

**Former Clifton Caravan Sales
Morpeth Northumberland**

Mine Entry Investigations

Issue Date:

25 February 2022

Report Number:

20004-05

Client:

Northumbria Homes Ltd

Revision:

A

Report Ref	Prepared by	Date	Reviewed by	Date
20004-05	S Jones BSc FGS	24/02/2022	A Coverdale BSc MSc CGeol FGS	24/02/2022

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1. Introduction

1.1 Commission

Coast Consulting Engineers Ltd (Coast) was commissioned by Northumbria Homes Ltd (NHL) to undertake a Mine Entry Investigation for a proposed residential development at Clifton near Morpeth, Northumberland. A site location plan is presented as Drawing No. 20004-01 in Appendix A.

1.2 Proposals

It is understood that (NHL) propose to construct residential housing with gardens and associated infrastructure at the site. A proposed development layout is presented as IDP (Scotland) Drawing No. 1185 – L001 B in Appendix A.

1.3 Objectives

The objectives of the investigation were as follows:

- Locate and confirm the position of three mine entries (2 adits and 1 mineshaft) within the site.
- Assess potential impacts and zones of influence of these features that could impact development layout.

This report presents the factual information available during this appraisal, interpretation of the data obtained and recommendations with respect to future development.

1.4 Information Sources

The study has included an inspection of historical and geological maps, a review of environmental data held on publicly available registers and other sources as appropriate:

1. Coast Consulting Engineers Ltd 'Former Clifton Caravan Sales, Morpeth, Northumberland - Phase 1 Geoenvironmental Appraisal and Coal mining Risk Assessment', Ref. 20004-01 dated February 2021.
2. The Coal Authority Consultants Mining Report Ref: 51002350133001 dated 8 February 2021.
3. Coast Consulting Engineers Ltd 'Former Clifton Caravan Sales, Morpeth, Northumberland - Phase 2 Geoenvironmental Appraisal', Ref. 20004-01 dated April 2021.
4. Coast Consulting Engineers Ltd 'Former Clifton Caravan Sales, Morpeth, Northumberland – Remediation Strategy', Ref. 20004-04 dated December 2021.
5. Coast Consulting Engineers Ltd Proposed Housing Development at Former Clifton Caravan Sales, Morpeth – Hazardous Ground Gas Assessment, Ref 20004, dated 27 August 2021.

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6. Coast Consulting Engineers Ltd 'Former Clifton Caravan Sales, Morpeth, Northumberland – Gas Verification Strategy Report', Ref. 20004-03 dated January 2022
 7. Dunelm Geotechnical and Environmental Mine Shaft Investigation – Clifton, Morpeth Ref: D6185, dated 10th Nov 2014.
 8. The Coal Authority Abandoned Mine Plans (Sheet 6794a Catchburn Colliery, 1918 and Sheet 14248 West Clifton Colliery, 1947).
 9. CIRIA C758D Abandoned Mine Workings Manual, Dated 2019.
 10. The Coal Authority, Policy For Building Over Or Within The Influencing Distance Of A Mine Entry, January 2021.
 11. Mining Department National Coal Board (NCB), The Treatment of Disused Mine Shafts and Adits, 1982.

1.5 Limitations

This report has been prepared for NHL and their appointed agents only and should not be relied upon by any third party without the written permission of Coast. If any unauthorised third party comes into possession of this report, they rely on it at their own risk and the authors do not owe them any Duty of Care or Skill. This report is based on and limited to an assessment of the information obtained during these works and from the information sources provided in Section 1.4.

2. Site Details

OS Grid Reference	420042E 583150N.
Site Area	Approximately 2.9 hectares (7.15 acres).
Location	The site is located to the west of the A197 and to the east of the A1 highway in Clifton, Morpeth, Northumberland, approximately 1.8 miles south of Morpeth Town Centre.
Description & Topography	The site forms an irregular shaped plot of land, approximately 350m long and 95m wide. The land rises steadily in elevation from c. 71m AOD in the east to c.79m AOD in the west. The site comprises predominantly gravel surfacing interspersed with asphalt hard standing and scrubland areas. Trees are present along most boundaries of the site including a small, wooded area in the west and several mature trees located centrally. A concrete retaining walled feature is present in the centre of the site, with former office buildings, a garage and storage structures present in the east adjacent to the main access road off the A197.
Historical Development	The site was farmland until development of West Clifton Colliery in 1930 until closure in 1947. Colliery spoil associated with the colliery was re-distributed and remodelled at the site during the 1960/70s. After this time the recent occupation of the site has comprised caravan storage, maintenance and sales. Structures within the site were demolished during the latter part of 2021.
Coal Mining Summary from Previous Works	No shallow mine workings have been identified within influencing distance of surface during previous investigations. Therefore, no remedial treatment of coal workings is required. Mine entries (2 adits and 1 mineshaft) are present within the site which will require exposing to confirm location and to allow treatment where appropriate.

3. Mine Entry Investigations

3.1 Background

A Coal Authority (CA) consultants report and mine abandonment plans (Plan Refs: 6794 and 14248) identifying the three mine entries within the site were obtained from the CA and included in Appendix B. These documents provided the following information:

CA Ref	Entry Type	Grid Ref:	Treatment	Other Details
419583-005	Adit 1	419947, 583194	No details.	Day Drift. Surface Level of Adit: 73.7m. Existing Ground Level: 77.3m AOD Adit Bearing 340 degrees Assumed diameter 2.5m
419583-006	Shaft	419974, 583149	Filled to an unknown specification in 1947.	Level at top of shaft: 74.7m AOD. Existing Ground Level: 77.2m AOD Base: c. 36.8m AOD. Assumed depth 38m. Assumed diameter 2.5m.
420583-002	Adit 2	420149, 583238	Filled to unknown specification.	Assumed diameter 2m Adit bearing 139 degrees

3.2 Previous Investigations

In 2014 an investigation by Dunelm Geotechnical and Environmental was undertaken to locate the suspected mineshaft. That investigation utilised excavations and a geophysical EM31 ground conductivity survey. The investigations revealed anomalies in the ground potentially indicating the suspected mineshaft, Adit 1 to the north and several buried obstructions. Physical investigations failed to identify Adit 1 but exposed a concrete block of 3m x 5m x 0.8-0.9m at a depth of approximately 1.3m bgl in the suspected location of the mineshaft. The feature was identified to overlie firm brown clay with gravel of sandstone and coal to a depth of 2.20m bgl.

Nevertheless, site levels have remained unchanged since the original Dunelm investigation. The original recorded mine entry level was 2.5m below existing levels. Given the depth and dimensions of the concrete feature identified it is considered that the feature may not be a mine shaft cap, but some other relic feature of the colliery.

Whilst the geophysical survey excerpt interpolates the position of the mineshaft the units of measurement appear to be on a local grid with no defined point of reference. Overall, the report and appendices did not provide accurate positional information in relation to the mineshaft that could be used for confirmation purposes.

3.3 Recent Investigations

In March and November 2021, investigations to locate the mine entries was undertaken using a tracked 360-degree excavator and rotary probing techniques. Due to Adit 2 being positioned within the area of the incoming access road which would have prevented access in March, investigations were not performed in this area until November 2021 and January 2022.

The investigation locations are shown on Drawing 20004-04 in Appendix A.

Adit 1 (West)

The investigation area for Adit 1 is shown on Drawing 20004-05 in Appendix A.

Excavations in this area began approximately 20m from the northern boundary and worked towards the northern boundary. The works identified the top of the adit portal at a depth of approximately 2.0m bgl (c. 75.5m AOD) and the base at c.74m AOD at approximate grid reference 419945, 583191. The adit was found to be 1.5m wide and included a 600mm thick concrete curtain wall on the western approach leading down to the brick portal entrance which included 4 courses of brick (460mm thick) forming the eastern wall of the portal. The curtain wall was aligned with the adit entry on an approximate heading of c.340 degrees NNW with dip down into the entry in the same direction.

The adit roof at the entrance had been removed and the entry was observed to be completely infilled with a mix of soil and sandstone rubble. The portal entry was identified approximately 2.0m from the crest of the slope which forms the northern boundary of the development. No further investigation beyond that to the north was safe or possible due to the boundary slope. Photographs of the portal entry are provided in Appendix C.

Shaft

The investigation area for the mine shaft is shown on Drawing 20004-06 in Appendix A.

Excavations were initially undertaken to identify a shaft cap or the shaft lining and to confirm the depth to virgin ground around the feature. The exploratory works confirmed the presence of former colliery building foundations in several areas. An area of soft and saturated made ground comprising a mix of colliery spoil including brick and concrete with occasional metalwork was recorded within and around the CA recorded location of the mineshaft in the west and south. Excavations extended to a depth of approximately 4.5m bgl and revealed natural ground in several areas in the south and east at varying levels but did not reveal any visual evidence of a shaft cap, or the shaft lining due to the slumping of the excavation sides as a result of perched water ingress. Upon completion the excavations were backfilled and the soft disturbed zone provided with a reference marker.

Following the above works, rotary probing was undertaken in January 2022 on a grid system to further assist in locating the presence of a buried cap or soft backfill and the contrast with natural rock around the feature. Probing began to the south of the previously marked area working north. Due to the drilling flush and presence of perched water, no

flush returns were obtained and the visible resistance of the drill string was recorded in each probe hole.

Visible changes to the drill string marking a sudden change in resistance was noted at depths of between c.3.0 to 4.5m bgl suggesting the presence of glacial till as proven in the previous excavations. Harder strata was recorded at depths between 4.5m bgl and 6.2m bgl suggestive of the presence of weathered mudstone. Drill rates remained generally consistent to depths of c.9m bgl in conjunction with the observed compression of the drill head.

Two probe holes (RHP1 & RHP2) revealed starkly different conditions to other holes. Soft ground was noted in both to a depth of c.5.3-5.5m bgl with harder obstructions at c.5.3-6.1m bgl potentially indicating the presence of a shaft cap. A sudden drop of the rods between 6.1m bgl and 6.3m bgl was then noted in the second probe hole. Below 6.3m generally very loose or soft soils with occasional hard spots (observed from the rapid rate of drilling and absence of compression at the drill head) was observed to a termination depth of between 15.8m and 16m bgl.

The approximate co-ordinates for these probe locations correlate well with the CA recorded position (419972,583147 and 419973, 583149) suggesting that both probe holes may have intersected the former mineshaft. Based on the positions of the probe holes it is considered that the mine shaft could have a diameter of c.2.5m.

Adit 2 (East)

The investigation area for Adit 2 is shown on Drawing 20004-07 in Appendix A.

Mining records for the location of Adit 2 were superimposed onto the existing topographic survey of the site to obtain a best fit. The adit was indicated to lie within the incoming access road and former car-park terminating within the former reception area of the caravan sales area. Drawing No. 20004-08 in Appendix A shows the locations of the mine entries including the extent of Adit 2.

Three mechanically excavated trenches were initially dug perpendicular to the projected line of the adit down gradient of the predicted portal entrance. The excavations commenced at the site boundary in the west across the car-park and environmental bund to the boundary in the east. The excavations revealed the presence of made ground comprising colliery spoil and occasional large sections of concrete posts (ex-situ) randomly within the fill. These deposits extended to depth of c.2-2.75m bgl and overlay firm glacial till to depths of c.3.0m bgl. Natural rock comprising weathered sandstone/ siltstone was proven at the base of all excavations. No evidence of the adit was recorded within the three trenches excavated.

Probe drilling was then carried out in January 2022 perpendicular to the predicted adit alignment in two areas (car-park and reception area) to determine whether the portal was present at greater depth.

Initial probe holes within the car-park (RHA1 to RHA5) revealed sandstone at a depth of between 3.5m bgl and 3.9m bgl. A void or very soft ground (0.9m to 1.8m thick) was encountered in all five boreholes at a depth of between 6.7m bgl to 6.9m bgl.

Probe holes drilled within the reception area (RHA6-RHA13) were positioned to account for the main adit trending NNW to SSE (RHA6-RHA7 and RHA9-RHA13). Probe holes RHA8A to RHA8D were positioned to account for a possible secondary entry to the adit leading from the main reception area trending west to east. Probing in both areas identified the following observations:

Probe Hole	Depth of Feature (m bgl)	Base of Feature (m bgl).	Thickness of Feature (m)	Description
RHA1	6.9	8.2	1.3	Void (Little Resistance).
RHA2	6.9	7.8	0.9	Void (Little Resistance).
RHA3	6.8	8.3	1.5	Void (Little Resistance).
RHA4	6.7	7.9	1.2	Void (Little Resistance).
RHA5	6.8	8.6	1.8	Void (Little Resistance).
RHA9	5.3	7.4	2.1	Loss of flush.
RHA10	6.0	8.5	2.5	Very hard drilling with significant vibration of the drill string producing white dust (possible concrete and reinforcement).
RHA11	6.0	9.0	3.0	Very hard drilling with significant vibration of the drill string producing white dust (possible concrete and reinforcement).
RHA12	2.8	- Terminated at 2.9m	>0.10	Probable concrete obstruction (shallow).

By contrast to the hard materials encountered in RHA10 and RHA11, orange and yellow sandstone was proven in adjacent boreholes at similar depths. Wet strata or groundwater strikes were noted in the sandstone typically between 5.3m bgl (RHA9) to 8.5m bgl (RHA8C) at similar depths to the hard features identified.

Probe drilling was undertaken using water flush. No hazardous ground gases were detected during the probe drilling works. Copies of the exploratory hole logs are presented in Appendix D.

4. Conclusions

Investigations at the site to ascertain the location and condition of three mine entries has been undertaken. Visual evidence of Adit 1 located in the west has verified the exact position of this entry. Rotary probing has been undertaken to locate the former mine shaft and Adit 2 and has revealed evidence comprising deep soft ground in the recorded location of the mineshaft and the presence of voids/ very soft ground and localised hard features suggestive of Adit 2 in the east.

4.1 Remedial Works

Adit 1

The entrance to Adit 1 is located at the site boundary (within c.2m of the crest of the existing slope at a depth of 3.6m bgl). The entry dips down into the ground towards the NNW and off-site. Made ground depths in this area will require future proposed plots to be provided with deep foundations such as piles or vibro stone columns extending to competent bearing strata. Such foundations will be required to extend below a 45-degree angle from the base of the adit entry to mitigate against potential failure. No structures should be founded at shallow depth within this zone.

Presently, a stream follows the northern site boundary from west to east before entering a sinks adjacent to the adit. Investigation of this sinks either by exposure or CCTV survey to confirm and trace this possible culvert will be required. Following confirmation of the route of the stream, partial removal of the soil at the adit entrance followed by resealing of the entry with new blockwork should be undertaken to prevent the risk of soil washout or slumping within the gardens of plots within the site in the vicinity of the stream and adit. Placement of backfill following sealing of the shaft should be undertaken to an approved engineering specification.

Shaft

Soft ground implying the presence of shaft backfill has been identified at the approximate location of the CA identified co-ordinates for the shaft. Excavations to visually prove the mine entry or shaft cap were hampered by soft soils and perched groundwater destabilising and causing slumping of the ground. Depths to rock range around the vicinity of the shaft between 4.5m bgl and 6m bgl. A hard spot was encountered in both probe holes believed to be drilled within the shaft at a depth of 5.3-6.1m bgl which may suggest the presence of a shaft cap placed at depth (c. 72m AOD or 2.8m below the original shaft surface level) and which may also co-incide with the interface of the shaft with rockhead.

Based on a mine shaft diameter of 2.5m and a depth to rock of 6m (including c.1.5-2m of stiff glacial clay), the anticipated zone of influence for a shaft collapse would be a radius of 7.3m (14.6m diameter) taken at an angle of 45 degrees from rock head. Due to the presence of shaft infill and the absence of wet granular natural soils above rockhead which could result in shallower collapse angles, the above assessment of risk is considered appropriate at this time.

Ideally, no development should occur within this zone however, subject to pressure grouting of the shaft infill and the provision of an appropriately designed shaft cap, development within this zone could be agreed with the Coal Authority and local authority planning department. It is considered that this would be subject to no structures being constructed directly above the mine shaft cap and that plots within the 45 degree angle of influence of potential failure are piled and socketed into competent rock below this line. Pile design and distances will need to be cognisant of preventing piles exerting influence on the shaft lining.

It is considered that an allowance should be made in any budget for changes to the shaft cap design and installation to account for any change in the predicted diameter and shape of the shaft. All excavations for the shaft cap will require dewatering and temporary support to facilitate safe access for construction.

Adit 2

No surface evidence of the adit was identified within the car-park at the site entrance although large pieces of concrete with reinforcement were identified in the shallow made ground soils. Voids or very soft ground perpendicular to the predicted line of the adit within the car-park area and hard obstructions which may be associated with concrete and reinforcement lining of the adit at depth adjacent to the former reception area have been identified in the suspected location of this feature. CA information reveals that this entry was infilled, but it is not known what with and to what degree.

Nevertheless, voids or soft ground which may be associated with the adit have been identified which are of significant thickness (between 0.9m and 1.8m) and could result in future collapse at the surface. A programme of drilling and grouting will be required across the full extent of the predicted location of the adit to account for positional inaccuracies of CA plans and variations in backfill.

Subject to the satisfactory completion of the remedial works it is recommended that any proposed plots within this zone are provided with reinforced foundations following discussions and approval of the building warranty provider.

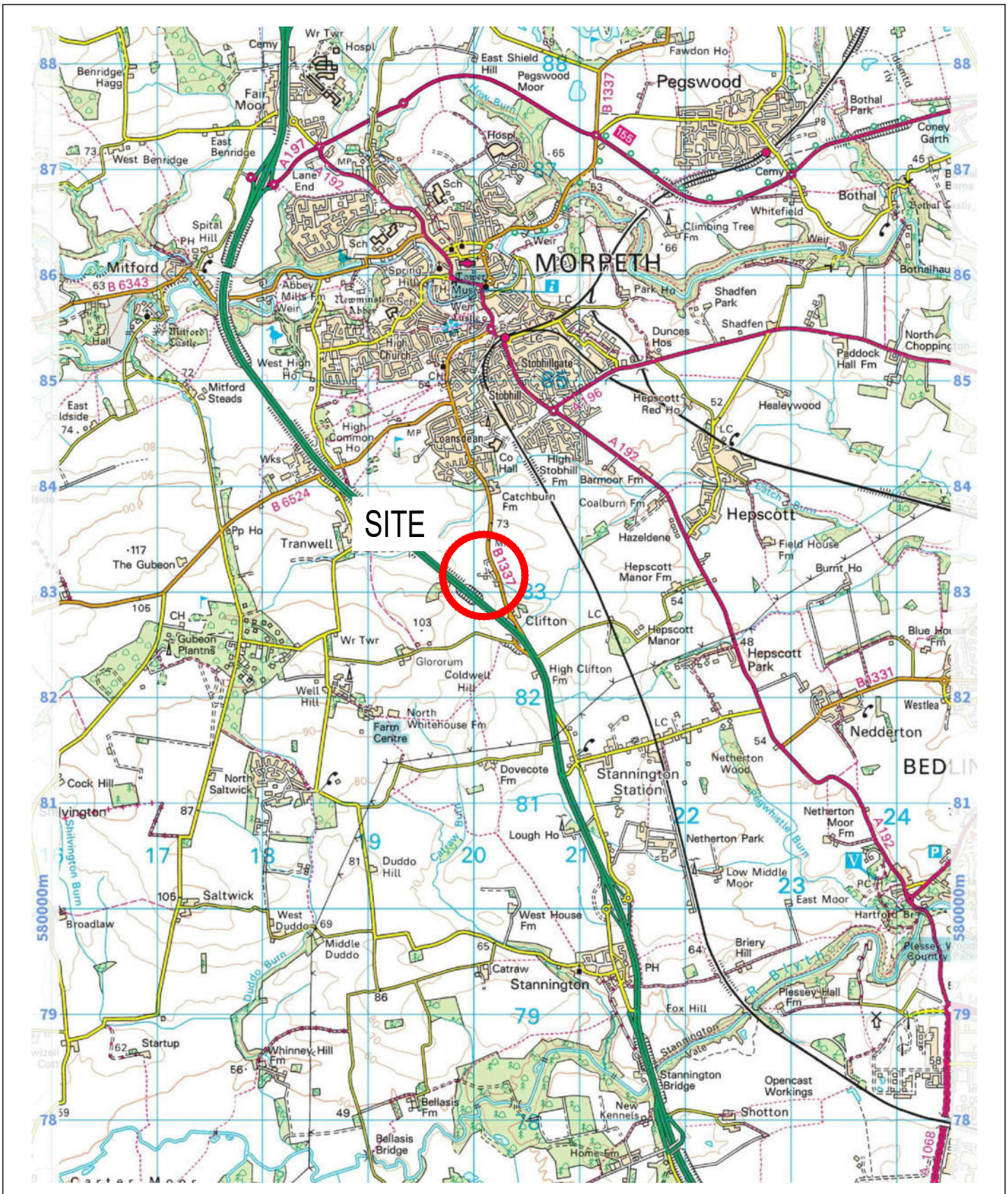
4.2 Hazardous Gases


The site has been identified as having a ground gas regime of Characteristic Situation 2 (CS2) in accordance with BS8485:2015+A1:2019. All structures within the development will require gas protection measures to all enclosed spaces to at least CS2 conditions to mitigate the risks from any hazardous ground gases.

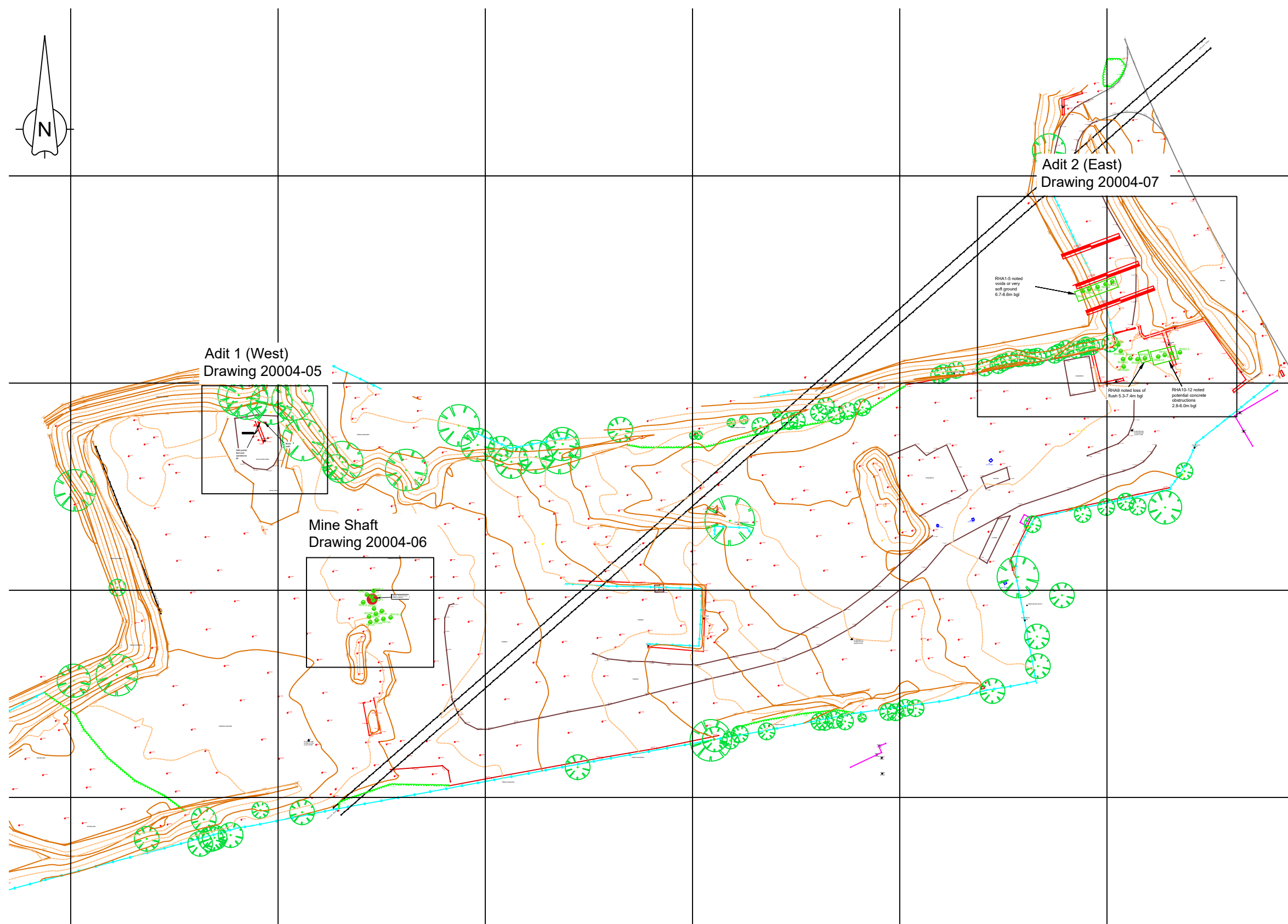
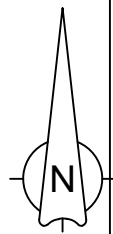
4.3 Regulatory Approvals

This document should be submitted to the Planning Department of the Local Authority and the Coal Authority for comment and approval.

Appendix A – Figures



Client		Northumbria Homes Ltd		
Project		Clifton, Morpeth		
Drawing Title		Site Location Plan		
Job No	Drawing No	Issue	Scale at A4	7 Silvertown Court, Northumberland Business Park, NE23 7RY rh@coastconsult.co.uk pl@coastconsult.co.uk 0191 5977879
20004	01	P1	1:50,000	
Do not scale				© Coast Consulting Engineers Ltd.



P1	23-02-22	Preliminary Issue	LOD
Issue	Date	Description	By



7 Silvertown Court, Northumberland Business Park, NE23 7RY
0191 5977879

Client
Northumbria Homes Ltd

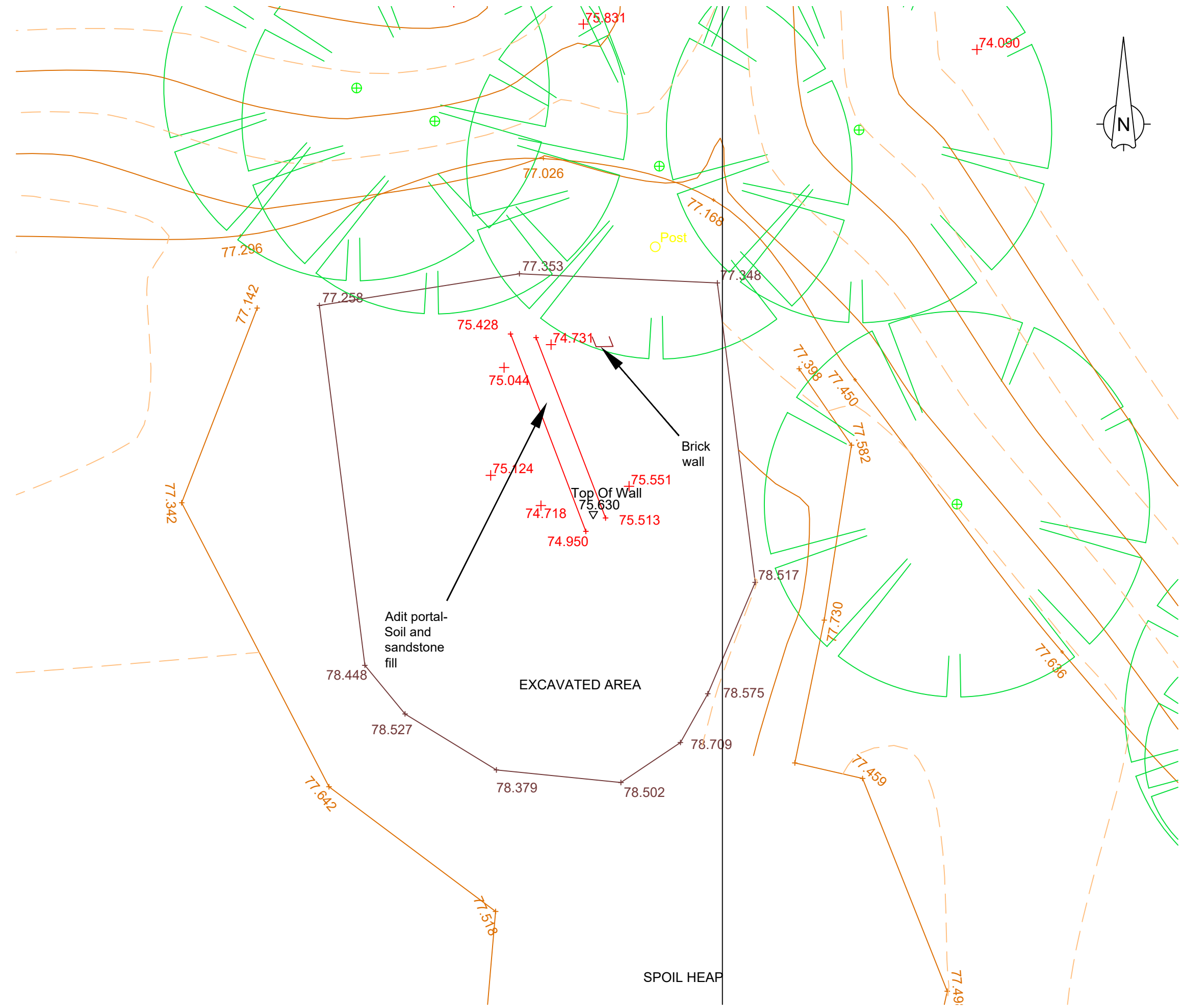
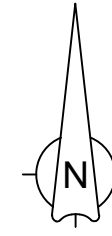
Job Title
Clifton, Morpeth

Drawing Title
Site Plan Showing Mine Entry Areas of Investigation

Scale at A3
1:1000

Drawing Status
PRELIMINARY

Job No	Drawing No	Issue
20004	04	P1



P1	23-02-22	Preliminary Issue	LOD
Issue	Date	Description	By



7 Silvertown Court, Northumberland Business Park, NE23 7RY
0191 5977879

Client
Northumbria Homes Ltd

Job Title
Clifton, Morpeth

Drawing Title
Adit 1 (West) Investigation

Scale at A3
1:100

Drawing Status
PRELIMINARY

Job No 20004	Drawing No 05	Issue P1
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A3

A

B

C

D

E

F

1

2

3

4

5

UNMADE GROUND

+76.856

+77.299

+77.458

+76.5

RHE1

+77.202

RHE2

RHP2

RHP1

Approx. Centre Co-ords
419973, 583148

RHE3

RH2C

+77.249

RH3B

RH2B

RH2A

RH1A

RH1B

RH1A-2

RH3A

+77.705

+77.768

+78.495

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+77.254

+77.891

+77.989

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77.453

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77.377

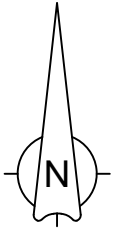
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76.885

77.860

77.711



-  Rotary Hole
-  Probable Mineshaft Location

Issue	Date	Description	By
P1	23-02-22	Preliminary Issue	LOD



7 Silvertown Court, Northumberland Business Park, NE23 7RY
0191 5977879

Client
Northumbria Homes Ltd

Job Title
Clifton, Morpeth

Drawing Title
Mine Shaft Investigation

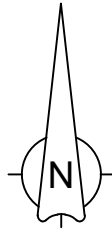
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Drawing Status
PRELIMINARY

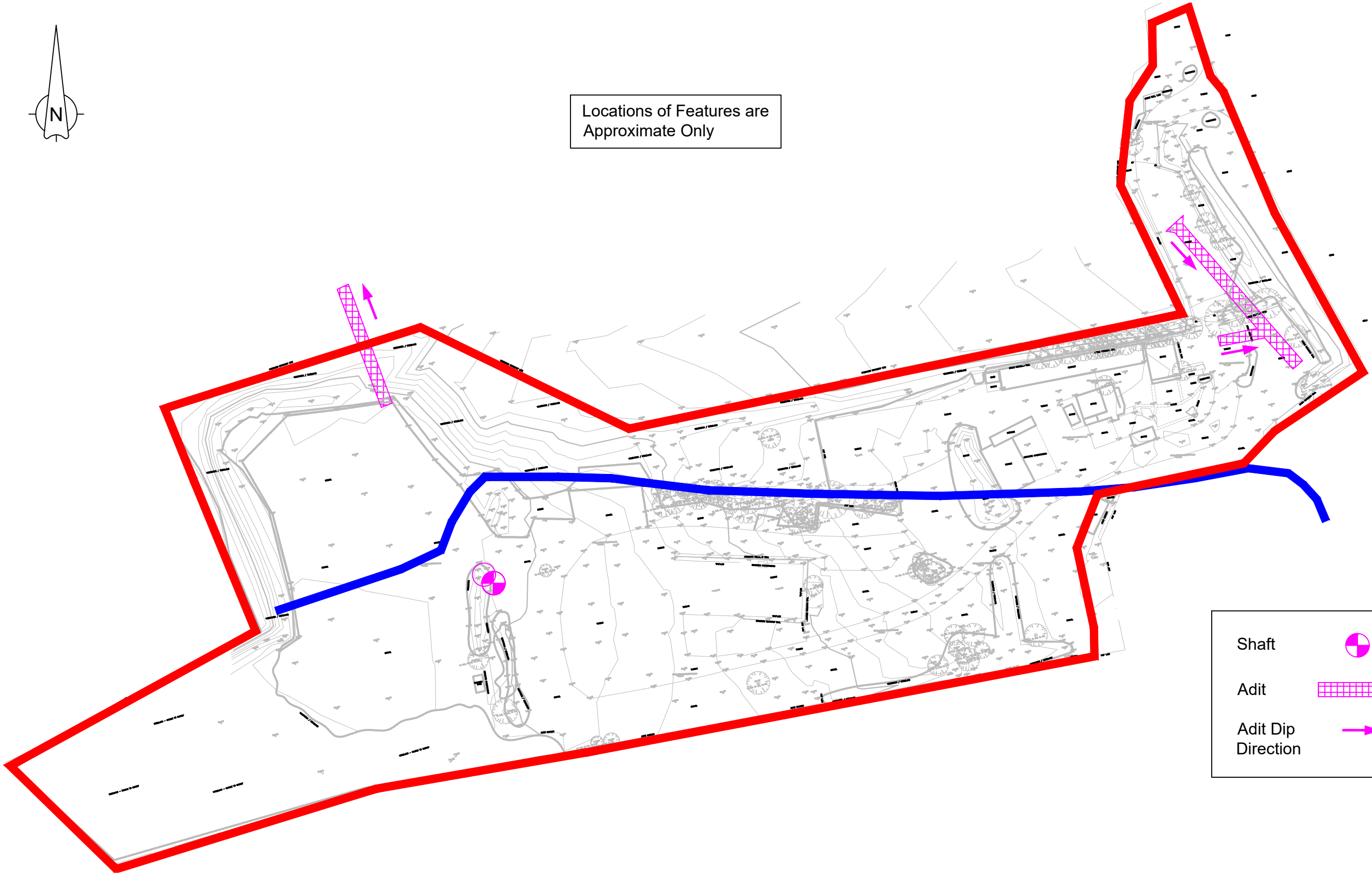
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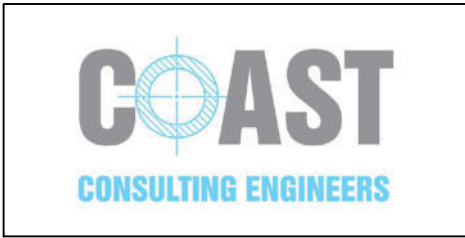


Locations of Features are Approximate Only



Shaft	
Adit	
Adit Dip Direction	

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Client
Falcon Fox

Job Title
Clifton, Morpeth

Drawing Title
Coal Authority Mine Entry Overlay

Scale at A3
1:1000

Drawing Status
FINAL

P1	25/02/22	Preliminary Issue	AC	SHJ	PL
Issue	Date	Description	By	Chkd	Appd

7 Silvertown Court, Northumberland Business Park, NE23 7RY
0191 5977879

Job No	Drawing No	Issue
20004	08	P1

Appendix B – Coal Authority Information

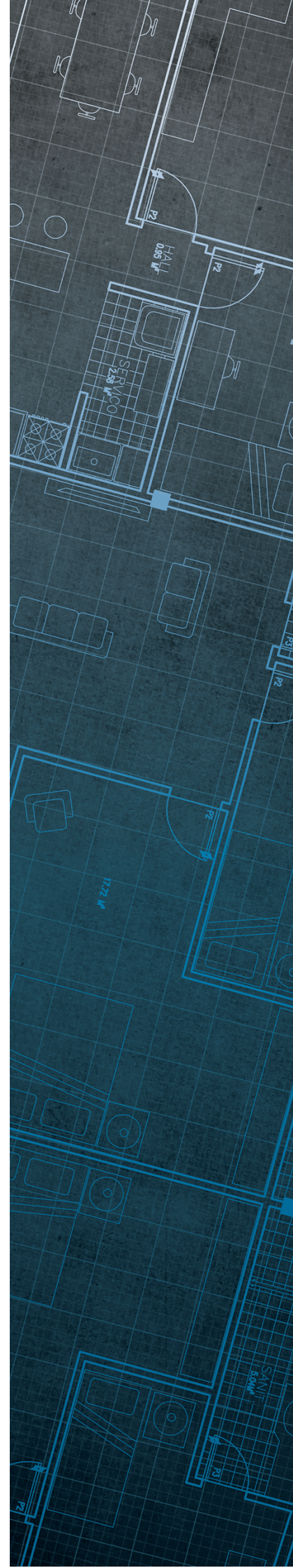


The Coal
Authority

Consultants Coal Mining Report

Clifton
Morpeth
Northumberland
NE61 6DG

Date of enquiry:	8 February 2021
Date enquiry received:	8 February 2021
Issue date:	8 February 2021
Our reference:	51002350133001
Your reference:	20004/AC/085



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

COAST CONSULTING ENGINEERS LTD

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Morpeth
Northumberland
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Mansfield
Nottinghamshire
NG18 4RG

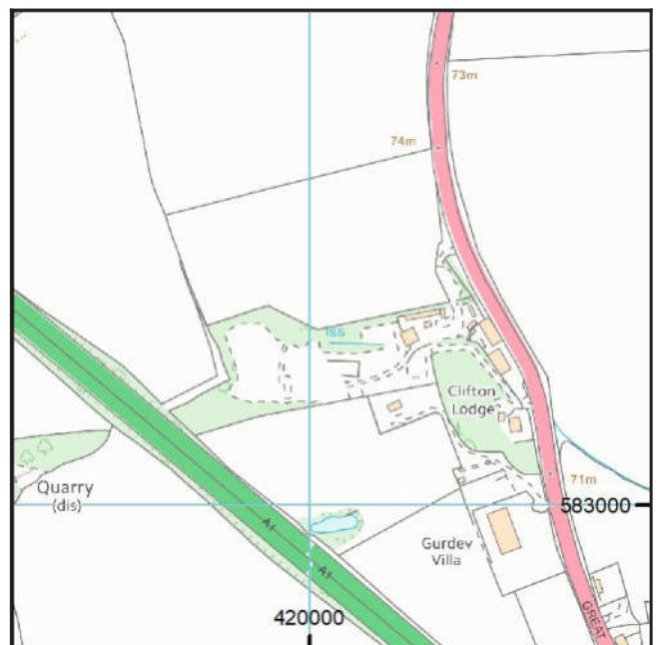
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



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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	VICTORIA	Coal	55CG	22	Beneath Property	3.6	South-East	60	1947
unnamed	VICTORIA	Coal	55CH	30	Beneath Property	4.6	South-East	60	1947
WEST CLIFTON	VICTORIA	Coal	5LEO	39	Beneath Property	6.1	South	70	1947
WEST CLIFTON	VICTORIA	Coal	5LDO	40	Beneath Property	6.1	South	70	1947

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Adit	419583-005	419947 583194		Coal	
Shaft	419583-006	419974 583149	This mine entry has been filled to an unknown specification in 1947.	Coal	
Adit	420583-002	420149 583238	this mine entry has been filled to an unknown specification	Coal	
Adit	420583-003	420192 583103	this entry is covered with corrugated sheets and bricks and covered over with soil.	Coal	

Abandoned mine plan catalogue numbers

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

14248	7353	6794
-------	------	------

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

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
BROCKWELL	Coal	Yes	11.5	North-West	57
BROCKWELL	Coal	Yes	21.7	North	110
THREE QUARTERS	Coal	Yes	Within	N/A	78

Geological faults, fissures and breaklines

No faults, fissures or breaklines 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.

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.

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 in an area where notices to withdraw support were given in 1943 and 1946.

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.

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.

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.

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.

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.

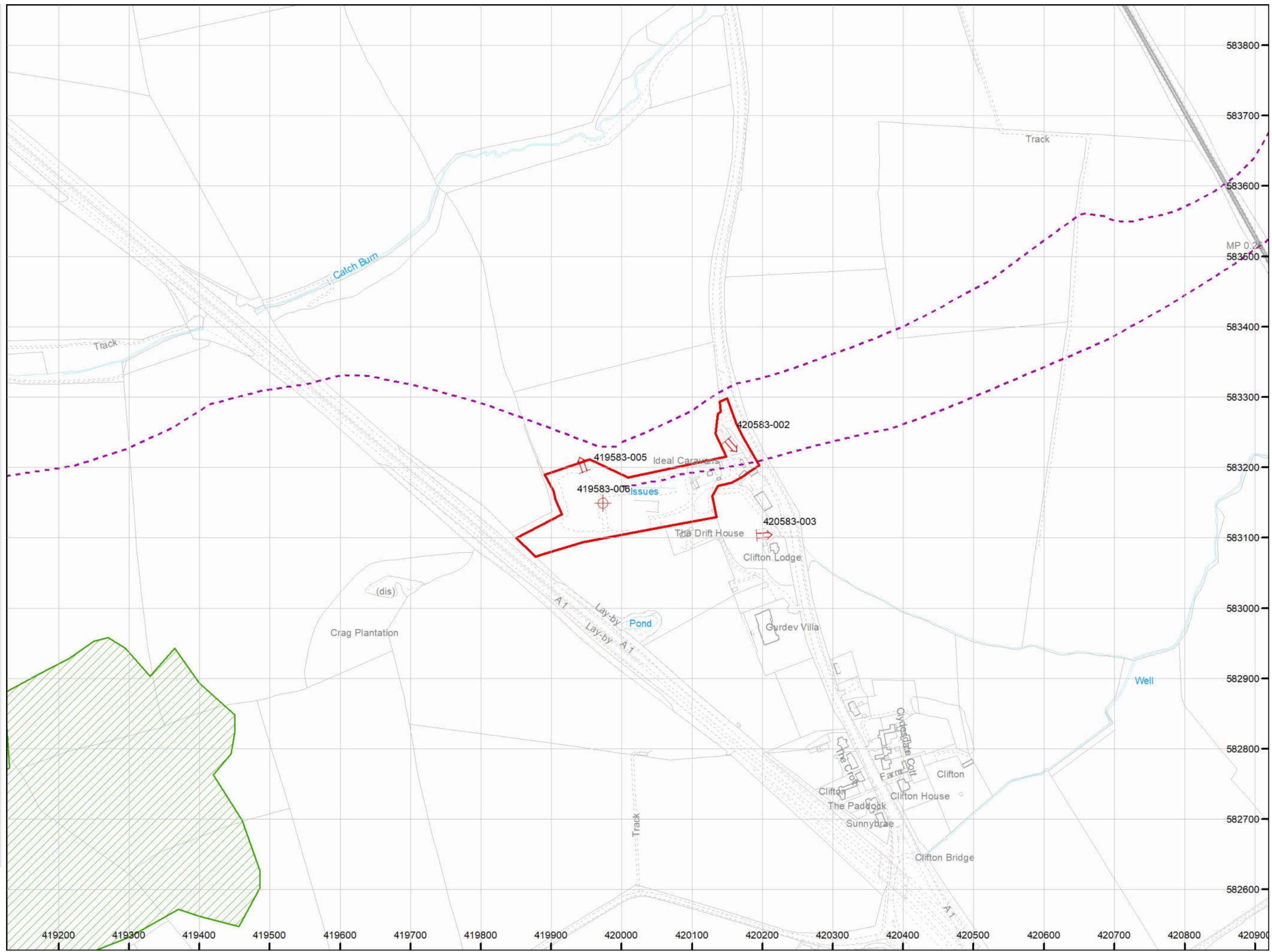
Payment to owners of former copyhold land

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.

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 
- Disused mine shaft 
- Disused adit 
- Outcrop (Conjectured) 
- Unlicensed opencast site 



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

Appendix C – Photographs



Plate 1: View east showing edge of curtain wall. Note depth of colliery spoil and crest of slope to left of picture.



Plate 2: View NNW of adit entry. Note brickwork wall and presence of natural soils and rock at base.

Appendix D – Exploratory Hole Logs



Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Ideal Caravans, Clifton

Trial Pit
Number
TT03

Machine : 360 Tracked
Excavator
Method : Trial Pit

Dimensions
1.1m x 15.5m

Ground Level (mOD)

Client
Northumbria Homes

Job
Number
20004

Location
Northumberland

Dates
14/12/2021-
14/12/2022

Engineer
S Jones

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					0.05	MADE GROUND: Dark grey ASPHALT.		
					(0.60)	MADE GROUND: Light brown and grey slightly clayey fine to coarse SAND AND angular medium to coarse GRAVEL with frequent cobbles of sandstone.		
					0.65	MADE GROUND: Grey mottled brown and black slightly silty fine to coarse SAND AND angular fine to coarse GRAVEL with frequent cobbles and boulders of sandstone, siltstone and mudstone (COLLIERY SPOIL).		
					(1.80)			
					2.45	Firm and stiff reddish brown mottled light grey slightly sandy slightly gravelly CLAY (GLACIAL TILL).		
					(0.70)			
					3.15	Brownish grey thinly bedded SILTSTONE/ SANDSTONE (PENNINE LOWER COAL MEASURES).		
					(0.45)			
					3.60	Complete at 3.60m		

Plan
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Remarks

Scale (approx)	1:50	Logged By	SHJ	Figure No.	20004.TT03
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Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Ideal Caravans, Clifton

Trial Pit Number
TT04

Machine : 360 Tracked Excavator
Method : Trial Pit

Dimensions
1.1m x 15m

Ground Level (mOD)

Client
Northumbria Homes

Job Number
20004

Location
Northumberland

Dates
14/12/2021

Engineer
S Jones

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					0.05	MADE GROUND: Dark grey ASPHALT.		
					(0.60)	MADE GROUND: Light brown and grey slightly clayey fine to coarse SAND AND angular medium to coarse GRAVEL with frequent cobbles of sandstone.		
					0.65	MADE GROUND: Grey mottled brown and black slightly silty fine to coarse SAND AND angular fine to coarse GRAVEL with frequent cobbles and boulders of concrete with reinforcement and sandstone (COLLIERY SPOIL).		
					(1.65)			
					2.30	Firm and stiff orange brown mottled light grey slightly sandy slightly gravelly CLAY (GLACIAL TILL).		
					(0.95)			
					3.25	Brownish grey thinly bedded SILTSTONE/ SANDSTONE (PENNINE LOWER COAL MEASURES).		
					(0.85)			
					4.10	Complete at 4.10m		

Plan

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Remarks

large sections of reinforced concrete excavated but did not appear to be insitu.

Scale (approx) 1:50	Logged By SHJ	Figure No. 20004.TT04
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Coast Consulting Engineers Ltd
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Northumberland Business Park
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Site
Clifton

Borehole
Number
A1

Machine : Flush : Water Core Dia: mm Method : Rotary Cored			Casing Diameter			Ground Level (mOD) 71.50		Client Northumbrian Homes		Job Number 20004-2	
			Location Northumberland			Dates 02/02/2022		Engineer		Sheet 1/1	

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(1.00)	Brown gravel SAND (FILL)		
						70.50	1.00 (0.50)	Possible CONCRETE.		
						70.00	1.50	Brown gravelly CLAY (GLACIAL TILL)		
							(2.40)			
						67.60	3.90	Orange SANDSTONE.		
							(1.70)			
						65.90	5.60	Weak pale yellow orange SANDSTONE.		
							(1.30)			
						64.60	6.90	VOID/ VERY SOFT GROUND (No resistance).		
							(1.30)			
						63.30	8.20	Orange SANDSTONE.		
							(1.50)			
						61.80	9.70	SOLID (Loss of flush. No returns).		
							(2.20)			
						59.60	11.90	Complete at 11.90m		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A1	



Coast Consulting Engineers Ltd
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Northumberland Business Park
NE23 7RY

Site
Clifton
Borehole Number
A2

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 02/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(2.50)	Brown gravelly SAND (FILL).		
						69.00	2.50 (1.20)	Grey gravelly sandy CLAY (GLACIAL TILL).		
						67.80	3.70 (0.80)	Orange SANDSTONE.		
						67.00	4.50 (0.50)	Pale yellow SANDSTONE.		
						66.50	5.00 (1.90)	Orange SANDSTONE.		
						64.60	6.90 (0.90)	VOID (No resistance).		
						63.70	7.80 (4.00)	Brown SANDSTONE.		
						59.70	11.80	Complete at 11.80m		

Remarks	Scale (approx) 1:75	Logged By LOD
	Figure No. 20004-2.A2	



Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Clifton

Borehole Number
A3

Machine : Flush : Water Core Dia: mm Method : Rotary Cored	Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
	Location Northumberland	Dates 02/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								Brown gravelly clayey SAND (FILL).		
						69.80	1.70	Grey gravelly CLAY (FILL).		
						68.40	3.10	Brown gravelly sandy CLAY. Gravel is fine and subrounded (GLACIAL TILL).		
						67.90	0.50			
						67.50	3.60	Pale yellow SANDSTONE.		
						67.40	0.40	Dark orange SANDSTONE.		
							4.00	Pale yellow SANDSTONE.		
							1.20	Dark orange SANDSTONE.		
						66.20	5.30	Pale yellow SANDSTONE.		
						65.80	0.40	VOID/ VERY SOFT GROUND (No resistance).		
							5.70	SOLID (Loss of flush. No returns).		
							1.10	Complete at 11.50m		
							6.80			
							1.50			
							8.30			
							3.20			
							11.50			

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A3	



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Site
Clifton

Borehole
Number
A4

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter		Ground Level (mOD) 71.50		Client Northumbrian Homes		Job Number 20004-2	
		Location Northumberland		Dates 02/02/2022		Engineer		Sheet 1/1	

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								Grey gravelly clayey SAND (FILL).		
						69.20	2.30 (0.40)	Brown gravelly CLAY (GLACIAL TILL).		
						68.80	2.70 (1.00)	Grey brown gravelly CLAY with rare coal fragments (GLACIAL TILL).		
						67.80	3.70 (1.30)	Orange SANDSTONE.		
						66.50	5.00 (1.70)	Pale yellow SANDSTONE.		
						64.80	6.70 (1.20)	VOID/ VERY SOFT GROUND (No resistance, possible broken ground at base).		
						63.60	7.90 (3.70)	SOLID (Loss of flush. No returns).		
						59.90	11.60	Complete at 11.60m		

Remarks	Scale (approx) 1:75	Logged By LOD
	Figure No. 20004-2.A4	



Coast Consulting Engineers Ltd
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Northumberland Business Park
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Site
Clifton

Borehole
Number
A5

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 02/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								Brown gravelly clayey SAND (FILL).		
						69.80	(1.70)	Grey gravelly clayey SAND (FILL).		
						68.70	(0.70)	Brown sandy CLAY (GLACIAL TILL).		
						68.00	(1.20)	Pale yellow SANDSTONE.		
						66.80	(1.05)	Dark orange SANDSTONE.		
						65.75	(0.35)	White SANDSTONE.		
						65.40	(0.20)	Dark orange SANDSTONE.		
						65.20	(0.30)	Pale yellow SANDSTONE.		
						65.10	(0.40)	Dark orange SANDSTONE.		
						64.70	6.80	VOID/ VERY SOFT GROUND (No resistance).		
							(1.80)			
						62.90	8.60	SOLID (Loss of flush. No returns).		
							(3.00)			
						59.90	11.60	Complete at 11.60m		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A5	



Coast Consulting Engineers Ltd
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Site
Clifton

Borehole Number
A6

Machine :		Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
Flush : Water Core Dia: mm Method : Rotary Cored				Location Northumberland	Dates 02/02/2022

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.00	(0.50) 0.50	Red angular GRAVEL of shale (FILL).		
							(2.60)	Grey gravelly clayey SAND (GRANULAR FILL).		
						68.40	3.10	Light brown SANDSTONE.		
							(1.40)			
						67.00	4.50	Cream SANDSTONE.		
							(1.40)			
						65.60	5.90	Dark orange SANDSTONE.		
						65.10	(0.50) 6.40	Grey SANDSTONE.		
							(2.90)			
						62.20	9.30 (0.40)	Grey SILTSTONE.		
						61.80	0.70 (0.20)	COAL.		
						61.60	9.90	Complete at 9.90m		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A6	



Coast Consulting Engineers Ltd
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NE23 7RY

Site
Clifton
Borehole Number
A7

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 03/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.20	(0.30) 0.30	Tarmacadam over pink GRAVEL of shale (FILL). Grey GRAVEL of siltstone (FILL).		
							(2.70)			
						68.50	3.00 (0.60)	Brown gravelly CLAY. Gravel fine and mostly siltstone (GLACIAL TILL)		
						67.90	3.60 (0.60)	Cream SANDSTONE.		
						67.30	4.20 (1.30)	Weak orange SANDSTONE.		
						66.00	5.50 (0.90)	Cream light grey SANDSTONE.		
						65.10	6.40 (0.60)	Orange SANDSTONE.		
						64.50	7.00 (1.20)	Light grey SANDSTONE.		
								Water strike		
						63.30	8.20 (1.20)	Wet brown SANDSTONE.		
						62.10	9.40 (0.30)	Grey SILTSTONE.		
						61.80	9.70 (0.80)	COAL		
						61.00	10.50 (1.20)	Brown very wet SANDSTONE.		
						59.80	11.70 (2.60)	Grey SILTSTONE.		
						57.20	14.30 (0.25)	COAL.		
						57.00	14.50 (0.25)	Grey SILTSTONE		
						56.75	14.75			

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A7	



Coast Consulting Engineers Ltd
7 Silverton Court
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Site
Clifton
Borehole Number
A8A

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter		Ground Level (mOD) 71.50		Client Northumbrian Homes		Job Number 20004-2	
		Location Northumberland		Dates 03/02/2022		Engineer		Sheet 1/2	

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(1.40)	Brown grey sandy gravelly CLAY with rare brick fragments, slow moving but gap open (FILL)		
						70.10	1.40	Grey gravelly SAND (FILL)		
							(1.10)			
						69.00	2.50	Light brown gravelly CLAY. Gravel is rounded fine, siltstone and sandstone (GLACIAL TILL)		
							(0.70)			
						68.30	3.20	Cream SANDSTONE.		
							(1.00)			
						67.30	4.20	Orange SANDSTONE.		
							(1.80)			
						65.50	6.00	White SANDSTONE.		
							(0.90)			
						64.60	6.90	Pale yellow SANDSTONE.		
							(1.60)			
						63.00	8.50	Grey SILTSTONE.		
							(1.10)			
						61.90	9.60	COAL		
							(0.60)			
						61.30	10.20	Light grey SILTSTONE.		
							(4.30)			
						57.00	14.50	COAL		
						56.80	14.70			

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A8A	



Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Clifton

Borehole
Number
A8A

Machine : Flush : Water Core Dia: mm Method : Rotary Cored	Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
	Location Northumberland	Dates 03/02/2022	Engineer	Sheet 2/2

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						56.70	14.80	White SANDSTONE. Complete at 14.80m		

Remarks	Scale (approx) 1:75	Logged By LOD
	Figure No. 20004-2.A8A	



Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Clifton

Borehole Number
A8B

Machine : Flush : Water Core Dia: mm Method : Rotary Cored			Casing Diameter			Ground Level (mOD) 71.50		Client Northumbrian Homes		Job Number 20004-2	
			Location Northumberland			Dates 03/02/2022		Engineer		Sheet 1/1	

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.40	0.10	Pink shale angular GRAVEL		
								Brown gravelly SAND (FILL)		
							(3.50)			
						67.90	3.60 (0.40)	Light brown SANDSTONE.		
						67.50	4.00 (0.75)	Pale yellow SANDSTONE.		
						66.75	4.75 (0.75)	Light grey SANDSTONE.		
						66.00	5.50 (3.00)	Dark orange SANDSTONE.		
						63.00	8.50 (1.00)	Grey SILTSTONE.		
						62.00	9.50 (0.50)	COAL		
						61.50	10.00 (1.50)	Weak white SANDSTONE.		
						60.00	11.50 (2.00)	Grey SILTSTONE.		
						58.00	13.50 (1.00)	Grey SANDSTONE.		
						57.00	14.50 (0.20)	COAL		
						56.80	14.70	Complete at 14.70m		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A8B	



Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Clifton
Borehole Number
A8C

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 03/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.40	0.10	Pink angular GRAVEL of shale (FILL). Brown grey sandy GRAVEL mostly grey siltstone (FILL).		
							(3.50)			
						67.90	3.60 (0.50)	Orange SANDSTONE.		
						67.40	4.10 (0.20)	Pale yellow SANDSTONE.		
						67.20	4.30 (1.10)	White SANDSTONE.		
						66.10	5.40 (1.50)	Brown SANDSTONE.		
						64.60	6.90 (0.60)	Pale yellow SANDSTONE.		
						64.00	7.50 (1.00)	Dark orange SANDSTONE.		
						63.00	8.50 (0.50)	Wet brown SANDSTONE.		
						62.50	9.00 (0.70)	Grey SILTSTONE.		
						61.80	9.70 (0.50)	COAL		
						61.30	10.20 (1.80)	Grey SANDSTONE.		
						59.50	12.00 (0.30)	Wet brown SANDSTONE.		
						59.20	12.30 (0.70)	Light grey SANDSTONE.		
						58.50	13.00 (1.50)	Dark grey SILTSTONE.		
						57.00	14.50	Complete at 14.50m		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A8C	



Coast Consulting Engineers Ltd
7 Silverton Court
Northumberland Business Park
NE23 7RY

Site
Clifton
Borehole Number
A8D

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.50	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 03/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.30	(0.20)	Tarmacadam over pink GRAVEL of shale (FILL).		
							(1.80)	Grey sandy GRAVEL (FILL).		
						69.50	2.00	Brown gravelly CLAY, Gravel is rounded, fine predominantly siltstone (GLACIAL TILL)		
							(1.40)			
						68.10	3.40	Brown to dark orange SANDSTONE.		
							(0.60)			
						67.50	4.00	Cream/ pale yellow SANDSTONE.		
							(0.90)			
						66.60	4.90	Dark orange SANDSTONE.		
							(0.60)			
						66.00	5.50	Light grey SANDSTONE.		
							(0.90)			
						65.10	6.40	Dark orange SANDSTONE.		
							(0.60)			
						64.50	7.00	Cream/ pale yellow SANDSTONE.		
							(2.00)			
						62.50	9.00	Grey SILTSTONE.		
							(0.40)			
						62.10	9.40	COAL		
							(0.80)			
						61.30	10.20	Cream SANDSTONE.		
							(1.90)			
						59.40	12.10	Wet grey SANDSTONE.		
							(0.60)			
						58.80	12.70	Grey SILTSTONE.		
							(1.30)			
						57.50	14.00	COAL		
							(0.50)			
						57.00	14.50	Grey SANDSTONE.		
							(0.30)			
						56.70	14.80			

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A8D	



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Site
Clifton
Borehole Number
A9

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.60	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 03/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(0.90)	Tarmacadam over pink GRAVEL of shale (FILL).		
						70.70	0.90	Light grey brown gravelly clayey SAND (Fill)		
						69.60	2.00	Brown gravelly sandy CLAY (Glacial Till)		
						68.00	3.60	Weak brown SANDSTONE.		
						67.20	4.40	Wet brown SANDSTONE.		
						66.30	5.30	Loss of flush		
						64.20	7.40	Light grey SANDSTONE.		
						62.60	9.00	Wet brown sand		
						62.40	9.20	Yellow SANDSTONE		
						62.20	9.40	Grey SILTSTONE		
						61.70	9.90	COAL		
						61.30	10.30	Light grey SANDSTONE.		
						58.10	13.50	Grey SILTSTONE		
						57.20	14.40	Complete at 14.40m		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A9	



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Site
Clifton
Borehole Number
A10

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.40	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 03/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.00	(0.40)	Tarmacadam over pink GRAVEL of shale (FILL).		
						70.80	(0.20)	Light brown clayey SAND (FILL)		
							(1.40)	Grey dark brown gravelly SAND (GRANULAR FILL)		
						69.40	2.00	Brown gravelly CLAY. Gravel is fine and is siltstone and sandstone (GLACIAL TILL)		
							(1.20)			
						68.20	3.20	Cream SANDSTONE.		
							(1.20)			
						67.00	4.40	Orange SANDSTONE.		
							(0.50)			
						66.50	4.90	Cream SANDSTONE.		
							(1.10)			
						65.40	6.00	Very hard material- white dust, possible concrete		
							(2.50)			
						62.90	8.50	Grey SILTSTONE		
							(1.10)			
						61.80	9.60	COAL		
							(0.70)			
						61.10	10.30	Grey SILTSTONE.		
							(1.20)			
						59.90	11.50	Cream SANDSTONE.		
							(2.00)			
						57.90	13.50	Brown SANDSTONE.		
						57.70	13.70	Grey SILTSTONE		
							(1.20)			
						56.50	14.90			

Remarks Very hard, scrapping squealing sound, drill worn down Soft	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A10	



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Site
Clifton
Borehole Number
A11

Machine :		Casing Diameter	Ground Level (mOD)		Client	Job Number 20004-2
Flush : Water			71.30		Northumbrian Homes	
Core Dia: mm		Location Northumberland	Dates		Engineer	Sheet 1/1
Method : Rotary Cored			03/02/2022			

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						70.90	(0.40) 0.40	Red angular GRAVEL of shale (FILL).		
								Brown dark grey gravelly SAND (FILL)		
							(2.50)			
						68.40	2.90 (0.50)	Brown gravelly sandy CLAY (GLACIAL TILL)		
						67.90	3.40 (0.60)	Brown SANDSTONE.		
						67.30	4.00 (1.40)	Pale yellow SANDSTONE.		
						65.90	5.40 (0.40)	Cream SANDSTONE.		
						65.50	5.80 (0.20)	Dark orange SANDSTONE.		
						65.30	6.00 (3.00)	Very hard material- white dust, possible concrete		
						62.30	9.00 (0.70)	Grey SILTSTONE.		
						61.60	9.70 (0.30)	COAL.		
						61.30	10.00 (2.00)	Grey SANDSTONE.		
						59.30	12.00 (2.70)	Grey SILTSTONE.		
						56.60	14.70 (0.20)	COAL.		
						56.40	14.90			

Remarks Very hard, scrapping squealing sound, drill worn down	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A11	



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Site
 Clifton

Borehole
 Number
A12

Machine :		Casing Diameter	Ground Level (mOD)		Client	Job Number
Flush : Water			71.30		Northumbrian Homes	20004-2
Core Dia: mm		Location Northumberland	Dates		Engineer	Sheet
Method : Rotary Cored			03/02/2022			1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						71.10	0.20 0.20	Pink shale angular gravel		
							(2.60)	Dark brown grey gravelly sand (FILL) Probable sandstone block between 1.0m to 1.8m bgl..		
						68.50 68.40	2.80 2.90	Probable CONCRETE (FILL). Complete at 2.90m		

Remarks Terminated due to possible concrete block	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A12	



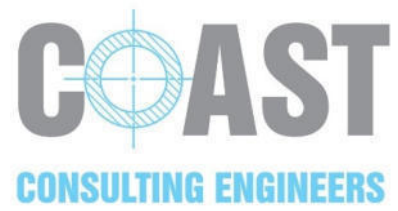
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Site
Clifton
Borehole Number
A13

Machine : Flush : Water Core Dia: mm Method : Rotary Cored		Casing Diameter	Ground Level (mOD) 71.30	Client Northumbrian Homes	Job Number 20004-2
		Location Northumberland	Dates 03/02/2022	Engineer	Sheet 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								Brown grey sandy GRAVEL (FILL)		
						68.80	2.50 (0.50)	Light brown gravely very sandy CLAY (GLACIAL TILL)		
						68.30	3.00 (1.50)	Brown SANDSTONE.		
						66.80	4.50 (1.20)	Pale yellow SANDSTONE.		
						65.60	5.70	Cream SANDSTONE.		
						65.50	5.80 (1.10)	Orange SANDSTONE.		
						64.40	6.90 (1.60)	Pale yellow SANDSTONE.		
						62.80	8.50 (1.20)	Grey SILTSTONE.		
						61.60	9.70 (0.60)	COAL		
						61.00	10.30 (1.20)	Grey SILTSTONE.		
						59.80	11.50 (1.70)	Grey SANDSTONE.		
						58.10	13.20 (1.40)	Dark grey SILTSTONE.		
						56.70	14.60	COAL		
						56.60	14.70	COAL		

Remarks	Scale (approx)	Logged By
	1:75	LOD
	Figure No. 20004-2.A13	



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