CAPITA

Belle Vue

Phase 1 Geo-Environmental Desk Study and Mining Risk Assessment

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1. Introduction

1.1 Background

1.1.1 Capita Property & Infrastructure Ltd ("Capita") was commissioned by Barnsley College to undertake a Phase I Geo-Environmental Desk Study and Mining Risk Assessment for the conversion of Belle Vue House and provision of new housing within Barnsley College Grounds, off Cockerham Lane, Barnsley.

1.1.2 A site location and existing site layout plan is presented on Figure 1 in Appendix A.

1.2 Proposed Development

1.2.1 With reference to the drawing in Appendix A, the site is proposed to be developed predominantly for private housing comprising 32no units with associated private gardens, driveways and hardstanding for car parking and access

1.2.2 Belle Vue House is being considered for conversion to residential apartments and the proposed plans also include the development of a mini pitch.

1.3 Objective and Scope of Work

1.3.1 The objective of this assessment was to collate and review the available geo-environmental information to determine potential constraints on the development proposals such as ground contamination risks and geotechnical hazards (including mining).

1.3.2 To achieve the objective the following scope of work was defined and undertaken:

- Review of published and readily available information concerning the site:
  - Recent Ordnance Survey (OS) Map;
  - British Geological Survey (BGS) Published Maps;
  - A site-specific Landmark GroundSure Report (Appendix B);
  - OS Historical Map Archive (included in the GroundSure Report – Appendix B);
  - BGS GeoIndex Service (borehole logs reproduced in Appendix C); and
  - Non-residential Coal Authority search.
- Develop a preliminary Conceptual Site Model (CSM) that relates the anticipated ground conditions at the site to the proposed development.
- Establish areas of potential concern based on identified risks and/or potential risks.
- Identify any actions (e.g. intrusive site investigation) required to reduce risks and/or minimise any uncertainties.

2. Site Characteristics

2.1 Site Location

2.1.1 The subject site occupies an area of land approximately 0.7km north of Barnsley town centre, South Yorkshire. The site lies just north of the Penistone railway line.

2.1.2 The site is bounded by houses off Cockerham Ave to the north, Barnsely College to the east, railway lines to the south and Cockerham Lane to the west.

2.1.3 The approximate centre of the subject site is located at Ordnance Survey National Grid Reference 434190E, 407131N. An indicative postcode for the site is S75 1AT.

2.1.4 A site location and existing site layout plan is presented on Figure 1 in Appendix A.

2.2 Site Description

2.2.1 With reference to Figure 1, the subject site is roughly rectangular shape in plan; covering an area of approximately 1.68ha. The topography generally slopes down to the east. However the site itself has been developed into a series of level tiers.

2.2.2 The proposed site is located within the area of the Belle Vue college campus. The site comprises the main Belle Vue House with 3 car parking areas on levels tiered down to the east. A single storey building is located in the north-eastern corner of the site and is currently used for college projects including bicycle maintenance. A landscaped area runs the length of the southern perimeter of the site and an electricity substation is situated near the north-western entrance to the site.

2.2.3 The site is bounded by brick walls to the north and east. Fencing and vegetation forms the perimeter of the site to the west and to the south of the car parks.

2.2.4 Vehicular and pedestrian access onto the site can be gained from the surrounding streets and walkways.

2.2.5 Photographs taken during the walkover survey are presented in Appendix B.

2.3 Surrounding Land-use

2.3.1 To the **NORTH**, the subject site is bounded by houses off Cockerham Avenue beyond which lie further residential properties.

2.3.2 To the **EAST**, the subject site is bounded by Barnsley College Honeywell Site beyond which lies railway lines and residential housing.

2.3.3 To the **SOUTH**, the subject site is bounded by railway lines beyond which is located an area of wooded land and residential housing.

2.3.4 To the **WEST,** the subject site is bounded by Cockerham Lane beyond which lie residential properties.

3. Environmental Setting

3.1 Geology

3.1.1 The regional geological information pertaining to the site was gained from a review of the BGS Digital Geological Map of Great Britain (DiGMapGB-50; available as a Web Map Service). Additional reference has been made to a site-specific GroundSure Report (reproduced within Appendix C).

3.1.2 Given the site history, deposits of Made Ground are considered likely to exist across the site area. Such deposits could locally attain substantial thickness, for example in areas previously developed. Made Ground is likely to be heterogeneous and may be relatively incompetent.

3.1.3 Superficial deposits are not indicated to be present on the BGS maps. The Kent's Rock Sandstone of the Pennine Middle Coal Measures (PMCM) is shown to be present beneath the site. This is underlain by undifferentiated solid strata of the PMCM; *"Interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit."*

3.1.4 The nearest major fault is an inferred fault running in a northeast-southwest orientation approximately 245m northwest of the site.

3.1.5 Additional ground condition information pertaining to the subject site and surrounding area has been obtained from a search of the BGS GeoIndex service. The following exploratory logs have been identified:

- SE30NW/879-885. Located onsite, the records are for 7no trial pits which extend to a maximum depth of 1.4m.Topsoil is recorded to 0.3mbgl overlying loose to medium dense slightly clayey stony sand to around 0.7mbgl. Very weathered shattered sandstone is recorded beneath this.
- SE30NW/98-118. Located roughly 250m southeast, the record is for 21 rotary boreholes formed in 1978 which extend to a maximum depth of 12.2m. Soft material described as fill is recorded to a maximum depth of 9.4mbgl over solid strata comprising brown sandy clay and yellow sandstone encountered at depths of between 0.3 and 9.4mbgl (base not proven).

3.1.6 Given the distance from the subject site of the offsite records, the information provided in these boreholes only provides an indication of the likely geology. Example borehole logs are reproduced in Appendix D.

3.1.7 The site is in a radon area with 1-3% of homes above the action level. Radon protective measures are therefore considered necessary for new residential structures at this time.

3.2 Coal Mining, Mineral Extraction and Subsidence

3.2.1 The GroundSure report has identified the subject site as being within an area which may be affected by coal mining activity. The Coal Authority (CA) Report (Appendix E) for the site states that the subject area is in the likely zone of influence from workings in 3 seams of coal at 90m to 450m depth, and last worked in 1986. However any ground movement from these coal workings should have ceased by now. The site is also in an area where the CA believes there is coal at or close to the surface. This coal may have been worked at some time in the past.

3.2.2 The site is not in an area likely to be affected at the surface by present or future underground coal workings; however reserves of coal exist in the local area which could be worked at some time in the future.

3.2.3 The CA Report also states that there are no known mine entries within 20m of the site and there are no records of mine gas emissions within the site boundary.

3.2.4 The site is considered to be stable with respect to any subsidence arising due to the recorded deep mining and therefore the primary concern for the site relates to the possibility of unrecorded historic shallow coal workings at or close to the surface.

3.2.5 Notwithstanding, according to the Coal Authority interactive map viewer, the site is not within an area of recorded past or current surface and shallow coal mine workings or probable shallow coal mine workings.

3.2.6 The site is indicated to be underlain by Kent's Rock Sandstone of the PMCM. On the BGS 1:50,000 series solid with drift geology map this unit is indicated to be underlain by undifferentiated strata of the PMCM and separated by a coal seam known as the Kent's Thin Coal.

3.2.7 A BGS report on the Coal Measures formations of the Barnsley District (Lake, 2006) states *"The Kent's Thin Coal is a persistent, thin seam that was only worked near outcrop on a local scale. The overlying Kent's Rock is over 10 m thick in north-west Barnsley, where it is best developed at crop."*

3.2.8 A Mineral Report was obtained for the Barnsley College site off Old Mill Lane from the South Yorkshire Mining Advisory Service (Appendix F). The report states that the Kent's Thin Coal Seam was encountered at 16.5 and 18.5mbgl in two locations (approximately 450m southeast) and was proven to be around 600mm thick. A further borehole investigation by the County Mining Engineers on a site approximately 250m southeast encountered competent Kent's Rock Sandstone to depths of circa 10m with no evidence of shallow mine workings.

3.2.9 On the basis of this review, the Kent's Thin Coal Seam is indicated to lie at a depth of around 10-15mbgl and there are no records of associated mine workings in the vicinity. With a seam thickness of around 600mm and at the depths suggested, any unrecorded workings would most likely be too deep to affect the surface stability; especially when taking into consideration the presence of The Kent's Rock Sandstone at/close to the site surface. We therefore consider the risk of ground movements resulting from activities relating to coal mining/extraction to be low.

3.2.10 However it would be prudent during any pre-development surveys to carry out a limited borehole investigation to confirm the above conclusion and low risk status; especially when considering that the nearest exploratory hole data to intersect the shallowest coal seam or prove substantial competent overburden above the seam was several hundred metres away from the subject site. It should be noted that any intrusive activities which may intersect or disturb coal seams will require the prior written permission of the Coal Authority.

3.2.11 Information in the GroundSure Report indicates that there is:

- "Null - Negligible" risk from:
  - Soluble Rocks stability hazards.
- "Negligible" risk from:
  - Compressible Ground stability hazards.
- "Very Low" risk from:
  - Landslide Ground Stability Hazards;
  - Shrinking or swelling clay ground stability hazards; and
  - Collapsible Ground Stability Hazards.
- "Low" risk from:
  - Running Sand Ground Stability Hazards.

3.3 Hydrogeology

3.3.1 According to a review of available (geological and environmental) information, the underlying Bedrock Deposits are classified as a Secondary A Aquifer. These comprise 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.

3.3.2 The site is not located within a currently defined Groundwater Source Protection Zone (SPZ) and there are no licensed groundwater abstractions within a 1km search buffer of the subject site.

3.4 Hydrology

3.4.1 The nearest surface watercourse to the subject site is the River Dearne located approximately 725m east of the site. The General Quality Assessment designation for the River Dearne was reported to be River Quality D - "Poor" in 2009.

3.4.2 According to the GroundSure Report there are no licensed surface water abstraction records within a 1km search buffer of the site.

3.5 Potential Flood Risks

3.5.1 The River Dearne is classified by the EA as a Main River. According to information presented in the GroundSure Report, the site does not lie within 250m of Zone 2 or 3 floodplain, which represent the greater than 1 in 1000 year and greater than 1 in 100 year events respectively.

3.5.2 The site itself is situated within Flood Zone 1, corresponding to less than 1 in 1000 annual probability of river flooding.

3.6 Pollution Incidents

3.7 According to the GroundSure Report there are no recorded pollution incidents within a 250m radius of the site.

3.8 Landfill and Waste Management Activity

3.8.1 According to the GroundSure Report, the subject site is located 95m west of an EA Historic Landfill site which accepted inert and commercial waste and was operated between 14 November 1984 and 30 March 1994.

3.8.2 There is one record of “Non-operational Waste Treatment, Transfer or Disposal Sites” within 500m of the subject site. This relates to a scrap metal yard located 425m east of the site.

3.9 Industrial Land Use Information

3.9.1 Current Land Use data presented in the GroundSure Report indicates that there are 3no “potentially contaminative industrial sites” located within a 250m search buffer of the site.

3.9.2 These comprise electricity substations, one of which is located onsite, and a vehicle servicing centre.

3.10 Ecology

3.10.1 With respect to the specific definition of Contaminated Land, the site does not lie within 1km of one of the following *sensitive* sites: Site of Special Scientific Interest (SSSI), National Nature Reserve, Marine Nature Reserve, Ramsar Site, Special Area of Conservation, Special Protection Area or World Heritage Site. However the site does lie within a nitrite vulnerable zone.

3.10.2 A Local Nature Reserve (LNR), labelled Dearne Valley Park is located approximately 1km east of the site; the proximity to the subject site should not be an issue.

4. Site History

4.1 Historical Map Review

4.1.1 The following summary of the site's history is based on a review of historical 1:10000, 1:10560, 1:2500, 1:1250 and 1:500 scale Ordnance Survey maps as presented in the GroundSure Report (presented in Appendix C).

Table 4.1. Summary of the Historical Development of the Site.

Map Dates	Description	Comments
1850-present	Belle Vue House	An area of the subject site is shown to be occupied by Belle Vue house and associated out buildings and gardens. A tank is also shown in the south western corner until at least 1959. The rest of the site area is shown as unoccupied until c1960.
c1960-c1993	Bowling Green	A bowling green and club house is located on the centre of the site. Tennis courts are also shown from c1974.
c1960-present	Sub Station	An electricity substation is present to the north of Belle Vue House.
c1974-present	Allotments	Allotments are shown in the south of the site.
c2002-present	Car Park	The former bowling green, tennis courts and the area surrounding the substation now provide car parking facilities.

Table 4.2. Summary of the Historical Development of the Surrounding Area.

Map Dates	Approximate Location	Description/comments
1850	Surrounding 250m	Land surrounding the site in the mid 19th century is a mixture of undeveloped agricultural land and industrial land.
1850	Surrounding 500m	Numerous collieries. Barnsley Colliery ~200m south and Honeywell Colliery ~300m east.
c1850-present	Immediately South	Penistone Railway Line (set in a deep cutting).
Early 20th Century	Surrounding 250m	Surrounding land has become more residential.
c1938-present	20m East	School (later called Barnsley College)

NOTE: All locations are approximate; measured from the nearest site boundary.

4.2 Summary

4.2.1 With reference to the earliest available historical maps, the subject site has long been occupied by Belle Vue house and its associated outbuildings and facilities. The surrounding land had an early history of agricultural, industrial and mining activities becoming predominantly residential during the 20th century.

4.2.2 The following potentially contaminative land uses have been identified on the site itself and the surrounding land and comprise;

- General Made Ground/in-filled ground (i.e. potentially poor quality/contaminated materials)
- Car Parking (i.e. localised/small scale fuel/oil leaks or spills)
- Electricity Sub Stations (dielectric and coolant fluids)
- Historic tanks (i.e. fuel/oil leakage)
- Railway lines (i.e. fuel/oil spillage)

4.2.3 On the basis of the historical information reviewed, the contamination potential for the subject site is generally considered to be Low (locally moderate).

5. Conceptual Site Model

5.1 Introduction

5.1.1 This section summarises the findings of the desk study in the form of a geo-environmental conceptual site model (CSM).

5.1.2 The CSM provides a qualitative evaluation of potentially active "*contaminant linkages*" at the site; these being plausible scenarios whereby a contamination source is connected to a possible receptor by one or more pathways:

i) Potential sources of contamination: these include any actual or potentially contaminating materials and activities, located either on or in the vicinity of the site;
ii) Potential pathways for contamination migration: these comprise the routes or mechanisms by which contaminants may migrate from the source to the receptor including environmental migration pathways and human health exposure pathways; and
iii) Potential receptors of contamination: these include present and/or future land users, ecological systems, water resources and property.

5.2 Contamination Sources

5.2.1 Given the history of the site Made Ground is thought to be present across the subject site. The thickness of the Made Ground could potentially be highly variable. Made Ground is also likely to have been imported to generate appropriate site levels and facilitate the various stages of historic development. The imported Made Ground is of unknown provenance and may be heterogeneous in terms of composition and strength/competence.

5.2.2 As areas of the site are currently used for car parking, it is feasible that motor vehicle fuel/engine oils could have leaked onto parking/service areas; such leakage is likely to have been minor, but the potential for such hydrocarbon contamination cannot be discounted, at this stage.

5.2.3 An electricity substation is located onsite and therefore dielectric transformer fluids containing PCBs may have leaked or could have been spilled. Historic maps also indicate the presence of a tank in the south-western corner of the site, it is possible that fuel or oil may have leaked or could have been spilled at some time in the past.

5.2.4 The development may be at risk from potential ground gas generation from the Made Ground deposits at the site and to a lesser extent the materials deposited in landfill 95m east of the site. Notwithstanding, the gas generation potential typically associated with Made Ground is considered to be Low (in line with Ciria C665). The site is in a radon area with 1-3% of homes above the action level; therefore radon gas is considered a potential contamination source. Furthermore the absence of mine gas beneath the site cannot be fully discounted at this stage.

5.2.5 The most significant off-site source of potential contamination with the potential to affect the subject site is the railway line, located immediately south of the site; however the line is set in a deep railway cutting and as such is unlikely to have significantly affected the subject site.

5.2.6 On the basis of the above, it is feasible that contamination could potentially exist within the site footprint and could include substances such as:

- Heavy metals and metalloids
- Inorganic compounds (sulphates, cyanide)
- Asbestos
- Poly-Aromatic Hydrocarbons
- Petroleum hydrocarbons
- Volatile and Semi-volatile Organic Compounds
- Polychlorinated Biphenyls
- Ground Gases (methane, carbon dioxide, radon etc.)

5.3 Pathways

5.3.1 Potential migration pathways are discussed below.

Airborne Migration Pathways

- Under the proposed development scenario the area to be covered in some form of hard-standing will be increased; however gardens and landscaped areas will be included and as such (without consideration of any mitigation) the particulate inhalation pathway is considered active. Notwithstanding, the majority of garden areas are likely to be grassed and as such dust generation is likely to be minimal.
- During development works, sub-surface soils could be exposed and therefore dust has the potential to be generated. Notwithstanding, typical dust suppression techniques could be employed during construction and events such as these would only result in short-period exposures linked to the development programme.
- Vapour inhalation pathways are potentially active irrespective of site status.

Aqueous Migration Pathways

- Leaching of contaminants in the shallow soils is likely to be negligible in areas of hardstanding (buildings, pavement etc.) where infiltration of rainfall is minimal however could potentially occur in the uncovered landscaped areas.
- The site is recorded as being directly underlain by a Secondary A Bedrock Aquifer and on this basis the aqueous migration of contamination vertically and laterally in shallow and deep groundwater could occur.

Direct Contact Exposure Pathways

- Under the developed scenario, a significant portion of the site area will be covered in some form of hard-standing (building floor slabs, road pavement, driveways etc); however lawns and landscaped areas will be included and as such (without consideration of any mitigation) direct contact pathways are considered active.
- During the construction phase of the development, soils can become exposed at the surface and hence the direct contact pathways should be considered active for the duration of the development programme and also during any later in-ground maintenance works.
- The proposed properties include gardens and as such the consumption of home-grown produce is an active pathway for consideration.

5.3.2 Ground gas migration follows pressure gradients (i.e. from high to low pressure via the path of least resistance). Given the nature of the ground conditions, ground gas migration from Made Ground sources will be predominantly vertical, migrating from the theoretical source to the surface along the path of least resistance. Ground gas pathways relating to mine gas are likely to be more complex; following bedding planes and jointing within the rock strata; however in the likely absence of shallow workings, the risk from mine gas is considered low. Ground gas migration pathways are therefore considered active.

5.4 Receptors

5.4.1 With reference to Part 2a of the Environmental Protection Act (1990), the potential receptors to be considered in any contaminated land scenario can be summarised as follows:

Human Health

- The majority of the proposed development is for a residential end-use and as such the future residents are the primary receptor for any contamination risk.
- Construction workers/contractors could potentially be exposed to contaminants during the construction process, particularly during the initial groundworks phase. We would however anticipate that the adoption of appropriate health and safety risk assessments and use of suitable personal protective equipment (PPE) will reduce risks to manageable levels.
- Residents of the existing surrounding properties could also be at risk; though for exposure to occur, active cross-boundary migration pathways would be required.

Eco-systems

- There are no known sensitive or protected habitats associated with the land upon which the proposed development sits, or in the nearby area. However an ecological survey has not been undertaken as part of this assessment.

Property (buildings, etc)

- The proposed development will comprise new structures and associated infrastructure; however these will be designed on the basis of a site specific geotechnical investigation which should include an appraisal of relevant risks including the potential for sulphate attack on buried concrete.

Controlled Water

- All groundwater is Controlled Water; therefore the groundwater beneath the site requires consideration and protection as a potential receptor of any site-derived contamination.
- Surface watercourses are also considered Controlled Water receptors. The nearest surface watercourse, the River Dearne, lies approximately 725m northeast of the site and is therefore not considered a plausible receptor for any site-derived contamination.

5.5 Preliminary Risk Assessment

5.5.1 Based on the CSM the following table presents the plausible contaminant linkages that apply to this site. An indicative qualitative assessment of the likelihood that a risk could be realised is provided with Table 6.1 constituting the Preliminary Risk Assessment (PRA) as outlined in CLR 11 (DEFRA & EA, 2004).

Table 5.1. Summary of the preliminary risk associated with Potential Pollutant Linkages

Potential Receptor	Potential Source	Potential Pathway	Preliminary Risk*
Site Users – Residents & General Public	Contaminated soil, perched groundwater and groundwater	Particulate inhalation / dermal contact / ingestion	Low to Moderate
		Vapour inhalation (indoor and outdoor)	Low (locally Moderate)
	Ground Gas (typical landfill type gases, radon & mine gas)	Migration through ground and structures	Low to Moderate
Adjoining site users	Contaminated soil	Particulate inhalation (during construction only)	Low
	Contaminated Groundwater	Vapour Inhalation	Low
Construction Workers/ Maintenance Workers	Contaminated soil & perched groundwater	Particulate inhalation / dermal contact / ingestion / vapour inhalation.	Low (locally Moderate)
Property (future building)	Sulphate impacted soil & groundwater	Chemical Attack	Low
	Ground Gas (methane & mine gas)	Structural damage due to explosion of combustible gas	Low
Controlled Water – Groundwater	Contaminated soil and perched groundwater	Leaching and migration of contaminants into the aquifer	Low to Moderate

* assuming no mitigation or remedial measures are implemented.

5.6 Discussion

5.6.1 A review of the PRA above indicates that, in general, the contamination potential for the site (with no specific mitigation measures) is considered to be LOW to MODERATE.

5.6.2 This is largely due to the fact that there may be local soil and/or shallow groundwater contamination associated with the substation and the historic tank and the sensitivity of the proposed end-use which is considered to be high.

5.6.3 Near surface contaminants could impact upon construction workers during redevelopment ground works activities, however it is envisaged that appropriate health and safety risk assessment and personal protective equipment would provide appropriate mitigation.

5.6.4 A risk (low-moderate) exists from hazardous ground gas until proven otherwise or mitigated through incorporation of appropriate gas protection measures into new buildings. Notwithstanding, it is considered that basic radon gas protection measures will be required in line with current industry guidance.

5.6.5 The environmental risk posed by the site to Controlled Water (primarily to groundwater within the underlying Secondary A (Bedrock) Aquifer) would only be significant if substantial, mobile, on-site ground contamination sources are confirmed to exist; this is feasible but not considered likely given the historical site activities.

6. Conclusion & Recommendations

6.1 Overview

6.1.1 This Phase 1 Desk Study report presents an assessment of the geo-environmental information pertaining to the site based on readily available desktop/published information sources.

6.1.2 The objective of this assessment was to collate and review the available geo-environmental and coal mining information to determine potential ground contamination and geo-hazard risks associated with the Site in its current condition and evaluate potential constraints with regards to its proposed future development.

6.2 Geo-Environmental Risks

6.2.1 From the review of the available information, the identified historical land use of the site and surrounding area may have generated contamination impacts potentially comprising low level chemical contamination within Made Ground deposits and potentially local impacts associated with the substation and historic tank and (on a small scale) the use of much of the site for car parking.

6.2.2 The preliminary risk associated with any “active” Source-Pathway-Receptor linkages is in the majority of cases considered to be Low, but locally elevated (Low-Moderate) where direct exposure can occur.

6.2.3 The environmental risk posed by the site to Controlled Water (Groundwater) is not anticipated to be significant however groundwater quality should be considered and determined locally if and where mobile/gross contamination impacts to soils are encountered during intrusive investigations.

6.2.4 Furthermore, a risk (albeit low) exists from hazardous ground gas until proven otherwise. Notwithstanding it is likely that basic radon protection measures will be required to mitigate potential exposure to radon gas.

6.2.5 Under the development proposals the site will comprise a combination of hardstanding and landscaped areas including private gardens therefore certain exposure pathways will remain active (particularly in the landscaped areas and during development) and therefore may require mitigation by management and design.

6.3 Coal Mining Related Risks

6.3.1 The subject site is in the likely zone of influence from workings in 3 seams of coal at 90m to 450m depth, and last worked in 1986; however any ground movement from these (deep) coal workings should have ceased by now. Furthermore, the Coal Authority information indicates that there are no known mine entries within 20m of the site and there are no records of mine gas emissions within the subject site boundary.

6.3.2 A review of the regional and local geological maps, borehole records and an available "Mineral Report" for a nearby site indicates that the near surface geology comprises a prominent sandstone unit of the PMCM known as The Kent's Rock Sandstone which is underlain by undifferentiated strata of the PMCM. A 600mm thick, persistent coal seam known as the "Kent's Thin" may be present in the upper reaches of the undifferentiated PMCM below the Kent's Rock Sandstone and therefore the presence of historical, unrecorded shallow workings within the subject site remains a possibility.

6.3.3 Notwithstanding, a BGS report on the Coal Measures formations of the Barnsley District (Lake, 2006) states *"The Kent's Thin Coal is a persistent, thin seam that was only worked near outcrop on a local scale. The overlying Kent's Rock is over 10 m thick in north-west Barnsley, where it is best developed at crop.";* with respect to this statement our interpretation of the general stratigraphy is that the Kent's Thin Coal Seam is indicated to lie at a depth of around 10-15mbgl within the vicinity of the subject site and therefore it is considered unlikely that the seam has been worked.

6.3.4 Furthermore, with a seam thickness of around 600mm and at the depths anticipated, any unrecorded workings would most likely be too deep to affect the surface stability; especially when taking into consideration the presence of the relatively competent Kent's Rock Sandstone at/close to the site surface.

6.3.5 Therefore on the basis of the available information and this preliminary/non-intrusive assessment, the risk of ground movements resulting from activities relating to coal mining/extraction is considered to be low.

6.3.6 However it would be prudent during any pre-development surveys to carry out a limited borehole investigation to confirm the above conclusion and low risk status; especially when considering that the nearest exploratory hole data to intersect the shallowest coal seam or prove substantial competent overburden above the seam was several hundred metres away from the subject site. It should be noted that any intrusive activities which may intersect or disturb coal seams will require the prior written permission of the Coal Authority.

6.4 Recommendations

6.4.1 Prior to any redevelopment of the site, Phase 2 Intrusive Investigations will be required to obtain development-specific geotechnical design parameters and to provide an appropriate spread/density of data across the subject site; thereby fully characterising the baseline geo-environmental conditions.

6.4.2 Intrusive investigations should give due consideration to the possibility of encountering coal bearing strata of the Pennine Middle Coal Measures. Any intrusive activities which may intersect or disturb any coal seams require the prior written permission of the Coal Authority.

6.4.3 Investigations should be undertaken in line with BS5930 (1999) and ISO10175 (2011) with the aim of determining the ground conditions, allowing sampling of soils for geotechnical and environmental testing. Such investigations should be designed to determine the need for mitigation against aggressive ground, establish the suitability of materials for re-use and characterise 'Waste' soils for future disposal.

6.4.4 The findings of the intrusive investigations and subsequent assessments should also establish the need (or otherwise) for any mitigation measures necessary for the development to progress including whether land remediation is required. In such an event, further site investigation or risk assessment may be appropriate in order to develop a Remediation Strategy. In this respect reference should be made to CLR11 (DEFRA & Environment Agency, 2004) and supporting guidance.

7. References

British Standards Institution (BSI), 1999. Code of Practice for Site Investigations – BS5930:1999.

British Standards Institution (BSI), 2001. Investigation of Potentially Contaminated Sites – Code of Practice. BS 10175 – 2001.

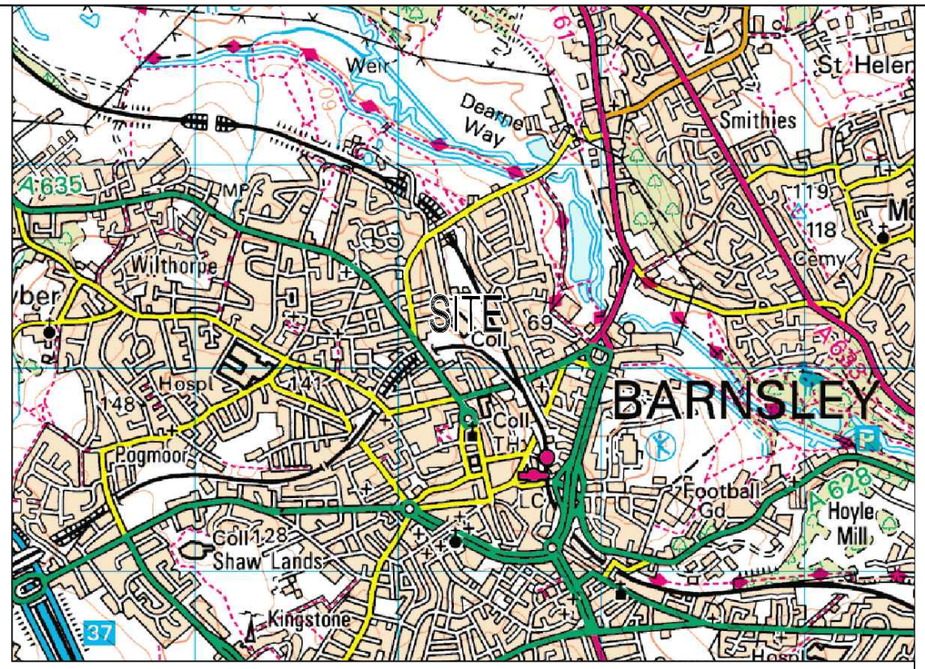
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Environment Agency, 2009. Updated technical background to the CLEA model. Science Report SC050021/SR3.

Lake, R, D, British Geological Survey (BGS). 2006. The Pennine Lower and Middle Coal Measures formations of the Barnsley district. Internal Report IR/06/135.

Appendix A Figures and Drawings





GENERAL NOTES

Do not scale from this drawing. Work from figured dimensions only. All dimensions are in millimetres u.n.o.

No deviation from the details shown on this drawing will be allowed without prior permission in writing.

All drawings are to be read in conjunction with all architects, engineers and specialist drawings and details.

Rev	Date	Revision	By	Checked	Authorised

Client:

Barnsley College

Project:

Belle Vue

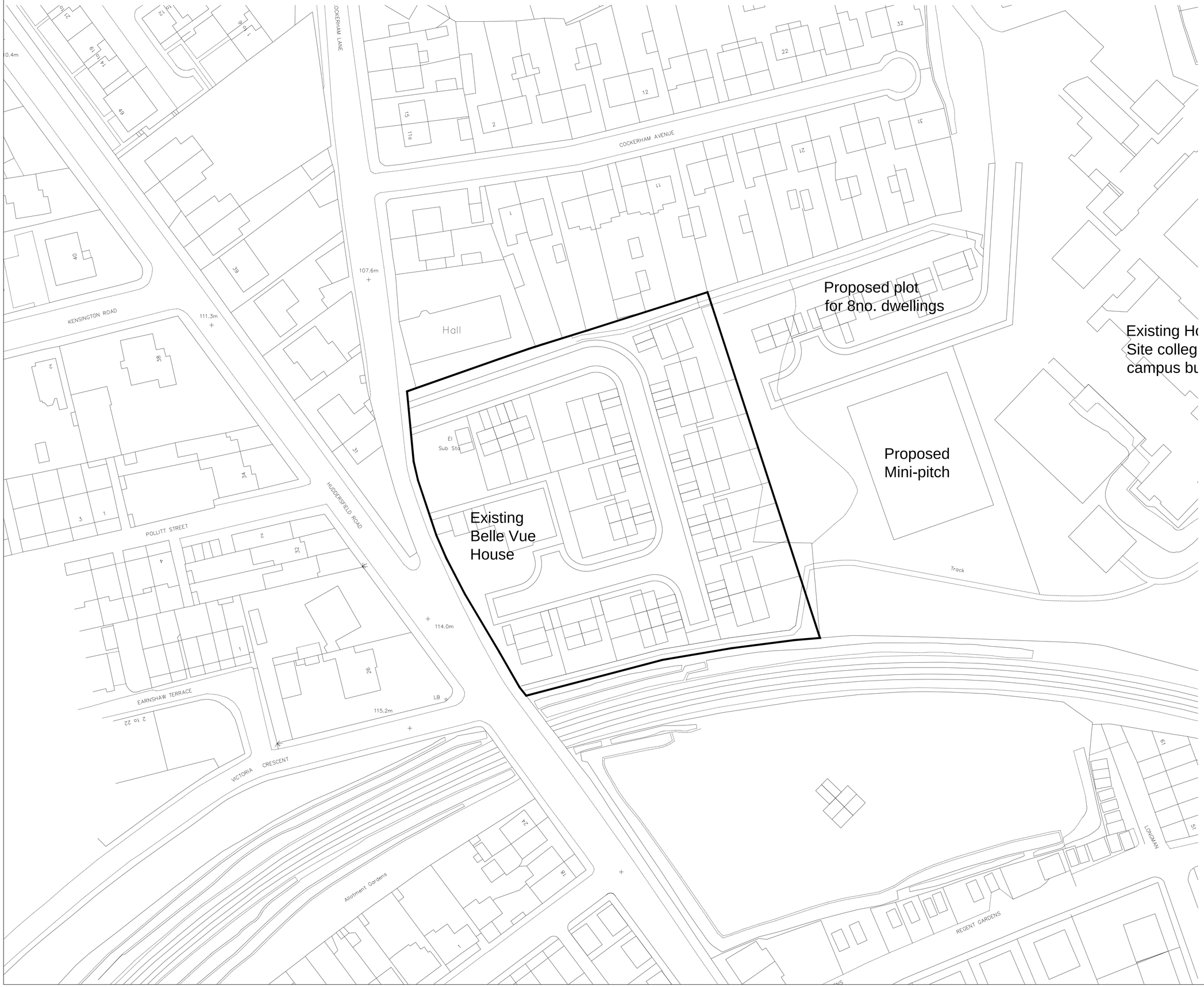
Title:

Figure 1: Site Location & Layout Plan

CAPITA
Property and Infrastructure, Engineering
MANCHESTER
Clemence House, 9 Mellor Road
Cheadle Hulme, Cheshire, SK8 5AT
Tel: (+44) 0161 486 1521
Fax: (+44) 0161 486 1580
E-mail: capitasymonds.cheadle@capita.co.uk
Offices also at:
Bristol Cambridge
London Sheffield
Watford
Special Projects: Cheadle Hulme
www.capitasymonds.co.uk/structures

Drawn at	Scale @ A3	Date
MANCHESTER	1:1000	Jun '14
Drawn	Checked	Authorised
EY	JLA	JLA

Project No.:	Drawing No.:	Revision:
CS071073	1	-



NOTES
1 Do not scale this drawing.
2 Site dimensions to be taken.
3 Contract administrator to be notified of any discrepancies prior to ordering of equipment and/or materials.

Rev	By	Chk'd	Date	Description
	XXX	XXX	XX.XX.XX	XXXXXX

Client
XXXXXX
XXXXX
XXXX

property design
Quadrant, Cobalt Business Park,
North Tyneside, NE27 0BY
Tel: 0191 643 4089

Project
XXXXXX
XXXXX
XXXX

Drawing Title
XXXXXX
XXXXX
XXXX

Drawn By XXX	Date XX.XX.XX
Checked By XXX	Date XX.XX.XX
Approved By XXX	Date XX.XX.XX

Drawing Number **P000 / A / 000** | Rev **000**

Drawing Scale **1:500 @ A1**

Drawing Status
FEASIBILITY/ TENDER/
CONTRACT/AS BUILT

Proposed Development
Layout BELLE VUE
HOUSE.dwg

Appendix B Photographs

Site/Project: Belle Vue, Barnsley	**Project reference:** CS/071073	CAPITA Property and infrastructure Clemence House, 9 Mellor Road, Cheadle Hulme SK8 5AT Tel 0161 486 1521 www.capita.co.uk/property
Client: Barnsley College	**Date taken:** 20/06/14	

Plate 1.

Entrance to the site from Cockerham Lane.



Plate 2.

Electricity Substation located in the northwest of the site.



We | Listen Create Deliver

Site/Project: Belle Vue, Barnsley	**Project reference:** CS/071073	CAPITA Property and infrastructure Clemence House, 9 Mellor Road, Cheadle Hulme SK8 5AT Tel 0161 486 1521 www.capita.co.uk/property
Client: Barnsley College	**Date taken:** 20/06/14	

Plate 3.

View to the north of Belle Vue House.



Plate 4.

View to the east of the landscaped area along the southern perimeter of the site.



We | Listen Create Deliver

Site/Project: Belle Vue, Barnsley	**Project reference:** CS/071073	CAPITA Property and infrastructure Clemence House, 9 Mellor Road, Cheadle Hulme SK8 5AT Tel 0161 486 1521 www.capita.co.uk/property
Client: Barnsley College	**Date taken:** 20/06/14	

Plate 5.

View to the north of the upper level car park along the eastern side of Belle Vue House.



Plate 6.

View of the northern boundary with adjacent properties. The general slope of the ground is to the east.



Site/Project: Belle Vue, Barnsley	**Project reference:** CS/071073	CAPITA Property and infrastructure Clemence House, 9 Mellor Road, Cheadle Hulme SK8 5AT Tel 0161 486 1521 www.capita.co.uk/property
Client: Barnsley College	**Date taken:** 20/06/14	

Plate 7.

View to the east of the rear of the single storey building currently used for maintenance projects.



Plate 8.

The front entrance to the building currently used for maintenance projects.



Site/Project: Belle Vue, Barnsley	**Project reference:** CS/071073	CAPITA Property and infrastructure Clemence House, 9 Mellor Road, Cheadle Hulme SK8 5AT Tel 0161 486 1521 www.capita.co.uk/property
Client: Barnsley College	**Date taken:** 20/06/14	

Plate 9.

View to the southeast of the lower car park.



Plate 10.

View to the west of Belle Vue House and the two tiers of car parking.



Site/Project: Belle Vue, Barnsley	Project reference: CS/071073	CAPITA Property and infrastructure Clemence House, 9 Mellor Road, Cheadle Hulme SK8 5AT Tel 0161 486 1521 www.capita.co.uk/property
Client: Barnsley College	Date taken: 20/06/14	

Plate 11. View to the east beyond the car parks.	
Plate 12. View to the north. Mature trees line the border with the lower car park.	

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Appendix C GroundSure Report

Capita Property and Infrastructure

ACCOUNTS PAYABLE, PO Box 202,
DARLINGTON, DL1 9HB

GroundSure Reference:	GS-1487407
Your Reference:	ZMCH/CS/071073-10
Report Date	5 Jun 2014
Report Delivery Method:	Email - pdf

GroundSure EnviroInsight

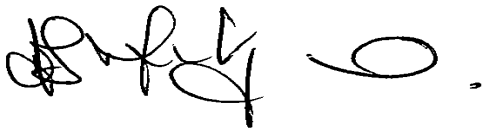
Address: BELLE VUE COCKERHAM LANE BARNSLEY, S75 1AT

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:	**BELLE VUE COCKERHAM LANE BARNSLEY, S75 1AT**
Date:	**5 Jun 2014**
Reference:	**GS-1487407**
Client:	**Capita Property and Infrastructure**

NW N NE



W E

SW S SE

Aerial Photograph Capture date:	26-Mar-2012
Grid Reference:	434190,407131
Site Size:	1.68ha

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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	0	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	0	0
1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
1.1.9 Records of Licensed Discharge Consents	0	0	0	0
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	0	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	12	14
2.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	2
2.1.4 GroundSure Local Authority Landfill Sites Data	0	0	0	0	1	5
2.2 Landfill and Other Waste Sites Findings						
2.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	1	Not searched	Not searched
2.2.2 Environment Agency Licensed Waste Sites	0	0	0	0	2	9

Section 3: Current Land Use

	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	1	1	1	Not searched
3.2 Records of Petrol and Fuel Sites	0	0	0	0
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	0	4
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	0	4
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched

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

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

Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?	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®

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- Site Outline
- Search Buffers (m) — 250 / 500
- 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:

0

Database searched and no data found.

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: 0

Database searched and no data found.

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: 0

Database searched and no data found.

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: 0

Database searched and no data found.

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

NW N NE

W E

SW S SE



Landfill and Other Waste Sites Legend

Mapping sourced from Ordnance Survey

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Ordnance Survey license 100035207.

Site Outline

Search Buffers (m)

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:

28

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	
4	95.0	E	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
5	462.0	E	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
6	521.0	E	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
7	598.0	E	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
8	649.0	E	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: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	773.0	NE	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	798.0	NE	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	813.0	E	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	914.0	NE	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	921.0	N	434600 408100	Site Address: Smithies Tip, Smithies Tip, Off Smithies Lane, Barnsley Waste Licence: - Site Reference: 4400/(141) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	944.0	N	433700 408100	Site Address: Croft Farm, Willow Bank, Barnsley Waste Licence: Yes Site Reference: WD20 B742 Waste Type: Inert, Commercial, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 10-Jul-1990 Licence Surrendered: 31-Dec-1993 Licence Hold Address: Croft Farm, Willow Bank, Barnsley Operator: Mr K Hadfield
Not shown	953.0	SW	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	965.0	E	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	987.0	SW	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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1046.0	SW	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	1158.0	S	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 shown	1225.0	NE	434900 408300	Site Address: Dalestone Works, Wakefield Road, Barnsley Waste Licence: - Site Reference: 4400/(142) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	1226.0	SW	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
Not shown	1248.0	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: -
Not shown	1291.0	NE	434800 408400	Site Address: Land adjacent to Wakefield Road, Barnsley Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Prospect Estates Limited
Not shown	1389.0	SE	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
Not shown	1399.0	SW	432800 406400	Site Address: Recreation Ground, Pogmoor Road, Barnsley Waste Licence: - Site Reference: 4400/(134) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -
Not shown	1449.0	SW	432900 406100	Site Address: S.R. Gents, Dodworth Road, Barnsley Waste Licence: - Site Reference: 4400/(131) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	1468.0	NW	432700 407700	Site Address: Gawber Refuse Tip, Withorpe Lane, Gawber, Barnsley, South Yorkshire Waste Licence: - Site Reference: - Waste Type: Commercial, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Darton Urban District Council
Not shown	1484.0	SW	432700 406300	Site Address: Quarry at Higher Spring Head Farm, Oakworth, Keighley Waste Licence: Yes Site Reference: 671, 4400/(130) Waste Type: Inert, Commercial, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 21-Aug-1988 Licence Surrendered: Licence Hold Address: 30 Exley Head, Keighley Operator: -
Not shown	1492.0	SW	432900 406000	Site Address: Disused Quarry, Dodworth Road, Barnsley, Yorkshire Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Barnsley County Borough Council
Not shown	1495.0	NW	432900 408100	Site Address: Redbrook Business Park, Wilthorpe Road, Redbrook Waste Licence: - Site Reference: 4400/(160) Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: Tineslave Limited
Not shown	1499.0	NW	432700 407900	Site Address: Redbrook Business Park, Gawber Waste Licence: Yes Site Reference: 41B58(165), 4400/B1050 Waste Type: Inert, Commercial, Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Hold Address: 31 Bence Lane, Darton, Barnsley Operator: -

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

2

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1159.0	N	434700.0 408300.0	Address: Smithy Green Tip, Smithies Lane, Barnsley, Yorks BGS Number: 1890.0	Risk: No risk to aquifer Waste Type: N/A
Not shown	1498.0	SW	433000.0 406100.0	Address: Disused Quarry, Dodworth Rd, Barnsley, Yorks BGS Number: 1892.0	Risk: No risk to aquifer Waste Type: N/A

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

6

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
Not shown	793.0	NE		Refuse Tip	1970 mapping	Polygon
Not shown	1069.0	E		Refuse Tip	1972 mapping	Polygon
Not shown	1072.0	NE		Refuse Tip	1970 mapping	Polygon
Not shown	1230.0	S		Spring Street	Barnsley Metropolitan Borough Council	Point
Not shown	1249.0	NE		Refuse Tip	1970 mapping	Polygon
Not shown	1487.0	SW		Refuse Tip	1969 mapping	Polygon

2.2 Other Waste Sites

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

1

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		
3	425.0	E	434709 407261	Type of Site: Scrap Metal Yard Site Address: N/A	Planning Application Reference: N/A Date: 1970	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:

11

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	
32	670.0	SE	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: -, -
Not shown	933.0	E	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	1055.0	NE	434870 408090	Site Address: Smithies Lane, Smithies, Barnsley, S Yorks Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: BDR013 EPR reference: - Operator: South Herts Waste Management Ltd Waste Management licence No: 60609 Annual Tonnage: 0.0	Issue Date: 14/06/1993 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Smithies Lane Civic Amenity Site Correspondence Address: -, 48, Cardigan Road, Stanion, Northants, NN14 1BY
Not shown	1055.0	NE	434870 408090	Site Address: Smithies Lane, Smithies, Barnsley, S Yorks Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REG006 EPR reference: - Operator: Regional Waste Recycling Plc Waste Management licence No: 60609 Annual Tonnage: 5000.0	Issue Date: 14/06/1993 Effective Date: 08/12/2006 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Smithies Lane Civic Amenity Site Correspondence Address: -, 2 Cecil Court, 49-55, London Road, Enfield, Middlesex, EN2 6DE
Not shown	1055.0	NE	434870 408090	Site Address: Smithies Lane Civic Amenity Site, Smithies Lane, Smithies, Barnsley, South Yorkshire, S71 1NL Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS067 EPR reference: EA/EPR/DP3992LS/T001 Operator: Waste Recycling Ltd Waste Management licence No: 60609 Annual Tonnage: 24999.0	Issue Date: 14/06/1993 Effective Date: 26/01/2009 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Smithies Lane H W R C Site Correspondence Address: -, Ground Floor West, 900, Pavilion Drive, Northampton Business Park, Northampton, NN4 7RG

ID	Distance (m)	Direction	NGR	Details	
Not shown	1055.0	NE	434870 408090	Site Address: Smithies Lane H W R C, Smithies Lane, Smithies, Barnsley, South Yorkshire, S71 1NL Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS067 EPR reference: EA/EPR/DP3992LS/V002 Operator: F C C Recycling (U K) Limited Waste Management licence No: 60609 Annual Tonnage: 24999.0	Issue Date: 14/06/1993 Effective Date: 26/01/2009 Modified: 23/11/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Smithies Lane Household Waste Recycling Centre Correspondence Address: -, -
Not shown	1055.0	NE	434870 408090	Site Address: Smithies Lane Civic Amenity Site, Smithies Lane, Smithies, Barnsley, South Yorkshire, S71 1NL Type: Household Waste Amenity Site Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WAS067 EPR reference: EA/EPR/DP3992LS/T001 Operator: Waste Recycling Ltd Waste Management licence No: 60609 Annual Tonnage: 24999.0	Issue Date: 14/06/1993 Effective Date: 26/01/2009 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Smithies Lane H W R C Site Correspondence Address: -, -
Not shown	1188.0	SW	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	1211.0	SW	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
Not shown	1491.0	NE	435300 408300	Site Address: Rotherham Road, Carlton, Barnsley, South Yorkshire, S27 2AG Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR007 EPR reference: EA/EPR/AP3090ZE/S002 Operator: Yorkshire Water Services Ltd Waste Management licence No: 60547 Annual Tonnage: 39521.0	Issue Date: 31/01/1994 Effective Date: - Modified: - Surrendered Date: 01/11/2000 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Carlton Road Depot Correspondence Address: -, -
Not shown	1491.0	NE	435300 408300	Site Address: Rotherham Road, Carlton, Barnsley, South Yorkshire, S27 2AG Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: YOR007 EPR reference: - Operator: Yorkshire Water Services Waste Management licence No: 60547 Annual Tonnage: 0.0	Issue Date: 31/01/1994 Effective Date: - Modified: - Surrendered Date: 01/11/2000 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Carlton Road Depot Correspondence Address: -, Western House, Western Way, Halifax Road, Bradford, West Yorkshire, BD6 2LZ

3. Current Land Use Map

NW N NE



W E

SW S SE

Current Land Use Legend

Mapping sourced from Ordnance Survey

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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: 3

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	Electricity Sub Station	434112 407150	S75	Electrical Features	Infrastructure and Facilities
2	44.0	W	Dent Wizard	434072 407109	30, Huddersfield Road, Barnsley, S75 1DL	Vehicle Repair, Testing and Servicing	Repair and Servicing
3	180.0	S	Electricity Sub Station	434179 406885	S70	Electrical Features	Infrastructure and Facilities

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

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.

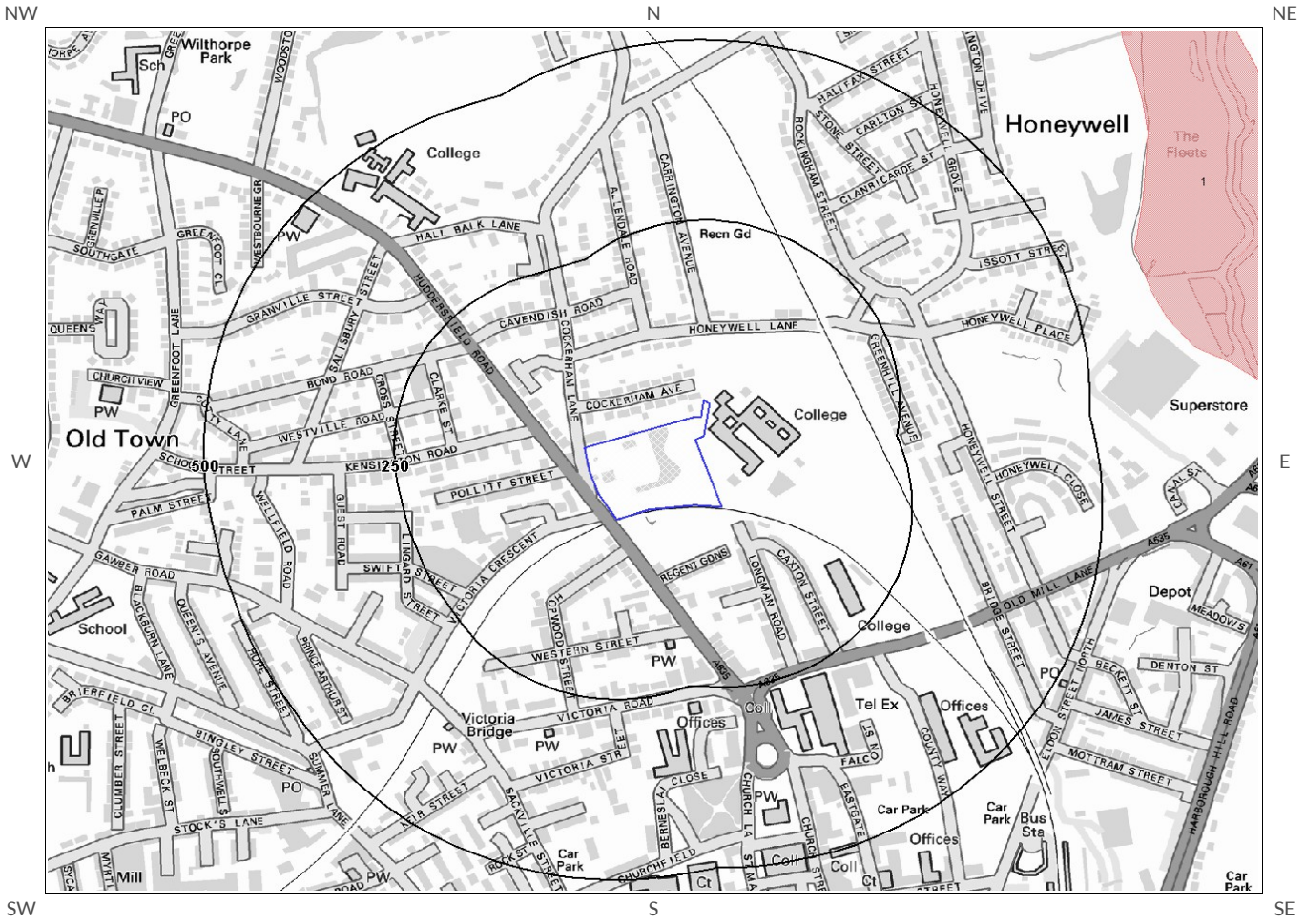
Lex Code	Description	Rock Type
KNR-SDST	KENT'S ROCK	SANDSTONE
PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

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

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5. Hydrogeology and Hydrology

5a. Aquifer Within Superficial Geology



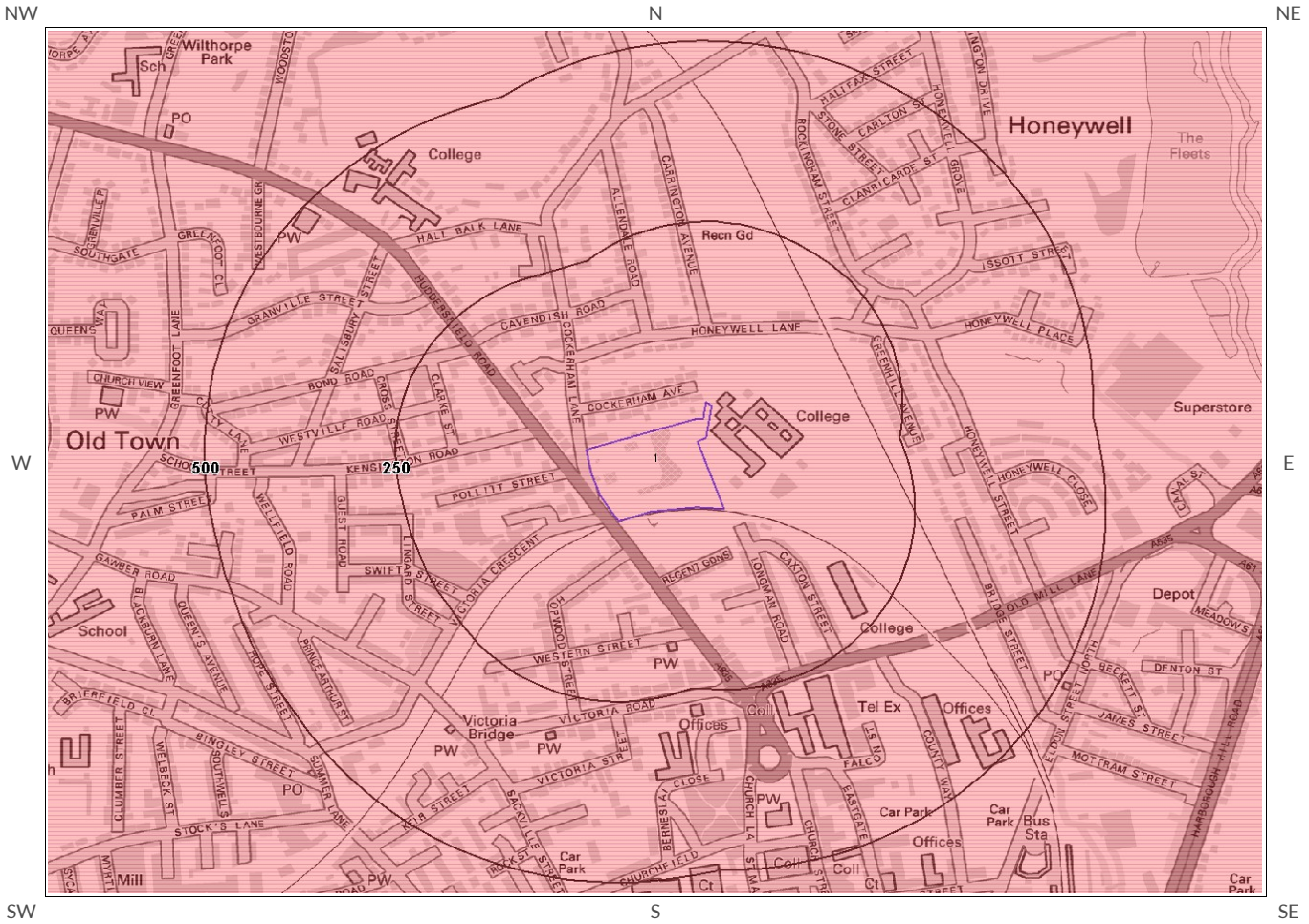
Map Legend

Mapping sourced from Ordnance Survey®

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- Site Outline
- Search Buffers (m): 250, 500
- 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



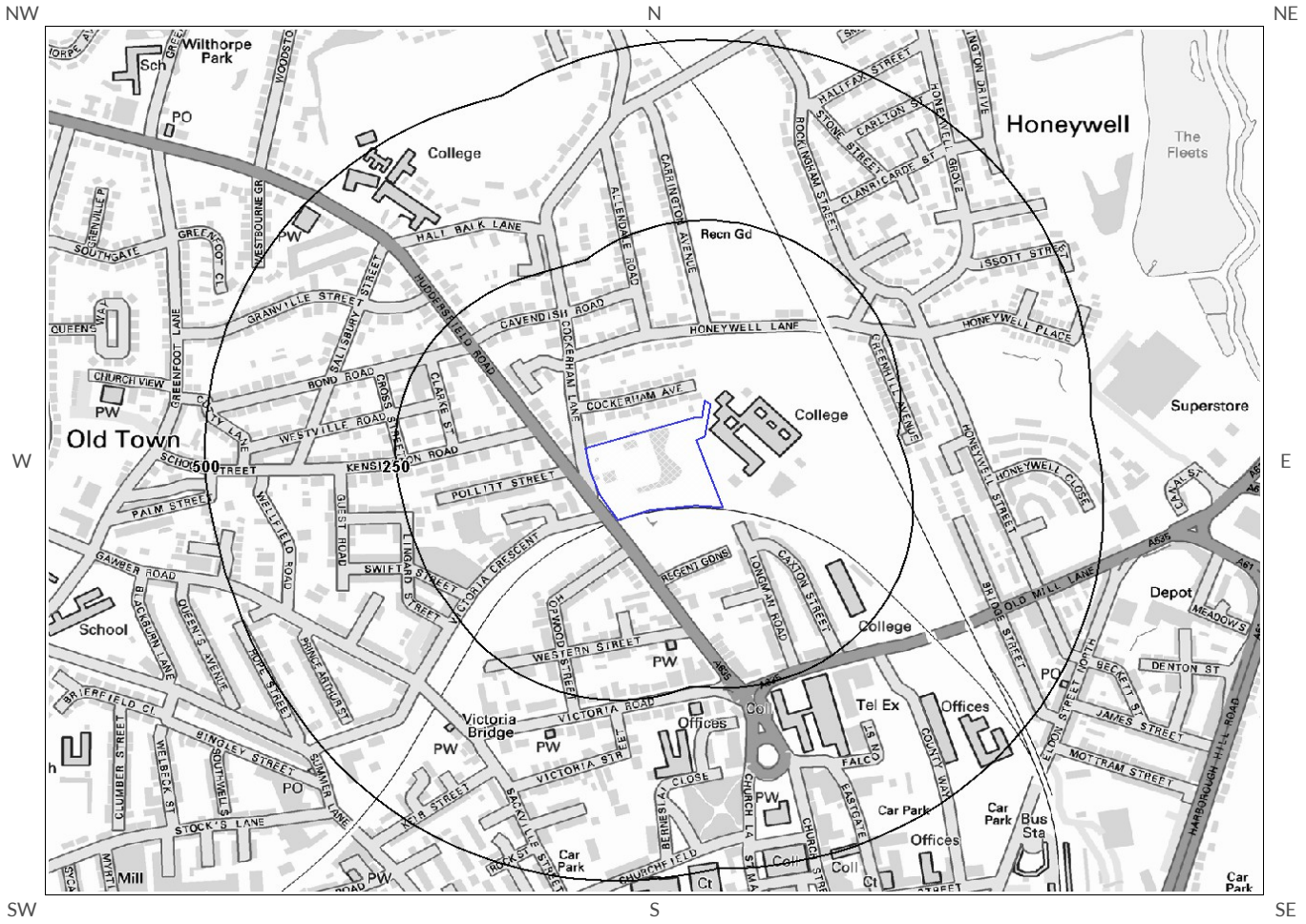
Map Legend

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- Site Outline
- Search Buffers (m): 250, 500
- Principal Aquifer
- Secondary (A) Aquifer - Permeable Layers
- Secondary (B) Aquifer - Lower Permeability Layers
- Secondary Aquifer - Undifferentiated Layers
- Unproductive
- Unknown (lakes and landslip)
- Groundwater Abstraction Licence
- Surface Water Abstraction Licence

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



Map Legend

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Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

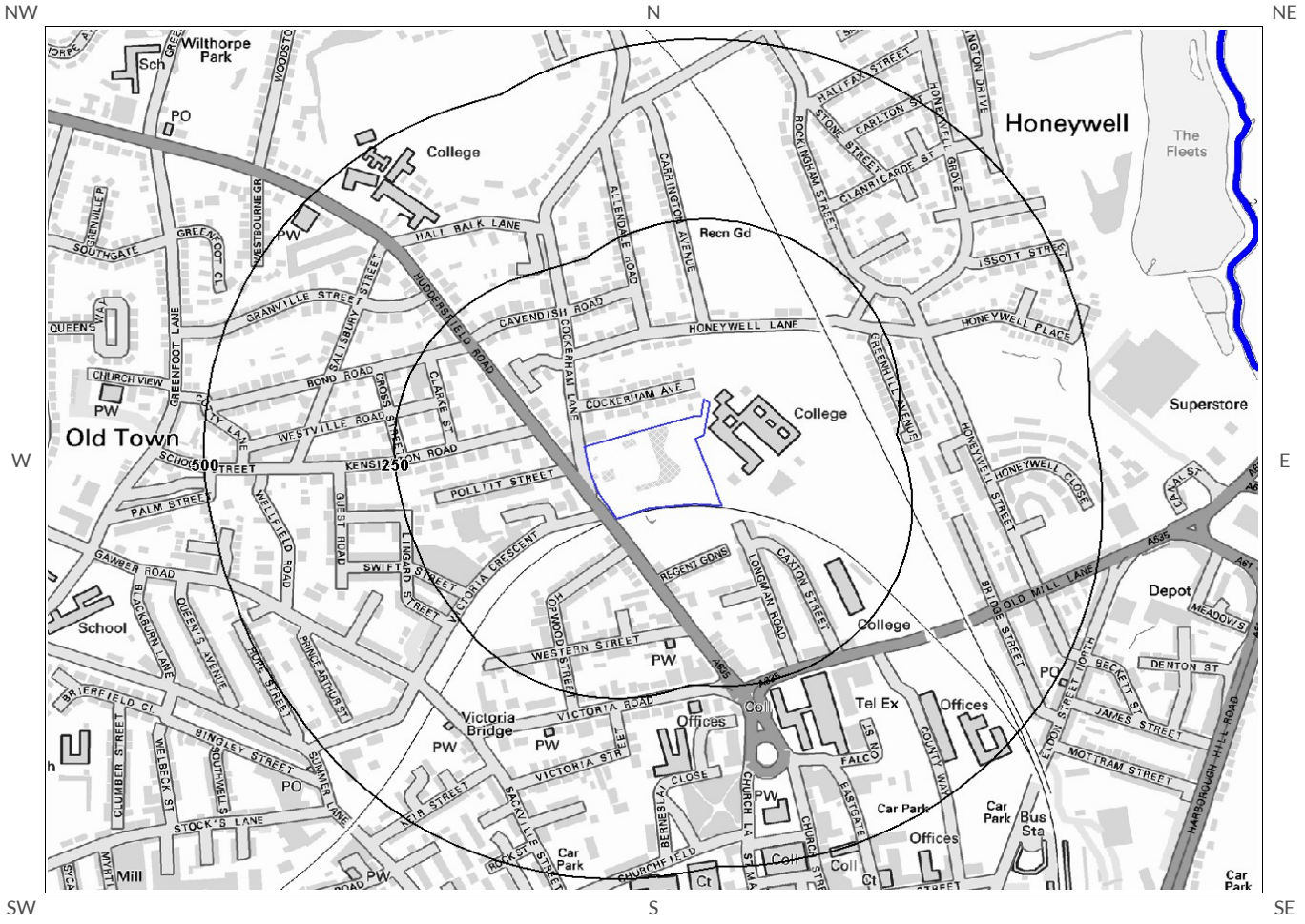
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

5d. Hydrology – Detailed River Network and River Quality

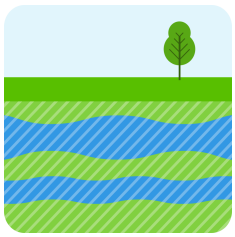


Map Legend

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- Site Outline
- Search Buffers (m): 250, 500
- 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)



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

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	1098.0	SW	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:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1098.0	SW	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	1153.0	SW	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	1153.0	SW	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	1442.0	E	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:
Not shown	1442.0	E	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	1442.0	E	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:

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 shown	1098.0	SW	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:
Not shown	1098.0	SW	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	1153.0	SW	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	1153.0	SW	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 River Quality

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

5.7.1 Biological Quality:

Database searched and no data found.

5.7.2 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):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	823.0	E	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	1263.0	N	433979 408458	River Name: River Dearne Reach: Cawthorne Dyke New Lodge End/Start of Stretch: End of Stretch NGR	B	B	B	B	B
Not shown	1263.0	N	433979 408458	River Name: River Dearne Reach: New Lodge Old Mill End/Start of Stretch: Start of Stretch NGR	D	B	C	C	D
Not shown	1388.0	E	435673 407028	River Name: River Dearne Reach: New Lodge Old Mill End/Start of Stretch: End of Stretch NGR	D	B	C	C	D

5.8 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? No

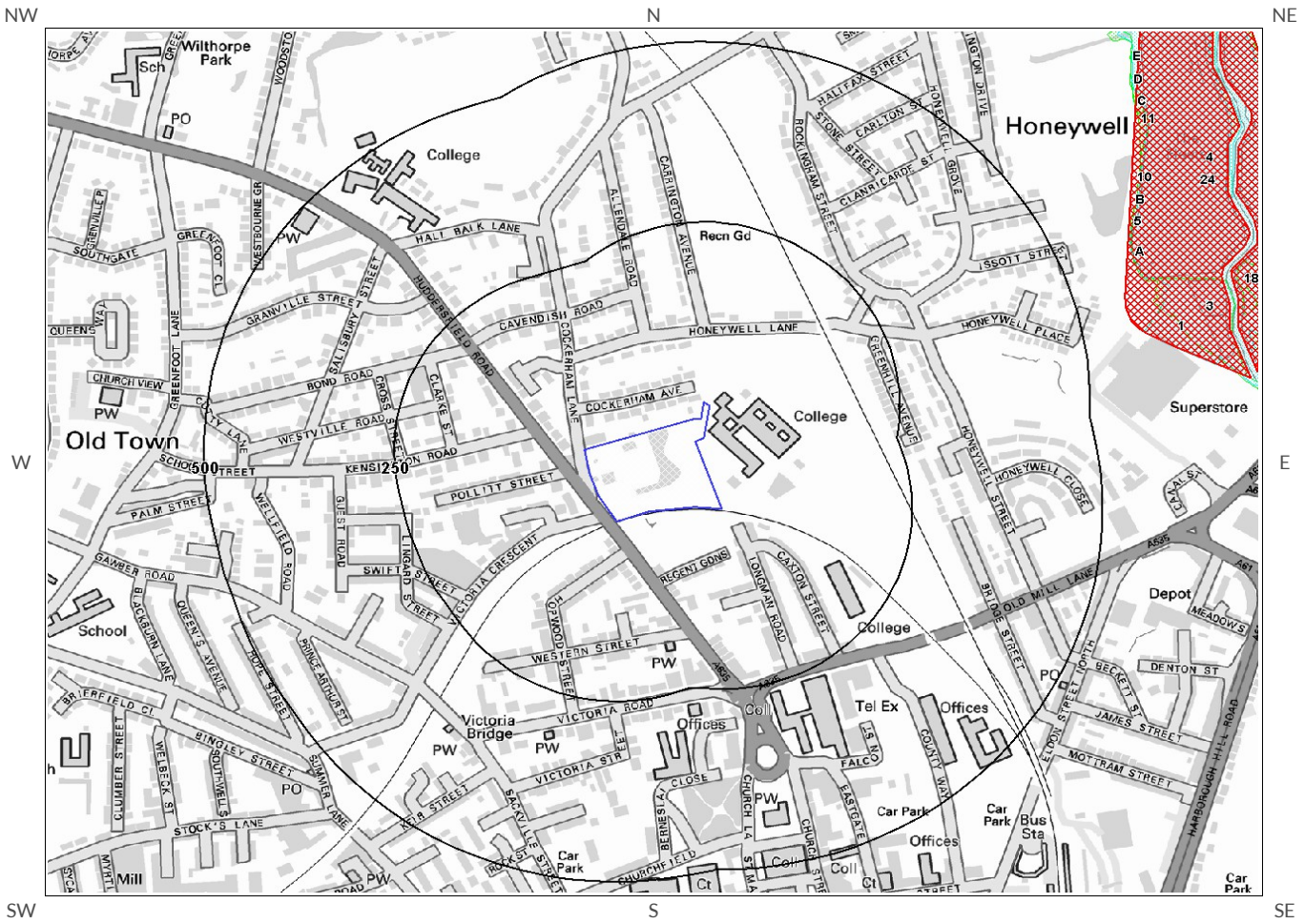
Database searched and no data found.

5.9 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)



Map Legend

Mapping sourced from Ordnance Survey

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- Site Outline
- Search Buffers (m) — 250 — 500
- 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

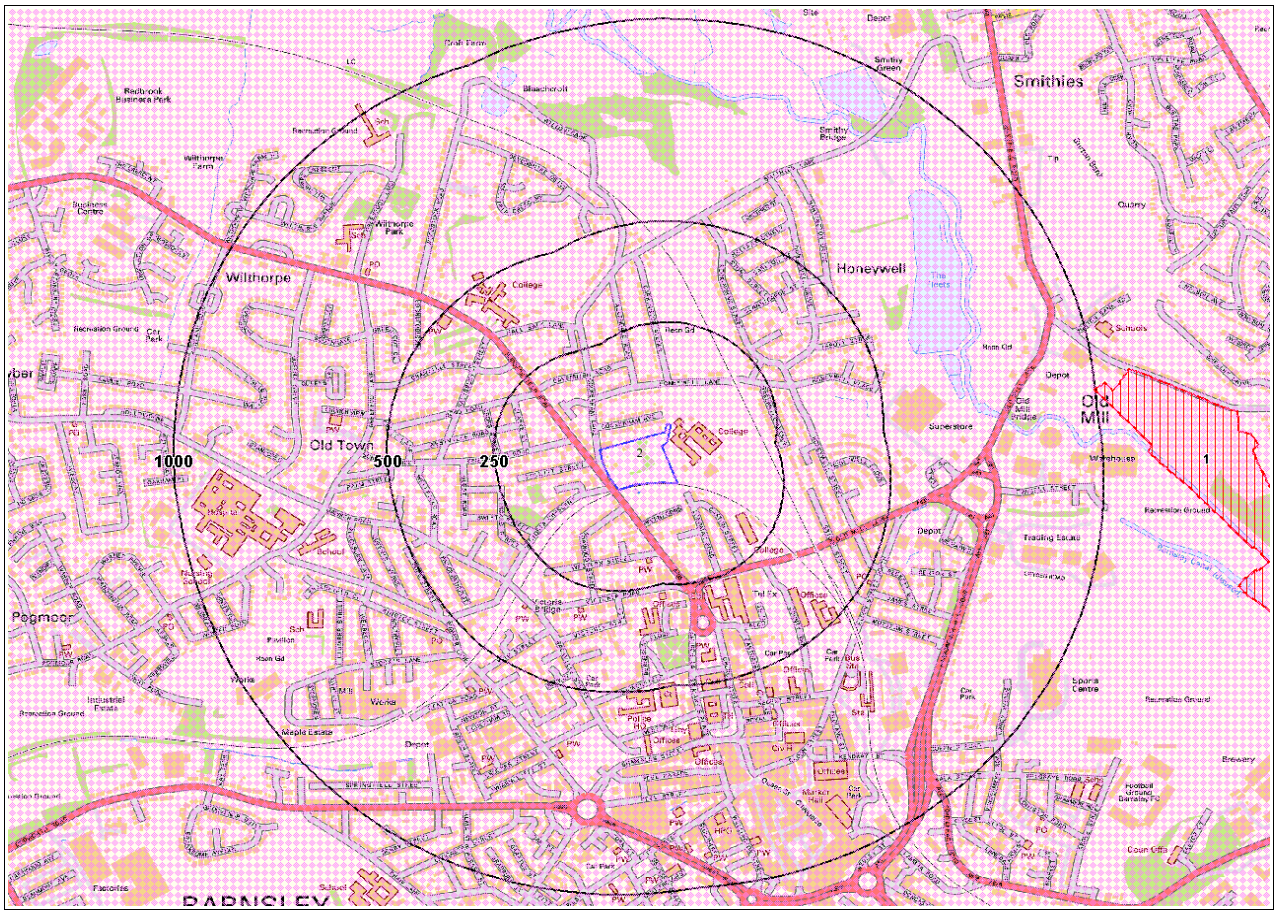
What is the British Geological Survey confidence rating in this result? Low

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.

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7. Designated Environmentally Sensitive Sites Map



Map Legend

Mapping sourced from Ordnance Survey®

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- Site Outline
- Areas of Outstanding Natural Beauty
- SAC
- SPA
- Nitrate Vulnerable Zones
- SSSI
- Ramsar
- Nitrate Sensitive Areas
- NNR
- LNR
- National Parks
- World Heritage Sites
- Environmentally Sensitive Areas
- Ancient Woodlands



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/Countryside Council for Wales and Scottish Natural Heritage are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
1	997.0	E	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	NVZ Area	DEFRA



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.

8.1.3 Soluble Rocks

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

Soluble rocks are not present in the search area. 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.

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

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: www.barnsley.gov.uk/index.asp
Address: Town Hall, Barnsley, South Yorkshire, S70 2TA

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, English Nature 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

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.

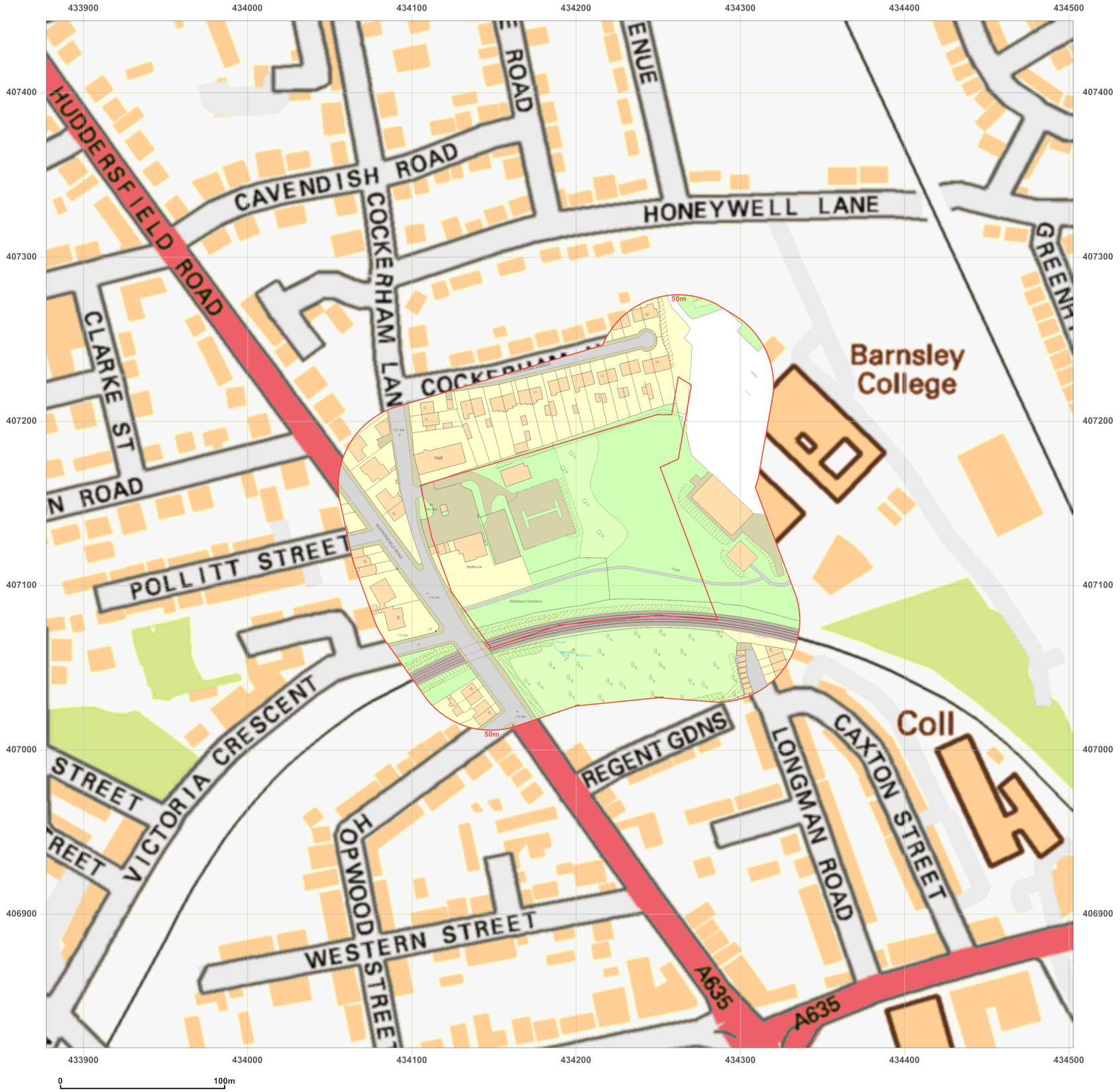
12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

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**



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ENVIRONMENTAL INSIGHT

Site Details:

BELLE VUE
COCKERHAM LANE
BARNSLEY, S75 1AT

Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: MasterMap
Map date: **2012**
Scale: 1:1,250
Printed at: 1:2,500

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2012

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1991-1993**

Scale: 1:1,250

Printed at: 1:2,500

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Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1991 Levelled 1963
Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed N/A Revised N/A Edition N/A Copyright 1993 Levelled N/A

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1988-1991**

Scale: 1:1,250

Printed at: 1:2,500

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Surveyed 1963 Revised 1991 Edition N/A Copyright 1991 Levelled 1963		Surveyed 1963 Revised 1991 Edition N/A Copyright 1991 Levelled 1963	Surveyed 1963 Revised 1989 Edition N/A Copyright 1989 Levelled 1963
Surveyed 1963 Revised 1991 Edition N/A Copyright 1991 Levelled 1963		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

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

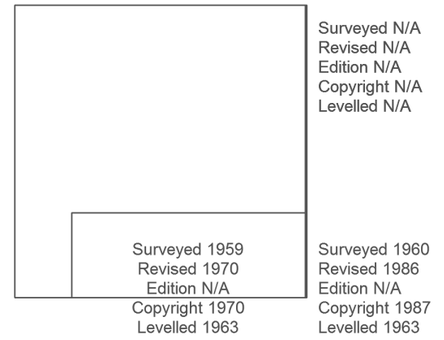
Map Name: National Grid

Map date: **1982-1987**

Scale: 1:1,250

Printed at: 1:2,500

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

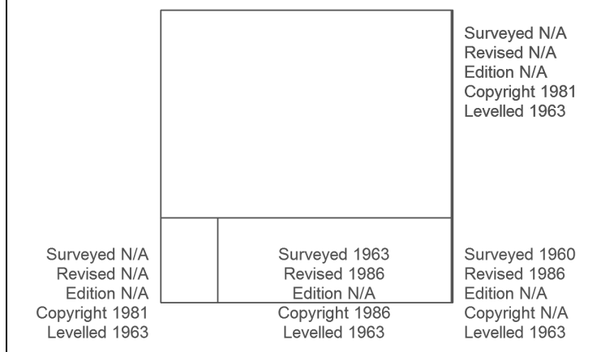
Map Name: National Grid

Map date: **1981-1986**

Scale: 1:1,250

Printed at: 1:2,500

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1977-1982**

Scale: 1:1,250

Printed at: 1:2,500

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		Surveyed 1963 Revised 1979 Edition N/A Copyright 1979 Levelled 1963
Surveyed 1959 Revised 1982 Edition N/A Copyright 1982 Levelled 1963	Surveyed N/A Revised N/A Edition N/A Copyright 1981 Levelled 1969	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1970-1975**

Scale: 1:1,250

Printed at: 1:2,500

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Surveyed 1959 Revised 1973 Edition N/A Copyright 1974 Levelled 1963	Surveyed 1959 Revised 1974 Edition N/A Copyright 1975 Levelled 1963	Surveyed 1959 Revised 1970 Edition N/A Copyright 1970 Levelled 1963
	Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed 1960 Revised 1971 Edition N/A Copyright 1972 Levelled 1963

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1959-1961**

Scale: 1:1,250

Printed at: 1:2,500

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Surveyed 1959 Revised 1959 Edition N/A Copyright 1959 Levelled 1930		Surveyed 1959 Revised 1959 Edition N/A Copyright 1960 Levelled 1930	Surveyed 1959 Revised 1959 Edition N/A Copyright 1960 Levelled 1930
Surveyed 1959 Revised 1959 Edition N/A Copyright 1960 Levelled 1930		Surveyed 1959 Revised 1959 Edition N/A Copyright 1961 Levelled 1930	Surveyed 1960 Revised 1960 Edition N/A Copyright 1961 Levelled 1930

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1959-1960**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1959
Revised 1959
Edition N/A
Copyright 1969
Levelled 1963

Surveyed 1960
Revised 1960
Edition 1962
Copyright 1962
Levelled 1960

Surveyed 1959
Revised 1959
Edition 1961
Copyright 1961
Levelled 1930

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

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

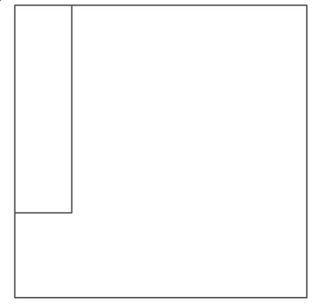
Map date: **1959**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1959
Revised 1959
Edition 1960
Copyright 1960
Levelled 1930



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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1906**

Scale: 1:2,500

Printed at: 1:2,500

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

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

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

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series Town Plan

Map date: **1889**

Scale: 1:500

Printed at: 1:1,000

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

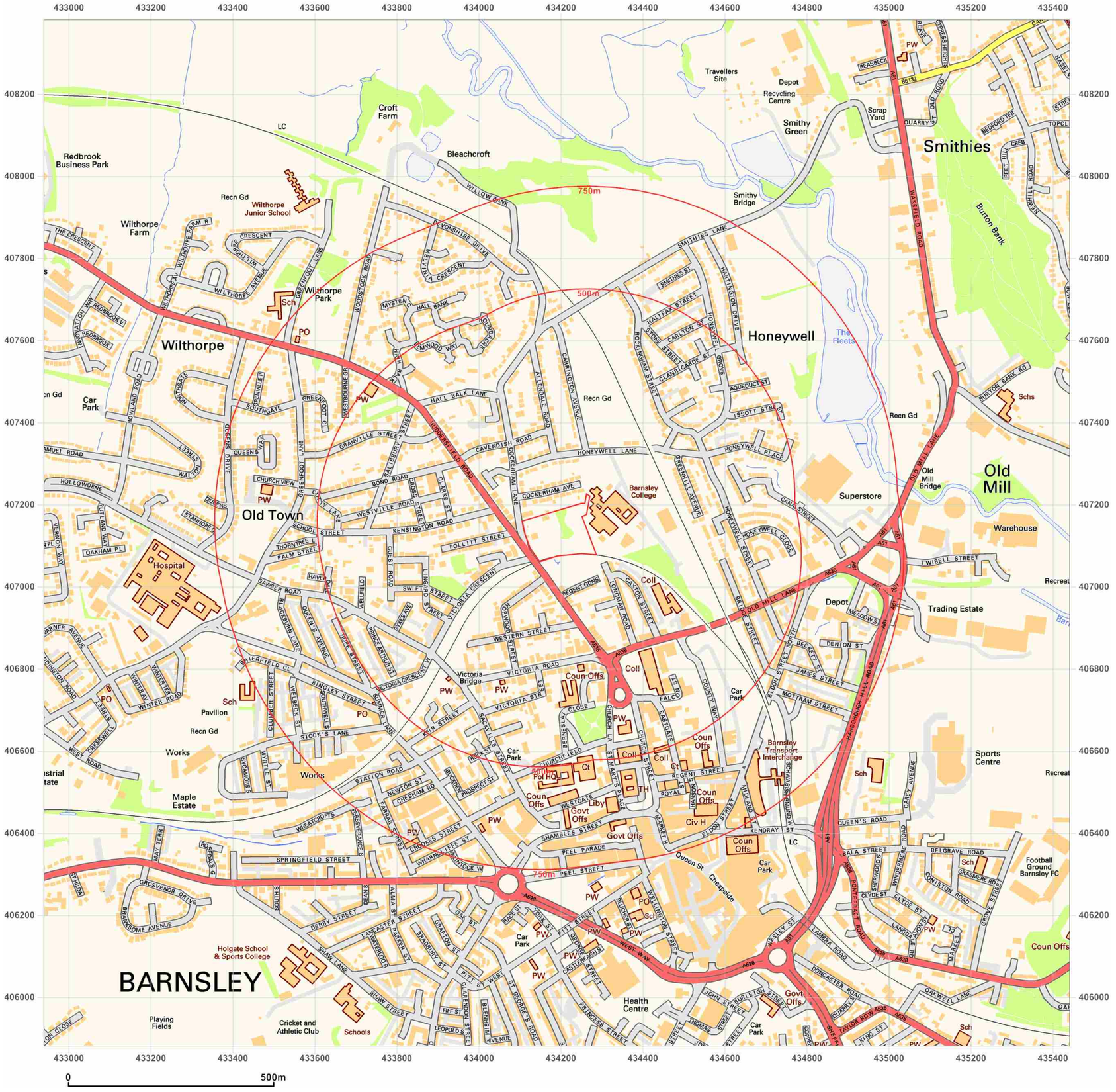
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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **2012**

Scale: 1:10,000

Printed at: 1:10,000

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2012

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: 1:10,000 Raster

Map date: **2002**

Scale: 1:10,000

Printed at: 1:10,000

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2002

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1992-1993**

Scale: 1:10,000

Printed at: 1:10,000

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

Surveyed 1981
Revised 1992
Edition N/A
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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1982**

Scale: 1:10,000

Printed at: 1:10,000

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

Surveyed 1981
Revised 1982
Edition N/A
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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: National Grid

Map date: **1973-1974**

Scale: 1:10,000

Printed at: 1:10,000

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

Surveyed 1974
Revised 1974
Edition N/A
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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: Provisional

Map date: **1966**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1966
Revised 1966
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1966
Revised 1966
Edition N/A
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Levelled N/A

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Grid Ref: 434190, 407131

Map Name: Provisional

Map date: **1951**

Scale: 1:10,560

Printed at: 1:10,560

N
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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

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Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1948**

Scale: 1:10,560

Printed at: 1:10,560

N
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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

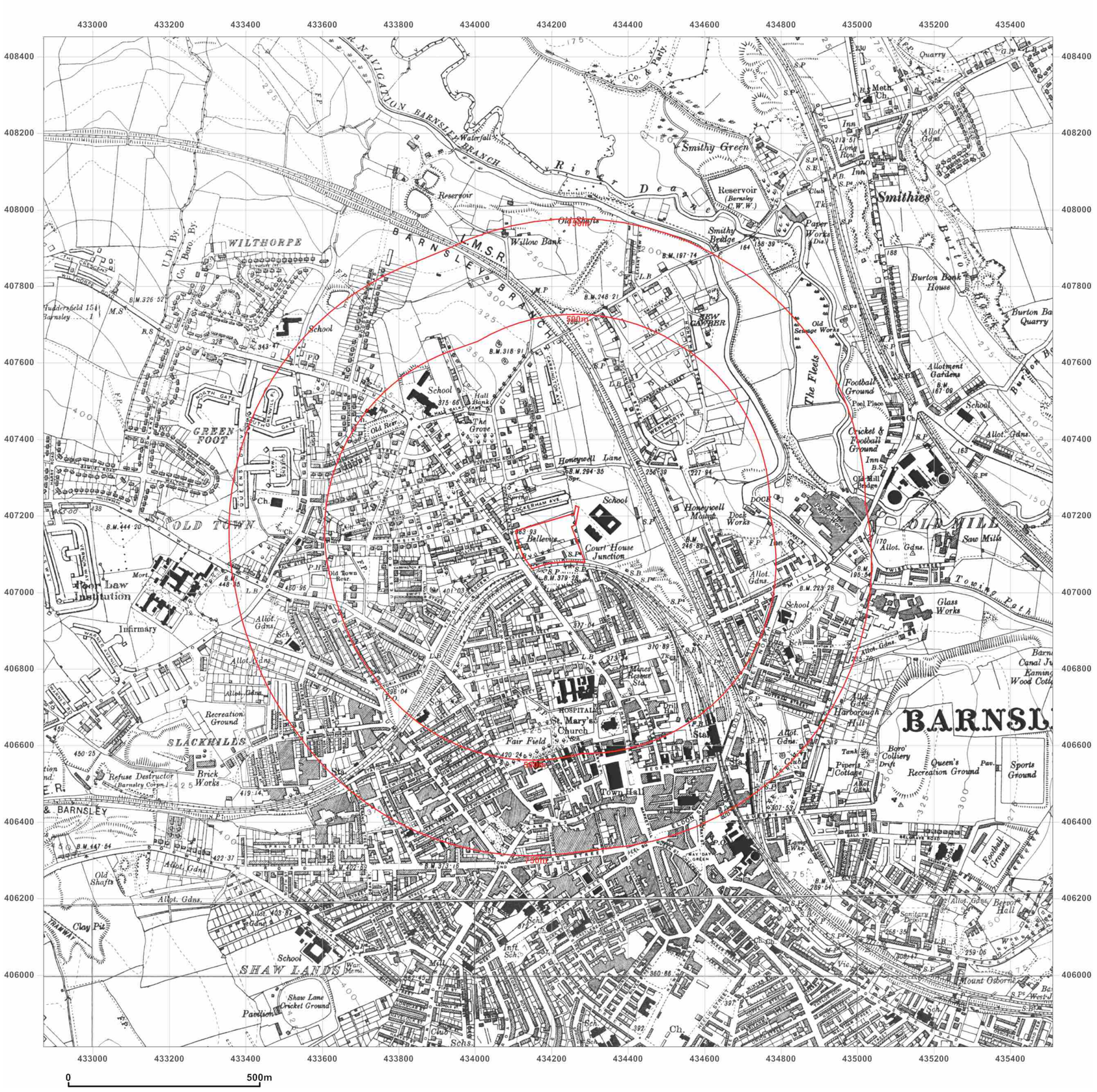
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Production date: 05 June 2014

To view map legend click here *Legend*



GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

BELLE VUE
COCKERHAM LANE
BARNSLEY, S75 1AT

Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1851
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1938
Edition N/A
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Levelled N/A

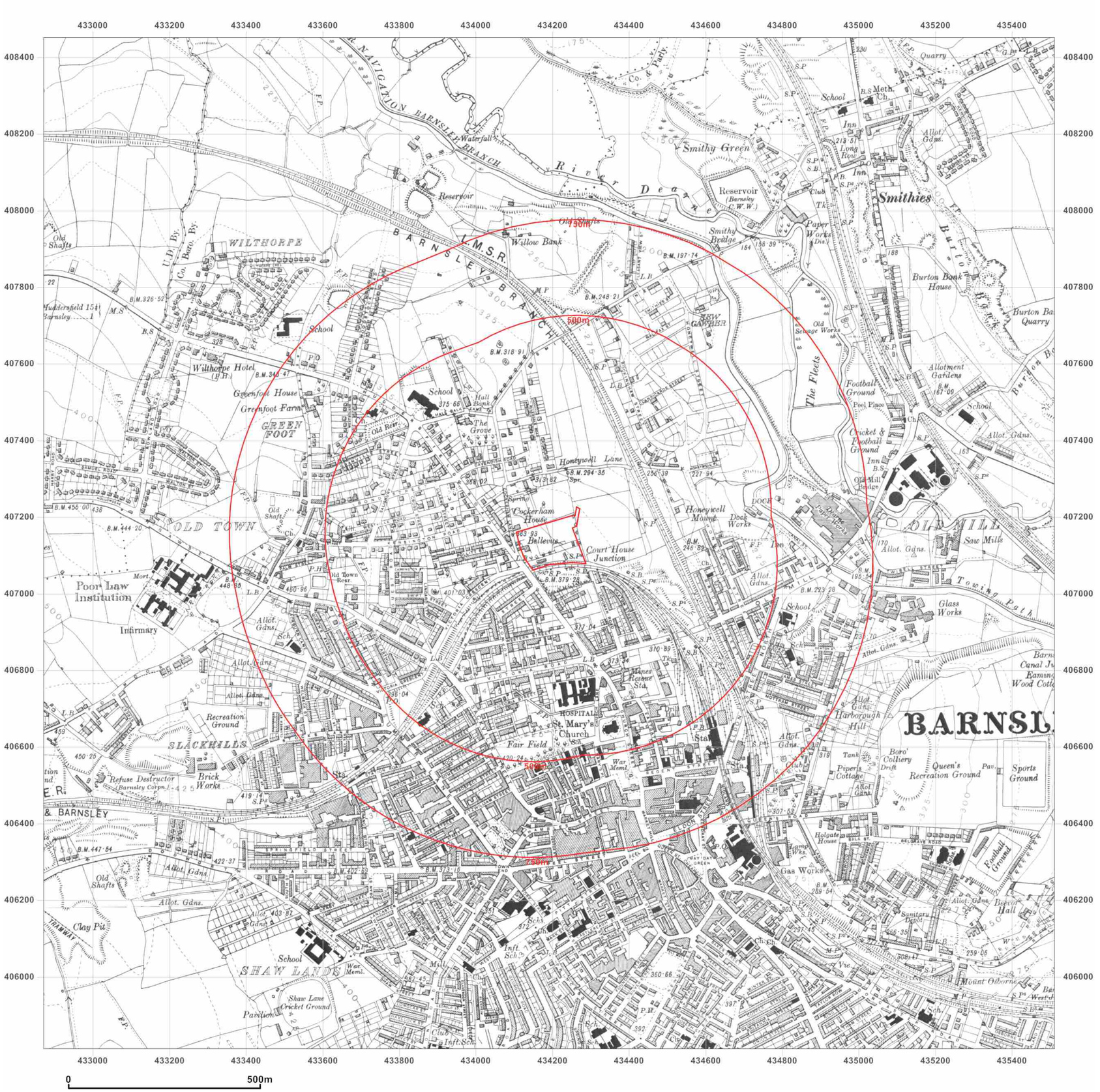
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GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

BELLE VUE
COCKERHAM LANE
BARNSLEY, S75 1AT

Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1929**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1851
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1851
Revised 1929
Edition N/A
Copyright N/A
Levelled N/A

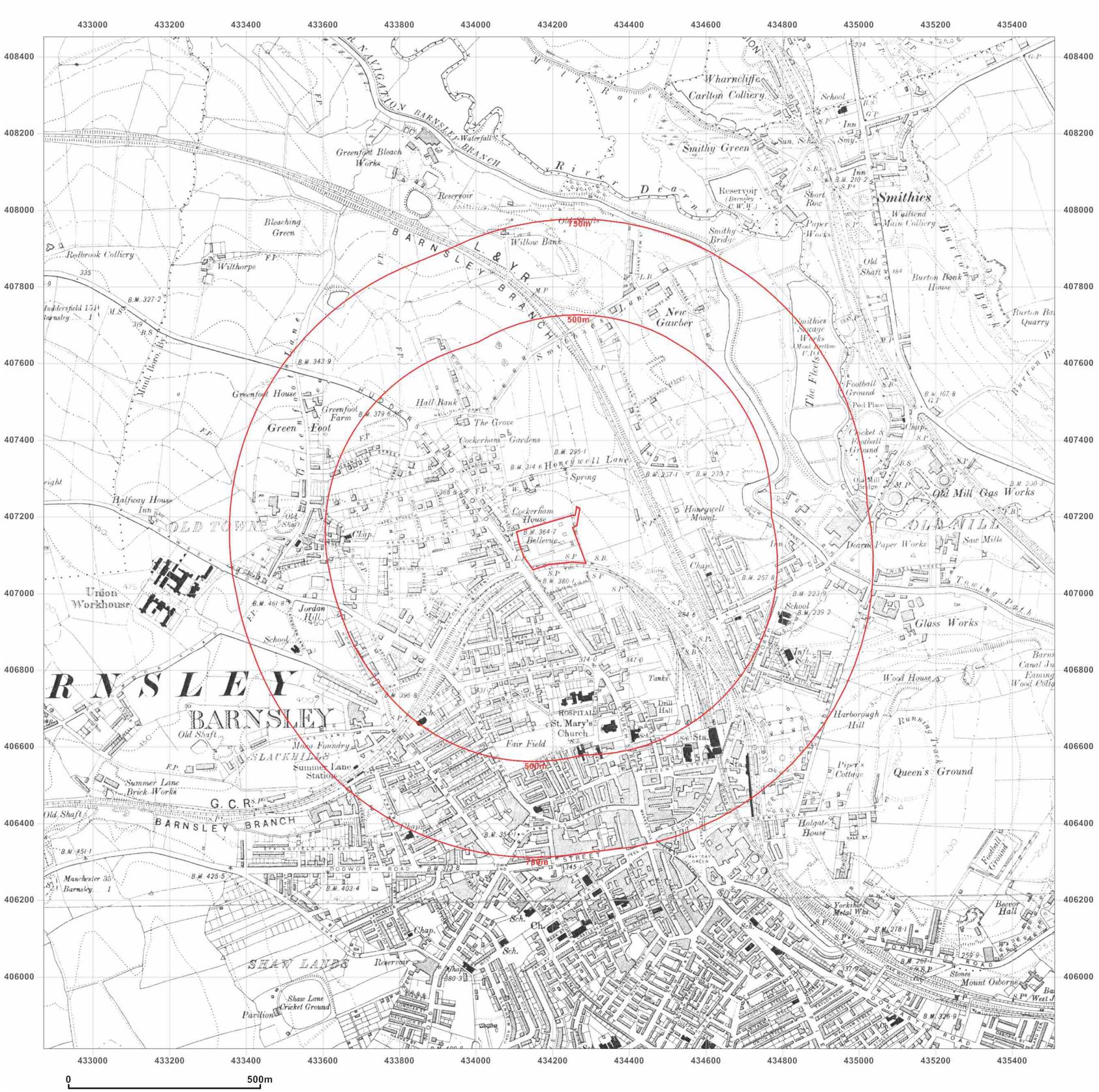
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GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

BELLE VUE
COCKERHAM LANE
BARNSLEY, S75 1AT

Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1904**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1890
Revised 1904
Edition N/A
Copyright N/A
Levelled N/A

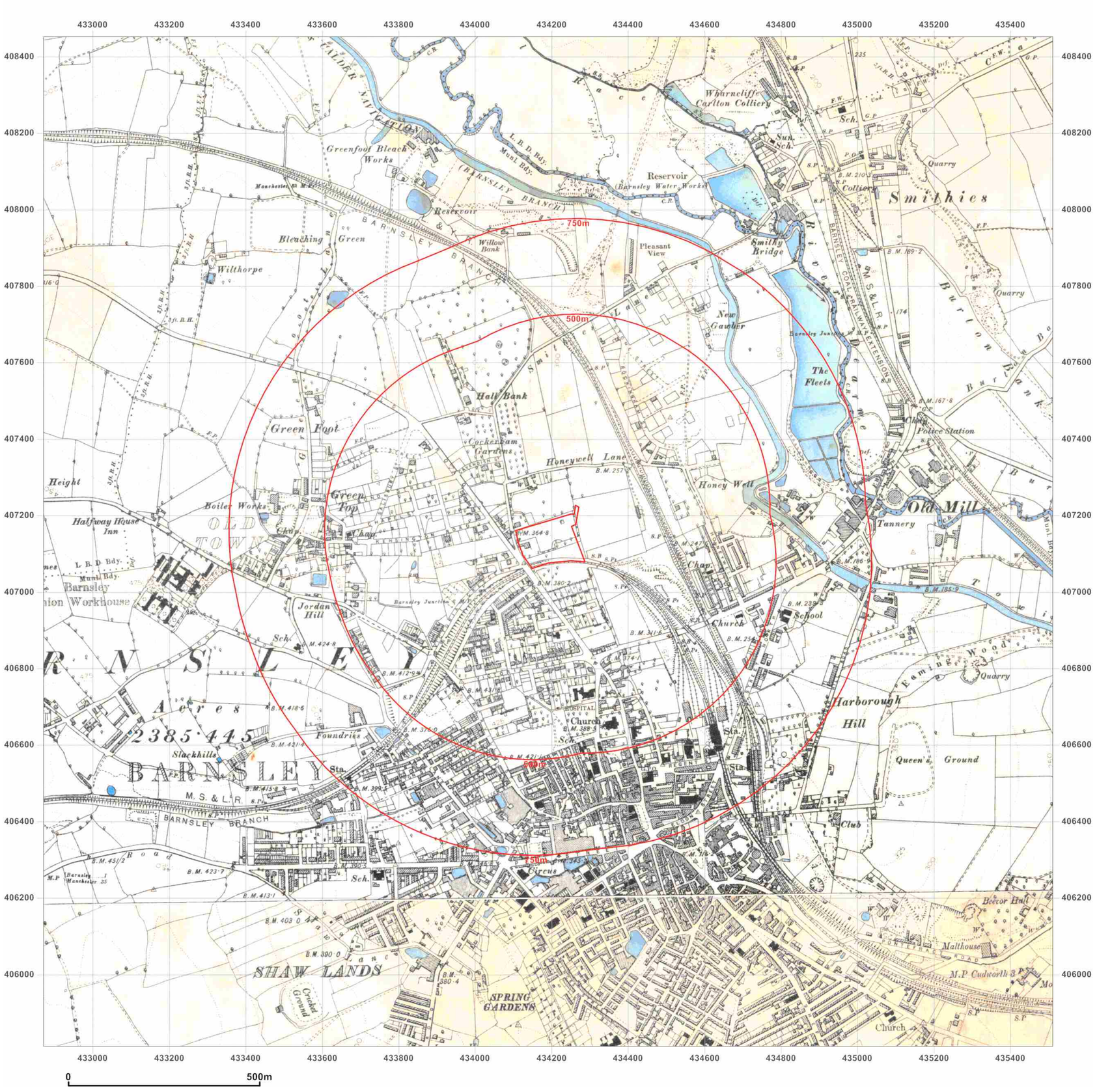
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ENVIRONMENTAL INSIGHT

Site Details:

BELLE VUE
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BARNSLEY, S75 1AT

Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1890**

Scale: 1:10,560

Printed at: 1:10,560

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GroundSure
ENVIRONMENTAL INSIGHT

Site Details:

BELLE VUE
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BARNSLEY, S75 1AT

Client Ref: ZMCH/CS/071073-10
Report Ref: GS-1487406
Grid Ref: 434190, 407131

Map Name: County Series

Map date: **1850**

Scale: 1:10,560

Printed at: 1:10,560

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Production date: 05 June 2014

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Appendix D BGS Borehole Records

BARNSLEY COLLEGE

TRIAL PIT RECORD SHEETS

TRIAL PIT NO. 1

Dark brown and black TOPSOIL with small rootlets throughout	to	0.30m
Loose to medium dense slightly clayey stony orangey brown SAND with fragments of weathered sandstone throughout	to	0.60m
Light brown and grey very weathered shattered SANDSTONE	to	1.40m

No water encountered
Sides of pits stable throughout

TRIAL PIT NO. 2

Dark TOPSOIL	to	0.30m
Loose to medium dense medium to dark brown slightly clayey stony SAND, with fragments of weathered sandstone throughout	to	0.70m
Light brown fragmented very weathered SANDSTONE	to	1.00m

No water encountered
No collapse of sides

British Geological Survey

TRIAL PIT NO. 3

Dark brown and black TOPSOIL with small rootlets present	to	0.35m
Loose to medium dense medium to dark reddish brown slightly clayey stony SAND with fragments of weathered sandstone throughout	to	0.65m
Very weathered light brown shattered SANDSTONE	to	1.00m

No water present
No side wall collapse

TRIAL PIT NO. 4

Black TOPSOIL	to	0.35m
Loose to medium dense medium to dark orangey brown slightly clayey stony SAND, with fragments of weathered sandstone throughout	to	0.70m
Light to medium orangey brown very weathered shattered SANDSTONE	to	1.00m

No water present
No side wall collapse

TRIAL PIT NO. 5

Dark brown TOPSOIL	to	0.40m
Loose to medium dense medium to dark orangey brown slightly clayey stony SAND with some fragments of weathered sandstone throughout	to	0.70m
Light brown very weathered shattered SANDSTONE with some thinly bedded fragments of weathered red sandstone throughout	to	1.10m

No water present
No side wall collapse

TRIAL PIT NO. 6

Dark brown and black TOPSOIL	to 0.20m
Loose to medium dense reddish brown slightly clayey stony SAND, small fragments of weathered sandstone throughout	to 0.70m
Reddish brown very weathered shattered SANDSTONE	to 1.00m

No water present
No side wall collapse

TRIAL PIT NO. 7

Dark TOPSOIL with various rootlets present	to 0.35m
Loose to medium dense reddish brown slightly clayey stony SAND with some fragments of weathered sandstone and small rootlets throughout	to 0.75m
Light to medium brown very weathered SANDSTONE	to 1.10m

No water present
Sides of pits stable.

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD

SE30NW 98 3445-0695

SITE Caxton Street, Off Old Mill Lane, Barnsley BOREHOLE NO. A

BORING METHOD Rotary Openhole ORDNANCE DATUM LEVEL 190.44m

BOREHOLE DIAMETER 0.1m STANDING WATER LEVEL NIL

DATE ~~COMMENCED~~ 14.6.78 Flushing Medium Air ~~DATE COMPLETED~~

DEPTH FROM M	TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	0.6	Black Ash/Coal Fill	0.6	
0.6	1.2	Yellow Sandy Clay Fill	0.6	
1.2	4.3	Dry grey shaley fill with traces of brick clay and coal debris	3.1	
4.3	6.1	Uncompacted voidy ground (apparently fill)	1.8	Lost flushings at 4.3 metres
6.1	9.8	Very soft material (apparently fill)	3.7	Rapid bit penetration
9.8	10.7	Solid strata - yellow brown natural sandy clay - damp	0.9	Sample taken from bit
10.7				
		Strata sequence inferred from bit penetration and flushing returns		
		Hole terminated at 10.7 metres		

DATE 28.6.78

MINING ENGINEER

FILL 3.4

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD SE30NW 99 3445-0695

SITE ..... Caxton Street, Off Old Mill Lane, Barnsley ..... BOREHOLE NO. ..B.....

BORING METHOD ..... Rotary Open Hole ..... ORDNANCE DATUM LEVEL .100.32m.....

BOREHOLE DIAMETER ..... 0.1m ..... STANDING WATER LEVEL NIL.....

DATE ~~COMMENCED~~ ..... 14.6.78 ..... ~~DATE COMPLETED~~ ..... Flushing Medium Air

DEPTH FROM M	DEPTH TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	0.6	Black coal/shale fill	0.6	
0.6	4.3	Soft yellow sandstone fill	3.7	
4.3	4.9	Hard/soft banded material (apparently fill)	0.6	Lost flushings at 4.3m
4.9	6.4	Grey shaley fill	1.5	Flushings return 4.9m.
6.4	7.9	Yellow /orange damp sandstone	1.5	

Strata sequence inferred from bit penetration and flushing returns

Hole terminated at 7.9 metres

DATE 28.6.78

..... MINING ENGINEER

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD

FILL 8.8

SE30NW 100 3445-0695

SITE Caxton Street, Off Old Mill Lane, Barnsley BOREHOLE NO. C

BORING METHOD Rotary Openhole ORDNANCE DATUM LEVEL 100.48m

BOREHOLE DIAMETER 0.1m STANDING WATER LEVEL NIL

DATE ~~COMMENCED~~ 14.6.78 ~~DATE COMPLETED~~ Flushing Medium Air

DEPTH FROM M	TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	0.9	Black shale/coal fill	0.9	
0.9	1.8	Sandy weathered fill	0.9	
1.8	7.6	Soft grey shaley fill	5.8	
7.6	8.8	Soft material (apparently fill)	1.2	Lost flushings at 7.6m
8.8	10.1	Solid strata - yellow brown natural sandy clay - damp	1.3	Sample taken from bit
		Strata inferred from bit penetration and flushing returns.		
		Hole terminated at 10.1 metres		

DATE 28.6.78

MINING ENGINEER

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD

SE30NW 102 3445-0695

SITE Caxton Street, Off Old Mill Lane, Barnsley ..... BOREHOLE NO. E .....

BORING METHOD Rotary Openhole ..... ORDNANCE DATUM LEVEL 100.35m .....

BOREHOLE DIAMETER ..... 0.1m ..... STANDING WATER LEVEL NIL .....

DATE ~~COMMENCED~~ ..... 14.6.78 ..... Flushing Medium Air ~~DATE COMPLETED~~ .....

DEPTH FROM M	TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	0.6	Black shale/coal fill	0.6	
0.6	1.2	Yellow sandy clay fill	0.6	
1.2	4.6	Grey shaley fill	3.4	
4.6	6.1	Uncompacted voidy fill	1.5	
6.1	7.0	Grey shaley fill	0.9	
7.0	7.6	Soft competent material (probably natural clay)	0.6	Lost flushings at 7.0m. Constant steady bit penetration.
7.6	8.2	Solid strata - brown sandstone	0.6	Sample taken from bit.
		Strata sequence inferred from bit penetration and flushing returns.		
		Hole terminated at 8.2 metres		

DATE 28.6.78 .....

..... MINING ENGINEER

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD

SE30NW 103 3445-0695

SITE ..Caxton Street, Off Old Mill Lane, Barnsley..... BOREHOLE NO. ...F.....

BORING METHOD ..Rotary Open Hole..... ORDNANCE DATUM LEVEL ..100.27m.....

BOREHOLE DIAMETER 0.1m..... STANDING WATER LEVEL Nil.....

DATE ~~COMMENCED~~ 14.6.78 Flushing Medium. Air
~~DATE COMPLETED~~

DEPTH FROM M	TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	0.9	Black ash/coal/shale fill	0.9	
0.9	2.4	Yellow broken sandstone fill	1.5	
2.4	5.2	Hard/soft banded material (apparently fill)	2.8	Lost flushings at 2.4m.
5.2	6.2	Soft sandy clay	1.0	Flushings return at 5.2m.
6.2	7.0	Yellow sandstone	0.8	
		Strata sequence inferred from bit penetration and flushing returns.		
		Hole terminated at 7.0 metres		

DATE 28.6.78

MINING ENGINEER

FILE 5.0

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD

SE30NW 104 3445-0695

SITE Caxton Street, Off Old Mill Lane, Barnsley ..... BOREHOLE NO. G

BORING METHOD Rotary Open Hole ..... ORDNANCE DATUM LEVEL 100.40m

BOREHOLE DIAMETER 0.1m ..... STANDING WATER LEVEL NIL

DATE ~~COMMENCED~~ 14.6.78 ..... ~~DATE COMPLETED~~ Flushing Medium Air

DEPTH FROM M	TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	3.0	Ash/shale fill	3.0	
3.0	4.3	Hard/soft banded material (apparently fill)	1.3	Lost flushings at 3.0m
4.3	5.0	Uncompacted voidy ground (apparently fill)	0.7	
5.0	5.5	Soft competent material (probably natural clay)	0.5	Constant steady bit penetration
5.5	7.0	Solid strata - sandstone	1.5	Sample taken from bit.

Strata sequence inferred from bit penetration and flushing returns.

Hole terminated at 7.0 metres

DATE 28.6.78

MINING ENGINEER

FILL 4.8

SOUTH YORKSHIRE COUNTY COUNCIL
MINING ENGINEERS SECTION
BOREHOLE RECORD SE30NW 105 3445-0695

SITE Caxton Street, Off Old Mill Lane, Barnsley BOREHOLE NO. H

BORING METHOD Rotary Open Hole ORDNANCE DATUM LEVEL 100.38m

BOREHOLE DIAMETER 0.1m STANDING WATER LEVEL NIL

DATE ~~COMMENCED~~ 15.6.78 Flushing Medium ~~DATE COMPLETED~~ Air

DEPTH FROM M	DEPTH TO M	DESCRIPTION OF STRATA	THICKNESS	REMARKS
0.0	0.9	Black ash fill	0.9	
0.9	4.8	Alternating hard/soft banded sandstone fill	3.9	
4.8	6.1	Soft sandy clay	1.3	Damp from 4.8m
6.1	6.7	Yellow sandstone	0.6	

Strata sequence inferred from bit penetration and flushing returns.

Hole terminated at 6.7 metres

DATE 28.6.78

MINING ENGINEER

Appendix E Coal Authority Report

The Coal Authority

Issued by:
The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG
Website: www.groundstability.com Phone: 0845 762 6848 DX 716176 MANSFIELD 5

GROUNDSURE LIMITED
SOVEREIGN HOUSE
CHURCH STREET
BRIGHTON
BN1 3UJ

Our reference:	**51000549526001**
Your reference:	**GS-1487405, PO:**
Date of your enquiry:	**05 June 2014**
Date we received your enquiry:	**05 June 2014**
Date of issue:	**05 June 2014**

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

Non-Residential Coal Authority Mining Report

BELLE VUE , COCKERHAM LANE , BARNSLEY, SOUTH YORKSHIRE, S75 1AT

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 3 seams of coal at 90m to 450m depth, and last worked in 1986.

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

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

Present

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

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.

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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

There are 2 claim(s) within 50 metres of the property boundary that do not match the property address. These are shown on the attached plan.

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.

If further subsidence damage claims information is required in addition to that provided in this report, the Authority need to manually search their records. For further advice on how to order this additional information visit www.groundstability.com or telephone 0845 7626 848.

Mine gas

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

Hazards related to coal mining

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

Withdrawal of support

The property is in an area for which notices of entitlement to withdraw support were published in 1978, 1982.

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.

© The Coal Authority

Payments to owners of former copyhold land

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

Comments on Coal Authority information

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

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

Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional Remarks

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

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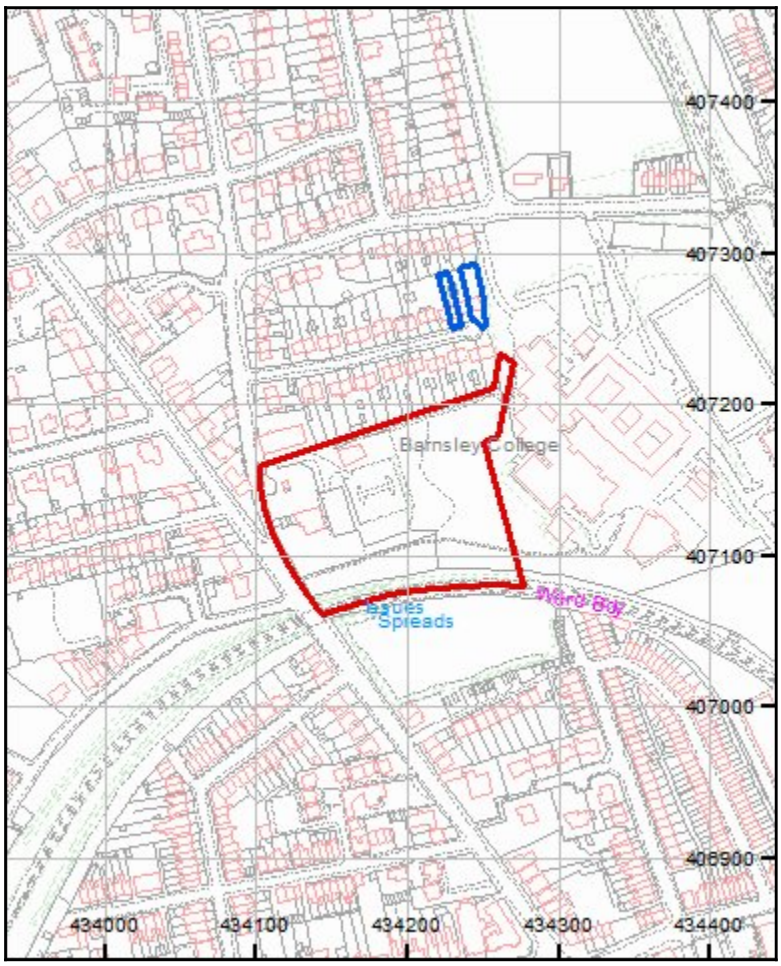
Location map

Approximate position of property



Enquiry boundary

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Key

Approximate position of enquiry boundary shown

Coal Claims

Mapping sourced from Ordnance Survey

Appendix F Mineral Report

BARNSLEY
Metropolitan Borough Council

Planning & Transportation Service
Assistant Director, Ruth Middleton BA (Hons). MRTPI. Dip Surv
South Yorkshire Mining Advisory Service
Mining Advisory Manager: C. P. Naylor, CEng., MIMM.,
Central Offices, Kendray Street, Barnsley, S70 2TN
Tel: (01226) 772685 Fax: (01226) 772688
Email: SYMAS@barnsley.gov.uk

My Ref: FW/SML/M1246/1 Your Ref:

Date: 11th April, 2006 Enquiries to: Mrs. F. Wickham Dial Direct: (01226) 772689

White Young Green Environmental Ltd.,
Arndale Court,
Headingley,
LEEDS.
LS6 2UJ

FOR THE ATTENTION OF DR. MARTIN CROSS

Dear Sir,

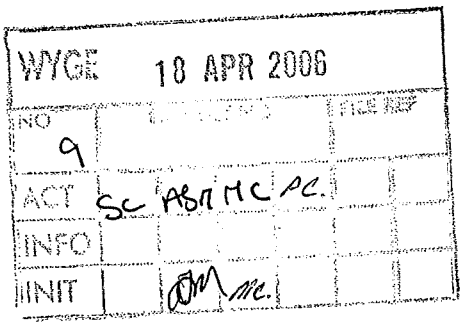
BARNSLEY COLLEGE, OLD MILL LANE, BARNSLEY

Further to your consultation request of 3rd April, 2006, please find enclosed a mineral report and plans which outline the mining and geological situation for the above site at Barnsley.

Yours faithfully,

pp C. P. Naylor,
Mining Advisory Manager.

Enc.



P.S.3937

SOUTH YORKSHIRE MINING ADVISORY SERVICE

MINERAL REPORT

CONFIDENTIAL

Date: 11/04/2006
Ref: FW/SML/M1246/1

BARNSLEY COLLEGE, OLD MILL LANE, BARNSLEY

SITUATION

It is proposed to construct a ten-storey building on land adjacent to the existing Barnsley College buildings; the site being shown edged orange on the attached plans nos. M1246/1A-M1246/1E.

A visual inspection of the site showed that the surface dips to the east.

GEOLOGY

Geological records indicate that the site is located on the Kents Rock Sandstone of the Middle Coal Measures, which generally dips at a rate of 1 in 11 in a north-easterly direction in this area. Information on the geological sheet suggests that the bedrock is around 11 m thick hereabouts, as recorded in the borehole situated just over 40 m to the east, see plan no. M1246/1A.

There are no geological faults shown to affect the locality.

The conjectured outcrop of the Low Beamshaw Coal Seam is shown to lie some 60 m to the south-east of the College, with the Top Beamshaw Coal lying around 130 m from the south-eastern corner of the site. These seams will dip clear away from the location.

An area of 'made ground' is shown to lie at the eastern edge of the site, which was recorded as being 7.5 m thick in the aforementioned borehole.

MINING INFORMATION

Shallow Mining

Kents Thin Coal Seam

The Kents Thin Coal Seam is recorded in two nearby boreholes as lying around 16.5 m and 18.5 m deep at these locations, see plan no. M1246/1A.

There are no records to suggest that this seam, which has been proved to be around 600 mm thick, has been worked in this area of Barnsley.

A borehole investigation was undertaken by the County Mining Engineers (predecessors to SYMAS) in 1978 on a site to the north-east, also associated with Barnsley College, to assess the possibility of a shallow mining situation as cavities had been encountered by an earlier investigation. Although voids were

encountered in the fill material covering the site the natural ground was found to comprise sandy clay underlain by a competent sandstone. No voids were encountered in the natural strata and no evidence of shallow mineworkings was seen, the boreholes terminating above the horizon of the coal seam in natural ground.

Boreholes carried out to the east of the site in the County Way area proved the Kents Thin Coal between 14 m - 20 m deep with a section of 500 mm.

No old workings were encountered. However, fracturing of the sandstone bedrock was found which is indicative of the effects of workings in the underlying Barnsley Coal Seam at a relatively shallow depth - see below.

Kents Thick Coal Seam

There are no records of any workings in the Kents Thick Coal Seam (thickness 920 mm) which lies over 20 m deeper than the Kents Thin Coal.

Deeper Mining

The only mineworkings to have affected the site would have been in the Barnsley Coal Seam (approximate depth 100 m, thickness 2670 mm) which was worked on a 'pillar and stall' basis. These workings were abandoned circa 1834 and are shown coloured pink on plan no. M1246/1B.

All mining movement associated with these workings will have ceased long ago and as the area is remote from the active coalfield will not be affected in the future.

DISUSED MINESHAFTS

Plans nos. M1246/1A and M1246/1B show a disused mineshaft around 75 m to the north of the site. No other mine entries are known within the immediate vicinity of the proposals.

FORMER LAND USES

The relevant County Series and Ordnance Survey Sheets have been checked for any former industrial uses which might influence the site.

Plans nos. M1246/1C and M1246/1D indicate the 'Falcon Works', Mines Rescue Station, railway, factory and builders yards, together with other structures such as a tank and former buildings to lie in the area.

LANDFILL

The site lies within 250 m of a Category 4 Landfill Site, as indicated on the current Borough Landfill Site Map and illustrated on drawing M1246/1E.

CONCLUSIONS

1. The site is currently stable from the deep mining subsidence aspect, with no future mining proposed under Barnsley.

2. The Kents Thin Coal Seam is indicted to lie at a shallow depth of around 15 m in the vicinity of Barnsley College. There are no records of any associated mineworkings in this part of the Town and it is thought unlikely that any would be present. With a proved thickness of 600 mm and at the depths suggested any unrecorded workings would be too deep to affect the surface stability in any case.

   However, considering the large development proposed and the author of this report not knowing the depths of the proposed foundations etc. it may be prudent to carry out a limited borehole investigation in the area of the new building, possibly as part of a soils investigation, in order to confirm the situation.

   Prior to any investigations involving the shallow coal seam indemnification must be sought from the Coal Authority.

3. The Kents Thick Coal lies more than 20 m deeper than the Kents Thin Coal and again no associated mineworkings are recorded. Ground stability would not be affected at this depth in any case.

4. There are no geological faults indicated to affect the site.

   However, past site investigations in the general locality have proved fracturing of the sandstone bedrock and therefore these types of conditions may also exist at the Barnsley College Site.

   Where weak ground conditions are encountered they may require treatment and/or foundations to be strengthened.

5. A disused mineshaft is indicated to be present around 75 m clear to the north of the site.

6. An area of made ground lies just within the eastern part of the site. If development is proposed in this area the nature and characteristics of the material should be checked for its suitability in relation to the end use.

7. Historical plan records confirm that a number of land uses have been present on and around the site, including a works, factory and builders yards.

8. The site lies within 250 m of a Category 4 Landfill Site, as indicated on the current Borough Landfill Site Map, which is described as:-

"A site which the Waste Disposal Site Licence indicates has been licensed to accept material that would not be expected to give rise to landfill gas in substantial quantities.

Or a site which has been granted an exemption from Waste Management Licensing pursuant to the provisions of the Waste Management Licensing Regulations 1994."

9. Due to the shallow coal seams, Barnsley Seam workings, fractured sandstone and made ground etc the usual precautions/monitoring in respect of fugitive gases are advised during investigations or development works, particularly where deep excavations are involved.

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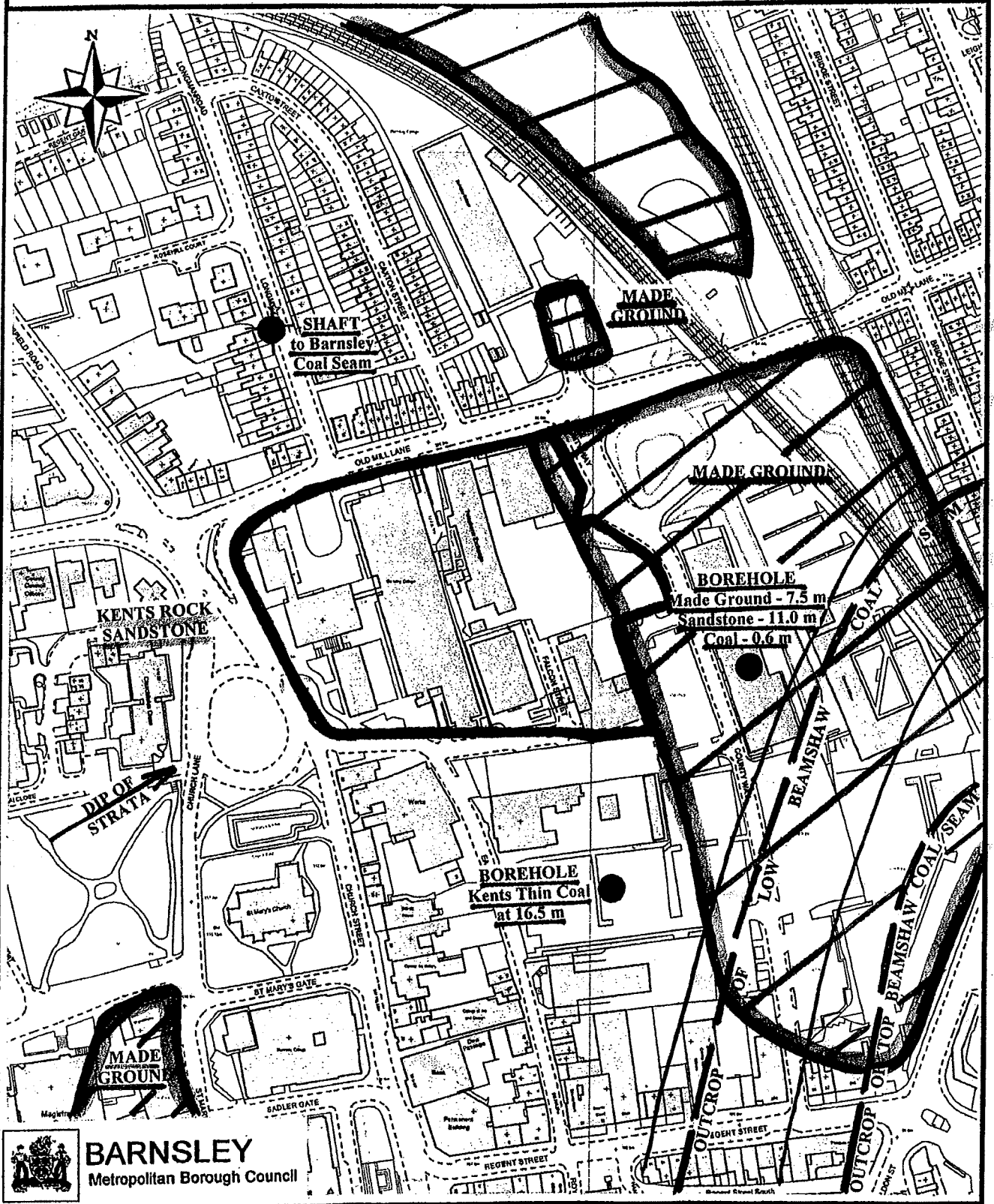
pp C. P. Naylor,
Mining Advisory Manager.

DRAWING TITLE

BARNSLEY COLLEGE
OLD MILL LANE, BARNSLEY

DRAWING NO.

M 1246 / 1A



BARNSLEY
Metropolitan Borough Council

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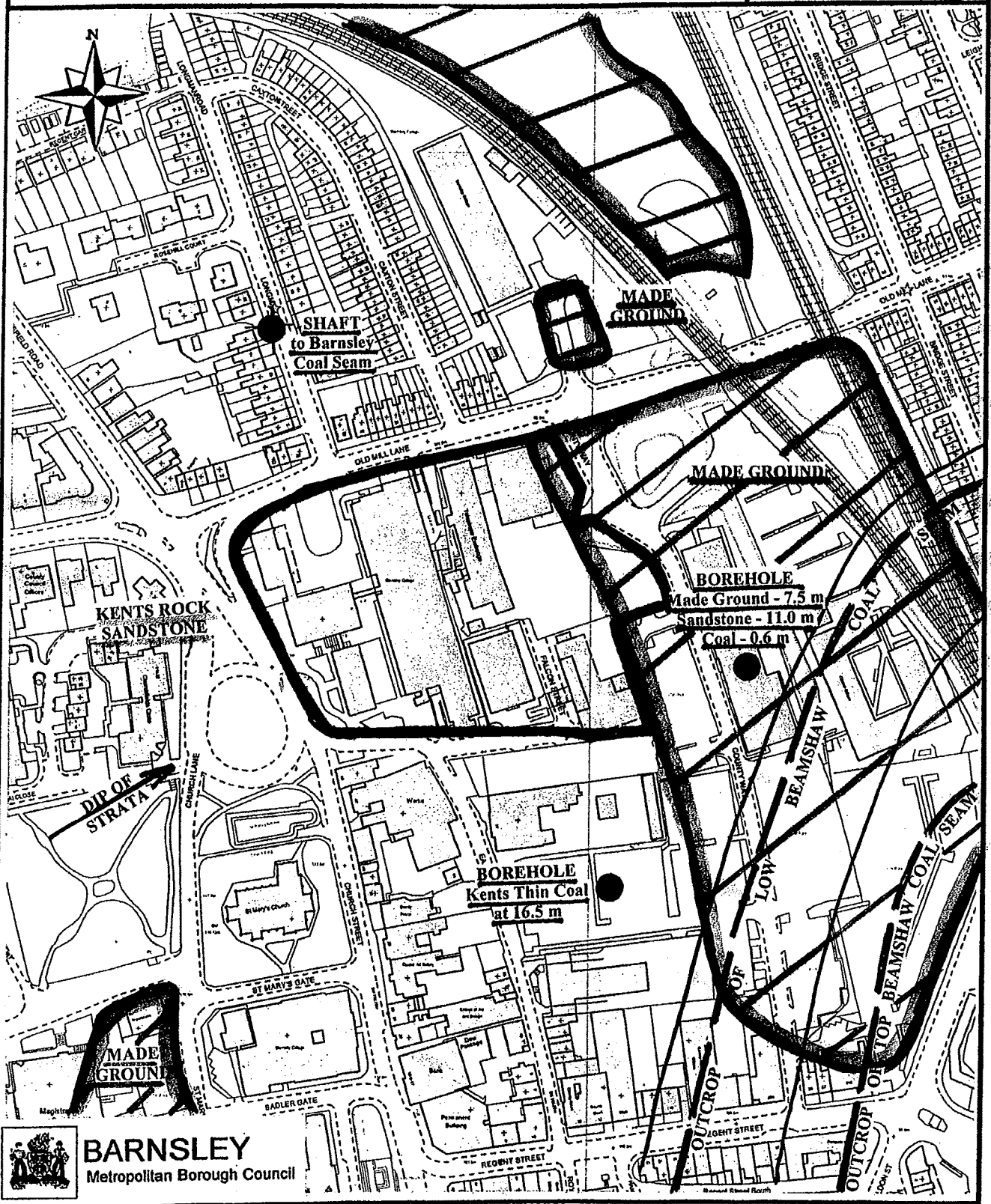
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M 1246 / 1A



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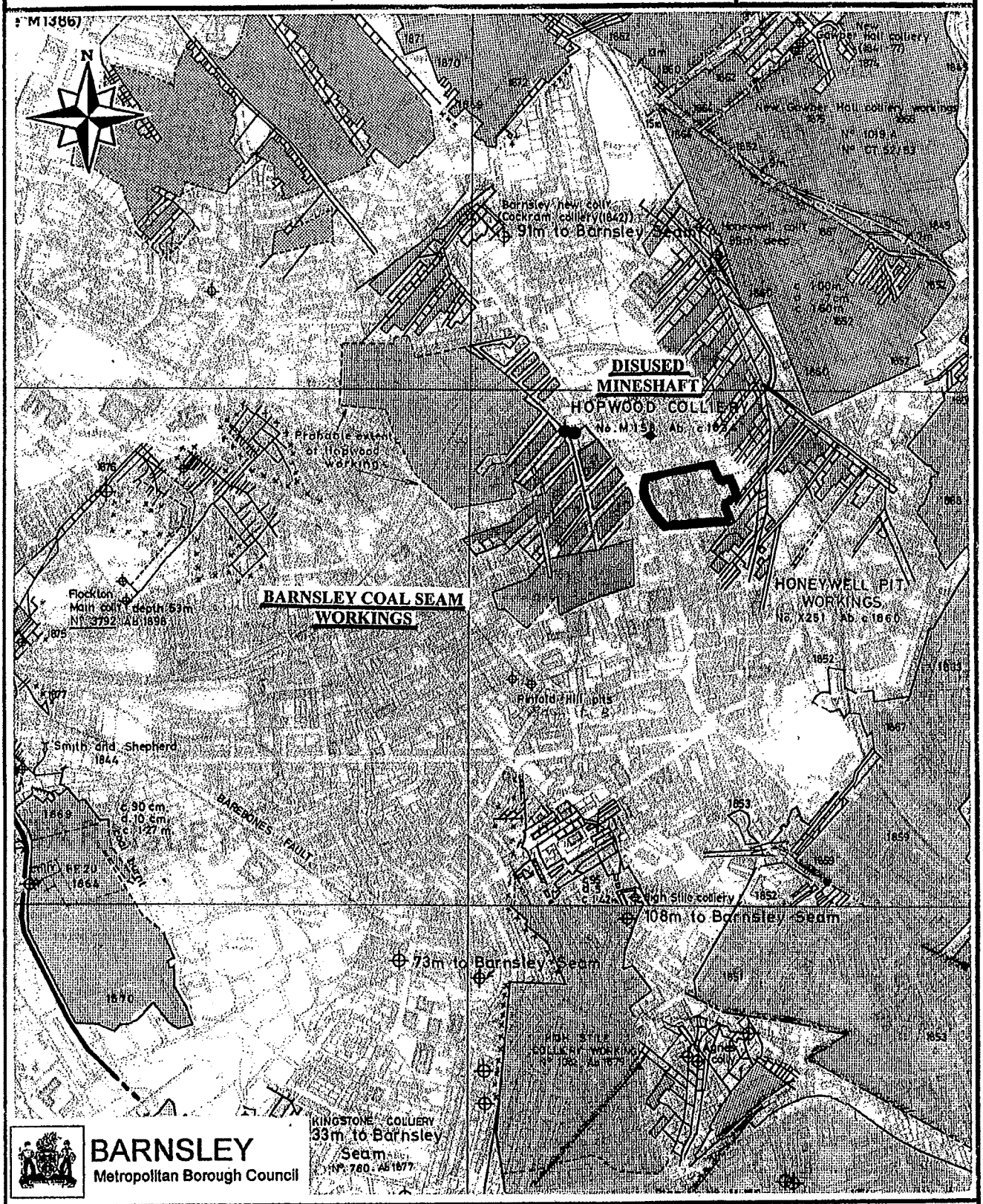
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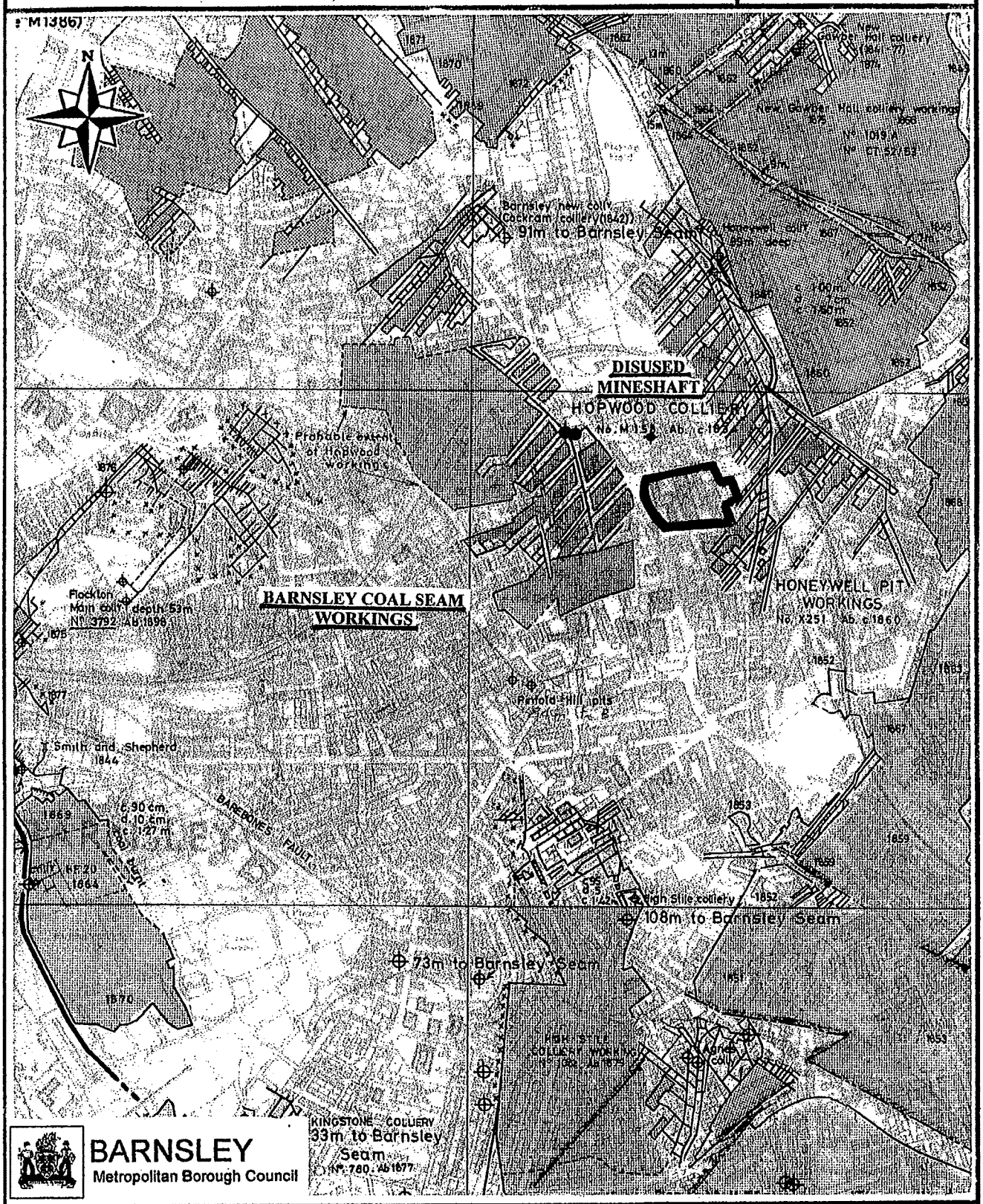
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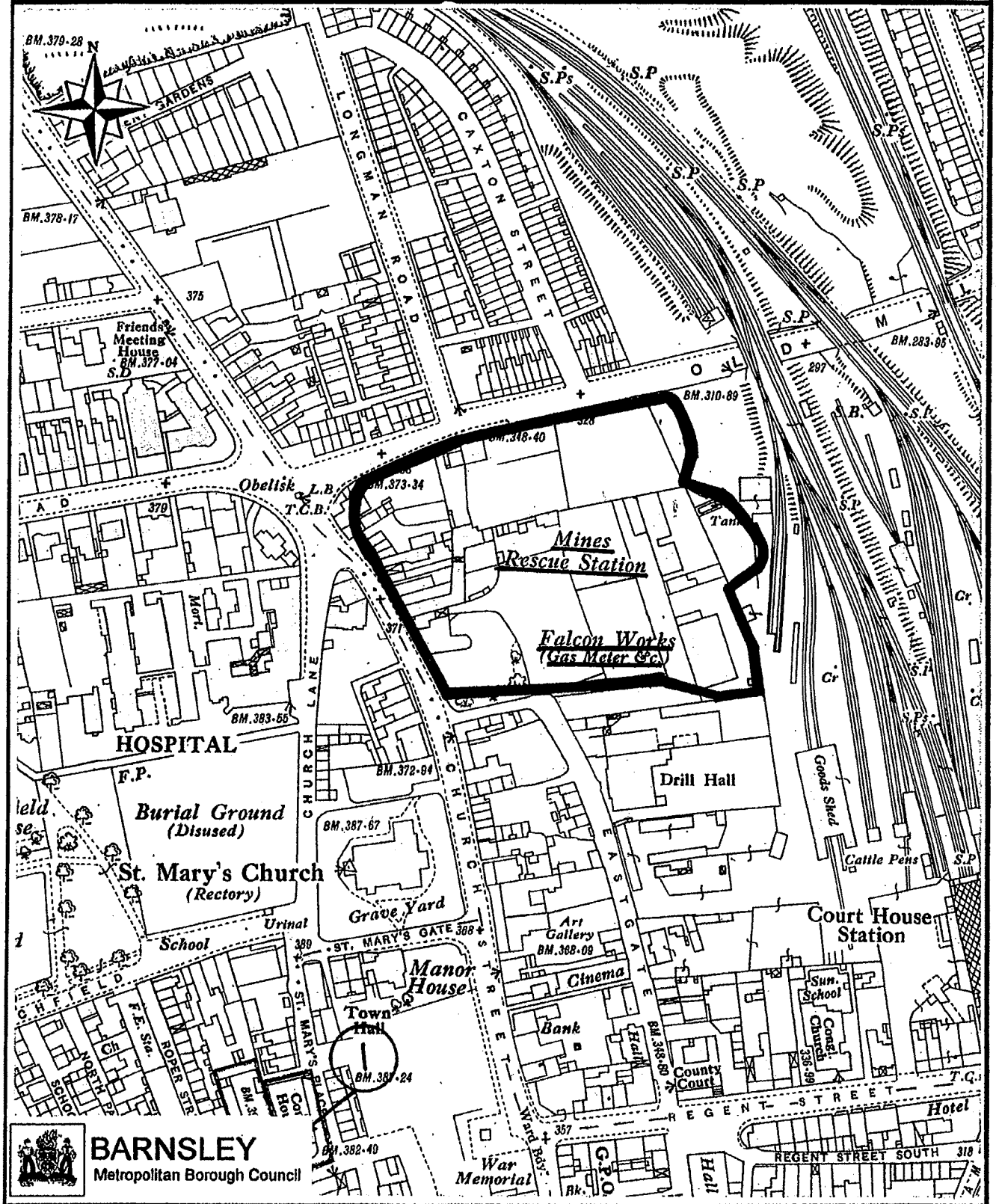
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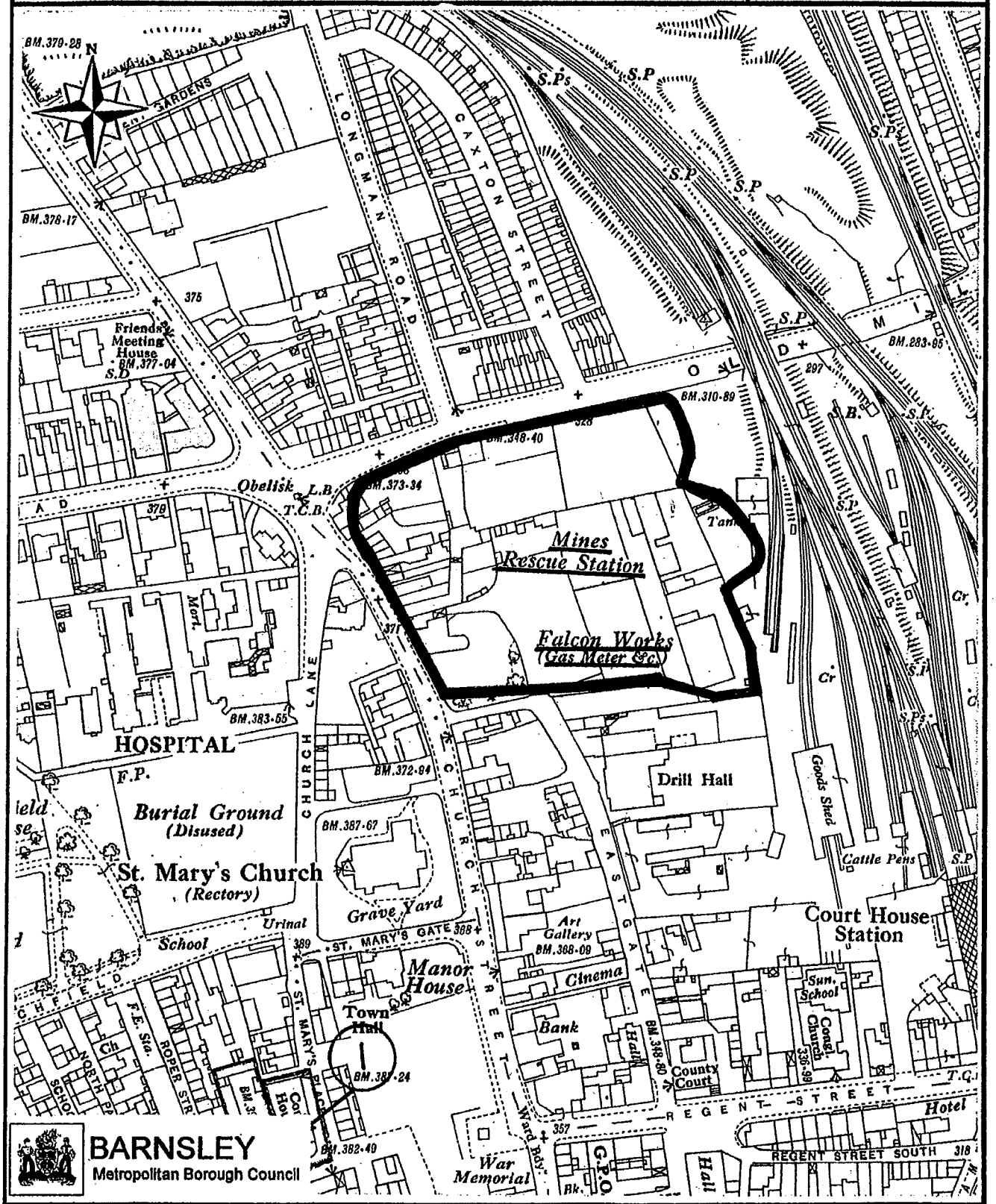
M 1246 / 1C



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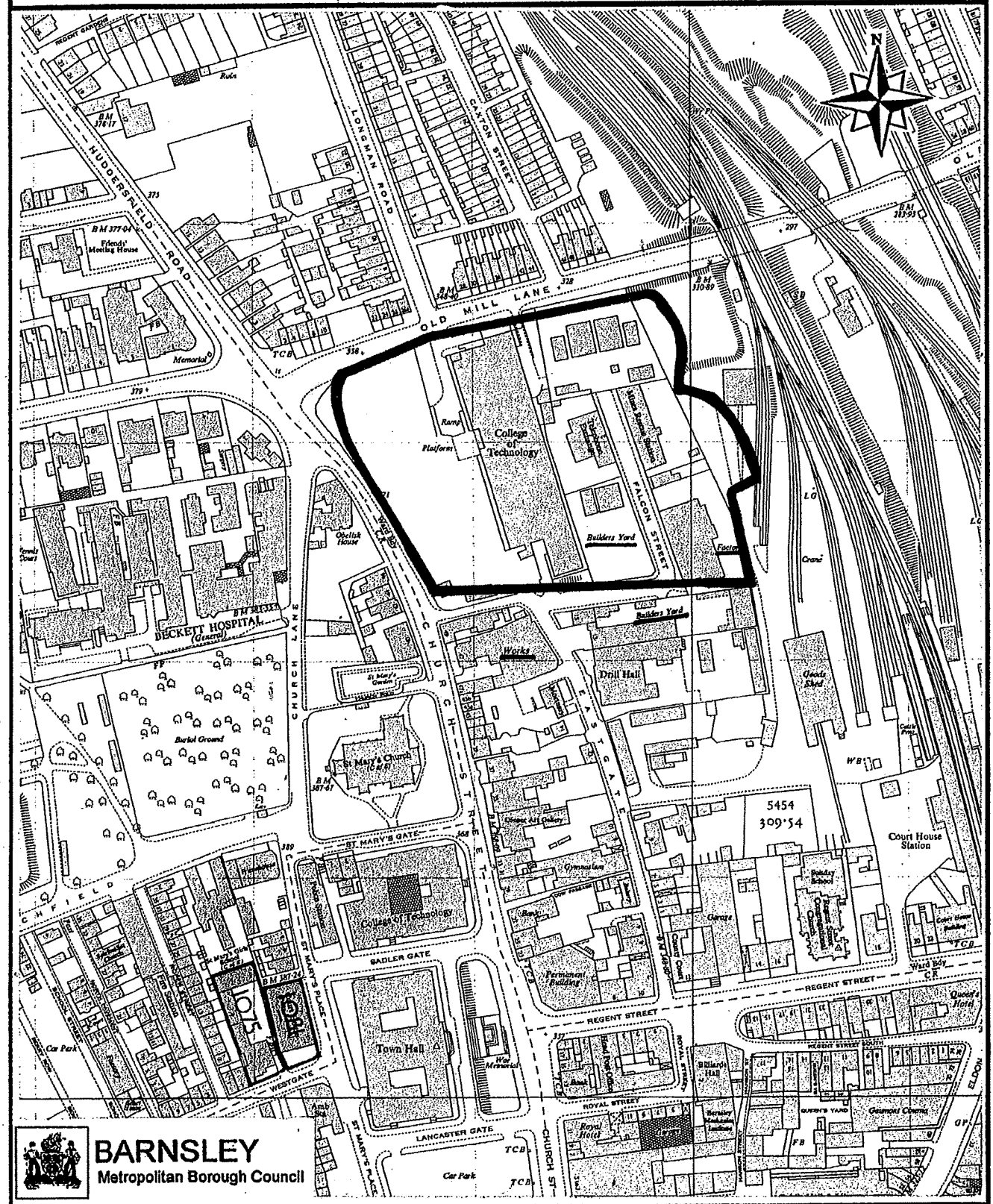
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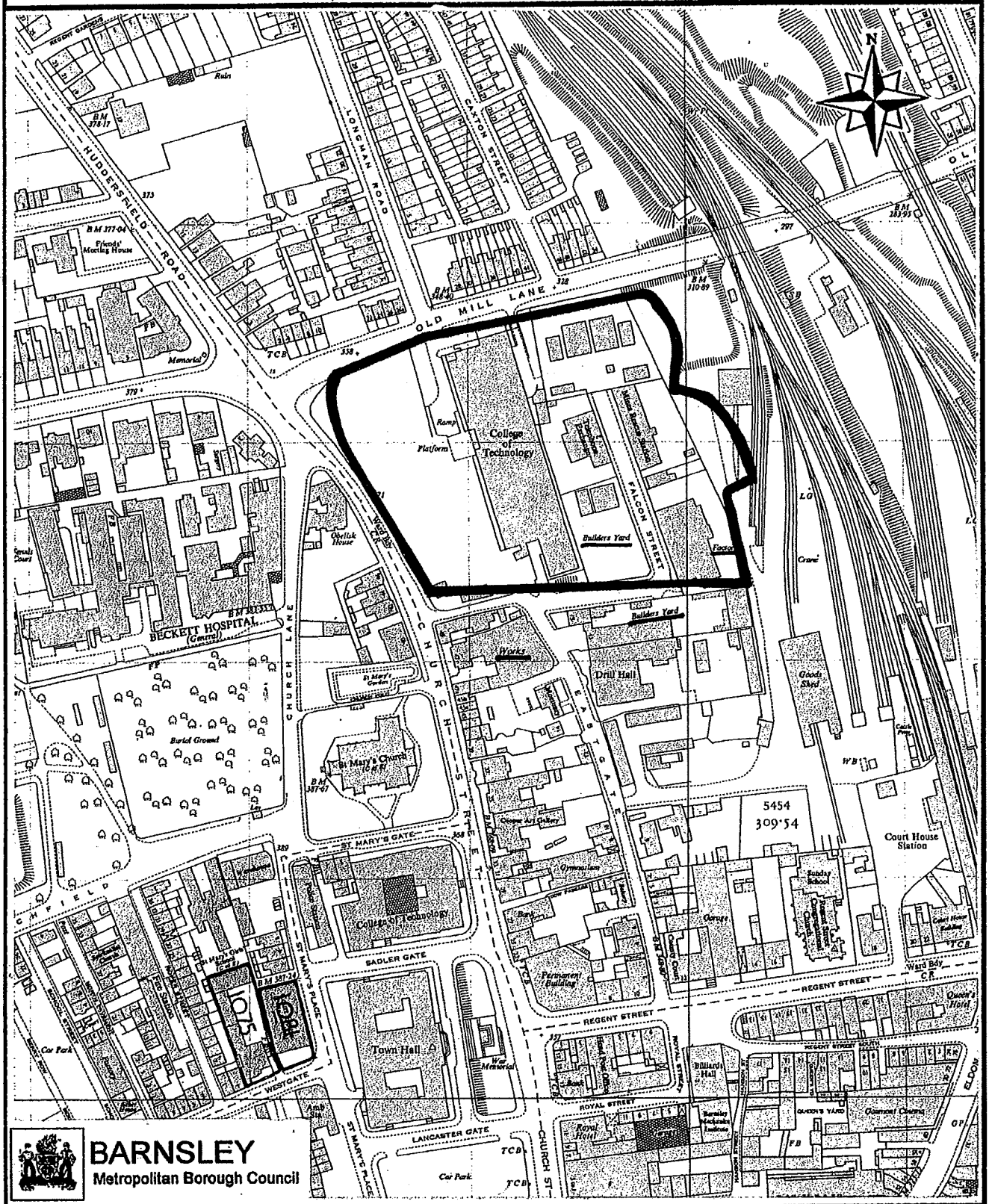
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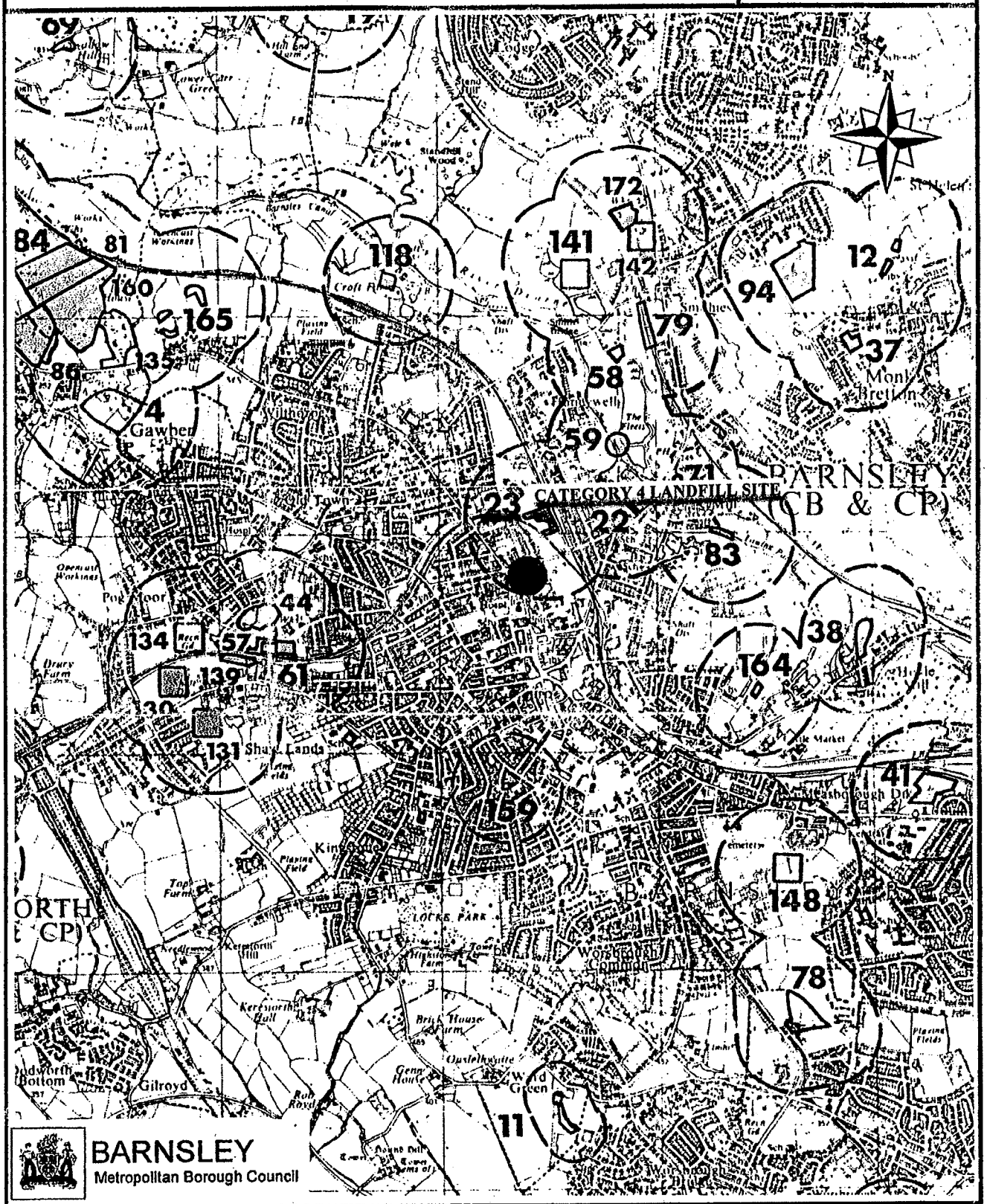
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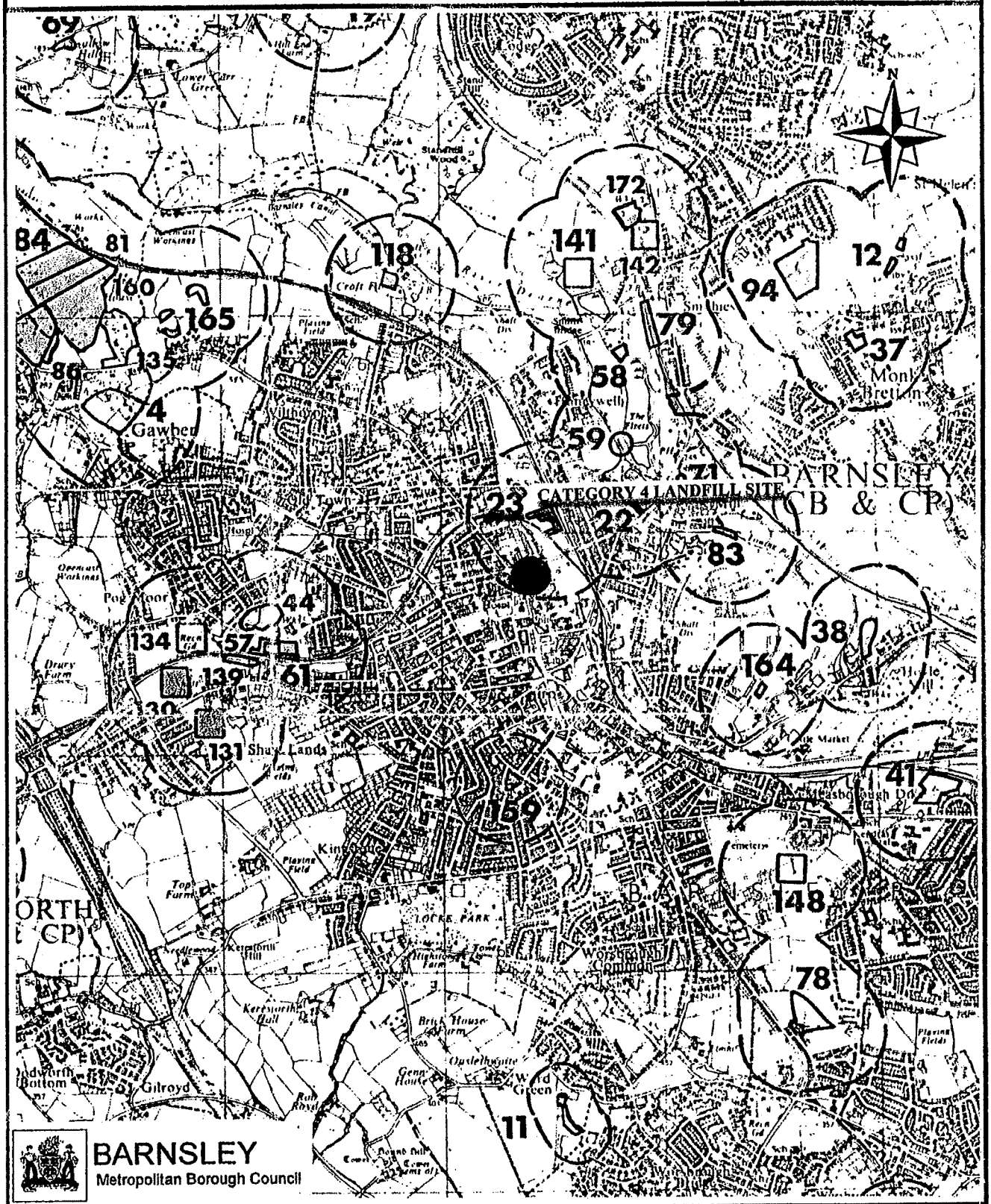
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