Project No: EAL.28.22
Date: 23rd August 2022

Mr Darrell Hibbert
Cattermole Contractors Ltd.
Market Place
Codnor
Derbyshire
DE5 9QA

Dear Darrelll,

Re: Land at Chesterfield Road, Oakerthorpe –Rotary Probe Drilling & Trial Pit Investigation for Shallow Unrecorded Mine Workings

BACKGROUND

The following report details the site works which were undertaken between 21st – 25th July 2022 and 18th August 2022 at the site known as *Land at Chesterfield Road, Oakerthorpe*. It is understood that the client proposes to redevelop the site with three residential dwellings with associated private driveways and gardens. Site location and proposed development plans are included in **Appendix** A.

These works were undertaken in order to address Condition 3a of Planning Reference: AVA/2020/0802 which required an intrusive investigation for potential coal mining legacy issues.

SUMMARY OF CA INTERACTIVE MAP VIEWER AND BGS MAPPING

A general review of the Coal Authority online interactive map viewer and BGS mapping (Sheet 112, Chesterfield) has identified the following salient points with regard to the site setting;

- The site is within a Coal Authority designated 'Development High Risk Area'.
- The site is within an area where recorded underground workings are known to be present beneath the property.
- The site is also in an area where probable shallow unrecorded mine workings may exist.
- No mine entries are recorded in close proximity to the site.
- The site is not recorded to be underlain by made ground or superficial deposits.
- The site is recorded to be underlain by the Pennine Lower Coal Measures. The solid geology is also indicated to be dipping approximately 4º to the east.
- A coal outcrop trending north-east to south-west is recorded to dissect the western portion of the site. Review of BGS mapping has confirmed that this is the Deep Hard coal which can be between 0.60m to 2.10m thickness).
- The Parkgate seam is recorded to outcrop approximately 35m to the west and anticipated to underlie the site at shallow depth (<5.00mbgl). The Parkgate seam is recorded to be between 0.40m to 3.50m in thickness.
- The Tupton seam is recorded to outcrop 550m to the west and is not anticipated to underlie the site at shallow depth (<30.00mbgl).
- There are no other coal seams in the stratigraphic sequence that are thought to potentially underlie the site at shallow depth (<30.00mbgl).

INVESTIGATION WORKS

Erda Associates Ltd. attended the subject property in order to undertake a probe drilling and trial pit investigation for the site. The probe drilling works were carried out under Coal Authority Permit Ref: 25257.

In summary, the works comprised the advancing of three boreholes to a maximum depth of 30.00mbgl. All boreholes were drilled utilising a water flush medium. Boreholes were generally reinstated with

bentonite backfill upon completion. In addition, four trial pits were undertaken in the area of the RBH03 to further investigate a small void feature.

A borehole and trial pit location plan and exploratory hole logs are included in **Appendix B,** for reference.

GROUND STABILITY ASSESSMENT

Probe Drilling

The site was generally recorded to be underlain by made ground/topsoil over and natural grey brown silty sandy clay to depths of between 0.90m and 4.20mbgl.

The made ground and natural clay were immediately underlain by a solid geology predominantly comprising extremely weak grey brown sandy mudstone with occasional light brown sandstone horizons.

A single thin intact coal seam was encountered at shallow depths of between 2.00mbgl and 4.80mbgl in all boreholes. This seam was noted to be between 0.20m and 0.70m thick and is considered to be the Parkgate seam.

Loss of flush was noted in RBH01 at 18.00mbgl. However, no voids or broken ground horizons were noted in conjunction with this. Furthermore, drilling penetration rates were noted to remain consistent, indicating solid strata to terminal depth.

Loss of flush was also noted in RBH02 at 21.70mbgl. Again, no broken ground or voids were noted immediately in conjunction with the loss of flush and drilling rates remained consistent. However, it is noted that a small void was recorded between 25.80m and 25.90mbgl. It is not considered that this void relates to historic mine workings as drilling rates remained consistent above and below this feature. Furthermore, no coal seams are anticipated to be at this depth beneath the site based on the BGS mapping review. Therefore, it is considered that the void may relate to a natural fracture or fissure within the rock structure.

Losses of flush in RBH01 and RBH02 were both within a sandstone layer and are more likely attributable to this layer rather than unrecorded mine workings.

Loss of flush in conjunction with a small void was encountered in RBH03 from 4.70m to 4.85mbgl. Broken ground was noted immediately after the void from 4.85m to 5.80mbgl. Finally soft strata were noted from 5.80m to 13.60mbgl. Competent strata with consistent drilling rates of between 13 minutes to 22 minutes per 1.50m run were noted from 13.60m to terminal depth. It is possible that these horizons could relate to historic mine workings (e.g., a remnant void above roof collapse material).

However, no coal seams are anticipated beneath the site at this depth based on the BGS mapping review. Furthermore, coal seams were not encountered in RBH01 or RBH02 (situated up dip from RBH03) that could underlie RBH03 at this depth. The soft strata between 5.80m and 13.60mbgl were indicated by drilling rates of between 4 minutes to 5 minutes per 1.50m length run, however, in isolation, these rates would still be considered representative of competent strata.

As a precaution, it was recommended that some exploratory trial pits were undertaken around RBH03 in order to investigate the void and broken ground horizon.

Trial Pits

A total of four trial pits were undertaken in the vicinity of RBH03. These generally encountered topsoil over stiff yellow mottled grey silty sandy clay to depths of between 0.90m to 1.50mbgl.

TP01 was situated approximately 1.50m at a lower elevation than RBH03. A coal horizon was encountered directly beneath the clay that extended to 2.50mbgl. The coal was noted to be poor quality and recovered as a slightly gravelly sand, likely due to weathering in situ at shallow depth. This seam was considered to be representative of the Deep Hard seam. The seam was underlain by dark grey gravelly clay. The clay was, in turn underlain by an extremely weak mudstone with thin occasional clay horizons.

TP02 was situated approximately 2.00m at a lower elevation than RBH03. Very weak siltstone was recorded to underlie the natural clay deposits at 0.90mbgl. The base of the siltstone was not encountered, but this stratum was noted to extend to a minimum depth of 3.00mbgl.

TP03 was situated approximately 3.00m at a lower elevation than RBH03. Extremely weak yellow mottled grey mudstone was encountered beneath the clay deposits at 1.20mbgl. Occasional thin clay horizons were noted within the mudstone.

TP04 was situated at the same elevation as RBH03. An extremely weak dark grey organic mudstone was encountered beneath the clay deposits at 1.20mbgl. The organic mudstone extended to 1.40mbgl where it was then underlain by extremely weak yellow mottled grey mudstone with occasional thin clay horizons.

It is possible that the thin clay horizons within the mudstone could have been mistaken for broken ground during the drilling of RBH03. In all trial pits, the mudstone was noted to be highly weathered and typically recovered as clayey gravel. No significant evidence of disturbed ground potentially relating to historic unrecorded extraction was noted in any of the pits.

On balance it seems most likely that the void and broken ground identified in RBH03 are naturally occurring due to fracturing or the presence of weaker clay horizons within the rock. However, as a precautionary measure, it is recommended that a reinforced raft foundation is adopted for Plots 2 & 3. The reinforced raft should be designed by a structural engineer with regard to the identified ground conditions detailed above.

Mine Gas
Boreholes were monitored for mine gas emissions periodically throughout the drilling works. In summary, no adverse gasses were detected. Furthermore, as no suspected shallow mine workings were encountered beneath the site, the risk of mine gas is considered to be reduced to very low.

Unrecorded Mine Entries
The risk of unrecorded mine entries being present on site is assessed as being very low, however, it is recommended that a watching brief for unrecorded mine entries is maintained during all site works as a precautionary measure. Further assessment will be required should any potential unrecorded mine entries be encountered.

Spontaneous Combustion
There is a potential low risk of spontaneous combustion within shallow coal seams across the site therefore, it is recommended that a precautionary approach is adopted. A cover of rock / clay of 0.5m thickness should be maintained between shallow coals and the base of foundations. Foundations should be locally deepened through coal seams if they are likely to have less than 0.5m of clay / rock cover above them.

CONCLUSION

The probe drilling and trial pit investigation has not encountered any suspected workings therefore, the risk of future instability from shallow unrecorded workings is considered to be low. However, it is recommended that a reinforced raft foundation is adopted for Plots 2 & 3 as a precaution. No significant mine gasses were recorded during the investigation works.

The risk of unrecorded mine entries being present on site is considered to be very low, however, this risk can be reduced to negligible by undertaking a watching brief for any anomalous features during any groundworks/foundation excavations. Further assessment will be required should any potential unrecorded mine entries be encountered.

As a precautionary measure, foundations may also require further revision to account for the potential for spontaneous combustion of the shallow seams.

Providing the above recommendations are adhered to, the site is considered to be suitable for the proposed development.

Copies of this letter report should be forwarded to the Local Authority / Coal Authority for review and approval.

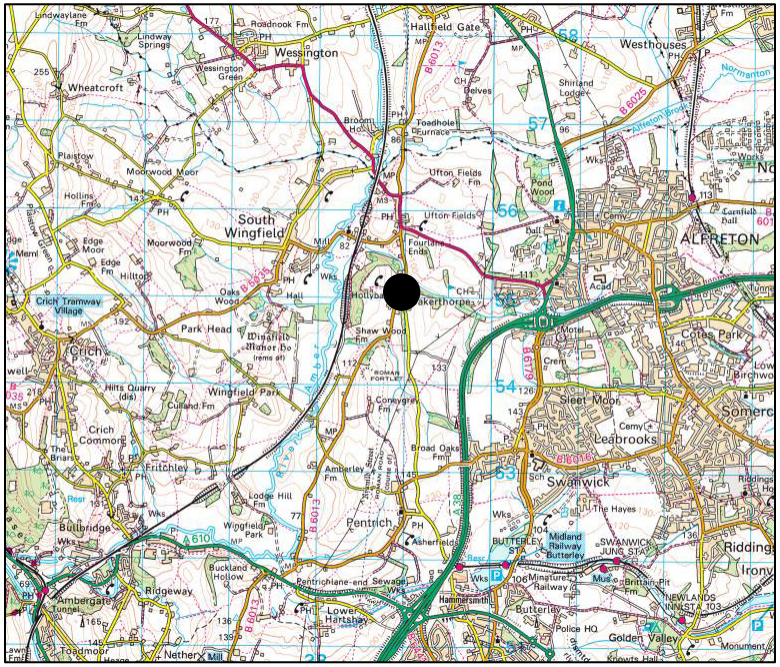
Yours Sincerely

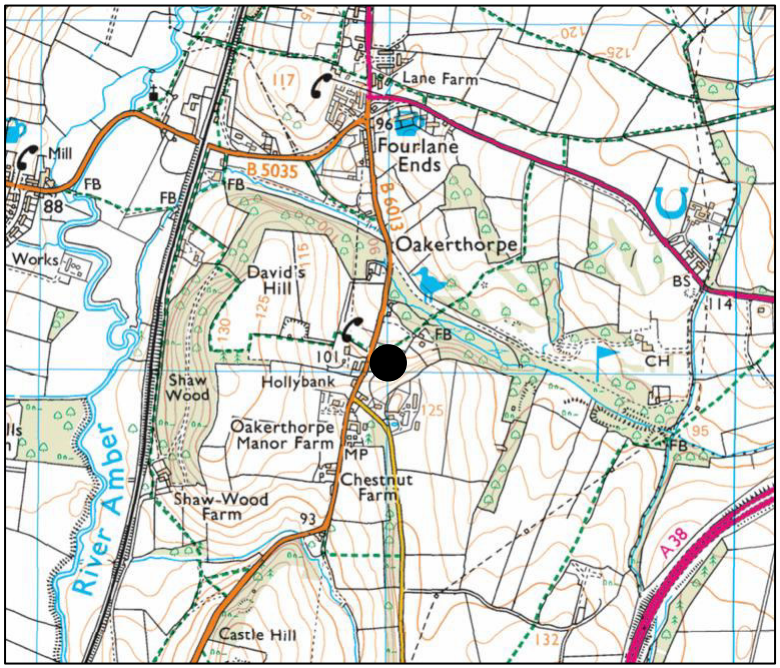


Phil Devitt, BSc MSc MRICS
Director

Encl.
Appendix A – Site Plans
Appendix B – Exploratory Hole Location Plan and Exploratory Hole Logs

Appendix A





KEY:

● Approximate Site Location

DO NOT SCALE

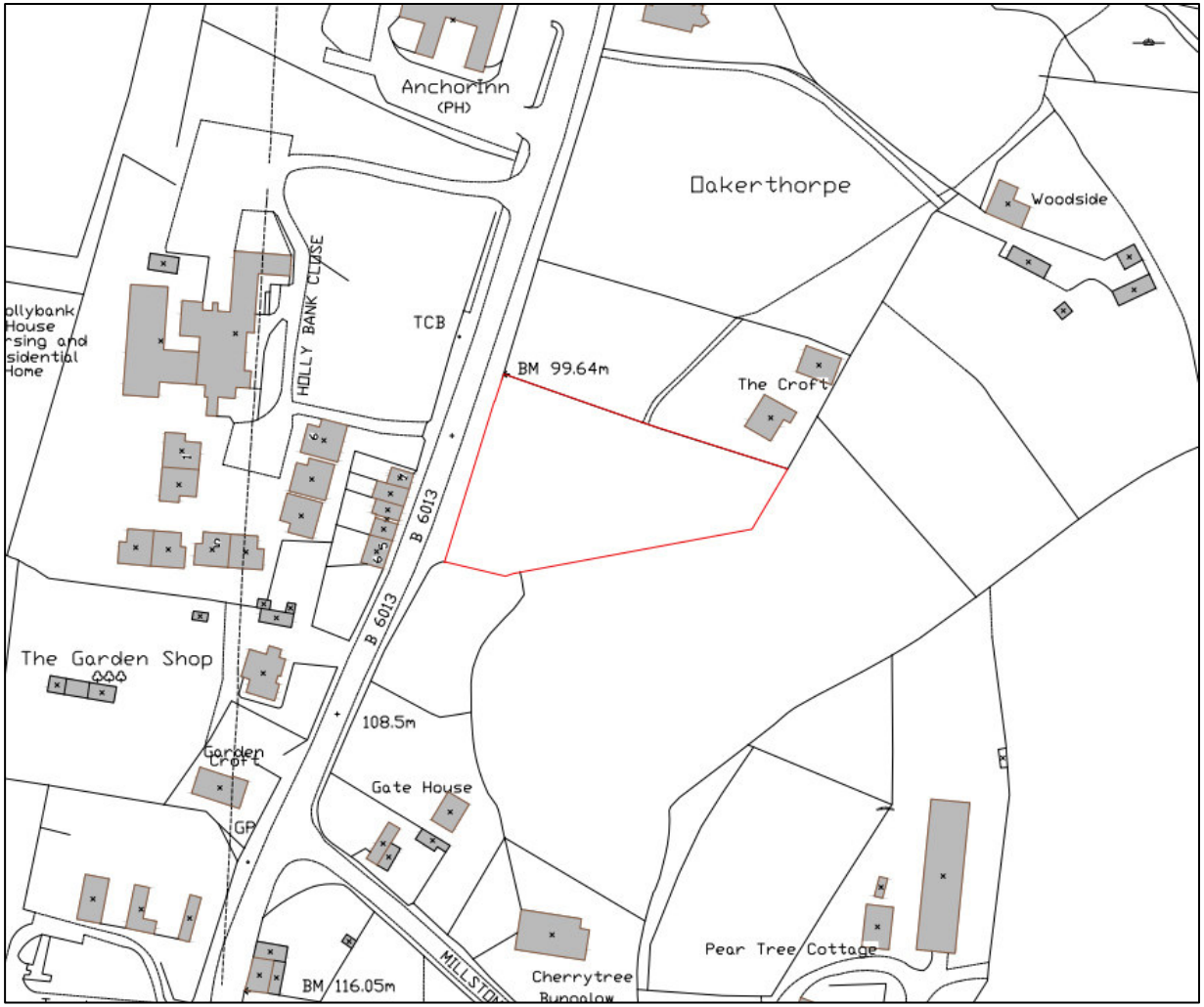
Erda Associates ltd

TITLE: Site Location Plan

PROJECT: Chesterfield Road, Oakerthorpe

PROJECT No:	DATE:
EAL.28.22	08/2022

SCALE :	DRAWN :	DWG No:
NTS	PD	Figure 1



KEY:

Site Boundary

DO NOT SCALE

Erda Associates ltd

TITLE:

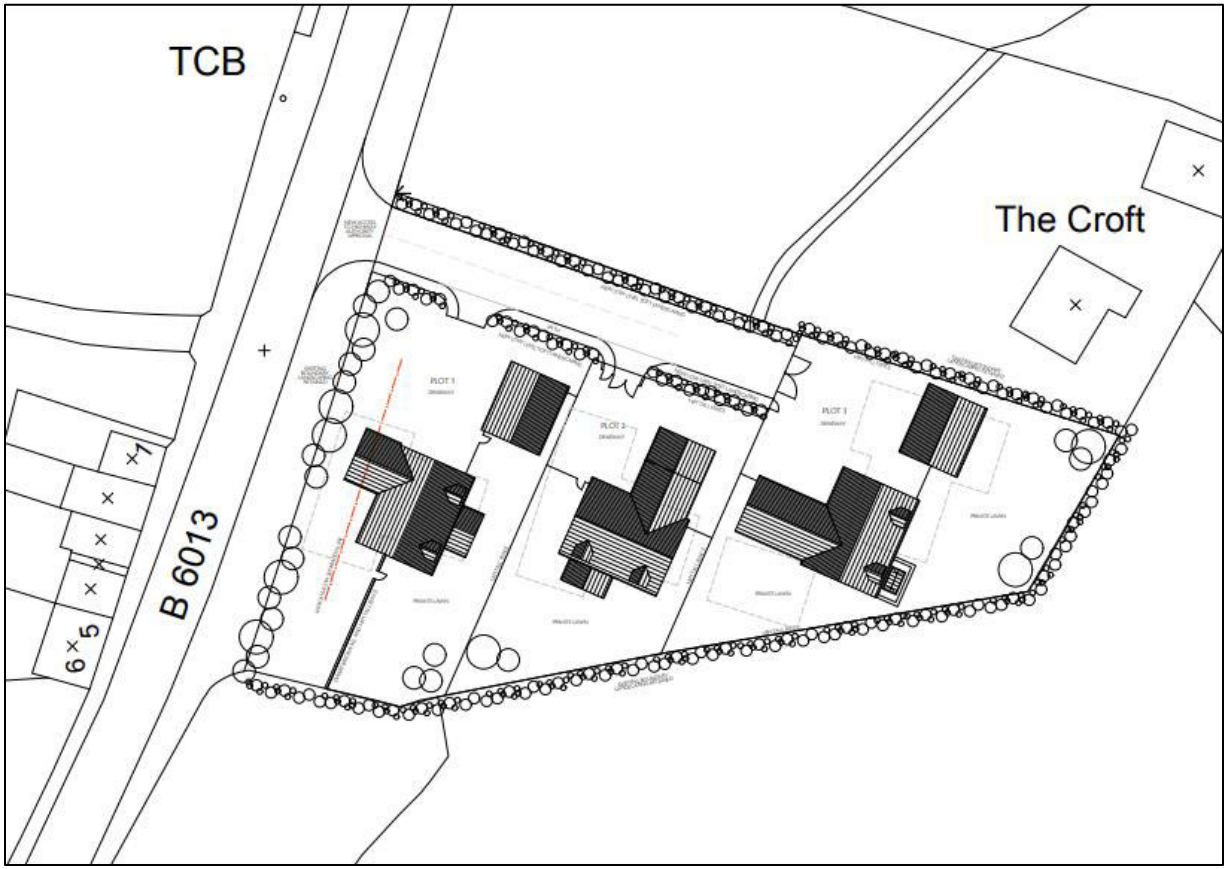
Site Layout

PROJECT:

Chesterfield Road, Oakerthorpe

PROJECT No:	DATE:
EAL.28.22	08/2022

SCALE :	DRAWN :	DWG No:
NTS	PD	Figure 2



KEY:

DO NOT SCALE

Erda Associates ltd

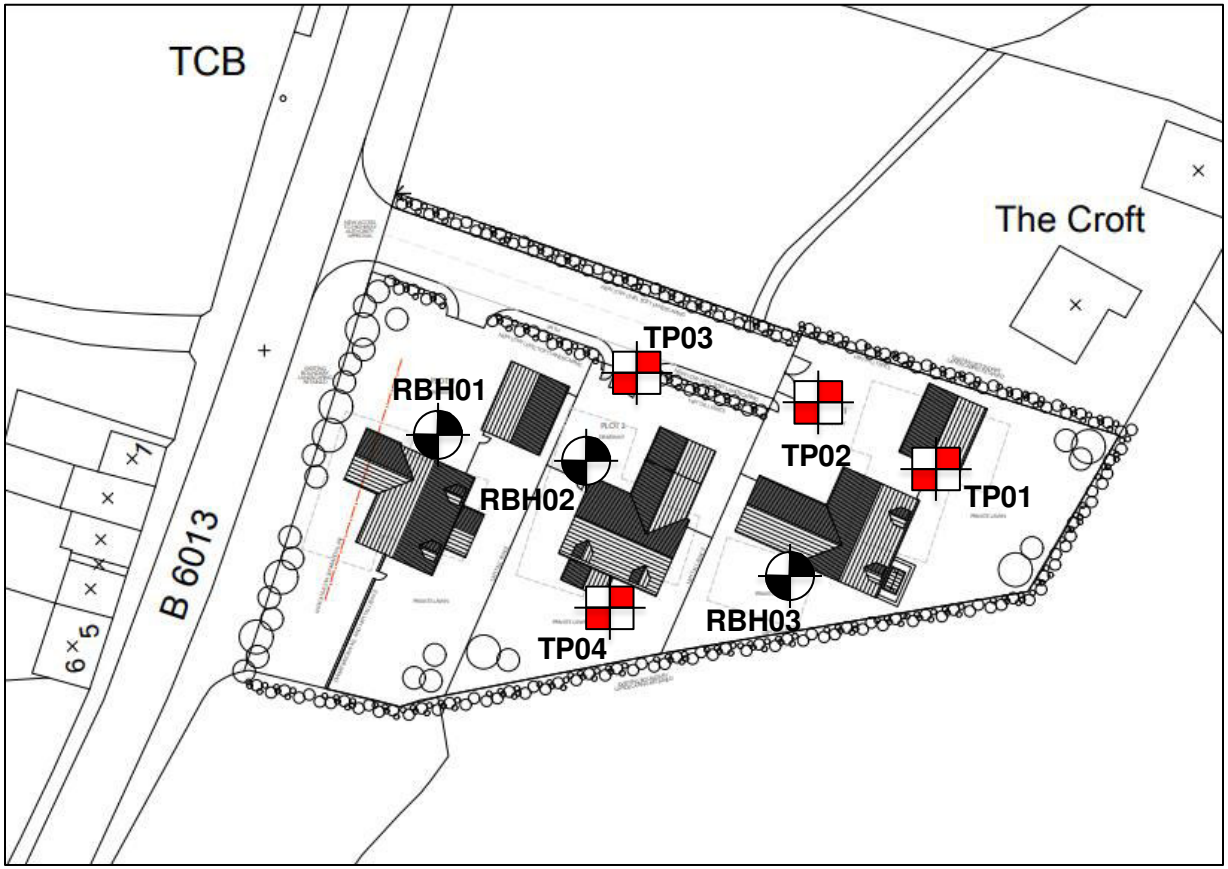
TITLE:
Development Proposal

PROJECT:
Chesterfield Road, Oakerthorpe

PROJECT No:	DATE:
EAL.28.22	08/2022

SCALE :	DRAWN :	DWG No:
NTS	PD	Figure 3

Appendix B



KEY:

Probe Drilling Borehole

Trial Pit

DO NOT SCALE

Erda Associates ltd

TITLE:

Exploratory Hole Location Plan

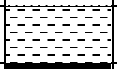
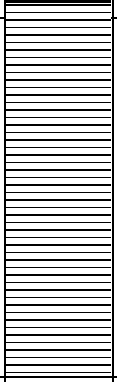
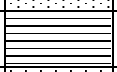
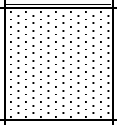
PROJECT:

Chesterfield Road, Oakerthorpe

PROJECT No:	DATE:	
EAL.28.22	08/2022	
SCALE : NTS	DRAWN : PD	DWG No: Figure 4

GEO Environmental Engineering

Chesterfield Road, Oakerthorpe. RBH01 (front of compound)

Depth From (m)	Depth To (m)	Strata Description	Legend	Testing / ROP Samples
0.00	0.35	MADE GROUND: Brick, concrete and sandstone FILL.		
0.35	2.50	Grey brown silty, sandy CLAY.		
2.50	3.20	Black COAL.		3.00-4.50: 5 mins
3.20	13.30	Grey brown sandy MUDSTONE.		4.50-6.00: 7 mins 6.00-7.50: 13 mins 7.50-9.00: 10 mins 9.00-10.50: 12 mins 10.50-12.00: 15 mins 12.00-13.50: 13 mins
13.30	14.40	Light brown SANDSTONE. Soft		13.50-15.00: 10 mins
14.40	15.50	Grey brown MUDSTONE.		15.00-16.50: 17 mins
15.50	18.00	Light brown SANDSTONE.		16.50-18.00: 16 mins 18.00-19.50: 23 mins
18.00	30.00	No flush. No returns. Noted as solid.		19.50-21.00: 25 mins 21.00-22.50: 15 mins 22.50-24.00: 12 mins 24.00-25.50: 15 mins 25.50-27.00: 13 mins 27.00-28.50: 16 mins 28.50-30.00: 15 mins
		Drilling mud added to water flush and casing advanced through broken ground. No flush returned. Borehole backfilled with bentonite and arisings. No adverse gas detected during or after drilling.		Hand dug before drilling. Cased to 3.00m.

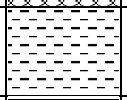
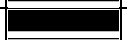
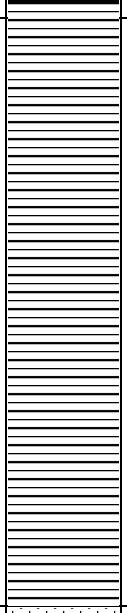
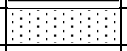
Site: Chesterfield Road, Oakerthorpe, Derbyshire
Client: ERDA
Client Reference:
Driller: GE
Site Works Date: 25/07/2022
Plant: Beretta T21 Tracked rotary rig with water flush

Log Notes:
ROP = Rate of penetration (rotary drilling)
Spt = Standard Penetration test (blows per 300mm n300)
HSV = Hand Shear Vane (result in kN/m^2)
CBR = California Bearing Ratio by Mexe Cone Penetrometer (result as percentage)
LP = Limited Penetration (HSV/CBR)
NP = No penetration (HSV/CBR)
B = Bulk Bag, J = Amber Glass Jar, T = Plastic Tub

Website: www.geoenvironmentalengineering.com
Email: info@geoenvironmentalengineering.com
Telephone: 08456 768 895 / 07883 440 186

GEO Environmental Engineering

Chesterfield Road, Oakerthorpe. RBH02 (centre).

Depth From (m)	Depth To (m)	Strata Description	Legend	Testing / ROP Samples
0.00	0.10	MADE GROUND: Long grass over topsoil.		
0.10	4.20	Light brown and grey silty, sandy CLAY.		3.00-4.50: 5 mins
4.20	4.80	Grey MUDSTONE.		4.50-6.00: 5 mins
4.80	5.00	Black COAL.		
5.00	20.80	Light brown fine to coarse SAND with occasional fine gravel and clay layers.		6.00-7.50: 8 mins 7.50-9.00: 5 mins 9.00-10.50: 13 mins 10.50-12.00: 21 mins 12.00-13.50: 14 mins 13.50-15.00: 17 mins 15.00-16.50: 20 mins 16.50-18.00: 17 mins 18.00-19.50: 21 mins 19.50-21.00: 19 mins
20.80	21.70	Light brown SANDSTONE.		21.00-22.50: 25 mins
21.70	30.00	Loss of flush. No returns. Drilling mud added. No flush return. Void noted from 25.80-25.90m.		22.50-24.00: 21 mins 24.00-25.50: 18 mins 25.50-27.00: 12 mins 27.00-28.50: 12 mins 28.50-30.00: 14 mins
		Borehole backfilled with bentonite and arisings. No adverse gas detected during or after drilling.		Hand dug before drilling. Cased to 3.00m.

Site: Chesterfield Road, Oakerthorpe, Derbyshire
Client: ERDA
Client Reference:
Driller: GE
Site Works Date: 21/07/2022
Plant: Beretta T21 Tracked rotary rig with water flush

Log Notes:
ROP = Rate of penetration (rotary drilling)
Spt = Standard Penetration test (blows per 300mm n300)
HSV = Hand Shear Vane (result in kN/m^2)
CBR = California Bearing Ratio by Mexe Cone Penetrometer (result as percentage)
LP = Limited Penetration (HSV/CBR)
NP = No penetration (HSV/CBR)
B = Bulk Bag, J = Amber Glass Jar, T = Plastic Tub

GEO Environmental Engineering

Chesterfield Road, Oakerthorpe. RBH03 (top of hill).

Depth From (m)	Depth To (m)	Strata Description	Legend	Testing / ROP Samples
0.00	0.25	Long grass over topsoil.		
0.25	2.00	Light brown and grey silty, sandy CLAY. Black coal sand noted from 0.70-0.85m		
2.00	2.40	Black COAL.		
2.40	4.70	Grey brown sandy MUDSTONE.		3.00-4.50: 6 mins 4.50-6.00: 6 mins
4.70	4.85	VOID. Loss of flush. No returns.		
4.85	5.80	Broken Ground. No returns.		
5.80	13.60	No flush. No returns. Noted as soft.		6.00-7.50: 5 mins 7.50-9.00: 5 mins 9.00-10.50: 5 mins 10.50-12.00: 5 mins 12.00-13.50: 4 mins 13.50-15.00: 22 mins
13.60	28.50	No flush. No returns. Noted as harder and more competent.		15.00-16.50: 19 mins 16.50-18.00: 17 mins 18.00-19.50: 10 mins 19.50-21.00: 13 mins 21.00-22.50: 13 mins 22.50-24.00: 22 mins 24.00-25.50: 15 mins 25.50-27.00: 12 mins 27.00-28.50: 21 mins
		Drilling mud added to water flush and casing advanced through broken ground. No flush returned. Borehole backfilled with bentonite and arisings. No adverse gas detected during or after drilling.		Hand dug before drilling. Cased to 6.00m.

Site: Chesterfield Road, Oakerthorpe, Derbyshire
Client: ERDA
Client Reference:
Driller: GE
Site Works Date: 21-22/07/2022
Plant: Beretta T21 Tracked rotary rig with water flush

Log Notes:
ROP = Rate of penetration (rotary drilling)
Spt = Standard Penetration test (blows per 300mm n300)
HSV = Hand Shear Vane (result in kN/m^2)
CBR = California Bearing Ratio by Mexe Cone Penetrometer (result as percentage)
LP = Limited Penetration (HSV/CBR)
NP = No penetration (HSV/CBR)
B = Bulk Bag, J = Amber Glass Jar, T = Plastic Tub

Erda Associates ltd

Web: www.erda-ltd.co.uk
Email: p.devitt@erda-ltd.co.uk
Mob: 07531 051197

CLIENT

Cattermole Contractors Ltd.

SITE LOCATION

Chesterfield Road, Oakerthorpe

Date: 19th August 2022

Ground Level:

Orientation:

Coordinates:

Plant: Tracked 360 Excavator

Dimensions:

TRIAL PIT NO.

TP01

Sheet No. 1 of 1

Job No.

Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS				Test Sample Details
				Depth	No	Type	Results	
Dark brown sandy clayey TOPSOIL.	0.05, 0.10, 0.15, 0.20, 0.25, 0.30		0.30 (0.30)					
Stiff yellow mottled grey silty sandy CLAY.	0.35, 0.40, 0.45, **0.50**, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, **1.00**, 1.05, 1.10, 1.15, 1.20, 1.25, 1.30, 1.35, 1.40, 1.45, **1.50**		1.50 (1.20)					
Extremely weak weathered COAL. Recovered as slightly gravelly sand.	1.55, 1.60, 1.65, 1.70, 1.75, 1.80, 1.85, 1.90, 1.95, **2.00**, 2.05, 2.10, 2.15, 2.20, 2.25, 2.30, 2.35, 2.40, 2.45, **2.50**		2.50 (1.00)					
Stiff dark grey gravelly CLAY. Gravel is fine to coarse sub-angular to angular mudstone.	2.55, 2.60, 2.65, 2.70, 2.75, 2.80, 2.85, 2.90, 2.95, **3.00**, 3.05, 3.10, 3.15, 3.20, 3.25, 3.30, 3.35, 3.40, 3.45, **3.50**, 3.55, 3.60, 3.65, 3.70		3.70 (1.20)					
Extremely weak yellow mottled light grey MUDSTONE. Occasional clay horizons.	3.75, 3.80		3.80 (0.10)					
Trial pit terminated at 3.80mbgl.	3.85, 3.90, 3.95, **4.00**							

Remarks:

1. Trial pit situated at approximately 1.50m lower elevation than RBH03.
2. Trial pit reinstated with arisings upon completion.
3. No groundwater encountered.

Logged By:	Checked By:	Date	Scale
PD	PD	19.08.2022	NTS

Web: www.erda-ltd.co.uk
Email: p.devitt@erda-ltd.co.uk
Mob: 07531 051197

CLIENT

Cattermole Contractors Ltd.

SITE LOCATION

Chesterfield Road, Oakerthorpe

Date: 19th August 2022

Ground Level:

Orientation:

Coordinates:

Plant: Tracked 360 Excavator

Dimensions:

TRIAL PIT NO.

TP02

Sheet No. 1 of 1

Job No.

Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS				Test Sample Details
				Depth	No	Type	Results	
Dark brown sandy clayey TOPSOIL.	0.05 0.10		0.10 (0.10)					
Stiff yellow mottled grey silty sandy CLAY. . . . thin poor quality coal seam encountered 0.60m to 0.70mbgl.	0.15 0.20 0.25 0.30 0.35 0.40 0.45 **0.50** 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90		0.90 (0.80)					
Very weak light yellow mottled light grey SILTSTONE. Recovered as gravelly sand.	0.95 **1.00** 1.05 1.10 1.15 1.20 1.25 1.30 1.35 1.40 1.45 **1.50** 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 **2.00** 2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40 2.45 **2.50** 2.55 2.60 2.65 2.70 2.75 2.80 2.85 2.90 2.95 **3.00**		3.00 (1.05)					
Trial pit terminated at 3.00mbgl.	3.05 3.10 3.15 3.20 3.25 3.30 3.35 3.40 3.45 **3.50** 3.55 3.60 3.65 3.70 3.75 3.80 3.85 3.90 3.95 **4.00**							

Remarks:

1. Trial pit situated at approximately 2.00m lower elevation than RBH03.
2. Trial pit reinstated with arisings upon completion.
3. No groundwater encountered.

Logged By:	Checked By:	Date	Scale
PD	PD	19.08.2022	NTS

Web: www.erda-ltd.co.uk
Email: p.devitt@erda-ltd.co.uk
Mob: 07531 051197

CLIENT

Cattermole Contractors Ltd.

SITE LOCATION

Chesterfield Road, Oakerthorpe

Date: 19th August 2022

Ground Level:

Orientation:

Coordinates:

Plant: Tracked 360 Excavator

Dimensions:

TRIAL PIT NO.

TP03

Sheet No. 1 of 1

Job No.

Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS				Test Sample Details
				Depth	No	Type	Results	
Dark brown sandy clayey TOPSOIL.	0.05 0.10 0.15 0.20		0.20 (0.20)					
Stiff yellow mottled grey silty sandy CLAY.	0.25 0.30 0.35 0.40 0.45 **0.50** 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90 0.95 **1.00** 1.05 1.10 1.15 1.20		1.20 (1.00)					
Extremely weak weathered yellow mottled grey MUDSTONE. Occasional clay horizons. Recovered as clayey gravel.	1.25 1.30 1.35 1.40 1.45 **1.50** 1.55 1.60 1.65 1.70 1.75 1.80 1.85 1.90 1.95 **2.00** 2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40 2.45 **2.50** 2.55 2.60 2.65 2.70 2.75 2.80 2.85 2.90 2.95 **3.00** 3.05 3.10 3.15 3.20 3.25 3.30 3.35 3.40 3.45 **3.50** 3.55 3.60 3.65 3.70		3.70 (2.50)					
Trial pit terminated at 3.70mbgl.	3.75 3.80 3.85 3.90 3.95 **4.00**							

Remarks:

1. Trial pit situated at approximately 3.00m lower elevation than RBH03.
2. Trial pit reinstated with arisings upon completion.
3. No groundwater encountered.

Logged By:	Checked By:	Date	Scale
PD	PD	19.08.2022	NTS

Web: www.erda-ltd.co.uk
Email: p.devitt@erda-ltd.co.uk
Mob: 07531 051197

CLIENT

Cattermole Contractors Ltd.

SITE LOCATION

Chesterfield Road, Oakerthorpe

Date: 19th August 2022

Ground Level:

Orientation:

Coordinates:

Plant: Tracked 360 Excavator

Dimensions:

TRIAL PIT NO.

TP04

Sheet No. 1 of 1

Job No.

Description of Strata	Reduced level (m)	Legend	Depth (Thickness) m	SAMPLES/TESTS				Test Sample Details
				Depth	No	Type	Results	
Dark brown sandy clayey TOPSOIL.	0.05, 0.10, 0.15, 0.20, 0.25, 0.30		0.30 (0.30)					
Stiff yellow mottled grey silty sandy CLAY.	0.35, 0.40, 0.45, **0.50**, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, **1.00**, 1.05, 1.10, 1.15, 1.20		1.20 (0.90)					
Extremely weak dark grey organic MUDSTONE.	1.25, 1.30, 1.35, 1.40		1.40 (0.20)					
Extremely weak weathered yellow mottled grey MUDSTONE. Occasional clay horizons. Recovered as clayey gravel.	1.45, **1.50**, 1.55, 1.60, 1.65, 1.70, 1.75, 1.80, 1.85, 1.90, 1.95, **2.00**, 2.05, 2.10, 2.15, 2.20, 2.25, 2.30, 2.35, 2.40, 2.45, **2.50**, 2.55, 2.60, 2.65, 2.70, 2.75, 2.80, 2.85, 2.90, 2.95, **3.00**, 3.05, 3.10, 3.15, 3.20		3.20 (1.80)					
Extremely weak yellow SILTSTONE.	3.25, 3.30		3.30 (0.10)					
Trial pit terminated at 3.30mbgl	3.35, 3.40, 3.45, **3.50**, 3.55, 3.60, 3.65, 3.70, 3.75, 3.80, 3.85, 3.90, 3.95, **4.00**							

Remarks:

1. Trial pit situated at approximately same elevation as RBH03.
2. Trial pit reinstated with arisings upon completion.
3. No groundwater encountered.

Logged By:	Checked By:	Date	Scale
PD	PD	19.08.2022	NTS