

The title "Preliminary Geoenvironmental Investigation" is written in white text over a photograph of a stream. The stream flows through a rocky bed, bordered by green grass and vegetation. The water is clear and reflects the surrounding greenery.

# Preliminary Geoenvironmental Investigation

## Land at Smithy Wood Lane, Dodworth For The Wentworth Trustees

Report no: 1979/1

Date: June 2015



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## APPENDICES

### Appendix A – General notes

01	Environmental setting
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### Appendix B – Drawings

Drawing	Title
1979/1	Site location plan
1979/3	Site features
1979/3a	Site features (wider site area)
1979/4	Site photos
1979/5	Preliminary conceptual site model

### Appendix C – Commission

### Appendix D – Historical OS plans\*

### Appendix E – Search responses\*

From	Date	Content
SYMAS	25 <sup>th</sup> September 2014	Coal mining risk
Landmark	7 <sup>th</sup> April 2015	Envirocheck report
Coal Authority	7 <sup>th</sup> April 2015	Coal mining report
Coal Authority	5 <sup>th</sup> June 2015	Coal mine abandonment search

\* Some of this data is not included within the paper copy of this report; most is included in the PDF copy and all is included on the CD

## FOREWORD (preliminary geoenvironmental investigation report)

This report has been prepared for the sole use and reliance of the Client named on page 1 and cannot be relied upon by any other parties without the express written authorisation of Lithos Consulting Limited (Lithos). Any unauthorized third party relies on this report at their own risk and the authors owe them no duty of care.

The report presents observations and factual data obtained during our site investigation, and provides an assessment of geoenvironmental issues with respect to information provided by the Client regarding the proposed development. Further advice should be sought from Lithos prior to significant revision of the development proposals.

The report should be read in its entirety, including all associated drawings and appendices. Lithos cannot be held responsible for any misinterpretations arising from the use of extracts that are taken out of context. However, it should be noted that in order to keep the number of sheets of paper in the hard copy to a minimum, some information (e.g. full copy of the Landmark/Groundsure Report) is only included within the "electronic", PDF Report on the accompanying CD.

The findings and opinions conveyed in any Desk Study section of the report (including review of any third party reports) are based on information obtained from the sources listed, which Lithos understands are reliable. All reasonable skill, care and diligence has been applied in examining the information obtained. However, Lithos accept no responsibility for inaccuracies in the data supplied or for opinions based on any such inaccurate data.

Where the report refers to the potential presence of invasive weeds such as Japanese Knotweed, or the presence of asbestos containing materials, it should be noted that the observations are for information only and should be verified by a suitably qualified expert.

Lithos reserve the right to amend their conclusions and recommendations in the light of further information that may become available.

**PRELIMINARY  
GEOENVIRONMENTAL INVESTIGATION  
OF LAND AT  
SMITHY WOOD LANE, DODWORTH**

## **1 COMMISSION AND BRIEF**

### **1.1 The commission and brief**

- 1.1.1 Lithos Consulting were commissioned by The Wentworth Trustees to carry out a preliminary investigation of land at Smithy Wood Lane, in Dodworth.
- 1.1.2 Correspondence regarding Lithos' appointment, including the brief for this investigation, is included in Appendix C. The agreed scope of works included:
- A site walkover and inspection
  - An assessment of the land use history
  - Determination of the site's environmental setting
  - A mining risk assessment in accordance with Coal Authority guidance.
  - Assessment of anticipated ground conditions, including potential contaminants
  - Assessment of anticipated foundation and engineering issues associated with redevelopment for a residential end-use
  - Provision of recommendations for an appropriate ground investigation
- 1.1.3 This Preliminary Investigation comprised an inspection of historical and geological maps and information provided by the British Geological Survey, and the Landmark Information Group, the Coal Authority and the Environment Agency. In addition a site inspection has been carried out by Lithos.
- 1.1.4 The primary aims of this investigation were to identify salient geoenvironmental issues affecting the site to enable design and costing of an appropriate intrusive investigation, and to support the submission of a planning application.

### **1.2 The proposed development**

- 1.2.1 The site is proposed for development with around 36 homes, associated gardens and adoptable roads and sewers. It is understood that a proposed layout is to be prepared and submitted for outline planning at this stage.

### **1.3 Report format and limitations**

- 1.3.1 Standard definitions, procedures and guidance are contained within Appendix A, which includes background, generic information on assessment of the site's environmental setting.
- 1.3.2 General notes and limitations relevant to all Lithos preliminary investigations are described in the Foreword and should be read in conjunction with this report. The text of the report draws specific attention to any modification to these procedures and to any other special techniques employed.

## 2 SITE DESCRIPTION

### 2.1 General

2.1.1 The site's location is shown on Drawing 1979/1 presented in Appendix B to this report. Site details are summarised in the table below.

Detail	Remarks
Location	3 km south west of Barnsley town centre
NGR	SE 319 045
Approximate Phase I Area	1.0 ha (2.47 acres)
Known services	Low Pressure gas and underground BT shown within Smithy Wood Lane immediately beyond the eastern boundary of the site. Further services may be present, enquiries should be made with the appropriate service providers prior to redevelopment.

### 2.2 Site features

2.2.1 Lithos completed a walkover survey of the site on 8<sup>th</sup> April 2015.

2.2.2 The site comprises the north-east triangular corner of an existing agricultural field, currently under crop, sloping down from west to south-east at around 1 in 13.

2.2.3 Land immediately beyond the southern boundary falls away more steeply (c. 1 in 9) towards the south.

2.2.4 Access to the site is via a farm gate on the north-east boundary, from the end of Smithy Wood Lane (residential highway).

2.2.5 Smithy Wood Lane continues to the south-east as a tree lined single track rough surfaced (gravelled) road.

2.2.6 Existing residential properties are located immediately beyond Smithy Wood Lane and beyond the western boundary of the site.

2.2.7 Existing salient features, at the time of the walkover are presented on Drawing 1979/3 in Appendix B to this report, with the wider site area shown on Drawing 1979/3a, and summarised in the table below.

Feature	Remarks
Current access	Off Smithy Wood Lane to the north-east
Topography	Site slopes from around 115mAOD on the western boundary to around 105mAOD on the south-east boundary
Approximate areas	1 ha, existing agricultural field (currently cropped)
Nature of boundaries	North-west – various garden fencing, localised hedges/bushes. North-east – post and wire fencing with hedgerows. Dry stone walls and hedgerows towards to south-east. South – no physical boundary.
Surrounding land uses	North, east and west – existing residential South – agricultural fields

2.2.8 A selection of site photographs are included on Drawing 1979/4.

### 3 SITE HISTORY

- 3.1 In order to investigate the development history and previous land uses at the site and immediate surrounding land, site centred extracts from Ordnance Survey (OS) plans dating back to 1855 have been examined. These plans are presented in Appendix D to this report and also include the Phase II area of the site.
- 3.2 The table below provides a summary of the salient points relating to the history of the Phase I area of the site with respect to the proposed end use. It is not the intention of this report to describe in detail all the changes that have occurred on or adjacent to the site. Significant former uses/operations are highlighted in bold text for ease of reference.

Date	Site	Surrounding land
1855	Site comprises agricultural fields, divided up by hedgerows.	Smithy Wood Lane runs adjacent to north eastern boundary. Sandstone <b>quarry</b> 70m west. Surrounding land predominantly comprises agricultural fields. Railway lines 200m south east of site with associated sidings and buildings.
1894	<b>Reservoir</b> located centrally on the southern boundary. Surrounding embankments suggest a raised feature.	Quarry no longer shown. Development of housing 100m north. <b>Strafford Collieries</b> with sidings from railway and coking ovens 200m south east.
1907		Some expansion of <b>Strafford colliery</b> . <b>Rose Hill colliery</b> 300m north of site.
1933	No significant changes.	No significant changes.
1938		Development of housing 300m to 500m north.
1948		Development of housing immediately west of the site.
1958	Reservoir no longer shown.	<b>Strafford colliery</b> now disused. <b>Rose Hill colliery</b> no longer shown.
1966	Site no longer divided by hedgerows.	No significant changes.
1970	No significant changes.	Development of housing 100m north and 200m north east of site.
1985		No significant changes.
1993		Development of housing immediately north of site.
2006		No significant changes.
2015		Former <b>Strafford colliery</b> now developed with <b>Strafford industrial park</b> .

## 4 ENVIRONMENTAL SETTING

### 4.1 General

4.1.1 Notes describing how the site's environmental setting has been assessed are included in Appendix A to this report. The responses received from the Environment Agency, the Coal Authority, the BGS and Landmark are presented in Appendix E.

Issue	Data reviewed	
Geology	1:50,000 BGS map (Sheet SE 30 SW) BGS shaft log - (Strafford Main Colliery - 3216,0412) BGS Memoir 87	Drift - None recorded Solid - Coal measures - typically Sandstone across the site, undivided mudstone/siltstone likely on eastern boundary Shallowest coal seam - Lidget Coal outcrops immediately south of the site, dipping below the site Strata Dip - around 5° north east Faults - None crossing site. Champany Hill Fault, running east-west (downthrow to south) located approximately 50m to the north
Mining	Coal Authority BGS maps	This site is located within a Coal Mining Development High Risk Area. Further details in Section 4.3 below.
Quarrying	Historical OS plans	Historical sandstone quarry located 100m west of site, no known quarries at the site
Radon	BRE Report BR211	Site is in an area where between 1% and 3% of homes are estimated to be above the action level, therefore consideration should be given to the installation of Basic measures; see section 6.3.
Hydrogeology	Landmark Report	Source Protection Zone? None. Aquifer - None recorded (Drift); Secondary A (Solid). Groundwater abstractions? 160m south - Silkstone Mineshaft, Strafford Colliery, Barnsley. Operated by the Coal Authority. Soil leaching potential - Low. Pollution incidents? None of significance to site.
Hydrology	Landmark Report	Nearest watercourse(s) - Dodworth Dyke, 220m south of site. Pollution incidents? None of significance to site. Abstractions? None of significance to site. Discharge consents? None of significance to site.
Flood risk	Environment Agency	The site lies in Flood Zone 1, where the risk of flooding from rivers or the sea is classified as low. The site area is less than 1 hectare, therefore a formal Flood Risk Assessment should not be required. However, developers are advised to refer to the standard comments on managing surface water drainage as set out in the EA's Standing Advice on Development and Flood Risk.

## 4.2 Landfills

4.2.1 Known or suspected areas of landfill in the vicinity of the proposed development site are summarised below:

Location	NGR (proximity to site)	Remarks	Source of data
Land adjacent to former Strafford Colliery	SE 322 041 (190m south-east)	Inert and household waste. Degradable and chemically hazardous waste prohibited. Input of between 10,000 and 25,000 tonnes per year between December 1988 and December 1990.	EA website Landmark report
Gilroyd Lane, Stainsborough	SE 324 040 (230m south-east)	Inert and commercial waste deposited between Dec 1987 and June 1988	

4.2.2 Two historical recorded landfill sites are located within 250m of the sites boundary. A former sandstone quarry is also shown on historical plans around 70m to the west, backfilled circa 1894, with former open cast coal workings around 240m to the south-west.

4.2.3 Given the age of the landfills (last backfilled in 1990), nature of wastes deposited and their distance from the site (nearest 190m) the generation of significant quantities of hazardous gas which could affect the site is considered unlikely.

4.2.4 However, the risk of ground gas migration cannot be discounted and appropriate mitigation measures are discussed further within section 6.3 of this report.

## 4.3 Coal & mining

4.3.1 In July 2011 the Coal Authority (CA) formalised their requirements in relation to planning applications and introduced some new terminology relating to coal mining development areas. This Section provides the necessary mining risk assessment required by the proposed planning application.

4.3.2 Geological maps suggest that the Lidget Coal seam underlies the site at shallow depth as summarised below:

- Lidget Coal (0.48m to 1.25m thick) outcropping around 20m to the south of the site, dipping below the site.
- Joan Coal (0.51m to 0.66m thick, noted to be 0.51m thick in Strafford Colliery shaft 200m south), lies approximately 45m below the Lidget Coal.

4.3.3 Approximate outcrops of the above seams, together with additional geological features, are shown on Drawing 1979/3a. The geological plan and BGS Memoir show extensive coal workings in the surrounding area including shafts, adits and opencast works.

4.3.4 Given dip and topography, the Lidget seam is expected to underlie the site at shallow depth (<15m).

4.3.5 It should be noted that seam outcrops plotted on geological maps have been known to be inaccurate by distances in excess of 100m.

4.3.6 Coal Authority (CA) records show that the site lies within a Development High Risk Area - an area with specific mining legacy risks to the surface, including mine entries; shallow coal workings etc.

4.3.7 The CA mining report states that:

- *The property is within the zone of influence from workings in 5 seams at shallow to 270m depth and last worked in 1971*
- *The property is not in the likely zone of influence of any present underground coal workings.*
- *There are no known mine entries within, or within 20 metres of, the boundary of the property.*
- *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. This confirms the absence of any known significant geological faults below the site.*
- *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.*
- *There is no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.*
- *The property is not in an area for which a notice of entitlement to withdraw support has been published.*

4.3.8 A damage notice or claim for alleged subsidence damage was made in November 2000 for fields to the west of Smithy Wood Lane and in July 1999 for fields OS 1333, 0028, 2427, 2020 and 1517. However, the claims were rejected.

4.3.9 Further claims at 32 Calver Close and Saville Hall farm were also rejected.

4.3.10 Given the presence of workings at shallow to 270m depth a mining abandonment plan was requested from the CA.

4.3.11 However, it should be noted that it did not become a statutory requirement to maintain and preserve plans of abandoned mines until the Mine (Coal) Regulations Act of 1872 and consequently there may be mineworkings beneath the site for which the Coal Authority have no records.

4.3.12 The response from the CA, copied to Appendix E of this report, states that they hold records for workings in the Flockton Seam up to 60m depth. Given the depth of this seam any workings underlying the site are not considered to present a risk to surface stability.

4.3.13 The CA do not hold any records for workings in the Lidget Coal, which is conjectured to underlie the site at shallow depth, although unrecorded workings may exist.

## 4.4 Mineral safeguarded areas

4.4.1 The site is underlain by shallow coal (Lidget Coal) and might therefore be considered by the Local Authority to lie within a Mineral Safeguarding Area (MSA). The next shallowest seam, the Joan Coal, is likely to be too deep (>45m) to warrant extraction by opencast methods.

4.4.2 MSAs are areas of known mineral resources that are of sufficient economic or conservation value to warrant protection for generations to come. The purpose of MSAs is not to preclude automatically other forms of development, but to make sure that mineral resources are adequately and effectively considered in land-use planning decisions.

4.4.3 Specialist guidance on Mineral Safeguarding "A Guide to Mineral Safeguarding in England" has been produced by The Coal Authority and the British Geological Survey.

- 4.4.4 Paragraph 143 of the National Planning Policy Framework (NPPF) requires Local Authorities, when preparing Local Plans to:
- Define Minerals Safeguarding Areas and adopt appropriate policies in order that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development, whilst not creating a presumption that resources defined will be worked; and define Minerals Consultation Areas based on these Minerals Safeguarding Areas.
  - Set out policies to encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place.
- 4.4.5 NPPF Paragraph 144 notes that when determining planning applications, local planning authorities should give weight to the benefits of the mineral extraction.
- 4.4.6 As a consequence of the NPPF, and the presence of coal beneath the site, the Local Authority may require The Wentworth Trustees to consider the opportunity to recover (extract) the coal. Applicants submitting planning applications may need to demonstrate to the Local Authority that they will extract the coal, unless:
- It can be shown it is not economically viable to do so, or
  - It is not environmentally acceptable to do so, or
  - The need for the development outweighs the need to extract the coal, or
  - The coal will not be sterilised by the development
- 4.4.7 The viability of coal extraction at this site is considered later in this Report (see Section 6.8).

## 4.5 Land contamination - Part IIA & planning

- 4.5.1 Local Authorities have responsibilities with respect to land contamination in the context both of Part IIA of the Environmental Protection Act 1990, and Planning.
- 4.5.2 The contaminated land regime in Part IIA was introduced specifically to address the historical legacy of land contamination. It applies where there is unacceptable risk, assessed on the basis of the current use and the relevant circumstances of the land. It is not directed to assessing risks in relation to a future use of the land that would require a specific grant of planning permission. This is primarily a task for the planning system, which aims to control development and land use in the future.

### Planning

- 4.5.3 As of 27<sup>th</sup> March 2012, Planning Policy Statement (PPS23) was replaced by the National Planning Policy Framework (NPPF). The NPPF includes the following with respect to contamination and site investigation:
- 4.5.4 'Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.
- 4.5.5 Planning policies and decisions should ensure that:
- The site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses, and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;
  - After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the environmental protection act 1990; and
  - Adequate site investigation information, prepared by a competent person, is presented'.

4.5.6 Annex 2 of the NPPF states that ‘all investigations of land potentially affected by contamination should be carried out in accordance with established procedures (such as BS10175 - 2011, Code of Practice for the Investigation of Potentially Contaminated Sites)’.

*This site*

4.5.7 Given the presence of a Secondary A aquifer (Coal Measures Sandstones) the environmental setting of the site is considered to be of moderate sensitivity.

## 5 GROUND INVESTIGATION DESIGN

### 5.1 Anticipated ground conditions & potential issues

5.1.1 Based on the data reviewed in Section 4 (Environmental Setting) anticipated ground conditions are expected to comprise:

Anticipated condition	Remarks
Made ground	Possible made ground within footprint of former reservoir (likely a raised feature)
Natural soils	Topsoil (300mm) over shallow residual soils (gravelly clay and/or clayey gravel)
Bedrock	Coal Measures sandstone anticipated at shallow depth
Mineworkings	Possible unrecorded workings in the Lidget Coal, at shallow depth beneath the site
Groundwater	Anticipated at depth within bedrock

5.1.2 Historical plans show that the site has been occupied by arable farmland which is not considered likely to have caused significant ground contamination. Nonetheless, activities such as slurry spreading, the discharge of chemicals to ground, and unregulated burial have all occurred on farmland. Potential pollutants associated with farming activity might include any of the following:

Agricultural activity	Potential contaminant
Sewage farming, slurry spreading	Methane, metals, nitrates, oxygen depletion
Crop & animal protection	Pesticides & herbicides
Soil conditioners	Metals, sulphates, PAH
Equipment maintenance	Hydrocarbons, metals
Naturally occurring contaminants	Arsenic, metals

5.1.3 Based on the data above and that in Sections 2 (Site Description) and 3 (History), potential ground-related issues associated with this site are likely to include:

Type of issue	Specific issue	Remarks
Potential on-site contamination sources	1. farming activities 2. former reservoir	1. leakages/spillages 2. made ground
Potential off-site contamination sources	1. surrounding former industrial uses	1. airborne contaminants
Potential geotechnical hazards	1. former reservoir 2. shallow coal workings	1. relict foundations, pipework. 2. unrecorded workings in the Lidget coal
Other potential constraints	1. none	1. none

## 5.2 Preliminary conceptual site model

5.2.1 A preliminary conceptual site model, presented as Drawing 1979/5 in Appendix B, has been prepared after consideration of all the data presented in Sections 2 to 5.1 inclusive of this report.

## 5.3 Ground investigation design & strategy

5.3.1 The preliminary conceptual site model has used as a basis for design of an appropriate ground investigation, the scope of which is summarised below.

Exploratory holes	Purpose
8 trial pits	To determine the general nature of soils underlying the site, including the: <ul style="list-style-type: none"> <li>nature, distribution and thickness of shallow soils, including any made ground</li> <li>suitability of the ground for founding structures and highways</li> </ul>
2 trial trenches	To determine the extent and nature of made ground associated with the former reservoir
8 rotary probeholes	To check for the presence of voids or broken ground associated with possible shallow mine workings. To install monitoring wells across the site in order to monitor for hazardous gas.

5.3.2 Proposed exploratory hole locations should be selected to provide a representative view of the strata beneath the site and to target potential areas of interest identified in Section 5 above. A nominal 40m grid spacing should be appropriate, with additional exploratory locations scheduled as necessary in light of the ground conditions actually encountered.

5.3.3 Representative soil samples of natural and any man-made ground should be taken during the works. The number of soil samples taken should be reflective of the geological complexity actually encountered, but in general about 3 samples should be taken from most exploratory holes.

5.3.4 The investigation should be undertaken in general accordance with:

- BS5930:1999 "Code of practice for site investigation"
- BS10175:2011+A1:2013 "Code of practice for the identification of potentially contaminated sites"
- "Technical Aspects of Site Investigation" – EA R&D Technical Report P5-065/TR (2000)
- "Development of appropriate soil sampling strategies for land contamination" – EA R&D Technical Report P5-066/TR (2001)

5.3.5 The in-situ shear strengths of any cohesive soils encountered should be determined by use of a hand-held shear vane.

5.3.6 The potential for soakaways should be reviewed in light of ground conditions actually encountered, and if considered likely, soakaway tests should be commissioned. Given the anticipated geology and the topography of the site soakaways are considered unlikely to be feasible, however, testing would remove any ambiguity with respect to Yorkshire Water queries.

5.3.7 Routine geotechnical soils analysis (moisture content, Atterberg limits, pH, water soluble sulphate) should be scheduled on about 8 samples.

5.3.8 The site is essentially Greenfield, and therefore testing of potentially contaminated samples should only be required if made ground is encountered in the exploratory holes. However, analysis of topsoil (for pH, metals, TOC, speciated PAH and asbestos ID) should be undertaken in order to confirm its suitability for re-use.

- 5.3.9 Eight probeholes should be sufficient to determine whether or not old mineworkings are present in the Lidget coal seam. However, if a potential risk is perceived to exist, further probeholes may be required to delineate the extent of workings in order to obtain fixed price quotations for the necessary consolidation works.
- 5.3.10 Gas monitoring wells should be installed in each probehole with a period of gas monitoring commenced given the proximity of former quarries, landfills and deep coal workings.
- 5.3.11 It will be necessary to submit an application (with the associated fee) to the Coal Authority (CA) for 'Permission to enter CA mining interests'.
- 5.3.12 Given the proximity of surrounding housing (within 50m of much of the general site area), and in accordance with CA requirements it will be necessary to advance probeholes using water as the flushing medium (as reinforced by recent CA guidance on managing the risk of hazardous gas).
- 5.3.13 The generation potential of potential gas sources (possible shallow coal workings, historical quarry, open cast coal workings and landfill) are considered likely to be Low. Therefore, in accordance with CIRIA Report C665, it would be prudent to initially allow for 9 visits over a 6 month period. A hazardous gas risk assessment will be issued on completion of monitoring.
- 5.3.14 On completion of the fieldwork and laboratory testing a comprehensive bound, factual and interpretative report should be issued. This should contain detailed engineering records, laboratory test results, copies of all relevant correspondence and drawings of the site. The report should also include qualitative risk assessment with respect to both controlled waters and human health.

## 6 CONCLUSIONS & RECOMMENDATIONS

### 6.1 General

- 6.1.1 It is understood that The Wentworth Trustees are considering submission of an outline planning application for residential development of the site.
- 6.1.2 The main issues considered in this report, and in particular in Sections 3 and 4 are based on a review of historical data and available information. This report provides an assessment of geoenvironmental issues and implications associated with the proposed residential redevelopment of the site.

### 6.2 Mining and quarrying

- 6.2.1 This site is located within a Coal Mining Development High Risk Area (an area with specific mining legacy risks to the surface, including mine entries; shallow coal workings etc).
- 6.2.2 Geological plans show the Lidget Coal to underlie the site at shallow depth. If old mineworkings are present in the Lidget coal seam, and are considered to pose a significant risk to surface stability, mitigation of the risks posed will be required; this could be achieved in one of two ways:
- Extraction of the remaining coal
  - Consolidation, via drilling & grouting
- 6.2.3 No known quarrying is shown at the site, the nearest known quarry (sandstone) located around 70m to the west

### 6.3 Hazardous gas

- 6.3.1 Information from Landmark and the Environment agency indicates that there are two known landfill sites within 250m of the sites boundary.
- 6.3.2 Information from historical OS plans suggests that a historical quarry (sandstone) is located around 70m to the west with former opencast coal workings around 240m to the south.
- 6.3.3 Information from Landmark confirms that the site is in an area where between 1% and 3% of homes are estimated to be above the action level.
- 6.3.4 Requirements with respect radon measures are set out in Building Regulations Approved Document C. Probability bandings (based on the proportion of properties in a given area that exceed the Action Level; currently 200 Bq.m<sup>-3</sup>) are used to determine whether a property requires no, basic or full measures. At present Approved Document C advocates basic measures for the probability banding 3% to 10% (full measures if >10%).
- 6.3.5 However, Public Health England (formerly the Health Protection Agency) would like to see all new build include basic measures. Given that the site lies in an area where >1% of homes are estimated to be above the action level, the Developer might consider providing all new dwellings with basic radon protection measures.
- 6.3.6 Basic radon measures should comprise:
- Use of 1200 gauge polyethylene DPM\DPC, with suspended concrete floors or ground bearing floor slabs
  - Continuous membrane across cavity walls
  - Cavity tray in external walls
  - Fully sealed service entries/exits

### 6.4 Foundations

- 6.4.1 At present, no geotechnical ground investigation data is available and consequently it is only possible to estimate the ground conditions. Before firm foundation recommendations can be given, it will be necessary to undertake an appropriate ground investigation. However, tentative recommendations are provided below.
- 6.4.2 Made ground is not generally considered a suitable founding material and foundations should be taken through it, into underlying natural in-situ strata of adequate bearing capacity. Consequently, alternative foundation solutions will be required in any areas of deep made ground (greater than about 1.5m). Such made ground might be present in the vicinity of a former reservoir.
- 6.4.3 The published geological data suggests that natural ground will comprise residual soils over Coal Measures bedrock.
- 6.4.4 Residual soils (completely weathered Coal Measures) should provide sufficient bearing capacity to enable the adoption of strip footings for two storey housing. Reinforcement, as a precaution against differential settlement, is recommended only where foundation excavations encounter significant lateral and vertical variations in strata.
- 6.4.5 Should shallow mineworkings be encountered, NHBC typically require foundations to be strengthened, even after consolidation, in order to accommodate any potential time dependant differential settlement. Footings will probably need to be at least 300mm thick, and reinforced with a layer of mesh, with 50mm cover to the bottom. For a standard 600mm wide, a suitable reinforcement would be B385 mesh. For other footing dimensions further advice should be sought from the Structural Engineer.

6.4.6 If rock is encountered at shallow depth, foundations should be placed entirely on rock and not partially on rock and partially on residual soil. This may, depending on surface gradient, necessitate significant over deepening of foundations.

6.4.7 Should prior extraction of coal be undertaken then alternative foundations such as rafts on engineered fill will be required.

## 6.5 Highway, drainage and external works issues

6.5.1 Given the relatively level (site slopes around 1 in 13) nature of the site, there should be no requirement for retaining walls, underbuild, tanking etc.

6.5.2 It is recommended that the developer contact Yorkshire Water Services with respect to capacity in existing foul and surface water sewers in the vicinity of the development area.

6.5.3 Given anticipated ground conditions, soakaways may provide a viable solution for the disposal of surface water, subject to on testing.

## 6.6 Contamination

6.6.1 The site is essentially greenfield and no significant contamination is anticipated.

## 6.7 Potential development constraints

6.7.1 The site is underlain at shallow depth by the Lidget Coal. It is possible that unrecorded workings are present in this seam.

6.7.2 If workings are found to underlie the site at shallow depth then consolidation through grouting may be required.

## 6.8 Coal extraction

6.8.1 The Lidget Coal (0.48m to 1.25m thick) is shown to underlie the site; anticipated at depths from around 15m.

6.8.2 Prior extraction of coal is encouraged by both the Coal Authority and Planning Authorities, largely because a potential mineral resource will not be sterilised by the development.

6.8.3 For the developer/landowner, extraction can be attractive from a financial perspective, especially where mineworkings in the seam of interest require grouting, and/or the desired build programme can accommodate the time necessary to ensure settlement of the replaced overburden has reduced to tolerable levels.

6.8.4 However, extraction usually increases developer abnormal foundation costs. This would be the case here due to the need for rafts instead of strip footings, and issues associated with the peripheral 'high walls' created.

6.8.5 Intrusive investigation will be required to determine the viability of coal extraction .

6.8.6 It is understood from preliminary enquiries, that extraction is viable where the overburden above a seam is less than 12 times the seam's thickness; at this site the overburden thickness is likely to be at least 12 times seam thickness (which assumes the maximum thickness of 1.25m).

6.8.7 Based on the above it is considered likely that prior extraction of coal from this site may not be economically viable although further works including intrusive investigation will be required.

## 6.9 Further investigation

6.9.1 Whilst the site is considered suitable for its current and proposed use, the proposed change in use will require intrusive investigation.

6.9.2 This would include:

- Machine-excavated trial pits to determine near surface ground conditions including depth to bedrock, the presence of obstructions, groundwater and stability
- Geotechnical soils analysis to enable foundation recommendations
- Chemical testing on soil and if necessary groundwater, samples to assess the significance of contamination, if any.
- Rotary probeholes to investigate possible shallow coal workings and allow installation of gas monitoring wells
- Period of gas monitoring and production of a hazardous gas risk assessment

6.9.3 An appropriate ground investigation strategy is presented in Section 5.2. At this stage it should be feasible to condition any intrusive investigation works as part of an outline approval.

**APPENDIX A**  
**General notes**

#### General

Third party information obtained from the British Geological Survey (BGS), the Coal Authority, the Local Authority etc is presented in the "Search Responses" Appendix of this Geoenvironmental Report.

#### Geology, mining & quarrying

In order to establish the geological setting of a site, Lithos refer to BGS maps for the area, and the relevant geological memoir. Further information is sourced from the Local Authority and by reference to current and historical OS plans. A coal mining report is obtained from the Coal Authority (CA).

In July 2011, the CA formalised their requirements in relation to planning applications and introduced some new terminology. The CA, using its extensive records has prepared plans for all coalfield Local Planning Authorities, which effectively refines the defined coalfield areas into areas of higher risk (known as the Coal Mining Development Referral Area) and lower risk (known as the Standing Advice Area). The Coal Mining Development Referral Areas contain a range of specific mining legacy risks to the surface, including mine entries; shallow coal workings; workable coal seam outcrops; mine gas; geological features; and previous surface mining sites. The Standing Advice Area is the remainder of the defined coalfield. In this area no known defined risks have been recorded; although there may still be unrecorded issues.

#### Landfills

Lithos obtain data from the Landmark Information Group, the Environment Agency and the Local Authority with respect to known areas of landfilling within 250m of the proposed development site. Reference is also made to historical OS plans, which are inspected for evidence of backfilled quarries, railway cuttings, colliery spoil tips etc.

#### Radon

Radon is a colourless, odourless gas, which is radioactive. It is formed in strata that contain uranium and radium (most notably granite), and can move through fissures eventually discharging to atmosphere, or the spaces under and within buildings. Where radon occurs in high concentrations, it can pose a risk to health.

In order to assess potential risks associated with radon gas, Lithos refer to BRE Report BR211, 2007: "Radon: guidance on protective measures for new buildings", and to information from the BGS / HPA (Health Protection Agency) radon potential dataset provided by the Landmark Information Group. The level of protection needed is site-specific and is determined by reference to the maps contained in Annex A of BR211. These maps are derived from the Radon Atlas of England and Wales (2007), and indicate the highest radon potential within each 1km grid square.

Each 1km grid square is classified on the basis of the percentage of existing homes within that grid square estimated to have radon concentrations above the Action Level (average annual radon concentration of 200 Bq.m-3), as follows:

- Unshaded grid squares where less than 3% of homes are estimated to be above the Action Level, and no radon protection is required in new dwellings
- Light grey shaded grid squares where between 3% & 10% of homes are estimated to be above the Action Level, and basic radon protection is required in new dwellings
- Dark grey shaded grid squares where greater than 10% of homes are estimated to be above the Action Level, and full radon protection is required
- Sites where either basic or full radon protective measures are required (i.e. Where greater than 3% of homes are estimated to be above the Action Level) are referred to as Radon Affected Areas

BR211 provides a preliminary indication of the measures required for a particular site, as the Annex A maps indicate the highest geological radon potential within each 1km grid square, but in many cases the radon potential varies considerably within the grid square. The Landmark information is more site-specific and therefore may allow the adoption of a lower level of protection than that indicated in the Annex A maps. Alternatively, a BR211 Radon Report can be obtained from the BGS in order to provide more site-specific information.

It should be noted that in July 2010 the Health Protection Agency (HPA) published new advice (Document RCE-15: "Limitation of Human Exposure to Radon"), in which they recommend that all new buildings, extensions, conversions & refurbished buildings in the UK include (at least) basic radon protective measures. The HPA also widened the definition of Radon Affected Areas to include areas where greater than 1% of homes are estimated to be above the Action Level.

#### Hydrogeology

Lithos obtain information from the Environment Agency (EA) and the Landmark Information Group with respect to:

- groundwater quality
- recorded pollution incidents
- licensed groundwater abstractions

From April 2010 the EA's Groundwater Protection Policy uses aquifer designations that are consistent with the Water Framework Directive. These designations reflect the importance of aquifers in terms of groundwater as a resource (drinking water supply), but also their role in supporting surface water flows and wetland ecosystems. The aquifer designation data is based on geological mapping provided by the British Geological Survey. The maps are split into two different type of aquifer designation:

- Superficial (Drift) - permeable unconsolidated (loose) deposits. For example, sands and gravels
- Bedrock -solid permeable formations e.g. sandstone, chalk and limestone

The maps display the following aquifer designations:

Principal Aquifers: These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary Aquifers: These include a wide range of rock layers or drift deposits with an equally wide range of water permeability and storage. Secondary aquifers are subdivided into two types:

- 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
- Secondary B - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
- Secondary Undifferentiated - has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

Unproductive Strata: These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

Note: The maps only display the principal and secondary aquifers as coloured areas. All uncoloured areas on the bedrock designation map will be unproductive strata. However, for uncoloured areas on the superficial (drift) designation map it is not possible to distinguish between areas of unproductive strata and areas where no drift is present. To do this, it is necessary to consult the published geological survey maps.

For the purposes of our Groundwater Protection Policy the following default position applies, unless there is site specific information to the contrary:

- If no superficial (drift) aquifers are shown, the bedrock designation is adopted
- In areas where the bedrock designation shows unproductive strata (the uncoloured areas) the superficial designation is adopted
- In all other areas, the more sensitive of the two designations is used (e.g. If secondary drift overlies principal bedrock, an overall designation of principal is assumed)

The EA have also designated Source Protection Zones, which are based on proximity to a groundwater source (springs, wells and abstraction boreholes). The size of a Source Protection Zone is a function of the aquifer, volume of groundwater abstracted and the effective rainfall, and may vary from tens to several thousand hectares.

#### Hydrology

Lithos obtain information from the Environment Agency and the Landmark Information Group with respect to:

- surface water quality
- recorded pollution incidents
- licensed abstractions (groundwater & surface waters)
- licensed discharge consents
- site susceptibility to flooding

### Generic notes – geoenvironmental Investigations

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The EA have set water quality targets for all rivers. These targets are known as River Quality Objectives (RQOs). The water quality classification scheme used to set RQO planning targets is known as the River Ecosystem scheme. The scheme comprises five classes (RE1 to RE5) which reflect the chemical quality requirements of communities of plants and animals occurring in our rivers.

General Quality Assessment (GQA) grades reflect actual water quality. They are based on the most recent analytical testing undertaken by the EA. There are six GQA grades (denoted A to F) defined by the concentrations of biochemical oxygen demand, total ammonia and dissolved oxygen.

The susceptibility of a site to flooding is assessed by reference to a Flood Map on the Environment Agency's website. These maps provide show natural floodplains - areas potentially at risk of flooding if a river rises above its banks, or high tides and stormy seas cause flooding in coastal areas.

There are two different kinds of area shown on the Flood Map:

1. Dark blue areas could be flooded by the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year, or by a river by a flood that has a 1% (1 in 100) or greater chance of happening each year
2. Light blue areas show the additional extent of an extreme flood from rivers or the sea. These outlying areas are likely to be affected by a major flood, with up to a 0.1% (1 in 1000) chance of occurring each year

These two colours show the extent of the natural floodplain if there were no flood defences or certain other manmade structures and channel improvements

The maps also show all flood defences built in the last five years to protect against river floods with a 1% (1 in 100) chance of happening each year, or floods from the sea with a 0.5% (1 in 200) chance of happening each year, together with some, but not all, older defences and defences which protect against smaller floods.

The Agency's assessment of the likelihood of flooding from rivers and the sea at any location is based on the presence and effect of all flood defences, predicted flood levels, and ground levels.

It should also be noted that as the floodplain shown is the 1 in 100 year (or 1 in 200 year as appropriate), areas outside this may be flooded by more extreme floods (e.g. the 1 in 1000 year flood). Also, parts of the areas shown at risk of flooding will be flooded by lesser floods (e.g. the 1 in 5 year flood). In some places due to the shape of the river valley, the smaller floods will flood a very similar extent to larger floods but to a lesser depth.

If a site falls within a floodplain, it is recommended that a flood survey be undertaken by a specialist consultant who can advise on appropriate mitigating measures; ie raising slab levels, provision of storage etc.

### COMAH & explosive sites

Lithos obtain information from the Landmark Information Group with respect to COMAH or explosive sites within 1km of the proposed development site. Lithos's report refers to any that are present, and recommends that the Client seeks further advice from the HSE.

Areas around COMAH sites (chemical plants etc) are zoned with respect to the implementation of emergency plans. The HSE are a statutory consultee to the local planning authority for all COMAH sites. The COMAH site may have to revise its emergency action plan if development occurs. This might be quite straightforward or could entail significant expenditure. Consequently, the COMAH site may object to a proposed development (although it is the Local Authority who have final say, and they are likely to place more weight on advice from the HSE).

### Preliminary conceptual ground model

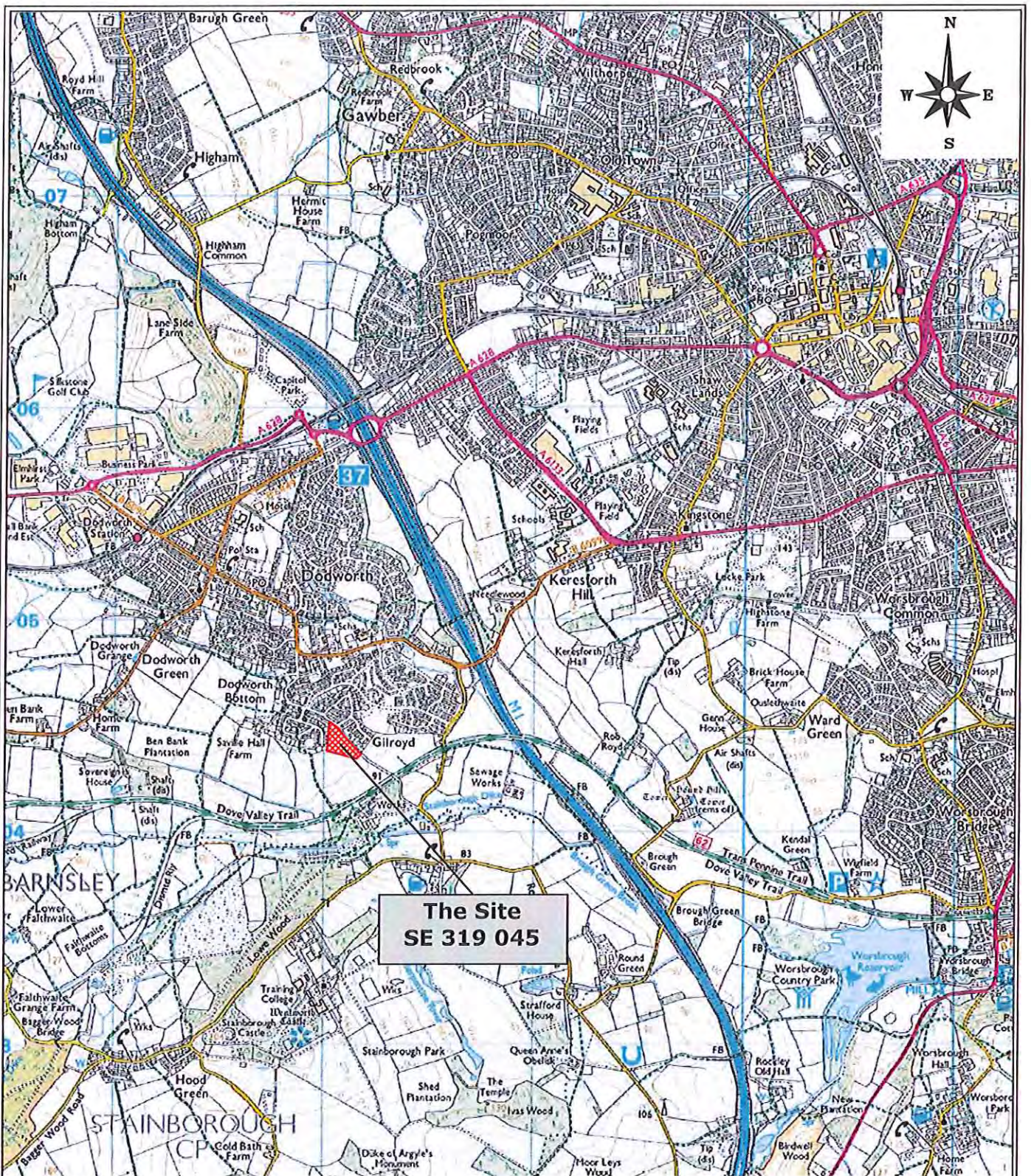
The site's environmental setting (and proposed end use) is used by Lithos to assess the significance of any contamination encountered during the subsequent ground investigation

Assessment of contaminated land is based on an evaluation of pollutant linkages (source-pathway-receptor). Contaminants within the near surface strata represent a potential source of pollution. The environment (most notably groundwater), site workers and end users are potential targets.

Potential pollutant linkages are shown on a preliminary conceptual site model, presented as a Drawing in an Appendix to this Geoenvironmental Report. The preliminary model is revised in light of data arising from the subsequent ground investigation.

## APPENDIX B

### Drawings



**The Site  
SE 319 045**

Reproduced from OS Explorer map 1:25,000 scale by permission of Ordnance Survey® on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100049696.



info@lithos.co.uk  
www.lithos.co.uk

Tel 0845 680 9781

CLIENT

**THE WENTWORTH  
TRUSTEES**

JOB TITLE

**SMITHY WOOD LANE,  
DODWORTH**

DRAWING TITLE

**SITE LOCATION  
PLAN**

DRAWN

GLM

DATE

27/05/2015

CHECKED

ASw

DATE

27/05/2015

STATUS

FOR COMMENT

DRAFT

FOR APPROVAL

FINAL

SCALE

1:25,000

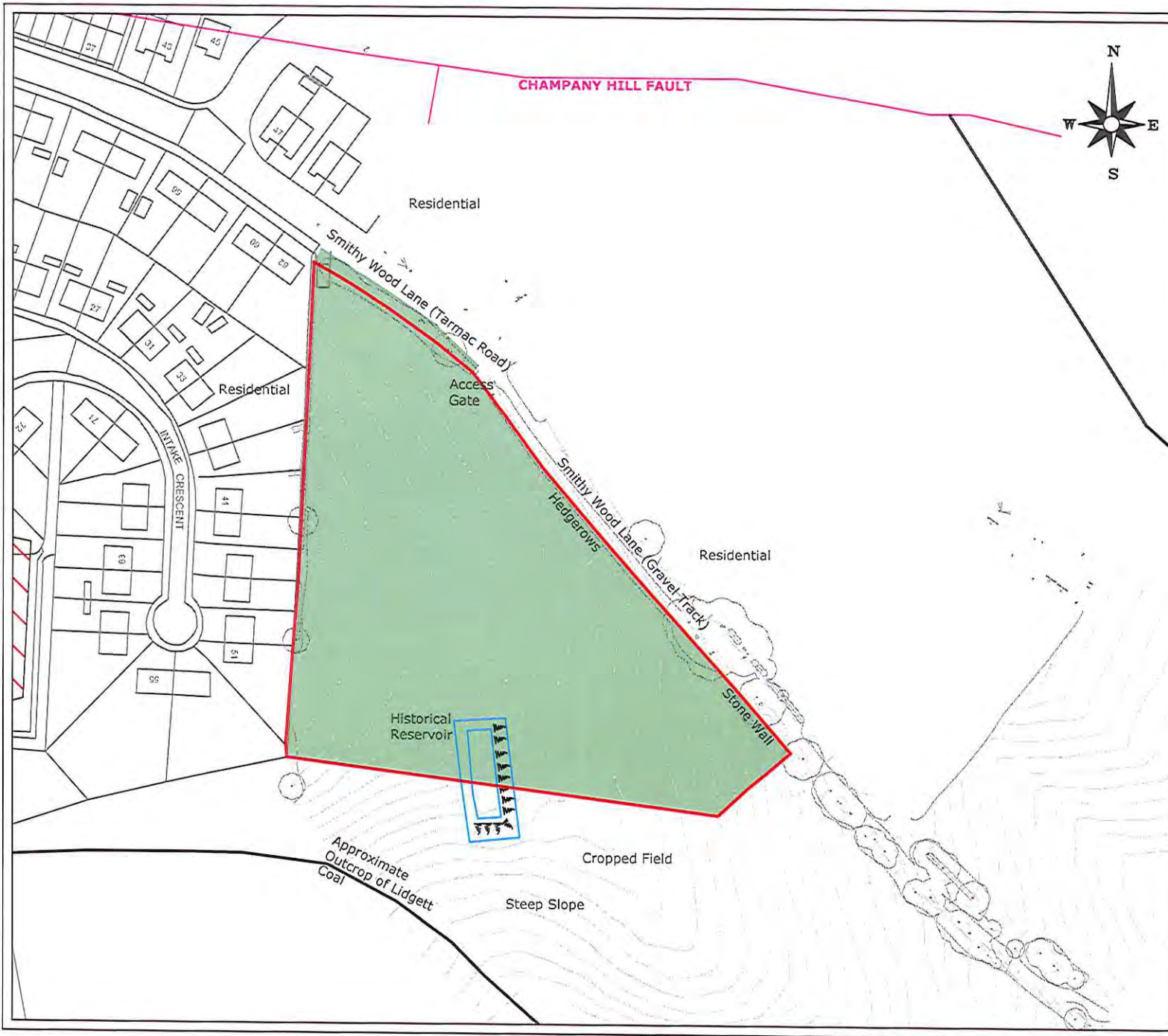
SHEET

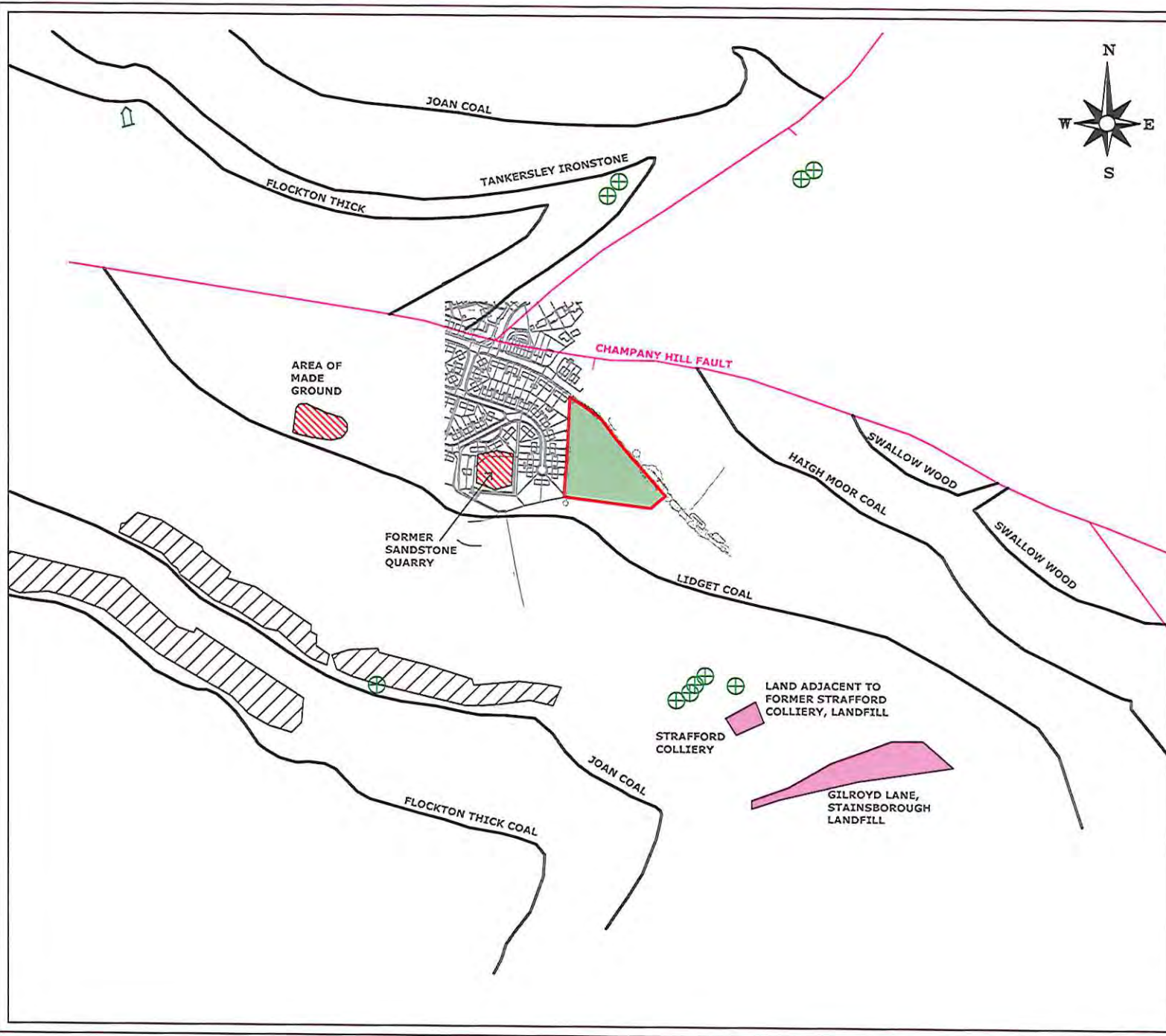
A4

DRAWING NO.

1979/1

REVISION





**NOTES**

- AGRICULTURAL LAND
- GEOLOGICAL FAULT
- COAL SEAM OUTCROP
- FORMER OPENCAST COAL WORKINGS
- AREA OF MADE GROUND
- HISTORICAL LANDFILL
- APPROXIMATE PHASE I SITE BOUNDARY
- ADIT LOCATION
- MINE SHAFT LOCATION

REV.	DESCRIPTION	DATE



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**THE WENTWORTH TRUSTEES**

**SMITHY WOOD LANE,  
DODWORTH**

**WIDER SITE AREA FEATURES &  
GEOLOGY**

DRAWN	DATE	STATUS	
ASw	29/05/2015	FOR COMMENT	<input type="checkbox"/>
CHECKED	DATE	FOR APPROVAL	<input type="checkbox"/>
REG	29/05/2015	DRAFT	<input type="checkbox"/>
		FINAL	<input type="checkbox"/>
SCALE	SHEET	DRAWING NO.	REVISION
1:2,500	A3	1979/3a	



NOTES

- AGRICULTURAL LAND
- APPROXIMATE SITE BOUNDARY
- LOCATION & ORIENTATION OF PHOTOGRAPH

REV.	DESCRIPTION	DATE



info@lithos.co.uk  
www.lithos.co.uk  
Tel 0845 680 9781

CLIENT

THE WENTWORTH TRUSTEES

PROJECT

SMITHY WOOD LANE,  
DODWORTH

DRAWING TITLE

SITE PHOTOGRAPHS

DRAWN	ASw	DATE	29/05/2015	STATUS	FOR COMMENT	<input type="checkbox"/>
CHECKED	REG	DATE	29/05/2015	FOR APPROVAL	DRAFT	<input type="checkbox"/>
				FINAL		<input checked="" type="checkbox"/>
SCALE	1:2,500	SHEET	A3	DRAWING NO.	1979/4	REVISION

**APPENDIX C**  
**Commission**

002/1979/REG

6<sup>th</sup> August 2014

Wentworth Trustees  
c/o Richard Barker  
Barker Gotelee Solicitors  
41 Barrack Square  
Martlesham Heath  
Ipswich  
IP5 3R



Please reply to  
Parkhill  
Walton Road  
Wetherby  
West Yorkshire  
LS22 5DZ

T 01937 545 330

E [info@lithos.co.uk](mailto:info@lithos.co.uk)

Dear Richard

**Land West of Smithy Wood Lane, Dodworth**

Further to your recent invitation, please find below our proposal for undertaking a geotechnical and environmental desk study appraisal of the above land. It is understood that the site (Phase I) consists of a single parcel of land of approximately 1.6 hectares and is currently grazing pasture.

Brief examination of the relevant geological map suggests the site is underlain by Coal Measures sandstone, with the Lidget coal seam (up to 1.25m thick) present at shallow depth (<30m). This site is located within a Coal Mining Development Referral Area (an area with specific mining legacy risks to the surface, including mine entries; shallow coal workings etc), and therefore a mining report will be obtained. Our report will include a mining risk assessment (desk-based) that should satisfy the Coal Authority.

Due to the presence of shallow coal the Local Authority at may consider the site to lie within a Mineral Safeguarding Area. As a consequence of this and the NPPF, the Local Authority may require your Client to consider the opportunity to recover (extract) the coal.

Environmental search data and historical maps (obtained from Landmark or Groundsure), will be reviewed in order to determine whether any past land uses have had any effect on the proposed development. In addition we will visit site to undertake a walkover survey.

The report will include preliminary recommendations with respect to mining, foundations, contamination and hazardous gas. Our report will be in a format familiar to Barnsley MBC, and therefore suitable for submission in support of an outline planning application.

Given the scale of development, and the likely high risk of shallow mineworkings, it is almost certain that Barnsley MBC will insist on an intrusive investigation. Our report will include recommendations for an appropriate, intrusive ground investigation, together with a costed proposal.

It is anticipated, allowing for receipt of statutory search information that a final bound report will be available within 3 weeks of receiving your written instruction to proceed. Our lump sum fee for provision of this report is **£\*,\*\*\*** plus VAT.

This work will be undertaken in accordance with our Standard Terms and Conditions, a copy of which are enclosed.

It is hoped the above is sufficient for your present needs. However, should you require any further information, please contact the undersigned.

Yours sincerely

A handwritten signature in black ink, appearing to read "Mark Perrin".

Mark Perrin  
Director  
**for and on behalf of**  
**LITHOS CONSULTING LIMITED**

# Terms and Conditions for the Appointment of Lithos Consulting Limited

V002.10

## 1 DEFINITIONS AND INTERPRETATION

1.1 In this Agreement, unless the context otherwise requires, the following words and expressions have the following meanings:

"Agreement" shall mean these Terms (entitled "Terms and Conditions for the Appointment of Lithos Consulting"), the Proposal, any document recording the Client's unequivocal acceptance of the Proposal and any other documents or parts of other documents expressly referred to in any of the foregoing;

"Client" shall mean the party for whom the Services are being provided by Lithos;

"Documents" shall mean all documents of any kind and includes plans, drawings, reports, programmes, specifications, Bills of Materials, calculations, letters, e-mails, faxes, memoranda, films and photographs (including negatives), or any other form of record prepared or provided or received by, or on behalf of Lithos, and whether in paper form or stored electronically or on disk, or otherwise;

"Lithos" shall mean Lithos Consulting Limited whose registered office is at 45 High Street, South Hildon, North Yorkshire, LS25 5AF.

"Intellectual Property" includes all rights to, and any interests in, any patents, designs, trade marks, copyrights, know-how, trade secrets and any other proprietary rights or forms of Intellectual Property (protectable by registration or not) in respect of any technology, concept, idea, data, programme or other software (including source and object codes), specification, plan, drawing, schedule, minutes, correspondence, scheme, programme, design, system, process logo, mark, style, or other matter or thing, existing or conceived, used, developed or produced by any person;

"Parties" shall mean the Client and Lithos

"Project" shall mean the project described in the Proposal and any enquiry from the Client on which Lithos has based its Proposal;

"Proposal" means the offer document prepared by Lithos in response to an enquiry or otherwise, in connection with the proposed provision of the Services;

"Services" means the work and services relating to the Project to be provided by Lithos pursuant to the Agreement and as set out in the Proposal and shall include any additions or amendments thereto made in accordance with these Terms;

"Terms" means these terms entitled "Lithos Consulting Terms of Appointment";

1.2 Words importing the singular only shall also include the plural and vice versa, where the context requires.

1.3 Words importing persons or parties shall include firms, corporations and any organisation having legal capacity and vice versa, where the context requires; and words importing a particular gender include all genders.

1.4 The sub-headings to the clauses of these Terms are for convenience only and shall not affect the construction of the Agreement.

1.5 A reference to legislation includes that legislation as from time to time amended, re-enacted or substituted and any Orders in Council, orders, rules, regulations, schemes, warrants, by-laws, directives or codes of practice issued under any such legislation.

1.6 In the event of conflict between the documents forming part of the Agreement, the Proposal shall prevail, followed by the Terms.

## 2 APPOINTMENT

2.1 The Client agrees to engage Lithos and Lithos agrees to provide the Services in accordance with the provisions of the Agreement.

## 3 OBLIGATIONS OF LITHOS

3.1 Lithos shall perform the Services using the reasonable standard of skill and care normally exercised by similar professional environmental firms in performing similar services under similar conditions.

3.2 Lithos shall use all reasonable endeavours to perform the Services in accordance with all relevant environmental and safety legislation.

## 4 OBLIGATIONS OF THE CLIENT

4.1 Throughout the period of this Agreement the Client shall afford to Lithos or procure the affording to Lithos of access to any site where access is required for the performance of the Services.

4.2 The Client accepts responsibility for ensuring that Lithos is notified in writing of all special site and/or plant conditions, including without prejudice to the generality of the foregoing, the existence and precise location of all underground services, cables, pipes, drains or underground buildings, constructions or any hazards known or suspected by the Client, which the Client shall clearly mark on the ground or identify on accurate location plans supplied to Lithos prior to the commencement of the Services. The Client shall also inform Lithos in writing of any relevant operating procedures including any site safe operating procedures and any other regulations relevant to the carrying out of the Services. The Client shall indemnify Lithos against all costs, claims, demands and expenses arising as a result of any non-disclosure in this respect, including but not limited to indemnification against any action brought by the owner of the land or otherwise.

4.3 If the Client discovers any conflict, defect or other fault in the information or designs provided by Lithos pursuant to the Agreement, he will advise Lithos in writing of such defect, conflict or other fault and Lithos shall have the right to rectify the same or where necessary, to design the solution for rectification of any works carried out by others pursuant to the conflicting, defective or in any other way faulty information or designs.

## 5 INTELLECTUAL PROPERTY

5.1 The copyright in all Intellectual Property prepared by or on behalf of Lithos in connection with the Project for delivery to the Client shall remain vested in Lithos.

5.2 The Client shall have a non-exclusive licence to copy and use such Intellectual Property for purposes directly related to the Project. Such licence shall enable the Client to copy and use the Intellectual Property but solely for its own purposes in connection with the Project and such use shall not include any licence to reproduce any conceptual designs or professional opinions contained therein nor shall it include any licence to amend any drawing, design or other Intellectual Property produced by Lithos.

5.3 Should the Client wish to use such Intellectual Property in connection with any other works or for any other purpose not directly related to the Project or wish to pass any Intellectual Property to any third party, it must obtain the prior written consent of Lithos. The giving of such consent shall be at the discretion of Lithos and shall be upon such terms as may be required by Lithos. Lithos shall not be liable for the use by any person of such Intellectual Property for any purpose other than that for which the same were prepared by or on behalf of Lithos.

5.4 Ownership of any proposals submitted to the Client that are not subsequently confirmed as part of the Services to be provided for the Client remain with Lithos and such proposals must not be used as the basis for any future work undertaken by the Client or a third party and no liability can be accepted whatsoever arising from such proposals.

5.5 In the event of the Client being in default of payment of any fees or other amounts due, Lithos may suspend further use of the licence on giving 2 days' notice of the intention to do so. Use of the licence may be resumed on receipt of the outstanding amounts.

## 6 TITLE

6.1 Lithos shall transfer only such title or rights in respect of the Documents as it has, and if any part is purchased from a third party Lithos shall transfer only such title or rights as that party had and has transferred to Lithos.

6.2 Title in the Documents shall remain with and shall not pass to the Client until the amount due under the Invoice(s) (including interest and costs) has been paid in full.

6.3 Until title passes, the Client shall hold the Documents as bailee for Lithos and shall store or mark them so that they can at all times be identified as the property of Lithos.

6.4 At any time before title passes (save and except where payment is not due), but only after prior consultation with the Client, Lithos may without any liability to the Client repossess and use or sell all or any part of the Documents and by doing so terminate the right of the Client to use, sell or otherwise deal in the Documents.

6.5 Lithos may maintain an action for the price of the Documents notwithstanding that title in them has not passed to the Client.

## 7 CONFIDENTIALITY

7.1 Lithos undertakes not to divulge or disclose to any third party without the written consent of the Client information which is designated confidential by the Client or which can reasonably be considered to be confidential and arises during the performance of the Services unless required to do so by law or necessary in the proper performance of its duties in relation to the Project, or in order to make full frank and proper disclosure to its insurers or intended insurers, or to obtain legal or accounting advice.

7.2 Subject to the above, Lithos shall be permitted to use information related to the Services it provides in connection with the Project for the purposes of marketing its services and in proposals for work of a similar type.

## 8 THIRD PARTIES

8.1 The Agreement or any part thereof or any benefit or interest thereunder may not be assigned by the Client without the prior written consent of Lithos. The giving of such consent shall be at the discretion of Lithos and Lithos will only agree to an assignment on its terms and in return for payment of a fee by the Client to Lithos to cover Lithos's legal and other costs associated with any assignment.

8.2 The Agreement shall not confer and shall not purport to confer on a third party any benefit or any right to enforce any term of this Agreement for the purposes of the Contracts (Rights of Third Parties) Act 1999 or otherwise.

8.3 Lithos will consider and may consent to any request from the Client for Lithos to enter a collateral warranty with a third party with regard to the Services provided under the Agreement. The giving of such consent shall be at the discretion of Lithos and Lithos will only enter a collateral warranty on its terms and in return for payment of a fee by the Client to Lithos to cover Lithos's legal and other costs associated with any collateral warranty.

## 9 INSURANCE

9.1 Lithos warrants to the Client that there is in force a policy of Professional Indemnity Insurance covering its liabilities for negligence under this Agreement, with a limit of indemnity of 25,000,000 (TWENTY FIVE MILLION POUNDS) any one Single Claim. Defence costs in addition. This policy is annually renewable and whilst renewal is not automatic, Lithos agrees to use reasonable endeavours to maintain such insurance at all times until six years from the date of the completion (or termination) of the Services under the Agreement, provided such insurance is available at commercially reasonable rates having regard, inter alia, to premiums required and policy terms obtainable.

9.2 If for any period such insurance is not available at commercially reasonable rates, Lithos shall forthwith inform the Client and shall obtain in respect of such period such reduced level of Professional Indemnity insurance as is available and as would be fair and reasonable in the circumstances for Lithos to obtain.

## 10 LIMITATIONS ON LIABILITY

10.1 Unless otherwise agreed in writing, Lithos's liability under or in connection with the Agreement whether in contract, tort, negligence, breach of statutory duty or otherwise (other than in respect of personal injury or death) shall be limited to and shall not exceed the lesser of either five million pounds in the aggregate or 10 times the total value of invoices issued to the Client for consultancy work instructed under the Agreement.

10.2 No action or proceedings under or in respect of the Agreement whether in contract, tort, negligence, under statute or otherwise shall be commenced against Lithos after the expiry of a period of six years from the date of the completion (or termination) of the Services under the Agreement.

10.3 Whilst Lithos will scan all potential exploratory locations with a Cable Avoidance Tool, Lithos shall not be liable for any damage to underground services, cables, pipes, drains or underground buildings, constructions and the like which were either not marked on site or for which accurate plans were not provided.

10.4 Lithos shall not be liable for the cost of rectifying any defect, conflict or other fault in the information or designs provided by Lithos or for the cost of designing a solution for and rectifying any subsequent works carried out by others pursuant to the conflicting, defective or in any other way faulty information or designs, unless Lithos has been advised in writing of the same by the Client and has been given the opportunity to rectify the same or where necessary, to design the solution for rectification of any subsequent works carried out by others pursuant to the same.

## 11 PAYMENT

11.1 Invoices for services rendered will be submitted for payment in accordance with the Proposal.

11.2 The due date for payment is the date of the Invoice and the final date for payment is 28 days from the date of the Invoice.

11.3 If the Client disputes the amount included for payment in an invoice a written notice must be served on Lithos by the Client not later than 14 days before the final date for payment. If no notice is given the amount due shall be the amount stated in the invoice.

11.4 In the event of failure on the part of the Client to pay any monies in accordance with the foregoing payment provisions, Lithos will be entitled to charge interest on any monies owed to it by the Client, such interest to be at a rate of 8% above the base rate of a clearing bank from time to time calculated from the final date for payment to the date of actual payment on a compound basis.

## 12 DELAY

12.1 Lithos will comply with any timescale agreed for completion of the Services unless delayed or prevented by circumstances beyond its reasonable control and in the event of any such circumstances arising Lithos undertakes to complete the Services within a reasonable period, but will not be liable to the Client for any delay as a result.

## 13 TERMINATION

13.1 The Agreement may be determined by either party in the event of the other making a composition or arrangement with its creditors, becoming bankrupt, or being a company, making a proposal for a voluntary arrangement for a composition of debts, or has a provisional liquidator appointed, or has a winding-up order made, or passes a resolution for voluntary winding-up (except for the purposes of a bona fide scheme of amalgamation or reconstruction), or has an administrator or an administrative receiver appointed to the whole or any part of its assets. Notice of determination must be given to the party which is insolvent by the other party.

13.2 If for any reason the performance of the Services by Lithos is suspended for a period in excess of three calendar months then Lithos shall be entitled to determine its appointment in respect of the Services by seven days written notice to the Client.

13.3 If the Client shall fail to pay in full any sum due under the terms of the Agreement by the final date for payment for that sum and no effective notice of intention to withhold payment has been issued, Lithos may serve written notice on the Client demanding payment within 14 days of such notice. If the Client shall fail to comply with such notice, Lithos shall be entitled to terminate its employment under the Agreement forthwith.

13.4 Any determination of the appointment of Lithos however caused shall be without prejudice to the right of Lithos to require payment for all services performed up to the date of such determination including but not limited to payment of a fair and reasonable proportion of any figure identified in the Proposal or otherwise for fees in respect of a particular service which Lithos has started, but not completed.

## 14 NOTICES

14.1 Any notice provided for in the Agreement shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post to the address of the relevant party as may have been notified by each party to the other or, in the absence of notification, to the address of Lithos set out above or to the registered address of the Client.

14.2 Such notice shall be deemed to have been received on the day of delivery if delivered by hand or on the second working day after the day of posting if sent by first class post.

## 15 ENTIRE AGREEMENT

15.1 The Agreement constitutes the complete and entire agreement between the Client and Lithos with respect to the Services and supersedes any prior oral and/or written warranties, terms, conditions, communications and representations, whether express or implied and any claim against Lithos in respect of the Services can only be made in contract under the provisions of the Agreement and not otherwise under the law or tort or otherwise.

15.2 No amendments, modifications or variation of the Agreement shall be valid unless made in writing and agreed to by both the Client and Lithos; such agreement must be recorded in writing by at least one of the Parties.

15.3 Lithos will not be bound by any standard or printed terms or conditions furnished by the Client in any of its documents unless Lithos specifically states in writing separately from such documents that it intends such terms and conditions to apply.

## 16 DISPUTES AND GOVERNING LAW

16.1 The Agreement shall be governed by and construed in accordance with English law and the Parties irrevocably and unconditionally submit to the jurisdiction of the English Courts.

16.2 Where the Housing Grants, Construction and Regeneration Act 1996 applies, any dispute between the Parties may be referred to adjudication in accordance with the Scheme for Construction Contracts Regulations 1998 or any amendment or modification thereof being in force at the time of the dispute, as applicable to England, Wales, Scotland and Northern Ireland.

**Alan**

---

**Subject:** FW: Wentworth Trustees - Smithy Wood Lane

**From:** David Barker [<mailto:david@evolution-planning.co.uk>]

**Sent:** 20 March 2015 13:02

**To:** Reg

**Subject:** FW: Wentworth Trustees - Smithy Wood Lane

Reg

I attach a copy of a quote you provided me last year. We would like to proceed with this work having now had the clients approval. As it was some time since we asked you to quote could you give me a call to discuss this please.

Kind Regards

David Barker MRICS MRTPI

Partner



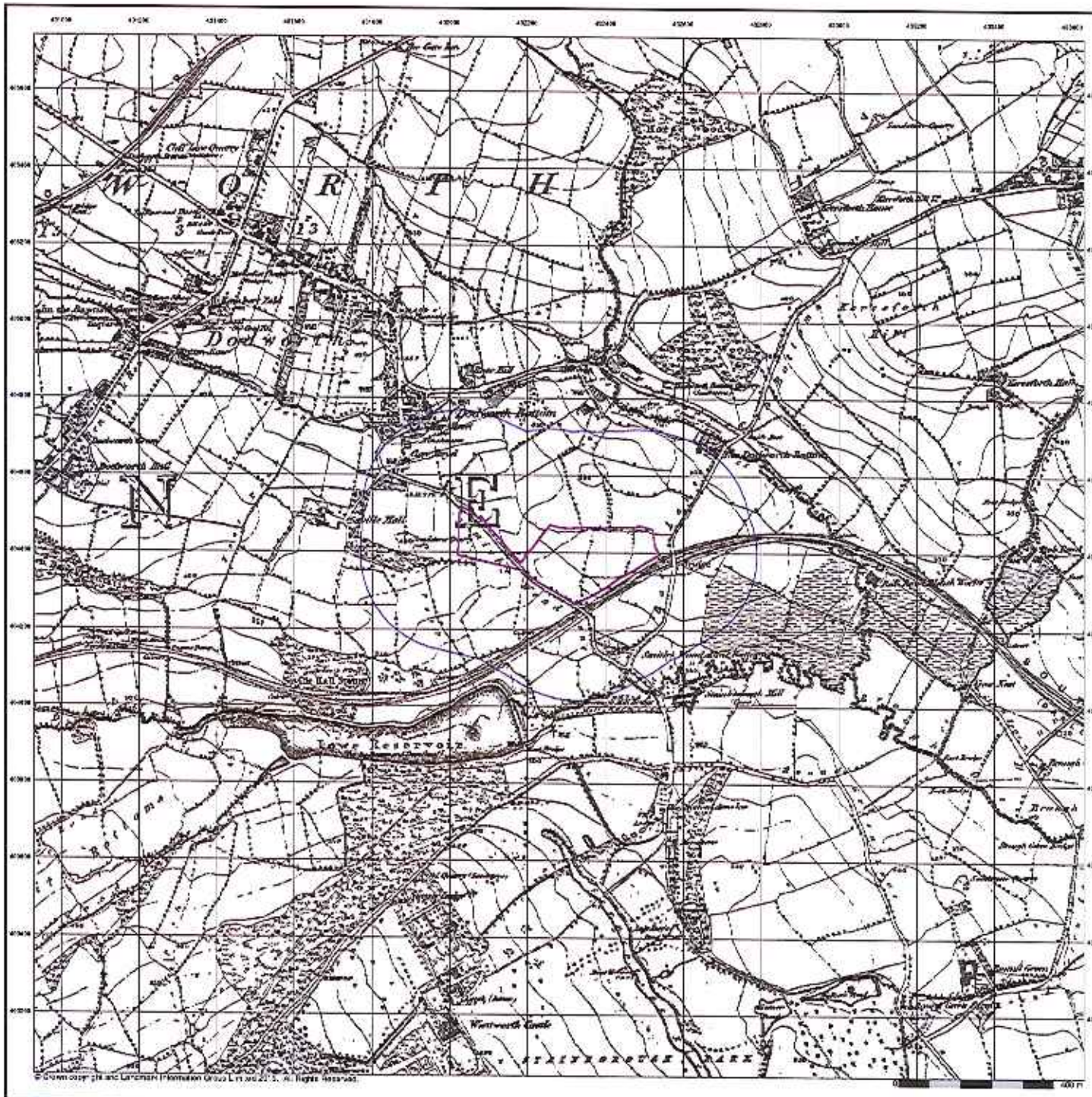
**Evolution Town Planning LLP**

Opus House Elm Farm Park Thurston  
Bury St Edmunds Suffolk IP31 3SH

**T:** 01359 233663 **M:** 07900 917567

[www.evolution-planning.co.uk](http://www.evolution-planning.co.uk)

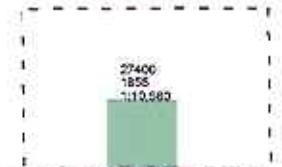
**APPENDIX D**  
**Historical OS plans**



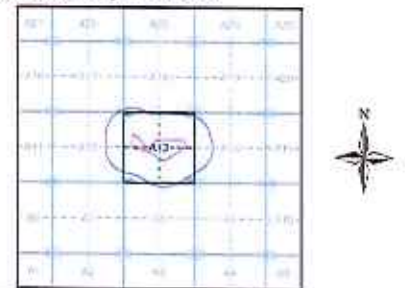
**Yorkshire**  
**Published 1855**  
**Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1928, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1840's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unaltered - with all military camps and other strategic sites removed. These maps were initially overlaid with the National Grid. In 1970, the first 1:10,560 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 15 years or so for urban areas.

**Map Name(s) and Date(s)**



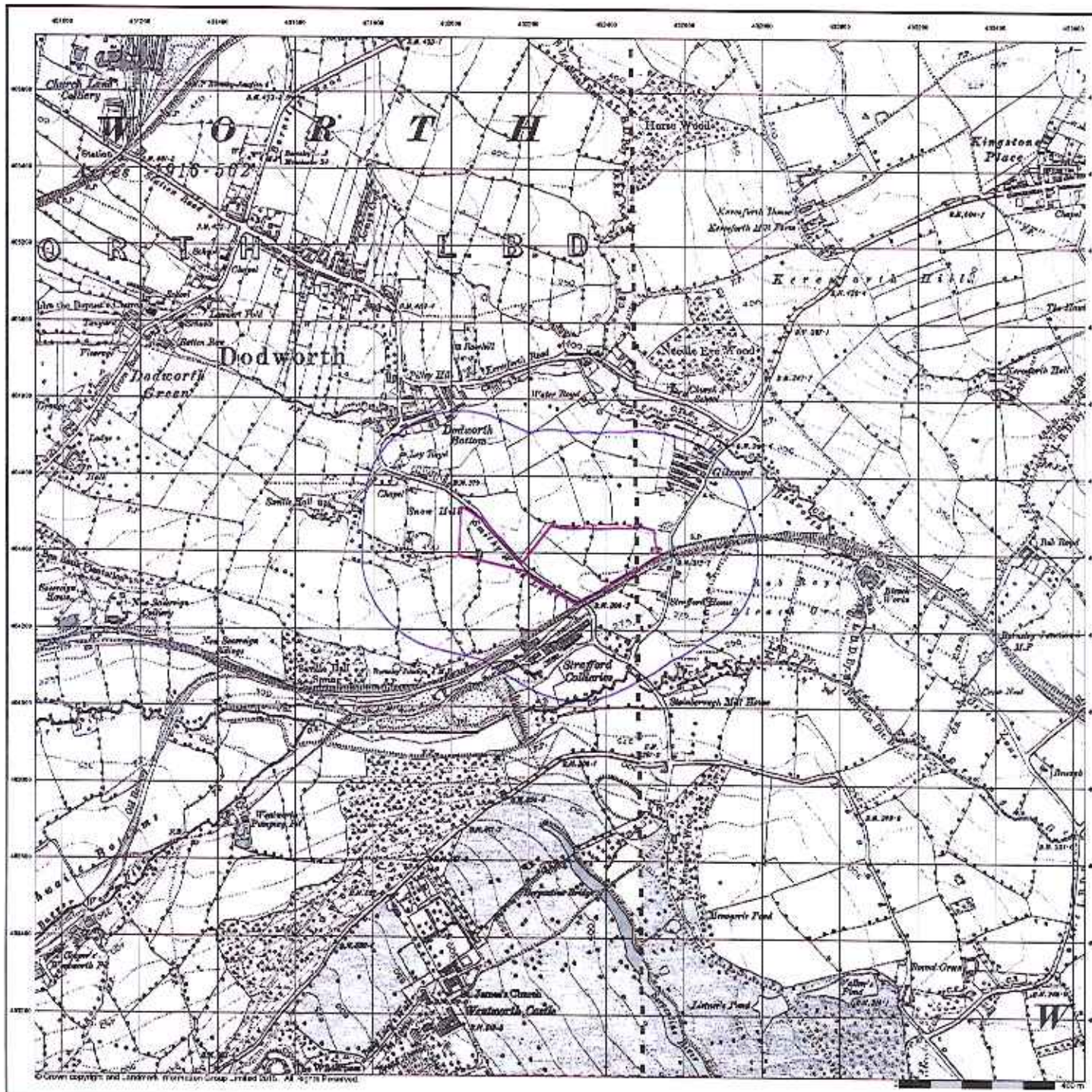
**Historical Map - Slice A**



**Order Details**  
 Order Number: 66165604\_1\_1  
 Customer Ref: 1979 - Smithy Wood Lane  
 National Grid Reference: 432270, 404410  
 Size: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

**Site Details**  
 10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW

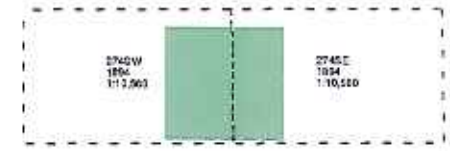
**Landmark**  
 Tel: 0844 344 5962  
 Fax: 0844 344 5961  
 Web: www.landmark.co.uk



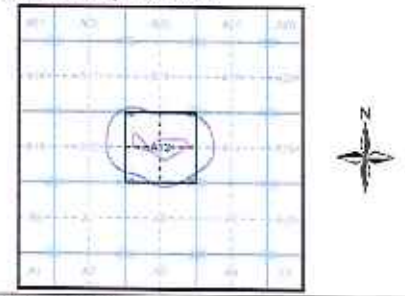
**Yorkshire**  
**Published 1894**  
**Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1953, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to a practical inaccuracy in adjoining areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:2,500 mapping from a number of sources. The maps appear unfinished - with all railway camps and other strategic sites removed. These maps were initially overlaid with the National Grid, in 1979, the first 1:2,500 maps were produced using the Transverse Mercator Projection. The revisions process continued until recently, with new editions appearing every 10 years or so for urban areas.

**Map Name(s) and Date(s)**



**Historical Map - Slice A**



**Order Details**

Order Number: 66166604\_1\_1  
 Customer Ref: 1979 - Sivity Wood Lane  
 National Grid Reference: 432270, 404410  
 Slice: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

**Site Details**

10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW



Tel: 0944 044 5027  
 Fax: 0944 044 3827  
 Web: www.enrchecked.co.uk



### Ordnance Survey Plan

Published 1956

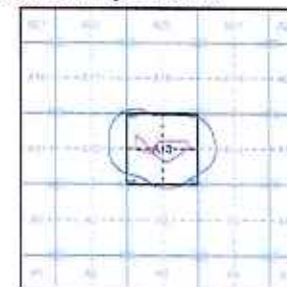
Source map scale - 1:10,000

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

### Map Name(s) and Date(s)

SE30NW	1955
	1:10,000
SE30SW	1956
	1:10,000

### Historical Map - Slice A



### Order Details

Order Number: 65166504\_1\_1  
Customer Ref: 1979 - Smithy Wood Lane  
National Grid Reference: 432270, 404410  
Slice: A  
Site Area (Ha): 6.05  
Search Buffer (m): 250

### Site Details

10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW



Tel: 0844 844 3202  
Fax: 0844 844 3221  
Web: www.ennochs.co.uk



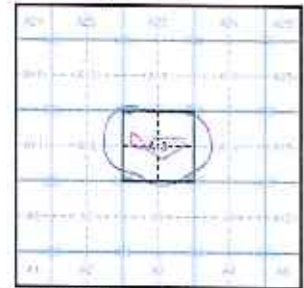
**VectorMap Local**  
**Published 2015**  
**Source map scale - 1:10,000**

VectorMap Local (Raster) is Ordnance Survey's highest detailed background mapping product. These maps are produced from OS's VectorMap Local, a single vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:250 scale (covering major towns and cities), 1:2500 scale (smaller towns, villages and developed rural areas), and 1:10,000 scale (mountain, moorland and rural areas).

**Map Name(s) and Date(s)**

- SE30NW 2015 Variable
- SE30SW 2015 Variable

**Historical Map - Slice A**



**Order Details**

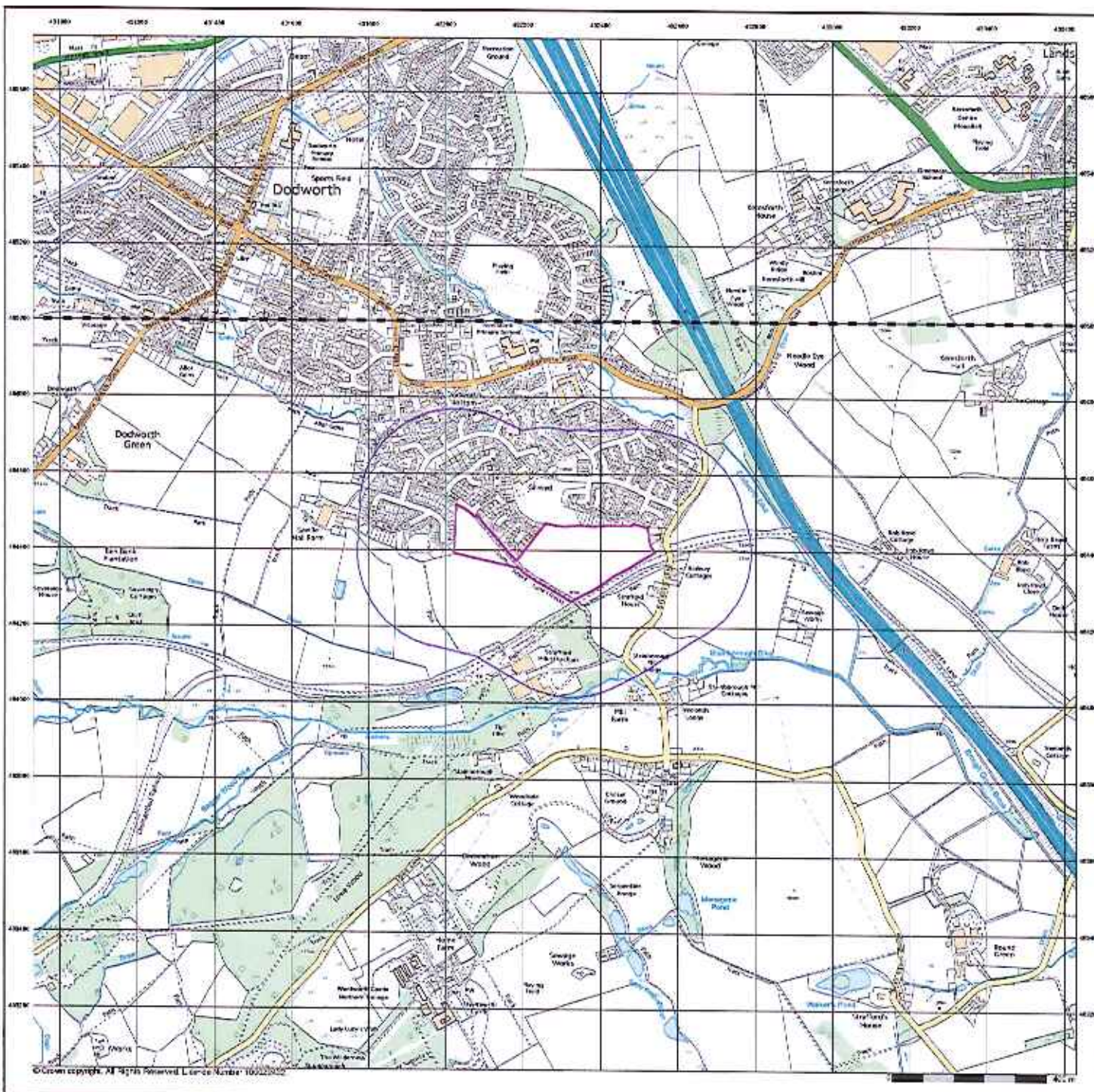
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 Customer Ref: 1979 - Smyth Wood Lane  
 National Grid Reference: 432270, 404410  
 Slice: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

**Site Details**

10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW



Tel: 0844 844 0002  
 Fax: 0844 844 0001  
 Web: www.enranch.co.uk



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## APPENDIX E

### Search responses & other correspondence

**Alan**

---

**To:** David Barker  
**Subject:** RE: Wentworth Trustees - Smithy Wood Lane

**From:** James , Paul [<mailto:PaulJames@barnsley.gov.uk>]  
**Sent:** 25 September 2014 12:17  
**To:** David Barker  
**Subject:** RE: Wentworth Trustees - Smithy Wood Lane

Hello David

The site is in a Coal Authority Coal Mining referral area because the "Lidgett" Coal seam is conjectured to outcrop to the south of the site (shown below) and probably dips beneath the site and is therefore likely to present at a shallow depth.

The Lidgett seam is approx. 55cm thick.

There is a slight risk that this coal may have been mined at some point in the past- Although there are no records of any shallow workings on the site, the risk of unrecorded ancient mine workings being present cannot be entirely ruled out- hence the referral area.

For outline planning permission you are therefore required to submit a coal mining risk assessment which assesses the geology and mining history (basically as above) and then makes any recommendations with regards the need for any investigatory and/or remedial works.

Some helpful information with regards the content/structure of the risk assessment can be found at <http://coal.decc.gov.uk/en/coal/cms/services/planning/strategy/strategy.aspx>  
(right edge of page Guidance on Coal Mining Risk Assessments)

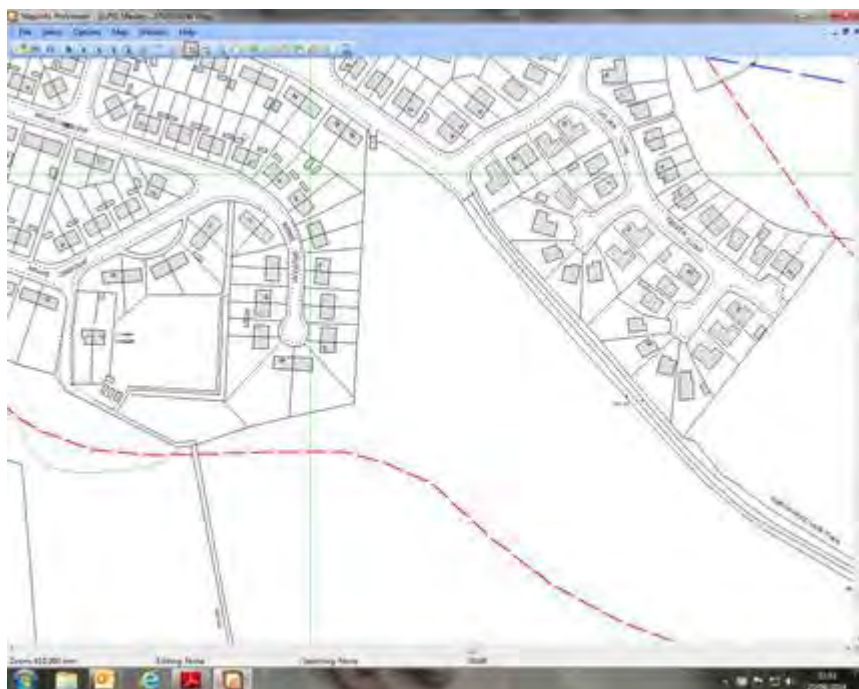
You would need to instruct a suitable consultant to undertake the work- without wanting to jump the gun I would anticipate the consultant to recommend a limited borehole site investigation to confirm the depth and condition of the seam.....if intact (i.e no mine workings found) the land could be regarded as stable, no remedial works required, and in all probability traditional strip footings utilised.

Any investigatory works recommended could be conditioned as part of an outline approval

I hope this helps

Please feel free to contact me if you require any clarification etc

Regards



Paul James  
Principal Mining Engineer  
South Yorkshire Mining Advisory Service  
Barnsley Metropolitan Borough Council  
PO Box 604  
Barnsley  
S70 9FE

Tel 01226 772689



## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

66166604\_1\_1

**Customer Reference:**

1979 - Smithy Wood Lane

**National Grid Reference:**

432270, 404410

**Slice:**

A

**Site Area (Ha):**

6.05

**Search Buffer (m):**

250

#### Site Details:

10 Calver Close

Dodworth

BARNSELY

South Yorkshire

S75 3QW

#### Client Details:

Mr M Perrin

Lithos Consulting Ltd

Parkhill

Walton Road

Wetherby

LS22 5DZ

#### Prepared For:

Wentworth Trustees

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	3
Hazardous Substances	-
Geological	5
Industrial Land Use	10
Sensitive Land Use	11
Data Currency	12
Data Suppliers	16
Useful Contacts	17

## Introduction

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

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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## Radon Potential dataset Copyright Notice

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

## Report Version v49.0

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

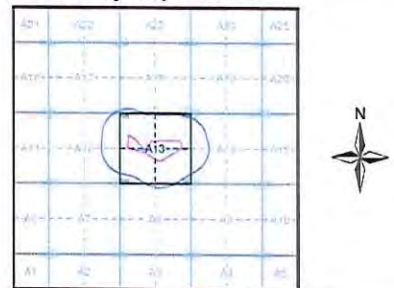
Data Type	Page Number	On Site	0 to 250m (*up to 500m)
<b>Waste</b>			
BGS Recorded Landfill Sites			
Historical Landfill Sites	pg 3		2
Integrated Pollution Control Registered Waste Sites			
Licensed Waste Management Facilities (Landfill Boundaries)			
Licensed Waste Management Facilities (Locations)			
Local Authority Recorded Landfill Sites	pg 3		2
Registered Landfill Sites	pg 4		1
Registered Waste Transfer Sites			
Registered Waste Treatment or Disposal Sites			
<b>Hazardous Substances</b>			
Control of Major Accident Hazards Sites (COMAH)			
Explosive Sites			
Notification of Installations Handling Hazardous Substances (NIHHS)			
Planning Hazardous Substance Consents			
Planning Hazardous Substance Enforcements			
<b>Geological</b>			
BGS 1:625,000 Solid Geology	pg 5	Yes	n/a
BGS Estimated Soil Chemistry	pg 5	Yes	Yes
BGS Recorded Mineral Sites	pg 7		2
BGS Urban Soil Chemistry			
BGS Urban Soil Chemistry Averages			
Brine Compensation Area			n/a
Coal Mining Affected Areas	pg 7	Yes	n/a
Mining Instability	pg 7	Yes	n/a
Man-Made Mining Cavities			
Natural Cavities			
Non Coal Mining Areas of Great Britain	pg 8	Yes	
Potential for Collapsible Ground Stability Hazards	pg 8	Yes	
Potential for Compressible Ground Stability Hazards	pg 8		Yes
Potential for Ground Dissolution Stability Hazards			
Potential for Landslide Ground Stability Hazards	pg 8	Yes	Yes
Potential for Running Sand Ground Stability Hazards	pg 8		Yes
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 9	Yes	Yes
Radon Potential - Radon Affected Areas	pg 9	Yes	n/a
Radon Potential - Radon Protection Measures			n/a

Data Type	Page Number	On Site	0 to 250m (*up to 500m)
<b>Industrial Land Use</b>			
Contemporary Trade Directory Entries	pg 10		9
Fuel Station Entries			
<b>Sensitive Land Use</b>			
Areas of Adopted Green Belt	pg 11	1	
Areas of Unadopted Green Belt			
Areas of Outstanding Natural Beauty			
Environmentally Sensitive Areas			
Forest Parks			
Local Nature Reserves			
Marine Nature Reserves			
National Nature Reserves			
National Parks			
Nitrate Sensitive Areas			
Nitrate Vulnerable Zones	pg 11	1	
Ramsar Sites			
Sites of Special Scientific Interest			
Special Areas of Conservation			
Special Protection Areas			



- General**
- Specified Site
  - Specified Duffter(s)
  - Deering Reference Point
  - Map ID
  - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorized Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Waste**
- BOG Recorded Landfill Site (Location)
  - BOG Recorded Landfill Site
  - EA Historic Landfill (Buffered Area)
  - EA Historic Landfill (Physian)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Registered Landfill Site
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Area Buffered to 100m)
  - Registered Landfill Site (Area Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site
- Geological**
- BOG Recorded Mineral Site
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHC Site
  - NIHC Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
- Industrial Land Use**
- Contemporary Trade Directory Entry
  - Fuel Station Entry

**Site Sensitivity Map - Slice A**



**Order Details**

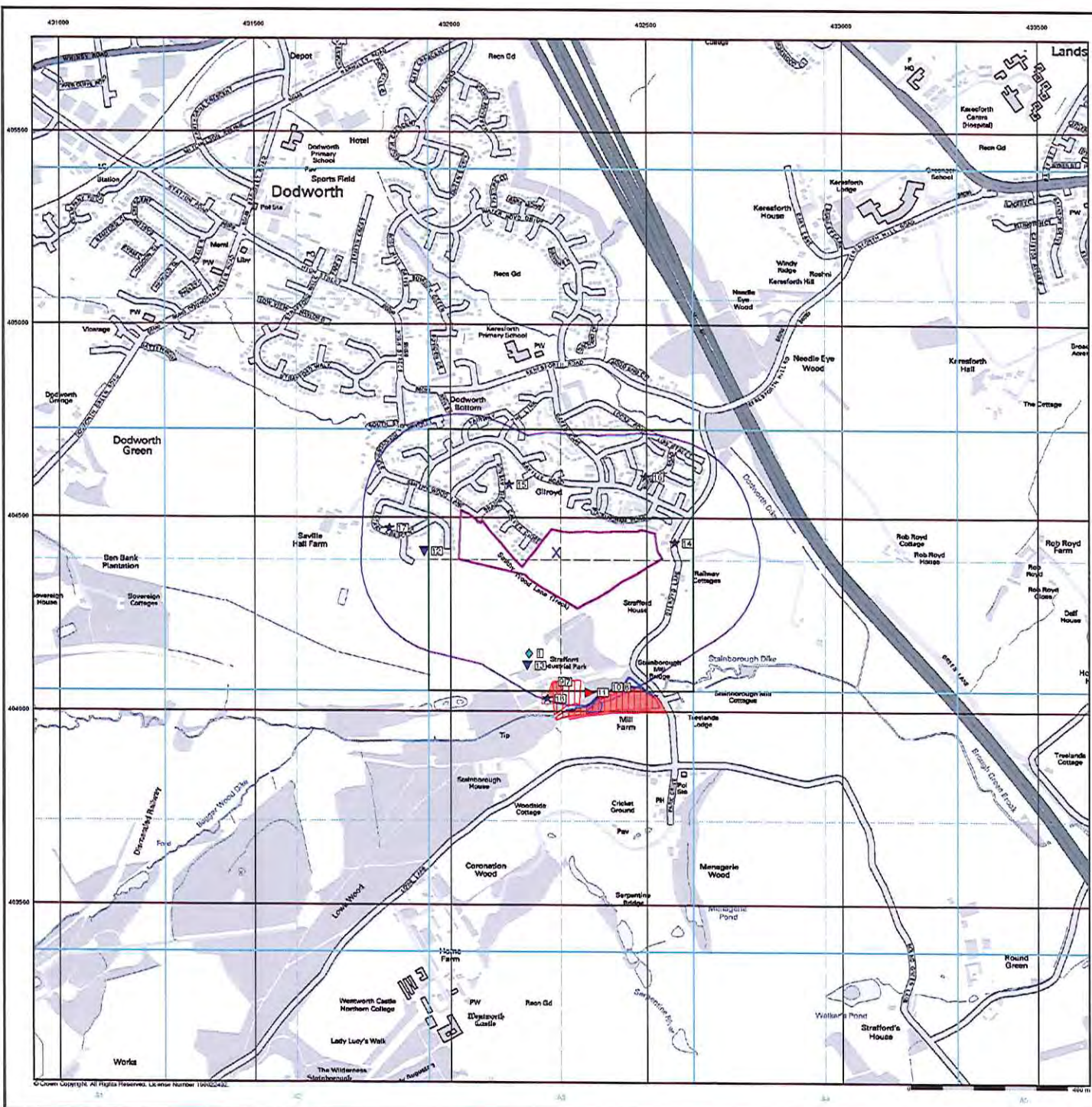
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 Search Buffer (m): 250

**Site Details**

10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW

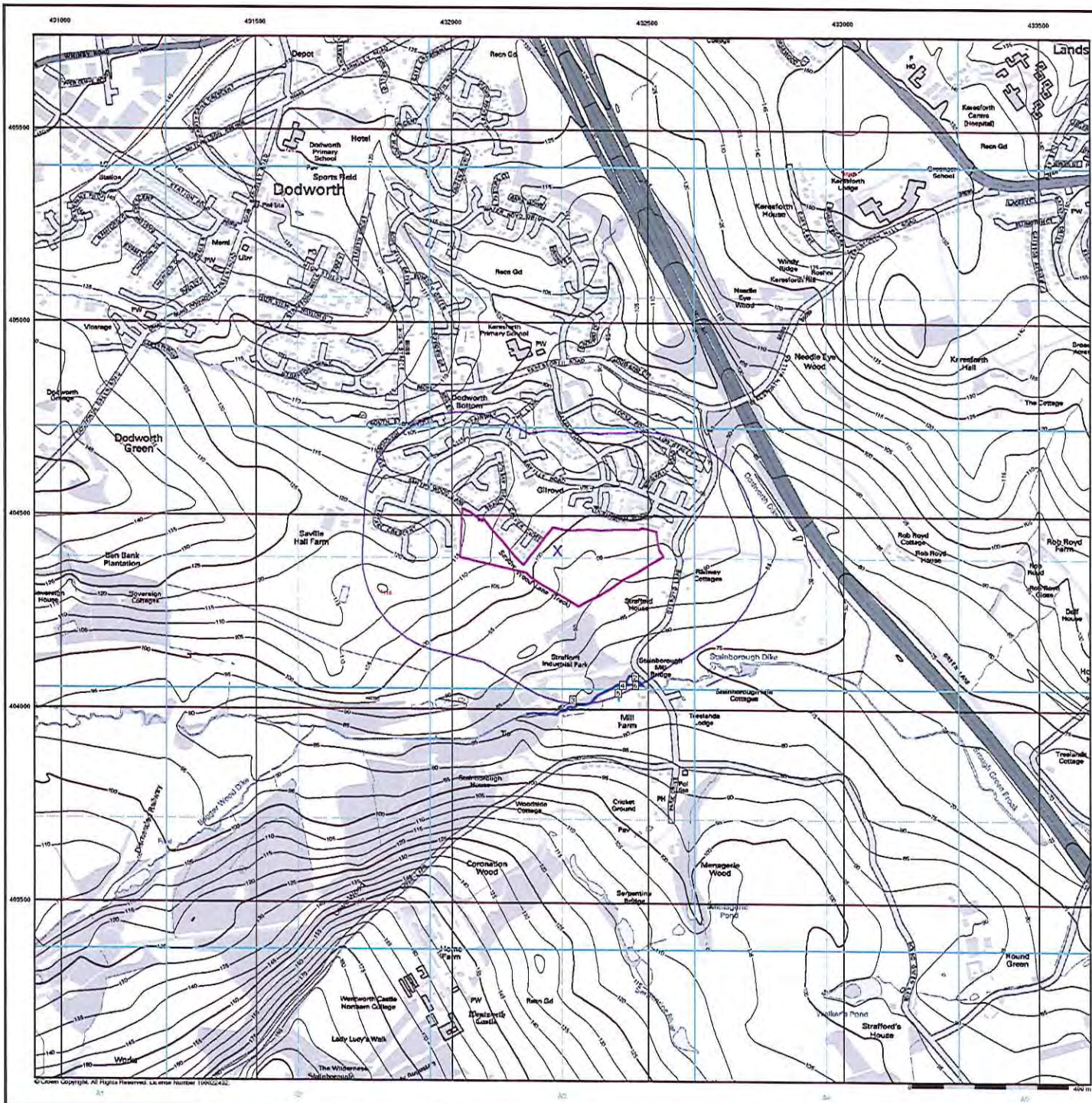
**Landmark**  
 Environmental Services

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



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**General**

- Specified Site
- Specified Buffer(s)
- X Dealing Reference Point
- Map ID

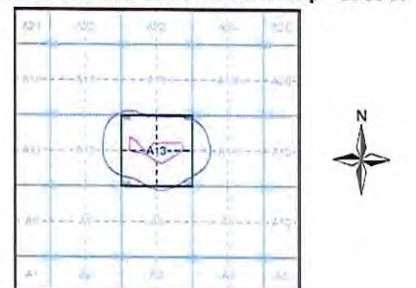
**Detailed River Network Data**

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

**Contours (height in metres)**

- Standard Contour — 10m
- Master Contour — 100m
- Spot Height \*167.2
- MLW = Mean Low Water
- MHW = Mean High Water

**EA/NRW Detailed River Network Map - Slice A**



**Order Details**

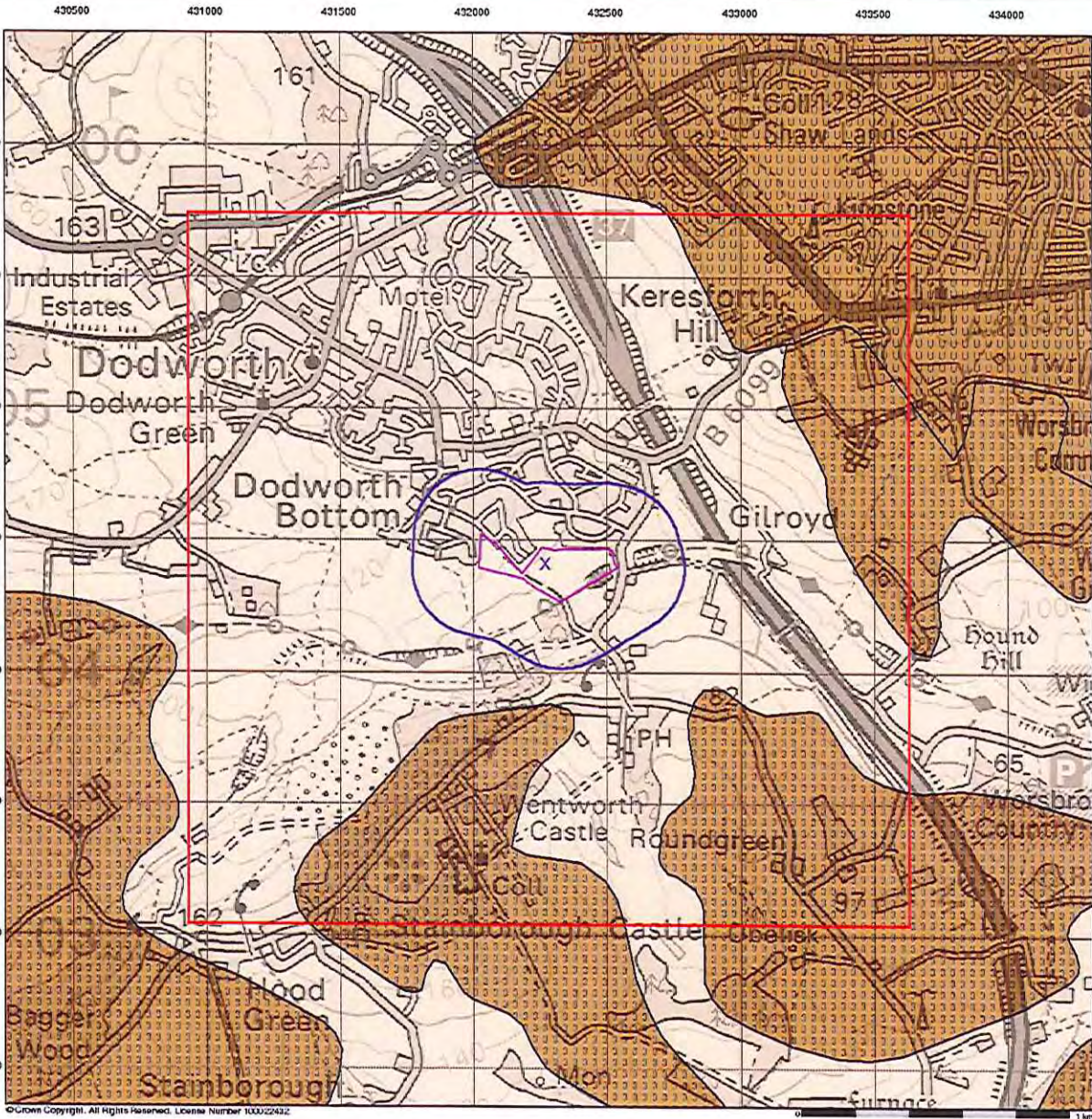
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 Slice: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

**Site Details**

10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW



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



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## Groundwater Vulnerability

**General**

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

**Agency and Hydrological**

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

### Site Sensitivity Context Map - Slice A



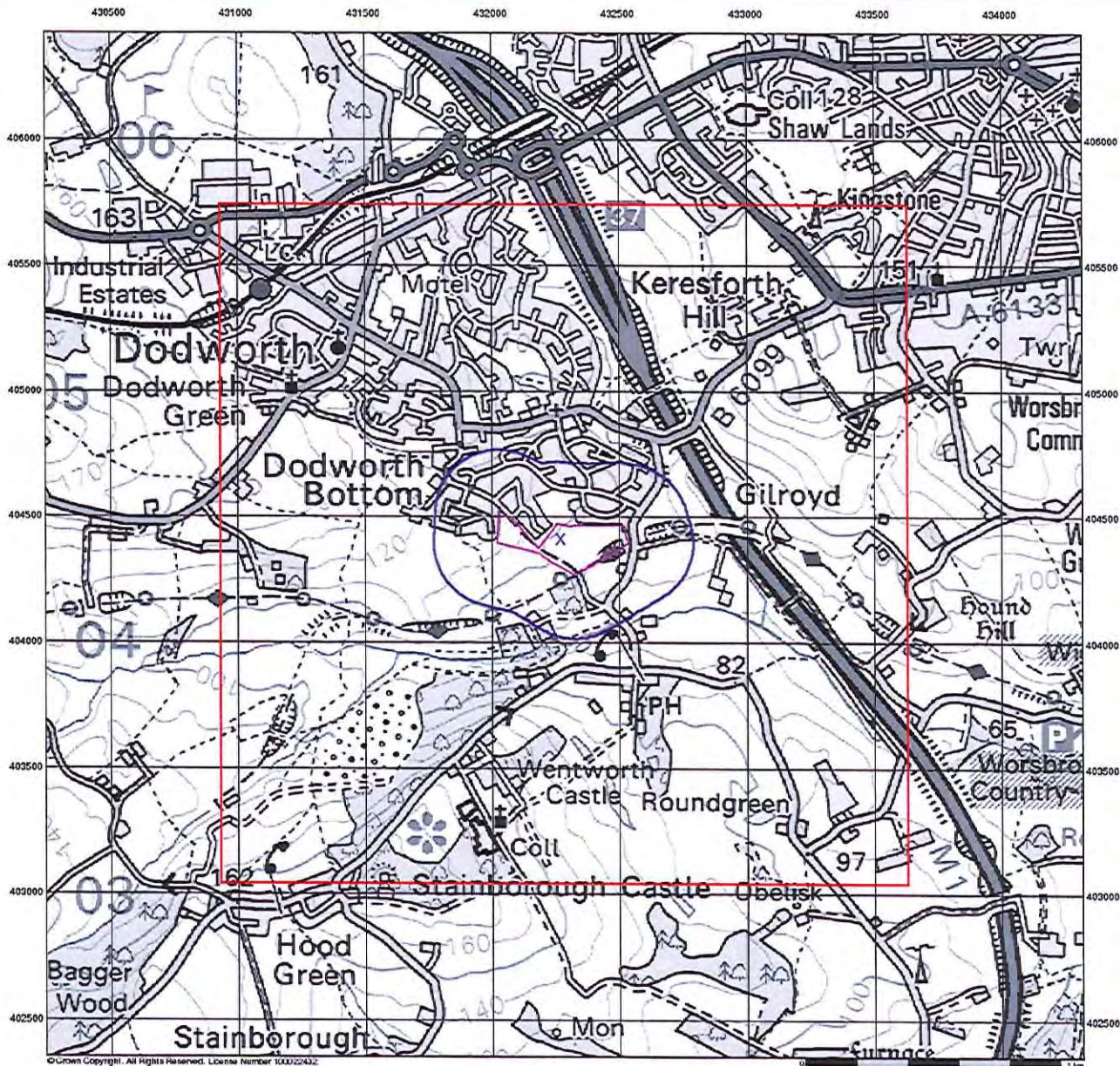
**Order Details**

Order Number: 66166604\_1\_1  
 Customer Ref: 1979 - Smyth Wood Lane  
 National Grid Reference: 432270, 404410  
 Slice: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

**Site Details**  
 10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW

**Landmark** Information Group

Tel: 0544 844 0052  
 Fax: 0544 844 0051  
 Web: www.envisirocheck.co.uk



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### Source Protection Zones

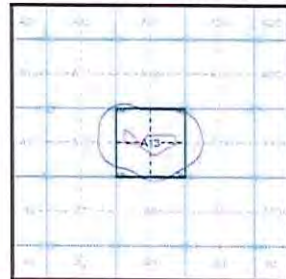
#### General

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

#### Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Boundary

#### Site Sensitivity Context Map - Slice A



#### Order Details

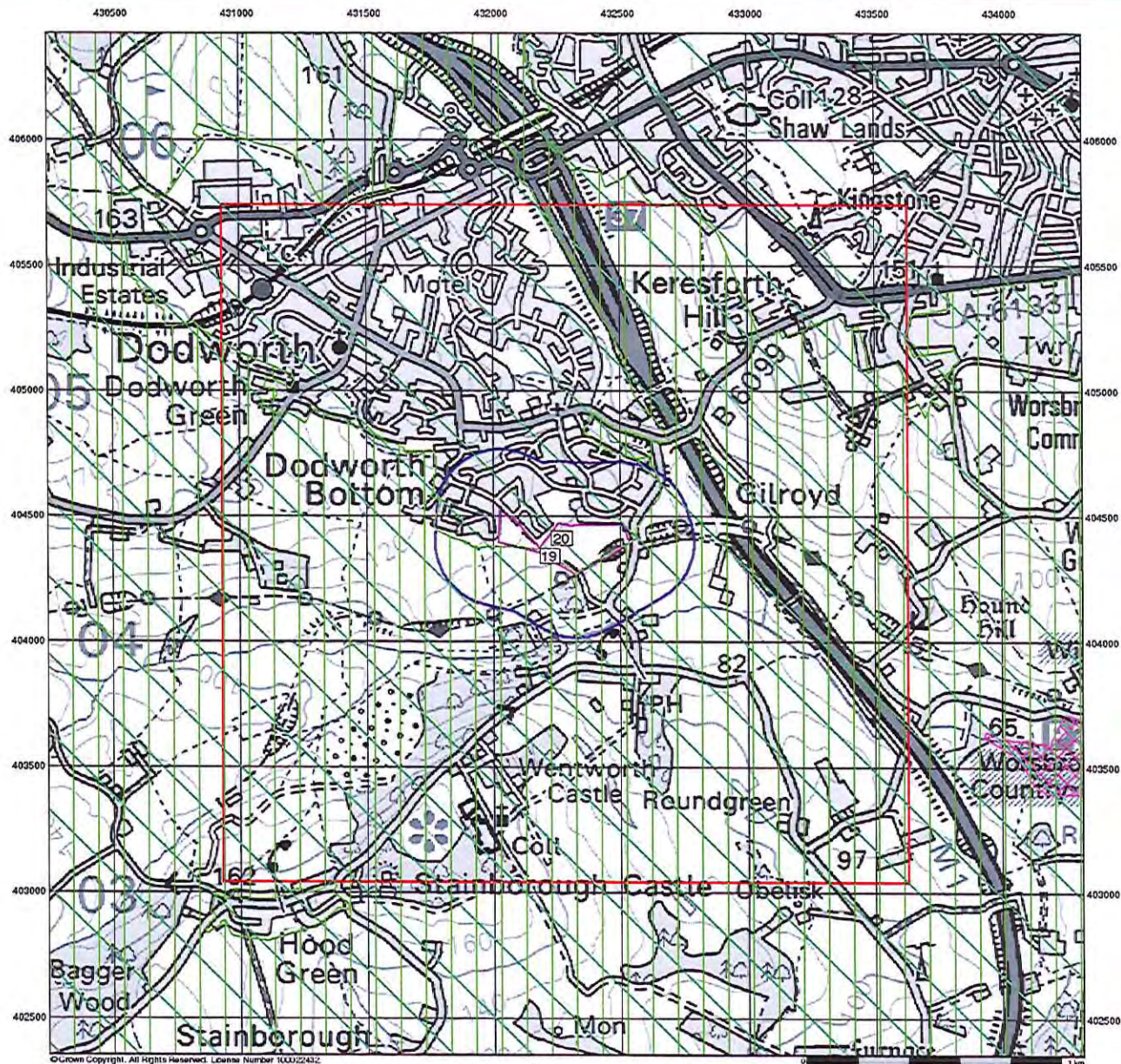
Order Number: 66166604\_1\_1  
 Customer Ref: 1979 - Smithy Wood Lane  
 National Grid Reference: 432270, 404410  
 Slice: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

#### Site Details

10 Calver Close, Dodworth, BARNSELY, South Yorkshire, S75 3QW



Tel: 0844 844 0652  
 Fax: 0844 844 0651  
 Web: www.envirocheck.co.uk



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### Sensitive Land Uses

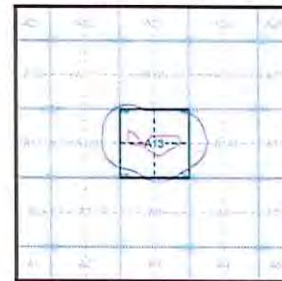
#### General

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

#### Sensitive Land Uses

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

#### Site Sensitivity Context Map - Slice A



#### Order Details

Order Number: 66166804\_1\_1  
 Customer Ref: 1979 - Smilthy Wood Lane  
 National Grid Reference: 432270, 404410  
 Slice: A  
 Site Area (Ha): 6.05  
 Search Buffer (m): 250

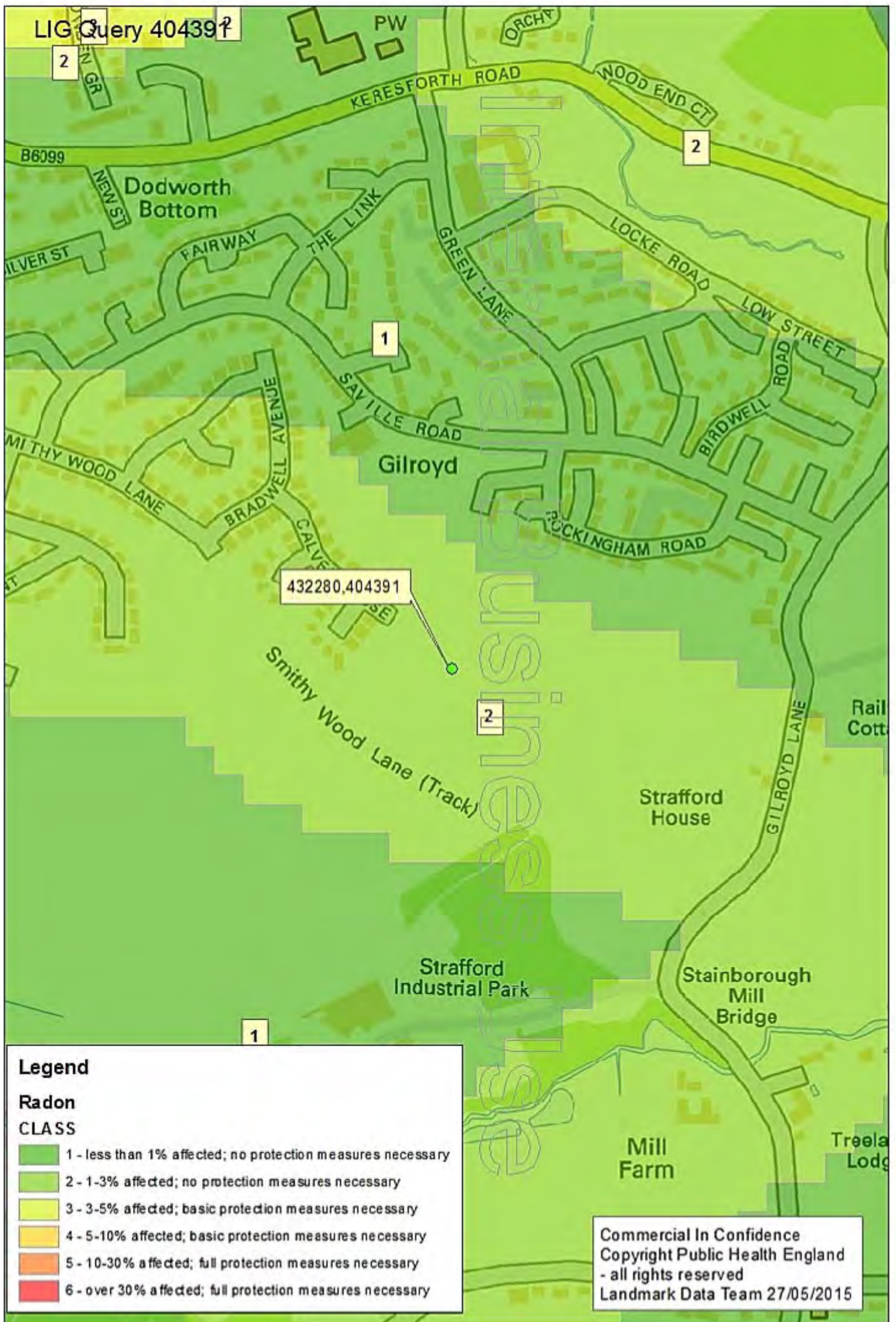
#### Site Details

10 Calver Close, Dodworth, BARNLSLEY, South Yorkshire, S75 3QW



Tel: 0544 844 0052  
 Fax: 0544 044 0051  
 Web: www.enrwocheck.co.uk

LIG Query 40439?





Issued by:

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

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

Our reference: **51000837001001**  
Your reference: **66166604\_2|**  
Date of your enquiry: **07 April 2015**  
Date we received your enquiry: **07 April 2015**  
Date of issue: **07 April 2015**

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

**Non-Residential Coal Authority Mining Report**

**SITE AT 10 CALVER CLOSE, DODWORTH, BARNSELY, SOUTH YORKSHIRE,**

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

Coal mining	See comments below
Brine Compensation District	No

***Information from the Coal Authority***

**Underground coal mining**

**Past**

The property is in the likely zone of influence from workings in 5 seams of coal at shallow to 270m depth, and last worked in 1971.

**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.

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**

A damage notice or claim for alleged subsidence damage was made in November 2000 for LAND WEST OF SMITHY WOOD LANE, DODWORTH, BARNSLEY, SOUTH YORKSHIRE. However, the claim was rejected.

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

A damage notice or claim for alleged subsidence damage was made in March 2000 for 32 CALVER CLOSE, DODWORTH, BARNSLEY, SOUTH YORKSHIRE, S75 3QW. However, the claim was rejected.

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

A damage notice or claim for alleged subsidence damage was made in June 2013 for SAVILLE HALL FARM, SAVILLE HALL LANE, DODWORTH, BARNSLEY, SOUTH YORKSHIRE S75 3NG. However, the claim was rejected.

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

A damage notice or claim for alleged subsidence damage was made in July 1999 for FIELDS OS 1333, 0028, 2427, 2020 & 1517 LAND TO WEST OF SMITHYWOOD LANE, DODWORTH, BARNSLEY. However, the claim was rejected.

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

A damage notice or claim for alleged subsidence damage was made in February 2015 for SAVILLE HALL FARM, SAVILLE HALL LANE, DODWORTH, BARNSLEY, S75 3NG. However, the claim was rejected.

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

There are a further 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](http://www.groundstability.com) or telephone 0345 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 not in an area for which a notice of entitlement to withdraw support has been published.

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

### **Working facilities orders**

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

### **Payments to owners of former copyhold land**

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

### **Comments on Coal Authority information**

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

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

### ***Information from the Cheshire Brine Subsidence Compensation Board***

The property lies outside the Cheshire Brine Compensation District.

### ***Additional Remarks***

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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## Location map



Approximate position of property



## Enquiry boundary

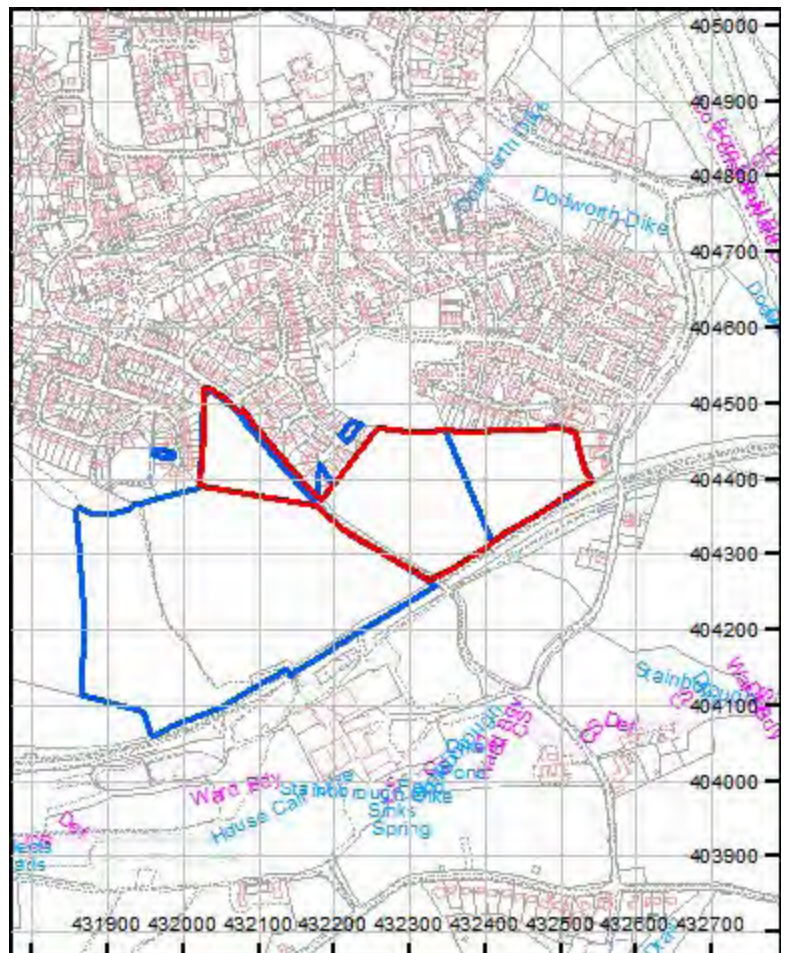
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## Key

Approximate position of enquiry boundary shown



Coal Claims





The Coal  
Authority



INVESTOR IN PEOPLE

Property Search Office  
200 Lichfield Lane  
Berry Hill  
Mansfield  
Nottinghamshire  
NG18 4RG  
DX: 716176 Mansfield 5

Tel: 0345 7626848  
Fax: 01623 637 338  
Email: [groundstability@coal.gov.uk](mailto:groundstability@coal.gov.uk)  
Web: [www.groundstability.com](http://www.groundstability.com)

5<sup>th</sup> June 2015

Our Reference: 71000860669001

George Morton  
Lithos Consulting  
Parkhill  
Walton Road  
Wetherby  
LS22 5DZ

Dear George,

**Re:- Smithy Wood Lane, Dodworth**

In response to your email dated 2014, the Coal Authority's Mining Records Office holds all the coal abandonment plans which have been deposited, via the Mines Inspectorate, since the passing of the relevant Act of Parliament in 1872. These plans, which number in excess of 120,000 in total, depict not only the extents of the coaling operation but also the locations of the mine entries associated therewith.

Examination of the above collection reveals we hold plans depicting workings in 1 seam of coal up to 60m depth, the extents of which are shown of the following abandonment plans:

**Flockton Thick – NE469 & NE584**

Enclosed is a quotation for the provision of a copy of the above plans, which if required will be despatched on receipt of the appropriate payment. Payments can be made by credit/debit card by contacting our customer helpline on 0845 7626 848, by cheque made payable to the Coal Authority or the cost of the plans can be added to your monthly invoice account if applicable. Please provide the quotation reference number when making or confirming payment.

Yours sincerely

**Mining Information Customer Service Team**