition agreed with BMBC although a number of these had to be removed or partially broken out to allow the removal of contaminated impacted material or to allow for backfilling to be undertaken

Hazardous material from both A2-B and A2-C was stockpiled for the CLUSTER trial that was being run at the nearby NGPH Neepsend site in Sheffield. The aim of CLUSTER is to treat material at a hub site and then return it to the original donor site for re-use following treatment.

The remaining hazardous material was stockpiled separately ready for offsite disposal.

Oversize material greater than 50mm was removed through screening of the material to be crushed at a later date.

A summary characterisation of the recorded excavation volumes of soils is presented below in Table 2.4.

Table 2.4 Area A2 Volume Summary

Total Excavation (m^3)	Materials Excavated				
	Disposed as Hazardous Waste (m^3)	Disposed as Non-Hazardous Waste (m^3)	Screened Material for Reuse on site (m^3)	Crushed Material for Reuse	Treated off Site by Bio-physical Remediation (CLUSTER) (m^3)
2,635	311	461	692 (Oversize >50mm)	387 (Concrete)	277

The vertical and lateral extent of the excavation is shown on VHE Drawing No. 130.

Area A2 Excavated Materials Retained on Site

There were a number of brick and concrete structures as well as a significant volume of demolition rubble within Area A2. All material excavated was stockpiled and screened. The oversize fraction was crushed for re-use and the fines were sent off site as either hazardous or non-hazardous. A summary of the material quantity and volume is presented in Table 2.5 below.

Table 2.5 Area A2 Reused Material

Stockpile Reference Identification.	Volume (m^3)	Material Description
SP52	387	Concrete to be crushed
SP53	181	Oversize material from screening
SP54	511	Oversize material from screening

A summary of the chemical test results from the stockpiled material is included in Appendix E.4 and chemical analysis test certificates are held in Appendix E.8. A summary of geotechnical classification testing is included in Appendix F.1 and copies of geotechnical test certificates are included in Appendix F.4.

Area A2 Off-Site Disposal & On Site Treatment

Following excavation of the area, visibly impacted material was excavated and stockpiled within the designated quarantine area for laboratory testing to determine suitability for on-site treatment or classification for off site disposal.

A summary of the disposal volumes are included in Appendix D.5 and further information on waste management and duty of care are included in Section 2.10. A summary description of each category of material is contained in Table 2.6 below.

Table 2.6 Area A2 Disposal and Treatment Summary

Stockpile Reference No.	Volume	Description	Waste Classification	Disposal Facility / Treatment
SP46	141m^3	Hydrocarbon Impacted Soils	Hazardous	Teesport (Impetus)
SP48	461m^3	Hydrocarbon and Spent Oxide Impacted Soils	Non-Hazardous	Oversized reused on site, fines off site as Non-Hazardous
SP51	62m^3	Hydrocarbon Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP55	190m^3	Hydrocarbon Impacted Soils	Hazardous	Neepsend CLUSTER Project for Reuse
SP56	90m^3	Hydrocarbon Impacted Soils	Hazardous	Neepsend CLUSTER Project for off site disposal as Non-Hazardous
SP58	170m^3	Hydrocarbon and Heavy Metal Impacted Soils	Hazardous	Teesport (Impetus)
SP61	74m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)

Area A2 Validation Summary

Following the removal of all visually impacted material, the exposed soils in the base and the sides of the excavation were sampled and tested to confirm that contaminant concentrations within the residual soil samples were below the respective Remediation Criteria. Eighteen samples were obtained from Area A2A, four from A2B, three from A2C and three from A2D.

Only one sample in Area A2B recorded levels in excess of the Remediation Criteria, with a total cyanide level of 850mg/kg. Additional excavations were carried out to remove the hotspot and subsequent validation samples were below the Remediation Criteria.

The location and level of each validation sampling point was measured and are indicated on VHE Drawing No. 477H_B3. A summary of the validation results including the Remediation Criteria are summarised in Appendix E.1 and copies of the laboratory test certificates are included in Appendix E.8.

Area A2 Infilling Summary

Infilling details are presented in Section 2.8.

2.4.4 Areas A3/A5/A7/A8 Boundary Structures including Tar and Liquor Tanks.

Areas A3/A5/A7 and A8 Background

These remediation areas are located along the northern boundary of the Site shared with Wickes and included a below ground tar and liquor tank shown on the historical plans to traverse the boundary between the Wickes site and the NGPH site. Historical plans also indicated the presence of other historical structures including purifiers.

Site investigations had indicated the presence of elevated levels of hydrocarbons and cyanide in these areas. Visual observations of contaminated structures along the boundary were also recorded during previous site investigations. During the course of the works on the NGPH site, the remediation of the cross boundary tar and liquor tank

was discussed with the Wickes site owner Windsor Life Management and the tank was remediated at the end of the remediation works under a separate contract.

The programmed extent of the excavation based on the Site investigation data is shown on Drawing No. 111. The actual extent of the excavations, is shown on Drawing No. 130.

Areas A3/A5/A7 and A8 Summary of Works

Following the excavation of pre classification trial pits the upper 3 metres of the areas were classified as non-hazardous. Substantial quantities of the material were contaminated with Japanese Knotweed which has been identified along the boundary both on the NGPH site and the Wickes site. Excavation works commenced on 19th November 2007 and was completed on 8th February 2008.

The part of the tar and liquor tank that crosses the boundary that was on the NGPH part of the Site was excavated during these works. During the excavation it became evident that the contamination extended under Wickes site. The material excavated from within the tank was classified as hazardous and stockpiled separately. The remainder of the tank under Wickes site was remediated separately after the NGPH site remediation works. The hazardous material from the NGPH side of the tank was disposed off site to an appropriate landfill with the material from the rest of the tank under the Wickes site.

During the excavation works a period of heavy rain combined with the presence of large volumes of perched groundwater in the excavation forced the works to be held up while the excavations were dewatered. The excavation on average extended 3m below ground level into the natural clay.

Due to visual evidence of spent oxide contamination Area A3 was extended south by approximately 2m and Area A7 was extended towards Areas A4 and A2. The extended area of A7 was only taken to 1mbgl, at which point the natural clay was encountered.

The excavation of the rest of former tar and liquor tank that crossed the boundary between the NGPH site Wickes land was carried out under a separate contract with Wickes land owner.

A summary characterisation of the recorded excavation volumes of soils is presented below in Table 2.7.

Table 2.7 Areas A3/A5/A7 and A8 Volume Summary

Total Excavation (m^3)	Materials Excavated		
	Disposed as Hazardous Waste (m^3)	Disposed as Non-Hazardous Waste (m^3)	Reused on Site (m^3)
5,455	210	5,133	112 (Hard Material)

The vertical and lateral extent of the excavation is shown on VHE Drawing No. 130.

Areas A3/A5/A7 and A8 Off-Site Disposal & On Site Treatment

Where pre-classification had been undertaken, visually and olfactory impacted material was selectively excavated and directly placed on to trucks for off site disposal. Where no pre-classification had been carried out or the material appeared grossly contaminated, the material was stockpiled within the designated quarantine area for laboratory testing to determine classification for off site disposal.

The hazardous material excavated from the cross boundary tank was stockpiled separately and disposed of to an appropriately licensed landfill with the rest of the material from Wickes side of the tank once the remediation was complete. Due to the wet nature of the material excavated from the tank, even after dewatering, it was necessary to mix some of the material with dry material to stiffen it up so that it would be accepted at the landfill. This increased the volume of material disposed to landfill (SP64).

A summary of the disposal volumes are included in Appendix D.5 and further information on waste management and duty of care are included in Section 2.10. A summary description of each category of each stockpiled material is contained in Table 2.8 below.

Table 2.8 Area A3/A5/A7 and A8 Disposal and Treatment Summary

Stockpile Reference No.	Volume	Description	Waste Classification	Disposal Facility / Treatment
SP29	142m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP30	42m^3	Oversized Material	Not Applicable	Crushed and Re-used on site
SP31	75m^3	Tarmac	Non-Hazardous	Peckfield (Caird Bardon)
SP32	52m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP38	130m^3	Coal Tar Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP39	74m^3	Coal Tar Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP63	163m^3	Hydrocarbon and spent oxide Impacted Soils	Non-Hazardous	Peckfield (Caird Bardon)
SP64	260m^3	Coal Tar Impacted Soils	Hazardous	Teesport (Impetus)

Areas A3/A5/A7 and A8 Validation Summary

Following the removal of all visually impacted material, the exposed soils in the base and sides of the excavation were sampled and tested to ensure that contaminant concentrations within the residual soils were below the respective Remediation Criteria.

Seven validation samples reported elevated Total Ammonium above the Remediation Criteria of 5.0 mg/l with a range of 5.5 mg/l to 29mg/l. All of these samples were taken from the underlying clay where there was no visual or olfactory indication of contamination. It is considered that these relatively marginal exceedances are not significant given their presence only in the underlying natural ground and given that the main sources of the ammonia contamination have been remediated.

One sample (A3v4) from the Made Ground on the northern face of Area A3 reported TPH exceedences above the Remediation Criteria in a number of TPH bands. No further action was taken to remove the material associated with these elevated levels due to its proximity to the Wickes boundary instead a clay barrier wall was installed along this boundary preventing any migration of contamination onto the NGPH site.

The clay barrier wall was 1m thick and extended from north-west corner of the Site to the Eastern edge of Area A8 using SHW Class 7J imported clay. The clay wall was thickened to 2m around the cross boundary tank to increase the protection against migration of contaminants visually identified around the tank structure.

The location and level of each validation sampling point was measured and is indicated on VHE Drawing No. 477H_B3. A summary of the validation results also showing the Remediation Criteria is included in Appendix E.1 and copies of the laboratory test certificates are included in Appendix E.8.

The validation testing confirmed that all levels of contaminants in samples tested from the natural ground were below the corresponding Remediation Criteria, with the exceptions discussed above.

Areas A3/A5/A7 and A8 Infilling Summary

Infilling details are presented in Section 2.8.

2.4.5 Area A4 Former Purifier House

Area A4 Background

Area A4 is located in the north western area of the Site and was historically occupied by the main gasworks purifier house. Historical plans identify a culvert entering the Site at the northern part of Area A4.

The Site investigation within this area was restricted due to the concrete floor slab remaining following demolition of the purifier house.

The extent of the excavation is given on VHE Drawing No. 130.

Area A4 Summary of Works

Pre-classification trial pits indicated that the majority of the material within area A4 would be classified as non-hazardous although one sample indicated a small area of hazardous material in the south-east of Area A4.

Excavation works commenced on 19th October 2007 and were completed on 1st February 2008. Dewatering was carried out by sump pumping during the excavation works.

The remedial works involved the excavation of spent oxide and spent oxide impacted demolition rubble from within the infilled, below ground purifier house structure and a small quantity of coal tar impacted soils and sludge present in the south east of the structure.

Trial pits were excavated through the concrete floor slab to identify contamination below the slab and revealed no visual or olfactory contamination of the natural clay below the slab. Laboratory tests results on samples taken from the trial pits were below the Remediation Criteria.

During the excavation works a manhole was identified in the north east corner of the area which had access to the historical culvert. The culvert was identified as a terracotta pipe and not a culvert. The pipe was surveyed and found to be blocked upstream of the Site. The three manhole accesses for the pipe were excavated and any water within the pipe pumped out to the water treatment plant. The pipe was removed where it was encountered in the excavation of the remediation areas. The pipe was blocked off where it entered the Site by the clay cut off wall installed along the northern boundary of the Site.

A summary characterisation of the recorded excavation volumes of soils is presented below in Table 2.9.

Table 2.9 Area A4 Volume Summary

Total Excavation (m^3)	Materials Excavated		
	Disposed as Hazardous Waste (m^3)	Disposed as Non-Hazardous Waste (m^3)	Reused on Site (m^3)
992	60	851	81

The vertical and lateral extent of the excavation is shown on VHE Drawing No. 130.

Area A4 Off-Site Disposal & On Site Treatment

Spent oxide impacted material was excavated and stockpiled within the designated quarantine area prior to sampling for laboratory testing to determine waste classification parameters for off site disposal.

A summary of the disposal volumes are included in Appendix D.5 and further information on waste management and duty of care are included in Section 2.10. A summary description of each category of material is contained in Table 2.10 below.

Table 2.10 Area A4 Disposal and Treatment Summary

Stockpile Reference No.	Volume	Description	Waste Classification	Disposal Facility
SP1	680m^3	Spent Oxide Impacted Material	Non-Hazardous	Peckfield (Caird Bardon)
SP12	171m^3	Spent Oxide Impacted Material	Non-Hazardous	Peckfield (Caird Bardon)
SP40	60m^3	Hydrocarbon and spent oxide Impacted Soils	Hazardous	Teesport (Impetus)
SP13	81m^3	Oversized Material	Not Applicable	Crushed and Re-used on site

Area A4 Validation Summary

Following the removal of all visually impacted material, the exposed soils in the base and sides of the excavation were sampled and tested to confirm that contaminant concentrations within the sampled residual soils were below the respective Remediation Criteria. A large part of the base of the excavation was covered by the concrete floor slab so three trial pits were dug through the pad and samples taken for validation purposes as mentioned above.

Additional validation trial pits were excavated to the south of Area A4 to investigate any potential extension of contamination outside of the main purifier footprint. The visual observation and samples taken from these trial pits indicated no contamination beyond the excavated area.

One validation sample taken from the main purifier excavation and located in the western boundary adjacent to Old Mill Lane did exceed the Remediation Criterion for cyanide with a level of 250mg/kg recorded. Excavation to remove the soils associated with this elevated level was not possible since it would have undermined the boundary fence and pavement outside the Site.

The location and level of each validation sampling point was measured and are indicated on VHE Drawing No. 477H_B3. A summary of the validation results also showing the Remediation Criteria is given in Appendix E.1 and copies of the laboratory test certificates are included in Appendix E.8.

The validation testing confirmed that all levels of contaminants in samples taken from the underlying natural ground were below the corresponding Remediation Criteria.

Area A4 Infilling Summary

Infilling details are presented in Section 2.8.

2.4.6 Areas A6 & B2 CWG Plant and Oil Tank

Areas A6 & B2 Background

Areas A6 and B2 are located in the southern part of the Site just to the north of Gasholder No. 2. Site investigation works did not identify significant exceedences of the Remediation Criteria, although the areas were identified due to their historic uses as a CWG plant and fuel storage tank. The Site investigation works carried out in this area were limited due to the presence of substantial concrete slabs and under ground obstructions.

Areas A6 & B2 Summary of Works

Pre-classification trial pits indicated that the upper 0.5m surface layer in these areas could be re-used on site. Below this depth, Remediation Criteria exceedences had classified the material as non-hazardous.

Excavation of these two areas was carried out concurrently and was limited in extent to the east by the active gas main. Visual observations of the excavation's western face did not indicate significant contamination although some hydrocarbon staining was present. Two window sampler boreholes were drilled under the groundwater treatment plant to identify if further excavation was needed. Results from the soil samples taken did not indicate that the CoC were above the Remediation Criteria.

The excavation extended up to 4m below ground level into the underlying natural clays which were visibly impacted by hydrocarbon free product.

A number of gas pipes were encountered during the excavation works. These were left in-situ and undisturbed until it was proven either by identifying capped ends or already broken sections, that they were dead. No live gas mains were encountered in these areas other than the one identified on service drawings to the east of the excavation area. Once pipes were proven to be dead they were broken out to the edge of the excavation and the hole in the excavation face sealed with clay. No significant contamination was encountered around these pipes and therefore chasing out of the pipes beyond the excavation boundary was not considered to be necessary.

The excavated material was stockpiled and tested before being taken off site. The excavation area was extended to the west where 2No. pre-classification trial pits had identified elevated TPHs in both the made ground and natural clay.

A 1m thick clay barrier wall was installed along the eastern boundary between the excavation area and live gas main. This was installed to minimise the risk of any visually contaminated material within the 3m easement zone of the gas main contaminating the clean backfill placed in the excavation. The barrier was constructed of imported clay meeting the Specification for Highways Works (SHW) Class 7J specification.

Window sampler boreholes were drilled to the west of the excavation to identify any potential contamination from a Historic Benzol Plant located under the current National Grid PRS compound. None of the samples recovered and tested had contaminant levels exceeding the Remediation Criteria.

A summary characterisation of the recorded excavation volumes of soils is presented below in Table 2.11.

Table 2.11 Area A6 and B2 Volume Summary

Total Excavation (m^3)	Materials Excavated			
	Disposed as Hazardous Waste (m^3)	Disposed as Non-Hazardous Waste (m^3)	Reused on Site Screened Material (m^3)	Treated on Site by Liming (m^3)
2,422	122	525	815	960

The extent of the Areas A6 and B2 excavation is shown on VHE Drawing No. 130 and validation sampling points are identified on VHE Drawing No. 477H_B3.

Areas A6 & B2 On Site Treatment

815m^3 of material was pre-classified as reusable on site by trial pitting and the material was stockpiled and screened to remove the oversized fraction greater than 50mm. The fine-grained material was used in the backfill of Area A1. The oversized material was crushed to meet (SHW) Class 6A specification for backfilling at the base of the A6/B2 excavation. The Local Authority was consulted and presented with method statements for both the screening and crushing which they permitted.

960m^3 of material was excavated and stockpiled in the quarantine area due to visual evidence of hydrocarbon contamination. Subsequent chemical laboratory testing confirmed that the material was suitable for re-use on site although visual inspection indicated it would not be geotechnical suitable for backfill due to high moisture content. In order to realise the potential to re-use this material and therefore avoid disposing of to landfill it the material was limed to make it geotechnically suitable as a cohesive fill. Lime was added at 2.5% of volume. Taking guidance from Definition of Waste: Developing Greenfield and Brownfield sites (Environment Agency, 2006) document this material is not considered as waste and therefore a mobile treatment licence was not need to carry out liming. The limed material was subsequently confirmed by testing to be chemically and geotechnically suitable for reuse and was placed in accordance with the specification in Areas A7, A3 and A5.

Areas A6 & B2 Validation Summary

Following the removal of all visually impacted material, the exposed soils in the base and sides of the excavation were sampled and tested to confirm that contaminant concentrations within the samples taken from the residual soils were below the respective Remediation Criteria.

Due to the presence of live services and the groundwater treatment plant, validation samples were recovered from window sampler boreholes undertaken to the east of the excavation. In addition to these previous site investigations carried out to the east of the gas main had not indicated significant levels of contamination.

2 No. of the validation samples showed elevated levels of TPHs. Two of those samples (B2A-V8 and B2B-V3) were in the natural ground and were taken from clay that showed no visual or olfactory evidence of contamination. These were not excavated further as they were within the natural clay and at depth, both greater than 2m bgl and therefore are not considered to be a source of contamination or a risk to future site users.

The location and level of each validation sampling point was measured and are indicated on VHE Drawing No. 477H_B3. A summary of the validation results including the

remediation criteria are summarised in Appendix E.1 and copies of the laboratory test certificates are included in Appendix E.8.

Areas A6 & B2 Infilling Summary

Infilling details are presented in Section 2.8.

2.4.7 Area B1 Infilled Gas Holder No.2

Area B1 Background

Area B1 is located in the southern area of the Site and comprises a 36m diameter, approximately 7m deep infilled former gasholder constructed of brick.

Site investigation works and historical information indicated that the gasholder had been backfilled with rubble and that this is not significantly contaminated. However, groundwater monitoring had identified elevated hydrocarbons, cyanide and ammonia in the perched groundwater within the structure. These impacts were assessed to pose an unacceptable risk to identified receptors and the dewatering of the former holder was therefore included in the remedial works.

Since the contamination had been identified in the groundwater and not the soils within the gasholder, the strategy adopted was to dewater the gasholder and then cap it with clay to minimise further infiltration by rainwater and surface run-off.

Area B1 Summary of Works

The material above the gasholder was excavated to 250mm below the top of the gasholder structure. This material was screened and stockpiled to be tested for potential re-use and the oversize material from the screening (greater than 50mm) was stockpiled for crushing.

A sump was excavated into the gasholder which eventually extended to the base of the gasholder approximately 7.0 mbgl. Perched groundwater was pumped out of the sump until the sump no longer recharged with water.

The material excavated from the sump was tested to confirm that it met the Remediation Criteria before being replaced in the sump following completion of the dewatering. A 250mm clay cap using SHW, Class 7J clay was placed over the gasholder in accordance with the specification.

A summary of the recorded excavation volumes of soils is presented below in Table 2.12.

Table 2.12 Area B1 Volume Summary

Total Excavation (m^3)	Materials Excavated		
	Disposed as Hazardous Waste (t)	Disposed as Non-Hazardous Waste (t)	Screened Material for reuse (m^3)
606	0	0	606

The vertical and lateral extent of the excavation is shown on VHE Drawing No. 130.

Area B1 Suitable Material Retained on Site

Material from the top of the gas holder was stripped and subsequently screened. The fines were stockpiled for testing and re-use and the oversize stockpiled for crushing.

Confirmatory chemical and geotechnical testing was then undertaken on each type of material to confirm compliance with the Remediation Criteria and geotechnical specification for re-use. A summary of the material quantity and volume is presented in Table 2.13 below.

Table 2.13 Area B1 Suitable Material

Stockpile Reference Identification.	Volume (m^3)	Material Description
SP4	606	Light brown sandy clay

A summary of the chemical test results from the stockpiled material is included in Appendix E.4 and chemical analysis test certificates are held in Appendix E.8.

A summary of geotechnical classification testing is included in Appendix F.1 and copies of geotechnical test certificates are included in Appendix F.4.

Area B1 Validation Summary

Following the strip of the gasholder validation sampling was carried out on the material below before the clay cap was placed.

The validation testing confirmed that levels of contaminants in the soils at the holder base were all below the corresponding Remediation Criteria.

The location and level of each validation sampling point was measured and are indicated on VHE Drawing No. 477H_B3. A summary of the validation results and corresponding Remediation Criteria are included in Appendix E.1 and copies of the laboratory test certificates are included in Appendix E.8.

Area B1 Infilling Summary

Infilling details are presented in Section 2.8.

2.4.8 Area B3 Benzene in BH103 and Free Product in BH201

Area B3 Background

BH103 had been monitored for a number of months prior to the commencement of the remediation works. During this monitoring recorded levels of benzene in this boreholes were significantly higher than in the boreholes on the rest of the Site. This identified it as potentially having a need for groundwater remediation during the rest of the remediation works.

Prior to the remediation works BH201 was monitored showing hydrocarbon free product floating on surface of the groundwater. If this free product was still evident during the remediation works it was considered that some form of remediation would be required.

Area B3 Summary of Works

During the remediation works monitoring of BH103 continued and elevated benzene levels were still recorded. Three additional boreholes (BH301, BH302, BH303) were drilled around BH103 to try to delineate the extent of the benzene plume. The additional boreholes are shown on Drawing No. 105

The additional boreholes, along with BH103, were monitored every two weeks during the remediation works. The additional boreholes did not indicate levels of benzene as high has those monitored in BH103. Instead, they all showed benzene at elevated levels similar to that monitored in the groundwater in the boreholes on the rest of the Site.

A programme of pumping out water from BH103 was carried out using a submersible pump for approximately 6 weeks. The water was pumped into the storage tank for water treatment works. During this period of pumping benzene levels did drop below laboratory detection limits although they rebounded after a short period (4 days) without pumping.

It was concluded that additional monitoring of the borehole would be undertaken as part of an ongoing groundwater monitoring programme on the Site, rather than any further treatment. The source of the benzene is not obvious and has not been confirmed and no visual or olfactory evidence of contamination was encountered during the drilling of BH103 or the additional boreholes around it. No pathway such as a pipe or drainage run was encountered during the remediation works that would indicate a possible source of benzene from another part of the Site.

Ongoing monitoring of BH201 indicated no free product present during the remediation works. No further remediation was carried out of BH201 as the source of the free product (hydrocarbon impacted gravels in Area B2) has been removed during the remediation of Area B2.

2.5 Water Treatment

Perched water was encountered within each of the main remediation works areas and was treated on site, prior to discharge to foul sewer under consent from Yorkshire Water. The water treatment plant comprised temporary storage tanks for primary settlement, 3-stage water/oil separators, sand filters and activated carbon filters.

Approximately 2,050m^3 of perched groundwater was pumped from remediation excavations to the water treatment plant. The treated water was disposed of to foul sewer under consent to discharge from Yorkshire Water with periodical sampling and analysis to show compliance with the discharge consent. Copies of the treated water sample analysis are presented in Appendix E.3.

2.6 Off-Site Disposal

2.6.1 Soils

Materials not suitable for on-site re-use were removed to suitably licensed facilities periodically over and throughout the works. Materials were transported using self-sheeting, eight-wheeler road lorries under appropriate duty of care and waste licensing guidelines.

The disposal is summarised below in Table 2.14 and full details are included in Appendix D.

Table 2.14 Disposal Summary

Site Name	Operator	EA Waste Management License No.	Accepted Waste Classification	Weighbridge Recorded Tonnage
Peckfield Landfill	Caird Bardon Ltd	BU9726IH	Non-hazardous	15,868.84
ICI No. 3 Landfill Teesport	Impetus	BV1917	Hazardous	2,051.94

2.7 CLUSTER Project

2.7.1 Material Management Plan

The Site was a donor site for the CLUSTER Project run in conjunction with CL:AIRE. The hub where the material was treated was located at the nearby NGPH site at Parkwood Road, Neepsend, Sheffield. The Materials Management Plan (MMP) for the project set out how the system worked and is briefly summarised below:

The MMP identified two types of contaminated materials on site:-

- Tar impacted soils
- Spent oxide impacted made ground

Material identified as suitable for treatment (bioremediation) at the hub site was segregated and stockpiled for confirmatory testing. The Hub site operator decided if the material was suitable for treatment from the chemical results.

In the MMP 500m^3 of material was identified prior to the works as potentially suitable for CLUSTER, 250m^3 from Area A6 and 250m^3 from Area A2.

The MMP also set out the material tracking system to be used so that the material that was sent to the hub could always be identified and returned to the Site following successful treatment.

2.7.2 Deviations to the Material Management Plan

Due to the higher than expected volume of spent oxide impacted materials and the less than expected volumes of coal tar impacted soils. The identification of 500m^3 of material suitable for treatment at the CLUSTER hub site was not possible.

Only material from Area A2 was identified as suitable. In total 280m^3 of material was identified as suitable for the CLUSTER Project. This was splint into two stockpiles 190m^3 suitable for treatment for re-use and 90m^3 suitable for treatment for declassification from Hazardous to Non-Hazardous for subsequent disposal.

2.7.3 Waste Management and Duty of Care

Prior to leaving site, haulage vehicles were issued with waste transfer notes. These notes identified the material carried by the vehicle, the materials waste classification, source of material and the location of the hub site receiving the waste. The hub operator issued a return of acceptance note detailing the weight of material disposed and confirming the waste classification and hub location. Collation of the documentation ensured that appropriate disposal of the waste had been carried out. This was in accordance with the MMP tracking system.

As part of the audit trail the registration numbers of the trucks and the time of leaving/arriving at the donor and hub sites were noted. This allowed a check to make sure the same material was leaving the donor site and arriving at the hub site and vice versa.

The waste management and duty of care documentation is be held by the Principal Contractor, VHE Construction plc, for a minimum of two years (three years for hazardous waste). For ease of reference a summarised daily record of this information is included in Appendix D.5.

Copies of receiving landfill permits are included in Appendix D.1 and licensed copies of hauliers licenses are included in Appendix D.2.

2.8 Environmental Monitoring

2.8.1 Dust

Dust samples were analysed on a weekly basis at four monitoring stations, one located on each of the Site boundaries. The locations of the monitoring stations are included on VHE Drawing No. 477H_004.

The Site threshold value for dust deposition of 200mg/m^2/day was significantly exceeded at one or more monitoring locations in two out of 26 weeks. In the event that the dust deposition threshold value was exceeded, the method of works and control methods were reviewed and modified accordingly. Dust monitoring records are presented in Appendix H.2.

A daily visual appraisal of dust deposited outside of the Site boundary indicated that any dust falling outside the Site boundary was not of sufficient quantity to cause a nuisance and dust control and suppression measures were considered satisfactory.

2.8.2 Air/Vapour

Vapour monitoring using a photo-ionisation detector (PID) was undertaken on a daily basis during active excavation periods and/or when contaminated material was stored on site. The PID unit was used for environmental monitoring at the Site boundaries in addition to spot readings of excavations, samples and site operations.

Within the Site boundary, the occupational health limit for benzene was exceeded on one occasion during direct monitoring of active remediation activities. In all instances of exceedence, appropriate personal respiratory equipment was issued and used to protect operatives from exposure to vapours.

In addition, odour control and odour masking systems were maintained along the sensitive boundaries of the Site during active excavation and treatment works.

The results of the air and vapour monitoring are presented in Appendix H.1.

2.8.3 Noise

Noise monitoring was undertaken throughout the works at sensitive boundaries of the Site in order to confirm that nuisance was not caused to surrounding site users due to construction noise from the Site. These results indicate that throughout the works, the ambient noise levels on site varied between 52.7 dBA and 78.1 dBA.

No complaints were received from off-site users regarding noise. The results of noise monitoring are presented in Appendix H.3

2.9 Infilling Works

2.9.1 General

Following the excavation and subsequent validation of excavations, backfilling was undertaken using a combination of processed site won recycled material, screened and off-site (CLUSTER) treated soils and imported fill. All fill was placed in accordance with the specification using the Specification for Highway Works (SHW) to determine placement criteria for the given compaction plant. Confirmatory in-situ density tests were undertaken to monitor the performance of the compaction method. In addition, a series of plate bearing tests were carried out on the final formation to assess the potential settlement characteristics of the fill.

2.9.2 Imported Materials

A summary of the imported material is provided in Table 2.15 below.

Table 2.15 Import Materials Summary

Import Source	Class of Material	Quantity Imported (Tonnes)
NGPH Site, Neepsend, Parkwood Road, Sheffield.	Class 6F2	7,248
John Owen (Aggregates) Ltd – Dinnington	Class 7J Clay	2,372
John Owen (Aggregates) Ltd	Type 1 Crush	2,698
John Owen (Aggregates) Ltd	Class 6F2	8,548

2.9.3 Classification of Materials

A summary of the geotechnical classification testing from each of the stockpiles of materials reused in the works including the earthworks classification is presented in Appendix F.1. The results of the testing were within the parameters set out in the specification.

A summary of the chemical testing carried out on imported material is included in Appendix E.2.

2.9.4 Clay Cut off Walls & Capping

A 1m wide low permeability clay cut off wall was constructed along the northern boundary between Wickes land and NGPH land running from north-west corner of the Site to the Eastern edge of Area A8 using SHW Class 7J imported clay. The wall was varied in depth between 1.5 m to 3 m and keyed at least 250mm into the natural clay at the bottom. The purpose of the cut-off wall was to minimising the risk of hydrocarbon impacted soils observed locally at the boundary from migrating back into the remediated area.

A 1m wide low permeability clay cut off wall was constructed using SHW Class 7J imported clay along the eastern boundary of the Area A6/B2 excavation to minimise the risk of any visually hydrocarbon contaminated soils impacting on the clean backfill. This extended the full 4 metre height of the excavation and was keyed at least 205mm into the natural clay.

A 1m thick clay barrier layer was placed in the base of Area A1 to minimise the risk of any potentially contaminated groundwater from entering the structure and contaminating the clean backfill placed inside the structure.

The location of the cut off wall is shown on VHE Drawing No. 477H_B7.

2.9.5 Compliance Testing

Following placement and compaction of every 4 layers of cohesive fill material, in-situ density was measured using Sand Replacement Tests (SRTs) by a UKAS accredited testing contractor, 1 test every 250m^2.

In addition, plate bearing tests were undertaken on the final formation to assess the settlement characteristics of the placed fill. The results of the testing were within the parameters set out in the specification.

The results of the in-situ testing is summarised in Appendices F.2 and F.3. The recorded co-ordinates and reduced level of the geotechnical validation tests are shown on VHE Drawing No. 477H-B3.

2.10 Supervision and Management of Works

The following parties were involved with the design, management and implementation of the works:

- WYGE were appointed as Engineer for the Works. to NGPH to provide environmental engineering services associated with design and supervision of the remedial works.
- The Principal Contractor for the Works was VHE Construction plc
- The CDM Coordinator for the Works was RSK Limited.
- The Cost Consultant was Davis Langdon.
- Public Relations were managed by Lynx PR Limited.

Contact details are presented in the project directory contained in Section 6.0.

2.11 Quality Assessment

2.11.1 Laboratory Testing

A copy of the laboratory quality assurance and quality control (QA/QC) procedures has been obtained from STL and is included in Appendix E.7.

Assessment of the supporting QA/QC documentation for the laboratory analyses shows that the work was undertaken within generally acceptable parameters and under appropriate quality conditions.

Confirmation has been obtained from the laboratory (copy of letter included in Appendix E.7.) that all the testing undertaken was carried out within the prescribed acceptance criteria and tolerances. In addition, a full set of Shewhart charts for all substances analysed is also included in Appendix E.7

2.11.2 Waste Management and Duty of Care

Prior to leaving site, haulage vehicles were issued with waste transfer notes. These notes identified the material carried by the vehicle, the materials waste classification, source of material and the location of the landfill site receiving the waste. The landfill operator issued a return of acceptance note detailing the weight of material disposed and confirming the waste classification and landfill location. Collation of the documentation ensured that appropriate disposal of the waste had been carried out.

Registration numbers of the trucks were noted at the gate and spot checked against the landfill operator's weighbridge records as an audit check to track trucks from site to landfill.

The waste management and duty of care documentation is be held by the Principal Contractor, VHE Construction plc, for a minimum of two years (three years for hazardous waste). For ease of reference a summarised daily record of this information is included in Appendix D.5.

Copies of receiving landfill permits are included in Appendix D.1 and licensed copies of hauliers licenses are included in Appendix D.2.

2.12 Ongoing Groundwater Monitoring

The Remediation Strategy for the Site requires that a programme of groundwater monitoring is undertaken on completion of the remediation works in order to confirm that the levels of contamination in the groundwater are reducing as a result of the source removal.

A programme of groundwater monitoring is being undertaken on a monthly basis for six months to assess the effect the remediation of the Site has had on the groundwater, the monitoring started in May 2008. The agreement of the Environment Agency will be sought in this respect.

During each round, chemical analysis is being carried out on samples taken from 17No. boreholes, 3No. river locations, 1No. duplicate sample and 1No. trip blank samples (one per couriered round). During the remediation works a number of the boreholes previously monitored were destroyed. It may be necessary to install new boreholes to replace those that were lost particularly along the northern and western boundary to attain groundwater chemistry data upstream of the remediation areas.

2.13 Final Site Conditions

2.13.1 Target Levels Achieved

Based on an assessment of the validation analytical results, the Site remediation works have generally achieved the Remediation Criteria within the remaining made ground and within the natural ground.

Exceptions are the samples detailed in Section 2.4 that have exceeded the Remediation Criteria. These are at the following locations:

The following samples were taken at the Site boundary see Sections 2.4.4 and 2.4.5 respectively fro details.

- 1 No. sample on the northern boundary in Area A3;
- 1 No. sample on the western boundary in Area A4

The following samples were taken from natural clay at a depth greater then 2 m bgl, see Section 2.4.6 for details.

- 2 No. samples in the natural clay in Area B2A and B2B

Residual contamination may be present below the PRS compound and within the 3m easement of the live gas main. Excavation was not undertaken in these areas due to the proximity of live services. These areas are not considered to present a risk as historical site investigation works and window sampling carried out around the PRS station do not indicate significant contamination in these areas.

Further investigation and assessment should be carried if there is any proposed change in use of these areas.

The Site is now considered to be suitable for the end uses as defined in Section 1.2 of this document.

2.13.2 Site Progress Report

A selection of photographs recording the progress of the works is contained within Appendix A.

2.14 Regulatory and Statutory Body Involvement

The Environment Agency (EA) and the Contaminated Land Officer at Barnsley Metropolitan Borough Council (BMBC) were consulted during the design of the project and the representatives from the EA and BMBC visited the Site on two occasions during the works.

Correspondence between these parties and WYGE regarding the works is presented in Appendix B.

Further consultation on groundwater impacts will be undertaken with the EA (see Section 2.11).

2.15 Development Issues

Potential on-site constraints to further development include:

- Differential settlement: Imported and recycled materials were placed in accordance with a method specification for an engineering fill. However, differential settlement should be anticipated between shallow and deep backfilled excavations due to the varying depth of excavations and variation in geotechnical characteristics of the placed fill material used during the remedial works. In the remediation areas lying beneath the proposed highway, imported quarried granular fill (Class 6F2) was used to backfill the excavations in order to minimise differential settlements. The locations and thickness of the imported granular material are given on VHE Drawing No. 477H_B6.
- Relic structures: Several concrete and brick sub-structures (e.g. gasholder walls and bases, mass concrete foundations and buried structures) remain below 1.5m of the final ground level at the locations given on VHE Drawing No. 477H_B2.
- Services: Live gas, electric, water and telecommunication services and drainage on and adjacent to the Site will pose constraints to future developments as detailed in Section 3.0.
- Operation National Grid PRS Compound is present in the south west of the Site. Any future development will have to allow access to this compound.
- A significant colony of Daubenton bats is understood to occupy the northern end of the culvert which runs down the western boundary of the Site. It is understood that the bats roost in a void associated with a former manhole situated beneath the main site entrance but they do not appear to use the roost during winter months which it is as risk from flooding. A copy of the Eric Bennett Consultancy Report is included in Appendix I.
- The southern half of the eastern area of the Site is subject to a Tree Preservation Order which extends along the southern boundary of the Site (along the River Dearne) up to the western boundary.
- During the Site walkover by a WYGE ecologist, a badger sett was discovered in the south eastern area of the Site within the TPO.
- Japanese Knotweed and Giant Hogweed are still present on the Site, they were removed where they were growing within the remediation areas. See Drawing No. 106 for the location of invasive weeds before the remediation. It is recommended that an ecological survey is carried out before any future development to identify any remaining invasive weeds the Site or any creep of these invasive weeds from neighbouring properties on to the Site.
- Ongoing groundwater monitoring or treatment should an extended period of monitoring or treatment be required following completion of the proposed six month monitoring period.

3.0 ESSENTIAL WAYLEAVES AND SERVICES

No details pertaining to wayleaves have been obtained which occur on the Site and it is not clear what wayleaves for the identified services and operational compound have been formally granted.

- The PRS compound in the south-west corner of the Site (24 hour access is required to be maintained afforded by the access road from Old Mill Lane entrance – See 2.13).
- Live 18" Medium Pressure below ground gas main which loops round the southern edge of Area B1 and then through the eastern part of the Site running in a northern direction to the east of Area A1.
- A Low Pressure Gas Pipeline runs from the PRS compund around Gasholder No.2 over the River Dearne to the operational gasholder beyond the southern boundary.

In any future development works access must be maintained to these facilities. The developer should appoint an appropriately qualified planning supervisor to oversee any future works.

4.0 HEALTH, SAFETY AND ENVIRONMENTAL MATTERS

All method statements produced by VHE Construction plc were forwarded to RSK Ltd for assessment and approved by WYGE.

A summary of all accidents and incidents recorded during the works are presented below in Table 4.1

Table 4.1 Reported Accidents and Incidents

Date	Nature of Incident	Summary
19.10.07	Minor Incident – No Injury	VHE Excavator carrying a bucket damaged when the bucket bounced off into the cab while machine was tracking.
18.01.08	Near Miss	Archaeologist walking across exposed wall of cross boundary tank adjacent to standing water.

Table 4.2 Complaints

Date	Complainant	Summary
22.10.07	Public via BMBC	Anonymous call to BMBC complaining about excessive odour. EHO visited site but not overly concerned and stated that the complaint was from a 'serial complainant'.
23.10.07	Public via HSE	Anonymous call to the HSE alleged that "Toxic materials were being left on site uncovered and exposed to the elements, this being of more concern due to the proximity of the local school". VHE contacted HSE via e-mail explaining the operations no further action taken by the HSE.
02.11.07	Public via EA	Anonymous call to EA alleged that the Site operations were allowing contaminated material/liquid discharge into the adjacent River Dearne causing gross pollution. Site visited by EA river inspected with no visual evidence of contamination noted. EA declined the offer of a full site tour to inspect works.

A copy of the Final Factual Post Remediation Verification Report will be forwarded to RSK Ltd for incorporation into the Health and Safety File.

5.0 WARRANTIES

White Young Green Environmental Ltd. and VHE Construction plc provide the warranties stipulated within the Contract documents.

WYGE warrant that they have exercised all due care in the design and supervision of the Remediation Works on the basis of a proposed end use as a Commercial/Industrial development with predominantly hardstanding and open space area without public access, based on the information obtained during their site investigations.

Under the terms of the contract, VHE Construction plc provide a maintenance period of 12 months from the date of completion of the Works (7th March 2008 to 7th March 2009).

6.0 CONTACT ADDRESSES AND LICENSE DETAILS

	Company and Contacts	Address	Telephone No.
CLIENT	**National Grid Property Holdings Ltd** David Oram (Regeneration Manager)	National Grid House Warwick Technology Park Gallows Hill Warwick CV34 6DA	01926 654707 (t) 07884 475641 (m)
ENGINEER	**White Young Green Environmental Ltd** Marc Davies (Project Director) Patricia Gill (Project Manager) Andrew Priestley (Resident Engineer)	Arndale Court Headingley Leeds LS6 2UJ	0113 278 7111 (t) 0113 275 0623 (f)
CONTRACTOR	**VHE Construction plc** Steve Stiff (Contract Manager) Jason Conn (Site Agent) Mark Goldsworthy (QS)	Phoenix House Hawthorn Park Coal Road Leeds LS14 1PQ	0113 273 9200 (t) 0113 273 9201 (f)
COST CONTROLLER	**Davis Langdon** Colin Hargreaves	Cunard Building Water Street Liverpool L3 1JR	0151 236 1992 (t) 0151 227 5407 (f)
PLANNING SUPERVISOR	**RSK ENSR/Shear Ltd** Clive Langham	RSK ENSR Shear Ltd 1 Brunel Court Rudheath way Gabrook Park Northwich Cheshire CW9 7LP	01606 352253 (t) 01606 352883 (f)
NATIONAL GRID PUBLIC RELATIONS	**Lynx PR** Andrew Vaux		0113 239 3535 (t) 0113 236 1606 (f)
REGULATORS	**Barnsley Metropolitan Council** **Development Control/Planning Services** Matthew Woodward **CLO** John Scott **Environment Agency** Hydrogeology Jerome Barton	 Regulatory Services Barnsley MBC PO Box 602, Barnsley S70 9FB Pheonix House, Leeds	 01226 772587 01226 772456
SERVICES	**Northern Gas Networks** **Chris Bates**	National Grid Effingham Street Sheffield S4 7YP	07980 273319
TESTING LABORATORIES	**STL** **PSL** **AES**	Raynor House 80 Lockhurst Lane Coventry CV6 5PZ 5/7 Hexthorpe Road Doncaster DN4 0AG Northumberland Dock Road Wallsend Newcastle upon Tyne Tyne & Wear NE28 0QD	0247 6584800 0870 240 1964 0870 320 4567

	Company and Contacts	Address	Telephone No.
LANDFILL OPERATORS	**Impetus Waste Management**	ICI (No. 3) Teesport Grangetown, Middlesbrough Cleveland TS6 6UG	**Permit No. BV1917**
	Caird Bardon Ltd	Ridge Road Micklefield Leeds LS25 4DW	**Permit No. BU9726IH**
CLUSTER Hub Site NGPH Site, Parkwood Road, Neepsend.	**VHE Construction plc** Steve Stiff (Contract Manager) Jason Conn (Site Agent) Mark Goldsworthy (QS)	Phoenix House Hawthorn Park Coal Road Leeds LS14 1PQ	0113 273 9200 (t) 0113 273 9201 (f)
WASTE HAULIERS	**Hargreaves (UK) Services Ltd**	West Terrace Esh Winning Durham Co. Durham DH7 9PT	**License No. YNA/840527/CB**
SUB-CONTRACTORS	**ARCUS**	Unit R6, Riverside Block, Sheaf Bank Business Park, Prospect Road, Sheffield, S2 3EN, UK	0114 222 5101

7.0 REFERENCES

National Grid Property Holdings Limited, 2002: Guidance for Assessing Potential Contamination on Former Gas Works and Associated Sites (Version 3.0), April 2003

National Grid Property Holdings Limited: Core Remediation Specification, ref. 11867/OR/01Irev-1 Revision I, November 2006

British Standards BS 10175 (2001) "Investigation of Potentially Contaminated Sites - Code of Practice".

British Standard BS 5930 (1999) "Code of practice for site investigations".

Contaminated Land Regulations, 2000.

Contaminated Land Exposure Assessment (CLEA): CLR 7 "Assessment of risks to human health from land contamination: an overview of the development of guideline values and related research", March 2002.

BS 1377: Part 1: 1990, Methods of test for soils for civil engineering purposes Part 1.

WYGE Supplementary Specification to National Grid Property Holdings Limited Core Specification (Rev I), Old Mill Lane, Barnsley. Report Ref: E7773-SS-V1 (September 2007)

WYGE Remediation Strategy Report, Old Mill Lane, Barnsley Ref: E7773RS-V3 (August 2007)

WYGE Detailed Quantitative Risk Assessment Report, Old Mill Lane, Barnsley Report Ref: E7773-DQRA-Issue 1 V2 (April 2007)

WYGE Ground Investigation 2007 Factual, Old Mill Lane, Barnsley Report ref: E7773-ADD207GIFACT-Issue 1 (August 2007).

WYGE Ground Investigation 2006 Factual Report, Old Mill Lane, Barnsley ref: E7773-GIFACT2006-Issue1 (Sept 2006)

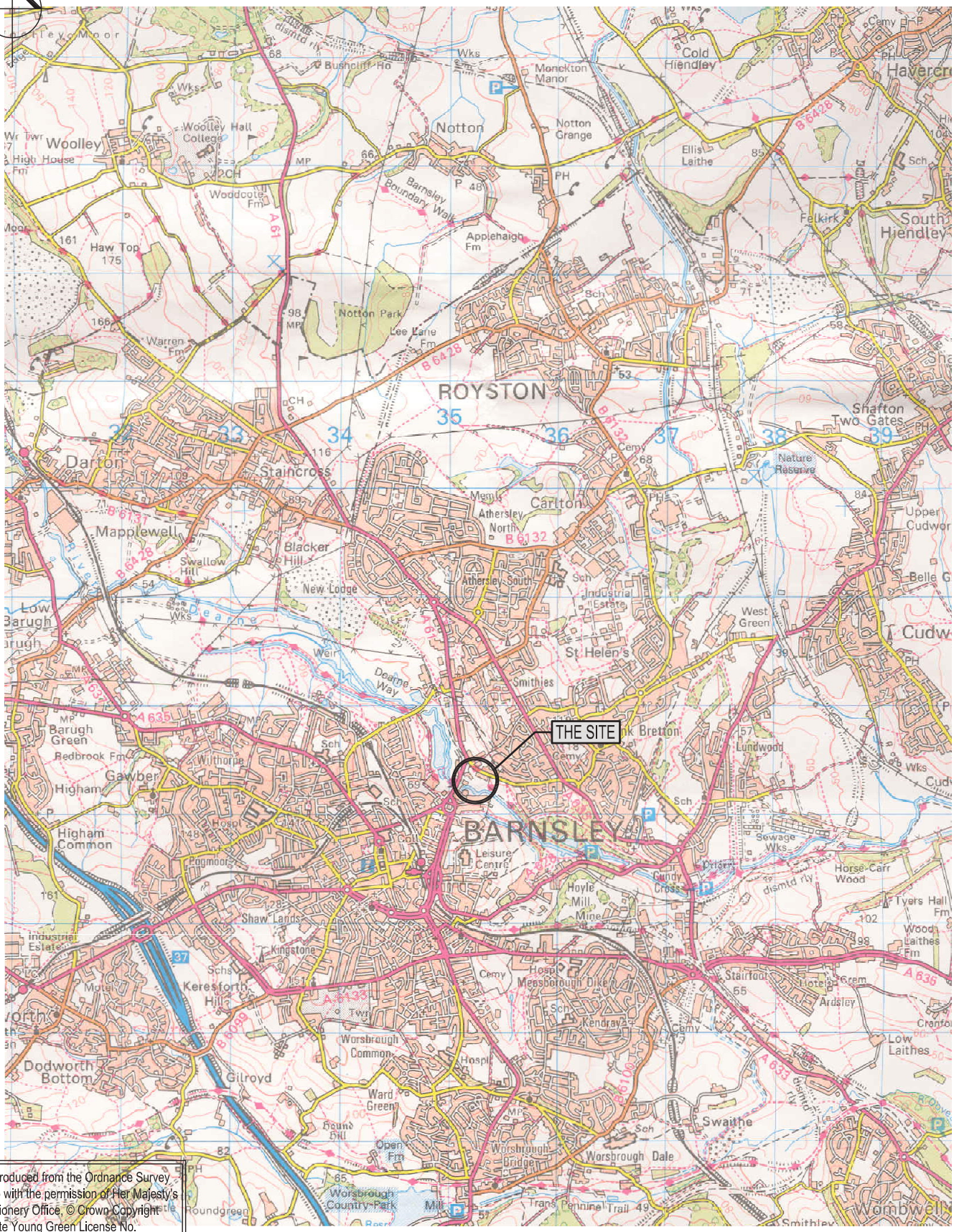
WYGE Additional Ground Investigation - Remediation Phase Factual Report, Old Mill Lane, Barnsley Ref: E1297- AdditionalGIFACT-Issue 1 (October 2003).

WYGE Ground Investigation Factual Report, Old Mill Lane, Barnsley – Ref: 21306/GI/F (June 1998)

White Young Ground Investigation Factual Report, Old Mill Lane, Barnsley – 1996

British Gas East Midlands Scientific Services (BGEM) Site Investigation Report – 1991

DO NOT SCALE: Contractor to check all dimensions and report any omissions or errors



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Rev	Description	By	Chk	App	Date

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Fax: 0113 275 0623
e-mail: enviro.leeds@wyg.com

White Young Green

Environmental

Civil Electrical Environmental Health & Safety Highways Management Services Mechanical Rail Structural Town Planning Transportation

Project: E7773

OLD MILL LANE
BARNSLEY

Client:

NATIONAL GRID PROPERTY HOLDINGS LTD

Drawing Title:

SITE LOCATION PLAN

Scale at A4	Drawn By	Date	Checked By	Date	Approved By	Date
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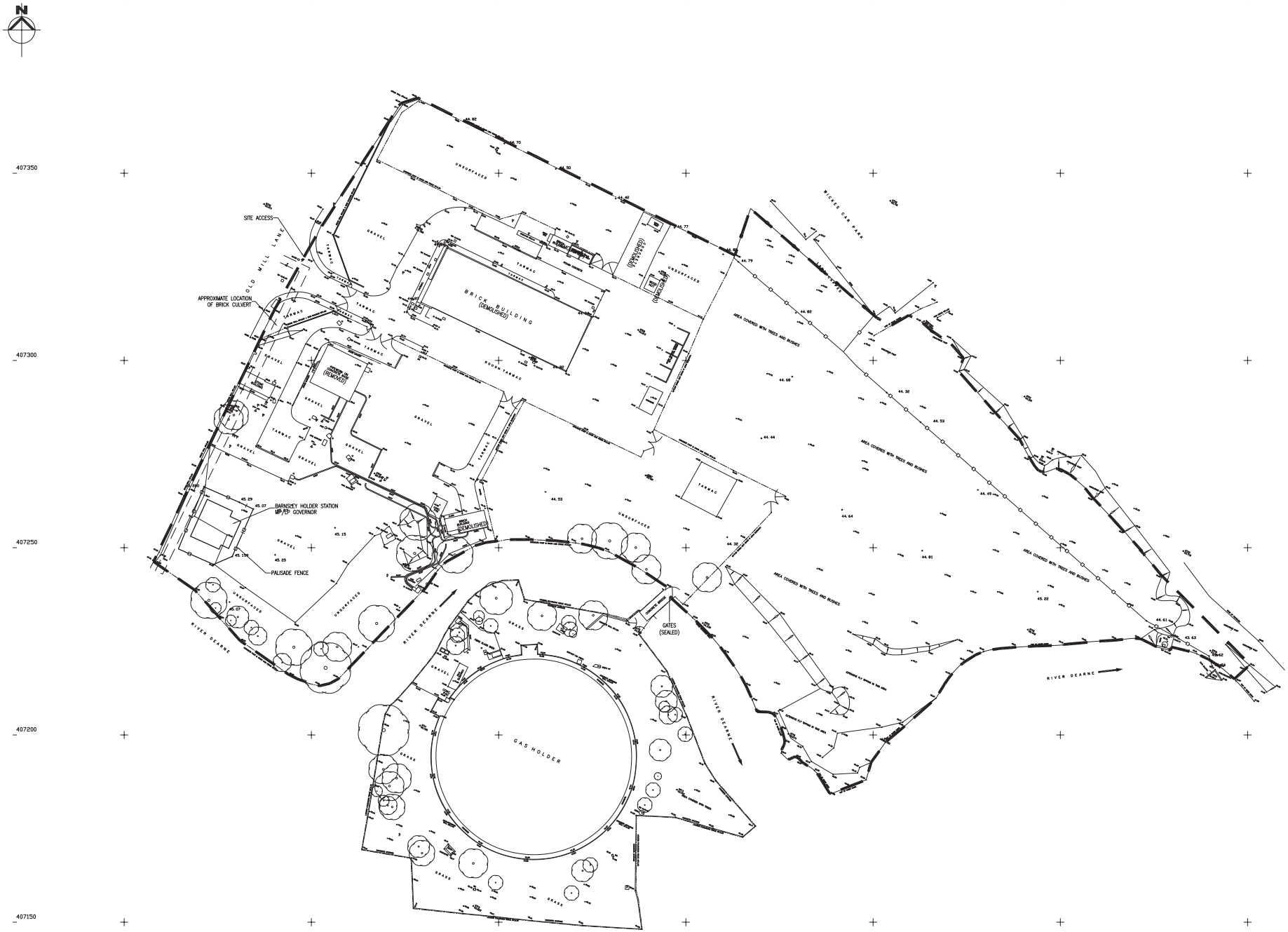
Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	101	

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KEY

SITE BOUNDARY



Rev	Description	By	Chk	App	Date
C	SITE BOUNDARY UPDATED TO REFLECT OWNERSHIP	PMC	AP	PG	08.08.08
B	PALISADE FENCE ACROSS NORTHERN BOUNDARY MOVED TO SURVEYED LOCATION	PMC	SAR	PG	15.06.07
A	SITE BOUNDARY AMENDED TO OWNERSHIP BOUNDARY	PMC	MM	PG	11.06.07

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OLD MILL LANE
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Drawing Title:

SITE LAYOUT PLAN

Scale at A1	Drawn By	Date	Checked By	Date	Approved By	Date
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Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	102	C

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KEY

SITE BOUNDARY

STANNINGLEY ENG. Ltd. SERVICES KEY

- Dead Gas Mains
- Live LP Gas Mains (below ground)
- Live IP(2-7 bar) Gas Mains (below ground)
- Electric Line
- Telephone Cables
- Buried Water Supply
- Culvert
- STANNINGLEY ENG.TRIAL EXCAVATION

IMPORTANT NOTE

THE SERVICE LOCATIONS SHOWN ON THIS DRAWING ARE BEST AVAILABLE INFORMATION AT JANUARY 2003 AS PROVIDED BY STANNINGLEY ENGINEERING LTD HAVING BEEN DETERMINED BY CONSULTATION, CONSTRUCTION DRAWINGS, SITE SURVEYS AND USING SERVICE LOCATING EQUIPMENT.
WHERE DIMENSIONS HAVE BEEN USED THESE HAVE BEEN DETERMINED BY USE OF SERVICE LOCATION EQUIPMENT AND BY TRIAL EXCAVATIONS.
LOCATIONS OF EX. GAS WORKS STRUCTURES ETC. HAVE BEEN OBTAINED THROUGH HISTORICAL RECORDS.
CARE STILL TO BE TAKEN DURING ANY SITE INVESTIGATION WORK DUE TO THE POSSIBILITY OF UNPROVEN SPUR/BRANCH CONNECTIONS HAVING NOT BEEN ESTABLISHED.

THE POSITION AND DEPTHS OF APPARATUS SHOWN ON THIS PLAN HAVE BEEN OBTAINED FROM THIRD PARTIES AND ARE APPROXIMATE ONLY. THIS PLAN MUST NOT BE RELIED UPON IN THE EVENT OF EXCAVATIONS OR OTHER WORKS UNDERTAKEN ON SITE. THE EXACT LOCATION AND DEPTHS SHOULD BE OBTAINED BY HAND EXCAVATION TRIAL HOLES.

Rev	Description	By	Chk	App	Date
C	SITE BOUNDARY UPDATED TO REFLECT OWNERSHIP	PMC	AP	PG	08.08.08
B	SITE BOUNDARY AMENDED TO OWNERSHIP BOUNDARY. 18" ST M/P GAS MAIN MOVED TO SURVEYED LOCATION DELINEATED BY HAND PITTING	PMC	SAR	PG	15.06.07
A	COLOUR OF IP GAS MAIN ALTERED FOR CLARITY	PMC	PG	MKD	01.03.07

Client:
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Project: E7773

OLD MILL LANE
BARNSLEY

Drawing Title:
SERVICE LOCATION PLAN

Scale at A1	Drawn By	Date	Checked By	Date	Approved By	Date
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Project No.	Office	Type	Drawing No.	Revision
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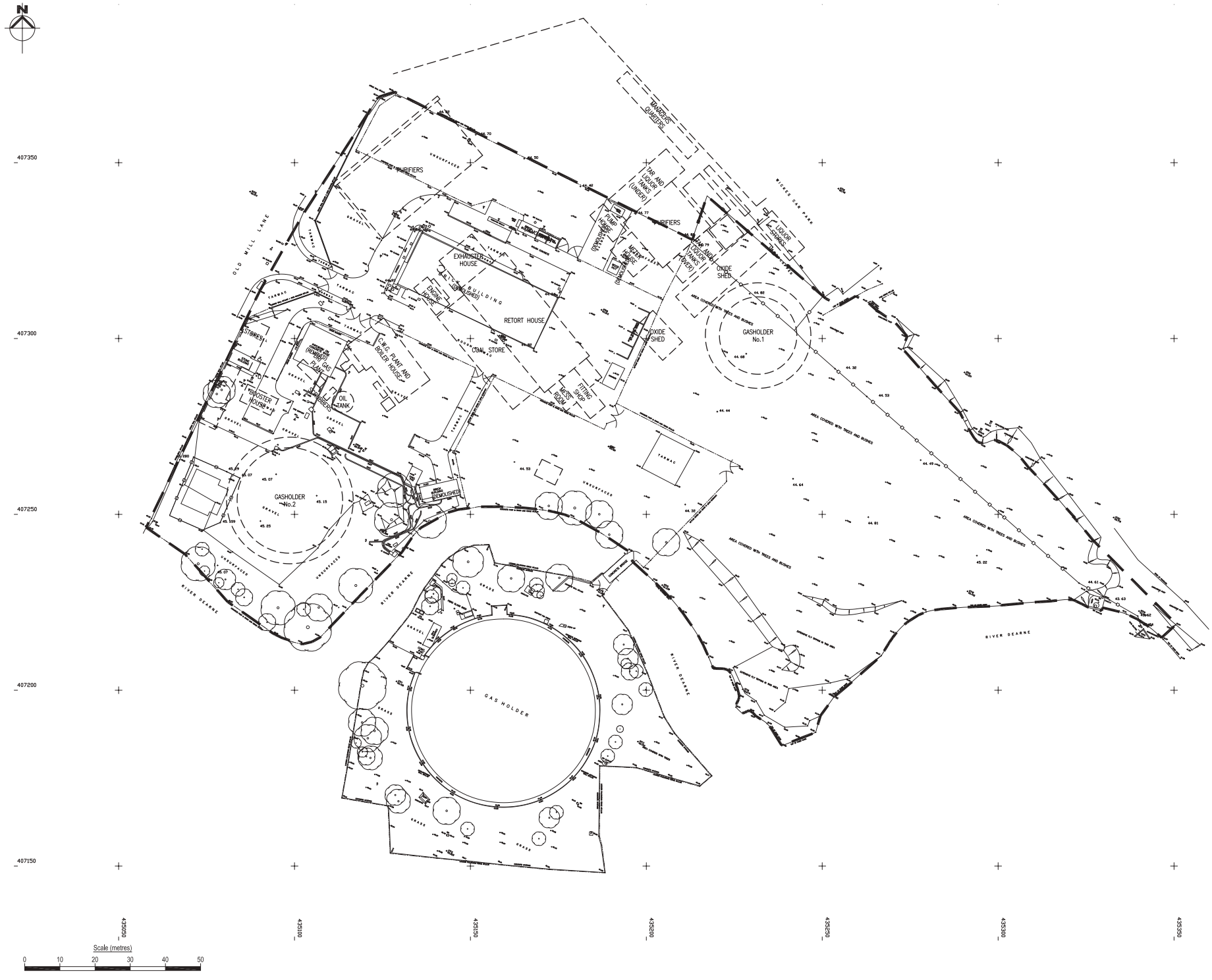
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KEY

SITE BOUNDARY

HISTORICAL LAYOUT



Rev	Description	By	Chk	App	Date
B	SITE BOUNDARY UPDATED TO REFLECT OWNERSHIP	PMC	AP	PG	08.08.08
A	SITE BOUNDARY AMENDED TO OWNERSHIP BOUNDARY. PALISADE FENCE MOVED TO SURVEYED CO-ORDINATES	PMC	MM	PG	11.06.07

Client:

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Project: E7773

OLD MILL LANE
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Drawing Title:

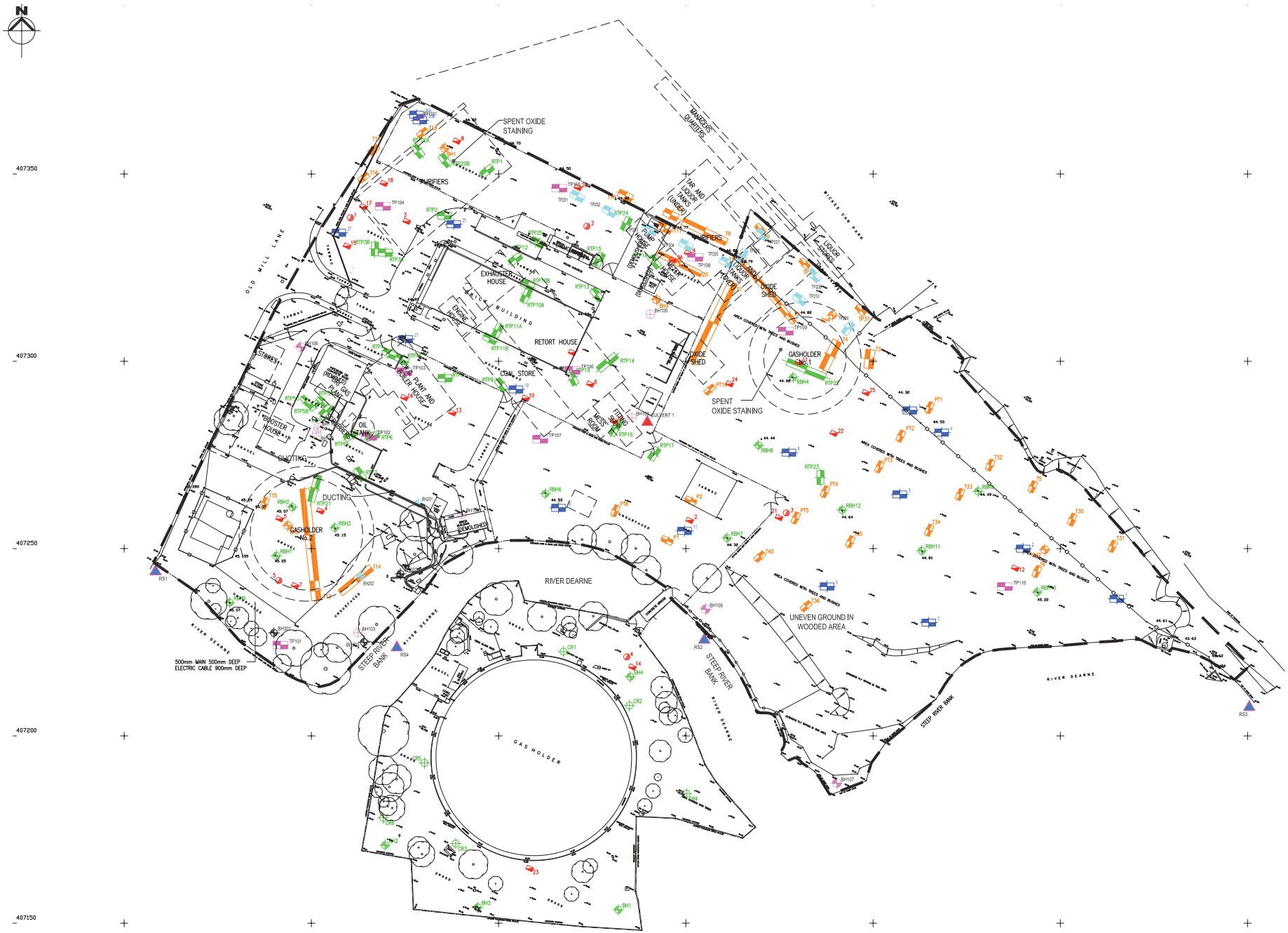
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Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	104	B

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KEY

SITE BOUNDARY

HISTORICAL LAYOUT

WYGE HISTORICAL SITE INVESTIGATION

LOCATION OF TRIAL PIT – 2002

LOCATION OF BOREHOLE – 2002

LOCATION OF TRIAL PIT – 1998

LOCATION OF BOREHOLE – 1998

LOCATION OF TRIAL PIT – 1996

LOCATION OF BOREHOLE – 1996

BRITISH GAS EAST MIDLANDS (BGEM) HISTORICAL SITE INVESTIGATION

LOCATION OF EXCAVATION

WYGE SITE INVESTIGATION (MARCH – JULY 2006)

LOCATION OF TRIAL PIT

LOCATION OF WINDOW SAMPLE

LOCATION OF BOREHOLE

LOCATION OF RIVER SAMPLE

LOCATION OF CULVERT SAMPLE

WYGE SITE INVESTIGATION MAY 2007

LOCATION OF TRIAL PIT

LOCATION OF BOREHOLE

WYGE SITE INVESTIGATION NOVEMBER 2007

LOCATION OF BOREHOLE

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D	NOVEMBER 2007 WYGE SI ADDED. SITE BOUNDARY UPDATED TO REFLECT OWNERSHIP	PMC	SAR	PG	08.08.08
C	MAY 2007 SI MOVED TO SURVEYED CO-ORDINATES. PALISADE FENCE MOVED TO SURVEYED CO-ORDINATES.	PMC	SAR	PG	15.06.07
B	BOUNDARY AMENDED, MAY 2007 SI ADDED	CM	SR	PG	07.06.07
A	RS 4 & CULVERT 1 ADDED	CM	MJM	PG	05.03.07

Client:

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Civil Electrical Environmental Health & Safety Highways Management Services Mechanical Rail Structural Town Planning Transportation

Project: E7773

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BARNSLEY

Drawing Title:

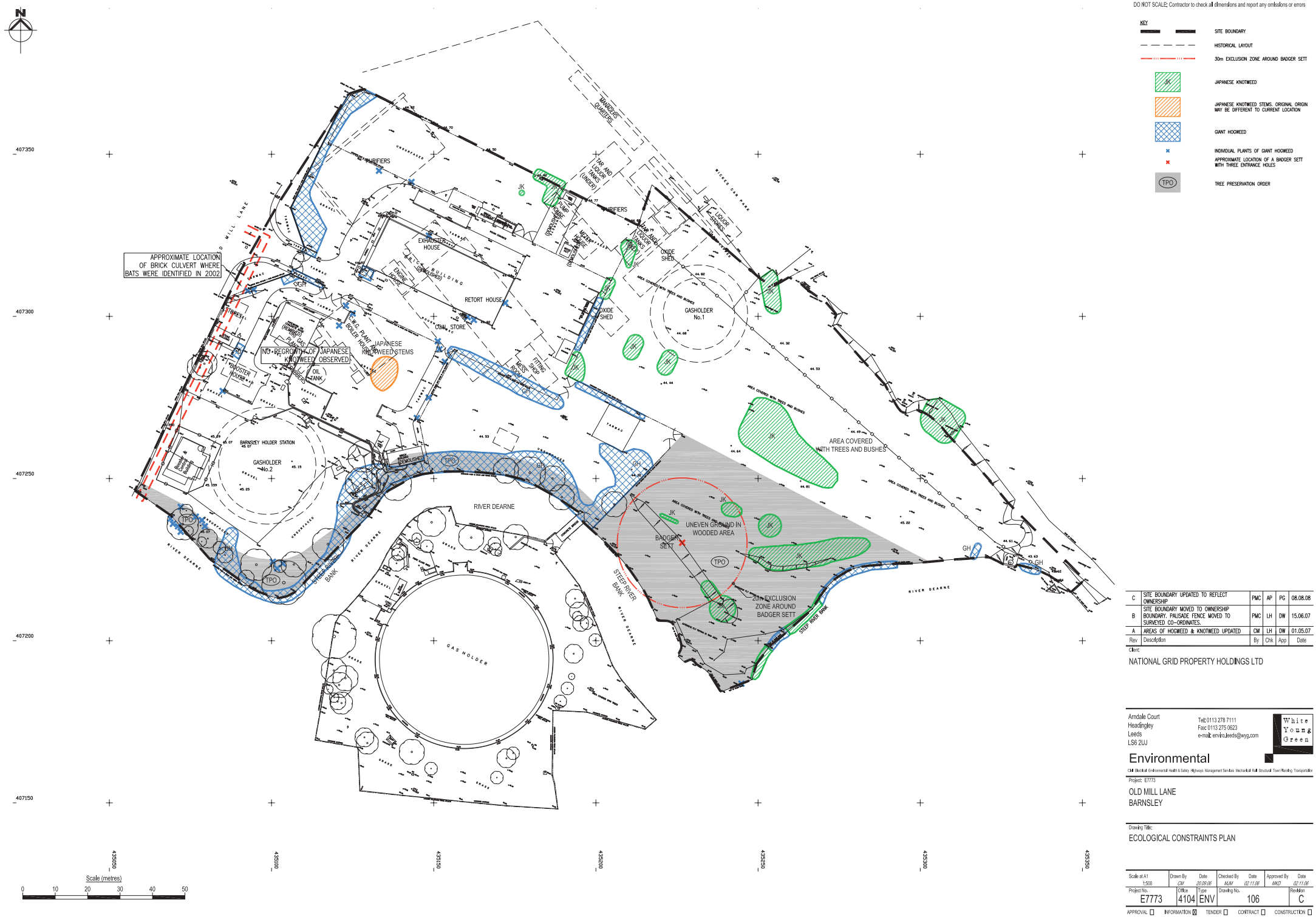
EXPLORATORY HOLE LOCATION PLAN

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Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	105	D

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Rev	Description	By	Chk	App	Date
C	SITE BOUNDARY UPDATED TO REFLECT OWNERSHIP	PMC	AP	PG	08.08.08
B	SITE BOUNDARY MOVED TO OWNERSHIP BOUNDARY. PALISADE FENCE MOVED TO SURVEYED CO-ORDINATES.	PMC	LH	DW	15.06.07
A	AREAS OF HOGWEED & KNOTWEED UPDATED	CM	LH	DW	01.05.07

Client:
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White Young Green
Environmental
Civil Electrical Environmental Health & Safety Highways Management Services Mechanical Rail Structural Town Planning Transportation

Project: E7773

OLD MILL LANE
BARNSLEY

Drawing Title:
ECOLOGICAL CONSTRAINTS PLAN

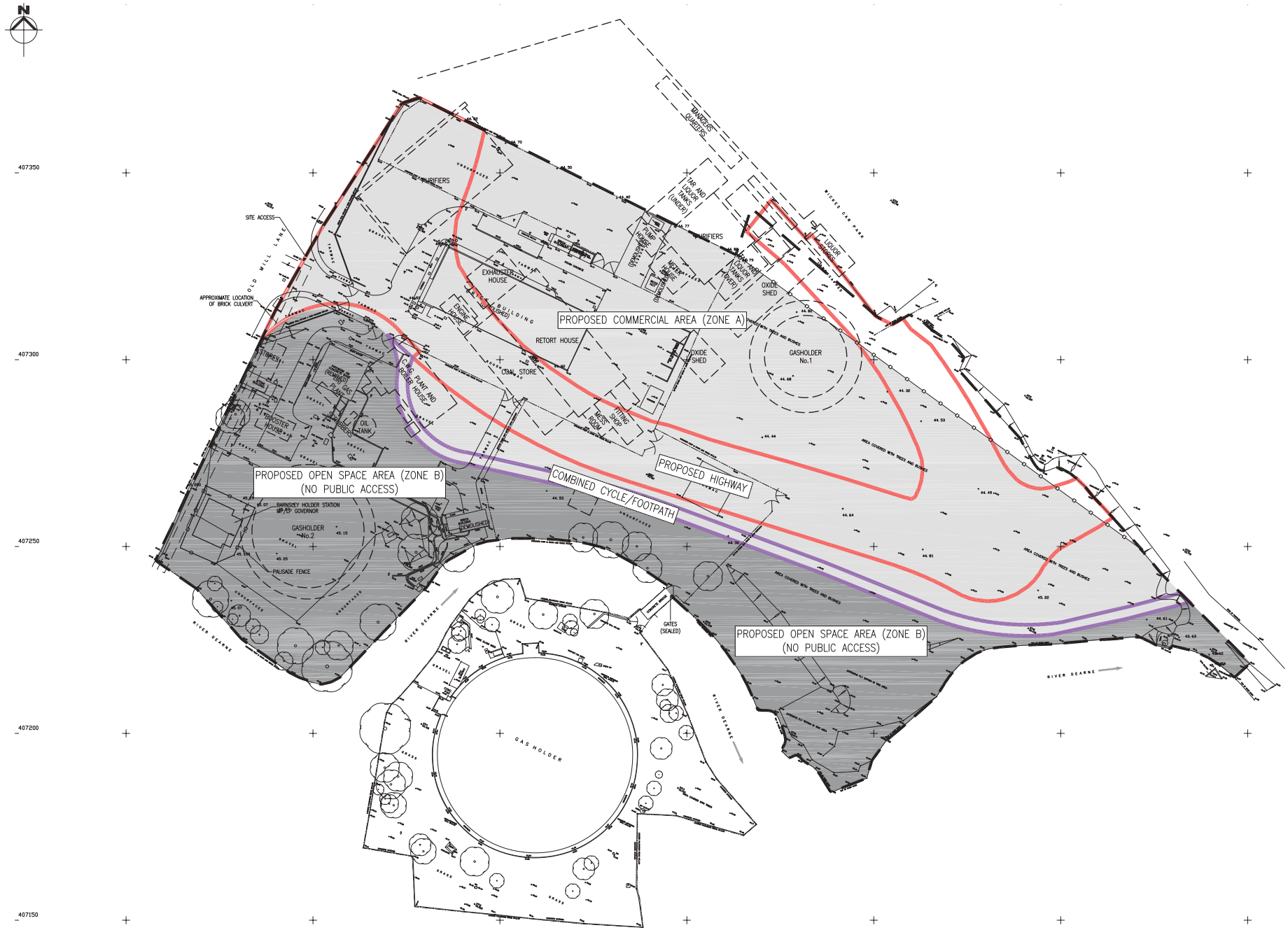
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E7773	4104	ENV	106	C

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B	ROAD LAYOUT UPDATED	CM	AP	PG	08.08.07
A	SITE BOUNDARY AMENDED TO OWNERSHIP BOUNDARY	PMC	MM	PG	11.06.07

Client:
NATIONAL GRID PROPERTY HOLDINGS LTD

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White Young Green
Environmental
Civil Electrical Environmental Health & Safety Highways Management Services Mechanical Rail Structural Town Planning Transportation

Project: E7773

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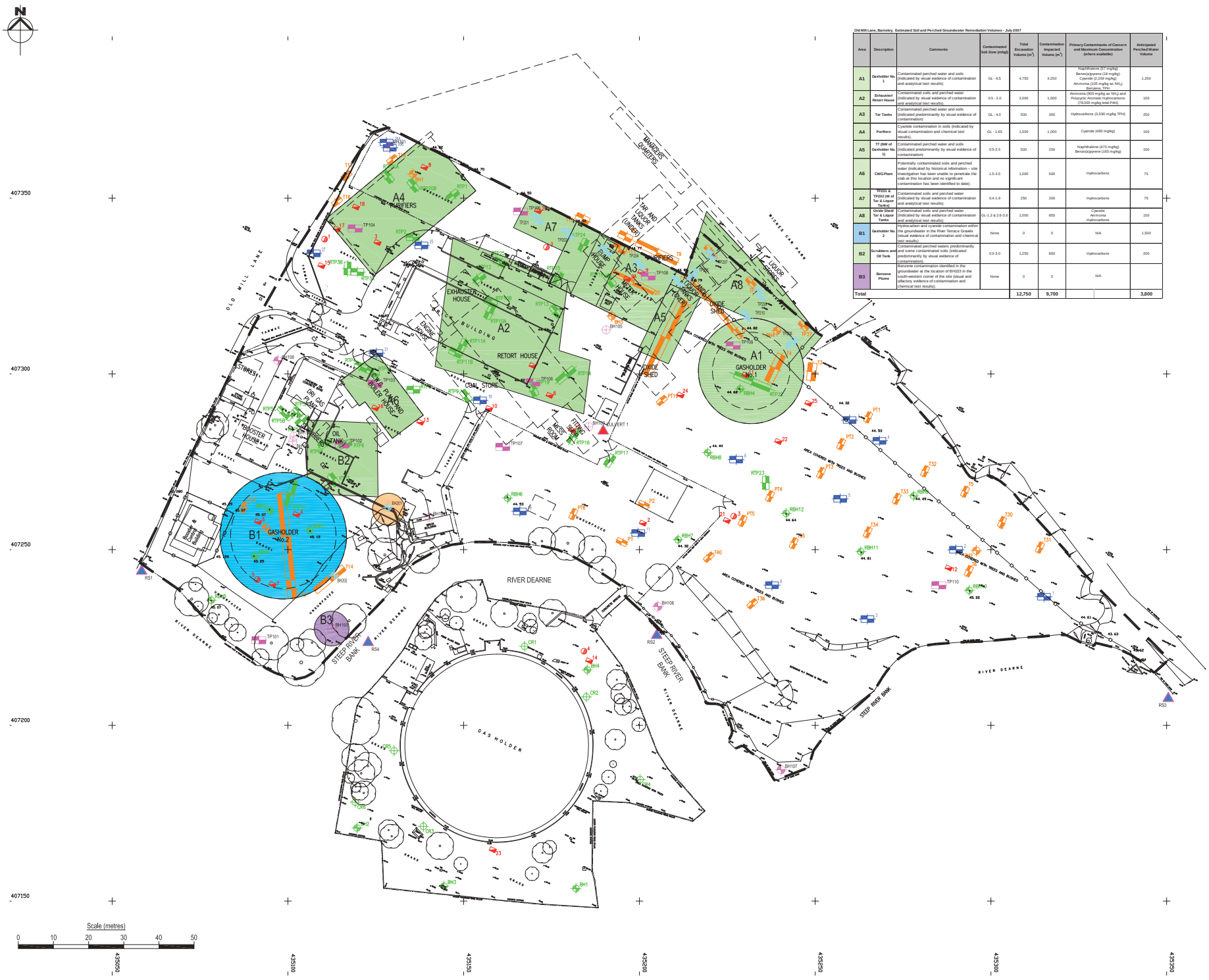
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SITE LAYOUT PLAN INCLUDING ZONES & PROPOSED END USE

Scale at A1	Drawn By	Date	Checked By	Date	Approved By	Date
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Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	107	C

APPROVAL ☐ INFORMATION ☒ TENDER ☐ CONTRACT ☐ CONSTRUCTION ☐

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Old Mill Lane, Barnsley. Estimated Soil and Perched Groundwater Remediation Volumes - July 2007

Area	Description	Comments	Contaminated Soil Zone (mbgl)	Total Excavation Volume (m^3)	Contamination Impacted Volume (m^3)	Primary Contaminants of Concern and Maximum Concentration (where available)	Anticipated Perched Water Volume
A1	Gasholder No. 1	Contaminated perched water and soils (indicated by visual evidence of contamination and analytical test results).	GL - 6.5	4,750	4,250	Naphthalene (57 mg/kg) Benzo(a)pyrene (18 mg/kg) Cyanide (2,245 mg/kg) Ammonia (105 mg/kg as NH_3) Benzene, TPH	1,250
A2	Exhausters/ Retort House	Contaminated soils and perched water (indicated by visual evidence of contamination and analytical test results).	0.5 - 2.0	2,000	1,500	Ammonia (900 mg/kg as NH_3) and Polycyclic Aromatic Hydrocarbons (79,000 mg/kg total PAH)	100
A3	Tar Tanks	Contaminated perched water and soils (indicated predominantly by visual evidence of contamination)	GL - 4.0	500	350	Hydrocarbons (3,580 mg/kg TPH)	250
A4	Purifiers	Cyanide contamination in soils (indicated by visual contamination and chemical test results).	GL - 1.65	1,500	1,000	Cyanide (480 mg/kg)	100
A5	T7 (NW of Gasholder No. 1)	Contaminated perched water and soils (indicated predominantly by visual evidence of contamination).	0.5-2.5	500	250	Naphthalene (473 mg/kg) Benzo(a)pyrene (165 mg/kg)	100
A6	CWG Plant	Potentially contaminated soils and perched water (indicated by historical information – site investigation has been unable to penetrate the slab at this location and no significant contamination has been identified to date).	1.5-3.5	1,000	500	Hydrocarbons	75
A7	TP203 & TP202 (W of Tar & Liquor Tanks)	Contaminated soils and perched water (indicated by visual evidence of contamination and analytical test results).	0.4-1.9	250	200	Hydrocarbons	75
A8	Oxide Shed/ Tar & Liquor Tanks	Contaminated soils and perched water (indicated by visual evidence of contamination and analytical test results).	GL-1.3 & 2.6-3.6	1,000	850	Cyanide Ammonia Hydrocarbons	150
B1	Gasholder No. 2	Hydrocarbon and cyanide contamination within the groundwater in the River Terrace Gravels (visual evidence of contamination and chemical test results)	None	0	0	N/A	1,500
B2	Scrubbers and Oil Tank	Contaminated perched waters predominantly and some contaminated soils (indicated predominantly by visual evidence of contamination).	0.5-3.0	1,250	800	Hydrocarbons	200
B3	Benzene Plume	Benzene contamination identified in the groundwater at the location of BH103 in the south-western corner of the site (visual and olfactory evidence of contamination and chemical test results).	None	0	0	N/A	
Total				12,750	9,700		3,800

DO NOT SCALE; Contractor to check all dimensions and report any omissions or errors

KEY

SITE BOUNDARY

HISTORICAL LAYOUT

WYGE SITE INVESTIGATIONS

MAY 2007

LOCATION OF TRIAL PIT

LOCATION OF BOREHOLE

2006

LOCATION OF TRIAL PIT

LOCATION OF WINDOW SAMPLE

LOCATION OF BOREHOLE

LOCATION OF RIVER SAMPLE

LOCATION OF CULVERT SAMPLE

2002

LOCATION OF TRIAL PIT

LOCATION OF BOREHOLE

1998

LOCATION OF TRIAL PIT

LOCATION OF BOREHOLE

1996

LOCATION OF TRIAL PIT

LOCATION OF BOREHOLE

BRITISH GAS EAST MIDLANDS (BGEM) HISTORICAL SITE INVESTIGATION

LOCATION OF EXCAVATION

PROPOSED REMEDIATION

REMEDIATION OF GROUNDWATER WITHIN GASHOLDER

REMEDIATION OF SOIL & PERCHED GROUNDWATER

ANTICIPATED GROUNDWATER REMEDIATION OF BENZENE PLUME

AREA OF GROUNDWATER TREATMENT – REMOVAL OF FREE PRODUCT

NOTES:

1. AREAS OF REMEDIATION ARE APPROXIMATE ONLY & ARE SUBJECT TO CHANGE BASED ON FINDINGS DURING REMEDIATION WORKS.
2. IT IS ANTICIPATED THAT GROUNDWATER REMEDIATION WILL BE REQUIRED IN THE VICINITY OF BH103 WHERE SIGNIFICANTLY ELEVATED LEVELS OF BENZENE HAVE BEEN IDENTIFIED.
3. FOLLOWING SOURCE REMOVAL & MONITORING, GROUNDWATER REMEDIATION IN ADDITION TO THAT AROUND BH103 MAY BE REQUIRED.

Rev	Description	By	Chk	App	Date
G	SITE BOUNDARY UPDATED TO REFLECT OWNERSHIP	PMC	AP	PG	08.08.08
F	AREA OF GROUNDWATER TREATMENT ADDED	PMC	AP	PG	04.09.07
E	REMEDIATION AREAS A7 & A8 ADDED AND ASSOCIATED TABLE UPDATED.	PMC	AP	PG	31.07.07
D	REMEDIATION AREAS AND ASSOCIATED TABLE UPDATED. PALISADE FENCE MOVED TO SURVEYED CO-ORDINATES.	CM	SAR	PG	15.06.07
C	REMEDIATION AREAS AND ASSOCIATED TABLE UPDATED. SITE BOUNDARY AMENDED TO OWNERSHIP BOUNDARY.	CM	MM	PG	13.06.07
B	REMEDIATION AREAS AND ASSOCIATED TABLE UPDATED. SITE BOUNDARY AMENDED TO OWNERSHIP BOUNDARY.	CM	MM	PG	13.06.07
A	PROPOSED REMEDIATION AREAS REVISED	CM	MJM	PG	05.03.07

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e-mail: enviro.leeds@wyg.com

White Young Green

Environmental

Civil Electrical Environmental Health & Safety Highways Management Services Mechanical Rail Structural Town Planning Transportation

Project: E7773

OLD MILL LANE
BARNSLEY

Drawing Title:

PROPOSED REMEDIATION AREAS

Scale at A1	Drawn By	Date	Checked By	Date	Approved By	Date
1:500	CM	20.10.06	MJM	02.11.06	MRD	02.11.06

Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	111	G

APPROVAL ☐ INFORMATION ☒ TENDER ☐ CONTRACT ☐ CONSTRUCTION ☐

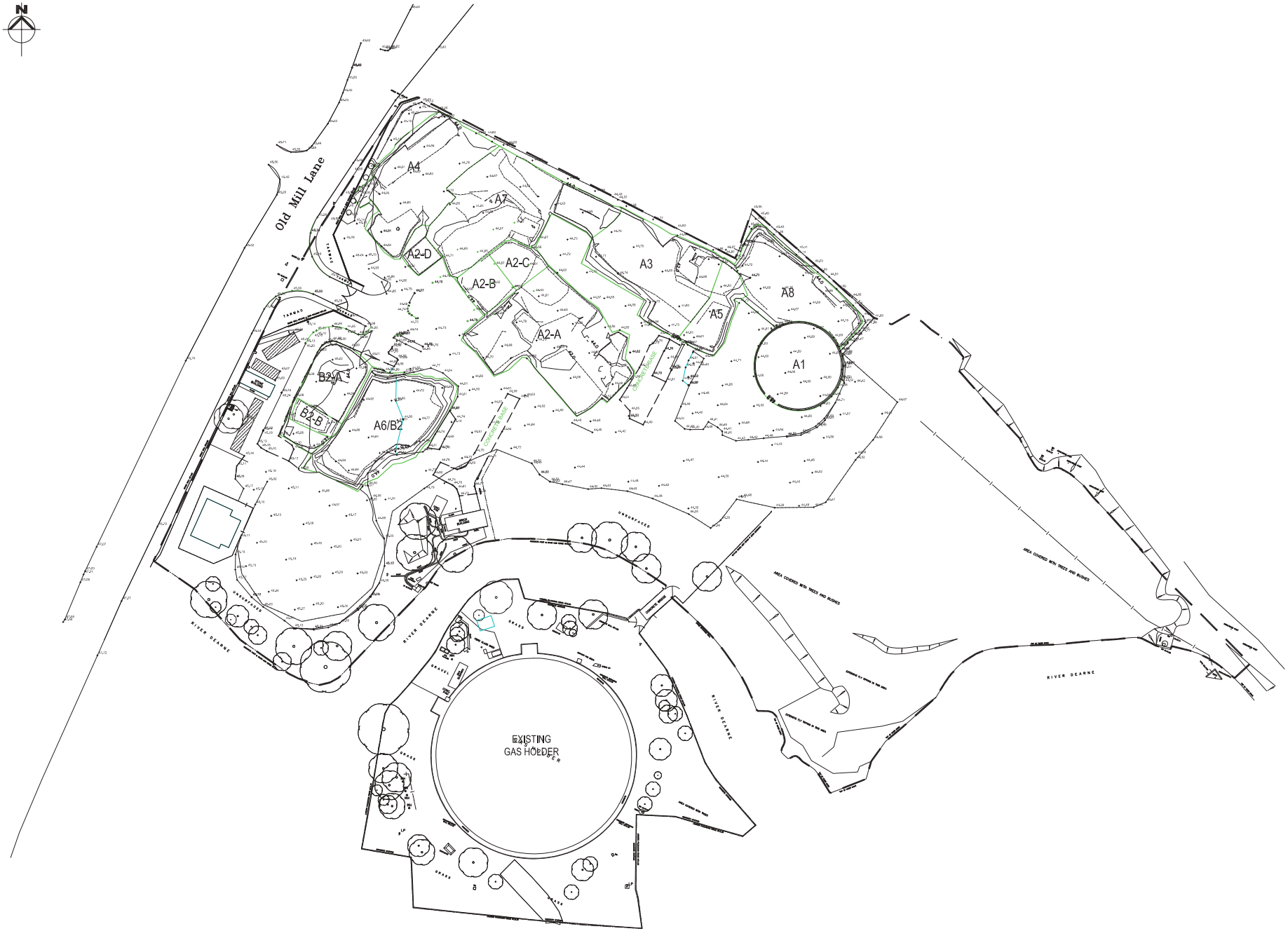
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KEY

SITE BOUNDARY

REMEDIATION AREAS



Scale (metres)

0 10 20 30 40 50

Rev	Description	By	Chk	App	Date

Client:

NATIONAL GRID PROPERTY HOLDINGS LTD

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Headingley
Leeds
LS6 2UJ

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e-mail: enviro.leeds@wyg.com

White Young Green

Environmental

Civil Electrical Environmental Health & Safety Highways Management Services Mechanical Rail Structural Town Planning Transportation

Project: E7773

OLD MILL LANE
BARNSLEY

Drawing Title:

AS DUG REMEDIATION AREAS

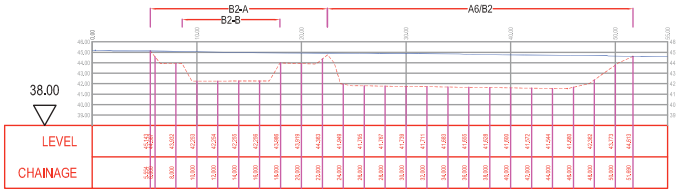
Scale at A1	Drawn By	Date	Checked By	Date	Approved By	Date
1:500	CM	28.05.08	AP	14.07.08	PG	14.07.08

Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	129	

APPROVAL ☐ INFORMATION ☒ TENDER ☐ CONTRACT ☐ CONSTRUCTION ☐

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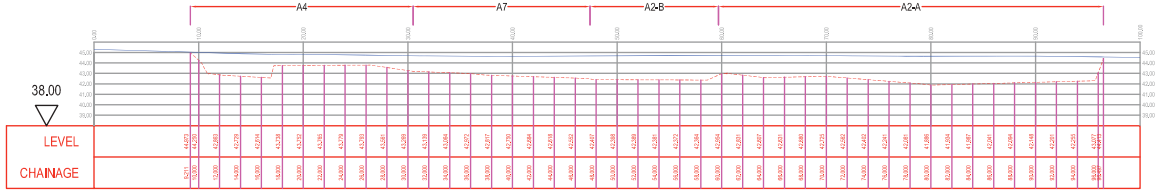
DO NOT SCALE; Contractor to check all dimensions and report any omissions or errors



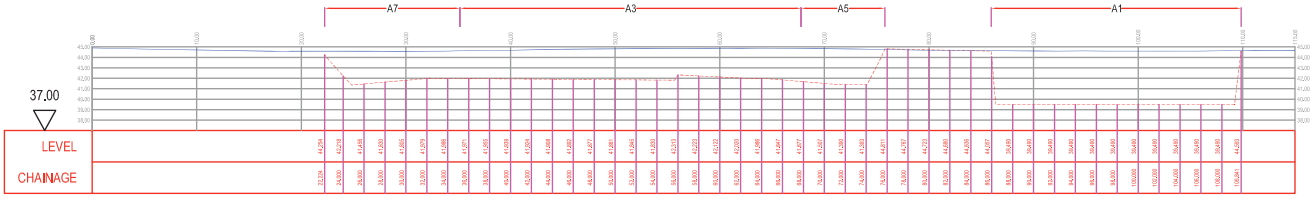
Section A-A'
Horiz. 1:250, Vert. 1:250

KEY
FINAL SURFACE LEVEL
EXCAVATION LEVEL
REMEDIATION AREA BOUNDARY

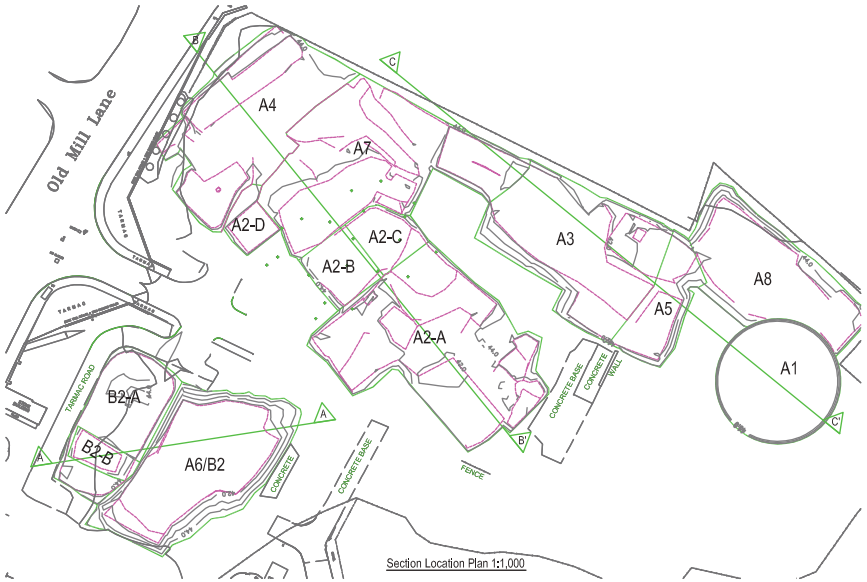
NOTE
BASE PLAN AND LEVEL DATA SUPPLIED BY VHE CONSTRUCTION PLC.



Section B-B'
Horiz. 1:250, Vert. 1:250



Section C-C'
Horiz. 1:250, Vert. 1:250



Section Location Plan 1:1,000

Rev	Description	By	Chk	App	Date

Client:
NATIONAL GRID PROPERTY HOLDINGS LTD

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e-mail: enviro.leeds@wyg.com

White Young Green

Project: E7773
OLD MILL LANE
BARNSLEY

Drawing Title:
LATERAL EXTENTS OF REMEDIATION EXCAVATIONS WITH CROSS SECTIONS

Scale at A1	Drawn By	Date	Checked By	Date	Approved By	Date
AS SHOWN	PMC	08.08.08	AP	08.08.08	PG	08.08.08

Project No.	Office	Type	Drawing No.	Revision
E7773	4104	ENV	130	

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Certificate No FS31618

Grid - Local or National Grid

Datum - Related to Ordnance Survey Benchmark
Value = ****m A.O.D.
OSBM Location

Approx Direction of North

KEY

KEY ENVIRONMENTAL MONITORING LOCATIONS.

Rev	Date	Drawn	Description	Ch'k'd
1	05/10/07	TT	NEW ENVIROMENTAL MONITORING POSITIONS	JC

VHE CONSTRUCTION PLC
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HAWTHORN PARK
COAL ROAD
LEEDS
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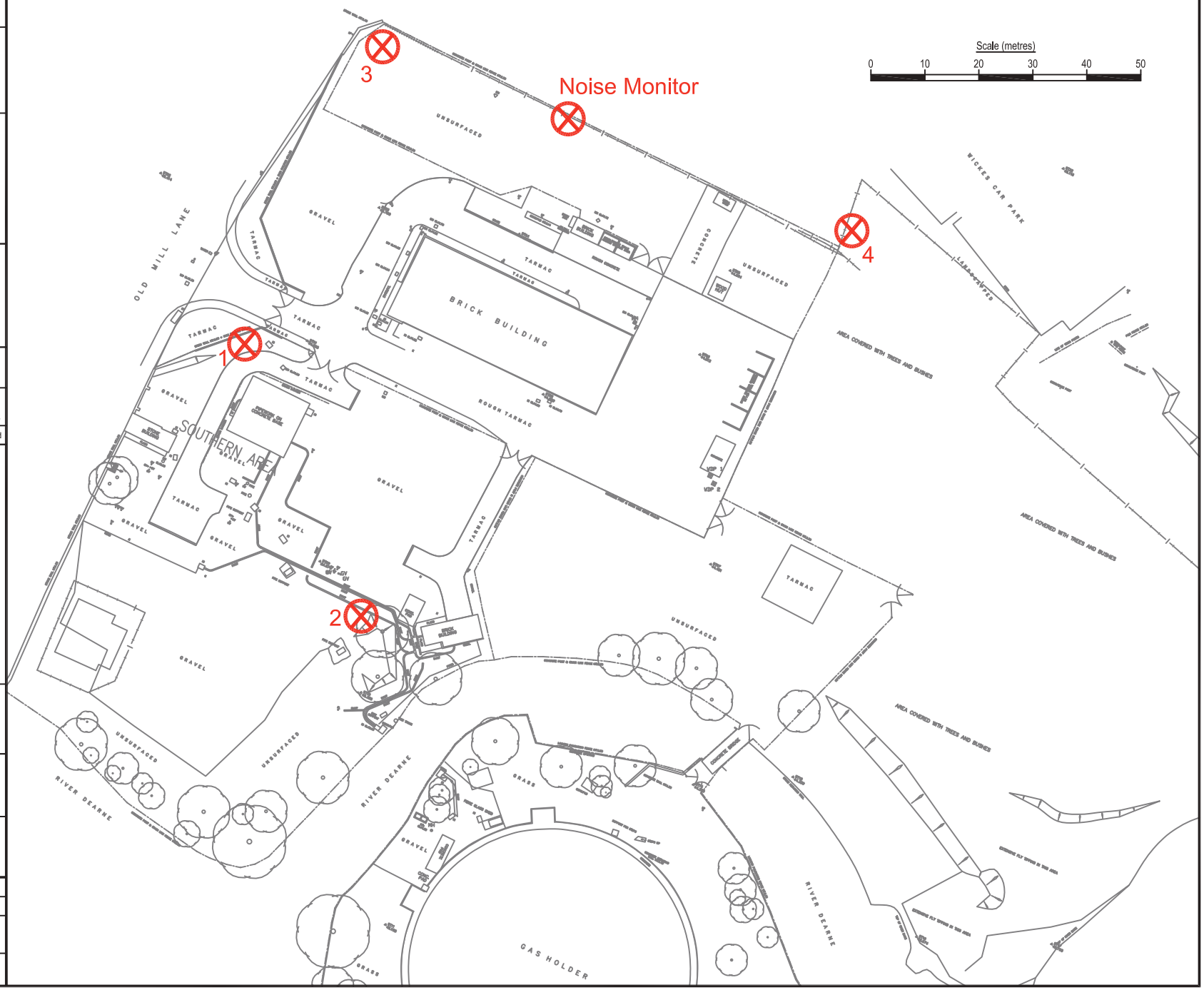
E: enquiries@construction.vhe.co.uk
WEB: www.vhe.co.uk

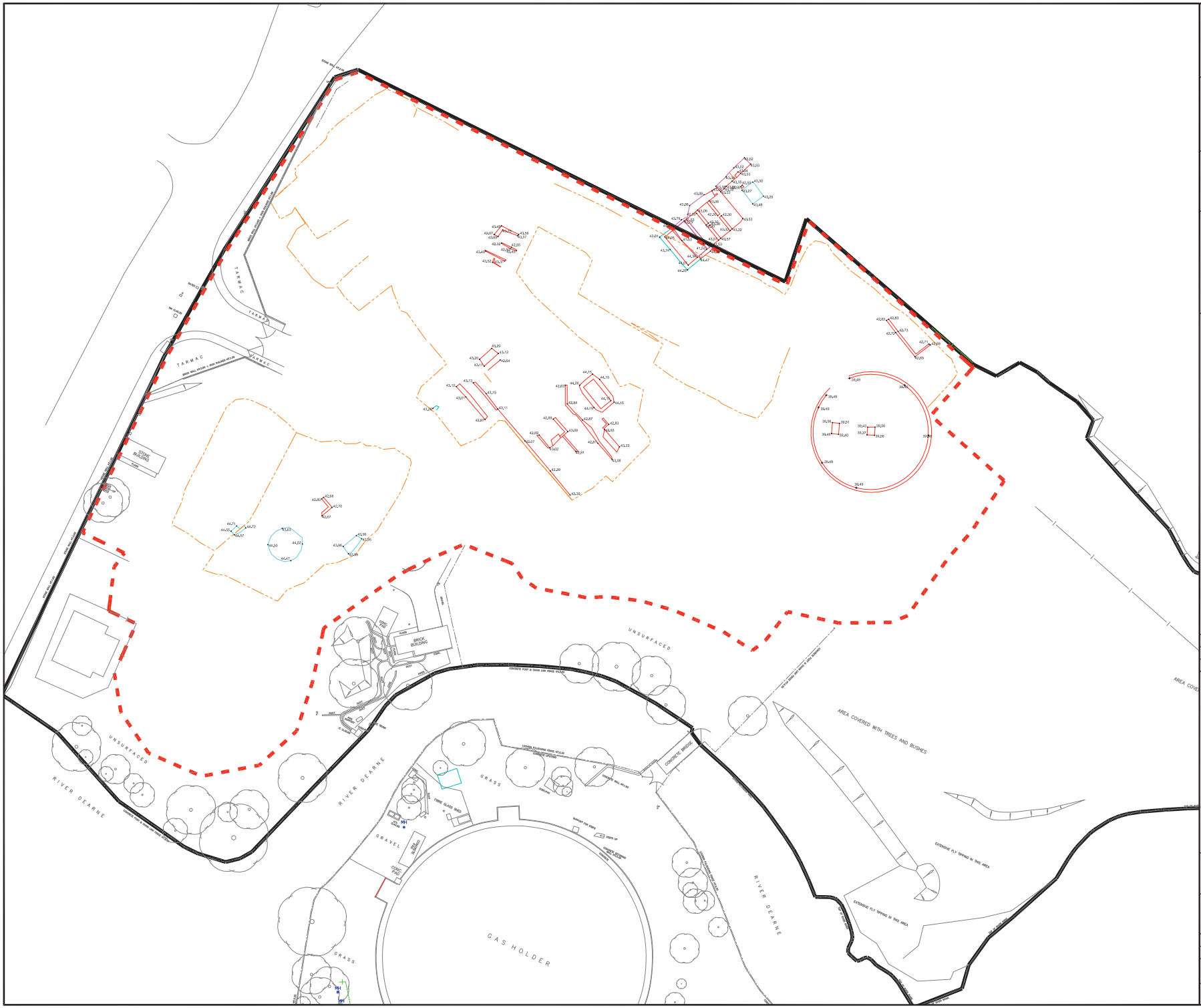
Client
NATIONAL GRID PROPERTY HOLDINGS.

Site
FORMER GASWORKS, OLD MILL LANE, BARNSLEY.

Title
ENVIRONMENTAL MONITORING DRAWING

Surveyed	TT	Drawn	TT
Chk.	JC	Date	06/09/2007
Scale [A4 Sheet]	1/100	CAD file	477H_004.dwg
Job No.	477H	Rev	1





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Approx Direction of North

Grid - National Grid

KEY

- NGPH LAND OWNERSHIP BOUNDARY
- VHE OPERATIONAL SITE BOUNDARY
- BRICK STRUCTURE
- CONCRETE STRUCTURE
- TOP OF BATTER
- BOTTOM OF BATTER

KEY

AIR VALVE	AV	MANHOLE (TRIANGULAR)	MH
ABSTRACTION WELL	AW	MARKER POST	MKR
BENCH MARK	BM	NOISE MONITOR	NM
BH	BH	PEG	PEG
BOLLARD	BOL	PIPE	PIPE
BORE HOLE	BH	POST	POST
BRITISH TELECOM COVER	BT	ROAD GULLY	RG
BUS STOP	BUS	RODDING EYE	RE
CABLE TV COVER	CATV	SADDLE COVER	SAD
CABLE TV SUPPLY	CA	STABBING	STAB
CABLE TV SUPPLY	CAN	STOPCOCK	SC
COLUMN	COL	STOPVALVE	SV
COMPACTION TEST	CT	SIGN POST	SIGN
DUST MONITOR	DM	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	TH
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TRIAL PIT	PIT
GAS MONITOR	GM	VENT	VENT
GAS VALVE	GAS	VIBRATION MONITOR	VM
GATE		VALIDATION POINT	VP
INSPECTION COVER (CIRCULAR)	IC	WASH OUT	WO
INSPECTION COVER (RECTANGULAR)	IC	WATER METER	WM
KERB OUTLET	KO	WATER STOP COCK	WSC
LAMP POST	LP	WATER STOP VALVE	WSV
MANHOLE (CIRCULAR)	MH	UNABLE TO RAISE	UTR
MANHOLE (RECTANGULAR)	MH	UNABLE TO MEASURE	UTM

Rev	Date	Drawn	Description	Ch'k'd
-	-/-/-	--		--
1	13/08/08	TT	Extra detail added	--

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Client: NATIONAL GRID PROPERTY HOLDINGS

Site: FORMER BARNSLEY GASWORKS, OLD MILL LANE, BARNSLEY

Title: RELICT STRUCTURES

Surveyed	TT	Drawn	TT
Chk.		Date	14/03/2008

Scale [A2 Sheet] 1/500

CAD file 477H_B2._R1dwg

Dwg No. 477H_B2

Rev 1



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Approx Direction of North

Grid - National Grid

NGPH LAND OWNERSHIP BOUNDARY

VHE OPERATIONAL SITE BOUNDARY

VP GH2 A 45,23 — CHEMICAL TEST LOCATION

TP A4-1 A4-V2 — CHEMICAL TEST TAKEN FROM BASE OF TRIAL PIT

KEY

AIR VALVE	AV	MANHOLE (TRIANGULAR)	MH
ABSTRACTION WELL	AW	MARKER POST	MKR
BENCH MARK	BM	NOISE MONITOR	NM
BH	BN	PEG	PEG
BOLLARD	BOL	PIPE	PIPE
BORE HOLE	BH	POST	POST
BRITISH TELECOM COVER	BT	ROAD GULLY	RG
BUS STOP	BUS	RODDING EYE	RE
CABLE TV COVER	CATV	SADDLE COVER	SAD
CABLE TV SUPPLY	CA	STABBING	STAB
CABLE TV SUPPLY	CAN	STOPCOCK	SC
COLUMN	COL	STOPVALVE	SV
COMPACTION TEST	CT	SIGN POST	SGN
DUST MONITOR	DM	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	TL
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TRIAL PIT	PIT
GAS MONITOR	GM	VENT	VENT
GAS VALVE	GAS	VIBRATION MONITOR	VM
GATE		VALIDATION POINT	VP
INSPECTION COVER (CIRCULAR)	IC	WASH OUT	WO
INSPECTION COVER (RECTANGULAR)	IC	WATER METER	WM
KERB OUTLET	KO	WATER STOP COCK	SC
LAMP POST	LP	WATER STOP VALVE	SV
MANHOLE (CIRCULAR)	MH	UNABLE TO RAISE	UTR
MANHOLE (RECTANGULAR)	MH	UNABLE TO MEASURE	UTM

Rev	Date	Drawn	Description	Ch'k'd
-	--/--/----	--		--
-	--/--/----	--		--

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Client: NATIONAL GRID PROPERTY HOLDINGS

Site: FORMER BARNSLEY GASWORKS, OLD MILL LANE, BARNSLEY

Title: VALIDATION SAMPLE LOCATIONS

Surveyed	TT	Drawn	TT
Chk.		Date	14/03/2008

Scale [A2 Sheet] 1/500 — CAD file 477H_B3.dwg

Dwg No. 477H_B3 — Rev 0



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Approx Direction of North

Grid - National Grid

KEY

- NGPH LAND OWNERSHIP BOUNDARY
- VHE OPERATIONAL SITE BOUNDARY
- SAND REPLACEMENT TEST
- PLATE BEARING TEST

AIR VALVE	AV	MANHOLE (TRIANGULAR)	MH
ABSTRACTION WELL	AW	MARKER POST	MKR
BENCH MARK	BM	NOISE MONITOR	NM
BIN	BN	PEG	PEG
BOLLARD	BOL	PIPE	PIPE
BORE HOLE	BH	POST	POST
BRITISH TELECOM COVER	BT	ROAD GULLY	RG
BUS STOP	BUS	RODDING EYE	RE
CABLE TV COVER	CATV	SADDLE COVER	SAD
CABLE TV SUPPLY	CA	STABBING	STAB
CABLE TV SUPPLY	CAN	STOPCOCK	SC
COLUMN	COL	STOPVALVE	SV
COMPACTION TEST	CT	SIGN POST	SGN
DUST MONITOR	DM	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	TH
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TRIAL PIT	PIT
GAS MONITOR	GM	VENT	VENT
GAS VALVE	GAS	VIBRATION MONITOR	VM
GATE		VALIDATION POINT	VP
INSPECTION COVER (CIRCULAR)	IC	WASH OUT	WO
INSPECTION COVER (RECTANGULAR)	IC	WATER METER	WM
KERB OUTLET	KO	WATER STOP COCK	SC
LAMP POST	LP	WATER STOP VALVE	SV
MANHOLE (CIRCULAR)	MH	UNABLE TO RAISE	UTR
MANHOLE (RECTANGULAR)	MH	UNABLE TO MEASURE	UTM

Rev	Date	Drawn	Description	Ch'k'd
-	--/--/---	--		--
-	--/--/---	--		--

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COAL ROAD
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WEST YORKSHIRE
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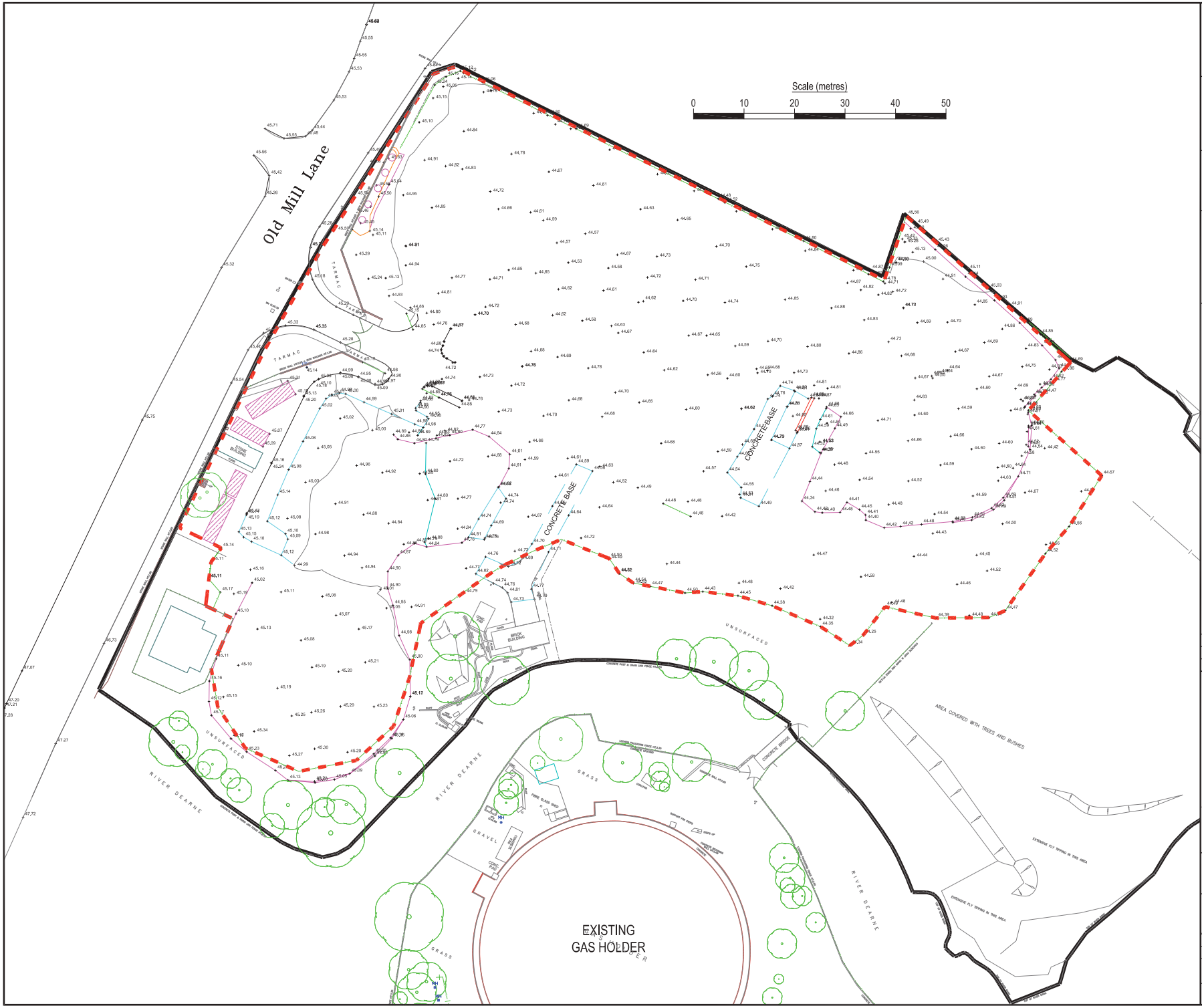
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Client: NATIONAL GRID PROPERTY HOLDINGS

Site: FORMER BARNSLEY GASWORKS, OLD MILL LANE, BARNSLEY

Title: GEOTECHNICAL TEST LOCATIONS

Surveyed	TT	Drawn	TT
Chk.		Date	14/03/2008
Scale [A2 Sheet]	1/500	CAD file	477H_B4.dwg
Dwg No.	477H_B4	Rev	0



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Approx Direction of North

Grid - National Grid

NGPH LAND OWNERSHIP BOUNDARY

VHE OPERATIONAL SITE BOUNDARY

KEY

AIR VALVE	AV	MANHOLE (TRIANGULAR)	MH
ABSTRACTION WELL	AW	MARKER POST	MKR
BENCH MARK	BM	NOISE MONITOR	NM
BH	BN	PEG	PEG
BOLLARD	BOL	PIPE	PIPE
BORE HOLE	BH	POST	POST
BRITISH TELECOM COVER	BT	ROAD GULLY	RG
BUS STOP	BUS	RODDING EYE	RE
CABLE TV COVER	CATV	SADDLE COVER	SAD
CABLE TV SUPPLY	CA	STABBING	STAB
CABLE TV SUPPLY	CAN	STOPCOCK	SC
COLUMN	COL	STOPVALVE	SV
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DUST MONITOR	DM	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	TH
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TRIAL PIT	PIT
GAS MONITOR	GM	VENT	VENT
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INSPECTION COVER (CIRCULAR)	IC	WASH OUT	WO
INSPECTION COVER (RECTANGULAR)	IC	WATER METER	WM
KERB OUTLET	KO	WATER STOP COCK	SC
LAMP POST	LP	WATER STOP VALVE	SV
MANHOLE (CIRCULAR)	MH	UNABLE TO RAISE	UTR
MANHOLE (RECTANGULAR)	MH	UNABLE TO MEASURE	UTM

Rev	Date	Drawn	Description	Ch'k'd
-	-/-/-	--		--
-	-/-/-	--		--

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HAWTHORN PARK
COAL ROAD
LEEDS
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FAX: 0113 2739201

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WEB: www.vhe.co.uk

Client

NATIONAL GRID PROPERTY HOLDINGS

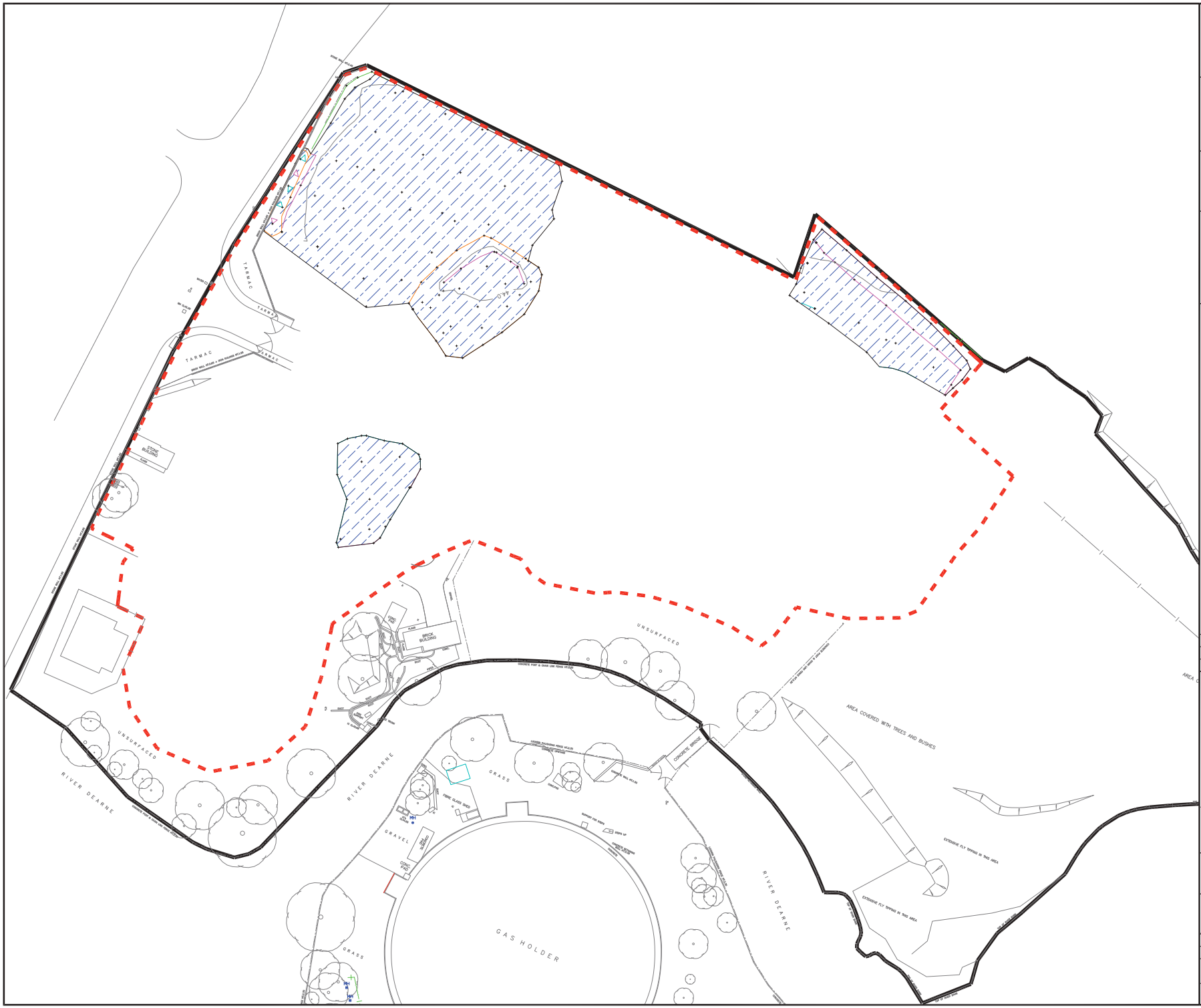
Site

FORMER BARNSLEY GASWORKS, OLD MILL LANE, BARNSLEY

Title

AS-BUILT SURVEY (FINISHED SITE LEVELS)

Surveyed	TT	Drawn	TT
Chk.		Date	09/06/2008
Scale [A2 Sheet]	1/500	CAD file	477H_B5.dwg
Dwg No.	477H_B5	Rev	0



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Approx Direction of North

Grid - National Grid

NGPH LAND OWNERSHIP BOUNDARY

VHE OPERATIONAL SITE BOUNDARY

IMPORTED QUARRIED STONE

KEY

AIR VALVE	AV	MANHOLE (TRIANGULAR)	MH
ABSTRACTION WELL	AW	MARKER POST	MKR
BENCH MARK	BM	NOISE MONITOR	NM
BIN	BIN	PEG	PEG
BOLLARD	BOL	PIPE	PIPE
BORE HOLE	BH	POST	POST
BRITISH TELECOM COVER	BT	ROAD GULLY	RG
BUS STOP	BUS	RODDING EYE	RE
CABLE TV COVER	CATV	SADDLE COVER	SAD
CABLE TV SUPPLY	CA	STABBING	STAB
CABLE TV SUPPLY	CAN	STOPCOCK	SC
COLUMN	COL	STOPVALVE	SV
COMPACTION TEST	CT	SIGN POST	SIGN
DUST MONITOR	DM	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	TH
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TRIAL PIT	PIT
GAS MONITOR	GM	VENT	VENT
GAS VALVE	GAS	VIBRATION MONITOR	VM
GATE		VALIDATION POINT	VP
INSPECTION COVER (CIRCULAR)	IC	WASH OUT	WO
INSPECTION COVER (RECTANGULAR)	IC	WATER METER	WM
KERB OUTLET	KO	WATER STOP COCK	WSC
LAMP POST	LP	WATER STOP VALVE	WSV
MANHOLE (CIRCULAR)	MH	UNABLE TO RAISE	UTR
MANHOLE (RECTANGULAR)	MH	UNABLE TO MEASURE	UTM

Rev	Date	Drawn	Description	Ch'k'd
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-	--/--/--	--		--

VHE CONSTRUCTION P.L.C.

VHE CONSTRUCTION PLC
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LS14 1PQ

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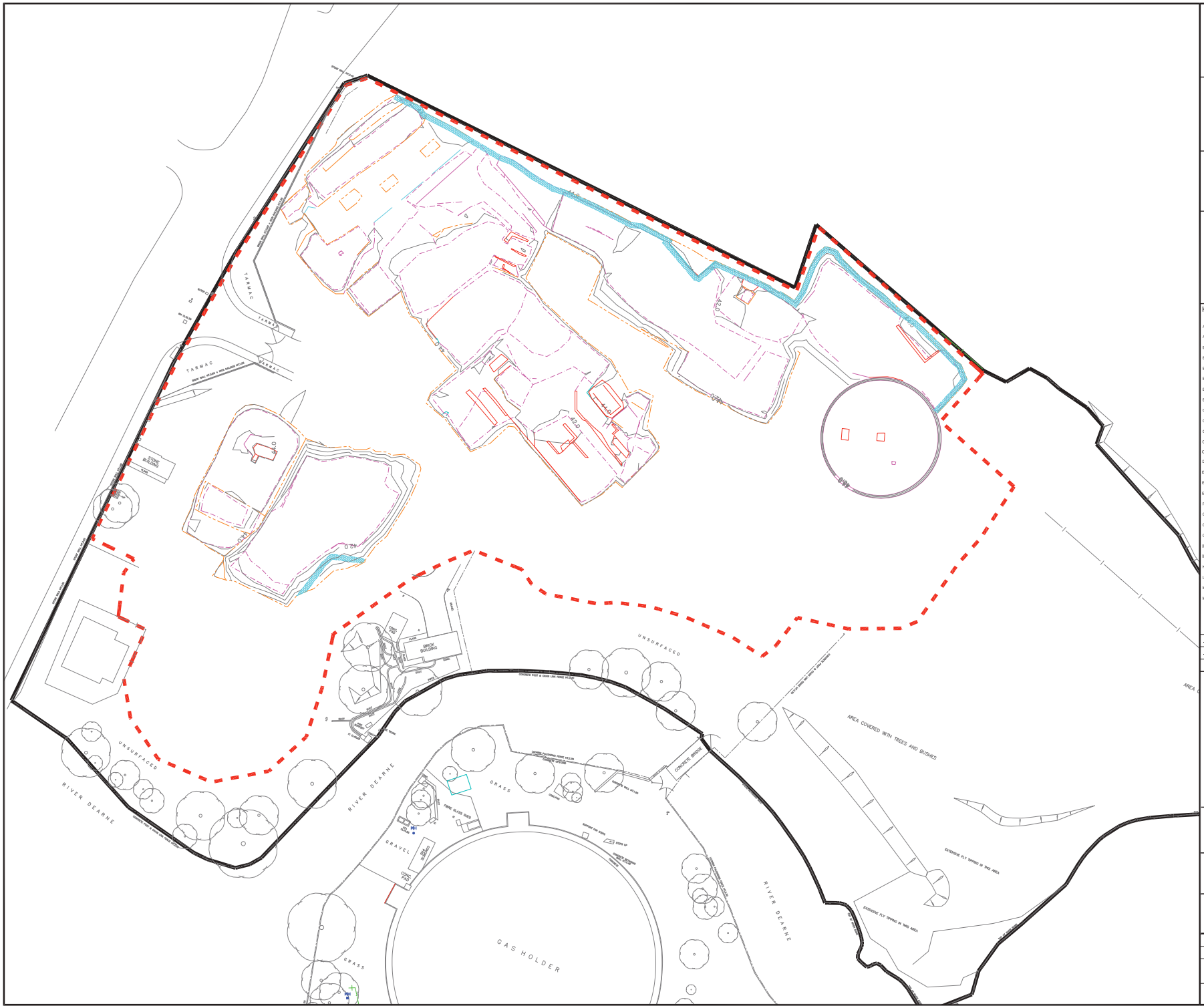
E: enquiries@construction.vhe.co.uk
WEB: www.vhe.co.uk

Client
NATIONAL GRID PROPERTY HOLDINGS

Site
FORMER BARNSLEY GASWORKS, OLD MILL LANE, BARNSLEY

Title
LOCATION OF IMPORTED QUARRIED STONE

Surveyed	TT	Drawn	TT
Chk.		Date	14/03/2008
Scale [A2 Sheet]	1/500	CAD file	477H_B6.dwg
Dwg No.	477H_B6	Rev	0



Notes

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Certificate No FS31618

Approx Direction of North

Grid - National Grid

NGPH LAND OWNERSHIP BOUNDARY

VHE OPERATIONAL SITE BOUNDARY

CLAY BARRIER WALL

KEY

AIR VALVE	AV	MANHOLE (TRIANGULAR)	MH
ABSTRACTION WELL	AW	MARKER POST	MKR
BENCH MARK	BM	NOISE MONITOR	NM
BH	BN	PEG	PEG
BOLLARD	BOL	PIPE	PIPE
BORE HOLE	BH	POST	POST
BRITISH TELECOM COVER	BT	ROAD GULLY	RG
BUS STOP	BUS	RODDING EYE	RE
CABLE TV COVER	CATV	SADDLE COVER	SAD
CABLE TV SUPPLY	CA	STABBING	STAB
CABLE TV SUPPLY	CAN	STOPCOCK	SC
COLUMN	COL	STOPVALVE	SV
COMPACTION TEST	CT	SIGN POST	SGN
DUST MONITOR	DM	TELECOM COVER	TEL
EARTHING POINT	ER	TELEGRAPH POLE	TP
ELECTRICITY COVER	ELEC	THRESHOLD LEVEL	TH
ELECTRICITY POLE	EP	TRAFFIC LIGHT	TL
FIRE HYDRANT	FH	TRIAL PIT	PIT
GAS MONITOR	GM	VENT	VENT
GAS VALVE	GAS	VIBRATION MONITOR	VM
GATE		VALIDATION POINT	VP
INSPECTION COVER (CIRCULAR)	IC	WASH OUT	WO
INSPECTION COVER (RECTANGULAR)	IC	WATER METER	WM
KERB OUTLET	KO	WATER STOP COCK	SC
LAMP POST	LP	WATER STOP VALVE	SV
MANHOLE (CIRCULAR)	MH	UNABLE TO RAISE	UTR
MANHOLE (RECTANGULAR)	MH	UNABLE TO MEASURE	UTM

Rev	Date	Drawn	Description	Ch'k'd
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-	--/--/---	--		--

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Client: NATIONAL GRID PROPERTY HOLDINGS

Site: FORMER BARNSLEY GASWORKS, OLD MILL LANE, BARNSLEY

Title: CLAY BARRIER WALL POSITION

Surveyed	TT	Drawn	TT
Chk.		Date	14/03/2008

Scale [A2 Sheet]: 1/500

CAD file: 477H_B7.dwg

Dwg No.: 477H_B1

Rev: 0

Appendix F

Correspondence from Regulators

BARNSLEY
Metropolitan Borough Council

Regulatory Services
Assistant Director: Ken Eastwood, BSc (Hons), MCIEH
PO Box 602, Barnsley S70 9FB

Patricia Gill
WYG Environment,
Arndale Court,
Otley Road, Headingley,
Leeds
LS6 2UJ

My Ref: JSC147430

Your Ref: ref: E7773-PRF-V1

Enquiries to: regulatoryservices@barnsley.gov.uk

Dial Direct: (01226) 772456

Fax: (01226) 775699

Date: 21 December 2010

Dear Patricia

Re: Verification Report, Former Gasworks, Old Mill Lane, Barnsley
Planning Application 2006/1911

Thank you for your submission of the Verification Report (ref E7773-PRF-V1) for the above site. I have now reviewed the report and made the following comments.

I can confirm my acceptance of the verification report, as it has confirmed the agreed remediation works have been completed and the risks to human health have been addressed.

With regards the condition on the planning application, I have confirmed with the planning officer of my approval to the verification report and informed them that sufficient information has been provided to discharge any outstanding conditions.

Should you wish to discuss this correspondence further, please don't hesitate to contact me.

Yours sincerely

John Scott
Contaminated Land Officer

creating a better place

Environment Agency

03 December 2010

Patricia Gill
WYG
Arndale Court
Headingley
Leeds
LS6 2UJ

Dear Patricia Gill:

Subject: Mill Lane

Further to our conversation today and your letter dated 23 November 2010 I agree that it is reasonable for National Grid / WYG to amend the remediation strategy so that active remediation of the groundwater shall not be required if post remediation monitoring shows:

"generally stable or decreasing levels of the Contaminants of Concern (CoCs) within the groundwater in the Alluvium / River Terrace Gravels."

While there is no consistent evidence of decreasing levels there is evidence to suggest that the CoCs are broadly stable. Also I consider the monitoring available suggests the river is not being significantly polluted by the gas works contamination at this site. Therefore, I agree that monitoring as part of this remediation strategy can cease and that, at present, it is unlikely that active remediation will be required in future.

The remediation strategy does not take detailed account of future development proposals at this site. In particular, it does not assess the risk posed from residual contaminants should the ground be significantly disturbed. Therefore, my comments above do not relate to such a scenario.

Please call if you wish to discuss.

Yours faithfully

E Wrathmell

Edward Wrathmell
Hydrogeologist



Environment Agency, Phoenix House, Global Avenue, Leeds, LS11 8PG

INVESTOR IN PEOPLE