

- NOTES
- JPG TRIAL PIT LOCATION
  - JPG BOREHOLE LOCATION
  - EASTWOODS BOREHOLE LOCATION
  - APPROXIMATE LT1 SITE BOUNDARY
  - APPROXIMATE LT2 SITE BOUNDARY
  - APPROXIMATE COMMERCIAL/INDUSTRIAL DEVELOPMENT SITE BOUNDARY
  - APPROXIMATE CURRENT SITE BOUNDARY

REV.	DESCRIPTION	DATE



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Tel 01937 545330

CLIENT

STRATA HOMES

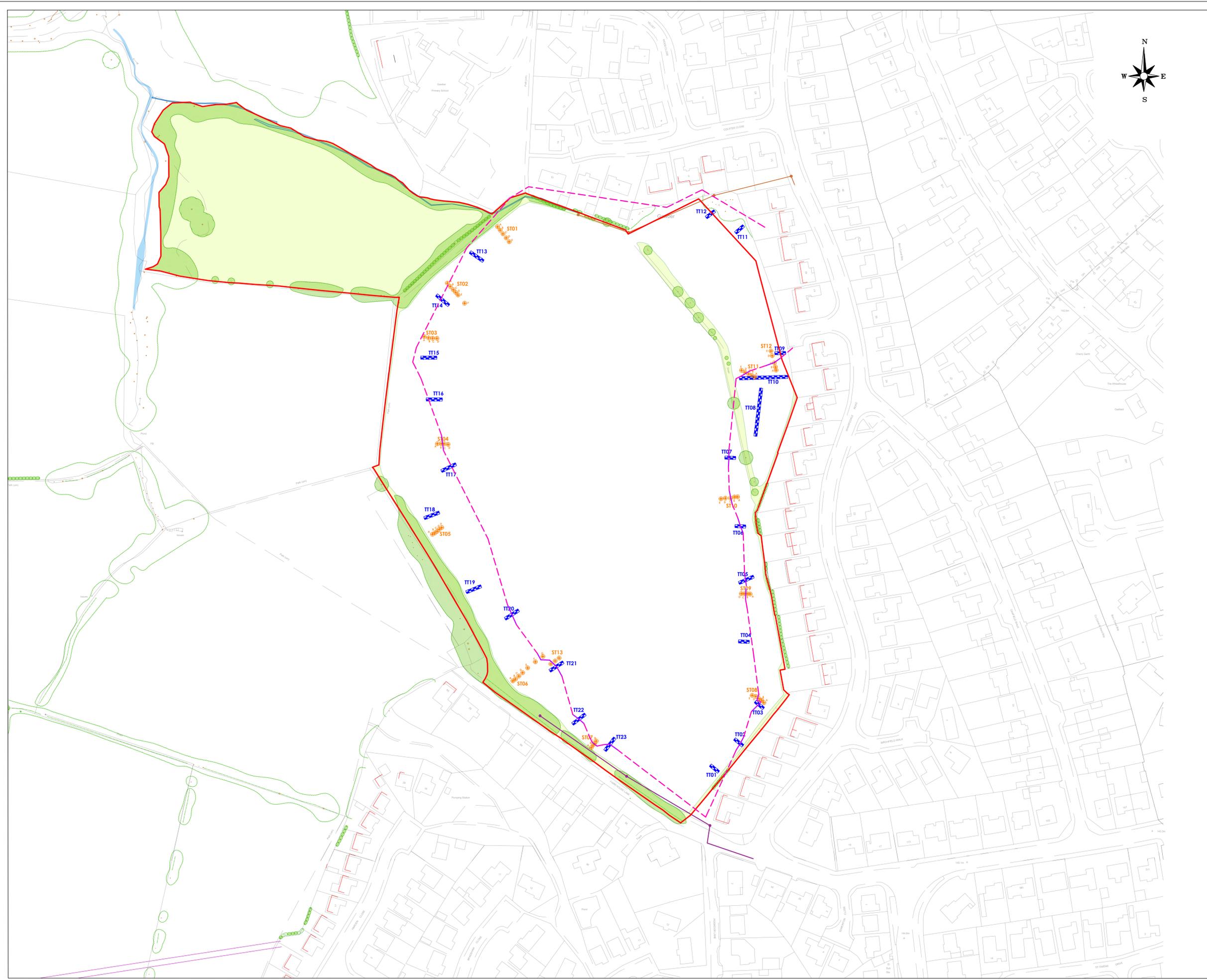
JOB TITLE

BARNSELY WEST  
(POGMOOR  
LAND)

DRAWING TITLE

3rd PARTY EXPLORATORY  
HOLE LOCATIONS

DRAWN	GLM	DATE	21/09/2022	STATUS	FOR COMMENT <input type="checkbox"/>
CHECKED	AG	DATE	21/09/2022	FOR APPROVAL	DRAFT <input type="checkbox"/>
				FINAL	<input checked="" type="checkbox"/>
SCALE	1: 2,500	SHEET	A0	DRAWING NO.	4454/10
				REVISION	



- NOTES
- TRIAL TRENCH LOCATION
  - LINE OF STITCHED PROBEHOLES
  - LINE OF HIGHWALL (PROVEN)
  - LINE OF HIGHWALL (INTERPRETED)
  - APPROXIMATE SITE BOUNDARY

REV.	DESCRIPTION	DATE

**LITHOS CONSULTING**

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CLIENT

**STRATA HOMES**

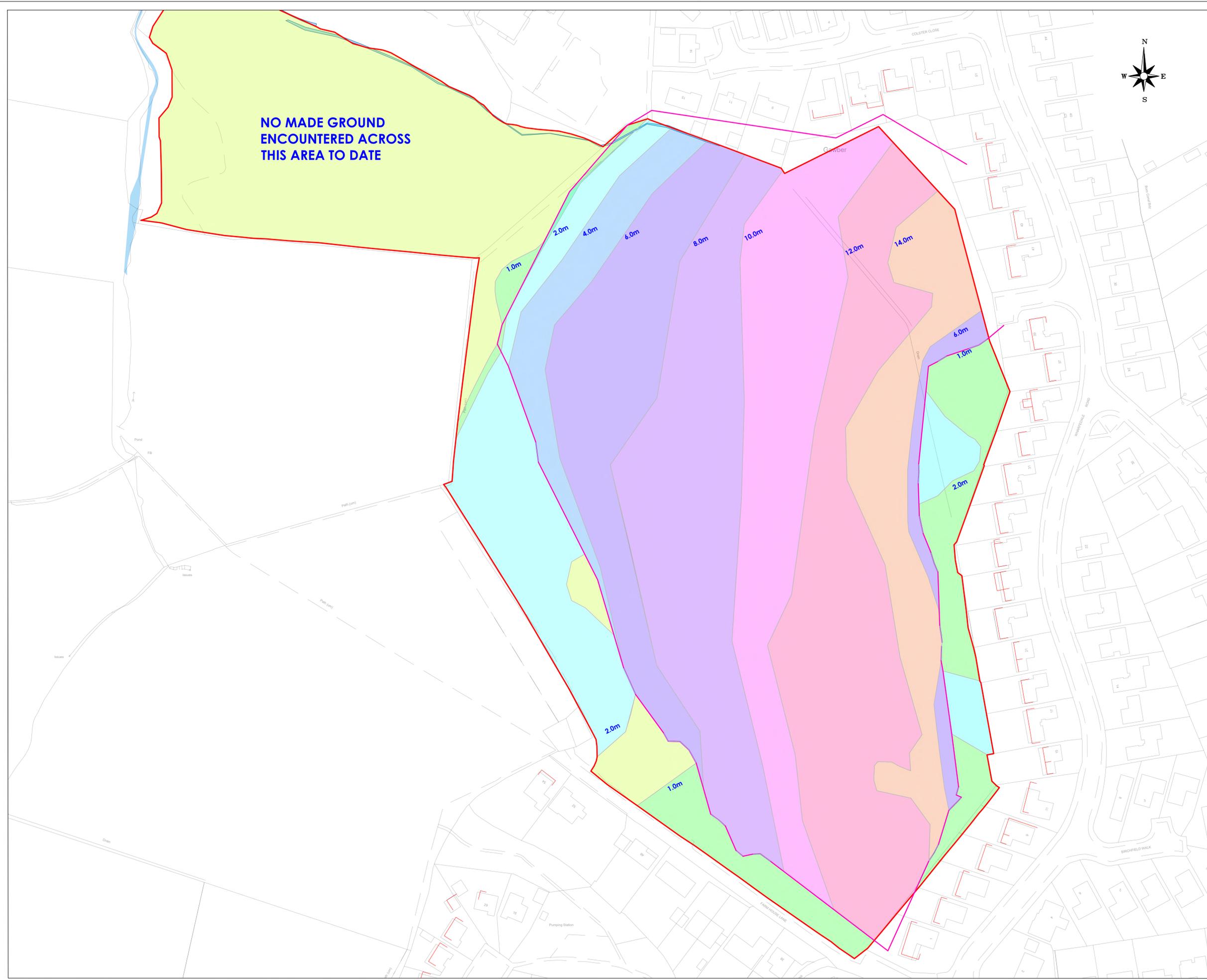
JOB TITLE

**BARNSELY WEST  
(POGMOOR LAND)**

DRAWING TITLE

**LINE & LOCATION OF BURIED  
HIGHWALLS**

DRAWN	GLM	DATE	24/11/2022	STATUS	FOR COMMENT	<input type="checkbox"/>
CHECKED	AG	DATE	24/11/2022	FOR APPROVAL	DRAFT	<input type="checkbox"/>
				FINAL		<input checked="" type="checkbox"/>
SCALE	1:1,000	SHEET	A1	DRAWING NO.	4454/1	REVISION



- NOTES**
- 0.0m to 1.0m
  - 1.1m to 2.0m
  - 2.1m to 4.0m
  - 4.1m to 6.0m
  - 6.1m to 8.0m
  - 8.1m to 10.0m
  - 10.0m to 12.0m
  - 12.1m to 14.0m
  - 14.0m to 16.0m
- LINE OF OPENCAST HIGHWALL
  - APPROXIMATE SITE BOUNDARY

DEPTH OF MADE GROUND INTERPRETED FROM AVAILABLE EXPLORATORY HOLES ADVANCED BY LITHOS

REV.	DESCRIPTION	DATE

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STRATA HOMES

JOB TITLE

BARNSELY WEST (POGMOOR LAND)

DRAWING TITLE

THICKNESS OF MADE GROUND (mbgl)

DRAWN	GLM	DATE	19/10/2022	STATUS	FOR COMMENT	<input type="checkbox"/>	
CHECKED	AG	DATE	19/10/2022	FOR APPROVAL	DRAFT	<input type="checkbox"/>	
				FINAL		<input checked="" type="checkbox"/>	
SCALE	1: 750	SHEET	A1	DRAWING NO.	4454/12	REVISION	

**NO MADE GROUND  
ENCOUNTERED ACROSS  
THIS AREA TO DATE**



- NOTES**
- 139m to 140m
  - 138m to 139m
  - 137m to 138m
  - 136m to 137m
  - 135m to 136m
  - 134m to 135m
  - 133m to 134m
  - 132m to 133m
  - 131m to 132m
  - 130m to 131m
  - 129m to 130m
  - 128m to 129m
  - 127m to 128m
  - 126m to 127m
  - 125m to 126m
  - 124m to 125m
  - 123m to 124m
  - 122m to 123m
  - 121m to 122m
  - 120m to 121m
  - 119m to 120m
- LINE OF OPENCAST HIGHWALL
  - APPROXIMATE SITE BOUNDARY

LEVEL OF MADE GROUND  
INTERPRETED FROM AVAILABLE  
EXPLORATORY HOLES ADVANCED  
BY LITHOS

REV.	DESCRIPTION	DATE



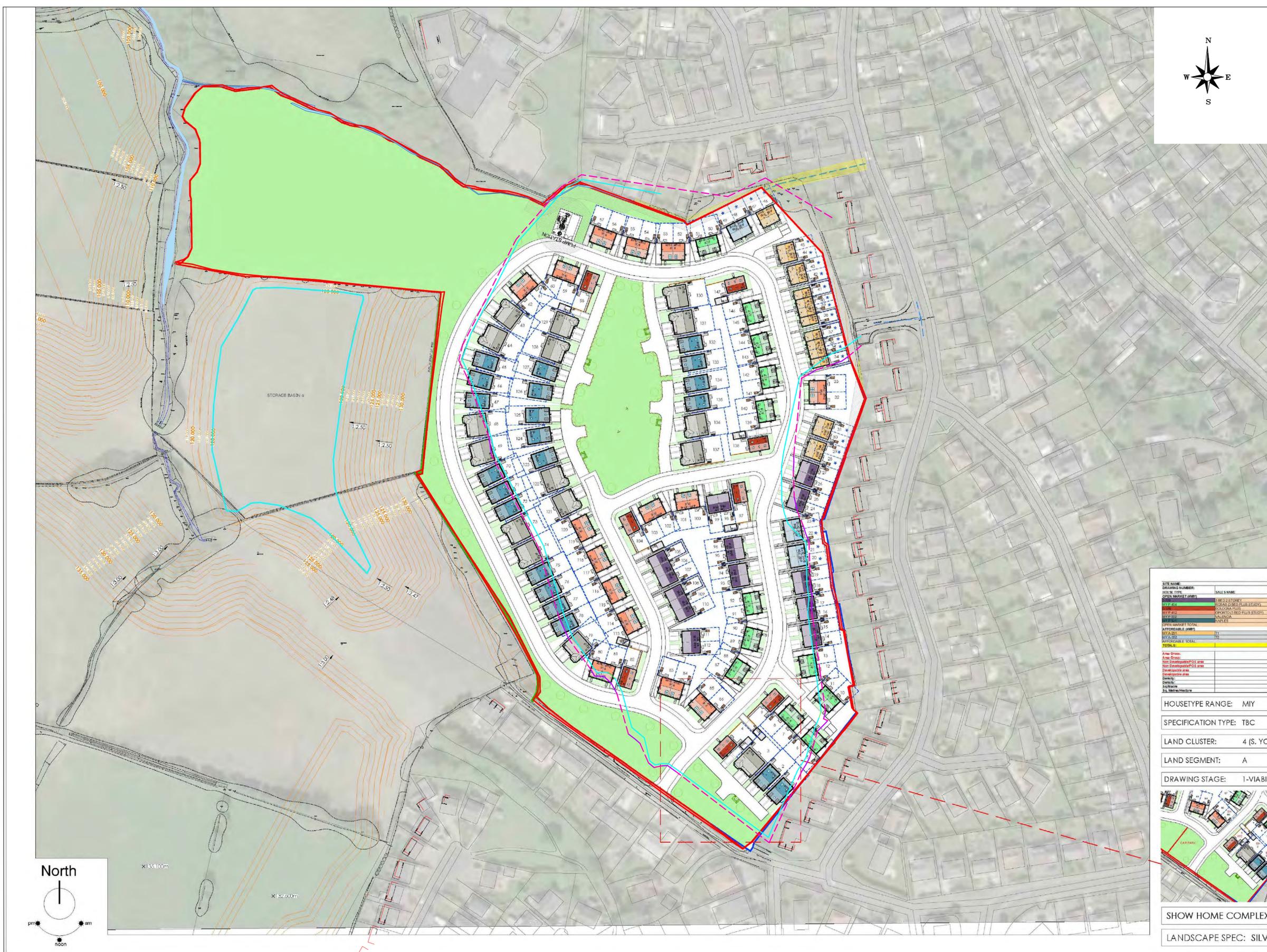
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STRATA HOMES

BARNSELY WEST  
(POGMOOR  
LAND)

DEPTH TO NATURAL  
GROUND (mAOD)

DRAWN	GLM	DATE	19/10/2022	STATUS	FOR COMMENT	<input type="checkbox"/>
CHECKED	AG	DATE	19/10/2022	FOR APPROVAL	DRAFT	<input type="checkbox"/>
					FINAL	<input checked="" type="checkbox"/>
SCALE	1: 750	SHEET	A1	DRAWING NO.	4454/13	REVISION



- NOTES
- TRIAL TRENCH LOCATION
  - LINE OF STITCHED PROBEHOLES
  - LINE OF HIGHWALL (PROVEN)
  - LINE OF HIGHWALL (INTERPRETED)
  - TOE OF HIGHWALL (INTERPRETED)
  - APPROXIMATE SITE BOUNDARY

REPRODUCED FROM STRATA HOMES' DRAWING 'POGMOOR PARCEL, FARM HOUSE LANE, BARNSELY S72 2JH - VIABILITY LAYOUT, OPTION 2' DRAWING NO. 21-CL4-SEGC-FBW02-02, REV. C, DATED 26/07/2021.

ITEM NAME	QUANTITY	UNIT
HOUSE TYPE		
OPEN MARKET TOTAL		
PERFORMANCE TOTAL		
TOTAL		

HOUSETYPE RANGE:	MIY
SPECIFICATION TYPE:	TBC
LAND CLUSTER:	4 (S. YORK)
LAND SEGMENT:	A
DRAWING STAGE:	1-VIABILITY
SHOW HOME COMPLEX	
LANDSCAPE SPEC:	SILVER

REV.	DESCRIPTION	DATE



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STRATA HOMES

BARNSELY WEST  
(POGMOOR LAND)

LINE & LOCATION OF BURIED HIGHWALLS

DRAWN	DATE	STATUS
GLM	17/10/2022	FOR COMMENT
AG	17/10/2022	FOR APPROVAL
		DRAFT
		FINAL

SCALE: 1:1,000    SHEET: A1    DRAWING NO: 4454/14    REVISION:



- NOTES
- TRIAL TRENCH LOCATION
  - LINE OF STITCHED PROBEHOLES
  - LINE OF HIGHWALL (PROVEN)
  - LINE OF HIGHWALL (INTERPRETED)
  - TOE OF HIGHWALL (INTERPRETED)
  - AREA OF DIFFERENTIAL SETTLEMENT ACROSS BURIED HIGHWALLS
  - APPROXIMATE SITE BOUNDARY

REPRODUCED FROM STRATA HOMES' DRAWING 'POGMOOR PARCEL, FARM HOUSE LANE, BARNLEY S72 2JH - VIABILITY LAYOUT, OPTION 2' DRAWING NO. 21-CL4-SEGC-PBW02-02, REV. C, DATED 26/07/2021.

- SITE LAYOUT LAYERS KEY
- 1800 HIC (shaded) - refer to
  - 1800 HIC (unshaded) - refer to
  - 600 HIC (shaded) - refer to
  - TREES TO
  - TREES TO
  - INDICA
  - INDICA
  - TRENCH
  - PROVED
  - VENDOR
  - STRATA
  - EASEMENT
  - INDICA
  - 900mm
  - 1800GCS
  - DENOT - refer to
  - SHOW
  - WELCC
  - WELCC
  - SOCIAL
  - INDICA - refer to
  - DENOT - refer to

ACCOMMODATION SCHEDULE

HOUSE TYPE	SALES NAME	BEDS	NUMBER	SQFEET	TOTAL SQM
OPEN MARKET (MIY)					
MIY 1-01	STIRLING TOWN	3	24	960	2094
MIY 1-02	POGMOOR PLUS STUDIOS	2	42	1680	3780
MIY 1-03	POGMOOR PLUS STUDIOS	3	30	1200	2700
MIY 1-04	POGMOOR PLUS STUDIOS	2	30	1200	2700
MIY 1-05	VALENTIA	3	30	1200	2700
MIY 1-06	VALENTIA	2	30	1200	2700
MIY 1-07	VALENTIA	2	30	1200	2700
MIY 1-08	VALENTIA	2	30	1200	2700
MIY 1-09	VALENTIA	2	30	1200	2700
MIY 1-10	VALENTIA	2	30	1200	2700
MIY 1-11	VALENTIA	2	30	1200	2700
MIY 1-12	VALENTIA	2	30	1200	2700
MIY 1-13	VALENTIA	2	30	1200	2700
MIY 1-14	VALENTIA	2	30	1200	2700
MIY 1-15	VALENTIA	2	30	1200	2700
MIY 1-16	VALENTIA	2	30	1200	2700
MIY 1-17	VALENTIA	2	30	1200	2700
MIY 1-18	VALENTIA	2	30	1200	2700
MIY 1-19	VALENTIA	2	30	1200	2700
MIY 1-20	VALENTIA	2	30	1200	2700
MIY 1-21	VALENTIA	2	30	1200	2700
MIY 1-22	VALENTIA	2	30	1200	2700
MIY 1-23	VALENTIA	2	30	1200	2700
MIY 1-24	VALENTIA	2	30	1200	2700
MIY 1-25	VALENTIA	2	30	1200	2700
MIY 1-26	VALENTIA	2	30	1200	2700
MIY 1-27	VALENTIA	2	30	1200	2700
MIY 1-28	VALENTIA	2	30	1200	2700
MIY 1-29	VALENTIA	2	30	1200	2700
MIY 1-30	VALENTIA	2	30	1200	2700
MIY 1-31	VALENTIA	2	30	1200	2700
MIY 1-32	VALENTIA	2	30	1200	2700
MIY 1-33	VALENTIA	2	30	1200	2700
MIY 1-34	VALENTIA	2	30	1200	2700
MIY 1-35	VALENTIA	2	30	1200	2700
MIY 1-36	VALENTIA	2	30	1200	2700
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MIY 1-38	VALENTIA	2	30	1200	2700
MIY 1-39	VALENTIA	2	30	1200	2700
MIY 1-40	VALENTIA	2	30	1200	2700
MIY 1-41	VALENTIA	2	30	1200	2700
MIY 1-42	VALENTIA	2	30	1200	2700
MIY 1-43	VALENTIA	2	30	1200	2700
MIY 1-44	VALENTIA	2	30	1200	2700
MIY 1-45	VALENTIA	2	30	1200	2700
MIY 1-46	VALENTIA	2	30	1200	2700
MIY 1-47	VALENTIA	2	30	1200	2700
MIY 1-48	VALENTIA	2	30	1200	2700
MIY 1-49	VALENTIA	2	30	1200	2700
MIY 1-50	VALENTIA	2	30	1200	2700
MIY 1-51	VALENTIA	2	30	1200	2700
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MIY 1-53	VALENTIA	2	30	1200	2700
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MIY 1-55	VALENTIA	2	30	1200	2700
MIY 1-56	VALENTIA	2	30	1200	2700
MIY 1-57	VALENTIA	2	30	1200	2700
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MIY 1-74	VALENTIA	2	30	1200	2700
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MIY 1-170	VALENTIA	2	30	1200	2700
MIY 1-171	VALENTIA	2	30	1200	2700
MIY 1-172	VALENTIA	2	30		

**Appendix C**  
**Commission**

## George Morton

---

**From:** Angus Niven <AngusNiven@strata.co.uk>  
**Sent:** 16 May 2022 11:55  
**To:** Adam Gombocz; Andrew Bradley  
**Cc:** Reg  
**Subject:** RE: Intrusive Investigation at Pogmoor Parcel, Barnsley west

Hi Adam

Thank you for your quotation, which we find acceptable. Please proceed with arranging you're your rigs etc. If you could firm up your proposed start date we can start asking about access and crops etc.

Thanks, and regards

Angus

002/4454/AG

5<sup>th</sup> May 2022

Mr A Bradley  
Strata Homes Ltd  
Quay Point  
Lakeside Blvd  
Doncaster  
DN4 5PL



Registered in England 07068066

Parkhill  
Wetherby  
West Yorkshire  
LS22 5DZ

T 01937 545 330

[www.lithos.co.uk](http://www.lithos.co.uk)

Dear Andrew,

### Pogmoor Parcel – Barnsley West

Further to your recent invitation, please find attached our proposal for undertaking a site investigation on the above land. We understand that proposed development will include 147 traditional 2 storey domestic dwellings with associated gardens, POS and adoptable roads and sewers; a sketch layout (Drawing No. 21-CL4-SEGC-PBWO2-01) has been provided.

Review of the information supplied suggests that the site consists of a single parcel of land of approximately 7 hectares, located off Farm House Lane. Review of Google Maps suggests the site is currently used for agricultural purposes.

Brief review of reports supplied (for the wider Barnsley West site), and our own research suggests:

- The site appears to have remained undeveloped throughout its history;
- The majority of the eastern part of the site is occupied by Farmhouse Lane opencast, which based on JPG's exploratory SI is up to c. 11.5m deep.
- The Barnsley coal seam (up to 3.1m thick) outcrops in the west of the main part of the site, dipping c. 3-4 degrees to the east.
- Known shallow coal workings are recorded in the Barnsley coal seam in the west part of the main site.
- Within the footprint of the opencast the shallow workings are likely to have been removed, but beyond the opencast both to the east and west will remain (where present).
- Seven mine entries are recorded within the site boundary, 6 are adits following the dip of the Barnsley seam (i.e. towards the east). The 7<sup>th</sup> entry is a shaft within the footprint of the opencast, and this is likely to have been removed as part of the opencast operations.
- The site is not located within 250m of a known landfill site;
- The site is not within a groundwater source protection zone;
- The site is in an area where the risk of encountering UXO is considered low;
- The far west of the site has steep topography, with slope angles generally up to 30 degrees, locally steeper. In this area Mass Movement Deposits (landslip) are recorded by the BGS.

Brief examination of the relevant geological map suggests that beyond the areas of opencast the site is underlain by Pennine Middle Coal Measures, consisting of undifferentiated mudstone, siltstone and sandstone. Faulting is recorded in the northern part of the site, orientated east to west, down throwing strata to the south.

The scope of works outlined in this letter should enable us to assess abnormal development issues, associated with ground. However, the nature of site investigation is such that it is not always possible to foresee all the potential issues. Consequently, it is sometimes necessary to recommend additional work, but where this occurs we will inform you immediately, provide costs, and seek your further



instruction. We have visited site and reviewed available internet data and our geological maps in order to minimise the likelihood of further work.

Our site investigation will be undertaken in accordance with UK good practice (as outlined in BS5930, BS10175, LCRM etc). Our Report may not be fully compliant with Eurocode 7 (EC7) and will not purport to be a Ground Investigation Report, nor a Geotechnical Design Report as defined by EC7. Our ground appraisal is intended to assist others as they proceed with design of the proposed development.

This proposal allows for the following works:

**Desk study:** Environmental search data and historical maps (obtained from Landmark or Groundsure), will be reviewed in order to determine whether past land uses have had any effect on the proposed development. In addition, published geological plans of the area will be examined. We will also visit site to undertake a walkover survey.

We will complete a more detailed review of the Eastwood & Partners' report (2013), along with the JPG's Preliminary Ground Investigation (2019) and Coal Mining Risk Assessment (2019). In addition, published geological plans of the area will be examined.

**Fieldwork:** We have allowed for the following:

- 9 day's trial pitting / trenching to excavated pits on a c. 40m grid across the site, with trenching to accurately locate the opencast highwall.
- The drilling of 10 cable percussion boreholes within the Farmhouse Lane opencast.
- The drilling of about 20 rotary probeholes to depths between c. 10m and 20m bgl, to check for the presence of shallow mine workings across the site in the Barnsley coal seam.
- 4 day's of rotary openhole stitch drilling to record the geometry of the buried highwall where this cannot be accurately determined using an excavator.
- Rotary coring at 3 locations advanced 9m beyond the base of the Farmhouse Lane opencast, to prove rockhead and obtain rock core to facilitate pile design.

All trial pits, trenches and boreholes will be supervised and logged by an experienced geoenvironmental engineer.

This proposal has been put together without a recent site visit. If ground conditions are found to be significantly wet/boggy at the time of the investigation, it may be necessary to hire additional resources (bog mats, tractors, stone etc) in order for works to continue. We will discuss the requirement for any such items and associated costs with you prior to ordering.

**Trial pitting / trenching** will enable us to determine the:

- Nature of any made ground, including:
  - visual/olfactory evidence of potential contamination and the proportion of undesirable elements e.g. biodegradable matter, relict foundations etc
  - the proportion of "oversize", boulder-sized material
  - the location and extent of the opencast, with trenching to locate the opencast high walls
- Nature, distribution and thickness of shallow soils beyond the former opencast
- Suitability of the ground for founding structures and highways.

**Trial trenching** will also be used to search for the six known **mine adits** outside the Farmhouse Lane opencast. The shaft within the opencast is recorded by the CA to have been treated (likely excavated during opencasting). CA conjectured positions will be set-out by survey prior to commencement. In addition, the adits might be tentatively identified by tell-tale signs at surface (i.e. grass die-back, depressions etc), and our Engineer will inspect land in the vicinity of each pegged position for such features.

Given the expected absence of significant made ground (around the 6 adits), the search will be conducted by stripping of topsoil, and a nominal 300mm of subsoils working in panels about 4m wide and 20m to 40m in length. We will search a minimum radius of 20m from the CA's conjectured position, where topography and site constraints allow.

Prior to backfilling of the first trench, each of the four corners of the excavation will be clearly marked with a peg/flag, to ensure the extent of excavation is not confused with areas where arisings have been temporarily stockpiled.

Once satisfied that a mine entry does not lie within a particular panel, Lithos will instruct the excavator operator to backfill the panel with arisings from an adjacent panel. Further panels will be excavated until the mine entry has either: (a) been located; or (b) been confirmed absent following strip and inspection of the exposed subsoil within a minimum 20m radius of the plotted location.

If located, photographs will be taken, and the mine entry's location will be taped in from three salient points, the position will be marked on the surface to allow subsequent surveying. We will also recover samples of any backfill for sulphate analysis to assist with specification of the anticipated concrete cap.

However, it impossible to say how long it will take to find each mine entry. Consequently, a day rate of £ /day should be allowed for the shaft search; likely maximum duration 10 days.

Given nature of the land, we have allowed for all pits and trenches to be dug using a tracked 360° excavator.

Representative soil samples of natural and man-made ground, including any contaminated samples, will be taken during the works. In-situ shear strengths of any cohesive soils encountered will be determined by the use of a hand-held shear vane.

We will make every effort to compact arisings and 'sweep' them over each trial pit. However, you should be aware that on completion of the investigation, "graves" of spoil (each about 3m long by 1m wide) unsuitable for trafficking, will be left up to 400mm proud at each trial pit location. At this stage, no allowance has been made for any further reinstatement such as removal of excess arisings, replacement of turf etc.

Based on anticipated ground conditions and topography, **soakaways** will not provide a satisfactory solution for surface water drainage, as a result, no allowance has been made for soakaway testing.

The **cable percussion boreholes** will be advanced to depths of c. 12m or refusal in bedrock, whichever is the shallower, and are primarily intended to enable the retrieval of geotechnical data from depth to inform pile design and to obtain geotechnical parameters to inform earthworks design and settlement (consolidation & creep) assessment.

The boreholes will also allow the installation of 10 gas and groundwater wells (50mm ID, HDPE pipework with bentonite seals and a gravel filter pack). Well headworks will comprise a 100mm diameter steel security helmet which will extend about 150mm above ground level (if required, the position of each helmet could be "marked" with a 1.5m high fence post to reduce the likelihood of damage by farm machinery). The groundwater **wells** will be developed and purged (twice each) shortly after completion of drilling.

Given the anticipated presence of deep made ground, SPTs will be undertaken at approximate 1m to 1.5m intervals as the boreholes are advanced. SPTs allow assessment of the in-situ density of granular soils, enabling determination of allowable bearing capacity and thereby definitive foundation advice.

Undisturbed, thin wall open-tube samples (UT100) will be obtained from cohesive made ground (where suitable) to enable total stress and consolidation testing to take place to further inform pile design and settlement assessment.

The boreholes will be cased-off during drilling to at least rock head, in order to reduce the possibility of collapse, groundwater ingress, mis-sampling etc.

This investigation should yield sufficient data to enable a foundation zoning plan, and possibly a detailed Foundation Schedule. However, if ground conditions are found to be more variable than anticipated, a 'tighter' grid of pits will be necessary prior to preparation of a detailed Foundation Schedule. This proposal does not allow for the preparation of a detailed Foundation Schedule, but we will provide a quote on completion of the site investigation if requested.

The site is underlain by the Barnsley coal seam, which is recorded to have been worked at shallow depth, therefore we have allowed for the drilling of c. 20 **rotary probeholes** to check whether old mine workings are present and pose a significant risk to surface stability of the site. Rotary openhole **stitch drilling** (c. 4 days) will also be undertaken to record the geometry and orientation of the buried highwall, where this cannot be accurately determined using an excavator.

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. Furthermore, we have assumed that it will be possible to advance the 20 probeholes within 4 days but there is a chance that it may take longer in which case we will inform you before leaving site, and seek your further instruction. Each day of additional drilling would cost £ (inclusive of supervision) provided it were instructed whilst the drilling rig was still on site.

It will be necessary to submit an application (with the associated fee) to the Coal Authority (CA) for 'Permission to enter CA mining interests'; and we have allowed for this. You should note that the CA have updated the application process and as of 4<sup>th</sup> October 2021, developers (clients) must submit a signed copy of the **CA's T&Cs** (copy enclosed) before the CA will commence work on permit issue which can take up to 4 weeks. Lithos can perform the role of Agent.

Given the proximity of surrounding housing (within 50m of much of the general site area), and in accordance with CA requirements we have had to assume that the probeholes will need to be advanced using water as the flushing medium (as reinforced by recent CA guidance on managing the risk of hazardous gas). Our drilling sub-contractor will need to locate the wash outs close to the site, and procure a standpipe and licence from Yorkshire Water.

With reference to the control, management and disposal of surplus water and flush arising from the works, (and in order to avoid additional costs associated with the provision of a telehandler to transfer a weir tank between boreholes, and the provision of a pump to transfer surplus water from the weir tank to an approved disposal point), we have made provision for a sand bag bund at the foot of the drilling mast, at each borehole to contain the majority of the drill cuttings. However, we have assumed that potentially discoloured surplus water will be allowed to flow and settle into the field.

We have allowed for the set up of a site compound, including a welfare cabin through the duration of the site works. The site compound will be secured with Heras fencing, however, at this stage, we have assumed that overnight security will not be required, but this will be reviewed following a site visit. If required, security would be an E\O of £ per night.

Given the potential for boulders to be present within the opencast backfill, **rotary cored** holes will be advanced through the base of the Farmhouse Lane opencast, to allow recovery of 9m of core to confirm the full depth of backfill has been proven. The coring will also allow the recovery of rock samples to enable compressive strength testing to take place, which will inform pile / rock socket design.

We have allowed for all exploratory holes to be picked-up by a **surveyor** (co-ordinates/ground levels will be included on the logs).

Given the presence of backfilled opencast, the potential presence of shallow mine workings, we have allowed for the installation of gas wells in 20 holes and monitoring for hazardous **gas** (and any shallow groundwater).

The generation potential of this gas source is considered likely to be Low. Therefore, in accordance with CIRIA Report C665, we have initially allowed for 9 visits over a 6-month period. If extensive shallow mine workings are encountered the number of visits may have to be extended to 12 over a 6-month period. A hazardous gas risk assessment will be issued on completion of monitoring.

We strongly recommend that groundwater / gas wells be decommissioned after monitoring has been completed. Decommissioning involves removal of the metal covers, unscrewing the upper 1m to 2 m of pipework and filling the void / remaining well with bentonite.

Decommissioning of monitoring wells removes the potential for groundwater pollution caused by accidental spillages during the construction phase and prevents gas migration into sub-floor voids. Subject to your instruction, we will decommission accessible wells after the last monitoring visit for an E\O price of £ +VAT.

**Testing:** This will comprise routine **geotechnical** soils analysis, including:

- 50 moisture content;
- 30 Atterberg limits
- 30 pH & water-soluble sulphate
- 15 Gradings by wet sieve and 10 by pipette
- 15 Compaction tests (4.5kg) on samples of made ground to assess suitability for use in earthworks ground improvement
- 15 Particle density
- 8 Unconsolidated undrained triaxial tests (soils)
- 8 Oedometer consolidation tests (soils)
- 10 Uniaxial compressive strength tests (rock)
- 20 Determination of point load strength (axial & diametral)

Appropriate **chemical analyses**, based on our review of existing SI report and knowledge of the site's history, have been allowed for; this will comprise 30 samples for a suite including heavy metals, speciated PAH, and banded TPH (with supplementary speciation as/where appropriate). In the event that ground contamination is more significant or different to that anticipated, it might be necessary to carry out additional chemical testing.

Within in our proposal we have allowed for the screening (ID) of 30 samples for asbestos. In the event that positive IDs are reported, it is likely that we will need to schedule further analysis (asbestos quantification), in order to determine the significance of the results. Asbestos quantification is currently a relatively expensive test and consequently we have not allowed for it at this stage. We will inform you immediately after receipt of results if we consider asbestos quantification is required.

**Reporting & timescales:** In order to provide you with sufficient information to enable assessment of abnormal costs at the earliest opportunity we will issue a concise overview report within 7 days of fieldwork completion.

On completion of the desk study, fieldwork and laboratory testing a comprehensive, factual and interpretative report will be issued. This will contain exploratory hole logs, laboratory test results, cross sections, copies of all relevant correspondence and drawings of the site. The report will include qualitative risk assessment with respect to both controlled waters and human health. The report will also include consideration of foundation types. At this stage we have assumed that two separate reports will be required, one for each of the two main development parcels.

At the time of writing, fieldwork could be commenced within 4 to 6 weeks of receipt of your written instruction to proceed. Our comprehensive geoenvironmental appraisal report will be issued within 6 to 8 weeks of fieldwork completion. This report will comment on issues associated with hazardous gas, but the gas risk assessment will not be issued until monitoring is completed.

This report will include a **mining risk assessment** in accordance with Coal Authority guidance.

A completed copy of the **YW** Contaminated Land Assessment Form will be included in an Appendix to our Report. However, the proposed route(s), and total length, of water supply pipes are not currently known and no allowance has been made for laboratory testing of soil samples in line with UKWIR guidance.

Given previous usage of this land, it is considered highly likely that a **Remediation Strategy** report will be required by the Local Authority, however in the absence of sufficient ground investigation data, at this stage we have not allowed for this.

It should be noted that a Remediation Strategy outlines the remediation objectives necessary to protect environmental receptors and render a site suitable for the proposed end use. A Remediation Strategy is not the same as a Method Statement; the latter should be prepared subsequently, usually by a Contractor, in order to detail how the objectives will be achieved.

A copy of the final report will be issued to the relevant regulatory authorities on receipt of written instruction from yourselves.

**Invoicing:** The attached proposal provides a breakdown of the costs associated with this project. This breakdown is for information only and the proposal can be regarded as a lump sum price of £ plus VAT. Variation will only occur in the event that a given item is not undertaken or that substantial additional works are recommended, in which case we will inform you immediately, provide costs for the required works, and seek your prior consent. Revision of the costings provided may be required if works are not instructed within 6 months of the date this proposal was issued.

Our proposal allows for submission of the report to the Local Authority and NHBC, and for submission of a single piece of subsequent correspondence with each regulator to address any queries they may have. Any further meetings, correspondence etc, would be chargeable.

We will submit invoices for this project on completion of each Item(s) instructed.

Please note if following instruction of the works outlined in this proposal, it is necessary to subsequently **postpone or cancel**, this should be done at least 3 working days before Lithos are due to commence intrusive investigation on site. We reserve the right to charge a cancellation fee in the event of later notification to cover plant / drill rig costs and abortive consultancy time. The cancellation fee will not exceed £ plus VAT.

**Health, safety & welfare:** The works outlined above will be carried out in accordance with Lithos' task- and site- specific Risk Assessments and Method Statements.

Details of welfare will be included within the Method Statements. However, this investigation is expected to last for at least 2 weeks and therefore this proposal includes for provision of a Welfare Unit, with the benefit of full canteen facilities, hot water with full size sink, toilet and drying room.

Immediately prior to commencement of fieldwork, a site compound will be established in a location to be agreed with Strata, comprising a storage container, and a welfare cabin for site staff, secured with Heras fencing; equipment and plant will be stored here overnight.

**Utility plans** are required in order to protect operatives from the hazards associated with striking buried services and avoid potentially substantial disruption\repair costs. We will make every effort not to damage any services (including review of utility plans and use of a CAT detector). However, Lithos cannot accept liability for damage to any underground services that are not accurately marked on plans made available to us prior to commencement of our field investigation, or have not been accurately marked on the ground by a responsible third party (e.g. utility company, site owner).

Most developers have copies of the necessary utility plans (including electricity, gas, water, drainage & telecom); it would be appreciated if you forward these prior to the proposed fieldworks.

However, if you do not have the necessary plans, Lithos will obtain them direct from each of the utility companies.

Under the **CDM** Regulations 2015, Lithos must be provided with pre-construction information already in your possession, or information that can reasonably be obtained through sensible enquiry. This information must be relevant to the project, have an appropriate level of detail, and be proportionate to the nature of the risks.

If no other designers or contractors have been appointed, Lithos could perform the role of Principal Contractor but only for the duration of the site investigation outlined in this proposal. If you require us to perform the role of Principal Contractor, please make this clear in your instruction. It should be noted that we are not suitably qualified to perform this role where other designers or contractors are also appointed.

It is anticipated that the site investigation outlined in this proposal will be undertaken several months before any construction is commenced on site. Consequently, our works can be considered in isolation and, given the anticipated number of person days on site, this site investigation is not notifiable to the HSE.

**Terms & conditions:** 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



Adam Gombocz  
Associate Director

**for and on behalf of  
LITHOS CONSULTING LIMITED**

**1 DEFINITIONS AND INTERPRETATION**

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

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

"Documents" means 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 us, and whether in paper form or stored electronically or on disk, or otherwise;

"Intellectual Property" includes all rights to, and any interests in, any patents, designs, trade marks, copyright, 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;

"Project" means the project described in the Proposal and any enquiry from you on which we have based our Proposal;

"Proposal" means the offer document prepared by us 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 us pursuant to the Agreement and as set out in the Proposal and includes any additions or amendments thereto made in accordance with these Terms;

"Terms" means these terms entitled "Lithos Consulting Terms of Appointment" as amended from time to time.

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 You agree to engage us and we agree to provide the Services in accordance with the provisions of this Agreement.

**3 OUR OBLIGATIONS**

3.1 We shall perform the Services using the reasonable standard of skill and care normally exercised by qualified members of our profession, performing similar services under similar conditions.

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

**4 YOUR OBLIGATIONS**

4.1 Throughout the period of this Agreement you shall afford to us, or procure for our benefit, access to any site where access is required for the performance of the Services.

4.2 You accept responsibility for ensuring that we are 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, which you shall clearly mark on the ground or identify on accurate location plans supplied to us prior to the commencement of the Services. You shall also inform us 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. You shall indemnify us against all costs, losses, 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 you discover any conflict, defect or other fault in the information or designs provided by us pursuant to the Agreement, you will advise us in writing of such defect, conflict or other fault and we 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 COPYRIGHT**

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

5.2 You shall have a non-exclusive licence to copy and use such Intellectual Property for purposes directly related to the Project. Such licence shall enable you to copy and use the Intellectual Property but solely for your 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 us.

5.3 Should you 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, you must obtain our prior written consent. The giving of such consent shall be at our absolute discretion and shall be upon such terms as we may require. We shall not be liable to you 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 our behalf.

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

5.5 In the event of you being in default of payment of any fees or other amounts due, we may suspend further use of the licence on giving no less than 2 calendar days' notice of the intention to do so. Use of the licence may be resumed on receipt of the outstanding amounts.

**6 CONFIDENTIALITY**

6.1 Neither you nor we shall at any time disclose to any person any confidential information concerning the business, affairs, customers, clients or suppliers of the other party or of any member of the group of companies to which the other party belongs, except as permitted by clauses 6.2 and 6.4.

6.2 Each party may disclose the other party's confidential information:

(a) to its employees, officers, representatives, contractors, sub-contractors or advisers who need to know such information for the purposes of exercising the party's rights or carrying out its obligations under or in connection with this Agreement. Each party shall ensure that its employees, officers, representatives, contractors, sub-contractors or advisers to whom it discloses the other party's confidential information comply with this paragraph 6; and

(b) as may be required by law, to a court of competent jurisdiction or any governmental or regulatory authority.

6.3 Neither you nor we shall use any other party's confidential information for any purpose other than to exercise our rights or perform our respective obligations under or in connection with this Agreement.

6.4 Subject to the above and our privacy policy which can be found on [www.lithos.co.uk](http://www.lithos.co.uk), we shall be permitted to use information related to the Services we provide in connection with the Project for the purposes of marketing its services and in proposals for work of a similar type.

**7 ASSIGNMENT**

7.1 You may assign the benefit of this Agreement on two occasions with our prior written consent (not to be unreasonably withheld) and any additional assignments shall be with our prior consent.

7.2 We may at any time assign, mortgage, charge, subcontract, delegate, declare a trust over or deal in any other manner with any or all of our rights and obligations under this Agreement.

**8 INSURANCE**

8.1 We shall maintain a professional indemnity insurance policy covering our liabilities for negligence under this Agreement, with a limit of indemnity of £5,000,000 (FIVE MILLION POUNDS) any one claim, save for pollution and contamination claims and asbestos claims both of which carry £2,000,000 (TWO MILLION POUNDS) in the aggregate cover. This policy is annually renewable and whilst renewal is not automatic, We shall maintain such insurance at all times until six years from the date of the completion (or

termination) of the Services under this Agreement, provided such insurance is available at commercially reasonable rates and terms.

8.2 If for any period such insurance is not available at commercially reasonable rates and terms, we shall inform you 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 us to obtain.

**9 PAYMENT**

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

9.2 You shall pay you any VAT properly chargeable on the Services and any amount expressed as payable to us under this Agreement is exclusive of VAT unless stated otherwise.

9.3 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.

9.4 If you dispute the amount included for payment in an invoice then you must serve a written notice on us no later than 14 calendar days before the final date for payment. If no notice is given within the required timeframe the amount due shall be the amount stated in the invoice.

9.5 If you fail to pay any monies in accordance with the foregoing payment provisions, we shall be entitled to charge interest on any monies owed to us, such interest to be at a rate of 4% 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. The parties acknowledge that our liability under this clause 10.5 is a substantial remedy for the purposes of section 9(1) of the Late Payment of Commercial Debts (Interest) Act 1998.

**10 LIMITATIONS ON LIABILITY**

10.1 Unless otherwise agreed in writing, our total liability under or in connection with this 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 the level of insurance cover referred to within clause 8.1 above, or 20 times the total value of invoices issued to you for the Services.

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 us after the expiry of a period of six years from the date of the completion (or termination) of the Services under this Agreement.

10.3 Whilst we usually scan for potential exploratory locations with a Cable Avoidance Tool, we 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 We shall not be liable for the cost of rectifying any defect, conflict or other fault in the information or designs provided by us 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 we have been advised in writing of the same by you and have 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 DELAY**

We shall comply with any timescale agreed for completion of the Services unless delayed or prevented by circumstances beyond our reasonable control and in the event of any such circumstances arising we undertake to complete the Services within a reasonable period, but will not be liable to you for any delay as a result.

**12 TERMINATION**

12.1 The Agreement may be terminated by either of us 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 termination must be given to the party which is insolvent by the other party.

12.2 If for any reason our Services are suspended for a period in excess of three calendar months then we shall be entitled to terminate our appointment under this Agreement in respect of the Services by no less than seven days written notice to you.

12.3 If you fail to pay in full any sum due under the terms of this Agreement by the final date for payment for that sum and no effective pay less notice is issued, we may serve written notice to you demanding payment within 14 days of such notice. If you fail to comply with such notice, we shall be entitled to terminate our employment under this Agreement forthwith.

12.4 Any termination of our appointment howsoever caused shall be without prejudice to our rights to require payment for all Services performed up to the date of such termination 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.

**13 THIRD PARTY RIGHTS**

The Agreement shall not confer and shall not purport to confer on any 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.

**14 COLLATERAL WARRANTIES & LETTERS OF RELIANCE**

We shall consider and may consent to a request from you for us to enter into a collateral warranty or letter of reliance with a third party with regard to the Services provided under this Agreement. The giving of such consent shall be at our absolute discretion and providing we agree to our standard form of collateral warranty or letter of reliance (subject to any reasonable changes to be approved by us at our absolute discretion) and in return for payment of a fee (to be notified at the time of the request).

**15 NOTICES**

15.1 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 pre-paid 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 our respective registered office addresses.

15.2 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 pre-paid first class post.

**16 ENTIRE AGREEMENT**

16.1 The Agreement constitutes the complete and entire agreement between us 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 us in respect of the Services can only be made in contract under the provisions of this Agreement and not otherwise under the law or tort or otherwise.

16.2 No amendments, modifications or variation of this Agreement shall be valid unless made in writing and agreed to by us; such agreement must be recorded in writing by at least one of us.

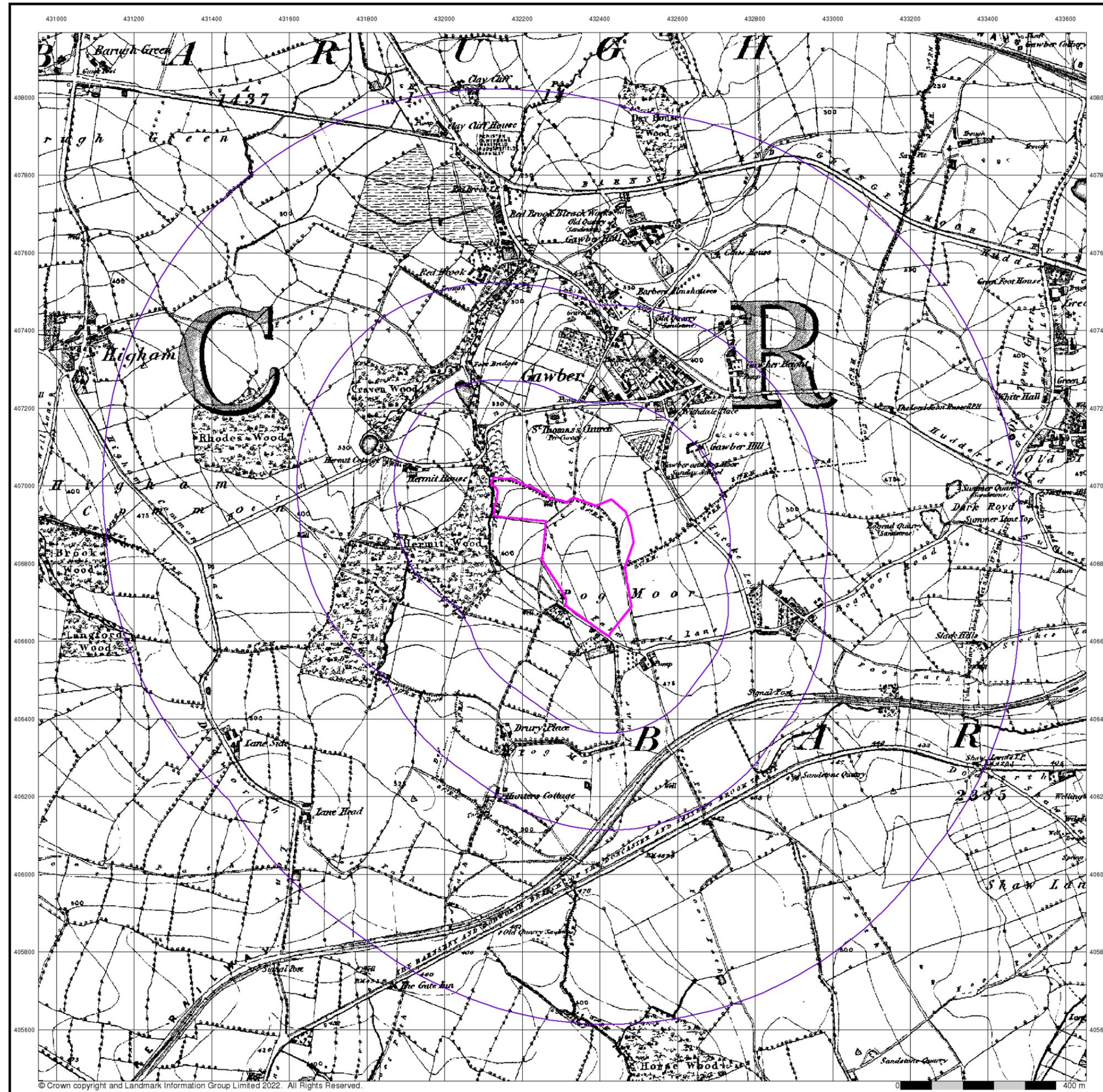
16.3 We shall not be bound by any standard or printed terms or conditions furnished by you in any of your documents unless we specifically state in writing separately from such documents that we intend such terms and conditions to apply.

**17 DISPUTES, JURISDICTION AND GOVERNING LAW**

17.1 This Agreement shall be governed by and construed in accordance with English law and we irrevocably and unconditionally submit to the jurisdiction of the English Courts.

17.2 Where the Housing Grants, Construction and Regeneration Act 1996 applies, any dispute between us 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.

**Appendix D**  
**Historical OS Plans**



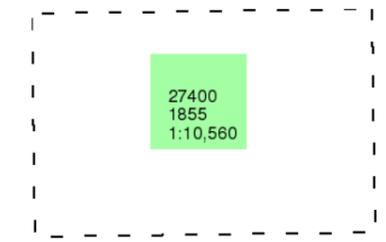
**Yorkshire**

**Published 1855**

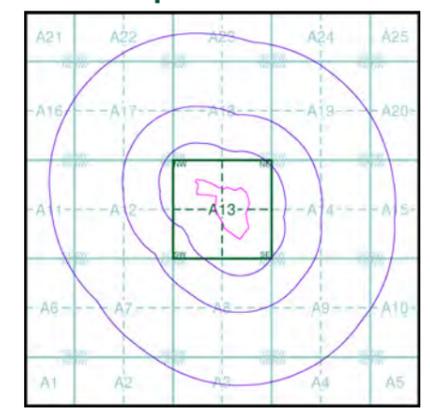
**Source map scale - 1:10,560**

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 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

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



**Historical Map - Slice A**



**Order Details**

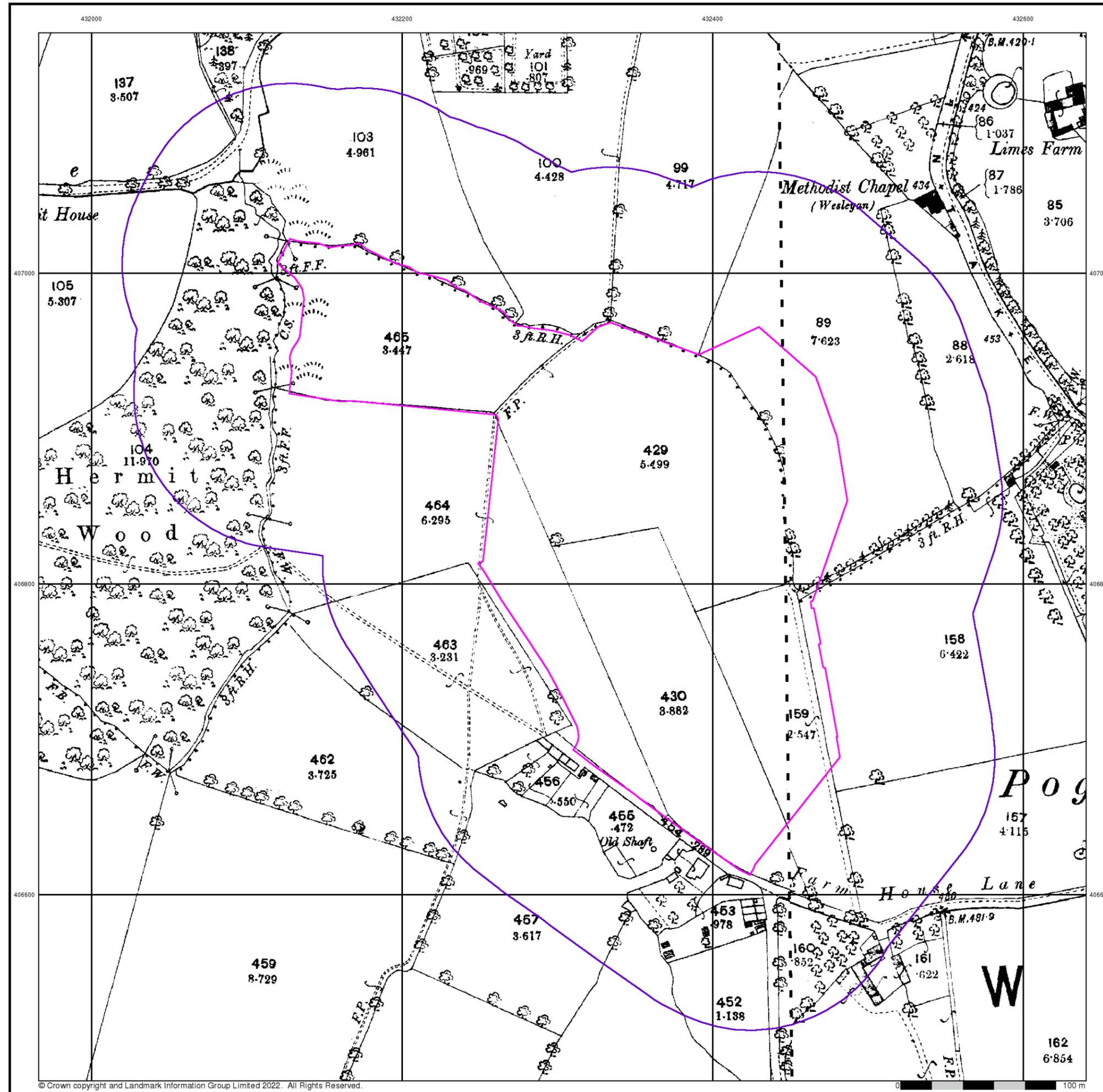
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 Customer Ref: 4454  
 National Grid Reference: 432320, 406840  
 Slice: A  
 Site Area (Ha): 7.29  
 Search Buffer (m): 1000

**Site Details**

Pogmore Lane, Barnsley West



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



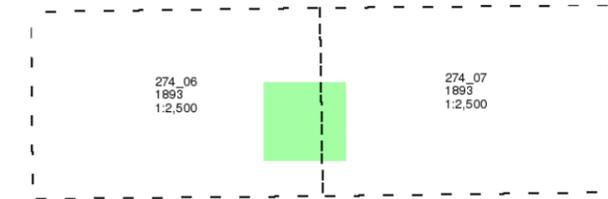
**Yorkshire**

**Published 1893**

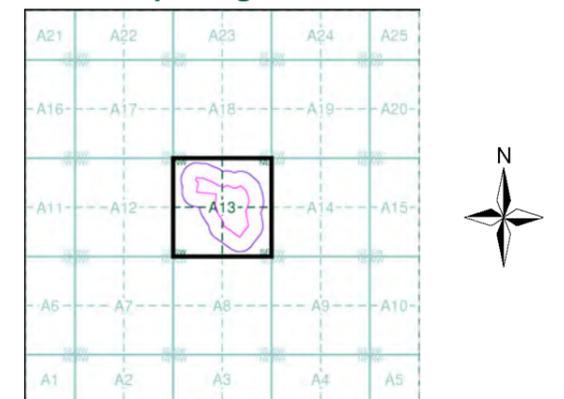
**Source map scale - 1:2,500**

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

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



**Historical Map - Segment A13**



**Order Details**

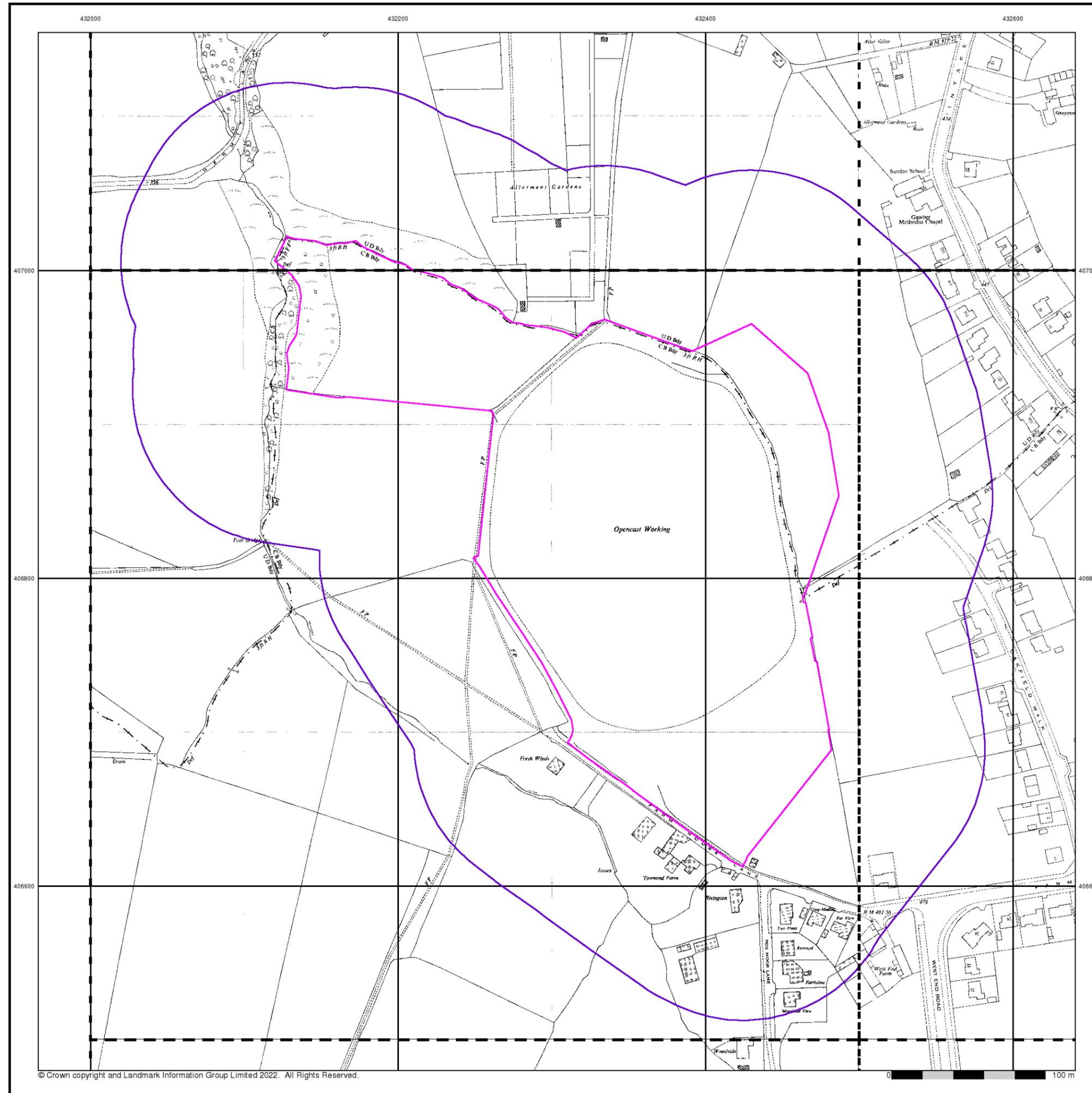
Order Number: 300379115\_1\_1  
 Customer Ref: 4454  
 National Grid Reference: 432320, 406840  
 Slice: A  
 Site Area (Ha): 7.29  
 Search Buffer (m): 100

**Site Details**

Pogmore Lane, Barnsley West



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



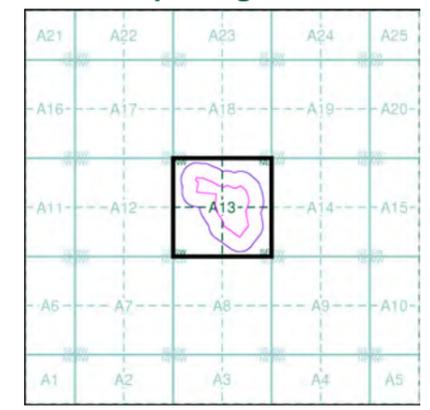
**Ordnance Survey Plan**  
**Published 1959 - 1960**  
**Source map scale - 1:1,250**

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

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

SE 3207 SW	SE 3207 SE
1959	1959
1:1,250	1:1,250
SE 3206 NW	SE 3206 NE
1960	1960
1:1,250	1:1,250
SE 3206 SW	SE 3206 SE
1960	1960
1:1,250	1:1,250

**Historical Map - Segment A13**



**Order Details**

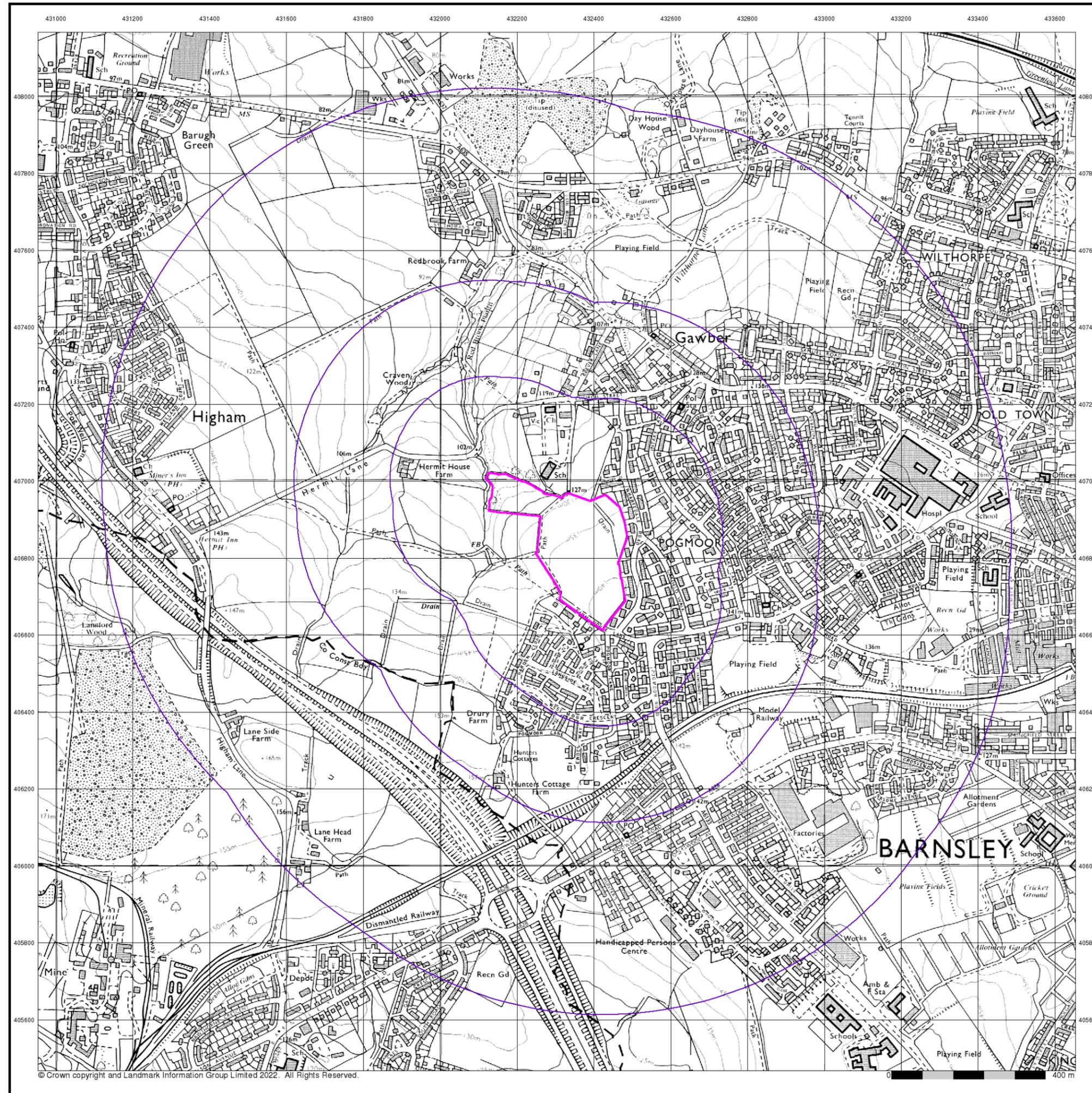
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**Site Details**

Pogmore Lane, Barnsley West



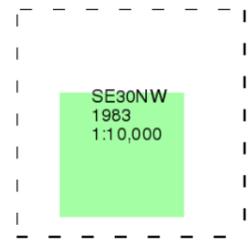
Tel: 0844 844 9952  
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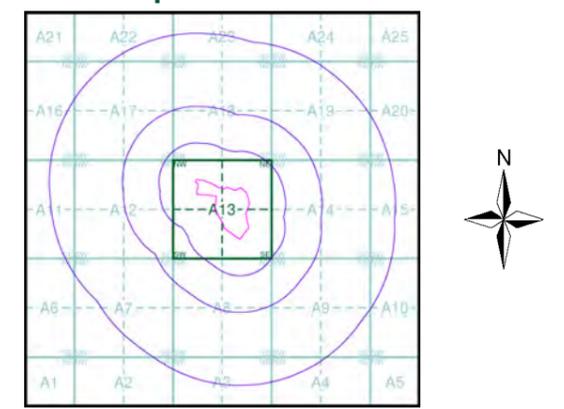
**Ordnance Survey Plan**  
**Published 1983**  
**Source map scale - 1:10,000**

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

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



**Historical Map - Slice A**



**Order Details**

Order Number:	300379115_1_1
Customer Ref:	4454
National Grid Reference:	432320, 406840
Slice:	A
Site Area (Ha):	7.29
Search Buffer (m):	1000

**Site Details**  
 Pogmore Lane, Barnsley West

**Landmark** INFORMATION GROUP  
 Tel: 0844 844 9952  
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 Web: www.envirocheck.co.uk

## Appendix E

### Search Responses & other Correspondence



## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

300379115\_1\_1

**Customer Reference:**

4454

**National Grid Reference:**

432320, 406840

**Slice:**

A

**Site Area (Ha):**

7.29

**Search Buffer (m):**

1000

#### Site Details:

Pogmore Lane, Barnsley West

#### Client Details:

Mr G Morton  
Lithos Consulting Ltd  
Parkhill  
Walton Road  
Wetherby  
LS22 5DZ

Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	23
Hazardous Substances	-
Geological	34
Industrial Land Use	42
Sensitive Land Use	58
Data Currency	59
Data Suppliers	65
Useful Contacts	66

#### 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 this 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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#### Report Version v53.0

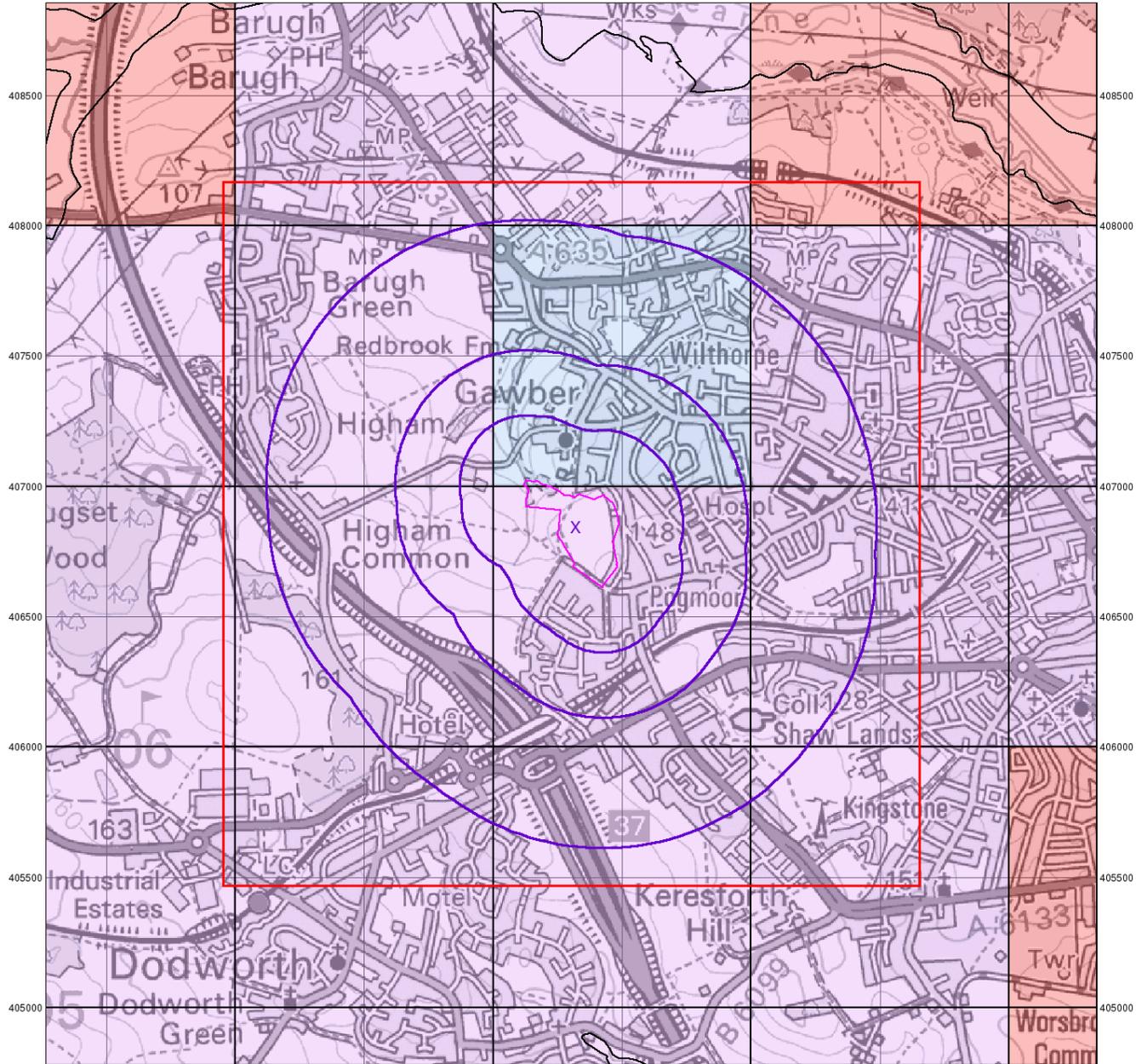
Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		5	2	11
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls	pg 8				4
Integrated Pollution Prevention And Control	pg 8				3
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 9			2	5
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 10	Yes			
Pollution Incidents to Controlled Waters	pg 10	1	5	1	6
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances	pg 12				14
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register	pg 14				2
Water Abstractions	pg 15				(*6)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 16	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 16	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 17	1	15	10	23

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites	pg 23				1
Historical Landfill Sites	pg 23			2	14
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 26				3
Local Authority Landfill Coverage	pg 27	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 27			2	12
Potentially Infilled Land (Non-Water)	pg 29		1	5	10
Potentially Infilled Land (Water)	pg 30		5	9	13
Registered Landfill Sites	pg 31				5
Registered Waste Transfer Sites	pg 33				1
Registered Waste Treatment or Disposal Sites	pg 33				1
<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					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 34	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 34	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 38			2	9
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 40	Yes	n/a	n/a	n/a
Mining Instability	pg 40	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 40	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 40	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 40	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 40	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 40	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 41	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas	pg 41	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries	pg 42		2	8	92
Fuel Station Entries	pg 51			1	4
Points of Interest - Commercial Services	pg 51		1	5	9
Points of Interest - Education and Health	pg 52				7
Points of Interest - Manufacturing and Production	pg 53			4	22
Points of Interest - Public Infrastructure	pg 55			4	5
Points of Interest - Recreational and Environmental	pg 56			3	6
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Sensitive Land Use</b>					
Ancient Woodland	pg 58				1
Areas of Adopted Green Belt	pg 58				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 58	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

430500 431000 431500 432000 432500 433000 433500 434000



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0 1 km



## Groundwater Vulnerability

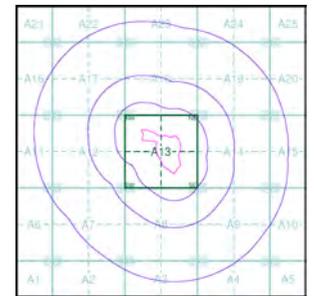
### General

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

### Agency and Hydrological

- | Bedrock Aquifers                        | Superficial Aquifers                    |
|---|---|
| High Vulnerability, Principal Aquifer   | High Vulnerability, Principal Aquifer   |
| High Vulnerability, Secondary Aquifer   | High Vulnerability, Secondary Aquifer   |
| Medium Vulnerability, Principal Aquifer | Medium Vulnerability, Principal Aquifer |
| Medium Vulnerability, Secondary Aquifer | Medium Vulnerability, Secondary Aquifer |
| Low Vulnerability, Principal Aquifer    | Low Vulnerability, Principal Aquifer    |
| Low Vulnerability, Secondary Aquifer    | Low Vulnerability, Secondary Aquifer    |
| Unproductive Aquifer                    |   |
| Soluble Rock                            |   |

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 300379115\_1\_1  
 Customer Ref: 4454  
 National Grid Reference: 432320, 406840  
 Slice: A  
 Site Area (Ha): 7.29  
 Search Buffer (m): 1000

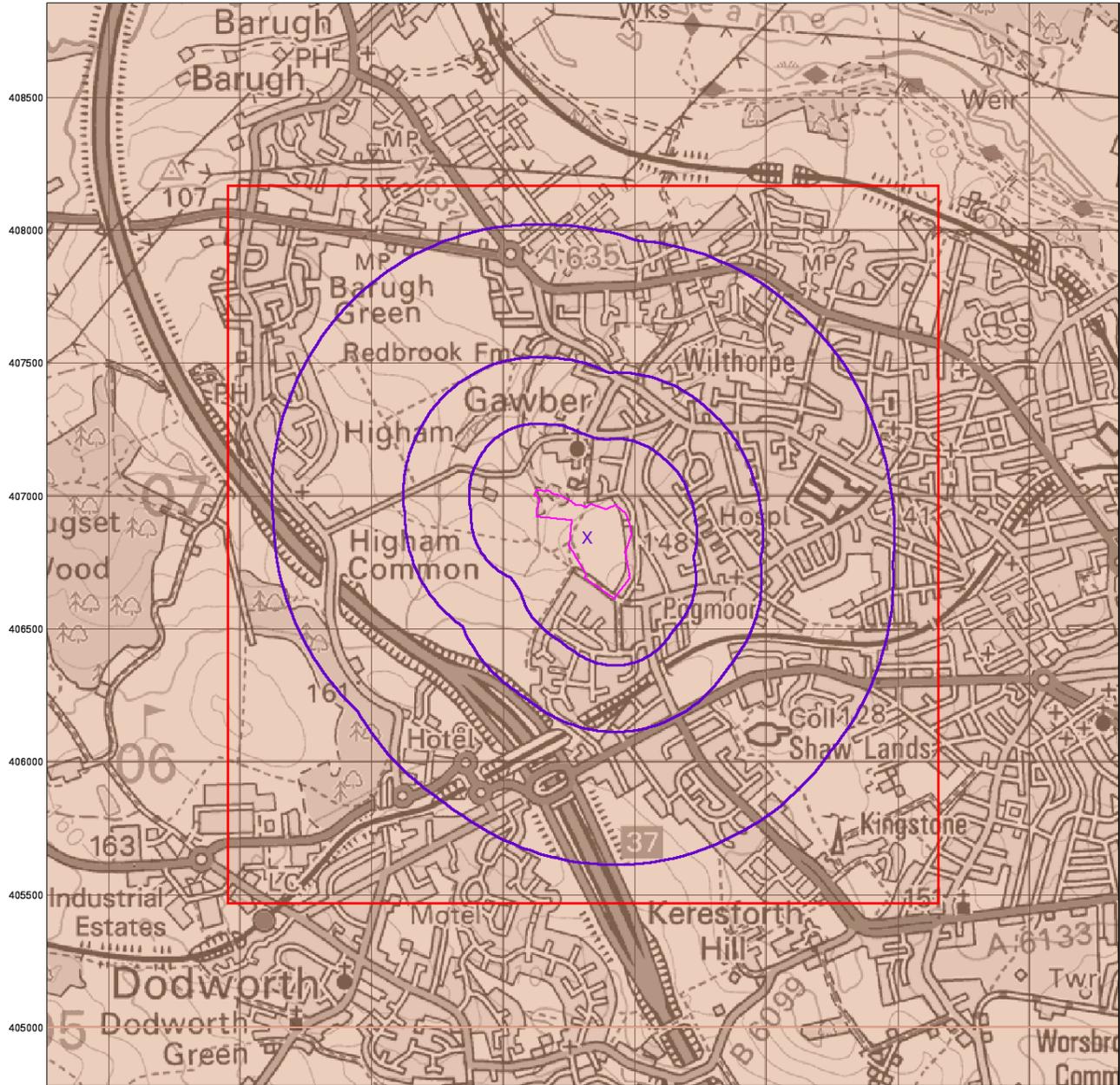
### Site Details

Pogmore Lane, Barnsley West



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430500 431000 431500 432000 432500 433000 433500 434000



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0 1 km



## Bedrock Aquifer Designation

### General

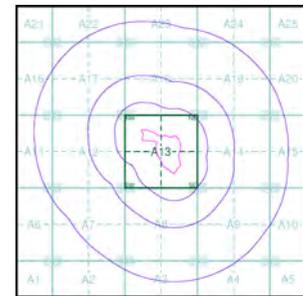
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 300379115\_1\_1  
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