Robson Liddle

part of the nps group

Better Barnsley
Barnsley Town Centre

Preliminary Land Contamination and Geotechnical Risk Assessment

On behalf of Barnsley Metropolitan Borough Council

Report 12-17-16-1-6001/DSR1
April 2015

• Structures • Civil and Infrastructure • Geotechnical & Geo-environmental

Report Issue Record

Project No.:	12-17-16-1-6001
Project Title:	Better Barnsley
Site Location:	Barnsley Town Centre
Client:	Barnsley Metropolitan Borough Council
Report Title:	Preliminary Land Contamination and Geotechnical Risk Assessment
Issue Date:	30 April 2015
Report No.:	12-17-16-1-6001 /DSR1
Revision:	-

	Written	Written	Approved
Name	**Catherine Riley** CEng, CEnv, CIWEM BEng, BSc	**Tim Thornburn** BSc(Hons), PgDip	**Catherine Riley** CEng, CEnv, CIWEM BEng, BSc
Signature			
Position	Senior Geo-Environmental Engineer	Senior Geotechnical Engineer	Senior Geo-Environmental Engineer

Contents

1	Introduction	1
2	Site Location	3
3	Summary of Previous Work	5
4	Site Description	8
5	Environmental Setting	16
6	Contamination Risk Assessment	23
7	Geotechnical Assessment	32
8	Conclusions and Recommendations	36
9	Limitations and Uncertainties	39
10	General Notes	40

Appendices

A Historic Maps
B Groundsure EnviroInsight Report
C Groundsure GeoInsight Report
D Coal Mining Report

Executive Summary

SITE INFORMATION	Client	Barnsley Metropolitan Borough Council.
	Site	Better Barnsley.
	Site Location	Barnsley Town Centre, S70 1DD (nearest). NGR 434671, 406312.
	Current Use	Mixed Commercial – Barnsley Town Centre.
	Proposed Development	Demolish existing buildings and redevelop with retail and leisure facilities.
SITE SETTING	Previous Investigations	A series of investigations have previously been undertaken for the Barnsley Market redevelopment.
	Geology	Pennine Middle Coal Measures. No superficial deposits shown. Made Ground is anticipated to be present on the site.
	Hydrogeology	Secondary A Aquifer. The site does not lie within a source protection zone.
	Hydrology	The nearest surface water is a culvert, Slough Dyke, runs through the site. The River Dearne lies circa c.850m north east.
	Site History	The site was developed at the time of the first mapping in 1850. Historically the site has been utilised by a variety of potentially contaminative industrial land uses including a gas works, foundries, lamp works, malt houses and electrical works.
	Topography	Elevations fall eastwards ranging from 97m OD to 91.5m OD. The floor of the basement is at about 91m OD.
LAND QUALITY	Human Health	Moderate risks identified due to two hotspots beneath the site.
	Controlled Waters	Moderate to high risks identified.
	Ground Gas	Risks from ground gases are considered to be low. No radon protection measures are anticipated to be required.
GEOTECHNICAL	Foundations	The bedrock is suitable for shallow foundation however the presence of localised areas of deep Made Ground and former foundations may mean that alternative foundation solutions are required in some locations.
	Shrinkable Soils	Soils are likely to be non shrinkable.
	Floor slabs	Ground bearing floor slab dependant on location specific ground conditions.
	Excavation stability	Soils are variable and location specific assessment would be needed.
	Pavement	CBR values likely to be adequate for road and car park construction.
	Soakaways	Underlying geology likely to be suitable for soakaway drainage in some locations, subject to full scale testing to confirm and calculate infiltration rates.
	Natural cavities	None expected.
	Mining	The risk at the site was identified as low however shallow coal is present beneath the site and limited areas were identified as possibly worked. Precautionary measures/remediation may be required for the Winter/Adby Seam.

1 Introduction

In April 2015, Robson Liddle Ltd was commissioned by Barnsley Council to undertake a Preliminary Land Contamination and Geotechnical Risk Assessment for Barnsley Town Centre for the proposed redevelopment of the site.

It is understood that the site is being considered for mixed-use redevelopment comprising demolition of existing buildings on application site and replacement with retail and leisure elements, including new market, multi-storey car park and surface level car park, new pedestrian routes, public realm, means of access and landscaping at the 'Barnsley Market Site'.

The site comprises commercial properties which form part of Barnsley town centre. The location of the site is shown on Figure 1.

1.1 Project Requirements and Scope of Works

The overall objectives of the Phase I assessment are to determine the potential risks from contamination and to identify preliminary geotechnical risks and constraints.

The objectives of the Phase I report are to:

- Establish the environmental setting, including sensitivity in relation to human health, surface water, groundwater and ecological receptors.
- Review historical and recent land uses to assess the potential for contamination to be present from past and current land-use.
- Quantitatively assess the potential nature and extent of contamination from those uses and the environmental risks and liabilities which may be posed to the identified receptors (human health and the environment).
- Develop a ground model for the site.
- Assess any potential geotechnical risks, including mining.

1.2 Information Sources

During the production of this report the following sources have been reviewed:

- An EnviroInsight Report prepared by Groundsure (Report Number GS2017327 dated 14th April 2015).

- A GeoInsight Report prepared by Groundsure (Report Number GS2017328 dated 14th April 2015).
- Coal Authority Mining Report (Report no: 51000849914001dated 20th April 2015).
- Historic Ordnance Survey maps.
- British Geological Survey maps.
- British Geological Survey borehole records.
- Environment Agency landfill records.
- Environment Agency groundwater data.
- BRE 211 (2007) Radon Atlas.

1.3 Previous Investigations

An initial desk study and subsequent investigation and assessment reports on the site have previously been developed for the site by Wardell Armstrong (WA) LLP. These reports are entitled:

- Barnsley Markets and Adjacent CEAG Sites, Preliminary Stage 1 (Pre-demolition) Site Investigation Report. Wardell Armstrong, 2007. (Report Number SD07-00120).
- Barnsley Markets and Adjacent CEAG Sites, Stage 2 (Pre-demolition) Site Investigation Report. Wardell Armstrong, 2008. Report Number SD08-0061.
- Soil Mechanics Factual Report on Ground Investigation, May 2008, Report ref A8017.

During the production of this report the information in these reports has been reviewed and a summary of their findings is described in Section 3.

2 Site Location

Address: Barnsley Town Centre

Post Code: S70 1DD (nearest).

National Grid Reference: 434671, 406312.

The site location is shown on Figure 1 and a more detailed plan including an approximate site boundary in Figure 2.

Full details of the site's features and land use are presented in Section 4.

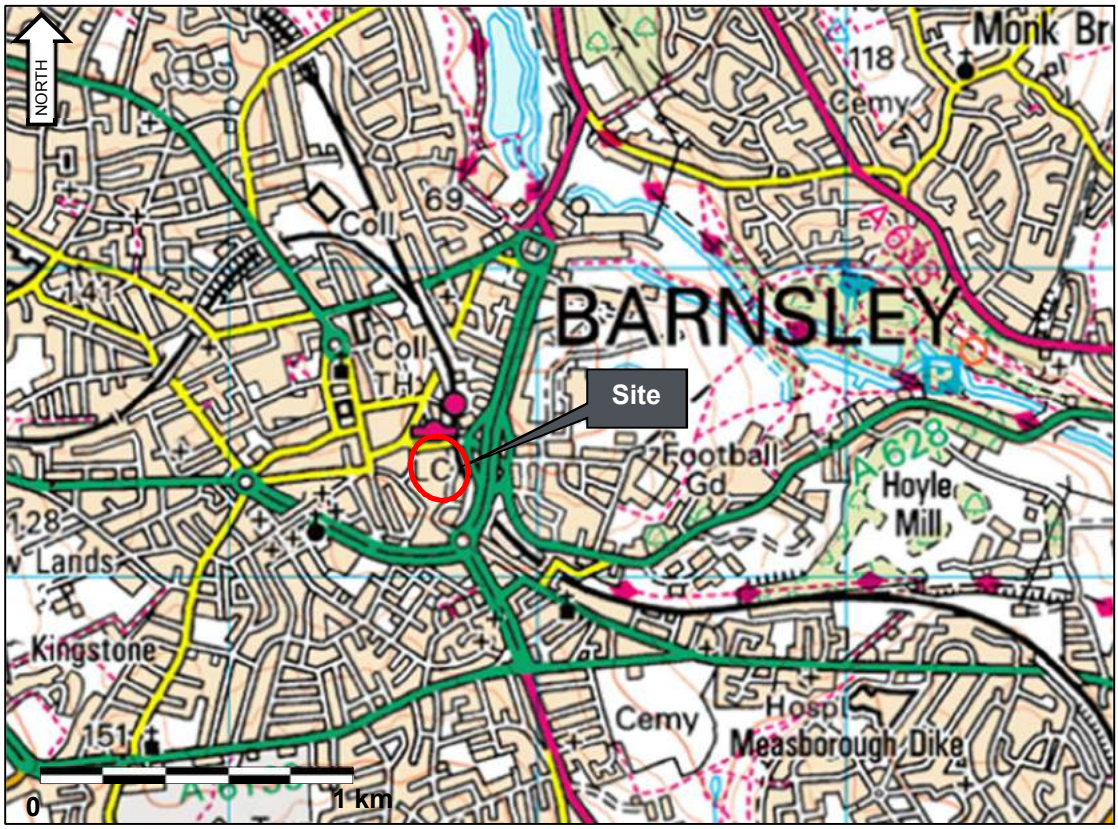


Figure 1 Site location plan

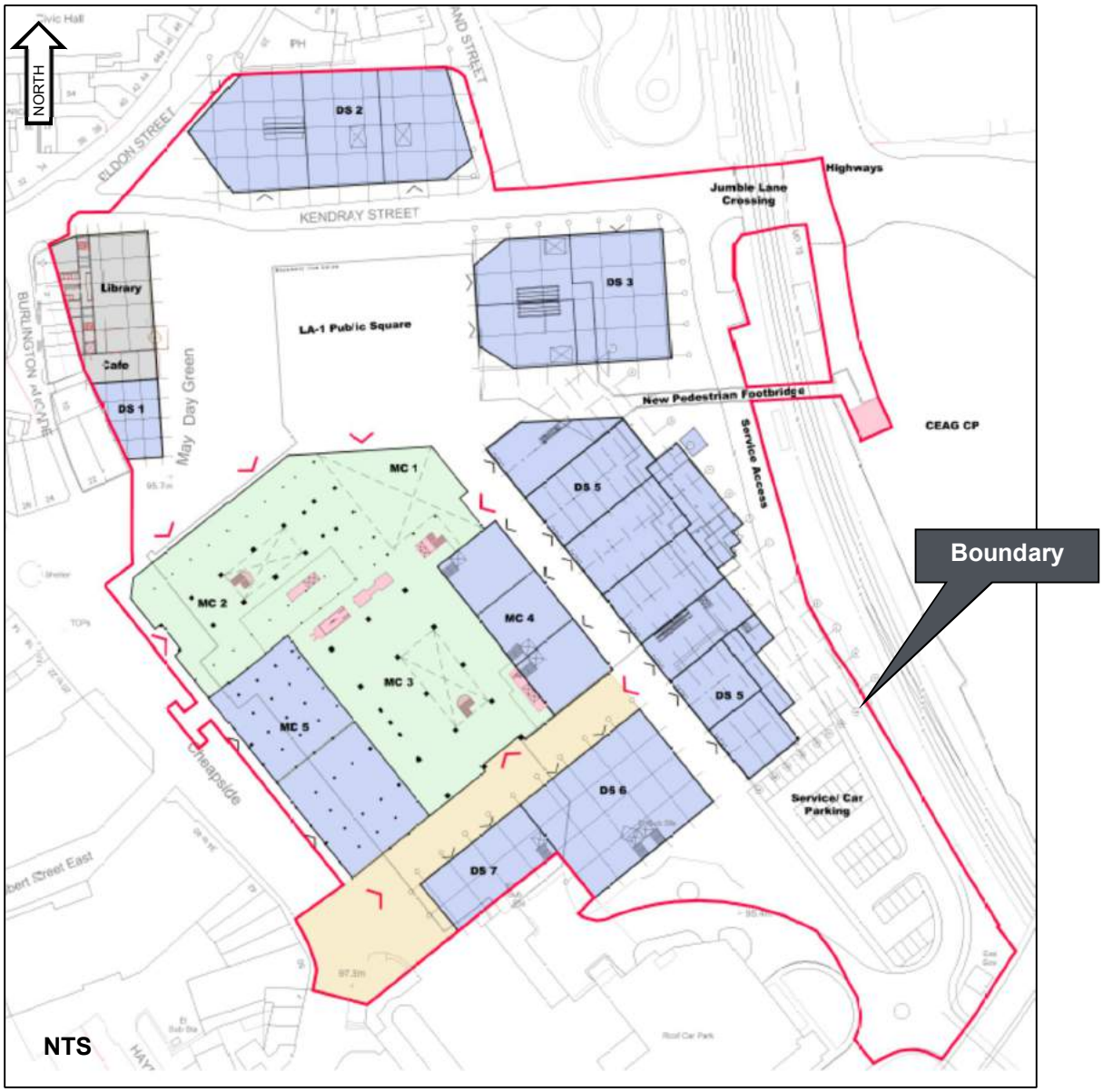


Figure 2 Approximate site boundary

3 Summary of Previous Work

The site has been subject to a Preliminary Stage 1 Site investigation and Stage 2 Pre-Demolition Investigation as part of a previous planning application. The following documents were available to view on the planning portal.

- Barnsley Markets and Adjacent CEAG Sites, Preliminary Stage 1 (Pre-demolition) Site Investigation Report. Wardell Armstrong, 2007, Report Number SD07-00120.
- Barnsley Markets and Adjacent CEAG Sites, Stage 2 (Pre-demolition) Site Investigation Report. Wardell Armstrong, 2008. Report Number SD08-0061.
- Soil Mechanics Factual Report on Ground Investigation, Barnsley Markets, November 2007, Report ref A7008.
- Soil Mechanics Factual, Report on Phase 2 Ground Investigation, Barnsley Markets, May 2008, Report ref A8017.
- Environmental Statement chapter on Ground Conditions and Contamination.

It is noted that these reports included for a residential land use as at this time apartments over the commercial/retail development were being considered. The former CEAG site (to the east of the current site boundary) was also included within the site assessed by Wardell Armstrong.

These reports confirmed the following:

- Historically the site has been utilised by a variety of potentially contaminative industrial land used including a gas works, foundries, lamp works, malt houses and electrical works. There are also a railway line and sidings present immediately east of the site.
- Ground conditions comprise of Made Ground (typically 2 to 3m thick up to a max of 6m) overlying Glacial Till (stiff clays and dense gravels) over Weathered Pennine Middle Coal Measures (stiff gravelly clay) over Coal Measures Bedrock. The bedrock consisted of weak to moderately strong grey mudstone inter-bedded with siltstone and sandstone and underlain by Kent's Rock Sandstone.

- Bedrock was encountered between 86 and 91m OD. Groundwater was typically encountered at or around the bedrock at between 86 and 92m OD. A shallow perched groundwater was also encountered in the Made Ground in the Market Basement area.
- Drilling identified the presence of four coal seams at depths ranging between 0.30m to 35.55m bgl. The thickness ranged from 0.25m to 1.23m. Possible workings were highlighted in two coals seams. The Winter/Abdy coal records possible backfill material at a depth between 9.1m to 10m bgl in addition to total loss of drilling flush at borehole location BH213. No other boreholes recorded potential working within the Winter/Abdy coal. Research records indicate that underground workings took place in the Winter/Abdy coal approximately 200m to the north-east from Mottram Wood Colliery prior to 1920.
- The report concluded that it is considered that the likelihood of shallow unrecorded abandoned workings being extensive beneath the site is very low and even if present would likely be of a very limited nature. The subsequent risk of potential surface subsidence is low. However, given the sensitive nature of the development precautionary measures are recommended where the Winter/Abdy coal is present beneath the development area.
- The extent of any significant contamination was recorded as limited to relatively small and discrete areas. The key on-site areas identified as potentially requiring further assessment and/or remediation included May Day Green (Benzo(a)pyrene) and Markets Basement (Cyanide, Naphthalene, Phenol, BTEX, aromatic hydrocarbons: C8-C10). A further hotspot was identified in the Southern CEAG – (aromatic hydrocarbons: C12-C21) which is outside the current site boundary.
- The Coal Measures Formation is classified as a Secondary A Aquifer. The closest sensitive abstraction lies 900m west (up gradient) from the site.
- The Sough Dyke is the closest water course to the site, and is currently culverted beneath the site.
- The groundwater quality beneath the site is locally poor, particularly in association with areas of local soil contamination, but is generally considered not to represent an on-going contaminant source that needs be addressed by

remedial activities. However further modelling to quantify the potential risk to environmental receptors from the Markets Basement hotspot was recommended.

- The report recommends a Design Class of DS4 and AC-3 should be assumed for buried concrete in accordance with BRE Special Digest 1 (BRE, 2005).
- Gas monitoring identified slightly elevated concentrations of methane and carbon dioxide beneath the site. A Characteristic Situation 2 (low risk) was considered appropriate to the site due to elevated concentrations of carbon dioxide and methane.
- Basic protection against radon for residential dwellings or new structures of similar form of construction on the site.
- The bedrock is suitable for shallow foundations however the presence of localised areas of deep Made Ground and former foundations may mean that piled foundations are required in some locations.
- Ground bearing slabs may be adopted.
- Excavations for the new development will generate three waste streams: inert, non-hazardous and hazardous.

4 Site Description

The site is located off Eldon Street, Kendray Street and Cheapside and lies within Barnsley town centre. The site occupies an area of approximately 3.94ha and is located at National Grid Reference (NGR) 434671, 406312.

Ground levels within the main existing market/car park area fall eastwards from about 97m OD in the north west to levels of about 93-94m OD, which are retained above the railway. Levels near to the railway and the Markets Basement entrance road are at about 91.5m OD. The floor of the basement is at about 91m OD.

A site walkover survey was undertaken on 15th April 2015 by Robson Liddle Ltd. The site comprises Barnsley markets, a multi-storey car park and the former council offices. Figure 3 shows the site setting.

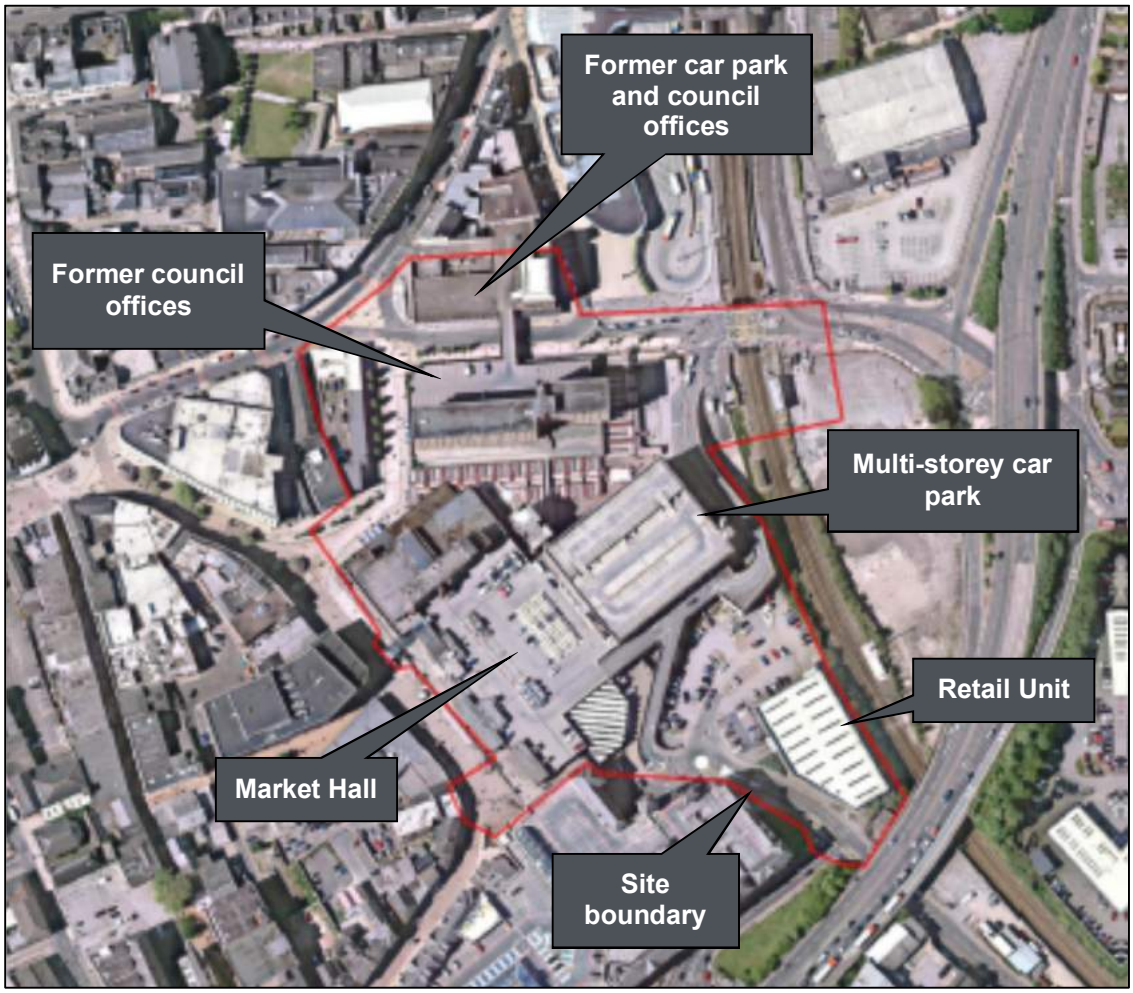
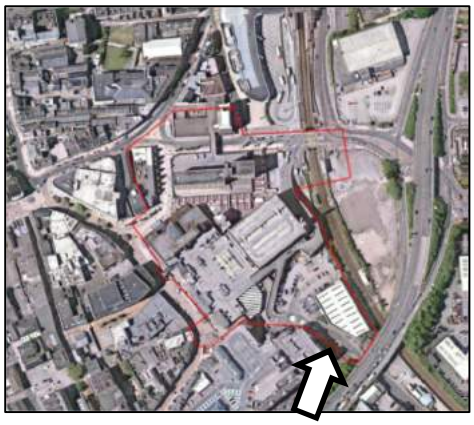


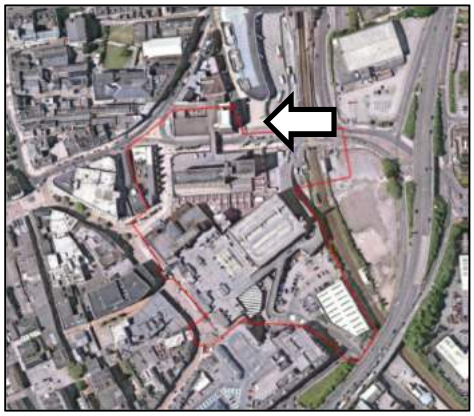
Figure 3 Site layout

4.1 Photographs

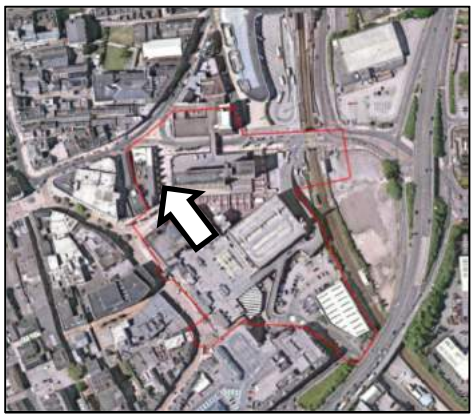
Photograph 1 Looking north east to disused retail store to the south of the site.



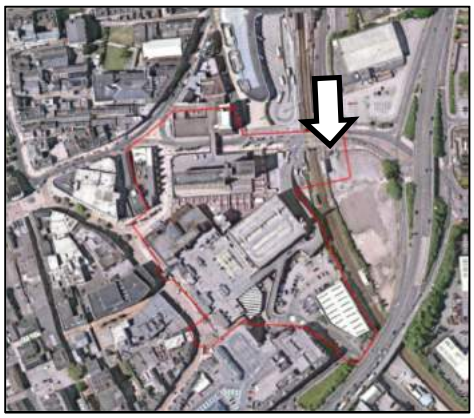
Photograph 2 Looking west along Kendray Street, former council offices to left of picture and right of picture



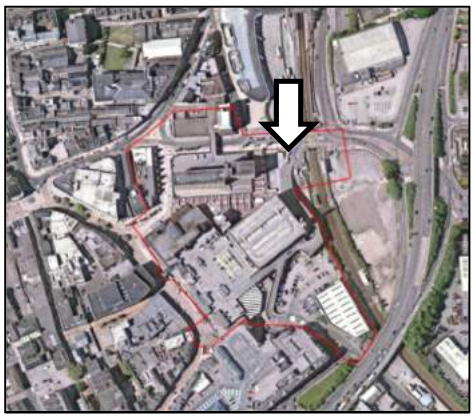
Photograph 3 Shops to the west of May Day Parade.



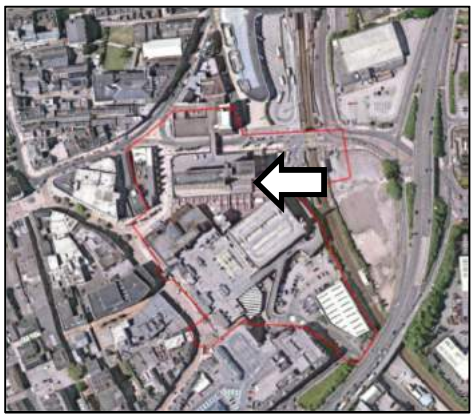
Photograph 4 Looking south across former car park site to east of railway line.



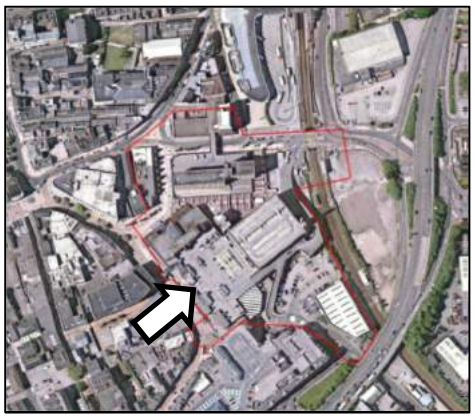
Photograph 5 Looking towards multi-storey car par and market basement entrance



Photograph 6 Rear of the council office to the right and markets to the left



Photograph 7 Front of the markets building.



5 Environmental Setting

5.1 Geology

The 1:50,000 scale British Geological Survey (BGS) geological map (Sheet 87 Barnsley) indicates that the site is underlain by the Pennine Middle Coal Measures. To the north west of the site the Kent's Rock, a sandstone flag within the Pennine Middle Coal Measures outcrops. There are no superficial deposits underlying the site. There are three coal outcrops indicated to be present within the site.

The Pennine Middle Coal Measures Formation is described by the BGS as "*Interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams*".

The site investigation undertaken by Wardell Armstrong for the redevelopment of the Markets in 2007 and 2008 proved Made Ground over the majority of the site overlying a thin layer of Glacial Till over weathered Pennine Coal Measures.

The Made Ground typically comprised gravel, sand and clay with brick, sandstone and concrete and some coal, ash and clinker. The depth of Made Ground was typically found to be 2 to 3m deep with a maximum depth of 6m recorded. However it was absent in the western section of the Market Basement.

Although no superficial deposits are recorded on the BGS mapping the Wardell Armstrong report recorded a layer of firm to stiff sandy gravelly clays which were identified as characteristic of Glacial Till deposits. Occasional plant remains were recorded within this stratum.

The Glacial Till was underlain by the solid geology of the Pennine Middle Coal Measures. This material was weathered to stiff gravelly clay near the surface, with intact bedrock being encountered at depths of 0.3m and 8.6m bgl (86 and 91m OD). The Kent's Rock, a sandstone flag within the Pennine Coal Measures, was recorded at depths between 15.75m bgl and 35.5m bgl. The thickness of the Kent's Rock was proven in five locations to be between 6.11m and 12.85m.

Three coal seams were recorded in the strata above the Kent's Rock and they were interpreted as comprising the Winter/Abdy, Top Beanshaw and Low Beamshaw coals.

The Winter/Abdy seam was encountered during the Wardell Armstrong investigation at between 2.5m bgl and 10.28m bgl. The Winter/Abdy coal was recorded as ranging from 0.58m thickness split over three leaves of coal to 1.17m.

The Top Beamshaw coal was present in boreholes across the majority of the site investigated by Wardell Armstrong ranging from depths of between 0.3m bgl (within the market basement) in the west of the Site to 23.95m bgl in the south-east of the Site. The Top Beamshaw coal varies widely in thickness and quality across the Site and is often recorded as a shaley coal or a mudstone and coal. The coal is generally subdivided into two leaves separated by a dark grey mudstone, however, it is often recorded as being a single coal and is also recorded as three coals at one location. The Top Beamshaw ranges in thickness from 0.25m to 1.23m split over two leaves of coal.

The Low Beamshaw coal is present in boreholes beneath the Top Beamshaw coal at depths ranging from 5.16m bgl to 31.23m bgl. The Low Beamshaw is present generally as a single coal ranging widely in recorded thickness across the Site from 0.35m (BH104) to 1.14m including a mudstone parting.

5.2 Soil Geochemistry

BGS estimated soil geochemistry information is included as part of the Groundsure GeoInsight report. The BGS digital estimated soil chemistry data indicates the estimated geometric mean concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Nickel and Lead in topsoil derived by spatial interpolation of the point source soil chemistry data. The original samples were collected and analysed as part of the BGS Geochemical Baseline Survey of the Environment (G-BASE) project.

Table 1 summarises the typical estimated concentrations of each determinant in topsoil in the locality of the site.

Table 1: Summary of BGS Estimated Soil Geochemistry

Determinant	Concentration Range (mg/kg)
Arsenic	15 – 25
Cadmium	<1.8
Chromium	90 – 120
Lead	<100
Nickel	30 - 45

5.3 Hydrogeology

The Environment Agency classifies the bedrock geology at the site to be Secondary A Aquifer. The site does not lie within a Source Protection Zone. The nearest groundwater abstraction lies circa 900m west as is licence for the abstraction of groundwater for bottling i.e. potable water.

The Wardell Armstrong report recorded groundwater as typically encountered at or around the bedrock at between 86 and 92m AOD; typically between 5m and 8m bgl. A shallow perched groundwater circa 3m bgl was also encountered in the Made Ground in the Market Basement area.

The site lies over a Secondary A Aquifer, however the only groundwater abstraction lies up gradient of the site. The above would suggest that groundwater would be of low sensitivity to any potential sources of contamination.

5.4 Hydrology

The nearest surface water is a culvert, Slough Dyke which runs along the northern boundary of the site. The closest designated watercourse is the River Dearne which lies c.850m north east of the site at its closest point.

The Environment Agency classifies the River Dearne as having an ecological quality of Moderate Potential and a chemical quality of Good.

The proximity of Slough Dyke to the site would suggest that surface water is considered to be of high sensitivity to any potential sources of contamination. The Wardell Armstong's report recommended that further modelling was required to quantify the potential risk to this receptor.

5.5 Landfill Sites

The Groundsure EnviroInsight Report records one former landfill site within 250m of the site. It is listed as The Old Vicarage, Doncaster Road, Barnsley approximately 230m to the south; the waste type is recorded as commercial and the licence was surrendered in January 1994.

The Wardell Armstrong report indicates that The Old Vicarage took excavation waste, soil, subsoil and inert/non hazardous building/demolition waste.

On the basis of the underlying geology, the distance from the site and the type of waste, the landfill is not considered likely to present a risk to the site from gas or leachate migration.

5.6 Radon

A site specific radon report obtained by Wardell Armstrong indicates that Basic radon protective measures should be adopted due to the underlying geology of the site.

Reference to the BRE211 (2007) Radon Atlas indicates that the site lies outside a square that requires radon protection. This is confirmed by the Groundsure GeoInsight report, which states that the site is in an area where the estimated probability of a home being above the action level of 200Bqm^{-3} is less than 1%, which would not normally require any radon protective measures for new dwellings or extensions.

It is likely that the site specific report obtained by Wardell Armstong included the square to the north within its 150m search buffer. Based on BRE 211 and the Groundsure GeoInsight report it is considered that radon protection measures would not be required for residential dwellings. Radon protection requirements for non residential buildings are not covered by BRE 211 or the site specific reports and confirmation of any protection measures should be agreed with the local authority building control.

5.7 Sensitive Land Uses and Designated Areas

The site lies within a nitrate vulnerable zone. There are no other sensitive land uses or designated areas in the vicinity of the site.

5.8 Land Use History

The historical land uses of the site and its surrounding area have been established from superseded editions of Ordnance Survey maps and are detailed in Table 2. Copies of the maps are included in Appendix A.

Table 2: Summary of Historical Maps

Date	On Site	Offsite
1850	The site is already developed for a mixture of residential and industrial purposes by the time of the first mapping. The scale does not allow for determination of the individual land uses.	The railway line is present to the east of the site. The surrounding area is fully developed with a mixture of industrial and residential land uses.

Date	On Site	Offsite
1889-1892	Residential premises and a public house are present along the western boundary of the site. A cattle market is present in the north west corner of the site. Railway Saw mill including a chimney lies to the north. The central area of the site comprises a mixture of residential housing, the Union Foundry, the Orchard and a gas works. Borough Foundry is located in the south eastern portion of the site	The site is surrounded by residential properties to the north, west and south with some industrial premises including timber yards, foundry. To the east of the site lies a railway line and sidings, a malthouse, residential properties beyond which lies open land. There is clay pit c.40m east and Mount Osborne Colliery 150m south east.
1904-1906	The Orchards is replaced by an electricity works. The saw mills is not longer present on site.	Mount Osborne Colliery has been replaced by Yorkshire Metal Works
1929	The union foundry buildings are no longer present on site	A lamp works is presented adjacent to the malt house. Borough Colliery (drift) present c.250m north east.
1938	No significant changes are evident.	No significant changes are evident.
1948-1951	Four circular tanks (identified in the Wardell report as water coolers) have been constructed on site two to the west and two to the north of the site.	No significant changes are evident.
1960-1965	The whole of the site has undergone significant change. The former cattle market is market as Kendray Market. The former saw mill is marked as Queens market. The majority of the residential housing has been demolished. The former union foundry is now marked as new market. The former electricity works, gas works and Borough foundry have been replaced by two work and a depot.	The lamp works has extended, taking the place of the malthouse. The area to the east has undergone significant development; the majority of which is residential with some recreational and industrial land. The former Colliery is no longer active; the only structure left is a disused air shaft.
1973-1974	The majority of the buildings have been demolished from the site with only a works present to the south east.	No significant changes are evident.
1975-1977	A pair of buildings have been constructed either side of the realigned Kendray street to the north of the site and a third series of buildings has been constructed off May Day green to the north west. The central area of the site has been developed as a market hall and multi-storey car park. The works is still present to the south of the site.	No significant changes are evident. The dual carriageway to the east of the site has been constructed.
1984-1987	No significant changes are evident.	No significant changes are evident.
1988-1993	No significant changes are evident.	No significant changes are evident.

Date	On Site	Offsite
2002	Works to the south of the site demolished and replaced with a retail unit (former Carpet World).	No significant changes are evident.
2010	No significant changes are evident.	No significant changes are evident.
2014	No significant changes are evident.	No significant changes are evident.

5.8.1 Summary of Development History

On site

The site was already developed by the time of the first mapping in 1850. The site has been used for a number of industrial uses including cattle market, saw mill, foundries, gas works, depot and works. The current site was redeveloped in the mid to late 1970s when the council buildings, shops off May Day Green, Market Hall and Car Park. It achieved its current layout in the early 2000s when the retail unit to the south of the site was constructed.

Off Site

The surrounding land use was typically residential interspersed with some industrial land use. Mount Osborne Colliery was present circa 150m south east from the late 1880s to the early 1990s. Borough Colliery (drift) was present circa 250m north east fro the 1920s to the early 1960s.

Other industrial land uses in the immediate surrounding area included a malt house (c.20m east), Lamp works (c.20-60m east). Railway line and siding (immediately east), timber yard (c.20m north east)

5.9 Statutory Authority Records

A review of public registers contained within the Groundsure EnviroInsight report has been undertaken. These entries relate to trade directories, pollution control registers, hazardous sites, enforcement notices etc. A summary of those that might be of relevance to the site is presented below, for full details of all entries, reference should be made to the EnviroInsight report in Appendix B.

- Two Electricity Sub Stations located on site.
- Chimney located on site
- Morrison's petrol station located circa 235m south west of the site.

- Obsoleted petrol station located circa 290m south east of the site.

5.10 Summary of key findings

No areas of potential concern were identified from the site walkover. The site however has had a number of historical industrial uses which may have results in contamination.

5.11 Potential Contaminant Sources

A summary of the risks from potential contamination sources identified from the desk study and walkover is presented in Table 3.

Table 3: Summary of Potential Contamination Sources.

Potential Hazard	On site	Off site
Significant imported soils / Made Ground / landfill	Possible	Possible
Current industrial use	Unlikely	Possible
Historic industrial use	Likely	Likely
Fuel, oil or solvent storage	Possible	Possible
Electricity sub-stations	Likely	Possible
Spills from machinery and plant	Possible	Possible
Naturally occurring metals	Unlikely	Unlikely

5.12 Potential Contaminants of Concern

On the basis of the identified sources of contamination the contaminants of concern are as follows: total petroleum hydrocarbons, poly-aromatic hydrocarbons, heavy metals and asbestos.

6 Contamination Risk Assessment

6.1 Legislative Background

The primary legislative mechanism for contaminated land management in the UK is Part 2A of the Environmental Protection Act, 1990 (EPA). Part 2A was introduced into the EPA under Section 57 of the Environment Act 1995 to help deal with the substantial legacy of land contamination. It focuses on the identification and remediation of land which is in such a condition by reason of contamination that it gives rise to significant harm or the significant possibility of significant harm to certain named receptors, or gives rise to pollution of controlled waters or the likelihood of such pollution. Part 2A applies where there is unacceptable risk, assessed on the basis of the current use and the relevant circumstances of the land. It is not directed to assessing risks in relation to a future use of the land that would require a specific grant of planning permission.

The control of development and land use in the future is the responsibility of the planning system. A fundamental principle of sustainable development is that the condition of land, its use and its development should be protected from potential hazards. The National Planning Policy Framework (NPPF) requires the developer to obtain adequate site information to confirm that the site is suitable for its proposed use.

Part 2A

Part 2A provides a regulatory regime for the identification and remediation of contaminated land and is the primary mechanism in the contaminated land regime. Local authorities are the principal regulator for inspection of land under Part 2A. In England, Part 2A is described fully in DEFRA Circular 01/2006, which also contains the statutory guidance (DEFRA, 2006). Part 2A defines contaminated land as:

'…any land which appears to the Local Authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that

a. significant harm is being caused or there is a significant possibility of such harm being caused; or

b. Pollution of controlled waters is being, or is likely to be, caused.'

Part 2A is designed to 'enable the identification and remediation of land on which contamination is causing unacceptable risks to human health or the wider environment. It does not necessarily include all land where contamination is present, even though such contamination may be relevant in the context of other regimes'.

In applying the definition of Contaminated Land, Part 2A states that 'the Local Authority must:

- Identify a 'Pollution Linkage'. That is, a linkage between a contaminant and a receptor, by means of a pathway(s).
- Determine if the contaminant is causing significant harm to that receptor, or there is a significant possibility of such harm being caused by that contaminant to that receptor.

If any one element of the pollutant linkage is not present then the land should not be identified as 'contaminated land'.

NPPF

NPPF States that 'to prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location.'

Planning policies and decisions should also ensure that:

- the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;

NPPF also states that after any required remediation, the land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990.

6.2 Preliminary Conceptual Site Model

Following a review of the desk based geo-environmental information, site reconnaissance and the investigations undertaken at the site in 2007 and 2008 have

confirm that a preliminary CSM has been formulated to identify potential sources of contamination, likely receptors and potential pathways on and in the immediate vicinity of the site.

It should be noted that some uncertainties exist due to the limited site specific data available. However, potential contaminants and receptors have been identified based on this Phase 1 desk study review. Pathways have been established on reasonable scientific knowledge of the behaviour of the contaminants in the ground.

It should also be noted that because the assessment is based on documentary evidence, contaminants may be identified, which in practice are not present and contaminants may be present which have not been identified.

The guidance provided in CLR11 indicates the CSM should identify those contaminants, pathways and receptors which are 'likely' to represent an 'unacceptable' risk either to human health or the surrounding environment.

6.3 Potential Contaminant Sources

The following potential sources of contamination are identified as follows:

- Two electricity substations located within the market basement.
- Historical use of he site as a gas works
- Historical use of the site as a foundry
- Historical use of the site as an electrical works
- Historical use of the site as Depot and works
- Historical use of the site as cattle market.

The site is 100% hardstanding i.e. tarmac, paving and buildings; no visual evidence of contamination was noted during the site walkover. Given the age of the buildings it is anticipated that they will contain asbestos.

Investigations undertaken at the site in 2007 and 2008 have confirmed that concentrations of metals, semi-metals and non-metals recorded across the Site were not considered to present a significant possibility of significant harm to long term human health. The investigations identified visual and olfactory evidence for hydrocarbon contamination at numerous site investigation locations. However, the

maximum recorded concentrations of petroleum hydrocarbons, PAH, SVOC and VOC are below the relevant screening criteria for the majority of samples taken from across the Site. The exceptions to this are samples from the May Day Green and Markets Basement.

6.3.1 Imported man made soils

Investigations undertaken at the site in 2007 and 2008 by Wardell Armstrong have confirmed that the majority of the site is underlain by Made Ground. The report confirmed that hydrocarbon contamination within the Made Ground was present as two hotspots located in May Day Green and the Markets Basement.

6.3.2 Naturally occurring metals

The underlying geology at the site comprises coal measures (interbedded mudstone, siltstone and sandstone), which is not generally associated with elevated levels of naturally occurring heavy metals. The BGS estimated soil geochemistry does not indicate elevated concentrations of naturally occurring metals (Section 5.2).

Consequently, it is considered that the naturally occurring metals likely to be present at the site do not present a potential source of contamination.

6.3.3 Off site potential sources

The surrounding land use was typically residential intersperse with some industrial land use. Mount Osborne Colliery was present circa 150m south east from the late 1880s to the early 1990s. Borough Colliery (drift) was present circa 250m north east fro the 1920s to the early 1960s. Other industrial land uses in the immediate surrounding area included a malt house (c.20m east), Lamp works (c.20-60m east). Railway line and siding (immediately east), timber yard (c.20m north east). Several of these land uses are considered to be a potential source of contamination.

An obsoleted petrol station is located circa 290m south east of the site. However, the location is topographically down gradient and consequently any leakage from the tanks is considered unlikely to present a risk of on site migration of contaminants.

6.3.4 Landfill gas

Only one historical landfill is known to exist within 250m of the site. No organic soils are anticipated to lie beneath the site. The Old Vicarage, Doncaster Road, Barnsley approximately 230m to the south; the waste type is recorded as commercial and the

licence was surrendered in January 1994. The Wardell Armstrong report indicates that The Old Vicarage took excavation waste, soil, subsoil and inert/non hazardous building/demolition waste. Given the time since the licence was surrendered, the distance to the landfill and the nature of the fill material it is considered unlikely that the quarry will represent a significant on going source of landfill gases.

Consequently the risks to end users from explosive or asphyxiating gases is considered low.

6.3.5 Radon

A site specific radon report obtained by Wardell Armstrong indicates that Basic radon protective measures should be adopted due to the underlying geology of the site.

Reference to the BRE211 (2007) Radon Atlas indicates that the site lies outside a square that requires radon protection. This is confirmed by the Groundsure GeoInsight report, which states that the site is in an area where the estimated probability of a home being above the action level of 200Bqm^{-3} is less than 1%, which would not normally require any radon protective measures for new dwellings or extensions.

It is likely that the site specific report obtained by Wardell Armstong included the square to the north within its 150m search buffer. Based on BRE 211 and the Groundsure GeoInsight report it is considered that radon protection measures would not be required for residential dwellings. Radon protection requirements for non residential buildings are not covered by BRE 211 nor the site specific reports and confirmation of any protection measures should be agreed with the local authority building control.

6.4 Receptors

It is understood that the site will be redeveloped with a mixture of commercial, retail and leisure. Visitors and workers are assumed to occupy the site part time and are not expected to be exposed directly to soils within the site. Construction workers would be directly exposed to soils, however this would only be short term.

- Visitors and workers
- Construction workers
- Construction materials (including services)

- Groundwater – Secondary A Aquifer.
- Surface Water - Slough Dyke on site (crosses the north eastern corner of the site)
- Flora and fauna.

6.5 Pathways

Generic possible pathways between potential sources and receptors are discussed as follows:

6.5.1 Receptor – Future Residents, Visitors and Workers

- Indoor and outdoor inhalation of dust or vapours.

6.5.2 Receptor – Construction Workers

- Dermal contact with contaminated soil or water.
- Ingestion of contaminated soil or water.
- Outdoor inhalation of dust or vapours.

6.5.3 Receptor – Buildings and services

- Sulphate attack on concretes.
- Hydrocarbon attack on plastics which can result in tainting of potable water carried in supply pipes.

6.5.4 Receptor – Groundwater

- Infiltration and leaching of contaminants in soil into groundwater.
- Migration of contaminated water via drainage system.
- Migration of polluted groundwater to drinking water abstraction.

6.5.5 Receptor – Surface Water

- Run off of contaminants into surface water.
- Migration of contaminated water via drainage system.

6.5.6 Receptor – Flora and Fauna

- Uptake via root system.
- Displacement of oxygen from root systems.
- Harm to ecosystems from contaminated surface water.

6.6 Preliminary Risk Assessment

A preliminary risk assessment was undertaken based on a qualitative assessment of the likely presence of a pollutant linkage. A pollutant linkage is the relationship between a source (or contaminant), a pathway and a target (or receptor). Unless all three elements of a pollutant linkage are present, a significant risk is not considered to exist. The approach adopted is to screen each site based on assigning a simple low, medium or high category. The preliminary risk assessment is shown in Table 4.

Table 4 Site Conceptual Model

Potential Source and Pollutant	Pathway	Receptor	Potential Pollutant Linkage?	Probability of exposure, consequence and magnitude of risk.
Geochemistry of underlying soils and made ground at the site. Sources on site include • potential for contaminants within any Made Ground e.g. metals, hydrocarbons, polyaromatic hydrocarbons and asbestos. Potential off site source which may impact on site include • as above	Direct contact - Dermal contact, soil ingestion and dust inhalation.	Human Health – future users of the site e.g. visitors and workers.	Possible – two localised on-site sources of contamination.	Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
		Human Health – Construction workers	Likely – increased risk of direct contact with soils during the construction period.	Probability: Likely Consequence: Medium Magnitude: **Medium Risk**
	Indirect Contact - Vapour inhalation.	Human Health – future users of the site e.g. visitors and workers.	Possible – two localised on-site sources of hydrocarbon contamination.	Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
		Human Health – Construction workers		Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
	Leaching and percolation.	Controlled Waters – groundwater (Secondary A Aquifer)	Possible – hotspot beneath Markets Basement. However contamination not recorded within deeper groundwater.	Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
	Groundwater migration & run-off to surface waters carrying entrained sediment or diffuse contamination	Controlled Waters – Surface waters within Slough Dyke	Possible – two localised on-site sources of hydrocarbon contamination.	Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
	Direct contact and/or leaching (inc sulphate, pH).	Buildings and Services – On site buildings and/or structures impacted by ground conditions	Likely – underlying geology expected to be pyritic.	Probability: Medium Consequence: Medium Magnitude: **Medium Risk**
	Plant uptake.	Ecology - existing trees and landscaping on site.	Possible – No protected ecosystems on or in the vicinity of the site. Localise elevated metals which may pose a risk to sensitive plant growth	Probability: Possible Consequence: Low Magnitude: **Medium Risk**

Potential Source and Pollutant	Pathway	Receptor	Potential Pollutant Linkage?	Probability of exposure, consequence and magnitude of risk.
Potential Geochemistry of underlying groundwater.	Lateral movement of groundwater	Controlled Waters – groundwater (Secondary A Aquifer)	Possible – hotspot beneath Markets Basement. However contamination not recorded within deeper groundwater.	Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
		Controlled Waters – Surface waters within Slough Dyke	Possible – two localised on-site sources of hydrocarbon contamination.	Probability: Possible Consequence: Medium Magnitude: **Medium Risk**
Ground gases.	Permeation through ground and intrusion into buildings and structures on site.	Human Health – future users of the site e.g. visitors and workers.	Possible – dependant on nature and extent of Made Ground and possible shallow coals seams which may have been worked.	Probability: Possible Consequence: Medium Magnitude: **Low Risk**
Radon.	Permeation through ground floor.	Human Health – future users of the site e.g. visitors and workers.	Unlikely – no radon protection measures required.	Probability: Low Consequence: Medium Magnitude: **Low Risk**

7 Geotechnical Assessment

The published geological information (Section 5.1) and information from previous site investigations indicates that the site is likely to be underlain by Made Ground (typically 2 to 3m thick up to a max of 6m) overlying Glacial Till (stiff clays and dense gravels) over Weathered Pennine Middle Coal Measures (stiff gravelly clay) over Coal Measures Bedrock. The bedrock consisted of weak to moderately strong, grey mudstone inter-bedded with siltstone and sandstone and underlain by Kent's Rock Sandstone.

An assessment of potential geotechnical risks based on the information from the Groundsure GeoInsight Report and available geological information is presented in the following sections. The risks are summarised in Table 5. The GeoInsight Report is reproduced in Appendix C.

7.1 Deep Made Ground

From the available information it is likely that the majority of the site will be underlain by made Ground around 2 to 3m deep, extending to 6m in isolated locations.

7.2 Buried Structures

The site is extensively developed with a number of significant structures that are likely to have considerable underground structures (foundations, basements etc.). These are likely to interfere with the proposed development and their impact on the proposed development will need to be carefully assessed.

7.3 Compressible Soils

The Groundsure GeoInsight report states that the Compressible Ground risk at the site is "negligible". Based on the expected geology, compressible soils are not anticipated.

7.4 Shrinking / Swelling Clay

The Groundsure GeoInsight report states that the Shrinking or Swelling Clay risk at the site is "negligible to very low". Based on the anticipated bedrock geology, shrinking or swelling soils are not anticipated.

7.5 Collapsible soils

The Groundsure GeoInsight report states that the Collapsible Ground risk at the site is "very low". Based on the anticipated ground conditions, collapsible soils are not expected.

7.6 Aggressive Ground Conditions for Concrete

Based on the published geology, the anticipated soils are expected to contain significantly elevated concentrations of soluble sulphates or pyritic materials which may oxide to form soluble sulphates.

7.7 Running Sands / Excavation Instability

The Groundsure GeoInsight report states that the Running Sand risk at the site is "negligible to low". Based on the anticipated ground conditions, running sands are not expected.

7.8 Groundwater

The Wardell Armstrong report recorded groundwater as typically encountered at or around the bedrock at between 86 and 92m AOD; typically between 5m and 8m bgl. A shallow perched groundwater circa 3m bgl was also encountered in the Made Ground in the Market Basement area.

7.9 Slope Stability

The Groundsure GeoInsight report states that the Landslide risk at the site is "Very low".

Ground levels within the main existing market/car park area fall eastwards from about 97m OD in the north west to a level of around 93 to 94m OD. Levels near to the railway and the Markets Basement entrance road are at about 91.5m OD. The floor of the basement is at about 91m OD.

The current development of the site has been accommodated by a basement with some terraces and slopes to the east of the site. The bedrock strata are generally considered stable. However the ground conditions are anticipated to vary locally from rock, clay, gravel or Made Ground and any proposed slopes or temporary cuttings would be carefully assessed.

7.10 Underground Mining

The GeoInsight report states that the site is within an area affected by coal mining. A Coal Authority Mining Report was obtained by Robson Liddle Ltd, this report confirmed:

- The property is in the likely zone of influence from workings in 2 seams of coal at 130m to 370m depth, and last worked in 1939. Any ground movement from these coal workings should have stopped by now.
- In addition the property is in an area where the Coal Authority believes there is coal at or close to the surface. This coal may have been worked at some time in the past.
- There are no known mine entries on or within 20m of the site; however they hold no records on whether any of the mine entrances have been treated.
- 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.
- The property is not within the boundary of an opencast site from which coal has been or will be removed by opencast methods.
- The Coal Authority has not received a damage notice or claim for the subject property or any property within 50 metres of the property boundary, since 31st October 1994.
- There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.
- The property is in an area for which a notice of entitlement to withdraw support was published in 1963.

The Coal Authority Report is presented in Appendix D.

In the Wardell Armstrong report, boreholes identified the presence of four coal seams at depths between 0.30m and 35.55m beneath the Site. They conjectured that the seams encountered are the Winter/Abdy, Top Beamshaw, Low Beamshaw and the Kent's Thin coals. The thicknesses of the seams range from 0.25m to 1.23m. Consideration is given to possible workings in the Winter/Abdy and Low Beamshaw coal seams during the investigation.

The report indicated that the Abdy/Winter coal varies widely in thickness across the Site, however, it is present at potentially workable thickness in some boreholes. It is considered that the likelihood of shallow unrecorded abandoned workings beneath the Site is low and even if present would be of a very limited nature. The subsequent risk of potential surface subsidence is low. However, given the sensitive nature of the development precautionary measures are recommended where the Winter/Abdy coal is present beneath the development area.

The report considered that though some very limited anomalous areas have been recorded within the Low Beamshaw coal these are either not considered to be old workings or that they are possible old workings of such limited extent to not be of significance. Therefore, no further investigation or precautionary measures are generally required with regard to the Low Beamshaw coal.

7.11 Solution Features / Natural Cavities

The site is expected to be underlain by interbedded mudstones, siltstones and sandstones of the Lower Pennine Coal Measures Formation which are not prone to dissolution.

The Groundsure GeoInsight report states that the Ground Dissolution risk at the site is “negligible” and no solution features are recorded within 1km.

8 Conclusions and Recommendations

8.1 Geotechnical Risks

The potential for geotechnical hazards are summarised in Table 5.

Table 5: Summary of Geotechnical Hazards.

Potential Geological Hazard	Impact on proposed development	Likelihood of presence	Risk
Deep Made Ground up to 3.0m	High	Likely	High
Buried structures	High	Likely	High
Compressible ground	Moderate	Unlikely	Low
Shrinking / swelling clay	Moderate	Unlikely	Low
Collapsible ground	High	Unlikely	Low
Aggressive ground conditions for concrete	Low	Possible	Medium
Running sands / excavation instability	Moderate	Unlikely	Low
High water table / groundwater inflows.	High	Unlikely	Low
Slope stability	Moderate	Unlikely	Low
Underground mining	High	Possible	Medium
Ground dissolution / natural cavities	High	Unlikely	Low

The bedrock is suitable for shallow foundations however the presence of localised areas of deep Made Ground and former foundations may mean that piled foundations are required in some locations. For heavier multi-storey structures piles may also be required even where the natural strata are present at shallow depth. The Wardell Armstrong report identified broad areas of zoning for piled and pad foundations.

The near surface soils are not anticipated to be shrinkable. A ground bearing ground floor slab may be suitable, depending on the depth of Made Ground present and any treatment of the Made Ground that can be undertaken.

8.2 Land Contamination

There is a moderate risk to various receptors from a number of potential sources identified, these are discussed in more detail below.

- Two electricity substations located within the market basement.
- Historical use of he site as a gas works

- Historical use of the site as a foundry
- Historical use of the site as an electrical works
- Historical use of the site as Depot and works
- Historical use of the site as cattle market.

The site is 100% hardstanding i.e. tarmac, paving and buildings; no visual evidence of contamination was noted during the site walkover. Given the age of the buildings it is anticipated that they will contain asbestos.

Investigations undertaken at the site in 2007 and 2008 have confirmed that concentrations of metals, semi-metals and non-metals recorded across the Site were not considered to present a significant possibility of significant harm to long term human health. The investigations identified visual and olfactory evidence for hydrocarbon contamination at numerous site investigation locations. However, the maximum recorded concentrations of petroleum hydrocarbons, PAH, SVOC and VOC are below the relevant screening criteria for the majority of samples taken from across the Site. The exceptions to this are samples from the May Day Green and Markets Basement.

At the time of the 2008 investigation, the contaminated Made Ground within the May Day Green hotspot was scheduled for removal as part of the redevelopment and therefore was not considered to present a significant risk to long-term human health.. If these materials area to be left insitu as part of the current development a detailed quantitative risk assessment would be required to establish the risk to human health and environmental receptors.

The Wardell Armstrong report recommended further assessment in the form of a detailed quantitative risk assessment is required to establish the risk posed by identified contamination within the Markets Basement and southern CEAG hotspots to human health and environmental receptors. This should also include generation of remedial targets if required. This additional assessment should be documented in a separate remediation strategy report for the proposed development.

8.3 Ground Gas

No sources of ground gas on or in the vicinity of the site. Gas monitoring was undertaken as part of the Wardell Armstrong investigation. It recorded a worse case gas screening value of 0.06l/h and classified the site as a CIRIA Characteristic Situation 2.

No radon protective measures are considered necessary.

8.4 Summary

The aim of this report was to assess the potential geotechnical and geo-environmental issues at the proposed development site. Two hydrocarbon hotspots of contamination have been identified from the Preliminary Risk Assessment. To enable the knowledge of the contaminating potential and land quality of this site to be developed further detailed risk assessment would be required.

In general, where any new building is proposed an intrusive investigation should be carried out so that geotechnical parameters and sub surface ground conditions can be determined to assist in the design of the structure. Any potential abnormal geotechnical risks identified in this report should be properly investigated so that the actual level of risk and any remedial measures required can be determined. A number of site investigations have previously been undertaken at the site for the redevelopment. It is recommended that the client investigates ownership of these reports.

9 Limitations and Uncertainties

9.1 General

It should be noted that the levels of risk identified in this report are perceived risks based on the information reviewed. No physical investigation or testing has been carried out; actual risks can only be assessed following a physical investigation of the site. Further work, including physical investigation, laboratory testing and ground gas monitoring may be required by the appropriate regulators to confirm actual conditions.

This report has been prepared by Robson Liddle with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the Client.

The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true representative data with respect to site conditions.

The information reported herein is based on the interpretation of data collected during the site investigation, pertaining specifically to the soil samples retained from the identified locations. Should additional information become available that may influence the opinions expressed in this report, Robson Liddle reserves the right to review such information and, if warranted, to alter the opinions accordingly.

The evaluation and conclusions do not preclude the existence of other site conditions and contamination, which could not reasonably have been revealed by the site investigation works undertaken at the time of writing. This report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions or potential contaminants.

This report has been prepared solely for the use of the client, and may not be relied upon by other parties without written consent from Robson Liddle.

Robson Liddle disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

9.2 Site Specific

No access was available to the office blocks to the north of the site.

10 General Notes

This report will be prepared for the exclusive use of the client named in the document and copyright will subsist with Robson Liddle Limited. Prior written permission must be obtained to reproduce all or part of the report. It will be prepared on the understanding that you will disclose its contents to parties directly involved in the current investigation, preparation and development of the site. Further copies may be obtained with the client's written permission from Robson Liddle Limited with whom a master copy of the document will be retained.

The report and /or opinion will be prepared for the specific purpose stated in the document and in relation to the nature and extent of proposals made available to us at the time of your enquiry. The recommendations should not be used for other schemes on or adjacent to the site without further reference to Robson Liddle Limited. The assessment of the factual data will be provided to assist the client and his Engineer and/or advisors in the preparation of their designs.

The report will be based on the ground conditions encountered in the exploratory holes together with the results of field and laboratory testing in the context of the proposed development. There may be special conditions, appertaining to the site, however, which may not be revealed by the investigation, and which may not be taken into account in the report.

Methods of construction and/or design other than those proposed by the designers or referred to in the report may require consideration during the evolution of the proposals and further assessment of the geotechnical data would be required to provide discussion and recommendation appropriate to these methods.

The accuracy of the results reported will depend upon the technique of measurement, investigation and test used and these values should not be regarded necessarily as characteristic of the strata as a whole. Where such measurements are critical, the technique of the investigation will need to be reviewed and supplementary investigation undertaken in accordance with the advice of the company where necessary.

Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes, or on possible presence of a feature based on either

visual, verbal, written, cartographical, photographic or published evidence, this will be for guidance only and no liability can be accepted for its accuracy.

Ground conditions should be monitored during the construction of the works and the recommendations of the report re-evaluated in the light of these data by the supervising geotechnical engineers.

Any comments on groundwater conditions will be based on observations made at the time of the investigation, unless specifically stated otherwise. It should be noted, however, that the observations are subject to the method and speed of the boring, drilling or excavation and that groundwater levels will vary due to seasonal or other effects.

Unless specifically stated, the investigation will not take into account of possible effects of mineral extraction.

The economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, will depend on very many factors in addition to geotechnical considerations hence its evaluation will be outside the scope of the report.

Appendix A

Historic Maps

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: County Series Town Plan

Map date: **1889**

Scale: 1:500

Printed at: 1:1,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: County Series

Map date: **1892-1893**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1893
Revised 1893
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1892
Revised 1892
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey
Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: County Series

Map date: **1906**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1906
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1906
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1906
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1906
Revised 1906
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

0 100m

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1960**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1930

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1930

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1961**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1959
Revised 1959
Edition N/A
Copyright 1961
Levelled 1930

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1930

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1930

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1930

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1975-1977**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1977-1982**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1981
Levelled 1969

Surveyed 1963
Revised 1982
Edition N/A
Copyright 1982
Levelled 1963

Surveyed 1960
Revised 1976
Edition N/A
Copyright 1977
Levelled 1963

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1984-1987**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1963
Revised 1986
Edition N/A
Copyright 1986
Levelled 1963

Surveyed 1960
Revised 1986
Edition N/A
Copyright N/A
Levelled 1963

Surveyed 1960
Revised 1983
Edition N/A
Copyright 1984
Levelled 1963

Surveyed 1963
Revised 1987
Edition N/A
Copyright 1987
Levelled 1963

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1988-1993**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1959
Revised 1987
Edition N/A
Copyright 1988
Levelled 1963

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey
Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: County Series

Map date: **1850**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

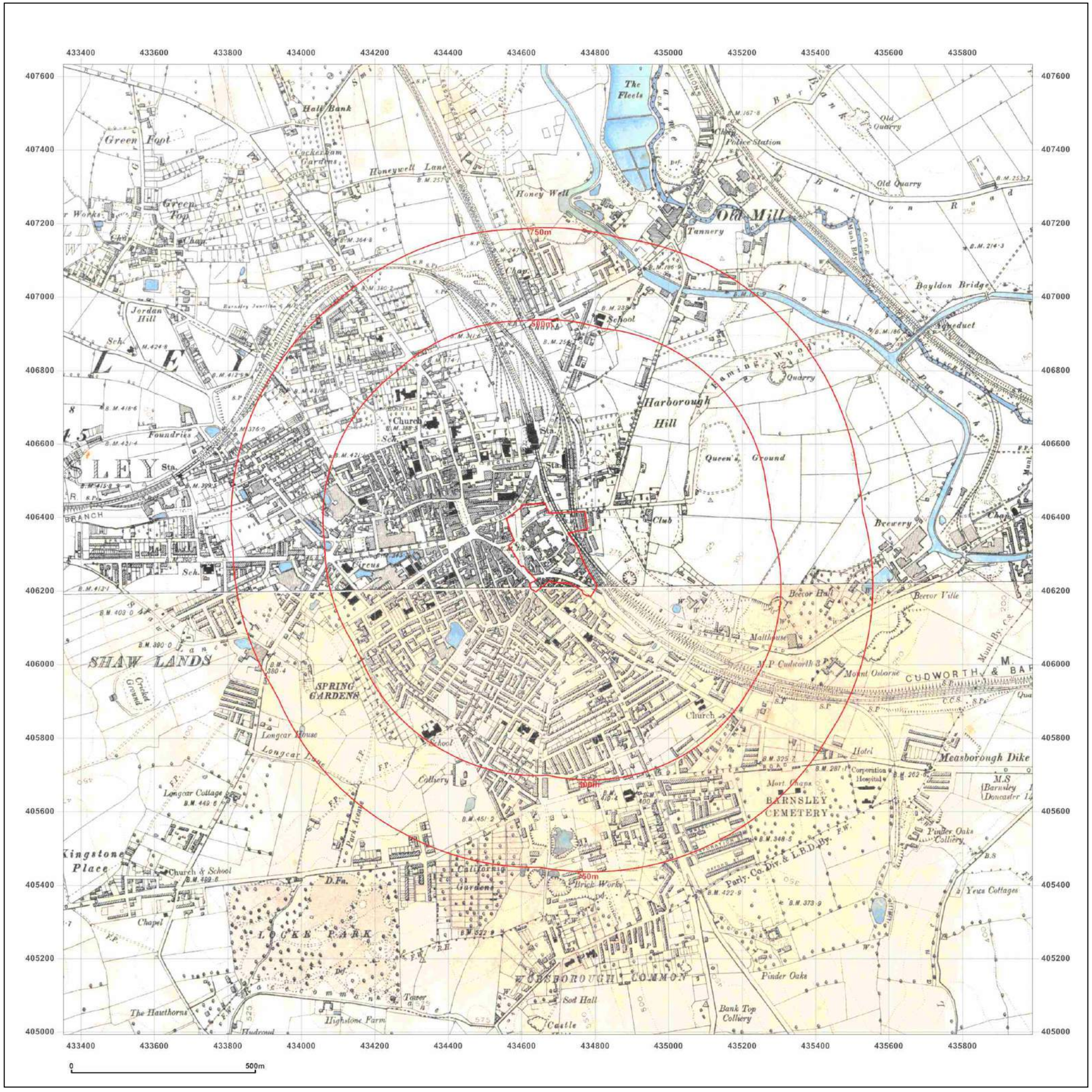
Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: County Series

Map date: **1890**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1890
Edition N/A
Copyright N/A
Levelled N/A

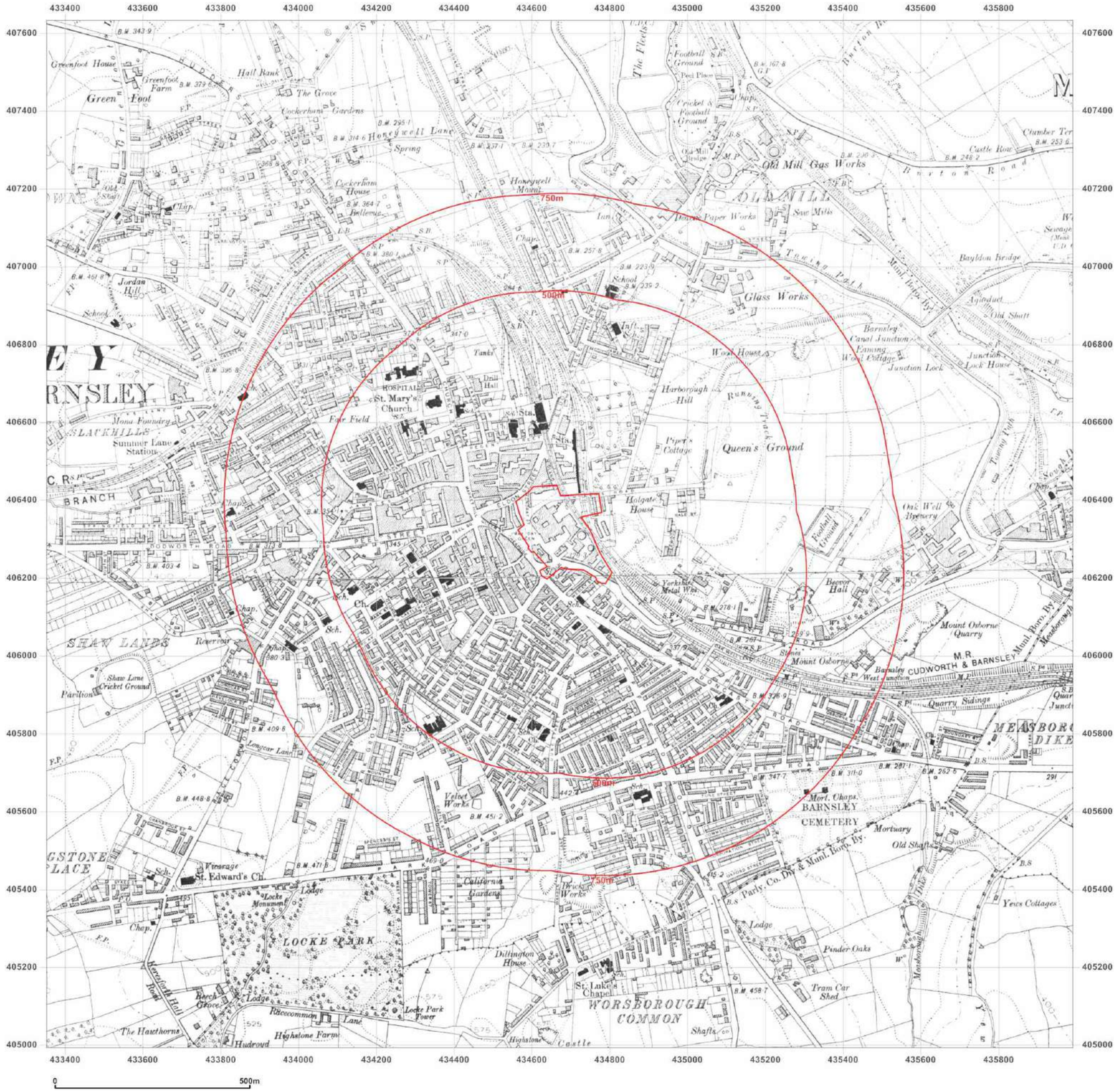
Ordnance Survey Licensed Partner

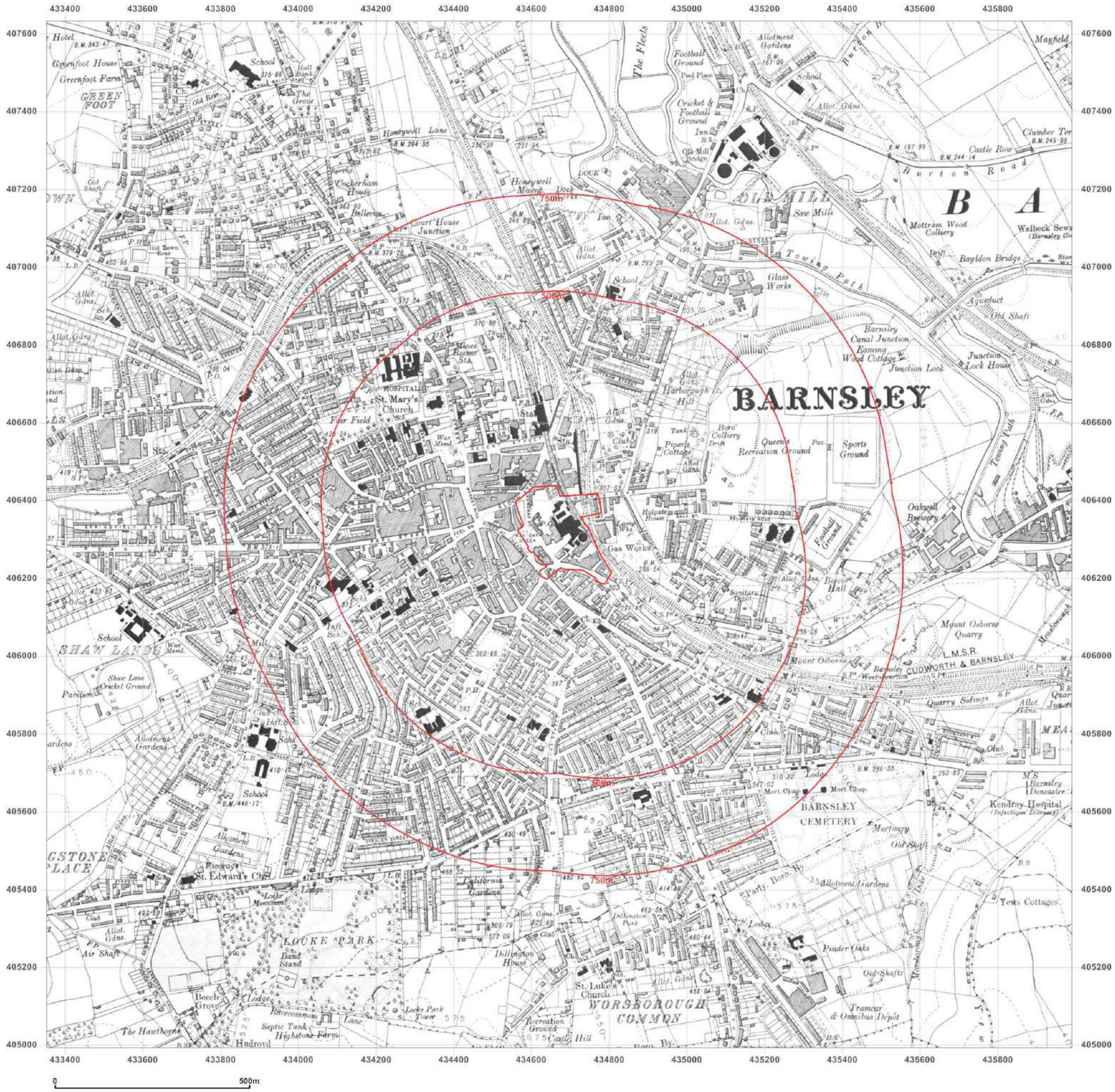
Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

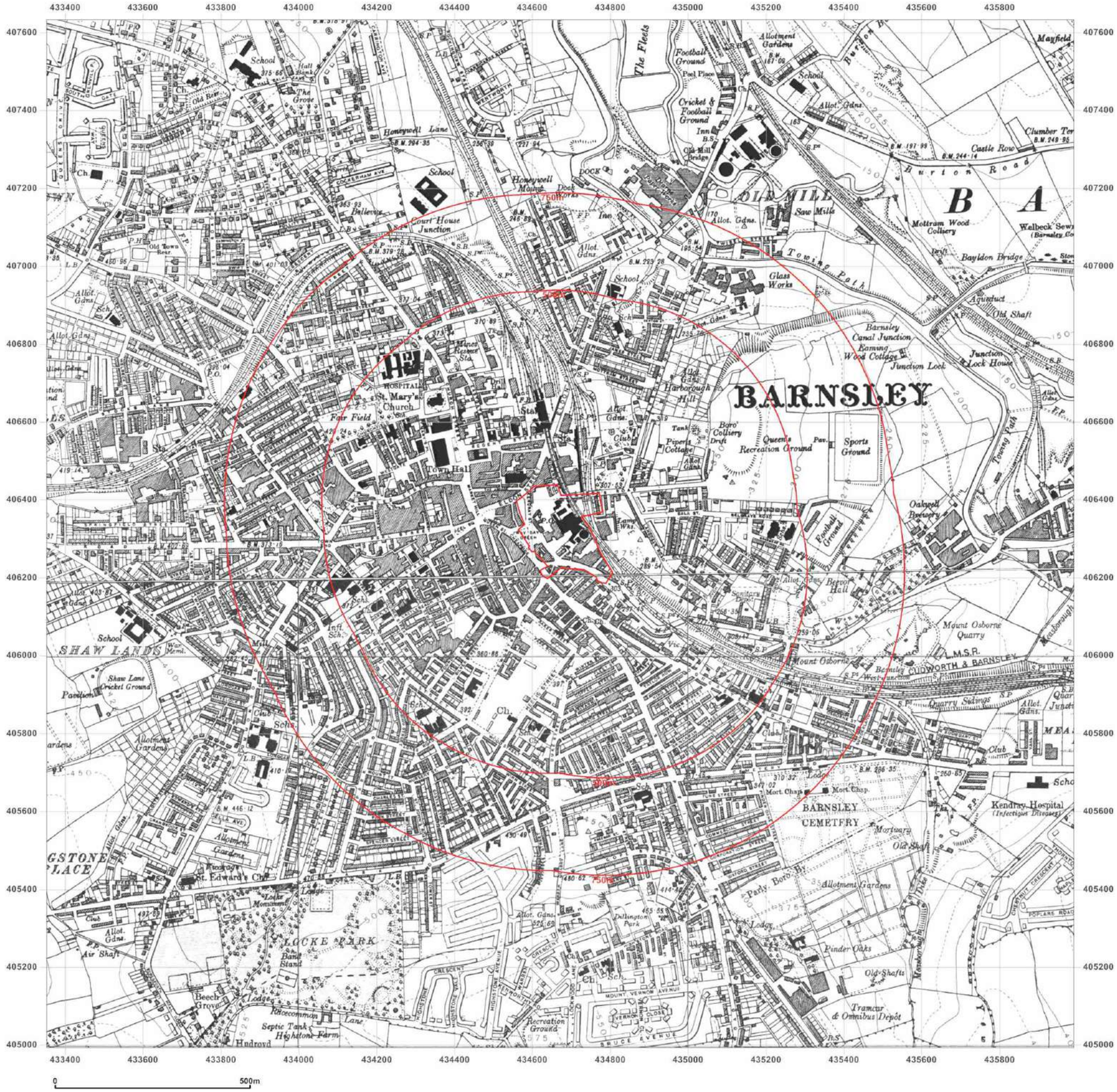
© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*


750m
500m
250m
Old Mill Gas Works
Glass Works
Queen's Ground
Harborough Hill
Holgate House
Mount Osborne Quarry
BARNSLEY CEMETERY
Mortuary
Old Shaft
Quarry Sidings
Barnsley Canal Junction
Junction Lock
Bayldon Bridge
Aqueduct
Tram Car Shed
Pinder Oaks
Yews Cottages
Dillington House
St. Luke's Chapel
WORSBOROUGH COMMON
Shafts
Highstone Castle
Highstone Farm
Hudroyd
The Hawthorns
Locke Park Tower
LOCKE PARK
St. Edward's Ch.
Vicarage
California Gardens
Velvet Works
Brick Works
Mort. Chaps.
Mount Osborne
Beever Hall
Yorkshire Metal Wks
Oak Well Brewery
Football Ground
Cricket & Football Ground
Old Mill Bridge
Tenants Paper Works
Saw Mills
Honeywell Lane
Honeywell Mount
Cockerham House
Cockerham Gardens
The Grove
Hall Bank
Greenfoot House
Greenfoot Farm
Green Foot
Jordan Hill
Mona Foundry
Summer Lane Station
SLACKHILLS
Fair Field
Drill Hall
HOSPITAL
St. Mary's Church
Tanks
Wood House
Wood Cottage
Paper Cottage
Holgate Road
Doncaster Road
Barton Road
Castle Road
Chamber Ter
Shaw Lands
Shaw Lane Cricket Ground
Pavilion
Reservoir
Longcar Lane
Measborough Hall
Beech Grove
Ricecommon Lane
Lodge
Locke Monument
Meadowbrook
Measborough Dike
Party Co. Div. & Muni. Boro. By.
Muni. Boro. By.
Tow Path
Aqueduct
Sewage (Mun. U.D.)
Stone
Quarry
Chap.
Sch.
Ch.
Inn
Pump
Tank
Station
Junction
Weight Bridge
Gas Works
Cricket Ground
Reed Place
Barnsley
Wakefield
Doncaster
Sheffield
Leeds
Manchester
Liverpool
Birmingham
Nottingham
Derby
Leicester
Stoke
Cardiff
Swansea
Bristol
Exeter
Plymouth
Southampton
Portsmouth
Brighton
Ipswich
Norwich
Cambridge
Oxford
Reading
Swindon
Bath
Gloucester
Hereford
Shrewsbury
Chester
Wrexham
Bangor
Aberystwyth
Carmarthen
Pembroke
Newcastle
Sunderland
Durham
Carlisle
Dumfries
Edinburgh
Glasgow
Stirling
Perth
Aberdeen
Inverness
Lerwick
Belfast
Dublin
Cork
Limerick
Galway
Sligo
Waterford
Kilkenny
Wexford
Dundee
Ayr
Kirkcaldy


BARNSLEY
HOSPITAL
St. Mary's Church
Court House Junction
Honeywell Lane
Honeywell Mount
Dock
Old Mill
Saw Mills
Mottram Wood Colliery
Bayldon Bridge
Towing Path
Glass Works
Barnsley Canal Junction
Junction Lock
Junction Lock House
Harborough Hill
Boro' Colliery
Queens Recreation Ground
Sports Ground
Football Ground
Cricket & Football Ground
Allotment Gardens
Burton Road
Castle Row
Clumber Ter
Mayfield
Oakwell Brewery
Gas Works
Holgate House
Mount Osborne Quarry
L.M.S.R.
CUDWORTH & BARNSLEY
Quarry Sidings
Kendray Hospital
BARNSLEY CEMETERY
Mortuary
Old Shaft
Allotment Gardens
Tews Cottages
Finder Oaks
Tramcar & Omnibus Depot
WORSBOROUGH COMMON
St. Luke's Church
Dillington House
Dillington Park
Recreation Ground
Castle Hill
LOCKE PARK
Band Stand
Lodge
Beech Grove
Racecommon Lane
Septic Tank
Highstone Farm
Hudroyd
The Hawthorns
Locke Park Tower
St. Edward's Ch
SHAW LANDS
Shaw Lane Cricket Ground
Pavilion
School
Allotment Gardens
Air Shaft
Fair Field
Cockerham House
Bellevue
Old Town Rear
GREEN FOOT
Greenfoot House
Greenfoot Farm
Hotel
The Grove
Hall Bank
Old Rear
Old Shaft
Tank
Piper's Cottage
Club
Gas Works
Sanitary Depot
Beacon Hall
Mount Osborne
Madsbrough
Towing Path
Aqueduct
Welbeck Sewa
Stone
Mortuary
Lodge
Mort. Chap.
Pinder Oaks
Old Shaft
Tank
Pond
Allot. Gdns.
Sch.
Ch.
Club
Inn
Mill
Bridge
Weir
Sta.
P.O.
Ch.
Sch.
Lib.
Pub.
Mkt.
Gdns.
Wks.
Hosp.
Cem.
Pk.
Rd.
Ln.
Dr.
Cres.
Sq.
Gr.
Hill
Mt.
Jct.
Br.
Stn.
Tel.
Wr.
Mem.
Ho.
Cot.
Farm
Fm.
Hse.
Tr.
Pt.
Sp.
Ft.
Yd.
Wd.
Cl.
Ct.
Pl.
Ter.
Vic.
Ch.
Chy.
Cemy.
Hosp.
Lib.
Mus.
Pub.
Sch


BARNSLEY
St. Mary's Church
Town Hall
Queen's Recreation Ground
Sports Ground
Glass Works
Old Mill
Saw Mills
Mottram Wood Colliery
Bayldon Bridge
Barnsley Canal Junction
Junction Lock
Junction Lock House
Harborough Hill
Boro' Colliery
Oakwell Brewery
Football Ground
Cricket & Football Ground
Allotment Gardens
Mount Osborne Quarry
L.M.S.R.
CUDWORTH & BARNSLEY
Quarry Sidings
BARNSLEY CEMETERY
Kendray Hospital
SHAW LANDS
Shaw Lane Cricket Ground
LOCKE PARK
Band Stand
Recreation Ground
Tramcar & Omnibus Depot
Pinder Oaks
Old Shafts
Allotment Gardens
Burton Road
Towing Path
Honeywell Lane
Court House Junction
The Fleets
Mayfield
Castle Row
Clumber Ter
Welbeck Sewy
Aqueduct
Old Shaft
Mortuary
Mort. Chap.
Lodge
Hudroyd
Beech Grove
Septic Tank
Highstone Farm
Racecommon Lane
Bruce Avenue
Mount Vernon Avenue
Poplare Road
Chestnut Crescent
Pinder Oaks
Allotment Gardens
Fair Field
Hospital
School
Club
Inn
Dock
Works
Mill
Pavilion
Cricket Ground
Allot. Gdns.
Air Shaft
Sch.
Ch.
P.O.
Stn.
Sta.
Pub.
Tank
Pipers Cottage
Wood Cottage
Farming
Harborough Hill
Dillington Park
Mount Vernon Close
Bruce Avenue
Highstone Avenue
Highstone Drive
Highstone Crescent
Oxford Street
Tyne Street
Wear Street
Thames Street
Mersey Street
Clyde Street
Dee Street
Trent Street
Severn Street
Tay Street
Forth Street
Bell St.
Belvedere Road
Sheffield Road
Meadowhall Road
Newborough Hill
Mount Osborne
Barnsley Hall
Sportsman Inn
Mort. Chap.
Pady. Boro. By.
Tyne Street
Oxford Street
Mount Vernon Avenue
Mount Vernon Close
Highstone Avenue
Highstone Drive
Highstone Crescent
Bruce Avenue
Chestnut Crescent
Poplare Road
Meadowhall Road
Newborough Hill
Burton Road
Towing Path
Tramway Path
Aqueduct
Old Shaft
Junction Lock
Junction Lock House
Barnsley Canal Junction

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1851
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1948
Edition 1948
Copyright N/A
Levelled N/A

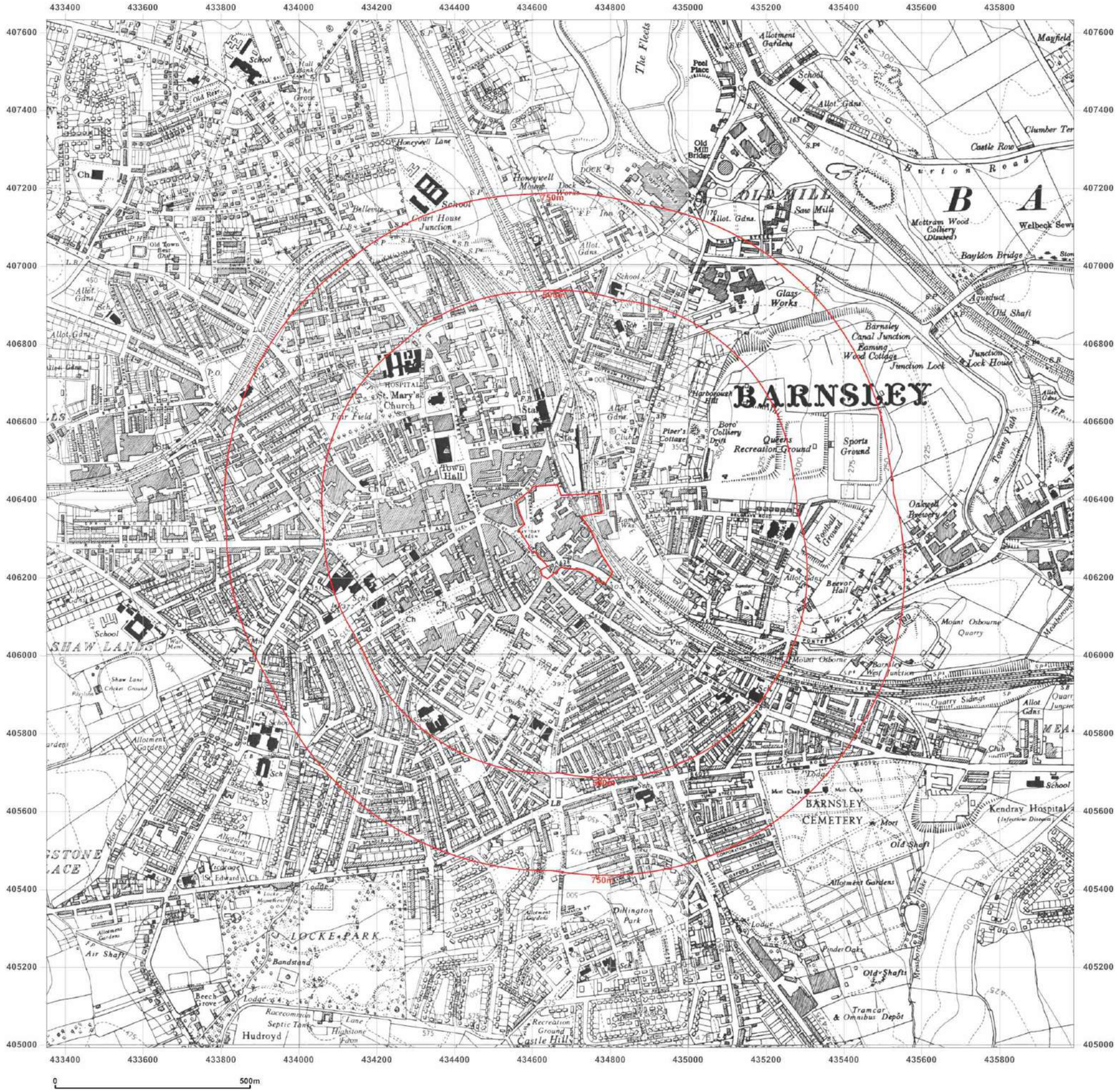
Ordnance Survey
Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: Provisional

Map date: **1951**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1951
Revised 1951
Edition N/A
Copyright N/A
Levelled N/A

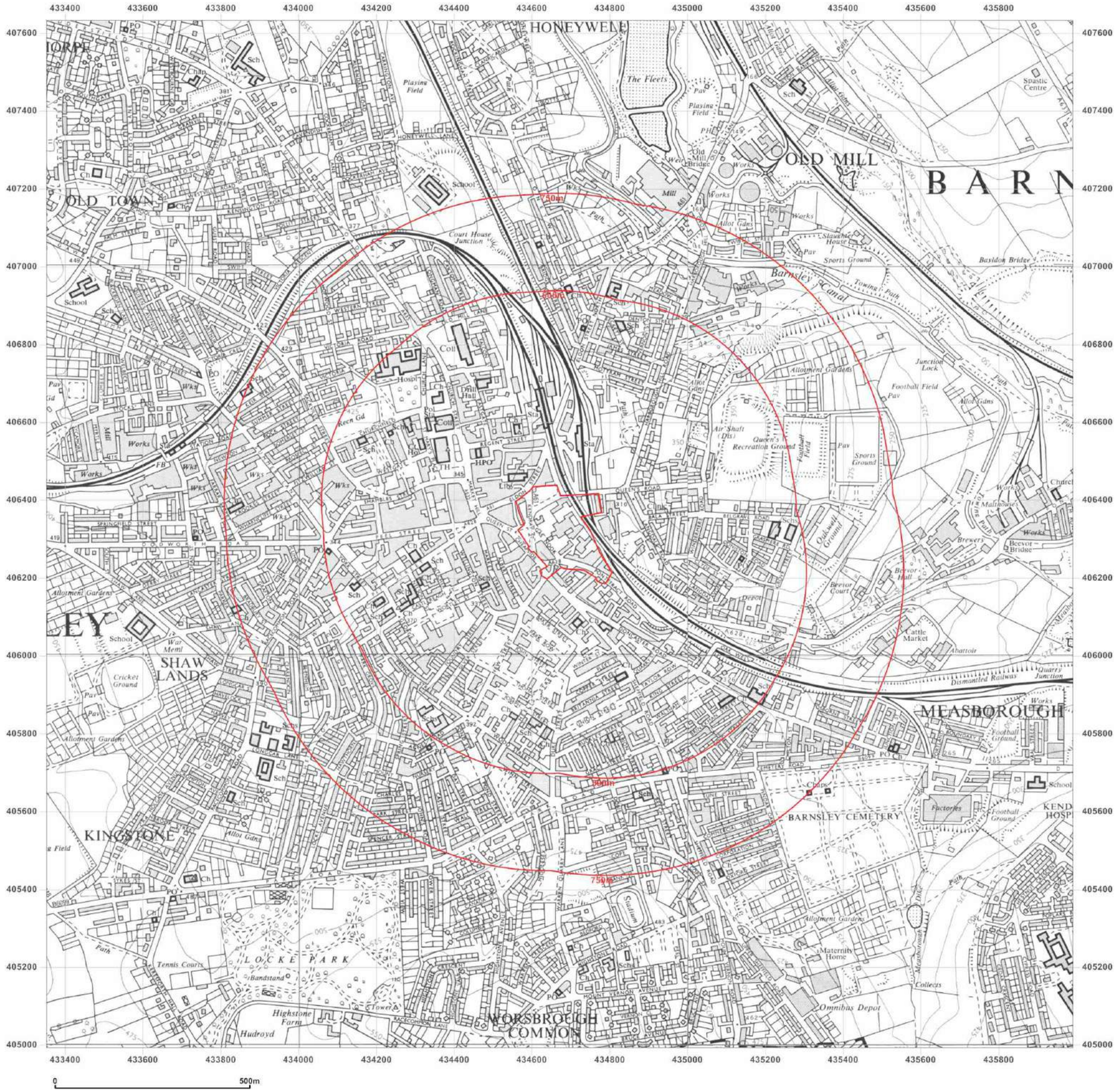
Ordnance Survey
Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*


HONEYWELL
OLD MILL
OLD TOWN
SHAW LANDS
KINGSTONE
MEASBOROUGH
BARNSLEY CEMETERY
WORSBROUGH COMMON
LOCKE PARK
Barnsley Canal
Queen's Recreation Ground
Sports Ground
Allotment Gardens
Cricket Ground
Tennis Courts
Bandstand
Highstone Farm
Hudroyd
Cattle Market
Abattoir
Omnibus Depot
Maternity Home
Colleges
Factories
Football Ground
Spastic Centre
Court House Junction
Junction Lock
Basildon Bridge
Beevor Bridge
Quarry Junction
Dismantled Railway
Towing Path
Stadium
Depot
Brewery
Malthouse
Slaughter House
Mill
Works
School
Sch
Pav
Path
Allot Gdns
Plasing Field
The Fleets
Old Mill Bridge
Weir
Air Shaft (Dis)
Coll
Hosp
Ch
Chapel
Clinic
Lib
Sta
PO
PH
FB
HPO
Cemetery
Vicarage Road
Wakefield Road
Doncaster Road
Pontefract Road
Dodworth Road
Sheffield Road
Station Road
Queen Road
Park Road
Kendray Road
Meadowcroft
Meadowhall Drive
Wilthorpe Road
Shaw Lane
Kingstone Lane
Pickford Lane
Wilthorpe Road
Honeywell Lane
Pontefract Road
Dodworth Road
Sheffield Road
Station Road
Queen Road
Park Road
Kendray Road
Meadowcroft
Meadowhall Drive
Wilthorpe Road
Shaw Lane
Kingstone Lane
Pickford Lane
Honeywell Lane
Wakefield Road
Doncaster Road

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1973-1974**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1974
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey
Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1982**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1982
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1981
Revised 1982
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **1992-1993**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1992
Revised 1993
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1981
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: 1:10,000 Raster

Map date: **2002**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

2002

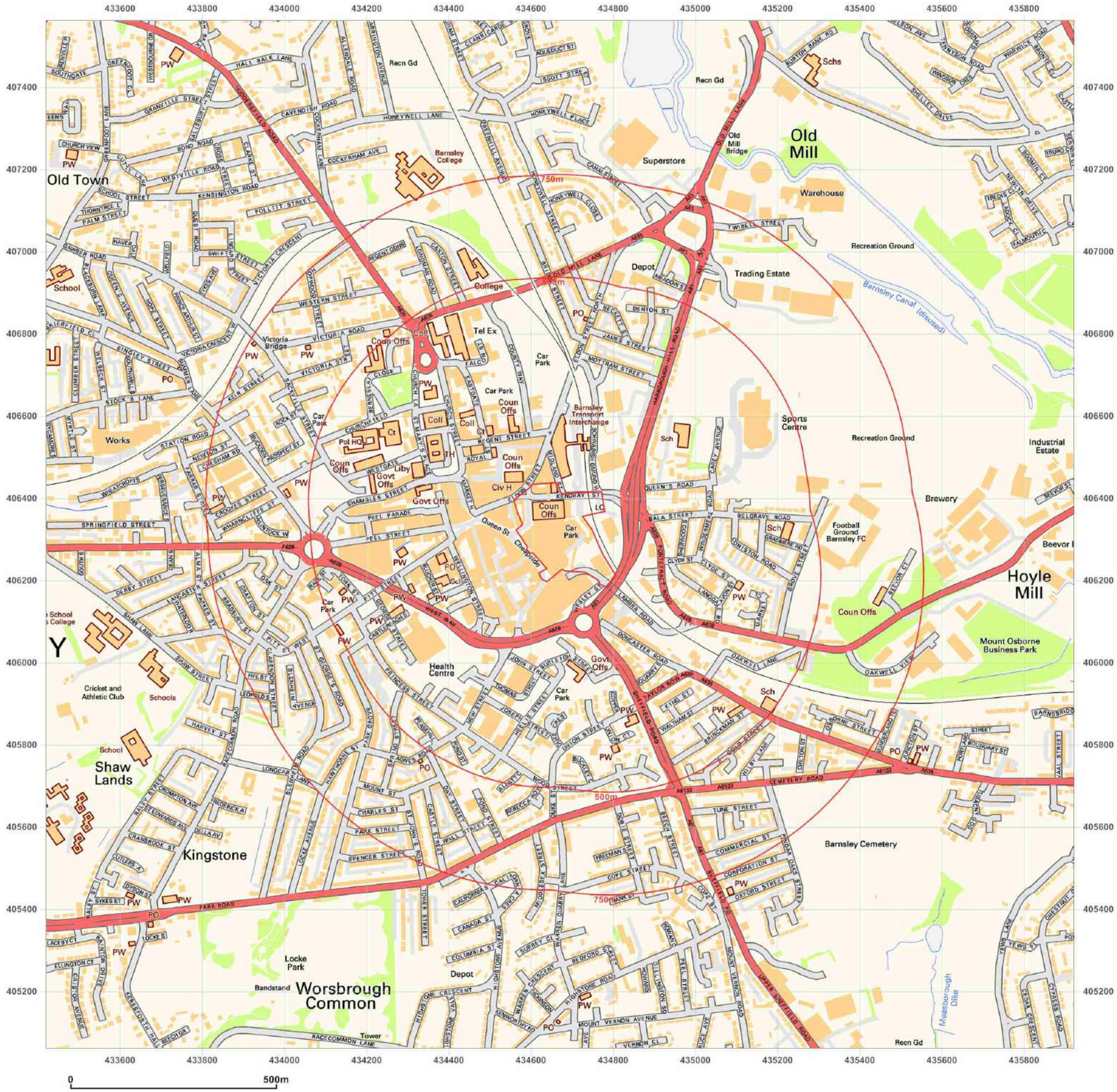
Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N W E S

2010

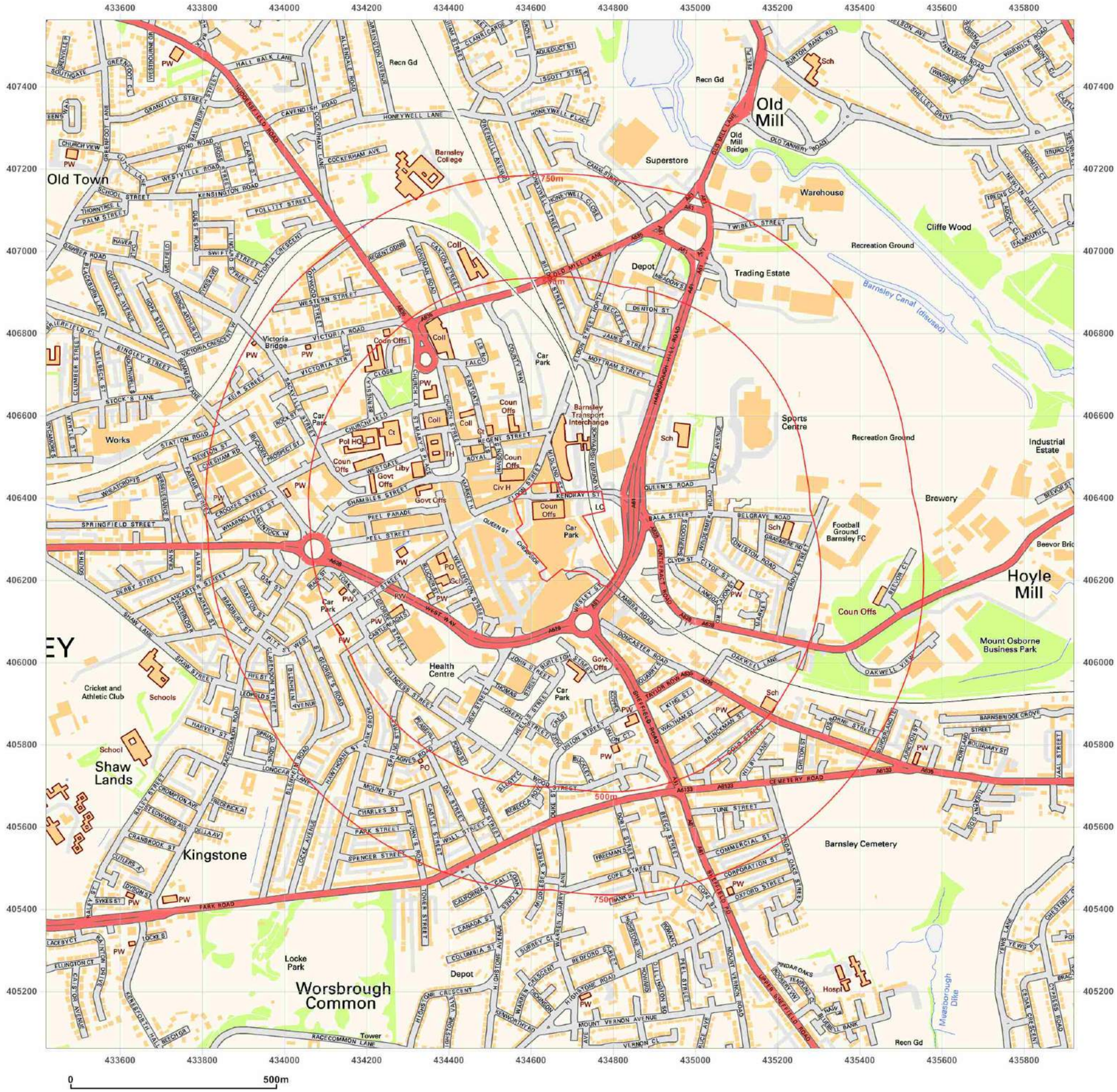
Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*



Groundsure INSIGHTS

Site Details:

BETTER BARNSLEY, S70 1DD

Client Ref: Better_Barnsley_Project
Report Ref: GS-2017329
Grid Ref: 434671, 406312

Map Name: National Grid

Map date: **2014**

Scale: 1:10,000

Printed at: 1:10,000

N W E S

2014

Ordnance Survey Licensed Partner

Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 14 April 2015

To view map legend click here *Legend*

Appendix B

Groundsure EnviroInsight Report

Robson Liddle Ltd

NAVIGATION HOUSE N P S NORTH EAST LTD,
WHISTLER DRIVE,
CASTLEFORD, WF10 5HX

Groundsure Reference:	GS-2017327
Your Reference:	Better_Barnsley_Project
Report Date	14 Apr 2015
Report Delivery Method:	Email - pdf

Groundsure Enviroinsight

Address: BETTER BARNSLEY, S70 1DD

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviroinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

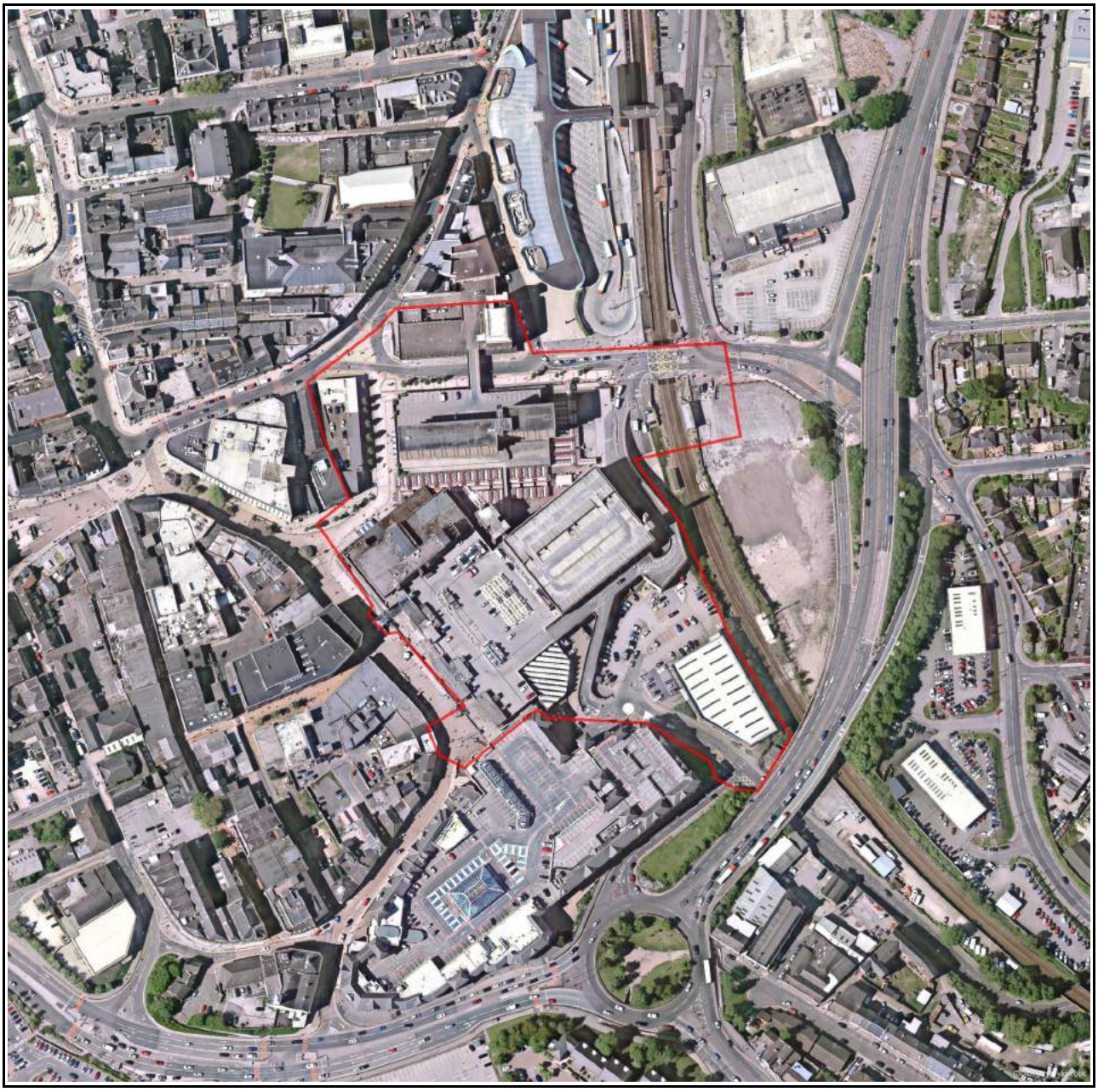
Enc.
Groundsure Enviroinsight

Groundsure Enviroinsight

Address:	**BETTER BARNSLEY, S70 1DD**
Date:	**14 Apr 2015**
Reference:	**GS-2017327**
Client:	**Robson Liddle Ltd**

NW N NE

W E



SW S SE

Aerial Photograph Capture date:	07-Jun-2013
Grid Reference:	434671,406312
Site Size:	3.84ha

Contents Page

Contents Page 3
Overview of Findings 5
Using this report 9
1. Environmental Permits, Incidents and Registers Map 10
1. Environmental Permits, Incidents and Registers 11
1.1 Industrial Sites Holding Licences and/or Authorisations 11
1.1.1 Records of historic IPC Authorisations within 500m of the study site: 11
1.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site: 11
1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: 14
1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site: 14
1.1.5 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site: 15
1.1.6 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site: 15
1.1.7 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site: 15
1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations: 16
1.1.9 Records of Licensed Discharge Consents within 500m of the study site: 16
1.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site: 18
1.2 Dangerous or Hazardous Sites 18
1.3 Environment Agency Recorded Pollution Incidents 18
1.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site: 18
1.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site: 18
1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990 19
2. Landfill and Other Waste Sites Map 20
2. Landfill and Other Waste Sites 21
2.1 Landfill Sites 21
2.1.1 Records from Environment Agency landfill data within 1000m of the study site: 21
2.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site: 21
2.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site: 24
2.1.4 Records of Local Authority landfill sites within 1500m of the study site: 24
2.2 Other Waste Sites 25
2.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site: 25
2.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site: 25
3. Current Land Use Map 28
3. Current Land Uses 29
3.1 Current Industrial Data 29
3.2 Petrol and Fuel Sites 32
3.3 Underground High Pressure Oil and Gas Pipelines 33
4. Geology 34
4.1 Artificial Ground and Made Ground 34
4.2 Superficial Ground and Drift Geology 34
4.3 Bedrock and Solid Geology 34
5. Hydrogeology and Hydrology 35
5a. Aquifer Within Superficial Geology 35
5b. Aquifer Within Bedrock Geology and Abstraction Licenses 36
5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses 37
5d. Hydrology Source Protection Zones within confined aquifer 38
5 e. Hydrology – Detailed River Network and River Quality 39
5. Hydrogeology and Hydrology 40
5.1 Aquifer within Superficial Deposits 40
5.2 Aquifer within Bedrock Deposits 40

5.3 Groundwater Abstraction Licences....41
5.4 Surface Water Abstraction Licences....42
5.5 Potable Water Abstraction Licences....42
5.6 Source Protection Zones....43
5.7 Source Protection Zones within Confined Aquifer....43
5.8 Groundwater Vulnerability and Soil Leaching Potential....44
5.9 River Quality....44
5.9.1 Biological Quality:....44
5.9.2 Chemical Quality:....44
5.10 Detailed River Network....45
5.11 Surface Water Features....45
6. Environment Agency Flood Map for planning (from rivers and the sea)....46
6. Flooding....47
6.1 Zone 2 Flooding....47
6.2 Zone 3 Flooding....47
6.3 Flood Defences....47
6.4 Areas benefiting from Flood Defences....47
6.5 Areas benefiting from Flood Storage....47
6.6 Groundwater Flooding Susceptibility Areas....48
6.6.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site?....48
6.6.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?....48
6.7 Groundwater Flooding Confidence Areas....48
7. Designated Environmentally Sensitive Sites Map....49
7. Designated Environmentally Sensitive Sites....50
7.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:....50
7.2 Records of National Nature Reserves (NNR) within 2000m of the study site:....50
7.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:....50
7.4 Records of Special Protection Areas (SPA) within 2000m of the study site:....50
7.5 Records of Ramsar sites within 2000m of the study site:....50
7.6 Records of Ancient Woodland within 2000m of the study site:....51
7.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:....51
7.8 Records of World Heritage Sites within 2000m of the study site:....51
7.9 Records of Environmentally Sensitive Areas within 2000m of the study site:....51
7.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:....51
7.11 Records of National Parks (NP) within 2000m of the study site:....51
7.12 Records of Nitrate Sensitive Areas within 2000m of the study site:....52
7.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:....52
7.14 Records of Green Belt land within 2000m of the study site:....52
8. Natural Hazards Findings....53
8.1 Detailed BGS GeoSure Data....53
8.1.1 Shrink Swell....53
8.1.2 Landslides....53
8.1.3 Soluble Rocks....54
8.1.4 Compressible Ground....54
8.1.5 Collapsible Rocks....54
8.1.6 Running Sand....55
9. Mining....56
9.1 Coal Mining....56
9.2 Shallow Mining....56
9.3 Brine Affected Areas....56
Contact Details....57
Standard Terms and Conditions....59

Groundsure
LOCATION INTELLIGENCE

Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
1.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
1.1.1 Records of historic IPC Authorisations	0	0	0	0
1.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	24	0
1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0
1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0
1.1.5 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
1.1.6 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
1.1.7 Records of Part A(2) and Part B Activities and Enforcements	0	0	5	4
1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
1.1.9 Records of Licensed Discharge Consents	2	1	8	2
1.1.10 Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0
1.2 Records of COMAH and NIHHS sites	0	0	0	0
1.3 Environment Agency Recorded Pollution Incidents				
1.3.1 National Incidents Recording System, List 2	0	1	0	0
1.3.2 National Incidents Recording System, List 1	0	0	0	0
1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 2: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-5000
2.1 Landfill Sites						
2.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
2.1.2 Environment Agency Historic Landfill Sites	0	0	1	1	9	11
2.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
2.1.4 Groundsure Local Authority Landfill Sites Data	0	0	0	0	2	3
2.2 Landfill and Other Waste Sites Findings						

Groundsure
LOCATION INTELLIGENCE

Section 2: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-5000
2.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	1	3	Not searched	Not searched
2.2.2 Environment Agency Licensed Waste Sites	0	0	1	0	3	4

Section 3: Current Land Use	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	10	8	60	Not searched
3.2 Records of Petrol and Fuel Sites	0	0	2	2
3.3 Underground High Pressure Oil and Gas Pipelines	0	0	0	0

Section 4: Geology	
4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
4.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 5: Hydrogeology and Hydrology	0-500m
5.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	No
5.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
5.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	4	0
5.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	3
5.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	4	0
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
5.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
5.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	0	0	Not searched	Not searched

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
5.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	Yes	Yes
5.10 Detailed River Network entries within 500m of the site	1	0	0	0	Not searched	Not searched
5.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Groundsure
LOCATION INTELLIGENCE

Section 6: Flooding

6.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No
6.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site?	No
6.3 Are there any Flood Defences within 250m of the study site?	No
6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
6.5 Are there any areas used for Flood Storage within 250m of the study site?	No
6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 7: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
7.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.5 Records of Ramsar sites	0	0	0	0	0	0
7.6 Records of Ancient Woodlands	0	0	0	0	0	0
7.7 Records of Local Nature Reserves (LNR)	0	0	0	0	1	0
7.8 Records of World Heritage Sites	0	0	0	0	0	0
7.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
7.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
7.11 Records of National Parks	0	0	0	0	0	0
7.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.13 Records of Nitrate Vulnerable Zones	1	0	0	0	0	0
7.14 Records of Green Belt Data	0	0	0	0	1	1

Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?	Low
8.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
8.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
8.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
8.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
8.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
8.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Low

Section 9: Mining

9.1 Are there any coal mining areas within 75m of the study site?	Yes
9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?	Low-Moderate
9.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

2. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

3. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure underground oil and gas pipelines.

4. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

5. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

6. Flooding

Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

7. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

8. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence.

9. Mining

Provides information on areas of coal and shallow mining.

10. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

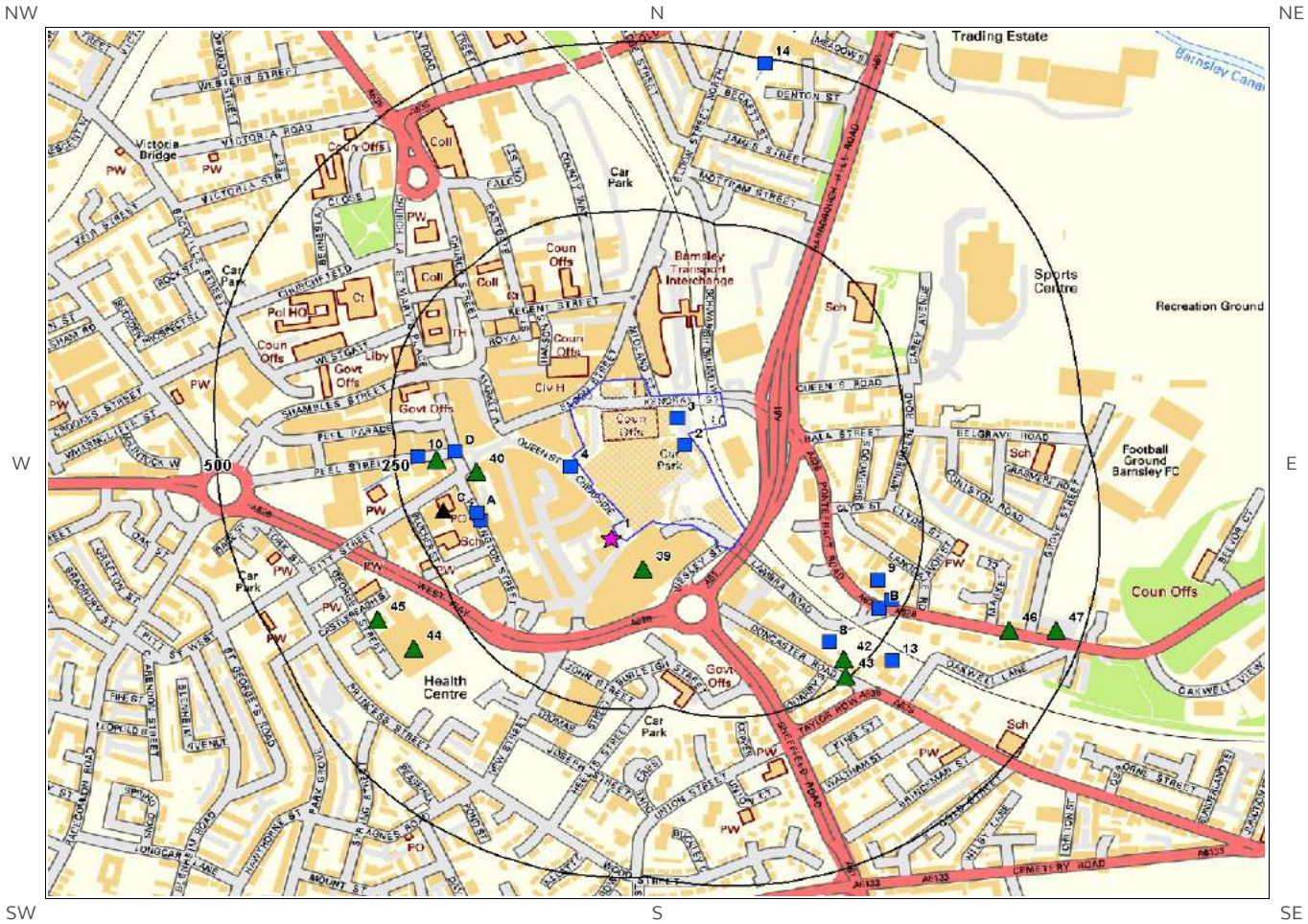
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Environmental Permits, Incidents and Registers Map



Environmental Permits, Incidents and Registers Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015. Ordnance Survey license 100035207.

- Site Outline
- 250 / 500 Search Buffers (m)
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

1. Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

1.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

1.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

24

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
48C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: COMBUSTION; ANY FUEL =>20MW BUT <50MW (UNLESS 1.1 A(1) B)	Permit Number: AP3135GS Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Refused
49C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: INORGANIC CHEMICALS; BASES EG AMMONIUM HYDROXIDE	Permit Number: YP3934UX Original Permit Number: BK3441IA EPR Reference: - Issue Date: 11/10/2007 Effective Date: 11/10/2007 Last date noted as effective: 2015-01-01 Status: Superceded
50C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS	Permit Number: AP3135GS Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Refused

ID	Distance	Direction	NGR	Details	
51C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Eaeprbk3441iav010 Process: OTHER MINERAL ACTIVITIES; CRUSHING ETC OF COAL ETC (UNLESS EXEMPT LOCATION)	Permit Number: PP3639KE Original Permit Number: BK3441IA EPR Reference: - Issue Date: 22/6/2009 Effective Date: 22/7/2009 Last date noted as effective: 2015-01-01 Status: Superceded
52C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS	Permit Number: NP3934VD Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Determination
53C	201.0	SW	434380 406240	Operator: Monckton Coke & Chemical Company Ltd Installation Name: The Monckton Coke And Chemical Co Ltd Process: INORGANIC CHEMICALS; BASES EG AMMONIUM HYDROXIDE	Permit Number: MP3636SN Original Permit Number: BK3441IA EPR Reference: - Issue Date: 16/12/2005 Effective Date: 16/12/2005 Last date noted as effective: 2015-01-01 Status: Superceded
54C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Eaeprbk3441iav010 Process: INORGANIC CHEMICALS; BASES EG AMMONIUM HYDROXIDE	Permit Number: PP3639KE Original Permit Number: BK3441IA EPR Reference: - Issue Date: 22/6/2009 Effective Date: 22/7/2009 Last date noted as effective: 2015-01-01 Status: Superceded
55C	201.0	SW	434380 406240	Operator: Monckton Coke & Chemical Company Ltd Installation Name: The Monckton Coke And Chemical Co Ltd Process: OTHER MINERAL ACTIVITIES; CRUSHING ETC OF COAL ETC (UNLESS EXEMPT LOCATION)	Permit Number: MP3636SN Original Permit Number: BK3441IA EPR Reference: - Issue Date: 16/12/2005 Effective Date: 16/12/2005 Last date noted as effective: 2015-01-01 Status: Superceded
56C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: INORGANIC CHEMICALS; BASES EG AMMONIUM HYDROXIDE	Permit Number: HP3239EW Original Permit Number: BK3441IA EPR Reference: - Issue Date: 17/1/2014 Effective Date: 17/1/2014 Last date noted as effective: 2015-01-01 Status: Effective
57C	201.0	SW	434380 406240	Operator: Monckton Coke & Chemical Company Ltd Installation Name: The Monckton Coke And Chemical Co Ltd Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS	Permit Number: MP3636SN Original Permit Number: BK3441IA EPR Reference: - Issue Date: 16/12/2005 Effective Date: 16/12/2005 Last date noted as effective: 2015-01-01 Status: Superceded
58C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: OTHER MINERAL ACTIVITIES; CRUSHING ETC OF COAL ETC (UNLESS EXEMPT LOCATION)	Permit Number: AP3135GS Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Refused

ID	Distance	Direction	NGR	Details	
59C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: INORGANIC CHEMICALS; BASES EG AMMONIUM HYDROXIDE	Permit Number: AP3135GS Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Refused
60C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: COMBUSTION; ANY FUEL =>20MW BUT <50MW (UNLESS 1.1 A(1) B)	Permit Number: NP3934VD Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Determination
61C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: COMBUSTION; ANY FUEL =>20MW BUT <50MW (UNLESS 1.1 A(1) B)	Permit Number: HP3239EW Original Permit Number: BK3441IA EPR Reference: - Issue Date: 17/1/2014 Effective Date: 17/1/2014 Last date noted as effective: 2015-01-01 Status: Effective
62C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: OTHER MINERAL ACTIVITIES; CRUSHING ETC OF COAL ETC (UNLESS EXEMPT LOCATION)	Permit Number: HP3239EW Original Permit Number: BK3441IA EPR Reference: - Issue Date: 17/1/2014 Effective Date: 17/1/2014 Last date noted as effective: 2015-01-01 Status: Effective
63C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: INORGANIC CHEMICALS; BASES EG AMMONIUM HYDROXIDE	Permit Number: NP3934VD Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Determination
64C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: COMBUSTION; ANY FUEL =>20MW BUT <50MW (UNLESS 1.1 A(1) B)	Permit Number: YP3934UX Original Permit Number: BK3441IA EPR Reference: - Issue Date: 11/10/2007 Effective Date: 11/10/2007 Last date noted as effective: 2015-01-01 Status: Superceded
65C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Eaeprbk3441iav010 Process: COMBUSTION; ANY FUEL =>20MW BUT <50MW (UNLESS 1.1 A(1) B)	Permit Number: PP3639KE Original Permit Number: BK3441IA EPR Reference: - Issue Date: 22/6/2009 Effective Date: 22/7/2009 Last date noted as effective: 2015-01-01 Status: Superceded
66C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: OTHER MINERAL ACTIVITIES; CRUSHING ETC OF COAL ETC (UNLESS EXEMPT LOCATION)	Permit Number: NP3934VD Original Permit Number: BK3441IA EPR Reference: - Issue Date: - Effective Date: - Last date noted as effective: 2015-01-01 Status: Determination

ID	Distance	Direction	NGR	Details	
67C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Eaeprbk3441iav010 Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS	Permit Number: PP3639KE Original Permit Number: BK3441IA EPR Reference: - Issue Date: 22/6/2009 Effective Date: 22/7/2009 Last date noted as effective: 2015-01-01 Status: Superceded
68C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS	Permit Number: HP3239EW Original Permit Number: BK3441IA EPR Reference: - Issue Date: 17/1/2014 Effective Date: 17/1/2014 Last date noted as effective: 2015-01-01 Status: Effective
69C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: OTHER MINERAL ACTIVITIES; CRUSHING ETC OF COAL ETC (UNLESS EXEMPT LOCATION)	Permit Number: YP3934UX Original Permit Number: BK3441IA EPR Reference: - Issue Date: 11/10/2007 Effective Date: 11/10/2007 Last date noted as effective: 2015-01-01 Status: Superceded
70C	201.0	SW	434380 406240	Operator: Monckton Coke And Chemical Company Limited Installation Name: The Monckton Coke And Chemical Co Ltd Process: ORGANIC CHEMICALS; HYDROCARBONS EG AROMATICS	Permit Number: YP3934UX Original Permit Number: BK3441IA EPR Reference: - Issue Date: 11/10/2007 Effective Date: 11/10/2007 Last date noted as effective: 2015-01-01 Status: Superceded
71C	201.0	SW	434380 406240	Operator: Monckton Coke & Chemical Company Ltd Installation Name: The Monckton Coke And Chemical Co Ltd Process: COMBUSTION; ANY FUEL =>20MW BUT <50MW (UNLESS 1.1 A(1) B)	Permit Number: MP3636SN Original Permit Number: BK3441IA EPR Reference: - Issue Date: 16/12/2005 Effective Date: 16/12/2005 Last date noted as effective: 2015-01-01 Status: Superceded

1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

1.1.5 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

1.1.6 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

1.1.7 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

9

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
39	51.0	SE	434662 406153	Address: Advance Dry Cleaners, Unit 2 K2 New Stree, Barnsley, S70 1SA Process: Dry Cleaning Process Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
40	137.0	W	434428 406298	Address: Johnson Dry Cleaners, 14 Peel Square, Barnsley, S70 1YA Process: Dry Cleaning Process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
41D	192.0	W	434371 406315	Address: Hunningley Lane MOT, Hunningley Lane, Stairfoot, Barnsley, S70 3DT Process: Waste Oil Burner <0.4MW Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
42	229.0	SE	434944 406019	Address: Barrett Excavations Limited, 76 Doncaster Road, Barnsley, S70 1TW Process: Crushing And Screening Designated Material Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
43	249.0	SE	434946 405994	Address: Dunlop Slanzenger Ltd, Doncaster Road, Barnsley, S70 3QP Process: Adhesive Coating Process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
44	332.0	SW	434339 406036	Address: WM Morrison Supermarkets Plc, Lower Thomas Street, Barnsley, S70 1LQ Process: Petrol Vapour Recovery Process Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

ID	Distance	Direction	NGR	Details	
45	360.0	SW	434288 406078	Address: Westway Fill Station, West Way, Barnsley, S70 1PN Process: Petrol Vapour Recovery Process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
46	401.0	E	435176 406063	Address: Gpf Stations Limited, Ponterfract Road, Oakwell, Barnsley, S71 1HA Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
47	463.0	E	435242 406062	Address: Oakwell Garage, Pontefract Road, Barnsley, S71 1EZ Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

1.1.9 Records of Licensed Discharge Consents within 500m of the study site:

13

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
2	0.0	On Site	434720 406340	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
3	0.0	On Site	434710 406380	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
4	12.0	SW	434560 406308	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005

ID	Distance	Direction	NGR	Details	
5A	160.0	SW	434427 406240	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
6A	162.0	SW	434433 406227	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
7D	166.0	W	434397 406330	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
8	194.0	SE	434924 406048	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
9	201.0	E	434992 406140	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
10	218.0	W	434345 406323	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
11 B	221.0	SE	434993 406098	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005
12 B	230.0	SE	435010 406110	Address: Lambra Road Cso, Lambra Road, Barnsley, South Yorkshire, . Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: WRA7491 Permit Version: 1	Receiving Water: Sough Dyke (culvert) Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 16/2/1999 Effective Date: 16/2/1999 Revocation Date: -
13	279.0	SE	435012 406020	Address: Septic Tank @ Crosslea Farm, Cockin Lane, Clayton, Bradford., West Yorkshire, BD14 6PZ Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: S/CB/8 Permit Version: 1	Receiving Water: Varies With Outlet Status: Transferred From R(pp)a 1951-1961 Issue date: 29/5/1963 Effective Date: 29/5/1963 Revocation Date: 31/3/2005

ID	Distance	Direction	NGR	Details	
14	493.0	N	434832 406906	Address: Regent Street, Barnsley, South Yorkshire Effluent Type: Sewage Discharges - Sewer Storm Overflow - Water Company Permit Number: YWUCD2/4 Permit Version: 1	Receiving Water: Trib Of River Dearne Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: - Effective Date: - Revocation Date: -

1.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

1.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

1

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
1	9.0	SW	434616 406202	Incident Date: 01/12/2001 Incident Identification: 45948 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

1.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

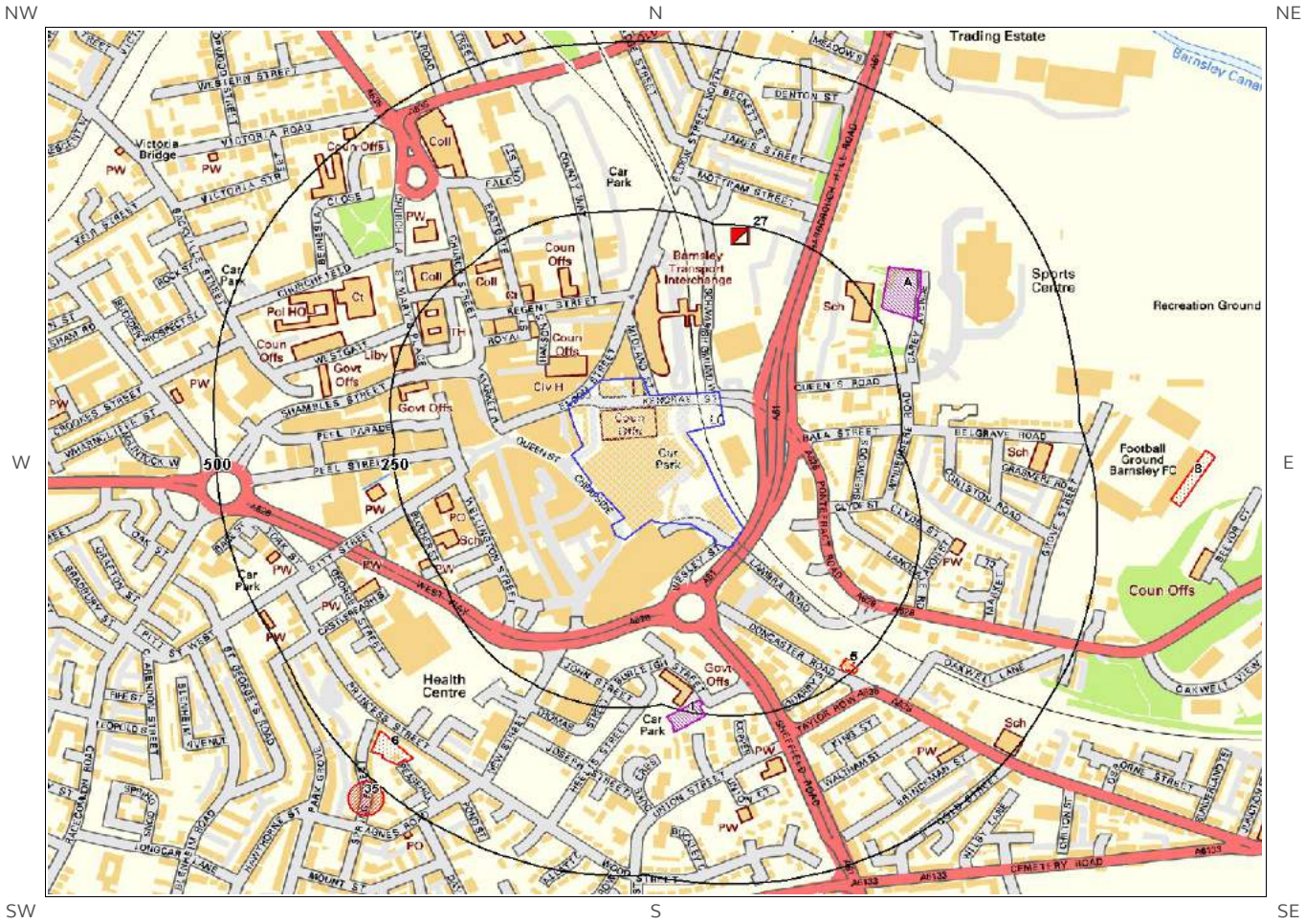
Database searched and no data found.

1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?	0

Database searched and no data found.

2. Landfill and Other Waste Sites Map



Landfill and Other Waste Sites Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

- Site Outline
- Search Buffers (m) (250, 500)
- E.A. Active Landfill
- E.A. Historic Landfill
- Local Authority Landfill
- Historic and Planned Waste Sites
- E.A. Licensed Waste Site
- BGS / DoE Survey Landfill

2. Landfill and Other Waste Sites

2.1 Landfill Sites

2.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

2.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

22

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
5	230.0	SE	434900 406000	Site Address: The Old Vicarage, Doncaster Road, Barnsley Waste Licence: Yes Site Reference: WD20 B812, 20B812 Waste Type: Commercial , Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 17-Jul-1991 Licence Surrendered: 17-Jan-1994 Licence Hold Address: Oak House, Doncaster Road, Barnsley Operator: -
6	437.0	SW	434300 405800	Site Address: Spring Street, Barnsley Waste Licence: - Site Reference: 4400/(159), (159)B, WD24 B343, WD34.16.16 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Mr A J Shaw
Not show n	555.0	N	434400 407000	Site Address: Land off Old Mill Lane, Town Centre, Barnsley Waste Licence: Yes Site Reference: WD20 B446 Waste Type: Inert Commercial , Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 14-Nov-1984 Licence Surrendered: 30-Mar-1994 Licence Hold Address: c/o Twibell Plant Limited, Twibell Street, Barnsley Operator: Mr M White
8	604.0	E	435400 406200	Site Address: Barnsley Football Ground, Oakwell Road, Barnsley Waste Licence: - Site Reference: 4400/(164) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Mowlem Construction

ID	Distance (m)	Direction	NGR	Details	
Not shown	655.0	N	434800 407100	Site Address: Disused Canal, Old Mill Lane, Barnsley Waste Licence: - Site Reference: 4400/(22) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Barnsley Metropolitan Borough Council
10	743.0	E	435500 406000	Site Address: Mount Osborne Industrial Park, Barnsley, South Yorkshire Waste Licence: Yes Site Reference: 4400/B62 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 11-Jul-1995 Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	761.0	NE	435200 407000	Site Address: Canal to the rear of Twibell Street, Barnsley Waste Licence: Yes Site Reference: WD20 B369, 4400/B369, 20B369(83) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 16-Sep-1982 Licence Surrendered: 06-Jun-1988 Licence Hold Address: 8A, Eastgate, Barnsley Operator: Barnsley Trades Council
Not shown	870.0	N	435100 407200	Site Address: Emgas Depot, Old Mill Lane, Barnsley Waste Licence: Yes Site Reference: WD20 B187, 4400/B187, 20B187(71) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 11-Jan-1978 Licence Surrendered: 11-May-1984 Licence Hold Address: PO Box 145, De Montfort Street, Leicester Operator: East Midlands Gas
Not shown	894.0	N	434800 407500	Site Address: Star Paper Limited, Old Mill Lane, Barnsley Waste Licence: Yes Site Reference: WD20 B4(i), 4400/B4 Waste Type: Inert Liquid sludge, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 11-Jan-1978 Licence Surrendered: 25-Feb-1982 Licence Hold Address: - Operator: Star Paper Limited
Not shown	901.0	N	434800 407300	Site Address: Star Paper Mill, Barnsley Waste Licence: - Site Reference: 4400/B59, WD20/B4(ii) Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Star Paper Mill
Not shown	993.0	N	434900 407500	Site Address: The Fleets Dam, Off Smithies Lane, Barnsley Waste Licence: Yes Site Reference: WD20 B774, 4400/B774, 20B774 Waste Type: Inert Commercial , Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 05-Sep-1990 Licence Surrendered: Licence Hold Address: Stainborough Fisheries, The Wickets, Low Lane, Stainborough, Barnsley Operator: -
Not shown	1018.0	SE	435500 405400	Site Address: South East Corner Cemetery Road, Barnsley Cemetery, Barnsley Waste Licence: - Site Reference: 4400/(148) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Barnsley Metropolitan Borough Council

ID	Distance (m)	Direction	NGR	Details	
Not shown	1137.0	E	435900 406500	Site Address: Former Wood Brothers Tip, Glasstip, Railway Cutting, Beevor Street, Hoyle Mill, Barnsley Waste Licence: Yes Site Reference: WD20 B353, 4400/B353, 20B353, WD20 B353a Waste Type: Commercial Special Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 22-Mar-1982 Licence Surrendered: 09-May-1984 Licence Hold Address: High Holborn Road, Codnor Gate Industrial Estate, Ripley, Derbyshire Operator: -
Not shown	1139.0	E	435900 406500	Site Address: Land to the rear of Chapel Street-Beever Street, Glasstip, Railway Cutting, Beevor Street Waste Licence: Yes Site Reference: WD20 B6(I), 4400/B6, 20B6(38), 4400/0573 Waste Type: Inert, Industrial Special Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 05-Dec-1977 Licence Surrendered: 31-Dec-1984 Licence Hold Address: Borough Flint Glassworks, Barnsley, South Yorkshire Operator: Barnsley Metropolitan Borough Council
Not shown	1232.0	W	433200 406400	Site Address: Land West of Summer Lane Dairy, Stocks Lane, Barnsley, South Yorkshire Waste Licence: Yes Site Reference: 20B38(61), 4400/B19, 4400/B38, WD20 B38 Waste Type: Inert, Industrial, Commercial , Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 18-Nov-1982 Licence Surrendered: 03-Jun-1988 Licence Hold Address: Wellington Street, Barnsley Operator: Co-op Retail Services
Not shown	1295.0	W	433100 406600	Site Address: Allotment Gardens, Pogmoor Waste Licence: - Site Reference: 4400/B197 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	1310.0	W	433100 406400	Site Address: West Road, Pogmoor, Barnsley Waste Licence: Yes Site Reference: WD2 B19, 20B572(57), WD20 B572, 4400/B572, 4400/0459 Waste Type: Inert Commercial , Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 15-Jul-1987 Licence Surrendered: 31-Dec-1990 Licence Hold Address: Public Services Department, Central Offices, Kendray Street, Barnsley or West Carr Road, Retford, Nottinghamshire Operator: Barnsley Metropolitan Borough Council
Not shown	1339.0	N	434800 407500	Site Address: Star Paper Limited, Old Mill Lane, Barnsley Waste Licence: Yes Site Reference: WD20 B4(i), 4400/B4 Waste Type: Inert Liquid sludge, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 11-Jan-1978 Licence Surrendered: 25-Feb-1982 Licence Hold Address: - Operator: Star Paper Limited
Not shown	1394.0	N	434800 407800	Site Address: Smithy Green Tip, Smithies Lane, Barnsley, Yorkshire Waste Licence: - Site Reference: - Waste Type: Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Barnsley County Borough Council
Not shown	1404.0	E	436200 405800	Site Address: Monument Field, Measborough Hill, Doncaster Road, Barnsley Waste Licence: Yes Site Reference: WD20 B37, 4400/B37, 20B37(41) Waste Type: Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 07-Sep-1979 Licence Surrendered: 14-May-1982 Licence Hold Address: 22 Hunningley Lane, Stairfoot, Barnsley Operator: Frank Green and Sons Limited

ID	Distance (m)	Direction	NGR	Details	
Not shown	1413.0	N	434900 407900	Site Address: Wakefield Road, Barnsley Waste Licence: Yes Site Reference: 20B320(79), WD20 B320, 4400/B320 Waste Type: Industrial, Commercial , Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 28-Jul-1981 Licence Surrendered: 09-May-1988 Licence Hold Address: c/c C E Smith and Son, 14 Regent Street, Barnsley Operator: Booth Excavations Limited
Not shown	1462.0	W	433000 406400	Site Address: Land North of Dodworth Road, Pogmoor Waste Licence: - Site Reference: 4400/(139) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Polar Motors

2.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

2.1.4 Records of Local Authority landfill sites within 1500m of the study site:

5

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
35	502.0	SW		Spring Street	Barnsley Metropolitan Borough Council	Point
Not shown	951.0	E		Refuse Tip	1970 mapping	Polygon
Not shown	1014.0	NE		Refuse Tip	1972 mapping	Polygon
Not shown	1184.0	S		Refuse Tip	1969 mapping	Polygon
Not shown	1400.0	N		Refuse Tip	1970 mapping	Polygon

2.2 Other Waste Sites

2.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

4

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
1	229.0	S	434724 405936	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1986	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
2A	263.0	NE	435027 406564	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1983	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
3A	263.0	NE	435027 406564	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1990	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon
4A	263.0	NE	435027 406564	Type of Site: Scrap Yard Site Address: N/A	Planning Application Reference: N/A Date: 1989	Further Details: N/A Data Source: Historic Mapping Data Type: Polygon

2.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

8

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
27	235.0	N	434800 406650	Site Address: Harborough Hill Road, Harborough, Barnsley, South Yorkshire, S71 1BD Type: - Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR005 EPR reference: EA/EPR/JP3390ZX/S002 Operator: Yorkshire Electricity Waste Management licence No: 60598 Annual Tonnage: 0.0	Issue Date: 14/09/1992 Effective Date: - Modified: - Surrendered Date: 13/05/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: - Correspondence Address: -, -

ID	Distance (m)	Direction	NGR	Details	
Not shown	849.0	E	435650 406130	Site Address: Unit 5, Oakwell Business Centre, Oakwell View, Barnsley, South Yorkshire, S71 1HX Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SRW001 EPR reference: - Operator: S R Waste Recycling Ltd Waste Management licence No: 100239 Annual Tonnage: 0.0	Issue Date: 12/03/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: S R Waste Recycling Ltd Correspondence Address: -, 5, Oakwell Business Centre, Oakwell View, Barnsley, South Yorks, S71 1HX
Not shown	849.0	E	435650 406130	Site Address: Unit 5, Oakwell Business Centre, Oakwell View, Barnsley, South Yorkshire, S71 1HX Type: WEEE treatment facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SRW001 EPR reference: EA/EPR/BP3598EY/A001 Operator: S R Waste Recycling Ltd Waste Management licence No: 100239 Annual Tonnage: 4999.0	Issue Date: 12/03/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Revoked Site Name: S R Waste Recycling Ltd Correspondence Address: -, -
Not shown	982.0	NE	435200 407300	Site Address: Old Mill Lane, Barnsley, South Yorkshire Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TRA002 EPR reference: EA/EPR/WP3790ZL/S002 Operator: British Gas Transco Plc Waste Management licence No: 60545 Annual Tonnage: 316.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: 06/09/2000 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Barnsley Depot Correspondence Address: -, -
Not shown	1286.0	SE	435550 405150	Site Address: Vernon Works, Upper Sheffield Road, Barnsley, South Yorkshire, S70 4PN Type: Metal Recycling Site (mixed MRS's) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CSO002 EPR reference: EA/EPR/WP3490ZY/S005 Operator: C Soar & Sons Waste Management licence No: 60541 Annual Tonnage: 0.0	Issue Date: 15/07/1993 Effective Date: - Modified: - Surrendered Date: 16/10/2012 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Vernon Works Correspondence Address: -, -
Not shown	1459.0	W	433100 406450	Site Address: Haulage Yard, Off West Road, Pogmoor, Barnsley, S Yorks, S75 2DH Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LYC001 EPR reference: - Operator: Lycett Dennis Waste Management licence No: 60564 Annual Tonnage: 0.0	Issue Date: 13/04/1987 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Andrich Skip Hire Correspondence Address: -, 2, Intake Gardens, Barnsley Road, Barnsley, S Yorks, S75 2DP

ID	Distance (m)	Direction	NGR	Details	
Not shown	1487.0	W	433077 406535	Site Address: Haulage Yard, Off West Road, Pogmoor, Barnsley, South Yorkshire, S75 2DH Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: LYC001 EPR reference: EA/EPR/RP3990ZS/A001 Operator: Lycett D Waste Management licence No: 60564 Annual Tonnage: 25000.0	Issue Date: 13/04/1987 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Andrich Skip Hire Correspondence Address: -, -
Not shown	1499.0	SE	436100 405460	Site Address: Kendray Hospital, Doncaster Road, Kendray, Barnsley, South Yorkshire, S70 3RD Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BAR002 EPR reference: EA/EPR/JP3890ZV/S003 Operator: Barnsley Primary Care Trust Waste Management licence No: 60603 Annual Tonnage: 0.0	Issue Date: 17/10/1994 Effective Date: - Modified: - Surrendered Date: 11/09/2013 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Kendray Hospital Correspondence Address: -, -

3. Current Land Use Map

NW N NE

W E

SW S SE

Current Land Use Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250 500 Search Buffers (m)

Current Industrial Sites

Petrol & Fuel Sites

Underground High Pressure Oil & Fuel Pipelines

3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 78

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0.0	On Site	Phone Geeks	434604 406323	19, May Day Green, Barnsley, S70 1RH	Electrical Equipment Repair and Servicing	Repair and Servicing
2	0.0	On Site	Gas Governor Station		S70	Gas Features	Infrastructure and Facilities
3A	0.0	On Site	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
4	0.0	On Site	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
5B	0.0	On Site	Unlock a Fone		Unit 9 Upper Barnsley Market Hall, Metropolitan Centre, Barnsley, S70 1SX	Electrical Equipment Repair and Servicing	Repair and Servicing
6	0.0	On Site	Chimney		S70	Chimneys	Industrial Features
7	0.0	On Site	Tom Hall Fish Retail	434640 406305	10, Upper May Day Green Arcade, Barnsley, S70 1SY	Fish, Meat and Poultry Products	Foodstuffs
8A	0.0	On Site	Shopmobility	434664 406229	21, Cheapside, Barnsley, S70 1RQ	Disability and Mobility Equipment	Consumer Products
9	0.0	On Site	Cheapside Beds & Furniture Ltd	434657	17, Cheapside, Barnsley, S70 1RQ	Beds and Bedding	Consumer Products
10B	0.0	On Site	Transform Images	434601	1-3, May Day Green Arcade, Barnsley, S70 1RG	Clothing, Components and Accessories	Consumer Products
11C	7.0	N	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
12D	9.0	SW	Fonebooth	406202	1, New Street, Barnsley, S70 1RX	Electrical Equipment Repair and Servicing	Repair and Servicing
13C	14.0	N	Stagecoach Yorkshire	434629 406451	4, Eldon Arcade, Barnsley, S70 2JP	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
14	34.0	E	Gas Governor Station		S71	Gas Features	Infrastructure and Facilities
15D	34.0	SW	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
16	42.0	W	Specsavers Hearcare	434525 406357	Unit 3 10-18, Queen Street, Barnsley, S70 1SJ	Disability and Mobility Equipment	Consumer Products
17E	50.0	SE	A S A P Valeting		The Alhambra Shopping Centre, Cheapside, Barnsley, S70 1SB	Vehicle Cleaning Services	Personal, Consumer and Other Services

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
18E	50.0	SE	E E	406153	Unit 3 The Alhambra Shopping Centre, Cheapside, Barnsley, S70 1SB	Electrical Equipment Repair and Servicing	Repair and Servicing
19	54.0	S	Warehouse		S70	Container and Storage	Transport, Storage and Delivery
20	56.0	SW	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
21	65.0	NW	Hidden Hearing	434510	16-18, The Arcade, Barnsley, S70 2QN	Disability and Mobility Equipment	Consumer Products
22	65.0	SE	Bullard Refurbishment Services		Unit 1-3 Freemans Yard, Off Doncaster Road, Barnsley, S70 1TH	Recycling, Reclamation and Disposal	Recycling Services
23F	66.0	SW	Big Apple	434582 406154	25, New Street, Barnsley, S70 1RZ	Workwear	Industrial Products
24	70.0	W	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
25F	83.0	SW	P & J Textiles the Curtain Shop Ltd	434571 406140	29, New Street, Barnsley, S70 1RZ	Curtains and Blinds	Consumer Products
26	84.0	NE	Bus Station		S70	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
27	92.0	W	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
28	95.0	W	Boots Hearing Care	434468 406324	1, Queen Street, Barnsley, S70 1RJ	Disability and Mobility Equipment	Consumer Products
29	97.0	SE	Calor Barnsley Sales & Hire		Unit 10 Freemans Yard, Doncaster Road, Barnsley, S70 1TH	Fuel Distributors and Suppliers	Household, Office, Leisure and Garden
30	103.0	E	Electricity Sub Station		S71	Electrical Features	Infrastructure and Facilities
31	105.0	SW	Big Wicks	434508	46, Market Street, Barnsley, S70 1SN	Candles	Consumer Products
32G	116.0	NE	Barnsley Rail Station		S71	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure
33G	117.0	NE	S Y P T E Barnsley Interchange	406542	Exchange Station 8, Midland Street, Barnsley, S70 1SD	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
34H	119.0	SW	The Hearing Company		13, Market St, Barnsley, S70 1SL	Disability and Mobility Equipment	Consumer Products
35H	119.0	SW	Scrivens Hearing Care	434456 406269	13, Market Street, Barnsley, S70 1SL	Disability and Mobility Equipment	Consumer Products
36	138.0	NE	Electricity Sub Station		S71	Electrical Features	Infrastructure and Facilities
37I	139.0	SE	Harratts Express Fit		1a Malthouse Road, Barnsley, S71 1AL	Vehicle Repair, Testing and Servicing	Repair and Servicing
38I	139.0	SE	Cars 2		1a Malthouse Road, Barnsley, S71 1AL	New Vehicles	Motoring
39I	140.0	SE	Cars2 Peugeot		Malthouse Road, 1a, Pontefract Road, Town Centre, Barnsley, S71 1AL	New Vehicles	Motoring
40	140.0	W	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
41	141.0	S	Photo Mac	434824 406049	7, Doncaster Road, Barnsley, S70 1TH	Clothing, Components and Accessories	Consumer Products
42J	147.0	E	Works		S71	Unspecified Works Or Factories	Industrial Features
43	152.0	SW	Barnsley Autolocksm iths	434523 406092	Francis Jordan House, Wellington Street, Barnsley, S70 1SW	Vehicle Repair, Testing and Servicing	Repair and Servicing
44J	153.0	E	Ken's Tyres & Exhausts	434957 406196	Langdale Road, Barnsley, S71 1AQ	Vehicle Repair, Testing and Servicing	Repair and Servicing
45J	153.0	E	Ken's Tyres & Exhausts Ltd	434957 406196	Langdale Road, Barnsley, S71 1AQ	Vehicle Parts and Accessories	Motoring
46K	156.0	SE	John Brailsford Printers	406053	44, Doncaster Road, Barnsley, S70 1TL	Published Goods	Industrial Products
47K	162.0	SE	Ron Daley Scooters	434876	46, Doncaster Road, Barnsley, S70 1TL	New Vehicles	Motoring
48	170.0	S	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
49	171.0	E	Works		S71	Unspecified Works Or Factories	Industrial Features
50L	172.0	NW	C Lockwood	434476 406551	2, Eastgate, Barnsley, S70 2EP	Clothing, Components and Accessories	Consumer Products
51L	172.0	NW	Amplifon	434476 406551	10, Regent Street, Barnsley, S70 2EJ	Disability and Mobility Equipment	Consumer Products
52	178.0	W	Distinct Designs	434384 406315	2-8, Peel Street, Barnsley, S70 2QX	Jewellery, Gems, Clocks and Watches	Consumer Products
53	183.0	SW	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
54	185.0	N	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
55	198.0	N	Tom Henry & Associates	434606 406633	Digital Media Centre, County Way, Barnsley, S70 2JW	Structural Engineers	Engineering Services
56N	203.0	E	Works		S71	Unspecified Works Or Factories	Industrial Features
57	205.0	E	A & P M O T Centre	434979	25, Queens Road, Barnsley, S71 1AN	Vehicle Repair, Testing and Servicing	Repair and Servicing
58M	208.0	SE	Comtech Services UK Ltd	434919	Burgess House 68-70, Doncaster Road, Barnsley, S70 1TL	Electronic Equipment	Industrial Products
59	210.0	W	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
60M	210.0	SE	Park Gate Mobility Barnsley		19-25, Doncaster Road, Barnsley, S70 1TH	Disability and Mobility Equipment	Consumer Products
61R	215.0	SW	Depot		S70	Container and Storage	Transport, Storage and Delivery
62O	216.0	S	Bennetts Motorcycle s Ltd	434854 405980	58-62, Sheffield Road, Barnsley, S70 1HS	New Vehicles	Motoring
63	218.0	SW	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
64N	222.0	E	Works		S71	Unspecified Works Or Factories	Industrial Features
65N	224.0	E	Brailsford Bros Barnsley Ltd	435029	Langdale Road, Barnsley, S71 1AF	Metalworkers Including Blacksmiths	Construction Services

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
66O	225.0	S	Future Djs Ltd	434857 405971	64, Sheffield Road, Barnsley, S70 1HS	Electronic Equipment	Industrial Products
67P	229.0	SW	Morrisons Barnsley		Lower Thomas Street, Kingstone, Barnsley, S70 1LQ	Petrol and Fuel Stations	Road and Rail
68P	229.0	SW	Morrisons Barnsley		Lower Thomas Street, Kingstone, Barnsley, S70 1LQ	Vehicle Cleaning Services	Personal, Consumer and Other Services
69P	229.0	SW	Morrisons Barnsley	434508 406008	Lower Thomas Street, Kingstone, Barnsley, South Yorkshire, S70 1LQ	Petrol and Fuel Stations	Road and Rail
70	232.0	SW	Works		S70	Unspecified Works Or Factories	Industrial Features
71	235.0	E	Warehouse		S71	Container and Storage	Transport, Storage and Delivery
72Q	238.0	SW	Gas Governor Station		S70	Gas Features	Infrastructure and Facilities
73Q	239.0	SW	Gas Governor Station		S70	Gas Features	Infrastructure and Facilities
74	245.0	SE	Designer Pine	434894 405965	2a, Quarry Street, Barnsley, S70 1HU	Furniture	Consumer Products
75	246.0	S	Electricity Sub Station		S70	Electrical Features	Infrastructure and Facilities
76R	247.0	SW	M C Mills & Co Ltd	434383	Lower Castlereagh Street, Barnsley, S70 1AR	General Purpose Machinery	Industrial Products
77Q	248.0	SW	Bed Factory Outlet	434529 405975	Upper New Street, Barnsley, S70 1LP	Beds and Bedding	Consumer Products
78	250.0	SW	Warehouse		S70	Container and Storage	Transport, Storage and Delivery

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 4

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
79S	236.0	SW	434478 406021	Morrisons	Morrisons Barnsley, Lower Thomas Street, Lower Thomas Street, Kingstone, Barnsley, South Yorkshire, S70 1LQ	Yes	Open
80S	240.0	SW	434459 406032	Obsolete	Westways Service Station, 1, Westways, Westways, Barnsley, South Yorkshire, S70 1PN	Not Applicable	Obsolete
81	289.0	SE	435061 406079	Texaco	Oakwell Service Station, Pontefract Road, Pontefract Road, Barnsley, South Yorkshire, S71 1HA	Not Applicable	Obsolete

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
82	455.0	E	435234 406061	Obsolete	Oakwell Garage, Pontefract Road, Pontefract Road, Barnsley, South Yorkshire, S71 1EZ	Not Applicable	Obsolete

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site: 0

Database searched and no data found.

4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.2 Superficial Ground and Drift Geology

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.3 Bedrock and Solid Geology

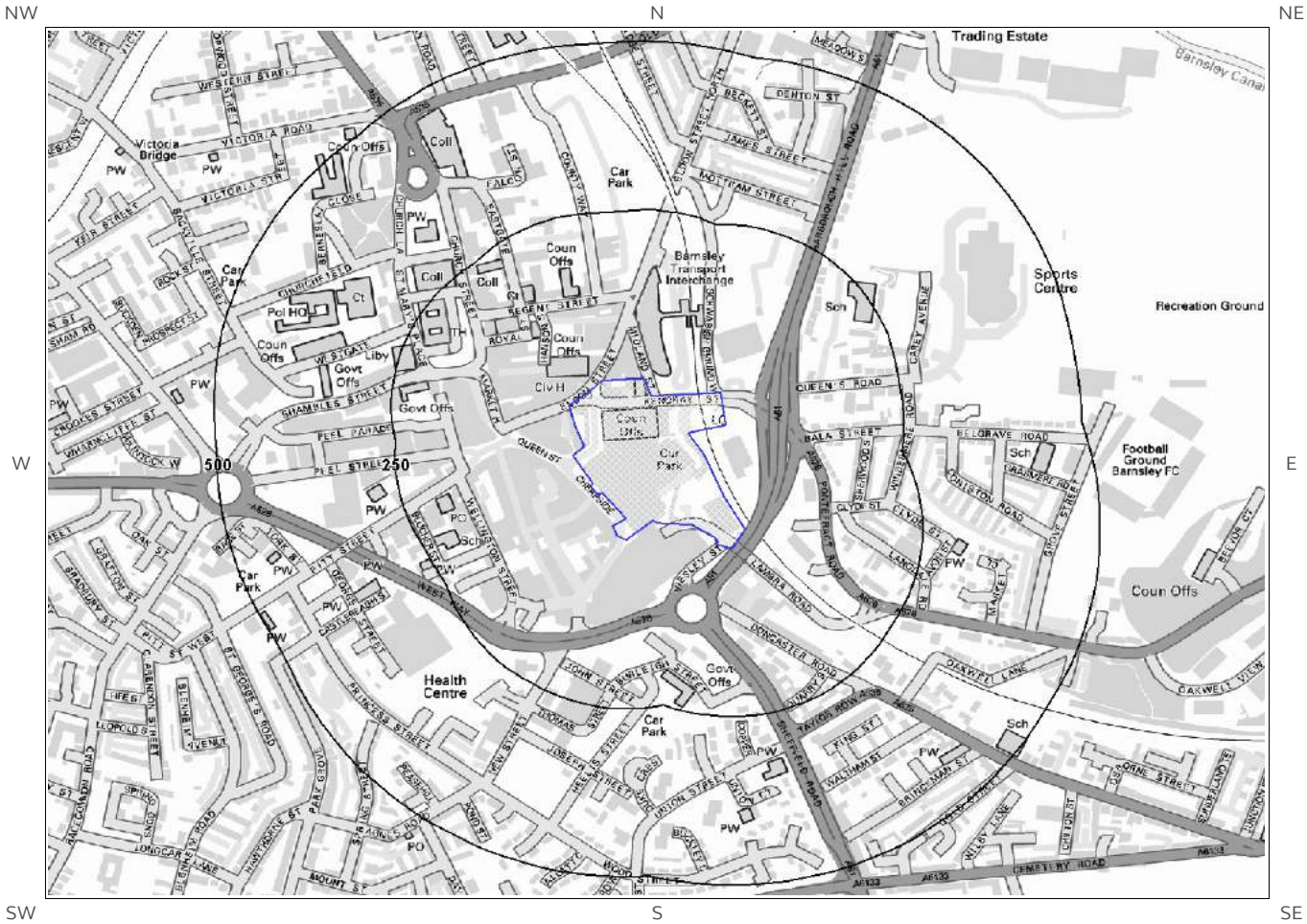
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION	SANDSTONE
KNR-SDST	KENT'S ROCK	SANDSTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

5. Hydrogeology and Hydrology

5a. Aquifer Within Superficial Geology



Aquifer Within Superficial Geology

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

5b. Aquifer Within Bedrock Geology and Abstraction Licenses

Aquifer Within Bedrock Geology and Abstraction Licenses

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

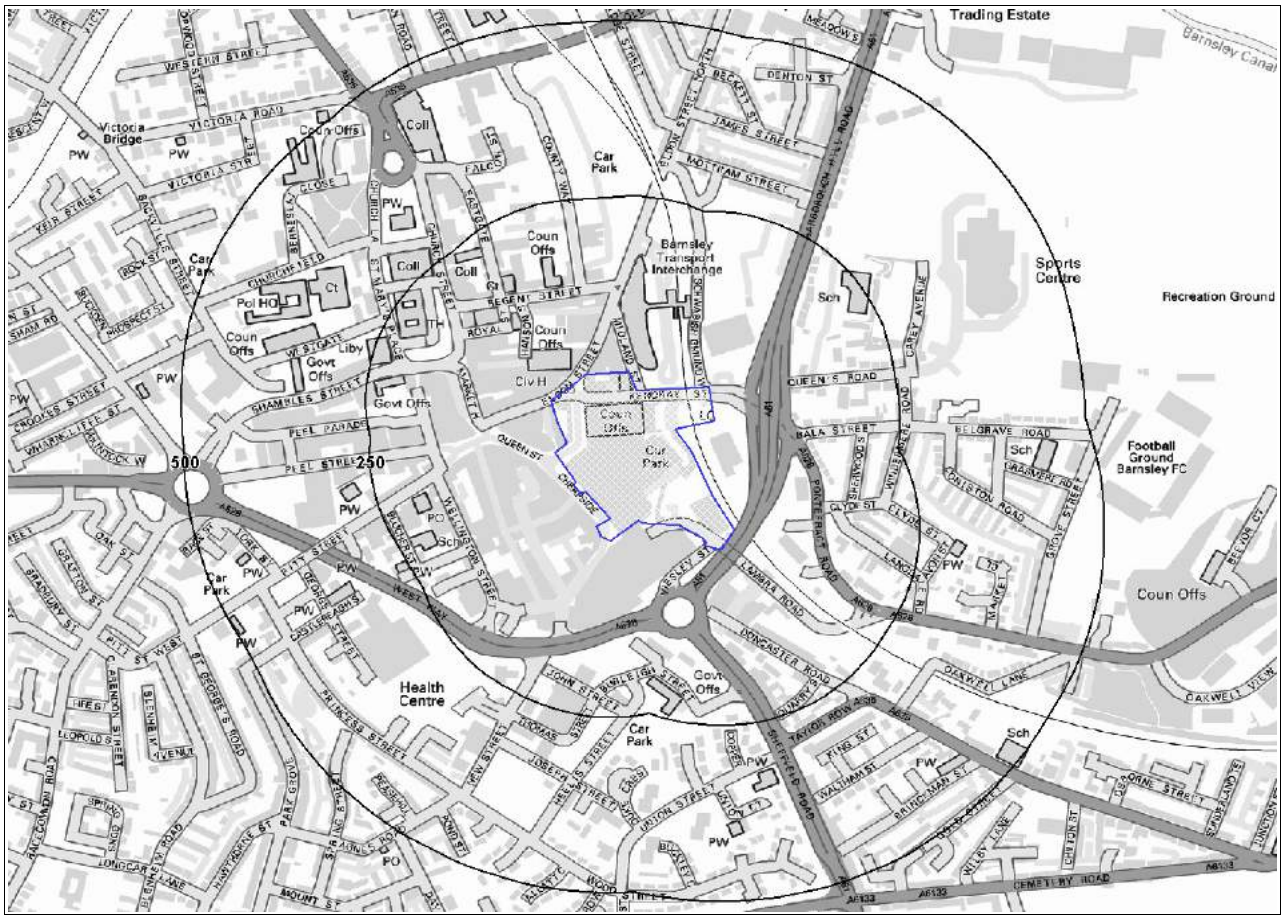
Surface Water Abstraction Licence

5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses

NW N NE

W E

SW S SE



Map LegendSource Protection Zonesand PotableWater Abstraction Licenses

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250 500 Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

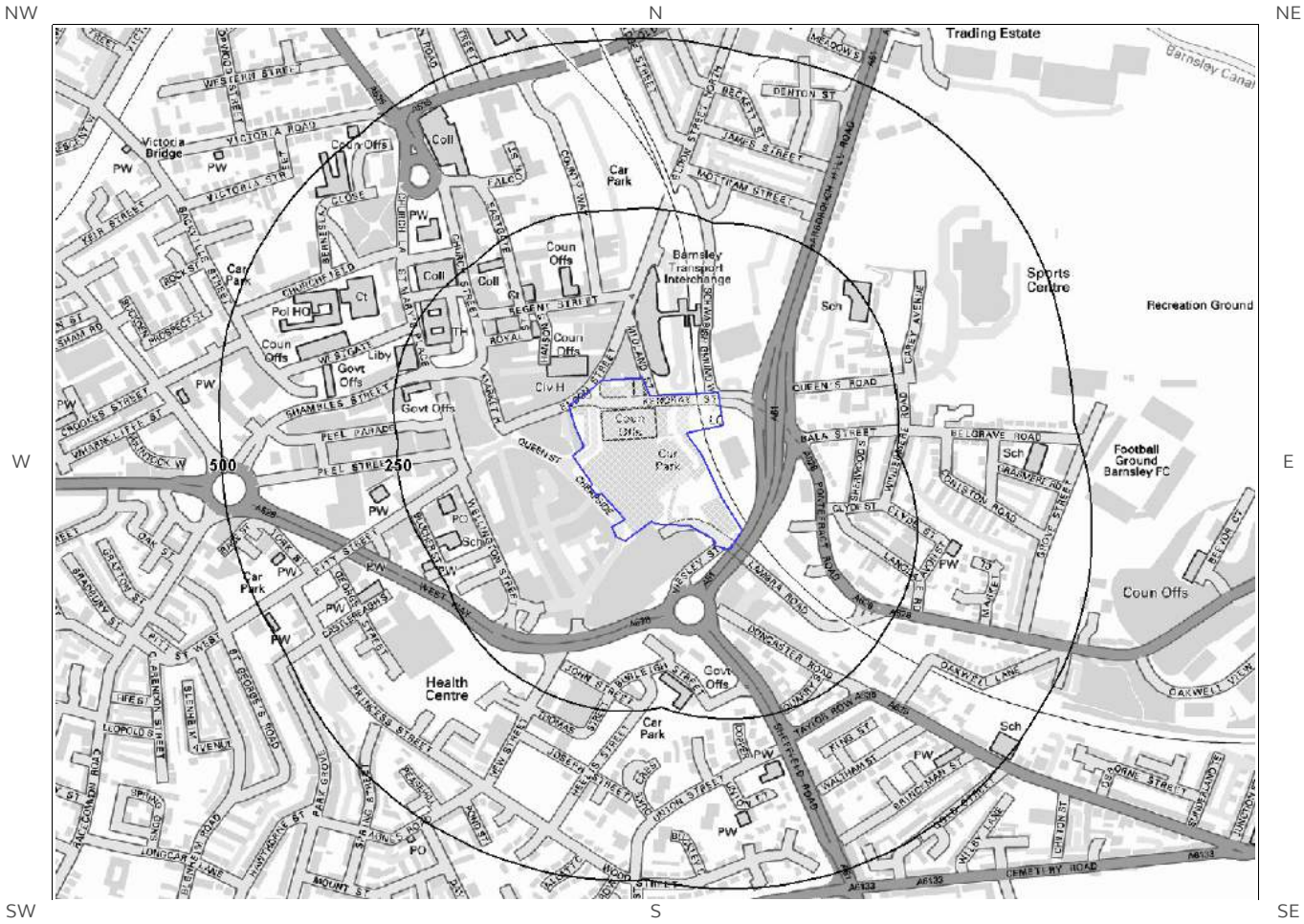
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

5d. Hydrology Source Protection Zones within confined aquifer



Hydrology Source Protection Zones

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1C - Inner Catchment within Confined Aquifer

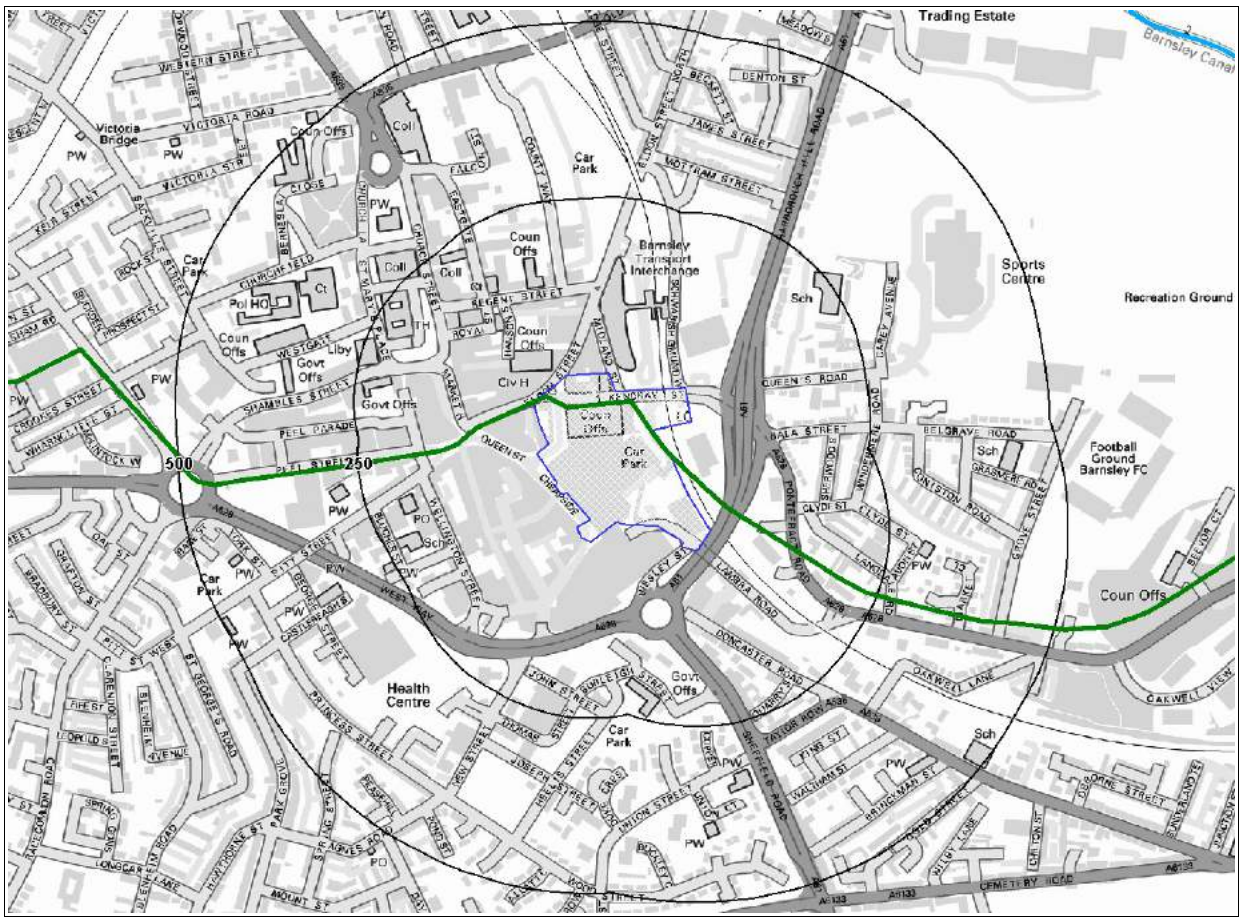
Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

5 e. Hydrology – Detailed River Network and River Quality

NW N NE



W E

SW S SE

Hydrology – Detailed River Network and River Quality

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015. Ordnance Survey license 100035207.

Site Outline

250 500 Search Buffers (m)

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

Report Reference: GS-2017327
Client Reference: Better_Barnsley_Project

5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? No

Database searched and no data found.

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

5.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	Designation	Description
1	0.0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	195.0	E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

5.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	902.0	W	433700 406060	Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 08082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/1/2004 Version End Date:
Not shown	902.0	W	433700 406060	Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring - Sandstone&middle Coal Measures - Barnsley Data Type: Point	Annual Volume (m^3): 350000 Max Daily Volume (m^3): 1400 Original Application No: 8082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/1/2004 Version End Date:
Not shown	922.0	W	433700 406000	Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Well/spring - Sandstone/middle Coal Measures - Shaw Lane Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 100 Version Start Date: 1/12/1999 Version End Date:
Not shown	922.0	W	433700 406000	Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 101 Version Start Date: 8/4/2003 Version End Date:

5.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1034.0	NE	435710 406850	Licence No: 2/27/08/122 Details: Make-Up or Top Up Water Direct Source: Surface Water Point: River Dearne Data Type: Point	Annual Volume (m^3): 7800 Max Daily Volume (m^3): 86.6 Application No: 6891 Original Start Date: 7/10/1998 Expiry Date: 31/10/2006 Issue No: 101 Version Start Date: 1/8/2002 Version End Date:
Not shown	1034.0	NE	435710 406850	Licence No: 2/27/08/141 Details: Make-Up Or Top Up Water Direct Source: Surface Water Point: River Dearne Data Type: Point	Annual Volume (m^3): 7800 Max Daily Volume (m^3): 86.6 Application No: 8254 Original Start Date: 13/3/2007 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/4/2008 Version End Date:
Not shown	1034.0	NE	435710 406850	Licence No: 2/27/08/122 Details: Make-Up or Top Up Water Direct Source: Surface Water Point: River Dearne Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: 6891 Original Start Date: 7/10/1998 Expiry Date: 31/10/2006 Issue No: 101 Version Start Date: 1/8/2002 Version End Date:

5.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (5c):

ID	Distance (m)	Direction	NGR	Details	
Not show n	902.0	W	433700 406060	Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 08082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	902.0	W	433700 406060	Licence No: 2/27/08/133 Details: Water Bottling Direct Source: Groundwaters Point: Spring - Sandstone&middle Coal Measures - Barnsley Data Type: Point	Annual Volume (m^3): 350000 Max Daily Volume (m^3): 1400 Original Application No: 8082 Original Start Date: 1/1/2004 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: Version End Date:
Not shown	922.0	W	433700 406000	Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Well/spring - Sandstone/middle Coal Measures - Shaw Lane Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 100 Version Start Date: Version End Date:
Not shown	922.0	W	433700 406000	Licence No: 2/27/08/110 Details: Water Bottling Direct Source: Groundwaters Point: Spring-sandstone/middle Coal Measures-shaw Lane Data Type: Point	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: 6598 Original Start Date: 23/3/1994 Expiry Date: 31/12/2003 Issue No: 101 Version Start Date: Version End Date:

5.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

5.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

5.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

5.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? Yes

5.9.1 Biological Quality:

Database searched and no data found.

5.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (5d):

					Chemical Quality Grade				
ID	Distance (m)	Direction	NGR	River Quality Grade	2005	2006	2007	2008	2009
Not shown	849.0	NE	435100 407200	River Name: River Dearne Reach: New Lodge Old Mill End/Start of Stretch: Sample Point NGR	D	B	C	C	D
Not shown	1089.0	NE	435673 407028	River Name: River Dearne Reach: New Lodge Old Mill End/Start of Stretch: End of Stretch NGR	D	B	C	C	D

5.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (5e):

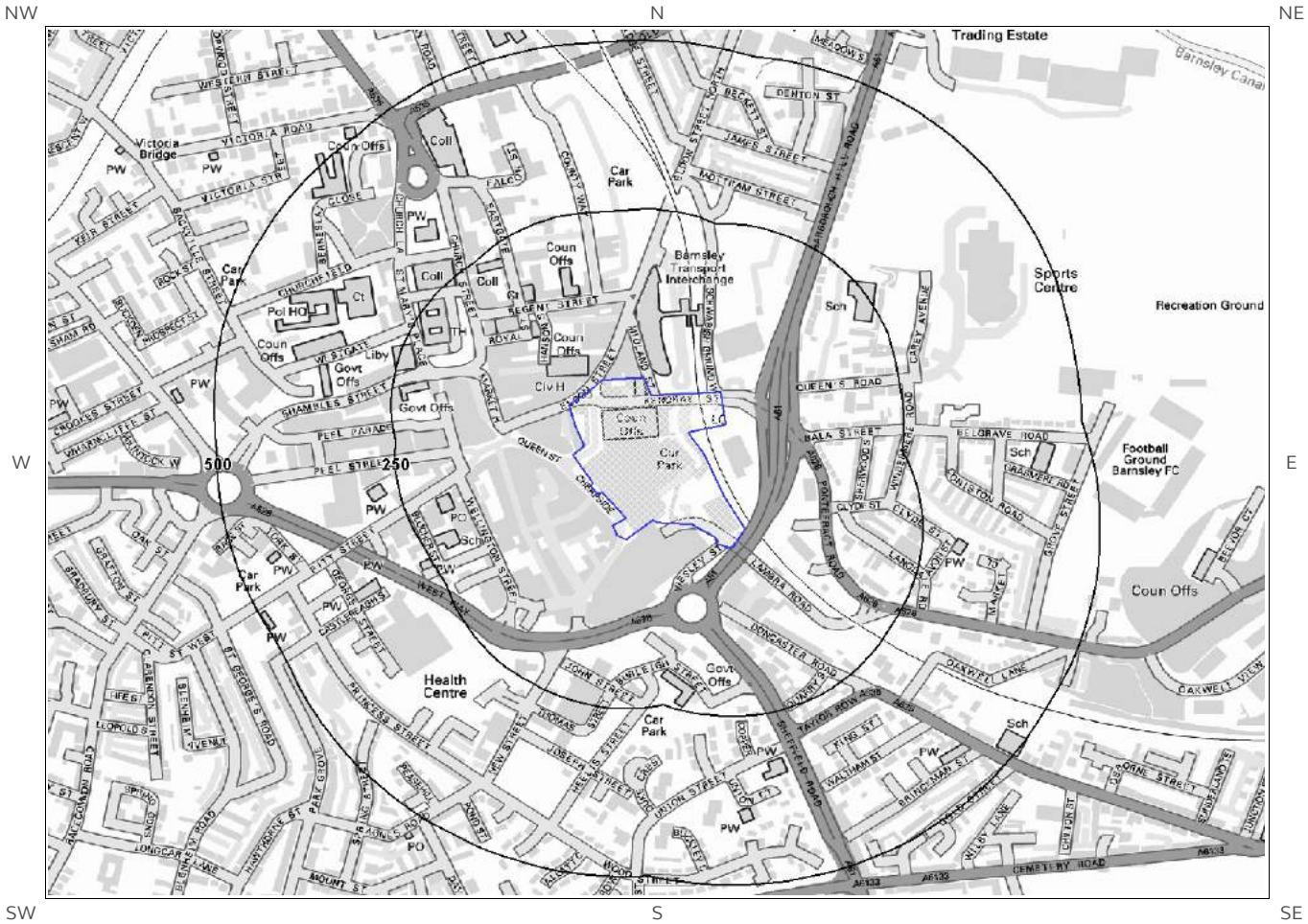
ID	Distance (m)	Direction	Details	
1	0.0	On Site	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

5.11 Surface Water Features

Are there any surface water features within 250m of the study site? No

Database searched and no data found.

6. Environment Agency Flood Map for planning (from rivers and the sea)



Environment Agency Flood Map for planning (from rivers and the sea)

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Zone 2 Floodplain

Zone 3 Floodplain

Flood Storage Area

Area Benefiting from Flood Defences

Flood Defences

6. Flooding

6.1 Zone 2 Flooding

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 1 – Environment Agency Flood Map for Planning:

Is the site within 250m of an Environment Agency Zone 2 floodplain?	No

Database searched and no data found.

6.2 Zone 3 Flooding

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 1 – Environment Agency Flood Map for Planning.

Is the site within 250m of an Environment Agency Zone 3 floodplain?	No

Database searched and no data found.

6.3 Flood Defences

Are there any Flood Defences within 250m of the study site?	No

Database searched and no data found.

6.4 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site?	No

6.5 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?	No

6.6 Groundwater Flooding Susceptibility Areas

6.6.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site?

Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

6.6.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

6.7 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Low

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

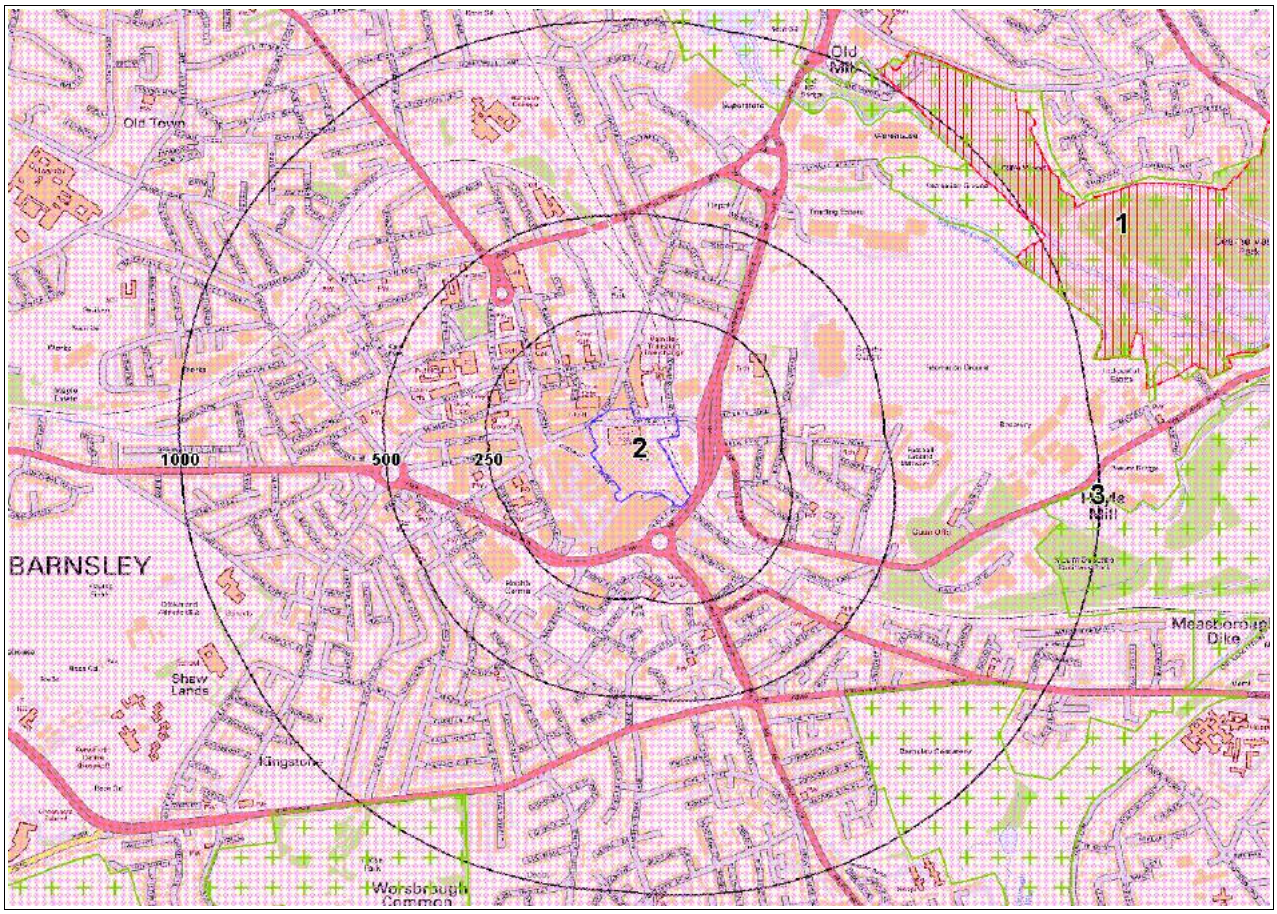
---

7. Designated Environmentally Sensitive Sites Map

NW N NE

W E

SW S SE



Designated Environmentally Sensitive Sites Map

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Centre
Site Outline
100 250 Search Buffers (m)

AONB
National Park
SSSI
Special Protection Areas
Nitrate Vulnerable Zones

Green Belt
Environmentally Sensitive Areas
Special Areas of Conservation
World Heritage Sites
Nitrate Sensitive Areas

Ancient Woodland
National Nature Reserve
Local Nature Reserves
RAMSAR Sites

7. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

7.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

7.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

7.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

7.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

7.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

7.6 Records of Ancient Woodland within 2000m of the study site:

0

Database searched and no data found.

7.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
1	926.0	NE	Dearne Valley Park	Natural England

7.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

7.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

7.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

7.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

7.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

7.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

1

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0.0	On Site	Existing	DEFRA

7.14 Records of Green Belt land within 2000m of the study site:

2

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015]

ID	Distance (m)	Direction	Green Belt Name	Local Authority Name
3	628.0	SE	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)
Not shown	1372.0	S	Liverpool, Manchester and West Yorks Greenbelt	Barnsley District (B)

8. Natural Hazards Findings

8.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure GeoInsight, available from our website. The following information has been found:

8.1.1 Shrink Swell

What is the maximum Shrink-Swell*[*] hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

8.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This indicates an automatically generated 50m buffer and site.

8.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

8.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

8.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

8.1.6 Running Sand

What is the maximum Running Sand*[*] hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

* This indicates an automatically generated 50m buffer and site.

9. Mining

9.1 Coal Mining

Are there any coal mining areas within 75m of the study site? Yes

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*? Low-Moderate

*Please note this data is searched with a 150m buffer.

9.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: **enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506
Web:**www.environment-agency.gov.uk**
Email:**enquiries@environment-agency.gov.uk**

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Barnsley Metropolitan Borough Council
Phone: 01226 770770
Web: http://www.barnsley.gov.uk/
Address: PO Box 634, Barnsley, South Yorkshire, S70 9GG

Gemapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.
PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

I**n these terms and conditions unless the context otherwise requires:**

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with Groundsure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to Groundsure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"Groundsure" means Groundsure Limited, a company registered in England and Wales under number 03421028.

"Groundsure Materials" means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

"Services" means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested Groundsure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event

(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

© Groundsure Limited June 2013

Appendix C

Groundsure GeoInsight Report

Robson Liddle Ltd

NAVIGATION HOUSE N P S NORTH EAST LTD,
WHISTLER DRIVE,
CASTLEFORD, WF10 5HX

Groundsure Reference:	GS-2017328
Your Reference:	Better_Barnsley_Project
Report Date	14 Apr 2015
Report Delivery Method:	Email - pdf

Groundsure Geoinsight

Address: BETTER BARNSLEY, S70 1DD

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geoinsight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

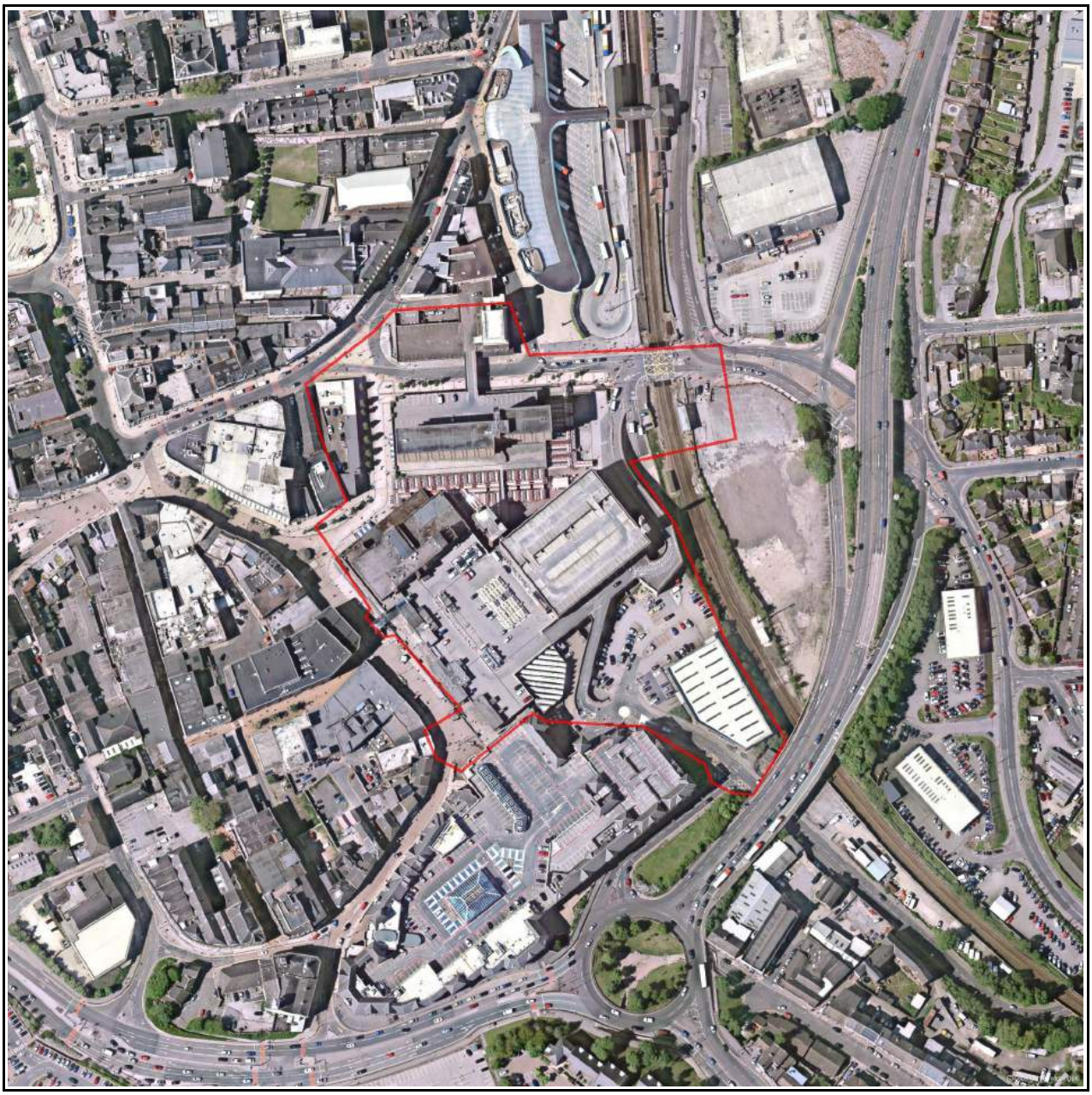
Enc.
Groundsure Geoinsight

Groundsure Geoinsight

Address:	**BETTER BARNSLEY, S70 1DD**
Date:	**14 Apr 2015**
Reference:	**GS-2017328**
Client:	**Robson Liddle Ltd**

NW N NE

W



E

SW S SE

Aerial Photograph Capture date:	07-Jun-2013
Grid Reference:	434671,406312
Site Size:	3.84ha

Contents Page

Overview of Findings 5
1 Geology 8
1.1 Artificial Ground Map 8
1 Geology 9
1.1 Artificial Ground 9
1.1.1Artificial/ Made Ground 9
1.1.2 Permeability of Artificial Ground 9
1.2 Superficial Deposits and Landslips Map 10
1.2 Superficial Deposits and Landslips 11
1.2.1 Superficial Deposits/ Drift Geology 11
1.2.2 Permeability of Superficial Ground 11
1.2.3 Landslip 11
1.2.4 Landslip Permeability 11
1.3 Bedrock and Faults Map 12
1.3 Bedrock, Solid Geology & Faults 13
1.3.1 Bedrock/ Solid Geology 13
1.3.2 Permeability of Bedrock Ground 13
1.3.3 Faults 13
1.4 Radon Data 15
1.4.1 Radon Affected Areas 15
1.4.2 Radon Protection 15
2 Ground Workings Map 16
2 Ground Workings 17
2.1 Historical Surface Ground Working Features derived from Historical Mapping 17
2.2 Historical Underground Working Features derived from Historical Mapping 18
2.3 Current Ground Workings 18
3 Mining, Extraction & Natural Cavities Map 20
3 Mining, Extraction & Natural Cavities 21
3.1 Historical Mining 21
3.2 Coal Mining 21
3.3 Johnson Poole and Bloomer 22
3.4 Non-Coal Mining 22
3.5 Non-Coal Mining Cavities 22
3.6 Natural Cavities 22
3.7 Brine Extraction 23
3.8 Gypsum Extraction 23
3.9 Tin Mining 23
3.10 Clay Mining 23
4 Natural Ground Subsidence 24
4.1 Shrink-Swell Clay Map 24
4.2 Landslides Map 25
4.3 Ground Dissolution Soluble Rocks Map 26
4.4 Compressible Deposits Map 27
4.5 Collapsible Deposits Map 28
4.6 Running Sand Map 29
4 Natural Ground Subsidence 30
4.1 Shrink-Swell Clays 30
4.2 Landslides 30
4.3 Ground Dissolution of Soluble Rocks 31

4.4 Compressible Deposits....31
4.5 Collapsible Deposits....31
4.6 Running Sands....31
5 Borehole Records Map....33
5 Borehole Records....34
6 Estimated Background Soil Chemistry....41
7 Railways and Tunnels Map....42
7 Railways and Tunnels....43
7.1 Tunnels....43
7.2 Historical Railway and Tunnel Features....43
7.3 Historical Railways....45
7.4 Active Railways....45
7.5 Railway Projects....46

Overview of Findings

The Groundsure Geoinsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1:Geology		
1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	No
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	No
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.4 Radon data	1.4.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

Section 2:Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	0	3	9	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	6	2
2.3 Current Ground Workings	0	0	1	3	8

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	6	2
3.2 Coal Mining	1	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	1	1	4	1	1
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0

Section 4: Natural Ground Subsidence	On-site
4.1 Shrink Swell Clay	Very Low
4.2 Landslides	Very Low
4.3 Ground Dissolution of Soluble Rocks	Negligible
4.4 Compressible Deposits	Negligible
4.5 Collapsible Deposits	Very Low
4.6 Running Sand	Low

Section 5: Borehole Records	On-site	0-50m	51-250
5 BGS Recorded Boreholes	0	8	83

Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250
6 Records of Background Soil Chemistry	1	1	15

Section 7: Railways and Tunnels	On-site	0-50m	51-250	251-500
7.1 Tunnels	0	0	0	Not Searched
7.2 Historical Railway and Tunnel Features	16	9	23	Not Searched
7.3 Historical Railways	0	0	0	Not Searched
7.4 Active Railways	2	2	3	Not Searched

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0

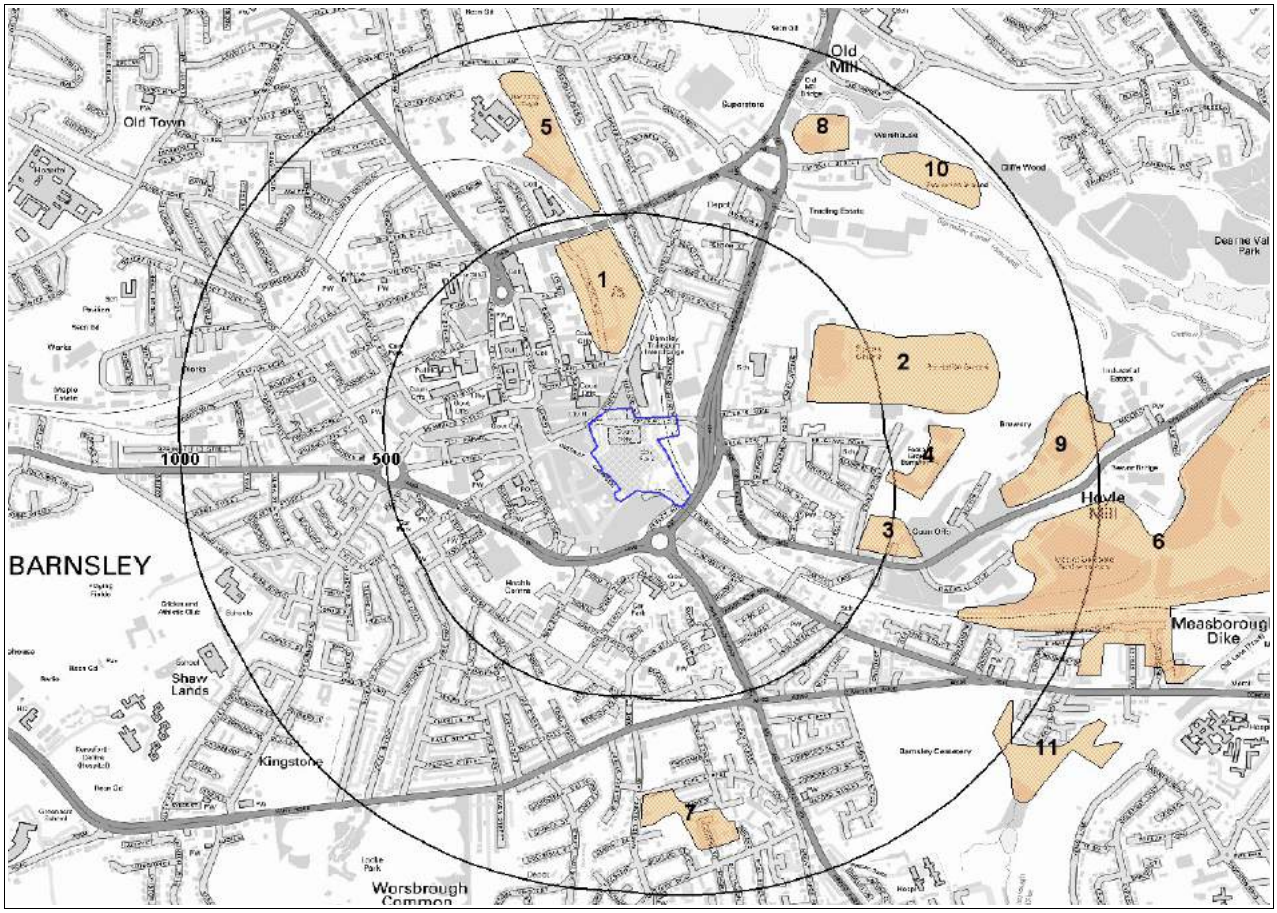
1 Geology

1.1 Artificial Ground Map

NW N NE

W E

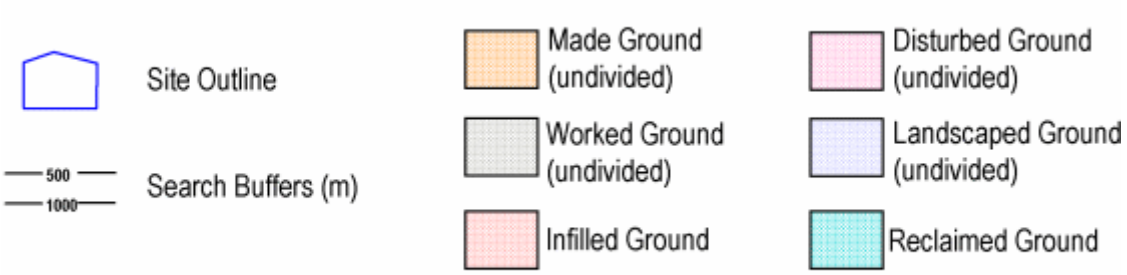
SW S SE



Artificial Ground Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.



1 Geology

1.1 Artificial Ground

1.1.1Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:087

Are there any records of Artificial/Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	142.0	N	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	319.0	E	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	428.0	E	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	478.0	E	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

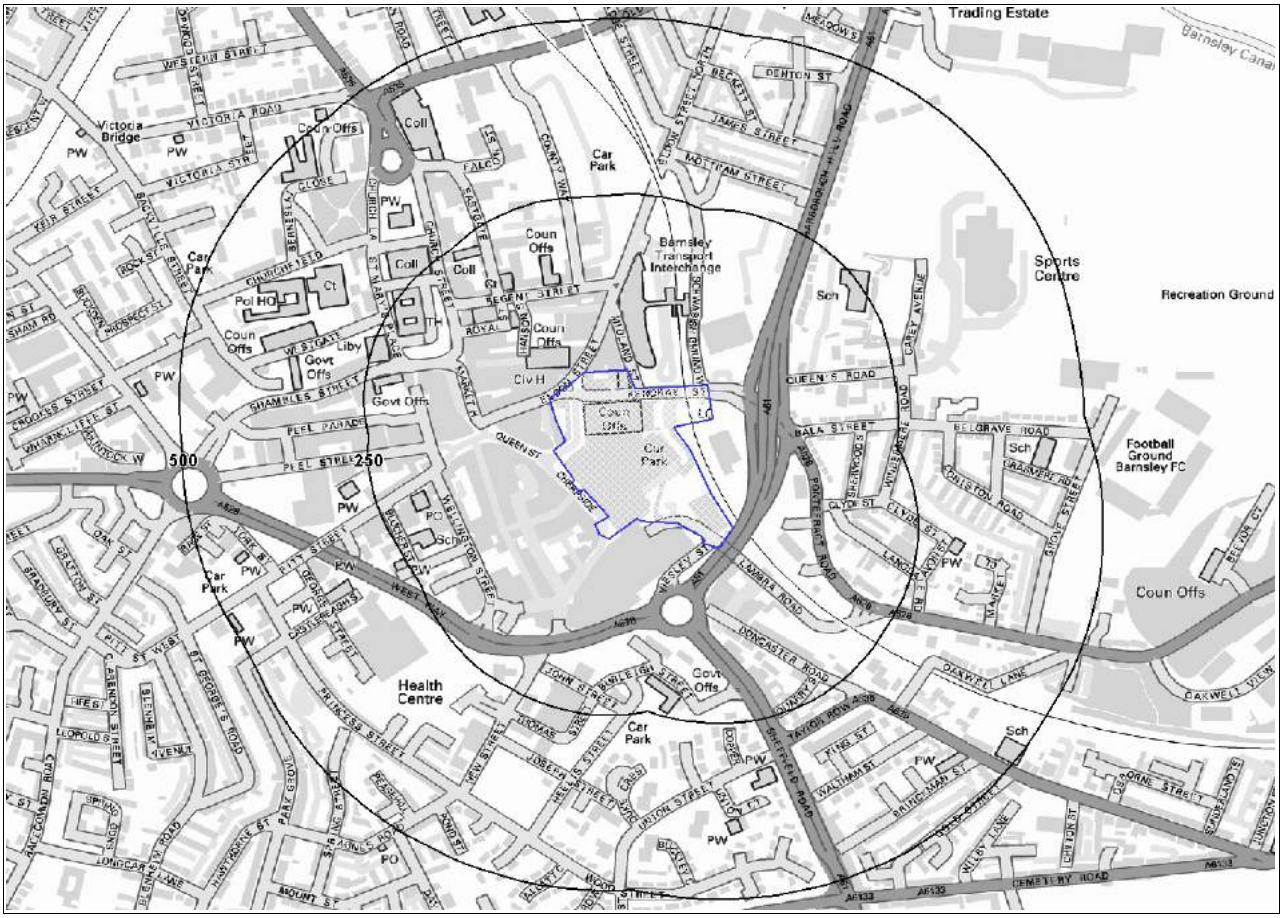
1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

1.2 Superficial Deposits and Landslips Map

NW N NE



W E

SW S SE

Superficial Deposits and Landslips Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? No

Database searched and no data found.

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? No

Database searched and no data found.

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site** boundary? No

Database searched and no data found.

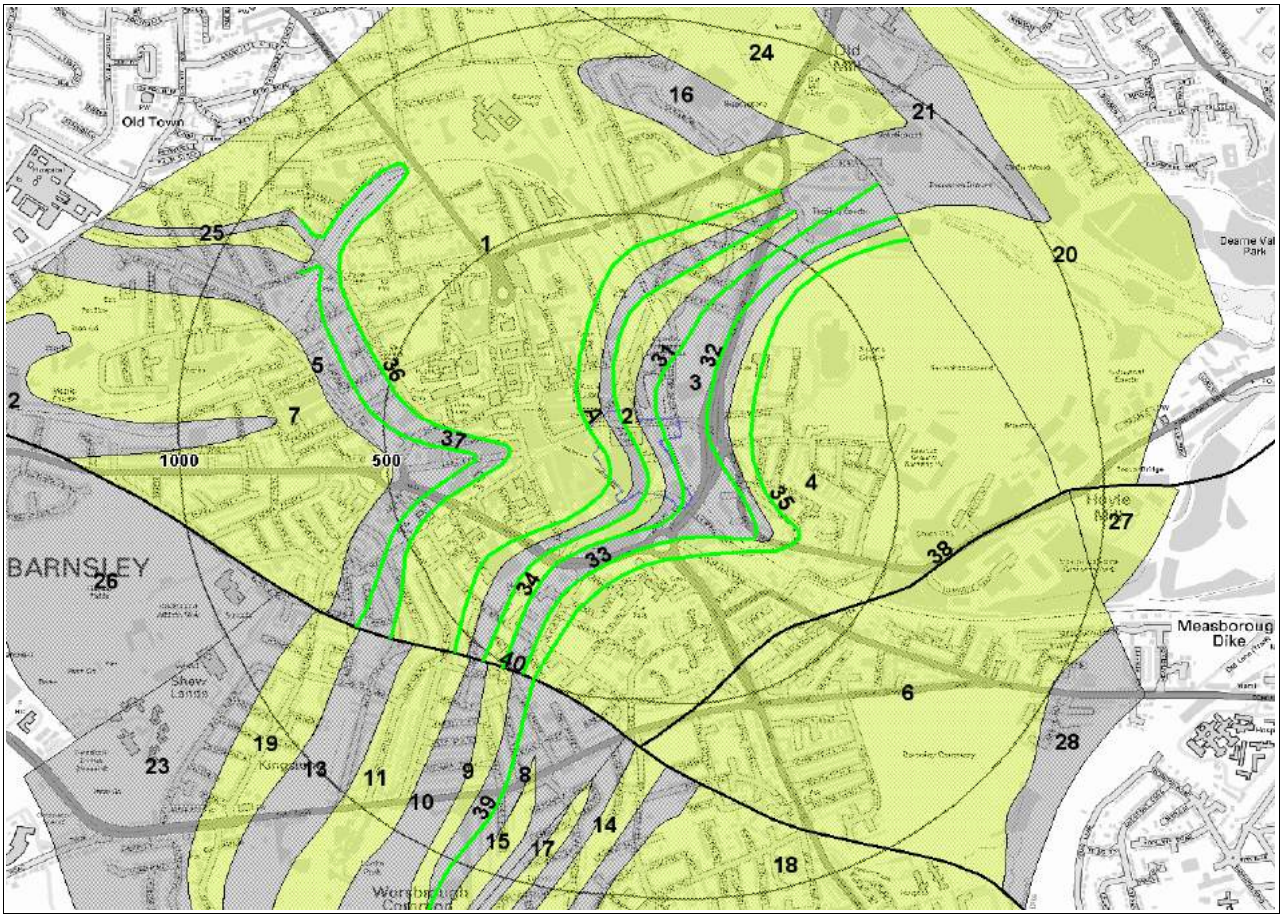
---

* This includes an automatically generated 50m buffer zone around the site

1.3 Bedrock and Faults Map

NW N NE

W E



SW S SE

Bedrock and Faults Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:087

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	KNR-SDST	Kent's Rock - Sandstone	Duckmantian
2	0.0	On Site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian / Duckmantian
3	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian / Duckmantian
4	76.0	S	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian
5	200.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian / Duckmantian
6	392.0	SE	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian
7	487.0	W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian / Duckmantian
8	499.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian / Duckmantian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Moderate	Low
0.0	On Site	Fracture	High	Moderate
0.0	On Site	Fracture	Moderate	Low
0.0	On Site	Fracture	High	Moderate

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
29A	0.0	On Site	ROCK	Coal seam, inferred
30A	0.0	On Site	ROCK	Coal seam, inferred

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Category Description	Feature Description
31	0.0	On Site	ROCK	Coal seam, inferred
32	64.0	E	ROCK	Coal seam, inferred
33	76.0	S	ROCK	Coal seam, inferred
34	85.0	S	ROCK	Coal seam, inferred
35	125.0	S	ROCK	Coal seam, inferred
36	200.0	W	ROCK	Coal seam, inferred
37	281.0	W	ROCK	Coal seam, inferred
38	392.0	SE	FAULT	Fault, inferred, displacement unknown
39	499.0	SW	ROCK	Coal seam, inferred
40	499.0	SW	FAULT	Fault, inferred, displacement unknown

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.4 Radon Data

1.4.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

---

1.4.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary

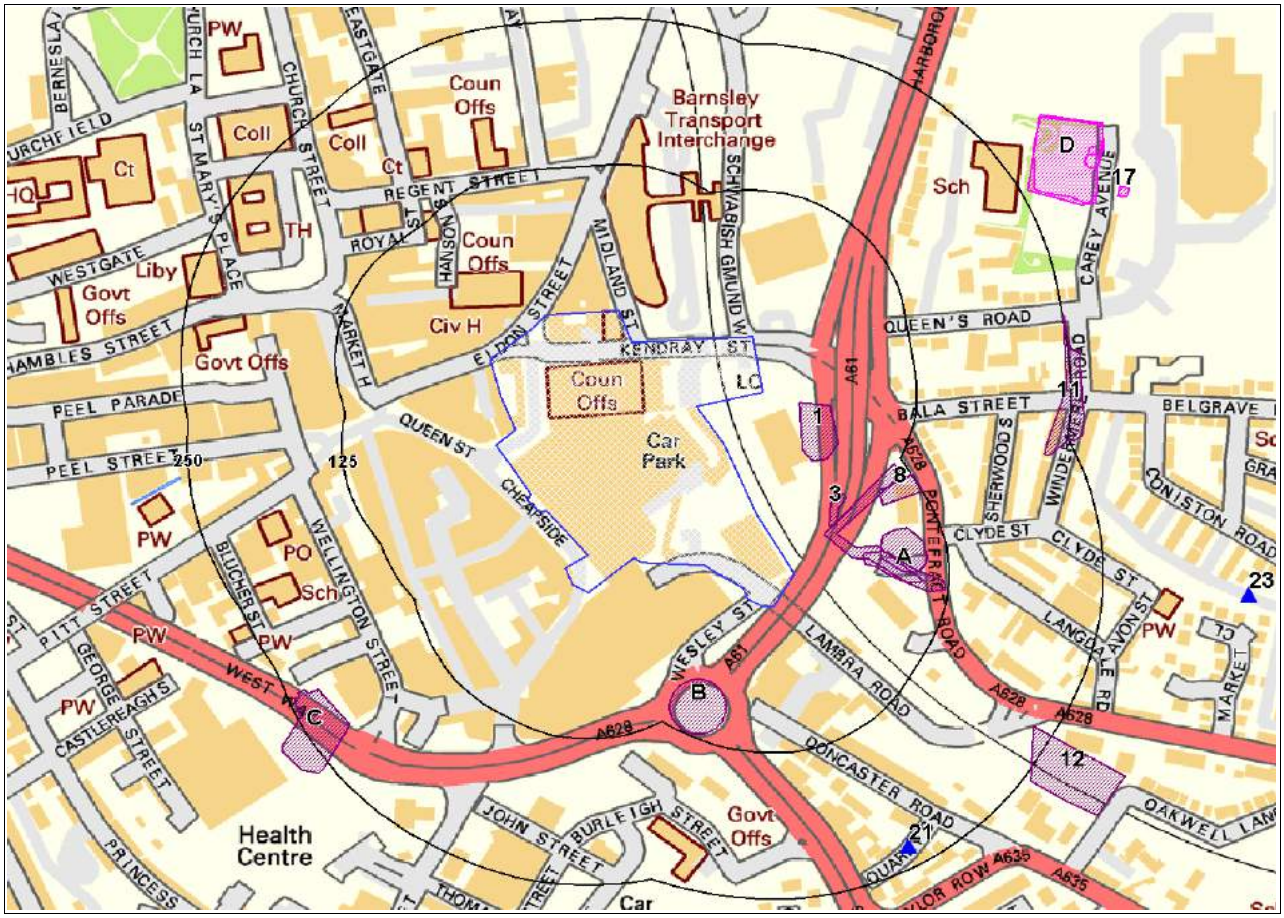
---

2 Ground Workings Map

NW N NE

W E

SW S SE



Ground Workings Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

- Site Outline
- Search Buffers (m) (125, 250)
- Historic Surface Ground Workings
- Historic Underground Workings
- Current Ground Workings

2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1	31.0	E	434826 406336	Unspecified Heap	1904
2	38.0	NE	434843 406258	Unspecified Ground Workings	1904
3	45.0	NE	434840 406269	Unspecified Ground Workings	1973
4A	57.0	E	434894 406216	Unspecified Ground Workings	1966
5A	71.0	E	434894 406234	Unspecified Pit	1890
6B	77.0	SW	434727 406100	Unspecified Pit	1982
7B	77.0	SW	434727 406100	Unspecified Pit	1993
8	91.0	NE	434891 406286	Refuse Heap	1890
9C	217.0	SW	434417 406079	Pond	1904
10C	217.0	SW	434417 406079	Pond	1890
11	227.0	NE	435031 406375	Unspecified Quarry	1890
12	233.0	SE	435034 406045	Cuttings	1966

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
13D	255.0	NE	435025 406567	Colliery	1948
14D	261.0	NE	435027 406568	Colliery	1951
15D	308.0	NE	435046 406567	Disused Air Shaft	1966
16D	313.0	NE	435046 406575	Unspecified Drift	1948
17	320.0	E	435072 406541	Unspecified Drift	1951
Not shown	429.0	SW	434408 405657	Colliery	1890
Not shown	985.0	NE	435410 407214	Colliery	1948
Not shown	988.0	SE	435677 405551	Colliery	1890

2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
21	232.0	SE	434897 405981	Sandstone	Taylor Row	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	304.0	S	434754 405884	Sandstone	Union Street	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
23	368.0	E	435173 406196	Sandstone	Oakwell	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	496.0	E	435298 406164	Sandstone	Beevor Hall	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	631.0	NE	435157 406916	Coal, Deep	Mount Osborne Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	633.0	NE	435298 406768	Sandstone	Eaming Wood	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	658.0	NW	434177 406937	Coal, Deep	Barnsley Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	676.0	S	434709 405515	Clay & Shale	Warren Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	786.0	S	434634 405412	Clay & Shale	Warren Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	792.0	E	435579 406044	Sandstone	Mount Osborne	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	804.0	S	434696 405387	Clay & Shale	Warren Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	858.0	N	434467 407282	Coal, Deep	Honey Well Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

3 Mining, Extraction & Natural Cavities Map

Mining, Extraction and Natural Cavities Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Historical Mining

Non-Coal Mining Cavities

Natural Cavities

Non-Coal Mining

Highly likely

Likely

Unlikely

Highly unlikely

Rare

3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? Yes

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
9A	255.0	NE	435025 406567	Colliery	1948
10A	261.0	NE	435027 406568	Colliery	1951
11A	308.0	NE	435046 406567	Disused Air Shaft	1966
12A	313.0	NE	435046 406575	Unspecified Drift	1948
13	320.0	E	435072 406541	Unspecified Drift	1951
14	429.0	SW	434408 405657	Colliery	1890
Not shown	985.0	NE	435410 407214	Colliery	1948
Not shown	988.0	SE	435677 405551	Colliery	1890

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

3.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Iron Ore (Bedded)	Rare and localised small scale mining may have occurred.
2	36.0	W	Sheffield Area	Vein Mineral/Iron ore	Rare and localised small scale mining may have occurred.
3	98.0	S	Sheffield Area	Vein Mineral/Iron ore	Rare and localised small scale mining may have occurred.
4	195.0	E	Not available	Iron Ore (Bedded)	Rare and localised small scale mining may have occurred.
5	213.0	SE	Sheffield Area	Vein Mineral/Iron ore	Rare and localised small scale mining may have occurred.
6	219.0	E	Sheffield Area	Vein Mineral/Iron ore	Rare and localised small scale mining may have occurred.
7	296.0	NE	Not available	Iron Ore (Bedded)	Rare and localised small scale mining may have occurred.
Not shown	746.0	N	Sheffield Area	Vein Mineral/Iron ore	Rare and localised small scale mining may have occurred.

3.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

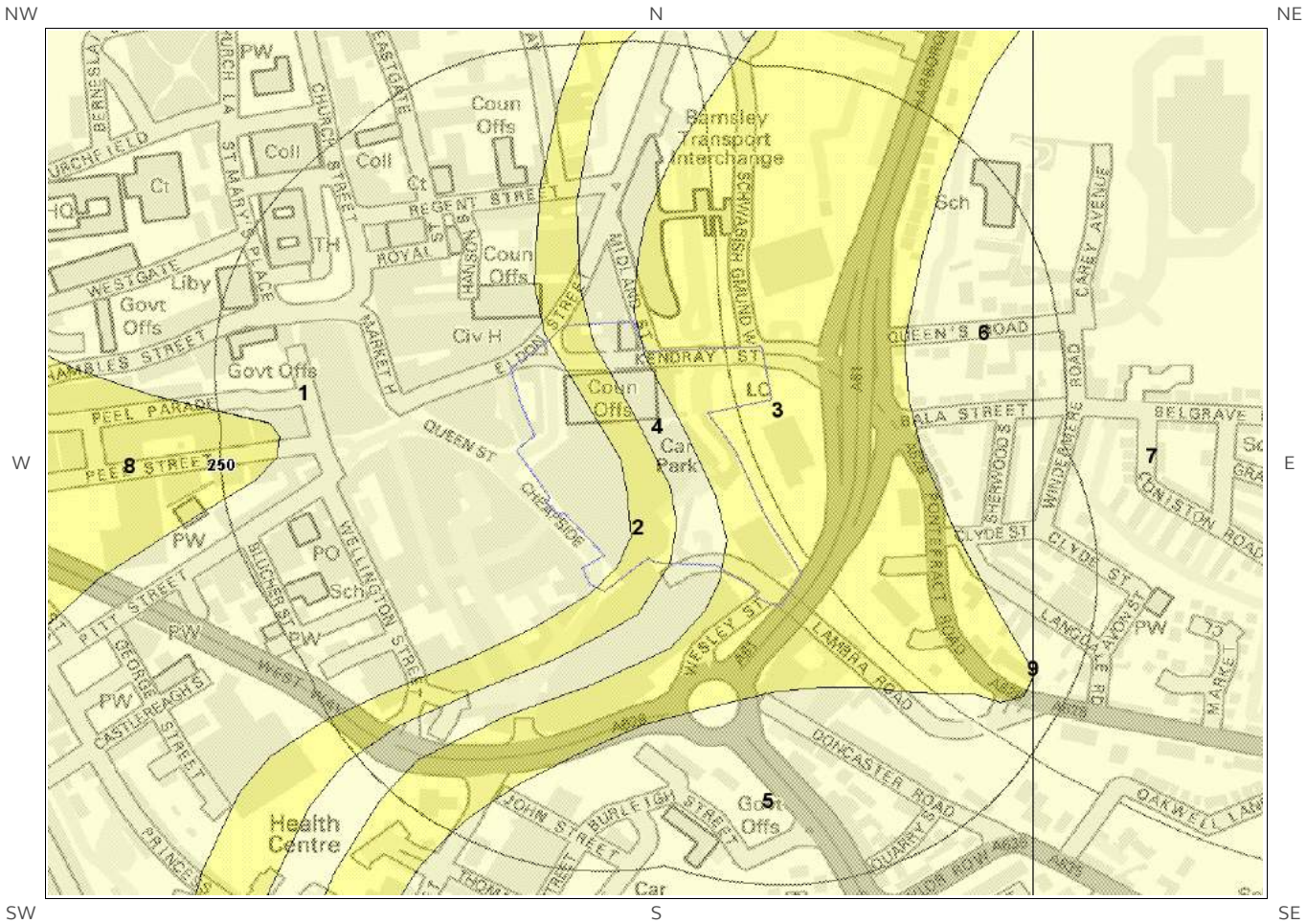
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map



Shrink Swell Clay Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

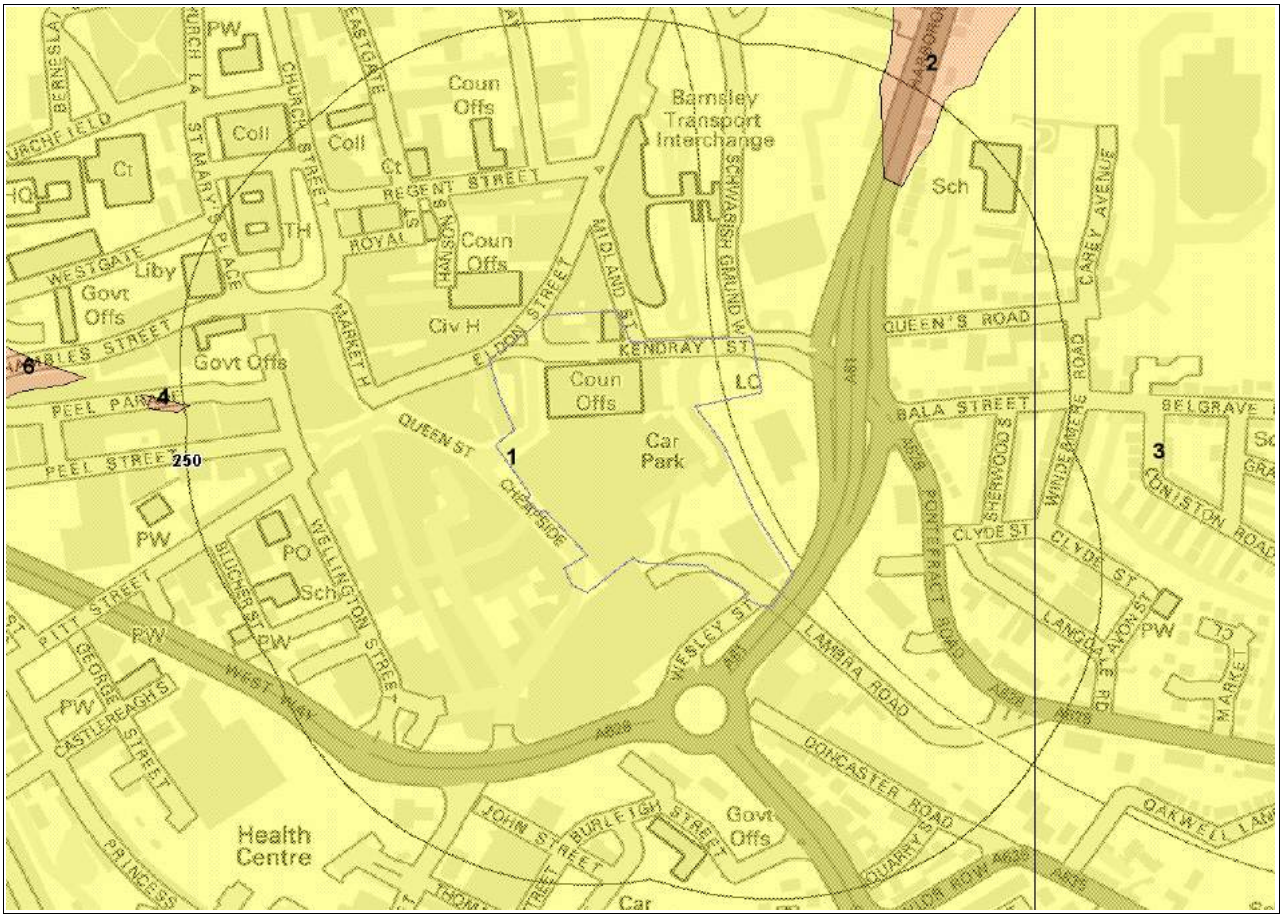
Low
Moderate
High

4.2 Landslides Map

NW N NE

W E

SW S SE



Landslides Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

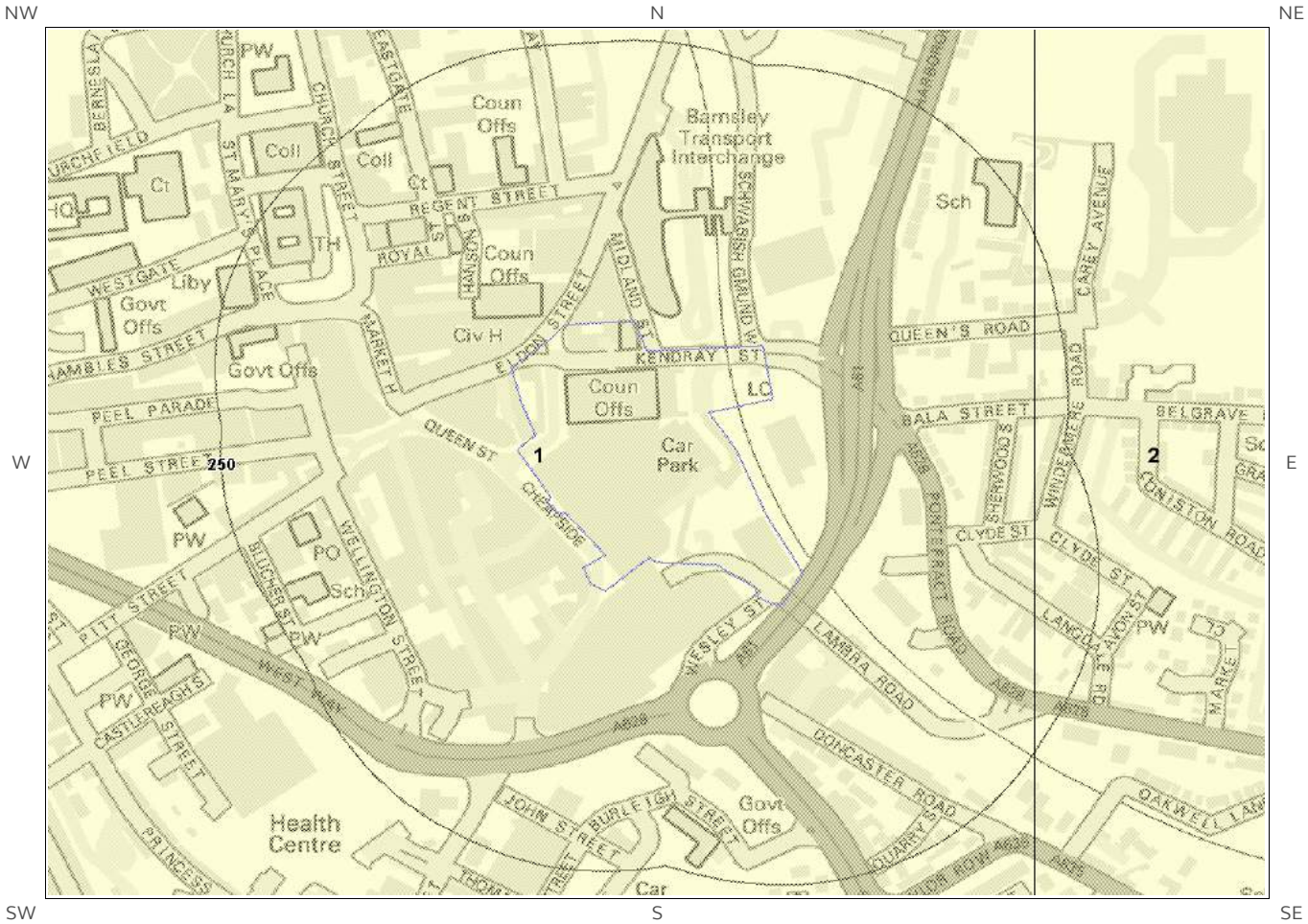
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

4.3 Ground Dissolution Soluble Rocks Map



Ground Dissolution Soluble Rocks Legend

Mapping sourced from Ordnance Survey

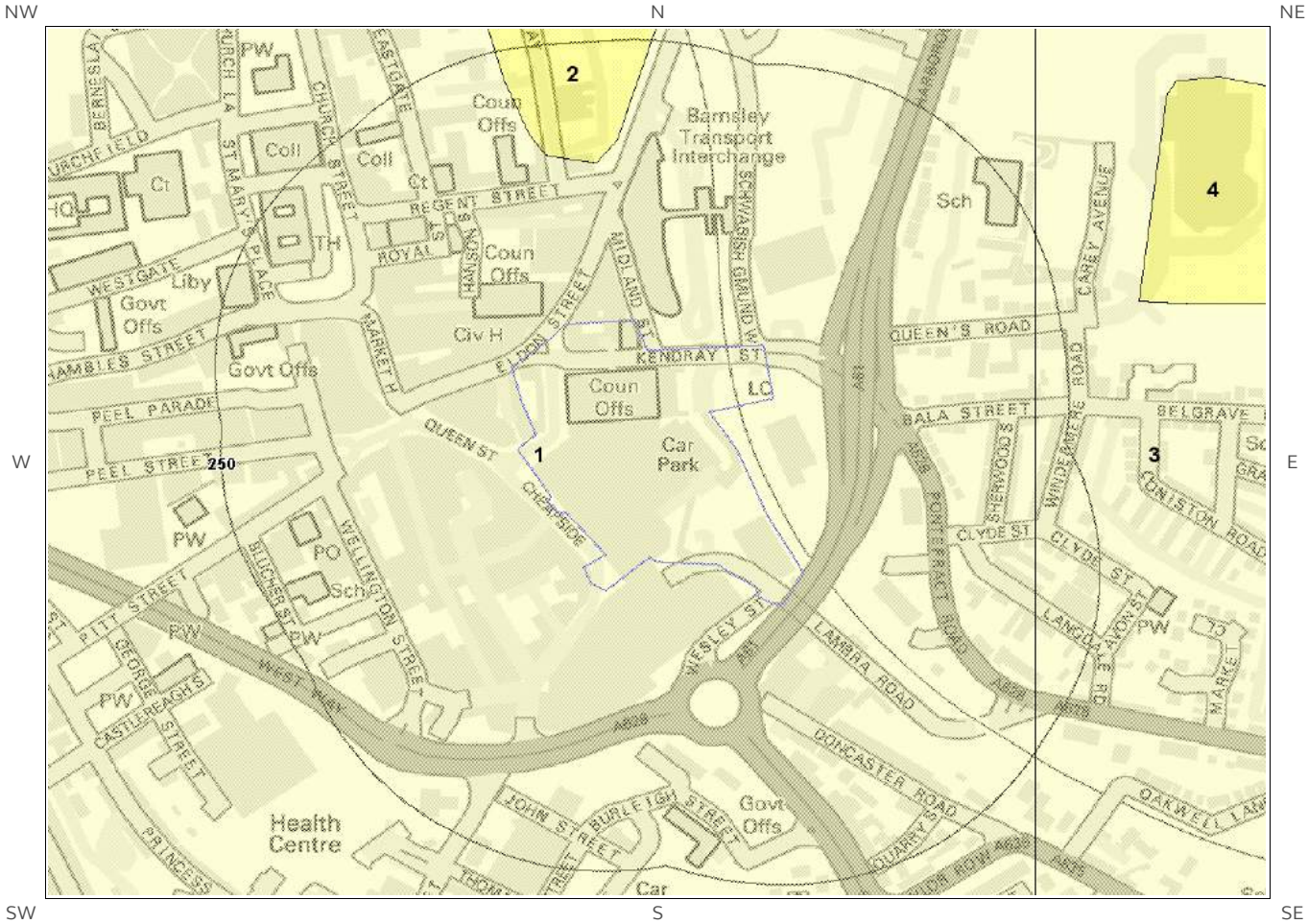
© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low
Low
Moderate
High

4.4 Compressible Deposits Map



Compressible Deposits Legend

Mapping sourced from Ordnance Survey

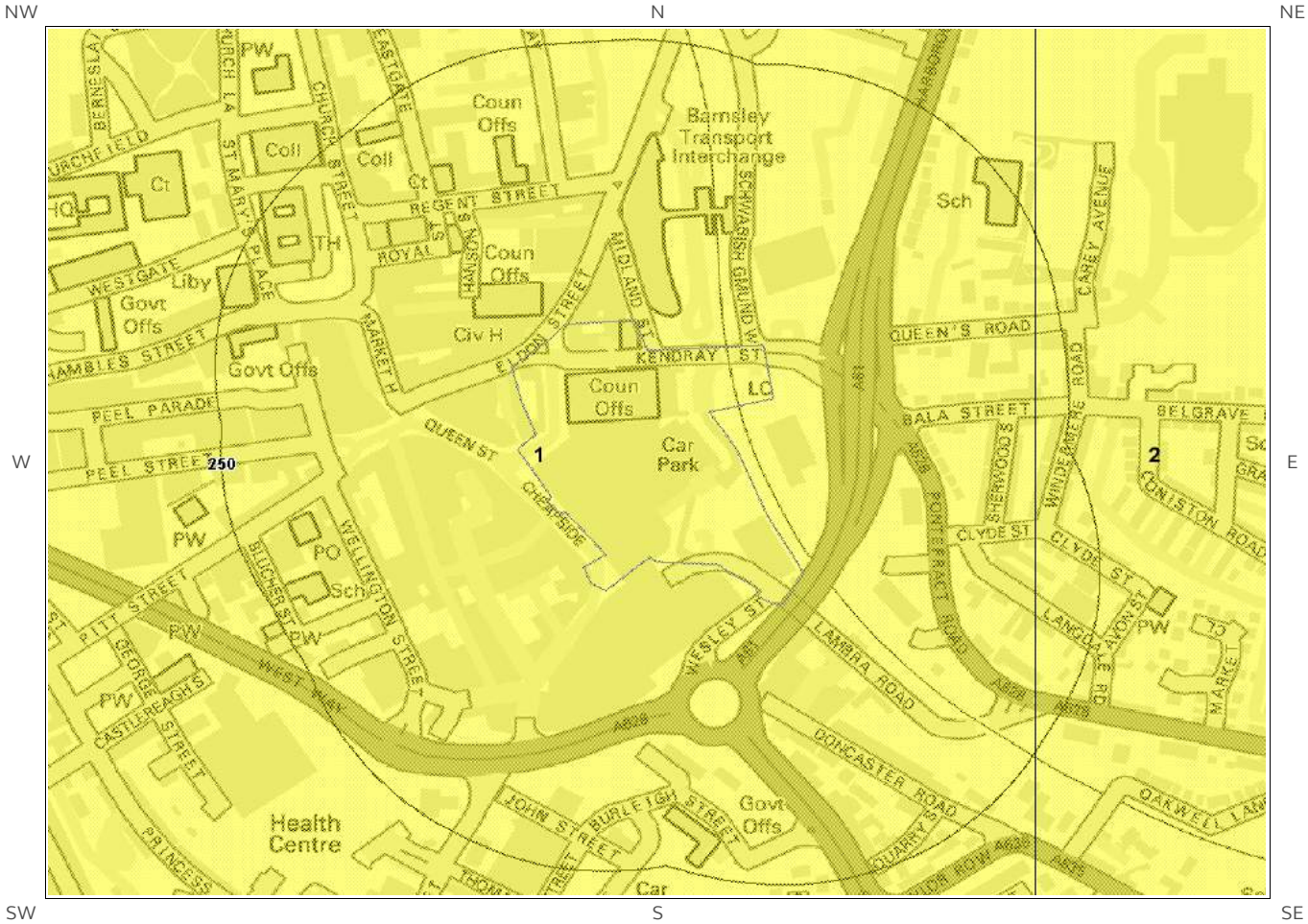
© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low
Low
Moderate
High

4.5 Collapsible Deposits Map



Collapsible Deposits Legend

Mapping sourced from Ordnance Survey

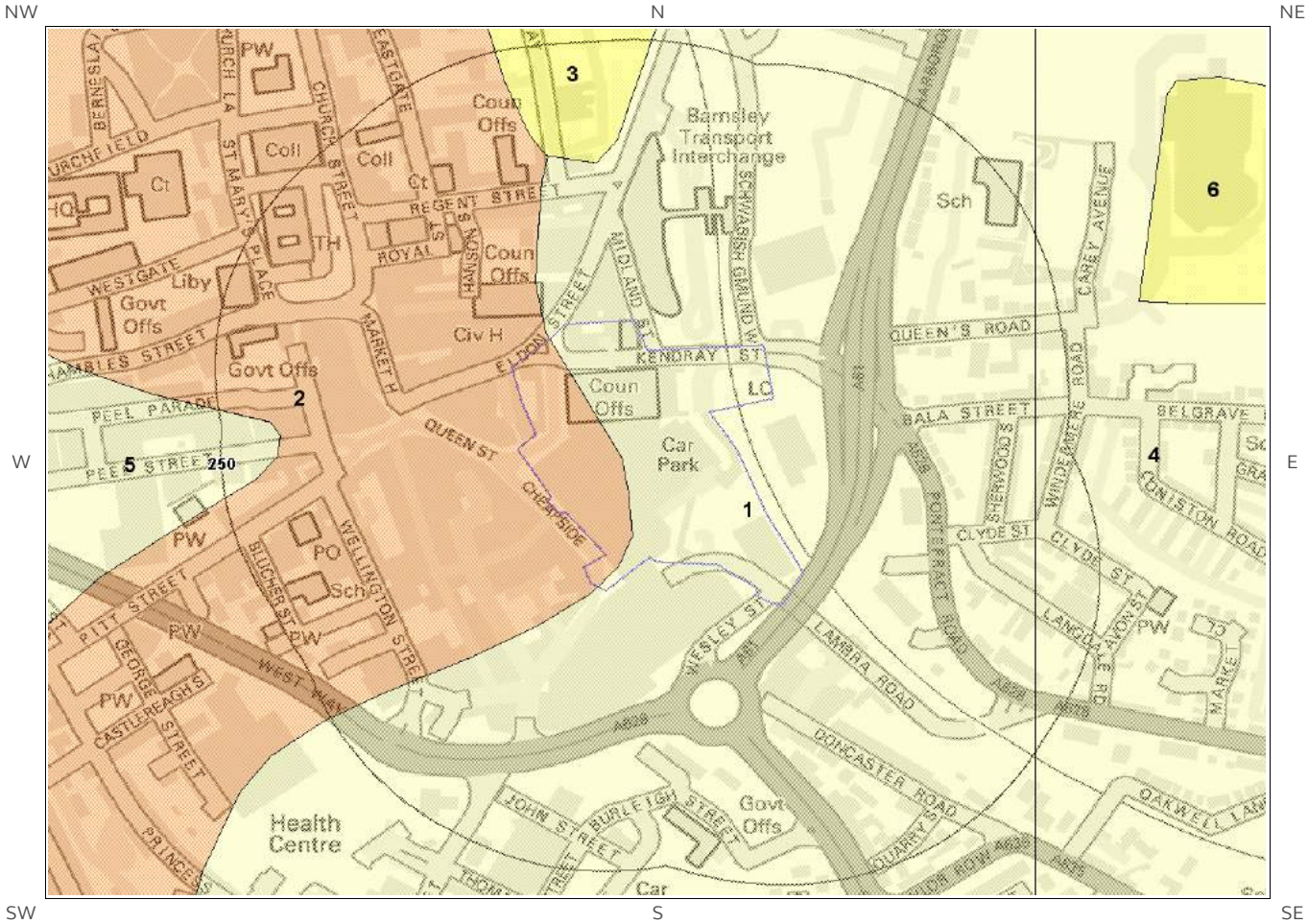
© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low
Low
Moderate
High

4.6 Running Sand Map



Running Sand Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low
Low
Moderate
High

4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site*[*] boundary? Low

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
4	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

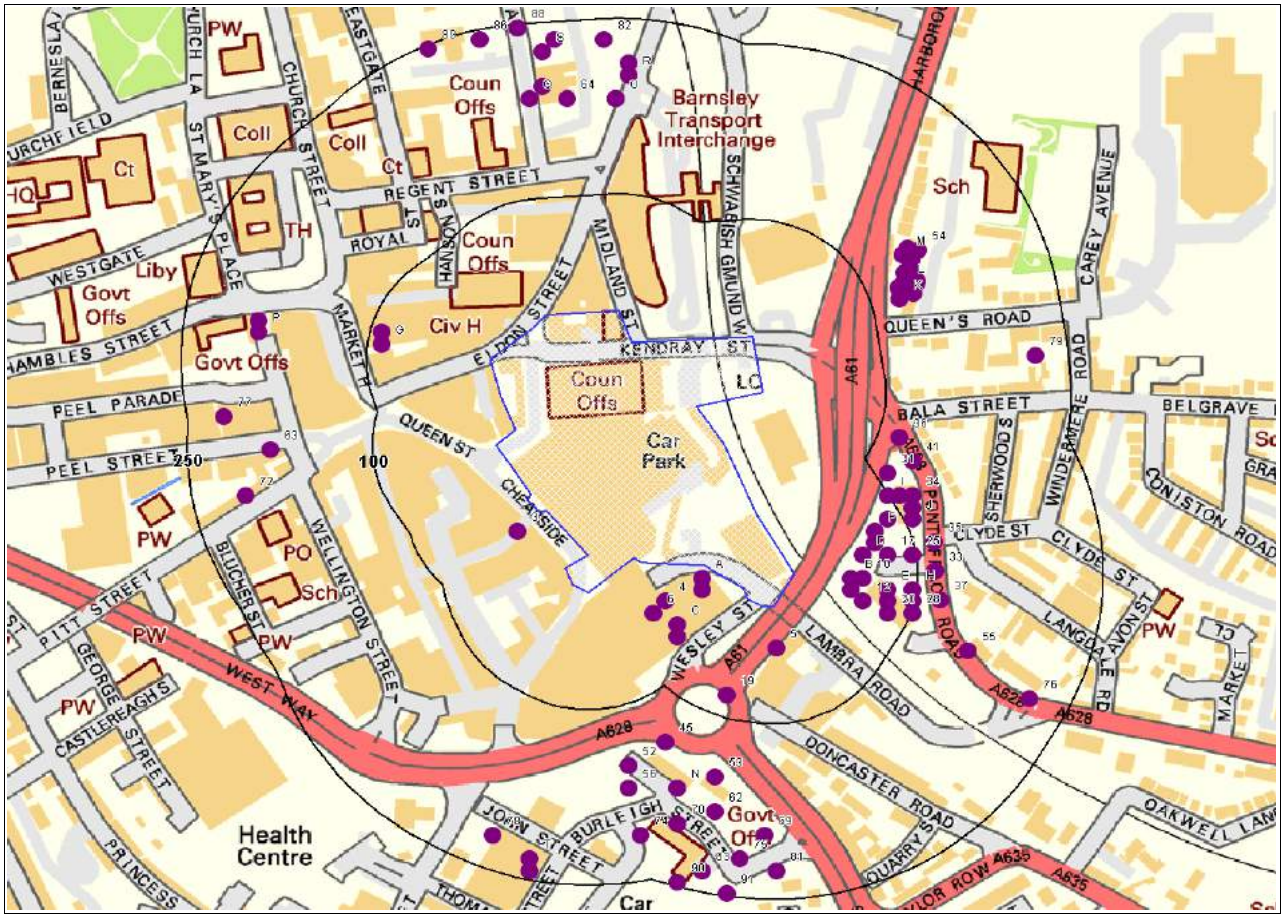
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build, consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property, no significant increase in insurance risk due to running sand problems is likely.

5 Borehole Records Map

NW N NE

W E

SW S SE



Borehole Records Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

Site Outline

Borehole Locations

125
250
Search Buffers (m)

5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:	91

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	10.0	SW	434730 406210	SE30NW242	3.0	WESLEY ST BARNSLEY 2
2A	19.0	SW	434730 406200	SE30NW246	21.0	WESLEY ST BARNSLEY C
3	25.0	SW	434580 406250	SE30NW558	10.0	BARNSLEY - BOOTS STORE 1
4	33.0	S	434700 406190	SE30NW241	5.0	WESLEY ST BARNSLEY 1
5	36.0	S	434790 406150	SE30NW249	8.0	BARNSLEY INNER RELIEF RD 8
6	43.0	S	434690 406180	SE30NW244	26.0	WESLEY ST BARNSLEY A
7B	45.0	E	434850 406210	SE30NW635	12.5	MALTHOUSE LANE/PONTEFRACT ROAD 1
8B	47.0	E	434850 406200	SE30NW653	3.2	MALTHOUSE LANE/PONTEFRACT ROAD TP 1
9C	52.0	S	434710 406170	SE30NW243	5.0	WESLEY ST BARNSLEY 3
10	55.0	E	434860 406210	SE30NW652	16.5	MALTHOUSE LANE/PONTEFRACT ROAD 18
11D	57.0	E	434860 406230	SE30NW636	26.25	MALTHOUSE LANE/PONTEFRACT ROAD 2
12	60.0	SE	434860 406190	SE30NW646	24.0	MALTHOUSE LANE/PONTEFRACT ROAD 12/12R
13C	62.0	S	434710 406160	SE30NW245	21.0	WESLEY ST BARNSLEY B
14D	70.0	E	434870 406240	SE30NW657	4.3	MALTHOUSE LANE/PONTEFRACT ROAD TP 5
15F	74.0	NE	434870 406250	SE30NW637	23.0	MALTHOUSE LANE/PONTEFRACT ROAD 3
16E	76.0	E	434880 406200	SE30NW651	15.5	MALTHOUSE LANE/PONTEFRACT ROAD 17
17	77.0	E	434880 406230	SE30NW649	13.5	MALTHOUSE LANE/PONTEFRACT ROAD 15
18E	79.0	E	434880 406190	SE30NW654	4.8	MALTHOUSE LANE/PONTEFRACT ROAD TP 2
19	82.0	S	434750 406110	SE30NW247	6.0	BARNSLEY INNER RELIEF RD 6
20	82.0	SE	434880 406180	SE30NW650	15.5	MALTHOUSE LANE/PONTEFRACT ROAD 16
21F	88.0	NE	434880 406260	SE30NW648	23.5	MALTHOUSE LANE/PONTEFRACT ROAD 14
22G	89.0	W	434470 406410	SE30NW553	2.0	YORKSHIRE BANK MARKET HILL BARNSLEY 2

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23G	91.0	W	434470 406420	SE30NW552	3.5	YORKSHIRE BANK MARKET HILL BARNSLEY 1
24H	96.0	E	434900 406200	SE30NW645	14.8	MALTHOUSE LANE/PONTEFRACT ROAD 11
25	96.0	E	434900 406230	SE30NW656	4.0	MALTHOUSE LANE/PONTEFRACT ROAD TP 4
26H	98.0	E	434900 406190	SE30NW655	3.7	MALTHOUSE LANE/PONTEFRACT ROAD TP 3
27I	98.0	NE	434880 406280	SE30NW638	22.0	MALTHOUSE LANE/PONTEFRACT ROAD 4
28	101.0	E	434900 406180	SE30NW642	25.9	MALTHOUSE LANE/PONTEFRACT ROAD 8
29J	106.0	NE	434900 406260	SE30NW644	27.7	MALTHOUSE LANE/PONTEFRACT ROAD 10
30I	107.0	NE	434890 406280	SE30NW647	23.0	MALTHOUSE LANE/PONTEFRACT ROAD 13
31	109.0	NE	434880 406300	SE30NW639	21.3	MALTHOUSE LANE/PONTEFRACT ROAD 5
32J	110.0	NE	434900 406270	SE30NW658	4.3	MALTHOUSE LANE/PONTEFRACT ROAD TP 6
33	114.0	E	434919 406216	SE30NW479	21.0	LANGDALE ROAD BARNSLEY 4
34	115.0	NE	434900 406280	SE30NW643	24.0	MALTHOUSE LANE/PONTEFRACT ROAD 9
35	116.0	E	434918 406241	SE30NW480	16.0	LANGDALE ROAD BARNSLEY 5
36	118.0	E	434890 406330	SE30NW641	29.65	MALTHOUSE LANE/PONTEFRACT ROAD 7/7R
37	120.0	E	434923 406191	SE30NW478	23.0	LANGDALE ROAD BARNSLEY 3
38K	123.0	E	434890 406448	SE30NW953	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS105
39K	125.0	E	434889 406458	SE30NW954	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS106
40L	130.0	E	434893 406462	SE30NW950	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS102
41	131.0	NE	434900 406310	SE30NW640	22.8	MALTHOUSE LANE/PONTEFRACT ROAD 6
42L	134.0	NE	434894 406471	SE30NW949	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS101
43L	135.0	E	434901 406453	SE30NW952	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS104

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
44L	139.0	E	434903 406461	SE30NW947	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY 1
45	139.0	SW	434700 406070	SE30NW248	3.0	BARNSLEY INNER RELIEF RD 7
46M	139.0	NE	434892 406486	SE30NW955	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS107
47M	140.0	NE	434898 406475	SE30NW959	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS111
48L	141.0	E	434904 406464	SE30NW951	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS103
49M	143.0	NE	434899 406481	SE30NW958	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS110
50M	144.0	NE	434897 406486	SE30NW948	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY 2
51M	146.0	NE	434896 406492	SE30NW956	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS108
52	151.0	S	434670 406050	SE30NW686	5.0	SHEFFIELD ROAD BARNSLEY 10
53	152.0	S	434740 406040	SE30NW690	4.1	SHEFFIELD ROAD BARNSLEY 14
54	153.0	NE	434905 406490	SE30NW957	-1.0	LAND AT REAR OF 32 QUEENS ROAD BARNSLEY WS109
55	155.0	SE	434945 406148	SE30NW477	11.0	LANGDALE ROAD BARNSLEY 2
56	171.0	S	434670 406030	SE30NW691	4.5	SHEFFIELD ROAD BARNSLEY 15
57N	171.0	SW	434710 406030	SE30NW688	3.9	SHEFFIELD ROAD BARNSLEY 12
58N	171.0	SW	434710 406030	SE30NW687	3.0	SHEFFIELD ROAD BARNSLEY 11
59O	181.0	N	434660 406620	SE30NW722	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY RP8
60O	181.0	N	434660 406620	SE30NW715	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY BH2
61O	181.0	N	434660 406620	SE30NW721	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY RP7
62	181.0	S	434740 406010	SE30NW689	2.5	SHEFFIELD ROAD BARNSLEY 13
63	183.0	W	434380 406320	SE30NW676	-1.0	PEEL STREET BARNSLEY 5
64	183.0	N	434620 406620	SE30NW717	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY BH4
65Q	185.0	N	434590 406620	SE30NW806	-1.0	COUNTY WAY BARNSLEY 11
66P	189.0	W	434370 406420	SE30NW259	15.0	SHAMBLES ST BARNSLEY 1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
67P	191.0	W	434370 406430	SE30NW260	8.0	SHAMBLES ST BARNSLEY 2
68Q	195.0	N	434600 406630	SE30NW805	-1.0	COUNTY WAY BARNSLEY 10
69	196.0	S	434780 405990	SE30NW680	4.3	SHEFFIELD ROAD BARNSLEY 4
70	199.0	S	434710 406000	SE30NW684	3.2	SHEFFIELD ROAD BARNSLEY 8
71R	201.0	N	434670 406640	SE30NW720	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY RP6
72	208.0	W	434360 406280	SE30NW675	-1.0	PEEL STREET BARNSLEY 4
73R	211.0	N	434670 406650	SE30NW719	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY RP5
74	212.0	S	434680 405990	SE30NW685	7.1	SHEFFIELD ROAD BARNSLEY 9
75	218.0	S	434760 405970	SE30NW681	3.8	SHEFFIELD ROAD BARNSLEY 5
76	218.0	SE	434995 406107	SE30NW476	8.0	LANGDALE ROAD BARNSLEY 1
77	221.0	W	434342 406348	SE30NW762	6.0	13 PEEL STREET, BARNSLEY 1
78	222.0	S	434560 405990	SE30NW611	17.0	NEW STREET BARNSLEY 4
79	223.0	E	435000 406400	SE30NE702	128.01	ELECTRICITY WORKS BARNSLEY
80S	225.0	N	434600 406660	SE30NW804	-1.0	COUNTY WAY BARNSLEY 9
81	226.0	S	434790 405960	SE30NW679	5.55	SHEFFIELD ROAD BARNSLEY 3
82	231.0	N	434650 406670	SE30NW718	-1.0	COURTHOUSE DEVELOPMENT BARNSLEY BH5
83	232.0	S	434730 405960	SE30NW682	2.7	SHEFFIELD ROAD BARNSLEY 6
84T	233.0	S	434590 405970	SE30NW612	4.1	NEW STREET BARNSLEY TP 1
85S	234.0	N	434610 406670	SE30NW802	-1.0	COUNTY WAY BARNSLEY 7A
86	241.0	N	434550 406670	SE30NW807	-1.0	COUNTY WAY BARNSLEY 12
87T	243.0	S	434590 405960	SE30NW608	22.0	NEW STREET BARNSLEY 1
88	246.0	N	434580 406680	SE30NW803	-1.0	COUNTY WAY BARNSLEY 8
89	246.0	NW	434508 406662	SE30NW41/A	26.1	COURT HOUSE SITE 1
90	247.0	S	434710 405950	SE30NW683	3.6	SHEFFIELD ROAD BARNSLEY 7
91	249.0	S	434750 405940	SE30NW678	4.0	SHEFFIELD ROAD BARNSLEY 2

Additional online information is available for the following boreholes listed above:

#1A: scans.bgs.ac.uk/sobi_scans/boreholes/84108

#2A: scans.bgs.ac.uk/sobi_scans/boreholes/84112
#3: scans.bgs.ac.uk/sobi_scans/boreholes/12827835
#4: scans.bgs.ac.uk/sobi_scans/boreholes/84107
#5: scans.bgs.ac.uk/sobi_scans/boreholes/84115
#6: scans.bgs.ac.uk/sobi_scans/boreholes/84110
#7B: scans.bgs.ac.uk/sobi_scans/boreholes/15938775
#8B: scans.bgs.ac.uk/sobi_scans/boreholes/15938794
#9C: scans.bgs.ac.uk/sobi_scans/boreholes/84109
#10: scans.bgs.ac.uk/sobi_scans/boreholes/15938793
#11D: scans.bgs.ac.uk/sobi_scans/boreholes/15938776
#12: scans.bgs.ac.uk/sobi_scans/boreholes/15938787
#13C: scans.bgs.ac.uk/sobi_scans/boreholes/84111
#14D: scans.bgs.ac.uk/sobi_scans/boreholes/15938799
#15F: scans.bgs.ac.uk/sobi_scans/boreholes/15938777
#16E: scans.bgs.ac.uk/sobi_scans/boreholes/15938792
#17: scans.bgs.ac.uk/sobi_scans/boreholes/15938790
#18E: scans.bgs.ac.uk/sobi_scans/boreholes/15938795
#19: scans.bgs.ac.uk/sobi_scans/boreholes/84113
#20: scans.bgs.ac.uk/sobi_scans/boreholes/15938791
#21F: scans.bgs.ac.uk/sobi_scans/boreholes/15938789
#22G: scans.bgs.ac.uk/sobi_scans/boreholes/84419
#23G: scans.bgs.ac.uk/sobi_scans/boreholes/84418
#24H: scans.bgs.ac.uk/sobi_scans/boreholes/15938786
#25: scans.bgs.ac.uk/sobi_scans/boreholes/15938798
#26H: scans.bgs.ac.uk/sobi_scans/boreholes/15938796
#27I: scans.bgs.ac.uk/sobi_scans/boreholes/15938778
#28: scans.bgs.ac.uk/sobi_scans/boreholes/15938783
#29J: scans.bgs.ac.uk/sobi_scans/boreholes/15938785
#30I: scans.bgs.ac.uk/sobi_scans/boreholes/15938788
#31: scans.bgs.ac.uk/sobi_scans/boreholes/15938779
#32J: scans.bgs.ac.uk/sobi_scans/boreholes/15938800
#33: scans.bgs.ac.uk/sobi_scans/boreholes/84345
#34: scans.bgs.ac.uk/sobi_scans/boreholes/15938784
#35: scans.bgs.ac.uk/sobi_scans/boreholes/84346
#36: scans.bgs.ac.uk/sobi_scans/boreholes/15938781
#37: scans.bgs.ac.uk/sobi_scans/boreholes/84344
#41: scans.bgs.ac.uk/sobi_scans/boreholes/15938780
#45: scans.bgs.ac.uk/sobi_scans/boreholes/84114
#52: scans.bgs.ac.uk/sobi_scans/boreholes/16104926
#53: scans.bgs.ac.uk/sobi_scans/boreholes/16104933
#55: scans.bgs.ac.uk/sobi_scans/boreholes/84343
#56: scans.bgs.ac.uk/sobi_scans/boreholes/16104934
#57N: scans.bgs.ac.uk/sobi_scans/boreholes/16104929
#58N: scans.bgs.ac.uk/sobi_scans/boreholes/16104927
#62: scans.bgs.ac.uk/sobi_scans/boreholes/16104931
#66P: scans.bgs.ac.uk/sobi_scans/boreholes/84125
#67P: scans.bgs.ac.uk/sobi_scans/boreholes/84126
#69: scans.bgs.ac.uk/sobi_scans/boreholes/16104918
#70: scans.bgs.ac.uk/sobi_scans/boreholes/16104924
#74: scans.bgs.ac.uk/sobi_scans/boreholes/16104925
#75: scans.bgs.ac.uk/sobi_scans/boreholes/16104919
#76: scans.bgs.ac.uk/sobi_scans/boreholes/84342
#77: scans.bgs.ac.uk/sobi_scans/boreholes/17974685
#78: scans.bgs.ac.uk/sobi_scans/boreholes/15394945
#79: scans.bgs.ac.uk/sobi_scans/boreholes/18527990

#81: scans.bgs.ac.uk/sobi_scans/boreholes/16104914
#83: scans.bgs.ac.uk/sobi_scans/boreholes/16104922
#84T: scans.bgs.ac.uk/sobi_scans/boreholes/15394949
#87T: scans.bgs.ac.uk/sobi_scans/boreholes/15394939
#89: scans.bgs.ac.uk/sobi_scans/boreholes/83902
#90: scans.bgs.ac.uk/sobi_scans/boreholes/16104923
#91: scans.bgs.ac.uk/sobi_scans/boreholes/16104911

6 Estimated Background Soil Chemistry

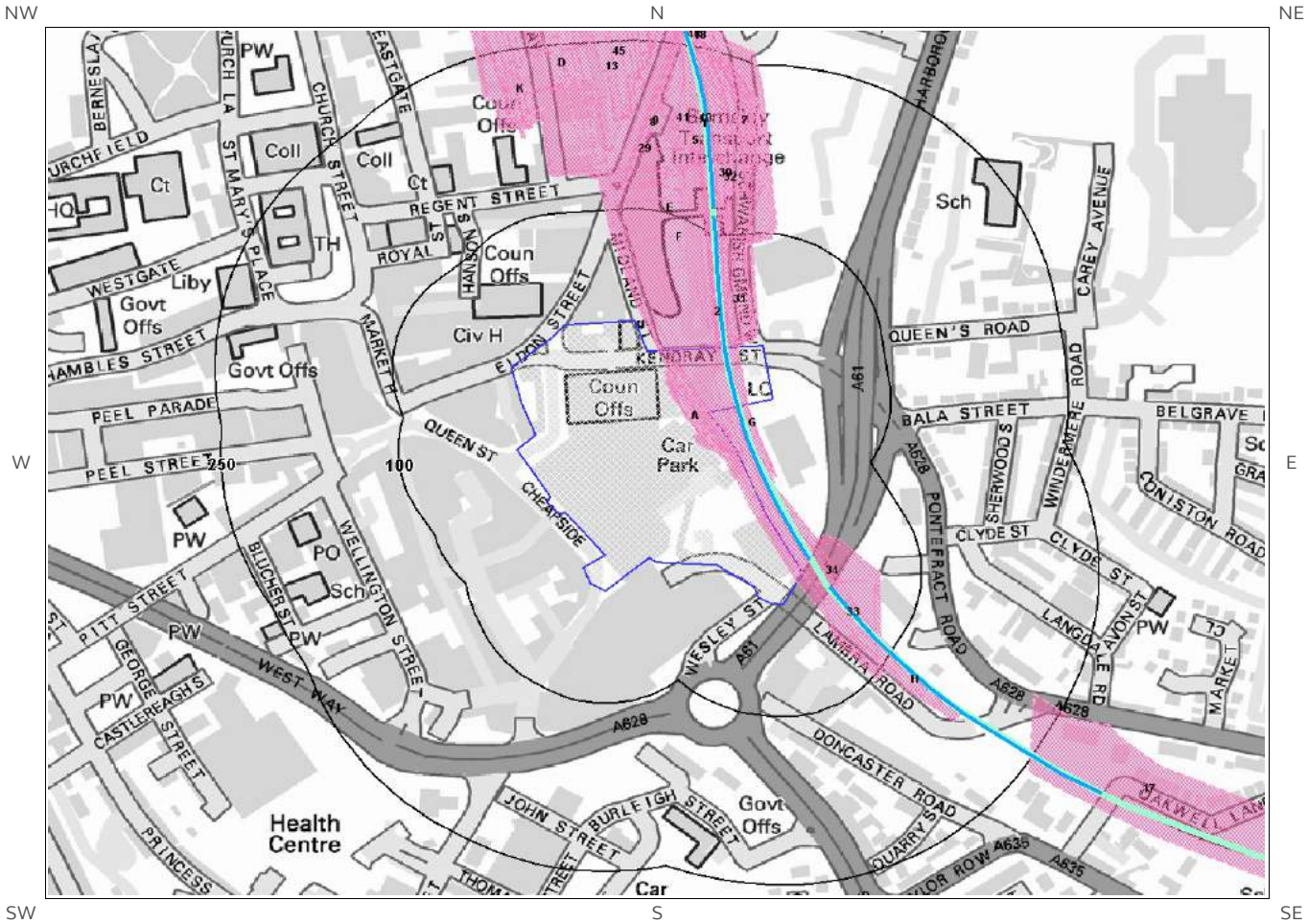
Records of background estimated soil chemistry within 250m of the study site boundary: 17

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geoinsight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	<100 mg/kg
36.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
58.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
61.0	N	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
64.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
88.0	NW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
98.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
117.0	NW	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
182.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
186.0	S	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
195.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
198.0	S	RuralSoil	25 - 35 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
213.0	SE	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
219.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
223.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
240.0	SW	RuralSoil	25 - 35 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	30 - 45 mg/kg	100 - 200 mg/kg
244.0	E	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7 Railways and Tunnels Map



Railways and Tunnels Legend

Mapping sourced from Ordnance Survey

© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.
© OpenStreetMapContributors

- Site Outline
- 250 / 500 — Search Buffers (m)
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- Crossrail
- Railway and/or Tunnel Feature from Historical Mapping

7 Railways and Tunnels

7.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

7.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? Yes

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1A	0	On Site	434717 406352	Railway Sidings	1948
2	0	On Site	434732 406444	Railway Sidings	1850
3A	0	On Site	434711 406360	Railway Sidings	1951
4B	0	On Site	434685 406577	Railway Sidings	1890
19	0	On Site	434812 406239	Railway Sidings	1961
20G	0	On Site	434764 406343	Railway Sidings	1961

ID	Distance (m)	Direction	NGR	Details	Date
21E	0	On Site	434560 406640	Railway Sidings	1893
22E	0	On Site	434675 406640	Railway Sidings	1906
23F	0	On Site	n/a	Railway	1929
24F	0	On Site	n/a	Railway	1906
25J	0	On Site	n/a	Railway	1893
26	0	On Site	434796 406240	Railway Sidings	1960
27A	0	On Site	434719 406347	Railway Sidings	1929
28G	0	On Site	434765 406341	Railway Sidings	1960
29	0	On Site	n/a	Railway	1932
30	0	N	434738 406632	Railway Sidings	1929
5	2	N	434733 406639	Railway Sidings	1904
6B	3	N	434705 406642	Railway Sidings	1948
7	4	N	434559 406744	Railway Sidings	1938
31	4	N	434753 406460	Railway Sidings	1961
8	5	N	434580 406736	Railway Sidings	1951
32	6	N	434744 406567	Railway Sidings	1960
9	9	N	434581 406739	Railway Sidings	1966
33	9	SE	n/a	Railway	1835
34	18	NE	434829 406215	Railway Sidings	1960
35	60	N	434584 406723	Railway Sidings	1961
36I	84	N	434635 406750	Railway Sidings	1961
37H	84	SE	434903 406118	Railway Sidings	1892
38H	84	SE	434903 406118	Railway Sidings	1906
39I	85	N	434686 406750	Railway Sidings	1987
40	85	N	434687 406750	Railway Sidings	1972
10C	96	N	434698 406683	Railway Sidings	1973
11C	96	N	434698 406683	Railway Sidings	1982
41	123	N	434699 406625	Railway Sidings	1960
42J	124	N	434682 406567	Railway Sidings	1961
12	135	N	434754 406623	Railway Sidings	1850
13	142	N	434629 406725	Railway Sidings	1850

ID	Distance (m)	Direction	NGR	Details	Date
14D	150	N	434527 406817	Railway Sidings	1948
15D	150	N	434527 406817	Railway Sidings	1904
16D	150	N	434527 406817	Railway Sidings	1890
43	180	N	434613 406755	Railway Sidings	1960
44	181	N	434534 406807	Railway Sidings	1960
45	181	N	434591 406821	Railway Sidings	1929
46K	183	N	434565 406643	Railway Sidings	1961
47K	183	N	434560 406642	Railway Sidings	1906
17	223	SE	435145 406012	Railway Sidings	1966
18	244	N	434681 406778	Railway Sidings	1993
48	247	N	434693 406747	Railway Sidings	1986

Any records that have been identified are represented on the Railways and Tunnels Map.

7.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? Yes

Have any active railway lines been identified within 250m of the study site boundary? Yes

Distance (m)	Direction	Name	Type
0	On Site	Not given	Rail
0	On Site	Not given	Multi Track
25	SE	Not given	Rail
25	SE	Not given	Multi Track

Distance (m)	Direction	Name	Type
120	NE	Not given	Multi Track
182	SE	Not given	Rail
211	SE	Not given	Rail

Note: multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail.

Is the study site within 5km of the route of the High Speed 2 rail project? Yes

Is the study site within 500m of the route of the Crossrail rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail Report.

Contact Details

Groundsure Helpline

Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: **enquiries@phe.gov.uk**
Main switchboard: 020 7654 8000

Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email:**enquiries.gs@jpb.co.uk**
Website: **www.jpb.co.uk**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates

Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

Contact Details

Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:
"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.
"Client" means the party or parties entering into a Contract with Groundsure.
"Commercial" means any building or property which is not Residential.
"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than
(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and
(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).
"Support Services" means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.
"Contract" means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.
"Third Party Data Provider" means any third party providing Third Party Content to Groundsure.
"Data Reports" means reports comprising factual data with no accompanying interpretation.
"Fees" has the meaning set out in clause 5.1.
"Groundsure" means Groundsure Limited, a company registered in England and Wales under number 03421028.
"Groundsure Materials" means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.
"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.
"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.
"Order" means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.
"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.
"Order Website" means the online platform through which Orders may be placed by the Client and accepted by Groundsure.
"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.
"Residential" means any building or property used as or intended to be used as a single dwelling.
"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.
"Services" means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.
"Site" means the area of land in respect of which the Client has requested Groundsure to provide the Services.
"Third Party Content" means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.
"User Guide" means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.
2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.
2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.
2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.
2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.
2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1The Client shall comply with the terms of this Contract and
(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and
(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.
3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.
3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.
3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.
3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.
3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.
4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;
(i) the Beneficiary,
(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
(iv) the first purchaser or first tenant of the Site, and
(v) the professional advisers and lenders of the first purchaser or tenant of the Site.
4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.
4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1Groundsure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").
5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.
5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to
(i) full payment of all relevant Fees and
(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.
6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure

acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.
6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.
6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.
6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.
7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.
7.4 Groundsure shall not be liable for

(i) loss of profits;
(ii) loss of business;
(iii) depletion of goodwill and/or similar losses;
(iv) loss of anticipated savings;
(v) loss of goods;
(vi) loss of contract;
(vii) loss of use;
(viii) loss or corruption of data or information;
(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.
7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.
8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.
9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event
(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.
12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.
12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.
12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.
12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.
12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.
12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;
(ii) fire, storm, flood, tempest or epidemic;
(iii) Acts of God or the public enemy;
(iv) riot, civil commotion or war;
(v) strikes, labour disputes or industrial action;
(vi) acts or regulations of any governmental or other agency;
(vii) suspension or delay of services at public registries by Third Party Data Providers;
(viii) changes in law; or
(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent
required by law

© Groundsure Limited June 2013

Appendix D

Coal Mining 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

GROUNDSURE LIMITED **SOVEREIGN HOUSE** **CHURCH STREET** **BRIGHTON** **BN1 3UJ**	Our reference: Your reference: Date of your enquiry: Date we received your enquiry: Date of issue:	**51000849914001** **GS-2017330 PO:** **20 April 2015** **20 April 2015** **20 April 2015**

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

Non-Residential Coal Authority Mining Report

BETTER, BARNSLEY, SOUTH YORKSHIRE, S70 1DD

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 2 seams of coal at 130m to 370m depth, and last worked in 1939.

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.

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.

All rights reserved. You must not reproduce, store or transmit any part of this document unless you have our written permission. --
© The Coal Authority --

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 a notice of entitlement to withdraw support was published in 1963.

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.

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

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. 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 applicable at the time the report was produced.

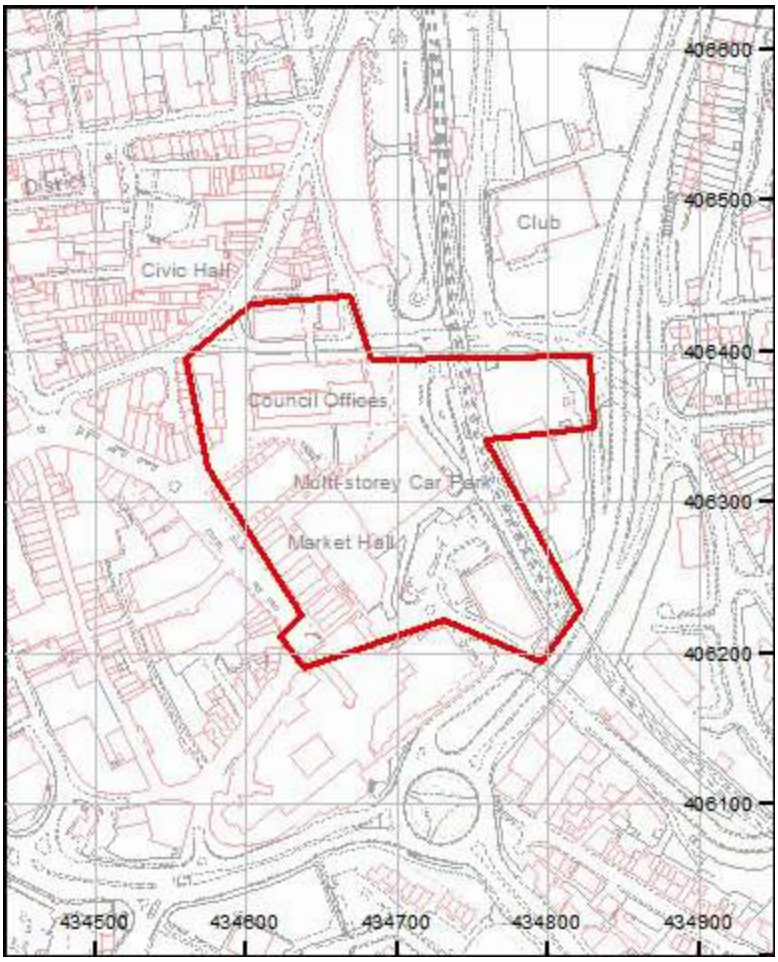
The Coal Authority owns the copyright in this report. The information we have used to write this report is protected by our database right. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you.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

Location map

Approximate position of property

Enquiry boundary

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2015. All rights reserved. Ordnance Survey Licence number: 100020315



Key

Approximate position of enquiry boundary shown

Mapping sourced from Ordnance Survey

Head Office

Robson Liddle Ltd
Venture House
One Capital Court
Sowton Industrial Estate
Exeter
Devon
EX2 7FW
Telephone: (01392) 351200
Facsimile: (01392) 351218
Email: mail@robsonliddle.com

Regional offices

Castleford
Leeds
London
Norwich