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PHASE 1: DESK TOP STUDY & COAL MINING RISK ASSESSMENT

REPORT

VISTRY PARTNERSHIP YORKSHIRE LIMITED

PROPOSED HOUSING DEVELOPMENT

HIGH STREET

HANING HEATON

DEWSBURY

WF12 7HF

Project No: 20-436

Prepared By:

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Date: 12/11/2020

Approved By:

John Ditchburn
Date: 12/11/2020

The information and/or advice contained in this Phase 1: Desk Top Study and Coal Mining Risk Assessment Report is based solely on, and is limited to, the boundaries of the site, the immediate area around the site, and the historical use(s) unless otherwise stated. This 'Report' has been prepared to collate information relating to the physical, environmental and industrial setting of the site, and to highlight, where possible, the likely problems that might be encountered when considering the future development of this site for the proposed end use. All comments, opinions, diagrams, cross sections and/or sketches contained within the report, and/or any configuration of the findings is conjectural and given for guidance only and confirmation of the anticipated ground conditions should be considered before development proceeds. Agreement for the use or copying of this report by any Third Party must be obtained in writing from Arc Environmental Limited (ARC). If a change in the proposed land use is envisaged, then a reassessment of the site should be carried out.

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Appendix IV	Conceptual Site Model (CSM).

1.0 Introduction

October 2020

Arc Environmental Limited (ARC) were instructed by Vistry Partnership Yorkshire Limited to undertake a Phase 1: Desk Top Study & Coal Mining Risk Assessment Report for land to the east of the High Street of Hanging Heaton, Dewsbury. Development proposals for this site comprise the development of up to 61 dwellings including residential gardens and local roads.

The primary objectives of this report are to assess the geological and potential ground contamination conditions on and beneath the surface of this site. This Phase 1: DTS & CMRA Report has been carried out generally in accordance with the EA (Environment Agency) guidance for Land Contamination Risk Management (LCRM: October 2020) which replaces CLR11: Model Procedures for the Management of Land Contamination. Based on all of the data reviewed, a Preliminary Conceptual Site Model (CSM) has been developed to define the scope and extent of any further investigation works deemed necessary, prior to commencing with any future redevelopment works. A site reconnaissance (walkover) survey was completed as part of this study with site photographs included within Appendix I, and all relevant observations noted in Section 2.1 below.

2.0 Physical Setting

2.1 Site Details:-

Table 2.1

Site Name & Address:	High Street, Hanging Heaton, WF12 0PY.
National Grid Reference:	426050, 423210 (representative of the centre of the site)
Description of Location:	The site is located to the east of High Street in Dewsbury, approximately 2.3km northeast of Dewsbury town centre.
Site Boundaries:	N= Undeveloped farmland, E=Challenge Way, S= Shell Garage, W= Housing and the High Street
Site Shape & Development Details:	The site is irregular in shape and occupies a total area of c.1.76 Hectares (Ha). The development will comprise the construction of private residential units with associated gardens, driveways and access roads.
General Topography:	From the topographic and utilities survey of the site, typically the site slopes down gradient from the south west to north east. Site levels at the western and southern corners of the site are 118.70m and 116.65m AOD respectively dropping to 106.09m AOD at the north eastern corner.
Site surfacing:	The site comprise undeveloped agricultural land with a rough grass surfacing. The site appears to be in used for livestock grazing and practice show jumping.
Above Ground Structures:	At present there are no above ground structures or buildings on-site. Above ground electricity transmission lines cut across the western portion of the site, terminating at a wooden pole and connecting with an underground cable running up to the High Street (see utilities survey plan). There are also the remains of two dilapidated stone walls cutting across the centre of the site which correlate with former field boundaries.
Sub-surface Structures & Services:	From the utilities survey, a foul sewer (300mm Ø) is shown to run down the western side of the site from the western boundary to the rear of the adjacent working mens club. In addition, a water main (600mm Ø) cuts across the site from the western corner (High Street) to the eastern boundary. Both of these live services are subject to an 8m easement. Records also suggest an old foul drainage run is present, running alongside the central field boundary, but this was not located during the utilities survey and may be redundant.
Summary of Site History:	The site has remained undeveloped and in agricultural use since records began in c.1854.

3.0 Environmental Setting

The geological and mining assessment for this site is based on geological maps published by the British Geological Survey (BGS). The following documents have been reviewed as part of this study: -

- BGS Geological Sheet 77 Huddersfield, England and Wales, Solid and Drift Edition, 1:50,000 Series, Published 1977.
- Coal Authority Online Interactive Map Viewer and Coal Mining Report (ref; 51002297719001)
- Envirocheck Report.
- BGS online viewer
- BGS County Series 1928 (ref; Sheet 247 NE)
- BGS archive boreholes SE22SE 812/ 817/ 819.

3.1 Site Geology:-

3.1.1 Made Ground:-

Published BGS data indicates an absence of significant recorded made ground materials on the site. Similarly, during the site reconnaissance (walkover) survey no significant areas of made ground were identified at surface. Taking into account the known history of this site, other than natural materials used to backfill any service trenches, significant depths of made ground are not anticipated for this site.

3.1.2 Superficial Deposits:-

The published BGS data indicates that the site is absent of superifical deposits, with the solid geology present at or close to surface. However, the archive BGS boreholes (SE22SE 812/ 817/ 819), located to the south of the site in the same geological setting, record firm to stiff silty clays up to c.2.70m bgl and are most likely representative of residual soil deposits arising from the parent bedrock.

3.1.3 Solid Geology:-

The BGS records the underlying solid geological deposits to comprise the Pennine Middle Coal Measures, which typically comprise cyclical alternations of sandstone, mudstone and siltstone along with productive coal seams. The majority of the site is shown to be underlain by undifferentiated deposits, with a fault recorded to cut across the northern end of the site, trending south west to north east and the downthrow to the south. To the north of this fault, within the northwest of the site, the site is shown to be underlain by the Thornhill Rock (sandstone) formation.

Based on the established BGS archive boreholes and generalised vertical section (GSV) for these deposits, the shallowest coal seam below this site is the Joan Coal. To the south of the fault, the minimum depth to the Joan Coal is estimated >30m bgl and to the north of the fault, the minimum depth is estimated to be at least c.22m bgl.

3.2 Coal Mining Risk Assessment:-

Based on the BGS records, the shallowest coal seam below this site is the Joan Coal, which locally is locally recorded as c.0.69m (2 feet 3 inches) in thickness and is located at a minimum depth of c.22m bgl. The next shallowest coal seam is the Flockton Thick (Stone Coal) seam, which lies c.16m below the Joan Coal (>38m bgl) followed by the Flockton Thin c.10m below the Flockton Thick seam, based in the GVS for these deposits.

In accordance with the Coal Authority (CA) Online Interactive Map Viewer, this area lies within a coal mining reporting area but does not fall within a defined development high risk area, nor within an area of probable or

3.0 Environmental Setting (Cont'd)

3.2 Coal Mining Risk Assessment (Cont'd):-

recorded shallow workings. Similarly, there are no recorded mine entries (shafts or adits) on or within close proximity to the site.

In order to assist with the coal mining risk assessment (CMRA) a Consultants Coal Mining Report (reference 51002297719001) has been obtained from the CA for this site, and a copy of which is attached in Appendix II.

The information provided in the Consultants Coal Mining Report concurs with the BGS and online CA data, with the shallowest recorded workings beneath the site are within the Flockton Thin seam, last worked between 1885 and 1907 and recorded to have been extracted at a thickness of between c.0.66m and c.0.84m, at a minimum depth of c.61m beneath this site. A further two seams (Middleton Main and Black Bed) are recorded as being worked below this site, at depths of between 131m and 300m bgl, with extraction thicknesses of between 0.53m and 0.76m. Given the recorded depths and extraction thicknesses for recorded worked seams below this site, it can be seen that there is no risk to the site from these historical mining activities.

The report confirms that there are no probable unrecorded shallow workings or spine roads at shallow depth (i.e. within the Joan Coal). Similarly, there are no recorded opencast workings, no managed tips and gassing sites within c.500m and no subsidence claims within c.50m of the site.

Taking into account the recorded depth to the Flockton Thin seam at c.61m bgl, below this site, based on the GSV, this places the Flockton Thick coal seam at c.51m bgl and the Joan Coal at c.35m bgl, below this site. Consequently, it can be seen that if unrecorded workings are present within either of these seams, there is sufficient rock cover (greater than 10:1 rock cover to extraction thickness) to arrest any potential void migration from these workings, and therefore the site is no considered to be at risk from historical mining activities.

3.3 Site Hydrogeology:-

Table 3.1

STRATA	Aquifer / Soil Leachability EA Classification	Comments
Groundwater Vulnerability:	High/Medium	High vulnerability in the north east of the site. Majority of site Medium Vulnerability.
Superficial Deposits:	N/A	There are no superifical deposits present on this site.
Solid Geology: (Pennine Middle Coal Measures)	Secondary A Aquifer	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.
Groundwater:	No records for this site.	Given the nature of the geology below this site a shallow continuous groundwater surface (water table) is not anticipated below the site. However, some localised perched/trapped groundwater may be present within any made ground and/or more granular deposits such as pockets and lenses of sands and gravels. Deeper groundwater is likely to be present within the solid geology.

- There are no Source Protection Zones (SPZs) recorded on or within 1km of the site.
- Shallow groundwater is not anticipated to be present below this site.

3.0 Environmental Setting (Cont'd)

3.3 Site Hydrogeology (Cont'd):-

- There are two Water Abstractions within c.1km of the site boundary. The first relates to a groundwater abstraction c.557m to the south east of the site for textiles and leather processing. The second entry is c.852m to the south west for surface water for industrial use. Neither are considered to be at risk from this site and the proposed development.

3.4 Site Hydrology:-

Table 3.2

SURFACE WATER FEATURE	Location	Comments
OS Water Network & GQA Classified River	None recorded within c.250m.	~
Unclassified Watercourse(s), Canals, Ponds, Lakes & Other Bodies of Water.	Several OS water networks recorded within c.250m.	There are 3 no. small watercourses present, c.90m to c.170m to the north of west of the site.
Flooding from River or Sea (Fluvial & Tidal)	The site lies within a Flood Zone I and does not fall within a designated Flood Zone II or III.	Although the site does not fall within a designated Flood Zone II or III, it is recommended that further consultation with the Local Authority (LA) and Environment Agency (EA) should be made concerning the potential for flood events in this area.
Surface Water Flooding (Pluvial)	There is a low to medium risk of surface water flooding in on parts of site.	The EA indicate a small band across the southern end of the site and along the eastern boundary is potentially at risk from surface water flooding.
Groundwater Flooding at Surface (BGS)	There is a limited risk of groundwater flooding to the northwest of the site.	Information obtained from Landmark which publish maps indicating the potential for groundwater flooding at surface, proposed by the British Geological Survey (BGS). This information is based on areas which may be potentially influenced by geological factors.
RAINFALL	**Measurements (mm)**	**Comments**
Annual	1028.4	Based on 'station average' records from Birchencliffe, dated from 1981-2010.
Minimum (Feb)	114.0	
Maximum (Nov)	62.4	

3.5 Radon Assessment:-

Reference to the UKRadon online mapping data indicates that the whole of the site lies in an intermediate probability radon area, where 5%-10% of homes are above the action level. In accordance with the BGS, National Geoscience Information Service and their assessment suggests that basic radon protection measures are necessary for the site. This corresponds with the BRE Digest, BR211 (2015) Radon: Guidance on Protective Measures for New Buildings, which shows the site is situated within a lightly shaded grid square (1km).

3.6 Site Ecology:-

There was no visual evidence to suggest the site was affected by the presence of invasive weed species (i.e. Japanese Knotweed, Giant Hogweed or Himalayan Balsam) at the time of the site walkover survey. However, a detailed invasive weed survey has not been undertaken due to limited access, therefore, site awareness during

3.0 Environmental Setting (Cont'd)

3.6 Site Ecology (Cont'd):-

future investigation works and during the construction phase for any potential invasive weed species would be considered prudent.

Table 3.3

FEATURES	Location	Comments
Local Nature Reserves	None recorded within c.500m.	~
Areas of Adopted Green Belt	On site.	The site lies within an area of adopted green belt based on the Kirklees Unitary Development Plan from 1999. The site is also in an area of unadopted greenbelt based on the draft Kirklees local plan, from 2017 .
Special Protection Areas	None recorded within c.500m.	~
Nitrate Vulnerable Zone	None recorded within c.500m.	~
Other	None recorded within c.1km.	~

3.7 Estimated Soil Chemistry: -

Data provided by the BGS in relation to estimated soil chemistry for a number of key metals and metalloid elements are summarised in Table 3.4 below. Note; the references to the anticipated background concentrations of contaminants, sourced from the BGS, should not be relied upon. They are not site-specific and do not represent the condition of the ground at the proposed development site.

Table 3.4

Element	Soil Sample Type	Estimated Soil Concentrations (mg/kg)
Arsenic	Rural Soil	15 - 25 mg/kg
Cadmium	Rural Soil	<1.8 mg/kg
Chromium (total)	Rural Soil	60 - 90 mg/kg
Lead	Rural Soil	<100 mg/kg
Nickel	Rural Soil	15 - 30 mg/kg

4.0 Industrial Setting

4.1 Site History:-

Copies of historical OS maps covering the site area & adjacent land are included in Appendix III and a summary of the site history based on these plans, as well as anecdotal evidence from historical Google Earth aerial imagery, is provided in Table 4.1 below and on the following page.

Table 4.1

Date	Site	Adjacent Areas
c.1854 to c.1922	The site is shown as undeveloped and is most likely in agricultural use (grazing for livestock). There are **two field boundaries** (stone walls) running through the middle of the site the south of the site.	From the earliest plans available, majority of the surrounding land is undeveloped and in agricultural use. The **High Street** lies to the west of the site, with **Leeds Road** to the south. The **railway cutting** and **tunnel** lie to the east. A **parsonage (vicarage)**, **St Paul's Church & grave yard**, **school** and **former quarry** lie to the west of the site, forming the eastern end of **Hanging Heaton**. By c.1893 a **small pond** is shown to the immediate east of the site and **smithy** is recorded c.120m to the southeast in **Shaw Cross**. During this period there is a gradual expansion to **Hanging Heaton** and **Shaw Cross**.

Significant features / potential contamination sources highlighted in **bold**.

4.0 Industrial Setting (Cont'd)

4.1 Site History (Cont'd):-

Table 4.1 (Cont'd)

Date	Site	Adjacent Areas
c.1931 to c.1972	During this period the site remains unchanged.	During this period **Hanging Heaton** and **Shaw Cross** continue to expand, mainly with **residential** type properties, along with some **commercial** and **educational** sites. There is also some partial **infilling** of the former quarry behind the school c.100m to the west. By c.1931 the **Working Men's Club** has been constructed next to the western boundary and by c.1966 all the **residential properties** along the western boundary have been constructed. By c.1972 the **spoil heaps** from the former Shaw Cross Colliery (c.500m to the south) have expanded to within c.280m of the southern site boundary.
c.1982 to present day	Again during this period the site remains unchanged with the stone wall field boundaries becoming dilapidated.	By c.1982 the **railway track** to the east has been **dismantled** and a **garage** is noted next to the southern end of the site. By c.1993 the road junction at Shaw Cross has started to be **reconfigured** and the former **railway cutting** and **tunnel** to the south have been **infilled**. The **spoil heaps** are no longer shown with this area being prepared for redevelopment. By c.1995, the **railway cutting** to the east of the site has been reused for the construction of **Challenge Way** (to bypass Hanging Heaton), with this new road connecting to the **new junction** at Shaw Cross. The construction of Challenge Way results in the formation of the eastern boundary to the site (top of cutting) and removes the **small pond** feature. The garage adjacent to the southern boundary has been redeveloped into a **PFS (Petrol Filling Station)**. By c.2000 significant **commercial/industrial development** has taken place constructed to the south of the Shaw Cross junction including the redevelopment of the former **spoil heaps** and **Shaw Cross Colliery site**, and this continues to the present day.

Significant features / potential contamination sources highlighted in **bold**.

4.2 Landfill & Waste: -

The following information relating to Landfill and Waste has been obtained from the Envirocheck Report (attached in Appendix III);

- There are no BGS Recorded Landfill Sites, Integrated Pollution Control Registered Waste Sites, Licensed Waste Management Facilities, Local Authority Recorded Landfill Sites, Waste Transfer, Waste Treatment or Disposal Sites recorded on or within c.250m of the site.
- There are recorded entries for Historical Landfill sites, associated with the former railway cuttings to the east and south of the site, references EC 46 & 47.
- The railway cutting immediately to the east has been used to construct Challenge Way and therefore is not considered to represent a potential source of ground gas generation.

4.0 Industrial Setting (Cont'd)

4.2 Landfill & Waste (Cont'd):-

- The infilling of the railway cutting to the south is tied in with the former Shaw Cross Landfill Site (last input 1991), which originated from the spoil heaps of the former Shaw Cross Colliery, with the majority of these features located >250m from the site boundary.
- There is one recorded BGS mineral site c.169m to the northwest of the site. this BGS mineral site comprised sandstone mining at Hanging Heaton Quarry.
- There are three entries of infilled land (water); c.170m north west, c.175m south east and c.200m north west of the site. These entries likely relate old small infilled drains and ponds, and are not considered to represent a significant source of ground gas generation.
- There are two entries of infilled land (non-water) located c.175m and c.215m to the southeast, with these features relating to the infilling of the former railway cutting (now largely redeveloped) and an old former clay pit in Shaw Cross.

When considering the above, and the current use of the site, although considered very low, there is a potential risk of off-site ground gas generation and migration to this site. Therefore, ground gas monitoring should be undertaken as part of the recommended intrusive investigation works, generally in accordance with CIRIA 665 and BS8485:2015+A1:2019.

4.3 Statutory Requirements/Authorisations:-

Table 4.2

TYPE	Location	Comments
Local Authority Pollution Prevention and Controls	Two recorded within c.250m.	Two local authority pollution and prevention controls are recorded. Both relate to the petrol filling station c.30m to the south east.
Registered Radioactive Substances	None recorded within c.250m.	~
Prosecutions Relating to Authorised Processes	None recorded within c.250m.	~
Enforcement and Prohibition Notices	None recorded within c.250m.	~
Planning Hazardous Substances Consents / Enforcements	None recorded within c.250m.	~
COMAH/NIHHS Sites	None recorded within c.250m.	~
Contemporary Trade Entries	Four recorded within c.250m.	Active entries include; petrol filling station c.30m south east, a textiles manufacturer c.185m south east, a commercial vehicle servicing c.190 south east and a plant machinery manufacturers c.220 southwest.
Fuel Station Entries	Two recorded within c.250m.	One entry c.30m to the south east, relating to the adjacent petrol station and a second c.160m to the south east relating to another petrol station.

4.0 Industrial Setting (Cont'd)

4.4 Pollution Incidents and Discharge Consents:-

Table 4.3

TYPE	Location	Comments
Discharge Consents	None recorded within c.250m.	~
Water Industry Act Referrals	None recorded within c.250m.	~
Prosecutions Relating to Controlled Waters	None recorded within c.250m.	~
Pollution Incidents to Controlled Waters	One recorded within c.250m.	A Category 3 incident occurred c.100m south of the site in 1993 and comprised an unknown pollutant entering the River Browney.
Substantiated Pollution Incident Register	None recorded within c.250m.	~

5.0 Conceptual Site Model (CSM)

The Conceptual Site Model (CSM) is one of the primary planning tools that can be used to support the decision-making process of managing contaminated land and groundwater on any given site and allows a better understanding of what needs to be done to achieve risk management, and from this appropriate remediation techniques, if required for those risk management goals can be chosen.

This can be done by undertaking a *source-pathway-receptor* analysis of the site. The anticipated *sources*, *pathways* and *receptors* for this site are summarised in Table 5.1 below.

Table 5.1

	Sources (S)
S1	Any areas of potential made ground (no significant deposits anticipated) on site.
S2	Potential off-site ground gas generation and migration to site.

	Pathways (P)
P1	Ingestion and Dermal contact.
P2	Air – Inhalation of vapours (indoor & outdoors) and direct contact with dust.
P3	Consumption of home-grown produce and attached soil.
P4	Migration through existing services.
P5	Direct contact with building materials.
P6	Surface runoff and leachate migration.

	Receptors (R)
R1	Human health (End users and construction workforce).
R2	Controlled Waters - Groundwater within the underlying strata (Secondary A Aquifer: Solid Geology).
R3	Controlled Waters.
R4	Building materials. *
R5	Adjacent sites.
R6	Flora and fauna. *

* = Not included in the Human Health & Controlled Waters Risk Assessment

A graphical representation of the CSM has been produced for the site and can be seen attached in Appendix IV, which also sets out the critical pollutant linkages of concern for this site, with regards to contamination.

5.1 Geotechnical Considerations: -

The following potential geotechnical issues and hazards have been identified for this site, and these issues should be considered before future development of the site is to take place;

5.0 Conceptual Site Model (CSM) (Cont'd)

5.1 Geotechnical Considerations (Cont'd): -

- Thicknesses and condition of any topsoil/made ground on site.
- Geotechnical parameters of the drift deposits and depth to suitable load bearing founding strata across the site, particularly with respect to the design of foundations and associated infrastructure.
- Control of surface drainage.
- The presence of existing above and below ground services and utilities, including the existing 8m easements for the foul sewer and water main.

To determine the geotechnical considerations above with more certainty, it is recommended that a programme of intrusive geotechnical investigation works is undertaken on this site with associated geotechnical testing, to aid in assessing the extent of any potential issues prior to commencing with any development in the future. Following this work detailed foundation proposals for the proposed development can then be prepared.

The information reviewed indicates that the site can be considered as being located within a **LOW** geotechnical risk setting.

5.2 Sources of Contamination and Probable Contaminants: -

The site has no record of previous development or evidence of any potential sources of ground contamination being present. In consideration of the above it would be prudent to allow for the potential screening of any made ground which is present on site as well as the existing topsoil for potential reuse in the development. At

Soils – Human Health:

- Potential contamination within any made ground materials present on this site.
- There is a potential risk from off-site ground gas generation (considered to be a very low risk of generation).

The information reviewed indicates that the site can be considered as being located within a **LOW** ground contamination risk setting for Human Health.

Groundwater/Leachate – Controlled Waters;

The issues below have been taken into consideration when assessing the risks towards groundwater/controlled waters.

- There are no Source Protection Zones (SPZs) recorded on or within 500m of the site.
- There are no Water Abstractions recorded on site or within 500m of the site.
- The solid geology is a Secondary Aquifer.
- Shallow groundwater is not anticipated to be present below this site.
- There are no watercourse present within a plausible migration distance from this site.

The site is not considered to be a significant risk setting for controlled waters.

The information reviewed indicates that the site can be considered as being located within a **LOW TO NEGLIGABLE** ground contamination risk setting for Controlled Waters.

6.0 Recommendations for Phase 2: Ground Investigation Works

The conclusions contained within this report have been based on a review of geological plans, historical plans and available environmental data relating to the site and nearby adjacent land and forms the basis of a preliminary risk assessment. The primary benefits of undertaking this report are as follows;

(i) Identify the geotechnical and/or geoenvironmental characteristics of the ground in sufficient detail to enable economic design of the proposed development, construction or remedial works.
(ii) Minimise the risk of unforeseen ground conditions which might cause increased costs and/or programme (construction) delays at a later date.

Therefore, it is recommended that a programme of Phase 2: Ground Investigation (intrusive investigation) works are completed for this site to provide an assessment of the geotechnical characteristics of the site. These intrusive investigation works should be completed prior to commencing with any future development works and should include for the following or a similar scope of investigation works;

- A series of boreholes and trial pits across the site with insitu sampling and testing (i.e. hand shear vanes, SPT's, CBR's). The information will aid with future foundation design.
- Provision and installation of combined ground gas & groundwater monitoring wells.
- Insitu Falling Head Tests to assess the infiltration characteristics on the natural ground conditions.
- Appropriate laboratory geotechnical testing on the samples recovered from the boreholes and trial pits, including chemical testing for concrete classification.
- Ground contamination screening including appropriate ground contamination risk assessment.
- Site supervision and production of interpretive Phase 2: Ground Investigation Report.

The samples of soil collected should be forwarded to UKAS and MCERTS accredited laboratory to undertake the recommended testing.

END OF REPORT

APPENDIX I

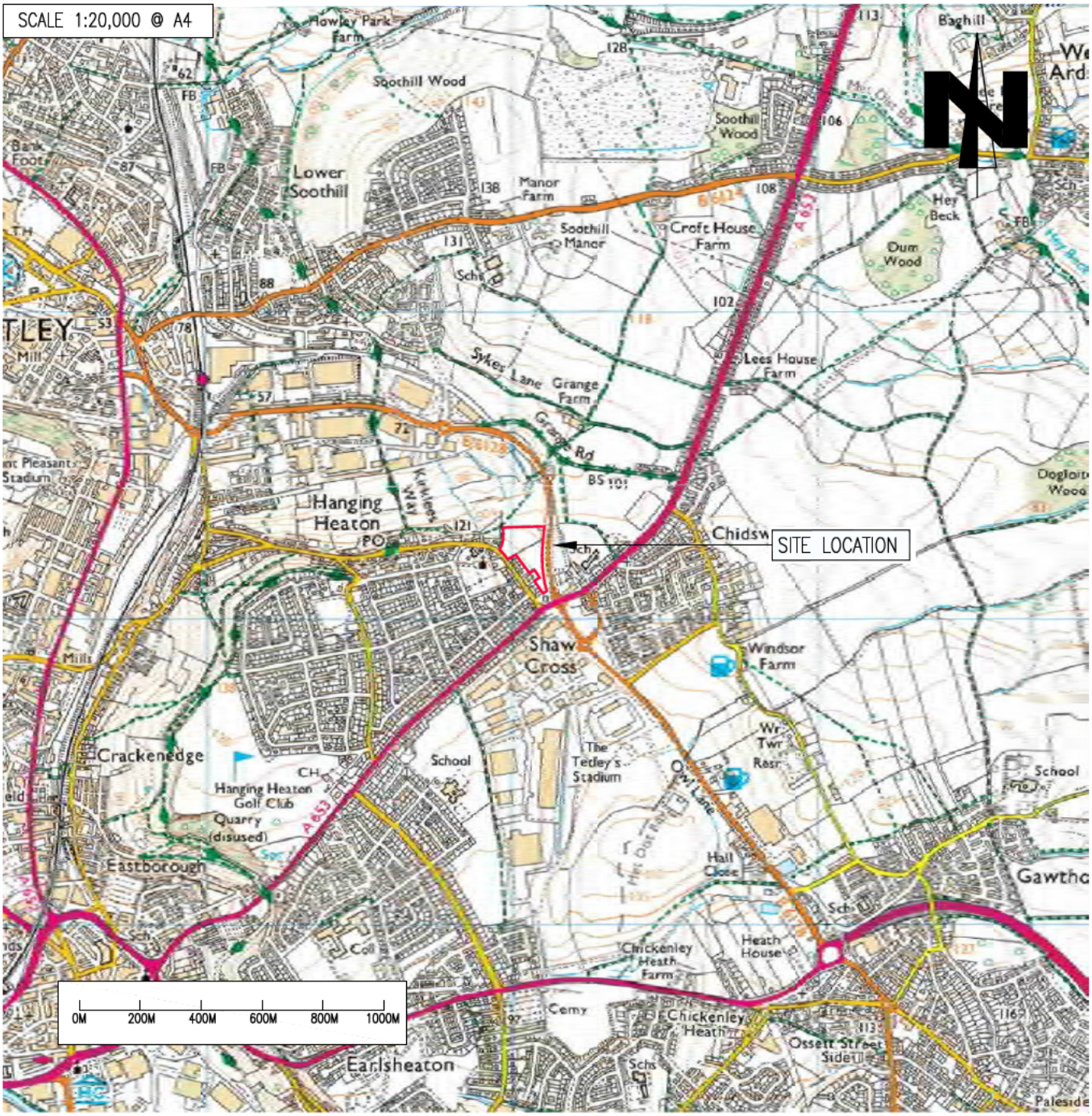
Location Plan

Aerial Photograph

Existing Layout Plan

Proposed Development Layout Plan

Site Observations – Photographic Record Sheet



Client:	VISTRY PARTNERSHIPS (YORKSHIRE) LTD

Project Title:	Drawing Title:
Proposed Residential Development High Street, Hanging Heaton Dewsbury, WF12 7HF	Location Plan

rev.	date	amendments	drawn	chckd

Job Reference:	Drawing Number:	Revision:
20-634	-	-

Drawn by:	Date:	Scale at A4:
P.D	29.10.20	As Shown

Checked by:	Approved by:	
M.P	M.P	The contractor shall check all dimensions on site before commencement of any works. No dimensions to be scaled off this drawing.

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Client: **VISTRY PARTNERSHIPS (YORKSHIRE) LTD**

rev.	date	amendments	drawn	chckd

Project Title:
Proposed Residential Development
High Street
Hanging Heaton, Dewsbury, WF12 7HF

Drawing Title:
Aerial Photograph

Scale at A3:	Date:	Drawn by:	Approved by:
NTS @ A3	10.09.20	P.D	M.P

Job Ref:	Drg no:	Rev:
20-436	–	–



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Client: **VISTRY PARTNERSHIPS (YORKSHIRE) LTD**

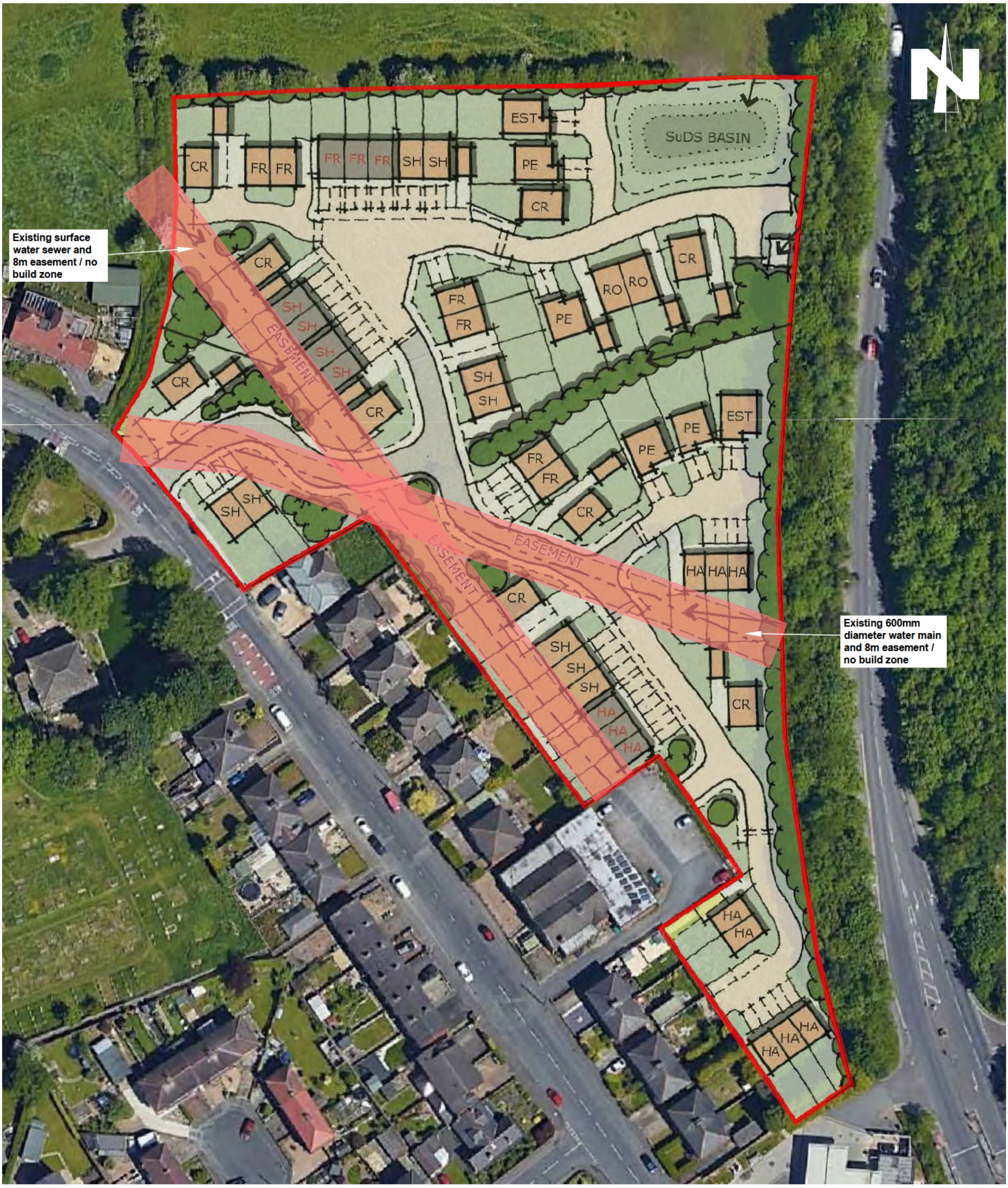
rev.	date	amendments	drawn	chckd

Project Title:
Proposed Residential Development
High Street
Hanging Heaton, Dewsbury, WF12 7HF

Drawing Title:
Existing Site Layout Plan

Scale at A3:	Date:	Drawn by:	Approved by:
NTS @ A3	10.09.20	P.D	M.P

Job Ref:	Drg no:	Rev:
20–436	–	–



ARC ENVIRONMENTAL LTD
Solum House
Unit 1 Elliott Court
St. John's Road
Meadowfield
Durham, DH7 8PN
Tel: (0191) 378 6380
e-mail: admin@arc-environmental.com
web: www.arc-environmental.com

Client: **VISTRY PARTNERSHIPS (YORKSHIRE) LTD**

rev.	date	amendments	drawn	chckd

Project Title:
Proposed Residential Development
High Street
Hanging Heaton, Dewsbury, WF12 7HF

Drawing Title:
Proposed Development Layout Plan

Scale at A3:	Date:	Drawn by:	Approved by:
NTS @ A3	10.09.20	P.D	M.P

Job Ref:	Drg no:	Rev:
20–436	–	–




Plate 1


Plate 2


Plate 3


Plate 4

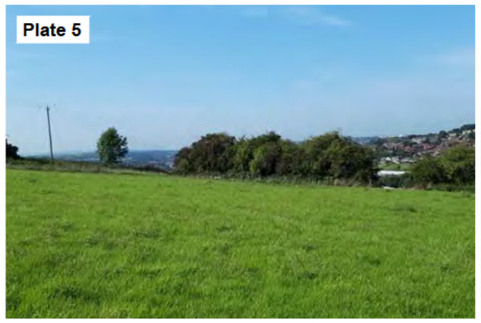

Plate 5


Plate 6


Plate 7


Plate 8


Plate 9


Plate 10


Plate 11


Plate 12


Plate 13


Plate 14


Plate 15


Plate 16

ARC ENVIRONMENTAL LTD
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web: www.arc-environmental.com

The contractor shall check all dimensions on site before commencement of any works. No dimensions to be scaled off this drawing.
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rev.	date	amendments	drawn	chckd

Client: **VISTRY PARTNERSHIPS (YORKSHIRE) LTD**

Project Title:
Proposed Residential Development
High Street, Hanging Street
Dewsbury, WF12 7HF

Drawing Title:
Site Photographic Record Sheet 1

Scale at A3:	Date:	Drawn by:	Approved by:
NTS @ A3	29.10.20	P.D	M.P

Job Ref:	Drg no:	Rev:
20-436	–	–

APPENDIX II

Archive Borehole Logs
&
Coal Authority Consultants Coal Mining Report

CLIENT: BLAND AND SWIFT

JOB NO: C8581

LOCATION: WATKINS ENG, OWL LANE DEWSBURY

BOREHOLE NO: BH1

DATE: JULY 1996

SCALE: 1 to 50

BORING METHOD: CABLE PERCUSSIVE

Sheet: 1

Drilling & Casing Progress	SAMPLE/TEST Type & No.	SAMPLE/TEST Depth(M)	SPT N – value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
8TH							0.0
	B 1	0.30 – 0.70		MADE GROUND – Topsoil.			0.15
	U 2	0.70 – 1.15		MADE GROUND – Disturbed medium to dark brown and grey very friable clay and fragmented rock.			
	D 3	1.20					1.20
	U 4	1.50 – 1.95	85.20	Firm to stiff to very stiff light to medium grey and brown slightly sandy silty CLAY with much fine to coarse gravel of mudstone and some sandstone fragments.			
	D 5	2.00					
	U 6	2.50 – 2.95	165.70				
	D 7	3.00					
	D 8	3.40					3.20
	S 9	3.50 – 3.95	46	Initially very weak and weathered very thinly bedded light to medium brown and grey intercolations of silty SANDSTONE and SHALE.			
	S 10	4.60 – 4.70	50				
8TH							5.00

DUNELM DRILLING COMPANY

TEL 091-526-2534 FAX 091-517-0085

BOREHOLE LOGSHEET

Water Observations, Remarks, Etc

No water encountered.

Chiselling from 4.00m to 5.00m – 0.50 hr.

British Geological Survey

CLIENT	JOB NO	LOCATION	BOREHOLE NO
BLAND AND SWIFT	C8581	WATKINS ENG, OWL LANE DEWSBURY	TP3
DATE: JULY 1996	SCALE: 1 to 50	BORING METHOD: MECHANICL EXCAVATOR (CAT 428)	Sheet: 1

Drilling & Casing Progress	SAMPLE/TEST Type & No.	SAMPLE/TEST Depth(M)	SPT N – value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
9TH				MADE GROUND – Black topsoil.			0.0
				MADE GROUND – Dry and very friable light to medium brown silty clay with much rock rubble.			0.10
	B 1	1.00 – 1.20					
	B 2	1.20 – 1.30					1.20
	B 3	1.50 – 1.75		Dark grey/black very silty CLAY (possibly original ground level)			1.30
				Stiff light orangey brown and grey mottled fissured silty sandy CLAY with many small shale and occasional coarse sandstone fragments and some ancient rootlets with depth.			2.70
9TH				Very to completely weathered thin bands of light to medium brown and grey silty SANDSTONE and SHALE.			2.90

DUNELM DRILLING COMPANY
TEL 091-526-2534 FAX 091-517-0085

BOREHOLE LOGSHEET

Water Observations, Remarks, Etc
No water encountered.

MEXE cone test at 1.00m – 1% to 10% CBR range, typical 7%.

British Geological Survey

CLIENT	JOB NO	LOCATION	BOREHOLE NO
BLAND AND SWIFT	C8581	WATKINS ENG, OWL LANE DEWSBURY	TP4
DATE: JULY 1996	SCALE: 1 to 50	BORING METHOD: MECHANICAL EXCAVATOR (CAT 482)	Sheet: 1

Drilling & Casing Progress	SAMPLE/TEST Type & No.	SAMPLE/TEST Depth(M)	SPT N – value or COHESION	DESCRIPTION	O D LEVEL	LEGEND	DEPTH
9TH							0.0
				MADE GROUND – Black subsoil with small white stone chippings.			0.20
	B 1	1.00 – 1.50		MADE GROUND – Light brown very dry and friable shale, sandstone, sand and clay lumps, with some large sandstone boulders.			1.70
	B 2	2.00 – 2.25		Dark grey/black soily silty CLAY (possibly original ground level).			1.80
9TH				Firm to stiff to stiff light orangey brown and grey mottled very silty CLAY with a little gravel, containing frequent fine to coarse gravel of mudstone/shale with depth.			2.60
				Light brown and grey very friable thinly bedded layeyrs of completely weathered SHALE, SANDSTONE and CLAY.			2.80

DUNELM DRILLING COMPANY
TEL 091-526-2534 FAX 091-517-0085

BOREHOLE LOGSHEET

Water Observations, Remarks, Etc

No water encountered.
Some collapse of side walls of trial pit recorded, from GL to 1.70m.

British Geological Survey

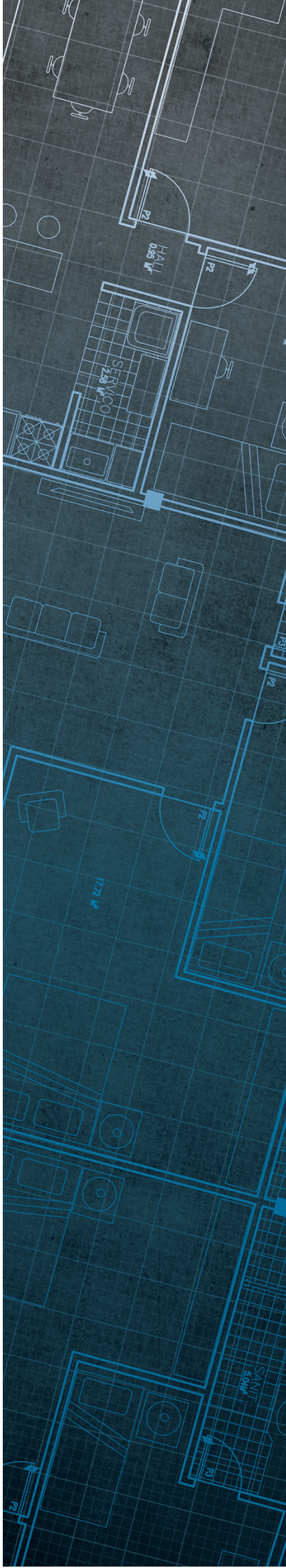
The Coal Authority

Consultants

Coal Mining Report

Land East Of High Street
High Street
Hanging Heaton
Batley
Kirklees
WF12 7HF

Date of enquiry:	**31 August 2020**
Date enquiry received:	**31 August 2020**
Issue date:	**31 August 2020**
Our reference:	**51002297719001**
Your reference:	**20-436**



Consultants

Coal Mining Report

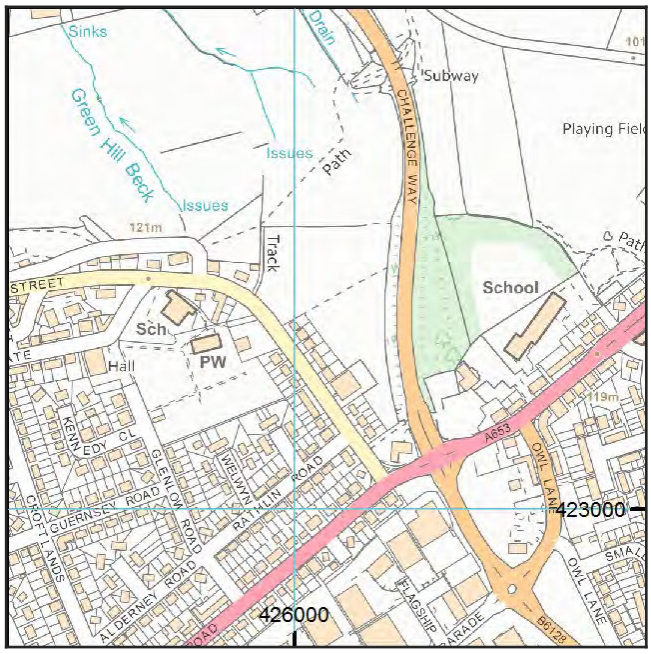
This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

ARC ENVIRONMENTAL LTD

Enquiry address

Land East Of High Street
High Street
Hanging Heaton
Batley
Kirklees
WF12 7HF



Approximate position of property

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How to contact us

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+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	FLOCKTON THIN	Coal	6HYV	61	Beneath Property	2.3	South-East	66	1885
unnamed	FLOCKTON THICK	Coal	6HYS	70	Beneath Property	2.6	East	84	1907
unnamed	FLOCKTON THIN	Coal	6L4H	79	South-West	2.5	South-East	66	1889
unnamed	MIDDLETON MAIN	Coal	6HZ4	131	Beneath Property	2.0	South-East	53	1934
unnamed	MIDDLETON MAIN	Coal	6HVQ	138	Beneath Property	1.0	East	54	1936
unnamed	MIDDLETON MAIN	Coal	69EB	155	South	0.8	East	53	1930
unnamed	MIDDLE ELEVEN YARDS	Coal	660M	180	South-East	1.7	South-East	66	1949
unnamed	SILKSTONE	Coal	69EF	180	South-East	1.6	South-East	66	1949
unnamed	MIDDLE ELEVEN YARDS	Coal	6HZ6	181	South-East	0.4	South-East	66	1951
unnamed	TOP BEESTON	Coal	6HVO	222	West	2.1	South-East	75	1963
unnamed	TOP BEESTON	Coal	6NKD	235	South-West	2.4	South-East	75	1956
unnamed	TOP BEESTON	Coal	69EH	248	South-East	1.4	South	69	1903
unnamed	BLACK BED	Coal	6HZB	299	Beneath Property	3.2	South-East	76	1923
unnamed	BLACK BED	Coal	6HVS	300	Beneath Property	1.8	South-East	76	1927
unnamed	BLACK BED	Coal	6NLD	310	South-West	2.1	South-East	69	1913
unnamed	BLACK BED	Coal	69EJ	311	South	2.0	South-East	76	1918
unnamed	BLACK BED	Coal	6HVT	398	North-West	2.0	South-East	76	1913

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

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Mine entries
None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers
The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

M29	14165	NE641
NE640	8652	14137
8026	NE629	

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops
No outcrops recorded.

Geological faults, fissures and breaklines
Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines
Please refer to the “Summary of findings” map (on separate sheet) for details of any opencast areas within 500 metres of the enquiry boundary.

Coal Authority managed tips
None recorded within 500 metres of the enquiry boundary.

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Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

Section 46 notices
No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices
The property is not in an area where a notice to withdraw support has been given.

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

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

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Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

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Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

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Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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VAT receipt

Issued by	The Coal Authority 200 Lichfield Lane Mansfield Nottinghamshire NG18 4RG
Tax point date	31 August 2020
Issued to	ARC ENVIRONMENTAL LTD ELLIOTT COURT ST JOHNS ROAD MEADOWFIELD INDUSTRIAL ESTATE MEADOWFIELD DURHAM DH7 8PN
Property search for	LAND EAST OF HIGH STREET HIGH STREET HANGING HEATON BATLEY KIRKLEES WF12 7HF
Reference number	51002297719001
Date of issue	31 August 2020
Cost	£112.13
VAT @ 20%	£22.43
Total received	£134.56
VAT registration	598 5850 68

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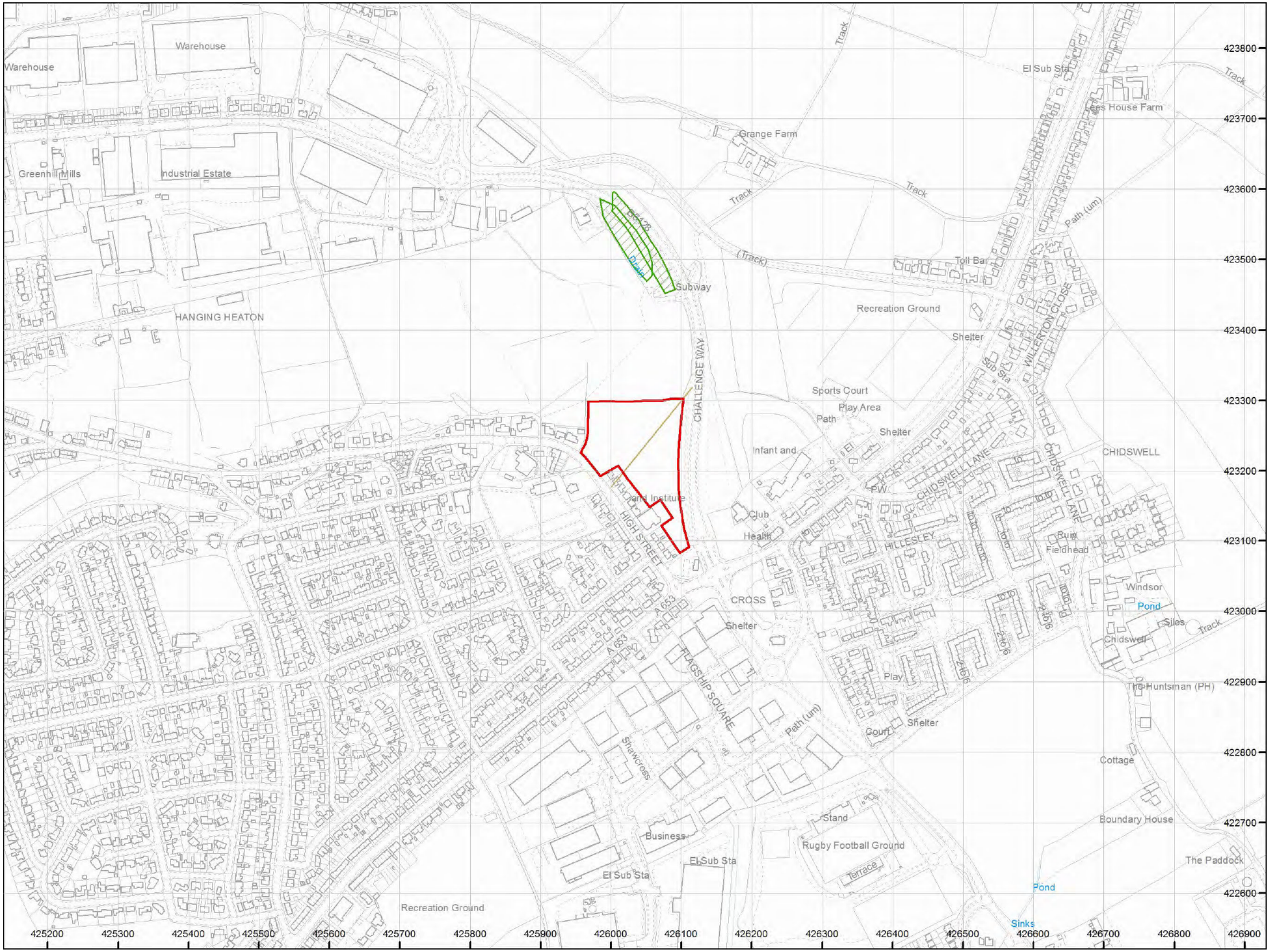
Summary of findings

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The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

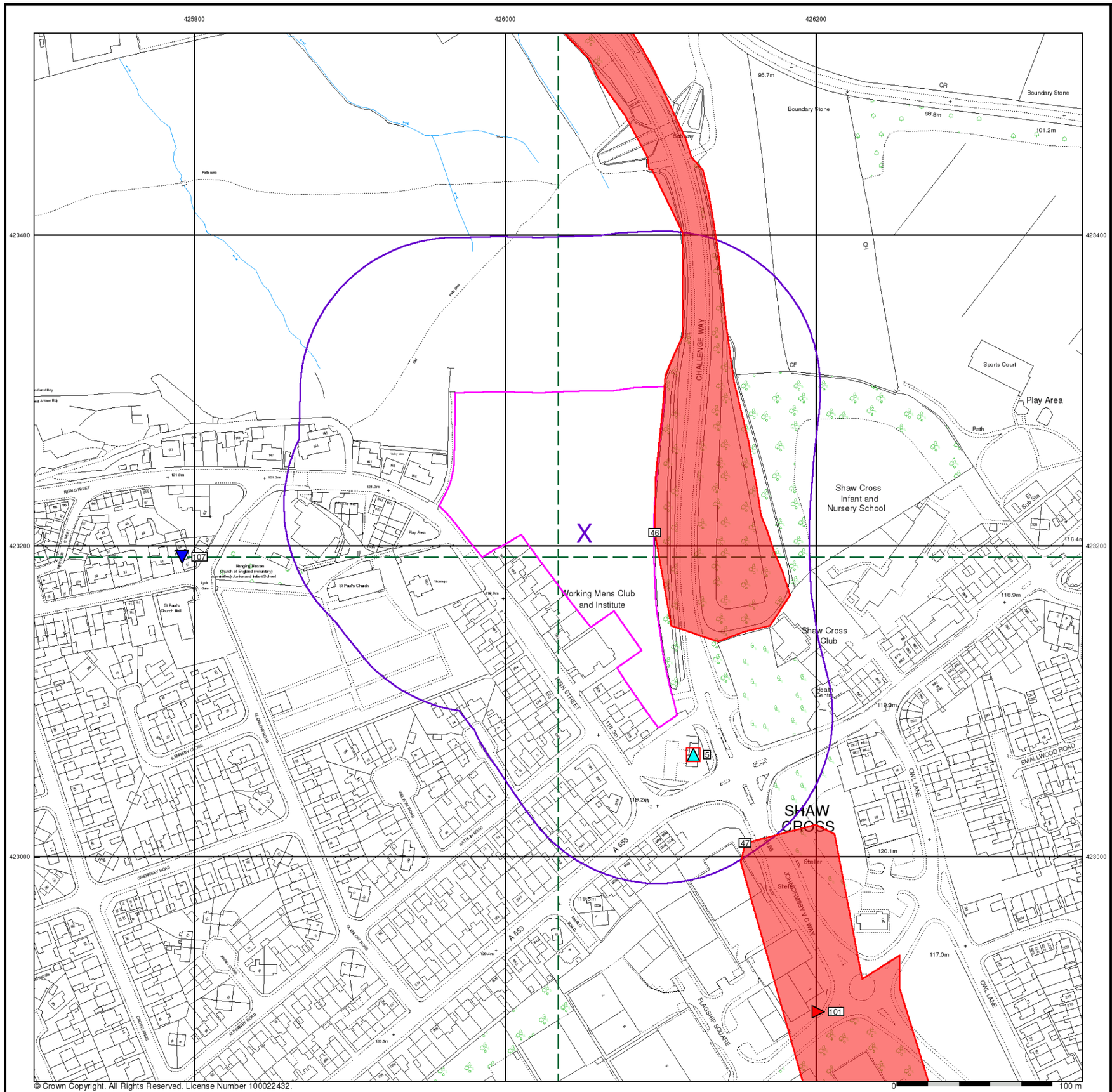
- Approximate position of the enquiry boundary shown
- Geological faults
- Unlicensed opencast site



How to contact us
0345 762 6848 (UK)
+44 (0)1623 637 000 (International)
www.groundstability.com

APPENDIX III

Landmark Information Group – Envirocheck Report



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General

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

Agency and Hydrological

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

Hazardous Substances

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

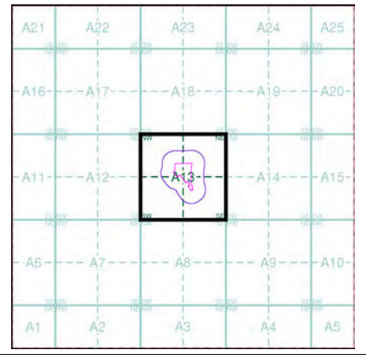
Geological

- BGS Recorded Mineral Site

Waste

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

Site Sensitivity Map - Segment A13



Order Details

Order Number:	254911796_1_1
Customer Ref:	20-436
National Grid Reference:	426050, 423210
Slice:	A
Site Area (Ha):	1.76
Plot Buffer (m):	100

Site Details

Land East of High Street, High Street, Hanging Heaton, DEWSBURY, WF12 7HF

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www envirocheck co uk



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General

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

Several of Type at Location

Agency and Hydrological

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

Hazardous Substances

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

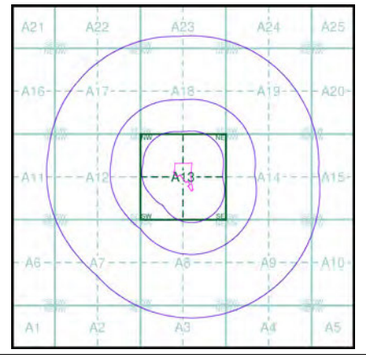
Geological

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- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
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- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



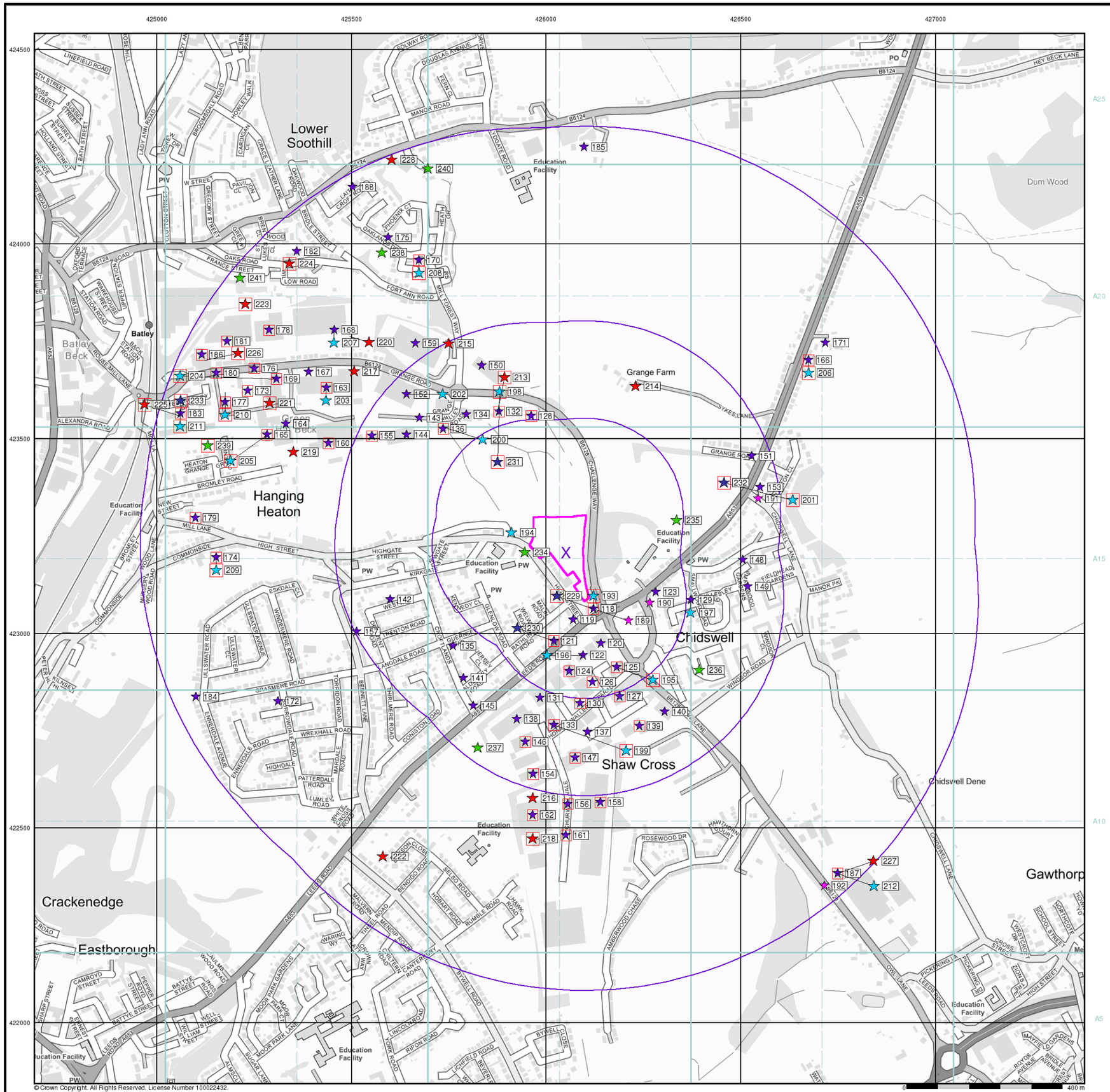
Order Details

Order Number:	254911796_1_1
Customer Ref:	20-436
National Grid Reference:	426050, 423210
Slice:	A
Site Area (Ha):	1.76
Search Buffer (m):	1000

Site Details

Land East of High Street, High Street, Hanging Heaton, DEWSBURY, WF12 7HF

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www envirocheck co uk



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Industrial Land Use Map

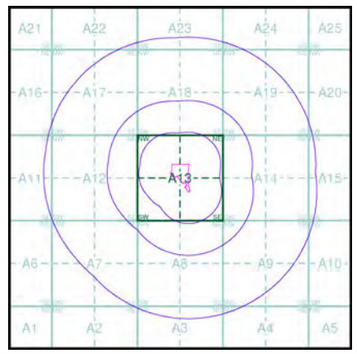
General

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

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



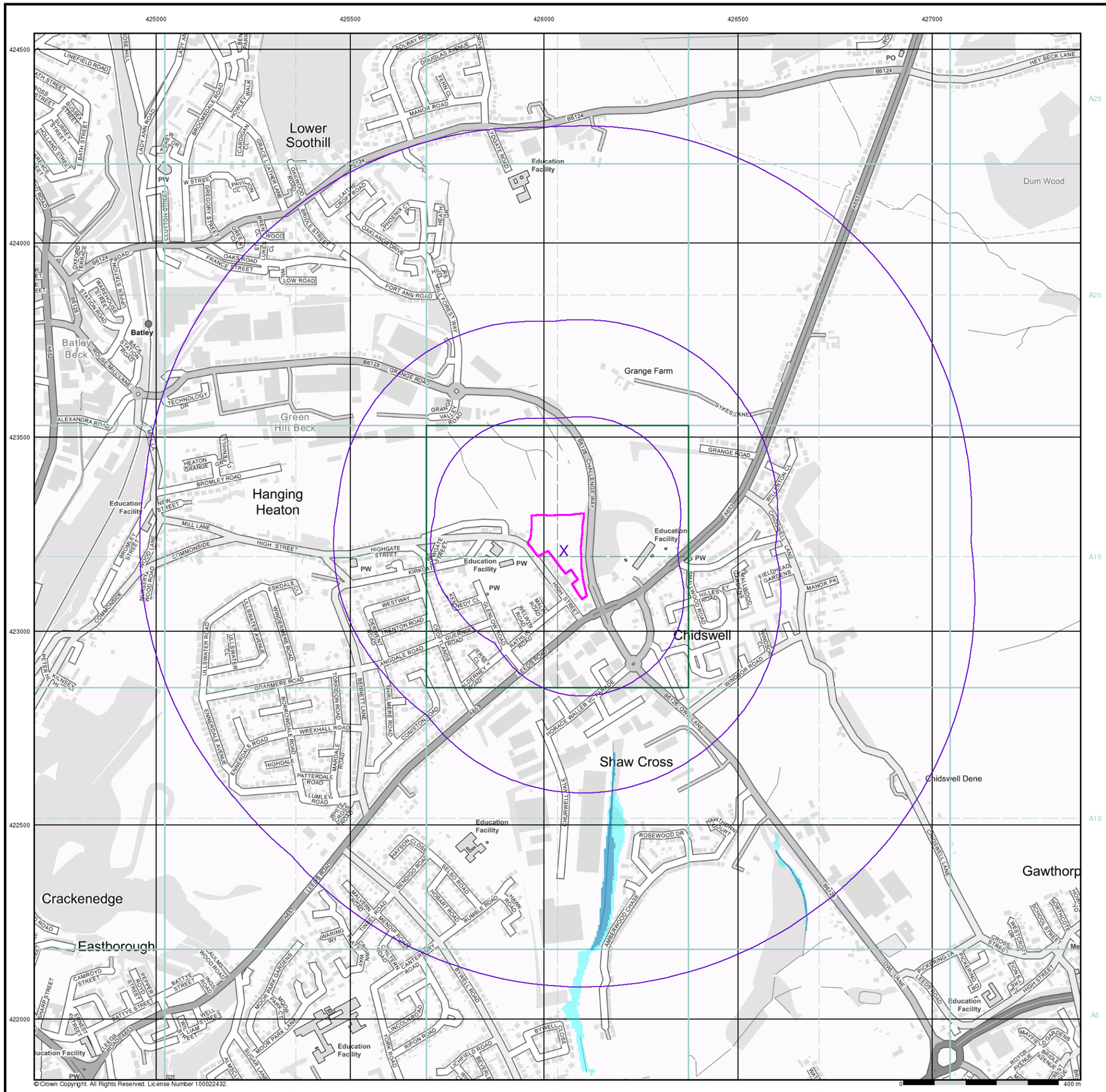
Order Details

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National Grid Reference:	426050, 423210
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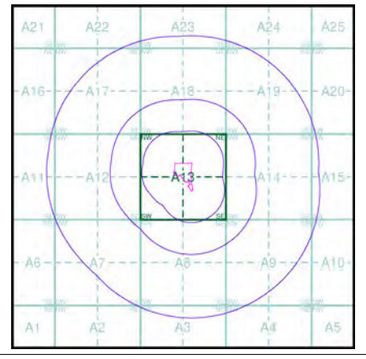
General

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

Agency and Hydrological (Flood)

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

Flood Map - Slice A



Order Details

Order Number:	254911796_1_1
Customer Ref:	20-436
National Grid Reference:	426050, 423210
Slice:	A
Site Area (Ha):	1.76
Search Buffer (m):	1000

Site Details

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