

Grango Lane, Ponciau, Wrexham
Proposed Housing
Drilling & Grouting Report
Mr. D. Hannaby & Mr. A Hughes Lloyd



GroundSolve Ltd

Consulting Geotechnical, Engineering Geology and Environmental Engineers

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1.0 INTRODUCTION

Ellbay Properties Ltd (EPL) own a site in Grango Lane, Ponciau, near Wrexham, for which they have planning permission for eight self build plots. They have recently sold four of these plots for development by private individuals.

Plots 1 and 3 have been purchased by Mr. A Hughes Lloyd, whilst Plot 8 has been purchased by Mr. D Hannaby (The Clients). However, when the drilling and grouting rigs were mobilised to site Mr. D Hannaby also purchased Plot 2, which was treated at the same time.

Prior to the drilling and grouting works a site investigation was undertaken by GroundSolve Ltd (GSL) on behalf of EPL, along with a search for two possible shafts. Following which GSL were appointed by the Clients to organise the required works, with permission obtained from the Coal Authority (CA) to drill and grout the shallow mineworking's beneath the site.

This report presents the findings of the drilling and grouting, and gives foundation recommendations for the development. It will also be submitted to the CA to discharge the permit conditions.

2.0 THE SITE

2.1 Site Location and Description

The site is located immediately north of Grango Lane in Ponciau, Wrexham, at National Grid Reference SJ 295 469. An aerial photograph showing the site obtained from the internet is presented below.

The site is bounded by Grango School playing fields to the north, with existing housing to the south and west. Open land lies immediately east of the site. The site itself is largely overgrown, and slopes gently in a northerly direction towards the school playing fields.

Grango Lane itself is tarmacked where it leaves Bank Street, before turning into a lane with gravel covering leading towards Plot 8. The existing and proposed site layout is presented in Figure 1, with photographs presented in Appendix A.



2.2 Geology

The geology of the site has been studied on the following sources:

- Wrexham Applied mapping project at a scale of 1:25,000,
- 1:50,000 scale geology plan, Sheet 121,
- Historical geology plans for the site,
- Geological memoirs.

The 1:50,000 scale plan shows the site to be underlain by glacial till overlying mudstone and sandstone bedrock. The Main and Lower Bench (Crown) coal seams are shown outcropping across the site with the outcrops trending north to south.

The historical geology plans at 1:10,560 show the Main coal seam outcropping on the eastern site boundary, with sandstone bedrock to the east of the Main seam and mudstone bedrock to the west. It also records the Main coal having been worked close to surface and the being the site of Briscoe's Pits.

A major fault is shown immediately north of the site, trending in an east to west direction, with its downthrow to the south (Ty-Gwyn fault). Opencast coal mining is shown immediately north of the fault.

The memoirs record that on the south side of the Ty-Gwyn fault, Briscoe's Pits, now obliterated, are said to have reached the Brassy Coal at a depth of 64' (19.50m), and the Wall and Bench at 352' (107.30m). It records the Main coal having been dug to surface.

2.3 Abandoned Mining

A Coal Authority Report has been supplied by the client, dated May 2005, the main points are summarised below, and presented in full in Appendix B. However, it should be noted that this report covers a larger area than the site covered by this report.

- The site is in the likely zone of influence from workings in two seams of coal at 80 to 110m, the last date of working being 1867,
- In addition, the site is in an area where coal is believed to exist at or close to surface that may have been worked in the past,
- Within or within 20m of the property are three mine entries,
- There are no records of any treatment to these shafts,
- The site is not in an area that has been open casted,
- There are no subsidence records at the site.

3.0 PROPOSED DEVELOPMENT

The proposed development comprises four detached dwellings, Plots 1 to 3 and Plot 8. The road leading to the plots is to be to adoptable standards, with the road accessing Plots 1 and 2 being to non-adoptable standards.

The present proposed layout is presented on Figure 1.

4.0 PREVIOUS INVESTIGATIONS

4.1 Previous Drill and Grout Contracts

Two previous drill and grout contracts have been undertaken on the site by nkc Geotech in 2003 and 2006. One to the west of Plot 1 and one to the south, the locations of which are presented on Figure 1. These located shallow workings in the Brassey coal seam, which were subsequently grouted.

4.2 Shaft Search

Prior to the sale of the four plots EPL appointed GSL to investigate the possible location of two mine shafts close to the proposed development.

This investigation was carried out between the 13th December 2016 and the 4th January 2017, using a 13T tracked excavator provided by Harvey Plant Hire. The works were supervised on a full-time basis by a chartered geologist from GSL.

This work was undertaken without finding any of the shafts, and this report was submitted to the Coal Authority in early 2017, under Permit License Number 13338, see Appendix C.

4.3 Previous Site Investigation and Ground Conditions

The site investigation to investigate Plots 1 to 3 was carried out on the 30th May 2017, and comprised drilling three boreholes to a maximum depth of 28.0m. The works were undertaken by CCGeosciences using water flush, and were supervised on a full-time basis by a chartered geologist from GSL.

The findings of this investigation were presented to the Coal Authority in mid-2017, under License No 14215, see Appendix C.

The excavations for the shafts typically encountered made ground comprising colliery spoil between 0.40m thick in the east, increasing to almost 2.0m in the west beneath Plot 1. It comprised loose, dark grey/black sandy gravel of mudstone, with occasional ash and clinker, with a little masonry, brick and lime mortar. In places substantial amounts of building debris was encountered probably derived from previous buildings on site.

In TP 1 the glacial till was encountered to a depth of 2.60m and was described as soft to firm, orange/yellow brown mottled light grey clay, with a little fine to coarse gravel, becoming brown and firm to stiff with depth. The location of TP 01 is shown on Figure 1, with the log presented in Appendix D.

The underlying bedrock was encountered between 2.60 and 3.90m and comprised very weak, becoming weak with depth, grey, very thinly bedded, highly weathered mudstone, with a little clay matrix, excavated as a platy grey gravel with a little clay matrix. A thin weak black coal was encountered at the base of the pit.

No groundwater was encountered in the trial pit, or any of the excavations for the shafts.

BH 1 was drilled in the centre of Plot 1 and encountered 2.50m of made ground overlying 1.5m of glacial till, with bedrock encountered at 4.0m. From 4.0m to 28.0m mudstone was encountered, with no coals seams, or working encountered, and no loss of flush or groundwater encountered.

As the strata encountered was completely different from the strata encountered by nkc despite them only being drilled some 7m from the closest nkc borehole, BH 2 was drilled some 1.50m from BH 1. This encountered weather bedrock to a depth of 7.0m, and then encountered a wet clay that was squeezing in around the drill rods. No returns were encountered between 7.0 and 12.0m before hitting solid drilling at 12.0 to 13.0m. While no returns were observed no voidage was encountered. BH 01 was drilled without any obvious water seepage, while the strata in BH 2 was very wet between 7 and 12.0m as observed from the drill rods.

BH 3 drilled at the centre of Plot 3 proved 0.50m of made ground, with the glacial till extending to 3.50m. Mudstone was then encountered from 3.50m to 18.0m, with a coal seam between 18.0 and 18.50m. Mudstone was then encountered to 25.0m, with no evidence of workings encountered.

The location of the boreholes is presented in Figure 1, with the logs in Appendix D.

5.0 THE WORKS

5.1 Prior to Tender

Prior to tender permission to drill and grout Plots 1, 3 and 8 (referred to as Plot 5 in the application) was obtained from the CA. The licenses are presented in Appendix D - Permit License Numbers 14816 and 14817.

5.2 Design & Tender

The grouting works were designed by GSL, and sent out to three contractors for pricing.

Forkers Ltd from West Bromwich were the successful contractor, who have a long history of undertaking such works.

5.3 Design & Supervision

The design comprised installing a perimeter line of boreholes outside the building line at 3m intervals, generally around 1m outside of the building line, with the premise that any large grout takes would involve tightening the grid up to 1.50m. Four internal infill boreholes were then drilled at each plot.

Due to the proximity of Plots 1 to 3 sections of the perimeter grids were shared between the plots. The drill hole layout is presented on Figure 2.

Grouting was to be carried out using a 10:1 PFA/Cement grout, which was to be tremied to the base of the drill hole to ensure any groundwater was displaced. A “Banjo T pipe” was then placed on top of the casing to allow the grout to be pressurised into the workings.

The works were supervised on a daily visiting basis by a Chartered engineering geologist from GSL, who reviewed the findings of the works.

5.4 The Drilling & Grouting Works

The works were undertaken by Forkers between the 5th and 22nd December 2017. The drilling was carried out using a Klemm drilling rig with water flush. The drill bit diameter was 70mm, with the casing being 101mm in diameter. It was generally only necessary to use one 3m length of casing, although this was occasionally increased to 6m, especially around Plot 8 where the made ground was thicker. Ground gases were monitored at the rig head, with none being encountered during the works.

The boreholes were drilled to 1m below the base of the Brassey seam in Plots 1 to 3. The seam was encountered at depths starting at around 9.50m in the west falling to around 10.50m in the east, a fall of 1m, which corresponds to the known regional dip. It is also possible beneath Plots 1 to 3 that the Main seam outcrop was encountered, although no workings were recorded.

Of 54 boreholes drilled, 36 encountered an intact coal seam, giving an abstraction ratio of only 33%, see Figure 2. All of the workings were encountered around the seam horizon, and no voids were encountered in any of the boreholes, with the workings being backfilled/collapsed.

However, beneath Plot 8, which had not been subject to any previous site investigation the depth to the Crank seam beneath the Brassey seam was such that beneath Plot 8 both the Brassey and Crank seams were drilled and grouted. The Crank coal seam being encountered at depths around 14m.

The drillers sheets for all of the drilling works are presented in Appendix E, with a summary of the boreholes presented in Figure 2a. Of the twenty boreholes drilled, nine encountered the Brassey seam, while ten encountered the Crank seam, giving abstraction ratios of around 50%.

All of the grouting records are presented in Appendix F, with the grout takes summarised on Figure 3. A total of 170 tonnes of grout being pumped into the ground, each plot taking around 38 tonnes with the exception of Plot 3 which was just over 50 tonnes.

The total amounts of PFA and cement delivered to site are summarised in the table below with the dockets presented in Appendix G.

PFA			Cement		
Date	Docket	Tons	Date	Docket	Tons
07/12/2017	61480	20	29/11/2017	F822	2.88
11/12/2017	61482	20	06/12/2017	F87240	4.5
11/12/2017	64125	20	08/12/2017	F87371	3
13/12/2017	64177	20	08/12/2017	F87372	1.5
14/12/2017	28007	19.9	12/12/2017	P9465086	2.8
16/12/2017	61486	20	14/12/2017	F87540	4.5
21/12/2017	64037	19.72	20/12/2017	F87780	1.5
Total		139.62	Total		20.68

Finally, all of the information has been summarised in a spreadsheet which is presented in Appendix H.

The Permit Closure forms are presented in Appendix I.

5.5 Testing

During the works grout cubes were taken on a daily basis, the result of which are summarised below and presented in full in Appendix J.

Reference No	Date Cast	Age at test (days)	Compressive Strength (N/mm ²)
1	7/12/2017	46	1.5
2	7/12/2017	46	1.8
3	7/12/2017	46	1.8
4	7/12/2017	46	1.5
5	12/12/2017	41	3.1
6	12/12/2017	41	2.5
7	12/12/2017	41	3.1
8	12/12/2017	41	2.3
9	13/12/2017	40	3.1
10	13/12/2017	40	1.6
11	13/12/2017	40	3.1
12	13/12/2017	40	2.9
13	14/12/2017	39	3.1
14	14/12/2017	39	3.2
15	14/12/2017	39	2.3
16	14/12/2017	39	2.7
17	15/12/2017	38	2.7
18	15/12/2017	38	1.5
19	15/12/2017	38	2.6
20	15/12/2017	38	2.6
21	18/12/2017	35	2.2
22	18/12/2017	35	2.2
23	18/12/2017	35	2.7
24	18/12/2017	35	2.3
25	19/12/2017	34	2.7
26	19/12/2017	34	2.1
27	19/12/2017	34	2.7
28	19/12/2017	34	2.4
29	20/12/2017	33	2.3
30	20/12/2017	33	2.4
31	20/12/2017	33	2.1
32	20/12/2017	33	2.4
33	22/12/2017	32	2.5
34	22/12/2017	32	2.4
35	22/12/2017	32	2.4
36	22/12/2017	32	2.5

Following the grouting a test borehole was drilled and grouted beneath all of the plots to ensure the works had been successfully completed, the locations of which are presented on Figures 2 and 3.

6.0 GEOTECHNICAL RECOMMENDATIONS

6.1 Foundations and Floor Slabs

Following grouting it is usual practice to provide raft foundations designed to cantilever any potential void of 3m and to cantilever 1.5m at its edge.

However, the clients structural engineer is designing a ring beam capable of achieving the above requirements. Apparently, this is in line with the foundations for the adjacent plots constructed in 2003 and 2006, see Figure 1.

However, the ground for Plots 1 and 2 was disturbed during the shaft search, it will therefore have to be either:

- Excavated down to the top of the glacial till, a depth of around 2m, and recompact in accordance with an approved earthwork specification, or,
- Founded at the base of the disturbed material at the top of the glacial till.

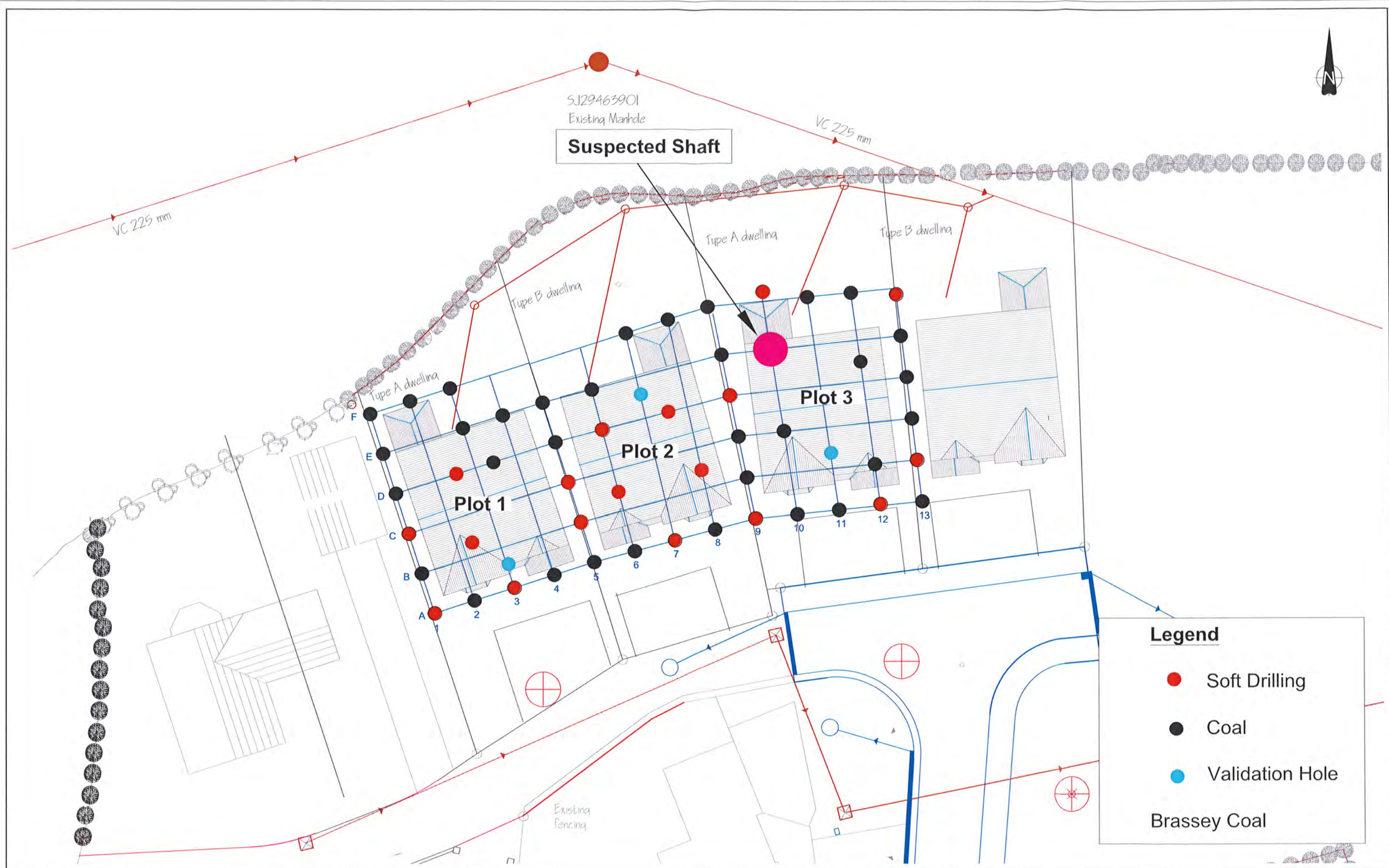
6.2 Shafts

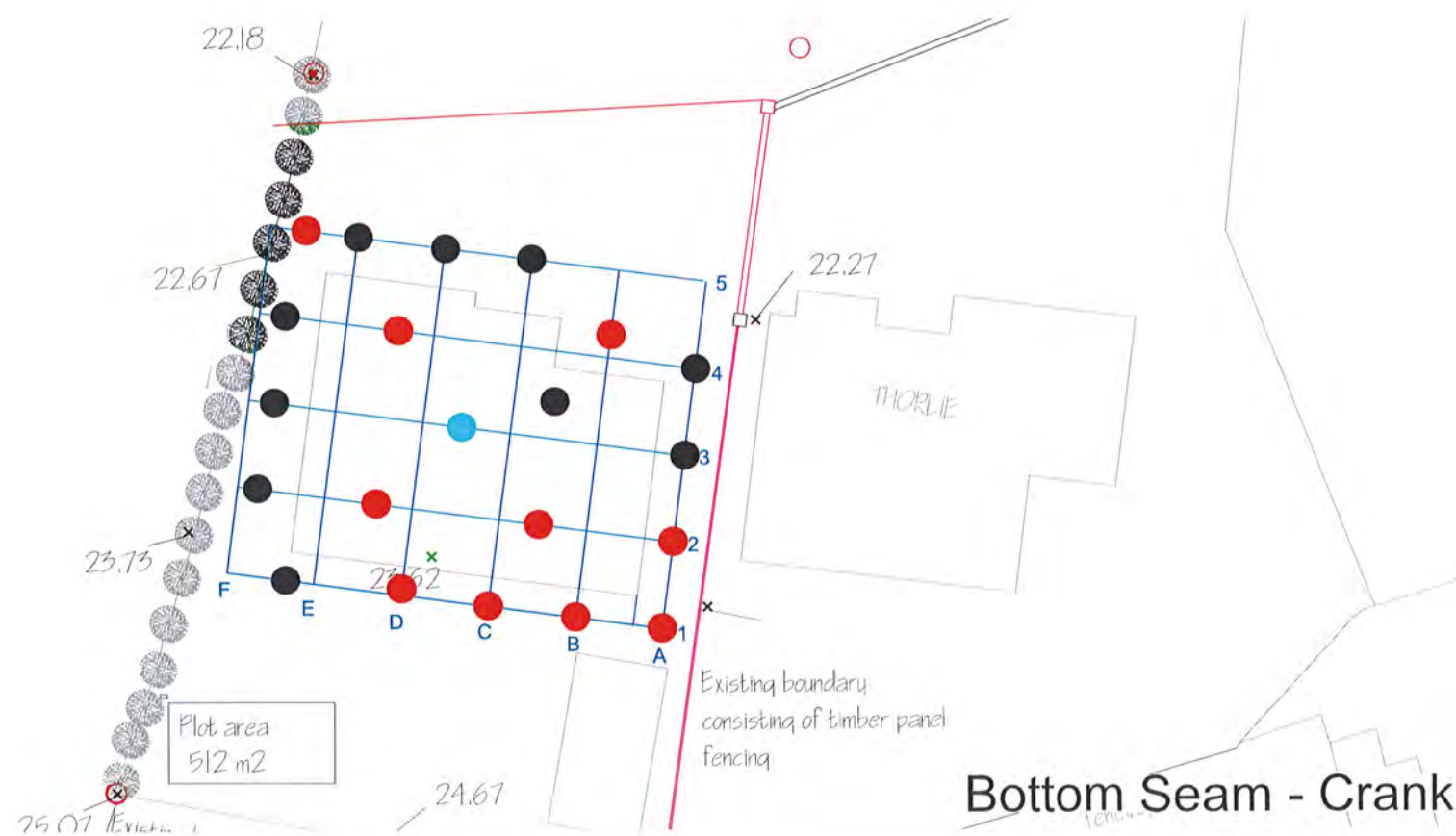
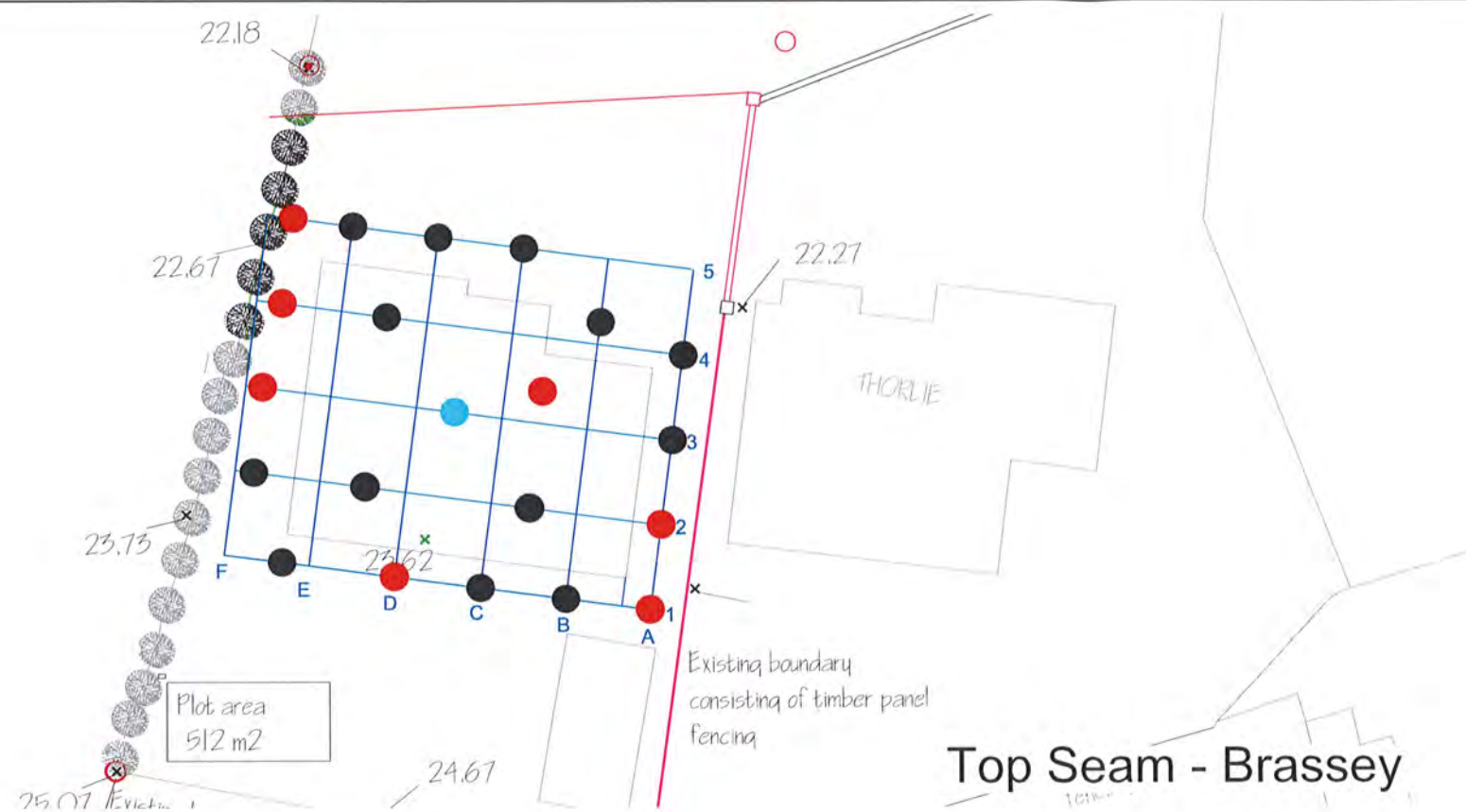
A possible shaft was located beneath Plot 3 at the location shown on Figure 2.

It is proposed to construct a concrete plug inside the shaft some 2 diameters below rockhead, with a reinforced concrete cap being constructed at rock head.

However, it is intended to place the construction on hold, as it is proposed to move the location of Plot 3, which will require revised planning permission. A provisional revised layout provided by EPL is presented in Appendix J.

FIGURES





Legend

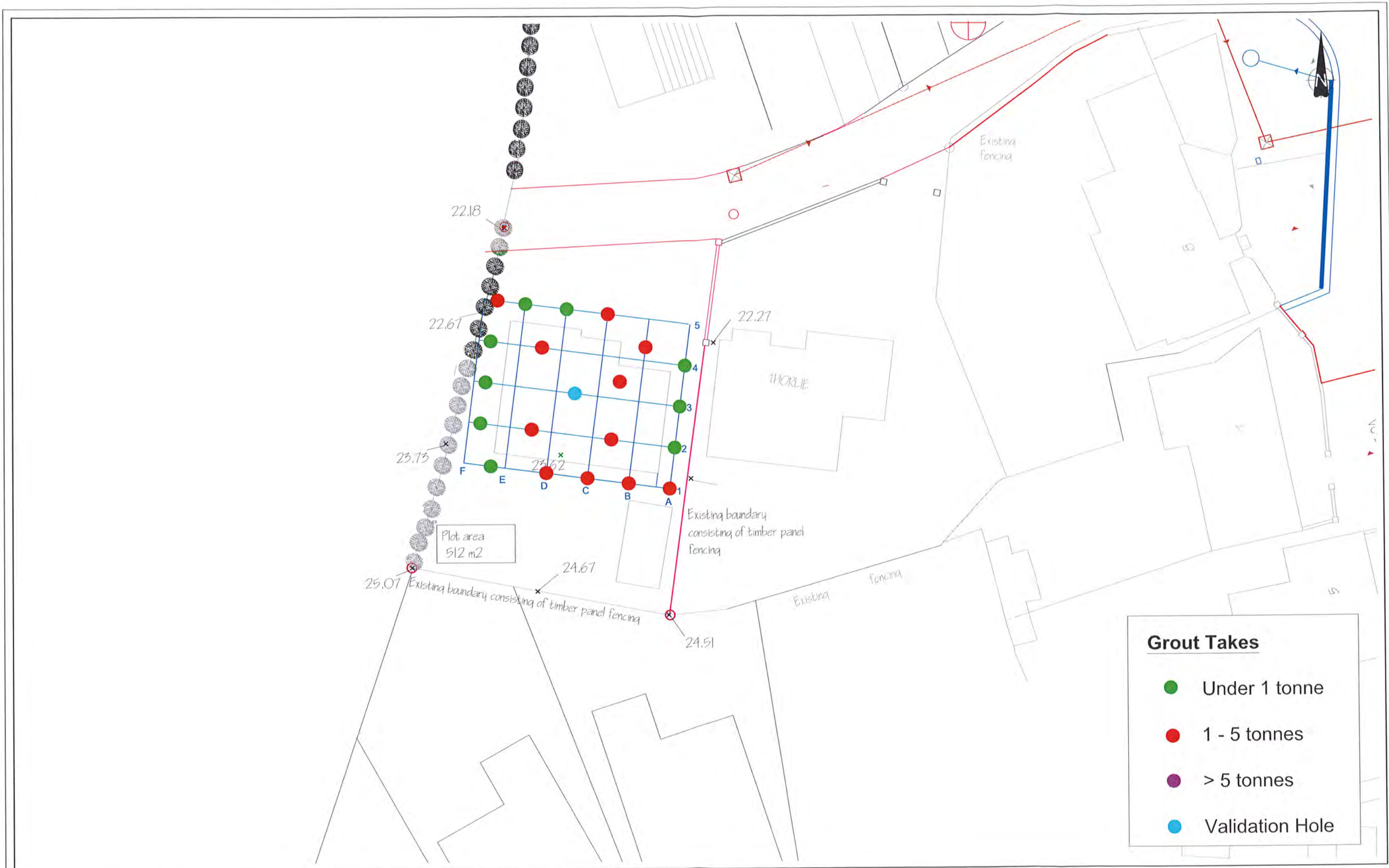
- Soft Drilling
- Coal
- Validation Hole

Brassey Coal

SCALE 1:250 @ A3

Figure Title
DRILL HOLE LOCATIONS
PLOT 8

FIGURE 2A



SCALE 1:250 @ A3

Figure Title
SUMMARY OF GROUT TAKES
PLOT 8

FIGURE 3A

APPENDIX A

Site Photographs



Photograph 1 Showing grout tremied to top of casing



Photograph 2 Banjo attachment pressurising grout.



Photograph 3 Showing Plots 1 to 3



Photograph 4 Plot 8

APPENDIX B

Coal Authority Report

JOHN HUGHES LLOYD,
JHL CONSULTANTS LTD,
BRYN GOLAU,
8 GRANGO LANE,
PONCIAU,
WREXHAM,
WREXHAM BOROUGH,
LL14 1ER

This matter is being dealt with by Simon Leeming

Our Ref: 00012972-05

Your Ref:

Electronic Ref:

RRUID: 007.00006485910001

Date: 18 May 2005

Dear Sir,

Coal Mining Report
GRANGO LANE DEVELOPMENT, PONCIAU, WREXHAM, CLWYD

I refer to the enquiry dated 13th May 2005, received 13th May 2005, in connection with the above.

This report is based on and limited to the records in the possession of The Coal Authority at the time the search is answered.

Ordnance Survey (O.S.) is undertaking a Positional Accuracy Improvement Programme of its mapping data. The Coal Authority (CA) has no control over the timing of issue of Positionally Improved mapping data by O.S. or over users of that data. In some instances the relative position between surface features and coal mining features may alter as a consequence of this programme. The CA will ensure that the integrity of its database is maintained by replotting some mining information to sustain the relationship between that mining information and the improved O.S. surface positions, some of which are now being released. However, mining reports are currently being produced against pre improved O.S. mapping whilst the Authority updates its database in line with the O.S. changes.

Past Underground Mining

The property is within the likely zone of influence on the surface from workings in 2 seams of coal at 80m to 110m depth, the last date of working being 1867.

Ground movement from the above mentioned past coal workings should by now have ceased.

In addition you may wish to know that the property is in an area where coal is believed to exist at or close to the surface that may have been worked at some time in the past.

Present Underground Mining

The property is not within the zone of likely physical influence on the surface from any present underground coal workings.

Future Underground Mining

The property is not within a geographical area for which a licence to extract coal by underground methods is awaiting determination by the Coal Authority.

The property is not within a geographical area for which a licence to extract coal by underground methods has been granted.

The property is not within the zone of likely physical influence at the surface from plans of future workings in our possession.

However reserves of coal exist in the locality which could be worked at some time in the future subject to feasibility, licences, and planning consents.

We have no record of any notice of the risk of the land being affected by subsidence being given under S.46 of the Coal Mining Subsidence Act 1991.

Shafts and Adits

Within or within 20 metres of the property there are 3 mine entries, the approximate positions of which are shown on the attached plan. Your attention is drawn to the statements made on that plan.

We have no record of what steps, if any, have been taken to treat the mine entries.

The records held by the Coal Authority may be incomplete. Consequently, there may exist in this locality mine entries of which we have no knowledge.

Surface Geology

(Records in our possession do not disclose any fault or other line of weakness at the surface as having affected the stability of the property.

Past Opencast Mining

The property is not located within the geographical boundary of an opencast site from which coal has been extracted by opencast methods.

Present Opencast Mining

The property does not lie within 200 metres of the geographical boundary of an opencast site within which coal is being extracted by opencast methods.

Future Opencast Mining

The property is not within 800 metres of the geographical boundary of an opencast site for which a licence to extract coal by opencast methods is awaiting determination.

The property is not within 800 metres of the geographical site boundary of an opencast site for which a licence to extract coal by opencast methods has been granted.

(Subsidence

The records in our possession do not disclose any damage notice or claim having been given, made or pursued in respect of the property since 1 January 1984.

The records in our possession do not disclose any current "Stop Notice" affecting the property.

The records in our possession do not show any request having been made to execute preventative works under S.33 of the Coal Mining Subsidence Act 1991.

Withdrawal of Support

The property does not lie within a geographical area in respect of which a notice of entitlement to withdraw support has been published.

The property does not lie within a geographical area in respect of which a notice has been given under S.41 of the Coal Industry Act 1994, revoking the entitlement to withdraw support.

Working Facilities Orders

The property is not within a geographical area that is the subject of an Order made under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

Payments to Owners of Former Copyhold Land

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

Additional Remarks

In view of the mining circumstances a prudent developer would seek appropriate technical advice before works are undertaken on site. All proposals should have regard to good engineering practice in mining areas as identified in authoritative publications on mining stability problems. In any event, no activities should be undertaken that intersect, disturb, or interfere with any coal or mines of coal without permission of the Coal Authority.

According to our records a site investigation was carried out in 2003 by NKC Geotech Ltd 25 Grosvenor Road, Wrexham, LL11 1BT .

(These replies are prepared in accordance with the 2003 editions of the Coal Authority's Terms and Conditions, User Guide and the Law Society's Guidance Notes.

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We acknowledge the receipt of your remittance in payment of our fee.

Yours faithfully



Stephen Pennell

Director of Mining Information and Services



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PLAN NOT TO SCALE

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This is a plan of the boundaries of the property in respect of which this report has been prepared. It is the responsibility of the user to ensure that the boundaries shown correspond with those of the property.

APPROXIMATE POSITION OF ENQUIRY BOUNDARY SHOWN



APPROXIMATE POSITION OF DISUSED MINE SHAFTS SHOWN



This plan shows the approximate location of the disused mine entry/entries referred to in the attached mining report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A DTI leaflet setting out the rights and the obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0845 762 6848.

If you wish to discuss the relevance of any of the information contained in the attached report you should seek the advice of a qualified mining engineer or surveyor. If you or your adviser wish to examine the source plans from which the information has been taken these are available at our Mansfield office, free of charge, by prior appointment, telephone 01623 638233. Should you or your adviser wish to carry out any physical investigations that may enter, disturb or interfere with any disused mine entry the prior permission of the owner must be sought. For coal mine entries the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). Our emergency telephone number at all times is 01623 646333.

APPENDIX C

Coal Authority Permits



The Coal
Authority

Permit to Enter or Disturb Coal Authority Mining Interests

Permit Reference Number 13338

Name and Address of Permit Holder:

*JHL Consultants
8 Grango Lane
Ponciau
Wrexham
LL14 1ER*

Site Location:

*Grango Lane
Ponciau
Wrexham
LL14 1EU*

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Excavation by mechanical excavation to locate and check the condition of two recorded mine entries (329346-529 & 329405-060) all within the Authority's mining interests at the identified site location for the period of 12 months from the granted date shown below. The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Applicant's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.

Signed: Leigh Sharpe Granted Date: 14/12/2016

For and on behalf of The Coal Authority

*Nominated Representative: Leigh Sharpe, Permitting Manager;
The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG
Tel: 01623 637339; E-Mail: permissions@coal.gov.uk*



The Coal
Authority

Permit to Enter or Disturb Coal Authority Mining Interests

Permit Reference Number 14215

Name and Address of Permit Holder:

*Andrew Hughes Lloyd
8 Grango Lane
Ponciau
Wrexham
LL14 1ER*

Site Location:

*Plots 1-3
Grango Lane
Ponciau
Wrexham*

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

A ground investigation comprising six boreholes to determine presence of shallow mine workings/coal seams and the risk posed to development pursuant to ensuring a safe and stable development platform is created all within the Authority's mining interests at the identified site location for the period of 12 months from the granted date shown below. The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Applicant's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.

Signed: Leigh Sharpe Granted Date: 24/05/2017

For and on behalf of The Coal Authority

*Nominated Representative: Leigh Sharpe, Permitting Manager;
The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG
Tel: 01623 637339; E-Mail: permissions@coal.gov.uk*



The Coal
Authority

Permit to Enter or Disturb Coal Authority Mining Interests

Permit Reference Number 14817

Name and Address of Permit Holder:

*Darran Hannaby
Tan-y-Claed Garage
Wrexham Road
Johnston
Wrexham
LL14 2ED*

Site Location:

*Plot 5
Grango Lane
Ponciau
Wrexham*

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Treatment by drilling and pressure grouting of shallow former coal mine workings to ensure safe and stable development platform for proposed residential use in accordance with national Planning requirements all within the Authority's mining interests at the identified site location for the period of 12 months from the granted date shown below. The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Applicant's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.

Signed: Leigh Sharpe Granted Date: 15/09/2017

For and on behalf of The Coal Authority

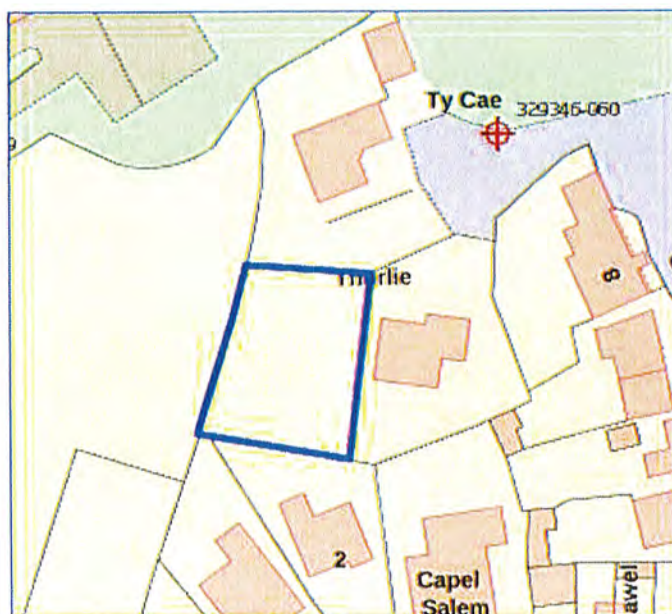
*Nominated Representative: Leigh Sharpe, Permitting Manager;
The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG
Tel: 01623 637339; E-Mail: permissions@coal.gov.uk*



Overview map



Permit Boundary



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The Coal
Authority

Permit to Enter or Disturb Coal Authority Mining Interests

Permit Reference Number 14816

Name and Address of Permit Holder:

Andrew Hughes Lloyd
8 Grango Lane
Ponciau
Wrexham
LL14 1ER

Site Location:

Plot 1&3
Grango Lane
Ponciau
Wrexham

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Treatment by drilling and pressure grouting of shallow former coal mine workings to enable a safe and stable development platform to be created prior to proposed residential development in accordance with national planning requirements and specific to the Planning conditions imposed (Application Ref. P/2017/0604), all within the Authority's mining interests at the identified site location for the period of 12 months from the granted date shown below. The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Applicant's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.

Signed: Leigh Sharpe Granted Date: 15/09/2017

For and on behalf of The Coal Authority

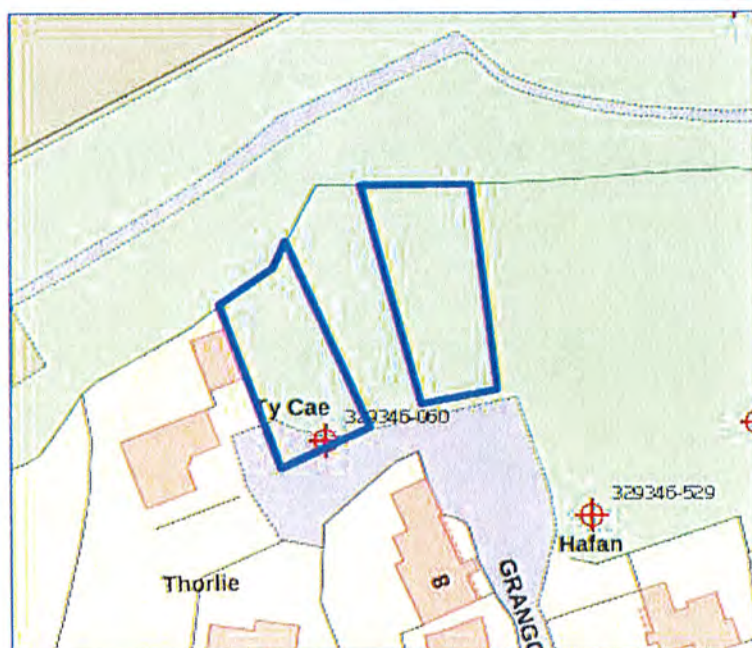
Nominated Representative: Leigh Sharpe, Permitting Manager;
The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG
Tel: 01623 637339; E-Mail: permissions@coal.gov.uk



Overview map



Permit Boundary



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APPENDIX D

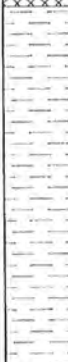
Previous Borehole Logs

GroundSolve
Ltd

GroundSolve Ltd
Unit 1 Well House Barns
Flintshire CH4 0DH
Telephone: 01244 661361
Fax: 01244 661289

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH1
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()	
Contractor				
				Sheet 1 of 4

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(2.50)	Made Ground		
						2.50 (2.50)	Brown Clay (Glacial Till)		
						5.00	Light grey Mudstone weathered to 7m, quickly becoming weak to moderately strong		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush observed 2. No coal or workings encountered 3. No groundwater seepage encountered
All dimensions in metres Scale 1:50		Client				Method/ Plant Used				Logged By MS	

AGS3 UK BH 1970 GRANGO LANE.GPJ GINT STD AGS 3 1.GDT 10/8/17

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH1	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 2 of 4	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
						(7.00)		
						12.00		
						12.30		
						(1.70)		
						14.00		
						(2.00)		
						16.00		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush observed 2. No coal or workings encountered 3. No groundwater seepage encountered
All dimensions in metres Scale 1:50						Client			Method/ Plant Used		Logged By MS

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH1	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 3 of 4	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
						(3.00)		
						19.00		
						(9.00)		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush observed 2. No coal or workings encountered 3. No groundwater seepage encountered
All dimensions in metres Scale 1:50						Client			Method/ Plant Used		Logged By MS

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		
							Grey Mudstone with occasional ironstone band <i>(continued)</i>	
						28.00		

AGS3 UK BH 1970 GRANGO LANE.GPJ GINT STD AGS3_1.GDT 10/8/17

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH2	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 1 of 2	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
						(3.00)		
						3.00		
						(1.00)		
						4.00		
						(1.00)		
						5.00		
						(2.00)		
						7.00		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. Water seepage at 7m making further progress 2. Rods pulled and cased to 3m 3. Unable to get past 10m because of clay squeezing on rods 4. No voids or evidence of collapsed ground
All dimensions in metres Scale 1:50			Client			Method/ Plant Used			Logged By MS		

AGS3 UK BH 1970 GRANGO LANE.GPJ GINT STD AGS 3.1.GDT 10/8/17

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH2
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()	
Contractor				Sheet 2 of 2

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick- ness)		
							Steady drilling but no returns as clay from 7m squeezing in on hole preventing returns <i>(continued)</i>	
						(5.00)		
						12.00		
							Solid Drilling	
						(1.00)		
						13.00		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. Water seepage at 7m making further progress 2. Rods pulled and cased to 3m 3. Unable to get past 10m because of clay squeezing on rods 4. No voids or evidence of collapsed ground
All dimensions in metres Scale 1:50		Client				Method/ Plant Used			Logged By MS		

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH3	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor					Sheet 1 of 4

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(0.50) 0.50	Made Ground		
						(3.00) 3.50	Brown Clay (Glacial Till)		
						(2.50) 6.00	Dark grey Mudstone with a little coal		
							Light grey Mudstone		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush or workings encountered 2. Notes no groundwater seepage observed 3. No casing used
All dimensions in metres Scale 1:50			Client			Method/ Plant Used			Logged By MS		

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH3	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 2 of 4	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						(5.00)	Light grey Mudstone (<i>continued</i>)		
						11.00			
						(1.00)	Dark grey Mudstone with two thin coal seams around 200mm thick		
						12.00			
						(6.00)	Light grey Mudstone		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush or workings encountered 2. Notes no groundwater seepage observed 3. No casing used
All dimensions in metres Scale 1:50			Client			Method/ Plant Used			Logged By MS		

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH3	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 3 of 4	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
							Light grey Mudstone (<i>continued</i>)		
						18.00			
						(0.50)	Coal		
						18.50			
							Light grey Mudstone with occasional ironstone band		
						(6.50)			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush or workings encountered 2. Notes no groundwater seepage observed 3. No casing used
All dimensions in metres Scale 1:50			Client			Method/ Plant Used			Logged By MS		

BOREHOLE LOG

Project Grango Lane				BOREHOLE No BH3	
Job No 1970	Date	Ground Level (m)	Co-Ordinates ()		
Contractor				Sheet 4 of 4	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						25.00	Light grey Mudstone with occasional ironstone band <i>(continued)</i>		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Notes 1. No loss of flush or workings encountered 2. Notes no groundwater seepage observed 3. No casing used
All dimensions in metres Scale 1:50			Client			Method/ Plant Used			Logged By MS		

TRIAL PIT 1

Depth (m)	Strata
0.00 – 0.45	Loose dark grey/black sandy GRAVEL of ash and clinker with a little masonry, brick and lime mortar (MADE GROUND)
0.45 – 2.60	Soft to firm orange/yellow brown mottled light grey CLAY with a little fine to coarse gravel becoming brown and firm to stiff with depth (GLACIAL TILL)
2.60 – 3.70	Very weak becoming weak with depth grey very thinly bedded highly weathered MUDSTONE with a little clay matrix, excavated as a platy grey gravel with a little clay matrix (BEDROCK)
3.70 – 3.90	Weak black COAL

Notes

1. Sides of pit stable.
2. No groundwater seepage encountered.





APPENDIX E

Drillers Sheets

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Geil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date: 5/12/17	Sheet No: 001	Ground Level (m):
Grango lane Ponciau F822			Date Commenced:		
Drilling Method:	Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):	Bit Type:	Flush Type:
Rot Per.	KLEM B60603		70mm 10/nu	BTW	WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
A1	✓	0	5.0	clay/Mudstone fill	5m	100%	
		5.0	9.7	Mudstone		"	
		9.7	11.7	Soft drilling		Nic	
		11.7	14.0	firm drilling		"	14.
ABI	✓	0	4.8	clay/Mudstone (Waste) fill	5m	100%	
		4.8	5.0	Coal		"	
		5.0	9.8	Mstone.		"	
		9.8	11.5	Soft Coal.		75%	
		11.5	12.5	Mstone.		"	12.5.
BC1	✓	0	4.6	clay/Mudstone (Waste) fill	4m	100%	
		4.6	5.0	Coal.		"	
		5.0	10.0	Mudstone.		"	
		10.0	11.3	Soft drilling.		Nic	
		11.3	12.5	firm drilling.		"	12.5.
Q01	✓	0	4.6	clay/Mudstone (Waste) fill	4m	100%	
		4.6	5.1	Coal		"	
		5.1	9.9	Mudstone		"	
		9.9	11.3	Coal.		"	
		11.3	12.5	Mudstone		"	12.5.

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc: No Gases detected	Signed for Forkers Ltd: 
From	To	Signed for Client:		

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

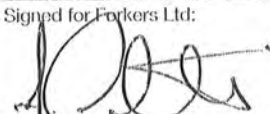
Crill & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):	
Grango Lane PONTIALL		F822	5/12/17	D02		
			Date Commenced:			
Drilling Method:	Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):		Bit Type:	Flush Type:
Rat - Perc.	KLEIN BE0603		70mm 101mm		BTN	WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
BE1	✓	0	3.0	clay fill	3.0	100%	
		3.6	5.0	Coal		"	
		5.0	9.6	Mudstone		"	
		9.6	11.0	Coal		"	
		11.0	12.0	Mudstone		"	12.
B F1.	✓	0	3.0	clay fill	3.0	100%	
		3.0	4.7	Coal		"	
		4.7	9.3	Mudstone		"	
		9.3	10.7	Coal		"	
		10.7	12.0	Mudstone		"	12.
A2.	✓	0	4.8	Soft clay / M/stone	5.0	100%	
		4.8	5.5	Coal		"	
		5.5	10.7	M/stone		"	
		10.7	12.0	Coal		"	
		12.0	13.0	M/stone		"	13.
BA3	✓	0	5.2	Soft clay / M/stone	5	100%	
		5.2	6.0	Coal		"	
		6.0	9.8	M/stone		"	
		9.8	11.8	Soft drilling		Nic	
		11.8	13.0	M/stone		"	13.

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd:  Signed for Client
From	To	Total		

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Crago Lane Porchall		F822	5/12/17	D03	
Drilling Method:		Drilling Equipment / Rig No:	Drilling / Casing Diam (mm):		Bit Type: / Flush Type:
Rot. Perc.		Kiem B6603	7mm 10mm		BW WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
9A4	V	0	5.5	Soft clay / m/stone.	5.5	100%	
		5.5	6.3	Coal.		"	
		6.3	10.7	m/stone.		"	
		10.7	12.0	Coal.		"	
		12.0	13.0	m/stone.		"	13.
10A5	V	0	5.8	Soft clay / m/stone.	6.	100%	
		5.8	6.5	Coal		"	
		6.5	10.9	m/stone		"	
		10.9	12.2	Coal		"	
		12.2	13.5	m/stone.		"	13.5

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

From	To	Total

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Coal & Mineral Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date: 6/12/17	Sheet No:	Ground Level (m):
Grangolane Porc. AU.		F822	Date Commenced:	DGL	
Drilling Method:	Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):	Bit Type:	Flush Type:
Rot - Perc.	KLEM BB0603		70mm 101mm	BH/ATR	

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
H6	V	C	3.0	clay fill	3m	100%	13m
		3.0	4.0	Coal		"	
		4.0	5.7	Soft Coal / dark Mudstone		"	
		5.7	10.8	Mudstone		"	
		10.8	12.0	Coal		"	
		12.0	13.0	Mudstone		"	
A7	V	C	3.0	clay fill	3m	100%	13.1
		3.0	4.0	Coal		"	
		4.0	5.6	Soft drilling		"	
		5.6	11.0	firm drilling		"	
		11.0	12.1	Soft drilling		"	
		12.1	13.1	firm drilling		"	
A8	V	C	3.5	clay fill	3.5m	100%	13.3
		3.5	5.5	Coal		"	
		5.5	11.1	Mudstone		"	
		11.1	12.3	Coal		"	
		12.3	13.3	Mudstone			

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd:
From	To	Total		
			unloading HLB 9.15 - 10.45am	
				Signed for Client

Foreman's Daily Journal -- Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:

Contract No:

Date:

Sheet No:

Ground Level (m):

Grango Lane PONTIAC T822

Date Commenced:

D05

Drilling Method:

Drilling Equipment / Rig No:

Drilling / Casing Diam (mm):

Bit Type:

Flush Type:

Rot Per.

KLEIN PCC603

70mm

101mm

BRN

WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
B/A9	V	C	4.0	clay fill.	4-	100%	
		4.0	6.0	Coal / Soft dark M/Stone.		"	
		6.0	9.7	Mud Stone.		"	
		9.7	12.0	Soft / Broken in Places		N/A	
		12.0	13.0	firm drilling.		"	13-
B/A10	V	C	3.5	clay fill.	35-	100%	
		3.5	5.8	Coal.		"	
		5.8	11.1	M/Stone.		"	
		11.1	12.3	Coal.		"	
		12.3	13.3	M/Stone.		"	13.3
B/A11	V	C	4.0	clay fill.	4-	100%	
		4.0	6.0	Coal.		"	
		6.0	11.5	M/Stone.		"	
		11.5	12.6	Coal.		"	
		12.6	13.6	M/Stone.		"	13.6
B/A12	V	C	4.0	clay fill.	4-	100%	
		4.0	6.0	Coal.		"	
		6.0	9.8	M/Stone.		"	
		9.8	12.8	Soft / Broken in Places.		N/A	
		12.8	13.8	firm drilling		"	13.8

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

From

To

Total

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

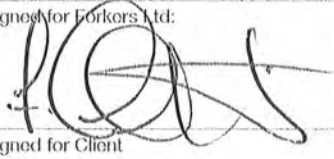
Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Grango Lane Powermax		T822	6/12/17	D06	
Drilling Method:		Drilling Equipment / Rig No:	Date Commenced:		
Lat Perc.		KIEM 300603	70mm 10mm		Bit Type: BPN WTK

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
A13	V	A	4.5	clay fill	4.5	100	
		4.5	6.3	Soft Coal / dark m/stone		"	
		6.3	11.5	m/stone		"	
		11.5	12.8	Coal		"	
		12.8	13.8	m/stone		"	13.8
B13	V	C	4.3	clay fill	4.5	100	
		4.3	6.3	Soft Coal / dark m/stone		"	
		6.3	10.7	m/stone		"	
		10.7	12.3	Soft / Broken in Places		N/A	
		12.3	13.3	from drilling		"	13.3

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd: 
From	To	Total		

Foreman's Daily Journal – Rotary Percussive Drilling

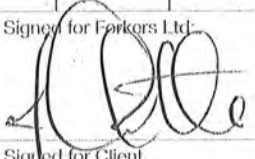
X/C/000/AP19

Forkers Ltd

Coal & Mineral Engineering Consultants

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:			Contract No:		Date:	Sheet No:	Ground Level (m):		
Grango Lane Pencinau			F822		7/12/17	D07			
					Date Commenced:				
Drilling Method:			Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):		Bit Type:	Flush Type:	
Rot-Per			KLEIN BB0603		70mm 101mm		BrN	Water	
Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)		
		From	To						
~~B0~~ BT4 C13	V	C	4.5	clay fill	4.5	100%			
			4.5	6.3	Soft Coal / M/Stone		25%		
			6.3	11.0	M/Stone		"		
			11.0	12.5	Coal		"		
			12.5	13.5	M/Stone		"	13.5	
D13	V	C	4.5	clay fill	4.5	100%			
			4.5	6.3	Soft Coal		"		
			6.3	11.0	M/Stone		"		
			11.0	12.4	Coal		"		
			12.4	13.4	M/Stone		"	13.4	
E13	V	C	4.5	clay fill	4.5	100%			
			4.5	6.1	Coal		"		
			6.1	10.7	M/Stone		"		
			10.7	12.2	Coal		"		
			12.2	13.2	Mudstone		"	13.2	
F13	V	C	4.2	clay fill	4.2	100%			
			4.2	5.8	Coal		"		
			5.8	10.5	M/Stone		"		
			10.5	12.0	Broken ground		"		
			12.0	13.0	firm drilling		"	13.0	
Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:			Signed for Forkers Ltd:			
From	To	Total	Pulling casing 2hrs			 Signed for Client			

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:

Contract No:

Date:

Sheet No:

Ground Level (m):

Grango Lane Perenna

T822

8/12/17

Date Commenced:

D08

Drilling Method:

Drilling Equipment / Rig No:

Drilling / Casing Diam (mm):

Bit Type:

Flush Type:

Rot - Perc

Kiem 860603

70mm 10mm

BrN WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
E/F 12	v	Q	4.5	clay fill	4.5	100%	
		4.5	5.8	Soft Coal / dark M/Stone.		"	
		5.8	10.2	Mudstone		"	
		10.2	11.8	Coal		"	
		11.8	12.8	M/Stone.		"	12.8
F11	v	Q	4.3	clay fill	4.3	100%	
		4.3	5.8	Soft drilling		N/A	
		5.8	10.4	M/Stone.		25%	
		10.4	11.8	Coal		"	
		11.8	12.8	M/Stone		"	12.8
F10	v	Q	3.8	clay fill	3.8	100%	
		3.8	4.5	Coal		"	
		4.5	9.5	M/Stone.		"	
		9.5	11.2	Soft drilling		N/A	
		11.2	12.2	M/Stone		25%	12.2
F9	v	Q	3.6	clay fill	3.6	100%	
		3.6	4.8	Coal		"	
		4.8	9.8	M/Stone.		"	
		9.8	11.1	Coal		"	
		11.1	12.1	M/Stone		"	12.1

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

From To Total

No GAS DETECTED

O2 = 20.7%

CO = 0%

CO2 = 0%

CH4 = 0%

H2S = 0%

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Drill & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:

Contract No:

Date:

Sheet No:

Ground Level (m):

Crango Lane Pershore.

FB22

8/12/17

Date Commenced:

Doq

Drilling Method:

Drilling Equipment / Rig No:

Drilling / Casing Diam (mm):

Bit Type:

Flush Type:

Rat for.

J-Kem B60603

7mm 101mm

BRN WTR.

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
F8	V	0	3.5	clay fill	3.5	100	
		3.5	4.7	Coal		"	
		4.7	9.7	M/Steel		"	
		9.7	11.0	Coal		"	
		11.0	12.0	M/Steel		"	12.0
F7	V	0	3.5	clay fill	3.5	100	
		3.5	4.7	Coal		"	
		4.7	9.5	M/Steel		"	
		9.5	10.8	Coal		"	
		10.8	11.8	M/Steel		"	11.8
E6	V	0	3.5	clay fill	3.5	100	
		3.5	4.7	Coal		"	
		4.7	9.5	M/Steel		"	
		9.5	10.7	Coal		"	
		10.7	11.7	M/Steel		"	11.7
E5	V	0	3.6	clay fill	3.6	100	
		3.6	4.8	Coal		"	
		4.8	8.7	M/Steel		"	
		8.7	10.7	Soft Coal		50%	
		10.7	11.7	M/Steel		100%	11.7

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

From

To

Total

No GAS DETECTED

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & General Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Grango Lane Wierham		F822	12/12/17	D11	
Drilling Method:		Drilling Equipment / Rig No:	Date Commenced:		
Rot. Perc.		KIEW B60603	7 Jan 10 Jan		
Drilling / Casing Diam (mm):			Bit Type:	Flush Type:	
70mm 100mm			BRN	WTR	

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
E3	✓	0	3.0	clay fin	3.0	100%	
		3.0	5.0	Coal		"	
		5.0	9.5	M/Stone		"	
		9.5	11.0	Coal		"	
		11.0	12.0	M/Stone		"	12.0
F3	✓	0	3.5	clay fin	3.5	100%	
		3.5	4.8	Coal		"	
		4.8	9.5	M/Stone		"	
		9.5	11.0	Coal		"	
		11.0	12.0	M/Stone		"	12.0
F2	✓	0	3.0	clay fin	3.0	100%	
		3.0	4.7	Coal		"	
		4.7	9.3	M/Stone		"	
		9.3	10.6	Coal		"	
		10.6	11.6	M/Stone		"	11.6

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd:
From	To	Total		
			No Gas Detected O2 = 20.7% CO = 0% CO2 = 0% CH4 = 0% H2S = 0%	 Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

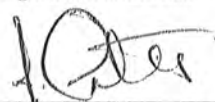
Geol & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Grango Lane Ponciau.		F822	13/12/17	D12	
Drilling Method:		Drilling Equipment / Rig No:	Drilling / Casing Diam (mm):		Bit Type: Flush Type:
Rein Perc		KLEIN B60603	70mm 10mm		BTW 6.5th

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
D5	✓	0	4.0	Cased	4.0	100	
		4.0	5.0	Coal		✓	
		5.0	9.3	M/Stone		✓	
		9.3	10.7	Coal		✓	
		10.7	11.7	M/Stone		✓	11.7
C5	✓	0	4.0	Cased	4.0	100	
		4.0	5.2	Coal		✓	
		5.2	9.0	M/Stone		✓	
		9.0	10.7	Broken ground		N/A	
		10.7	11.7	firm drilling		✓	11.7
B5	✓	0	4.0	Cased	4.0	100	
		4.0	5.0	Coal		✓	
		5.0	8.5	M/Stone		✓	
		8.5	10.0	Soft drilling		N/A	
		10.0	11.0	firm drilling		✓	11.0
E9	✓	0	4.0	Cased	4.0	100	
		4.0	4.9	Coal		✓	
		4.9	9.8	M/Stone		✓	
		9.8	11.2	Coal		✓	
		11.2	12.2	M/Stone		✓	12.2

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:		Signed for Forkers Ltd:
From	To	Total	No Gases detected		 Signed for Client
			O2 - 20.7% CO - 0% CO2 - 0% H2S - 0% CH4 - 0%		

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Crago Lane Pownall		F822	13/12/17	D13	
Drilling Method:		Drilling Equipment / Rig No:	Drilling / Casing Diam (mm):		Bit Type: / Flush Type:
Rat - Perc		KIEM 360603	70mm 101mm		BTW WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
D9	V	C.	3.5	Cased	3.5	100	
		3.5	5.0	Soft drilling.		NIL	
		5.0	9.8	firm drilling.		"	
		9.8	11.3	Soft drilling.		"	
		11.3	12.3	firm drilling.		"	12.3
C9	V	C	4.0	Cased	4	100	
		4.0	5.3	Soft Coal		50%	
		5.3	9.8	M/Stone		100%	
		9.8	11.4	Soft Coal		50%	
		11.4	12.4	M/Stone		"	12.4
B9	V	C	4.0	Cased	4	100	
		4.0	5.8	Soft Coal / clark n/stop		50%	
		5.8	10.6	M/Stone		"	
		10.6	12.0	Coal		"	
		12.0	13.0	M/Stone		"	13.

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

From	To	Total

No Gases detected

O2 - 20.7%
 CO - 0%
 CO2 - 0%
 H2S - 0%
 CH4 - 0%

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:		Date:	Sheet No:	Ground Level (m):	
Grango Lane POKINNA		FB22		14/12/17	D14		
Drilling Method:		Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):		Bit Type:	Flush Type:
Rat - Ppc		KLEM B60603		70mm 101mm		BRN	WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
B/C 6	V	Q	4.0	Cased	4-	100%	
		4.0	5.2	Soft clay/coal		"	
		5.2	9.7	M/Stone		"	
		9.7	11.5	Broken ground		N/A	
		11.5	12.5	firm drilling		"	12.5
B/C 7/B	V	Q	4.0	Cased	4-	100%	
		4.0	5.2	Coal		"	
		5.2	9.8	M/Stone		"	
		9.8	11.7	Broken ground		N/A	
		11.7	12.7	firm drilling		"	12.7
D6	V	Q	4.0	Cased	4-	100%	
		4.0	5.2	Coal		"	
		5.2	9.5	M/Stone		"	
		9.5	11.1	Broken ground		N/A	
		11.1	12.1	firm drilling		"	12.1
D 7/B	V	Q	4.0	Cased	4-	100%	
		4.0	5.2	Coal		"	
		5.2	9.7	M/Stone		"	
		9.7	11.0	Broken ground		N/A	
		11.0	12.0	firm drilling		"	12.

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd:
From	To	Total		
			No Gases detected O2 20.7% CO 0% CO2 0% H2S 0% RH4 8%	Signed for Client 

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

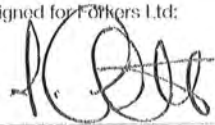
Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Grango Lane Palsau.		F822	14/12/17	D16	
Drilling Method:		Drilling Equipment / Rig No:	Drilling / Casing Diam (mm):		Bit Type: Flush Type:
Rau for		KIEW B60603	70mm 10mm		BRN Wire.

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
BC 2/3	V	C	4.0	Cased	4	100	
		H0	5.2	Soft Coal		"	
		5.2	9.2	M/Stone		"	
		9.2	11.3	Broken ground		NIL	
		11.3	12.3	firm drilling		"	12.3
D 2/3	V	C	4.0	Cased	4	100	
		4.0	5.0	Soft clay / coal traces		"	
		5.0	9.0	M/Stone		"	
		9.0	10.7	Broken ground		NIL	
		10.7	11.7	firm drilling		"	11.7
D 3/4	V	C	4.0	Cased	4	100	
		4.0	5.0	Soft Coal		"	
		5.0	10.2	M/Stone		"	
		10.2	11.6	Coal		"	
		11.6	12.6	M/Stone		"	12.6
D 2/3	V	C	4.0	Cased	4	100	
		4.0	5.0	Soft clay		"	
		5.0	10.0	M/Stone		"	
		10.0	11.3	Soft Coal		75%	
		11.3	12.3	M/Stone		"	12.3

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd:
From	To	Total		
			No Gases detected 02 - 20.7% CO - 0% CO2 - 0% H2S 0% CH4 0%	 Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:	Contract No:	Date: 15/12/17	Sheet No: D17	Ground Level (m):
Grango Lane Wrexham F822		Date Commenced:		

Drilling Method: R.A. Perc.	Drilling Equipment / Rig No: L-2M B60608	Drilling / Casing Diam (mm): 70mm 100mm	Bit Type: BTL	Flush Type: Air
-----------------------------	--	---	---------------	-----------------

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
B12	V	Ca	4.0	Cased	4.0	100%	
		4.0	5.5	Coal		u	
		5.5	10.8	M/Stone		u	
		10.8	12.5	Coal		u	
		12.5	13.5	M/Stone		u	
D/E 11/12	V	Ca	4.0	Cased	4.0	100%	
		4.0	5.3	Coal		u	
		5.3	10.5	M/Stone		u	
		10.5	12.0	Coal		u	
		12.0	13.0	M/Stone		u	
Pulling Casing 1 hr							

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:		Signed for Forkers Ltd:	
From	To	Total	No Gases detected. O ₂ = 20.7% CO = 0% CO ₂ = 0% H ₂ S = 0% RH ₄ = 0%		Signed for Client:	

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:

Contract No:

Date:

Sheet No:

Ground Level (m):

Grango Lane Poncau.

FB22

18/11/12

Date Commenced:

D18

Drilling Method:

Drilling Equipment / Rig No:

Drilling / Casing Diam (mm):

Bit Type:

Flush Type:

Rot. Perc.

Kiem B6060S.

70mm 101mm

BTR WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
DS	V	C	6.0	Cased	6	100%	15.9
		6.0	8.2	Soft Coal/dark m/stone		"	
		8.2	13.7	M/stone		"	
		13.7	14.9	Coal		"	
		14.9	15.9	M/stone		"	
ES	V	Q	6.0	Cased	6	100%	15.8
		6.0	8.2	Soft Coal		50%	
		8.2	13.6	M/stone		100%	
		13.6	14.8	Coal		"	
		14.8	15.8	M/stone		"	
FS	4°	Q	6.0	Cased	6	100%	15.5
		6.0	8.0	Soft drilling.		NIL	
		8.0	13.5	firm drilling.		"	
		13.5	14.5	Soft drilling.		"	
		14.5	15.5	firm drilling		"	
DI	4°	Q	6.0	Cased	6	100%	16.4
		6.0	8.6	Soft m/stone		"	
		8.6	9.7	Soft drilling.		NIL	
		9.7	14.0	M/stone		50%	
		14.0	15.4	Broken gravel		NIL	
		15.4	16.4	firm drilling.		"	

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

From	To	Total

NO GAS DETECTED

O2 - 20.7%

CO - 0%

CO2 - 0%

H2S - 0%

CH4 - 0%

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

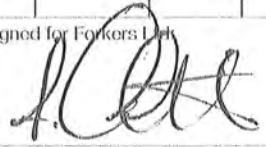
Cost & General Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Grango Lane Pongoran		FB22	18/12/17	D19	
Date Commenced:		Drilling / Casing Diam (mm):		Bit Type:	Flush Type:
Rot - Perc.		7mm 10mm		BrN	WDR
Drilling Method:		Drilling Equipment / Rig No:			
		KLEW B60603			

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
A4	V	C	6.0	Cased	6m	100%	
		6.0	7.0	M/Stone		"	
		7.0	7.7	Coal		"	
		7.7	10.2	Soft drilling		NIL	
		10.2	14.5	M/Stone		50%	
		14.5	15.7	Coal		"	
		15.7	16.7	M/Stone		"	16.7
C5	V	C	6.0	Cased	6m	100%	
		6.0	6.8	M/Stone		"	
		6.8	8.5	Coal / dark M/Stone bands		"	
		8.5	14.2	M/Stone		"	
		14.2	15.2	Coal		"	
		15.2	19.8	M/Stone		"	
		19.8	21.0	Broken ground		NIL	
		21.0	22.0	firm drilling		"	22m
B 4/5	V	C	6.0	Cased	6m	100%	
		6.0	6.6	Soft M/Stone		"	
		6.6	8.5	Soft Coal / dark M/Stone		"	
		8.5	13.8	M/Stone		"	
		13.8	15.0	Soft drilling		NIL	
		15.0	16.0	firm drilling		"	16m

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd: 
From	To	Total		
			No Gas Detected	Signed for Client:

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Drill & Borehole Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:	Contract No:	Date: 19/12/17 18/12/17	Sheet No: D20	Ground Level (m):
Grango Lane Poncrae		FB22		

Drilling Method: Rot - Perc.	Drilling Equipment / Rig No: KLEM B6003	Drilling / Casing Diam (mm): 70mm 101mm	Bit Type: BTA	Flush Type: Air
------------------------------	---	---	---------------	-----------------

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
A1	✓	0	6.5	Casal	6.5	100	
		6.5	9.5	M/Stone		50	
		9.5	10.7	Soft drilling		NIL	
		10.7	14.9	firm drilling		"	
		14.9	16.2	Soft drilling		"	
19/12/17		16.2	17.2	firm drilling		"	17.2
A2	✓	0	6.5	Casal	6.5	100	
		6.5	8.4	M/Stone		"	
		8.4	10.8	Soft drilling		NIL	
		10.8	14.8	firm drilling		"	
		14.8	16.0	Soft drilling		"	
19/12/17		16.0	17.0	firm drilling		"	17
A3	✓	0	6.0	Casal	6	100	
		6.0	8.2	M/Stone		"	
		8.2	10.2	Coal/dirt m/stone benches		50	
		10.2	14.6	M/Stone		100	
		14.6	15.8	Coal		"	
19/12/17		15.8	16.8	M/Stone		"	16.8

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd:  Signed for Client
From	To	Total		

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

Gold & Mineral Engineering & Contractors
Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX
Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date:	Sheet No:	Ground Level (m):
Grango Lane Poncharu		F822	19/12/17	D21	
Drilling Method:		Drilling Equipment / Rig No:	Drilling / Casing Diam (mm):		Bit Type: / Flush Type:
Rat for		KLEM B60603	70mm 101mm		BTD WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
B1	✓	A	6.0	Cased	6m	100%	
		6.0	7.8	M/Stone		"	
		7.8	10.5	Soft Coal/dst M/stone.		"	
		10.5	14.7	M/Stone		75%	
		14.7	16.0	Coal		"	
		16.0	21.5	M/Stone		"	
		21.5	22.5	Soft drilling.		NIL	
		22.5	23.5	firm drilling		"	23.5
C1	✓	A	6.0	Cased	6m	100%	
		6.0	7.0	M/Stone		"	
		7.0	7.6	Soft drilling.		NIL	
		7.6	9.0	firm/ small soft bends		"	
		9.0	10.0	Coal		50%	
		10.0	14.0	M/Stone		"	
		14.0	15.7	Soft drilling		NIL	
		15.7	16.7	firm drilling		"	16.7
F3	9°	A	6.0	Cased	6m	100%	
		6.0	7.0	M/Stone		"	
		7.0	9.0	Soft drilling.		NIL	
		9.0	10.0	firm drilling.		"	
		10.0	14.0	M/Stone		50%	
		14.0	15.0	Coal		"	
		15.0	16.0	M/Stone		"	16m

Hours Worked on Site

Remarks: Standing Time / Weather Conditions / Groundwater etc:

Signed for Forkers Ltd:

Signed for Client

Foreman's Daily Journal – Rotary Percussive Drilling

X/C/000/AP19

Forkers Ltd

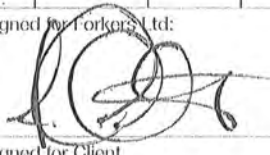
Civil & Ground Engineering Contractors

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX

Tel: 0121 505 1010 • Email: admin@forkers.com

Contract:		Contract No:	Date: 19/12/17	Sheet No: D22	Ground Level (m):
Grango Lane PONTIAC. FB22			Date Commenced:		
Drilling Method: Run for.	Drilling Equipment / Rig No: Kiew Boobas	Drilling / Casing Diam (mm): 7mm 101mm		Bit Type: BDN	Flush Type: WTR

Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To				
E1	12°	C	6.0	Cased	6.0	100%	16.2
		6.0	7.2	M/Stone.		4	
		7.2	8.0	Coal		4	
		8.4	8.4	M/Stone		4	
		8.4	9.5	Coal		4	
		9.5	14.0	M/Stone.		4	
		14.0	15.2	Coal		4	
		15.2	16.2	M/Stone.		4	
F2	12°	C	6.0	Cased	6.0	100%	16.2
		6.0	7.0	M/Stone.		4	
		7.0	7.7	Coal		4	
		7.7	9.6	Soft / small broken benches		N/A	
		9.6	12.0	firm drilling.		4	
		12.0	14.5	M/Stone		25%	
		14.5	15.2	Coal		4	
		15.2	16.2	M/Stone		4	
F4	V	C	6.0	Cased	6.0	100%	15.8
		6.0	8.2	Soft drilling.		N/A	
		8.2	13.6	M/Stone		50%	
		13.6	14.8	Coal		4	
		14.8	15.8	M/Stone		4	

Hours Worked on Site			Remarks: Standing Time / Weather Conditions / Groundwater etc:	Signed for Forkers Ltd: 
From	To	Total		
				Signed for Client

Greengate Lane, Broomfield, Essex, SSO 1 2LZ

21/12/17 D25

Ref	Pos	Item	Notes	Ref	Pos	Item	Notes
A/B 3	V	C	50	Validation	Holes		
			50 60	Coal		5	100
			60 100	Soft Coal			
			100 130	MStone			
			130 160	Soft drilling			
			160 180	firm drilling			
D/E 7	V	C	35	Coal		35	100
			35 40	Coal			
			40 45	MStone			
			45 110	Soft drilling			
			110 120	firm drilling			
B/C 11	V	C	40	Coal		4	100
			40 57	Soft Coal			
			57 110	MStone			
			110 120	Soft drilling			
			120 130	firm drilling			

C ELWELL TRANSPORT LTD

Waste Transfer Note No. CTR00010

BRIDGE HOUSE, POWER STATION ROAD, KIRKBY, STAFFS WS12 2W1
 Tel: 01829 540044 FAX: 01829 577794 EMAIL: cetr@celwelltransport.com

WASTE TRANSFER NOTE DUTY OF CARE NO: 64037

Producer / Holder of Material / Transfer

Date

FIDDLERS FERRY A/B

21-12-17

Site Address

For code

3 Wheel Load / Collector

Iron Spool - EWC 17 - 05 - 04

Handover - EWC 17 - 01 - 07

Topsoil - EWC 17 - 04 - 04

Tarmac - EWC 17 - 03 - 02

Other

SIC Code 4312

☐

☐

☐

☐

☐

☐

☐

or Delivered

Recycled 50%

Recycled Type 1

Recycled Screened ☐ as Dog

Other

Other

PPA

Weight Gross

32.78

Net

13.26

Net

19.72

Time On Site

Off Site

Reason

APPENDIX F

Grout Records

Forkers Ltd. Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX Tel: 0121 808 1010 - Fax: 10218029828										Date: 07/12/2017	
Golds Greet GRANGO LANE					Contract No: F822		Sheet No: G 1				
Grouting Method and Plant/Equipment in use Edeko/Screed Pump							Cement Type		SRC OPC X		

Hole Nos. Or Sewer Lengths	Grout Mixes						Water Supply: Mains																																													
	PFA	Cement	Sand	Pea Gravel	Additives	W/S Ratio																																														
	10	1						Materials Delivered <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Ticket No.</th> <th>Quantity (T)</th> <th>Total (T)</th> </tr> <tr> <th>PFA</th> <th>C/F</th> <th></th> </tr> <tr> <td>61480</td> <td>20</td> <td></td> </tr> <tr> <td>Del:</td> <td></td> <td>20.00</td> </tr> <tr> <td>Stock:</td> <td></td> <td>20.00</td> </tr> <tr> <td>Used:</td> <td></td> <td>11.82</td> </tr> <tr> <td>Total Left:</td> <td></td> <td>8.18</td> </tr> <tr> <td>Cement</td> <td>C/F</td> <td></td> </tr> <tr> <td>TP</td> <td>5.00</td> <td></td> </tr> <tr> <td>Del:</td> <td></td> <td>5.00</td> </tr> <tr> <td>Stock:</td> <td></td> <td>5.00</td> </tr> <tr> <td>Used:</td> <td></td> <td>1.18</td> </tr> <tr> <td>Total Left:</td> <td></td> <td>3.82</td> </tr> <tr> <td>Sand</td> <td>C/F</td> <td>0.00</td> </tr> </table>			Ticket No.	Quantity (T)	Total (T)	PFA	C/F		61480	20		Del:		20.00	Stock:		20.00	Used:		11.82	Total Left:		8.18	Cement	C/F		TP	5.00		Del:		5.00	Stock:		5.00	Used:		1.18	Total Left:		3.82	Sand	C/F	0.00
Ticket No.	Quantity (T)	Total (T)																																																		
PFA	C/F																																																			
61480	20																																																			
Del:		20.00																																																		
Stock:		20.00																																																		
Used:		11.82																																																		
Total Left:		8.18																																																		
Cement	C/F																																																			
TP	5.00																																																			
Del:		5.00																																																		
Stock:		5.00																																																		
Used:		1.18																																																		
Total Left:		3.82																																																		
Sand	C/F	0.00																																																		

Borehole No., Type, Position, Diameter, Depth or Sewer Length, Size and Manhole Nos.	Depth of Grout Tube or Rods or Casing B.G.L. (M)	Tonnage Pumped Today Per Hole (T)	Borehole or Sewer filled up Yes or No	Previous Total Per Hole (T)	New Total Per Hole (T)
D1		0.3	YES	0	0.3
E1		0.3	YES	0	0.3
F1		0.3	YES	0	0.3
A2		0.3	YES	0	0.3
A4		0.3	YES	0	0.3
A5		0.3	YES	0	0.3
A8		0.3	YES	0	0.3
A13		0.3	YES	0	0.3
A10		0.3	YES	0	0.3
A11		0.3	YES	0	0.3
A12		5.0	NO	0	5
B13		5.0	NO	0	5
Grout Pumped Today (T)		13.0	Total Grout Pumped on Site (T)		13.0

Standing Time From To Total			Approximate Quantities left on Site at end of Shift		Total Quantities Delivered to Site	
			PFA (T)	8.18	20	
			Cement (T)	3.82	5.00	
			Sand (T)	0.00	0.00	
			Cubes:	Cube Numbers 1,2,3 & 4		
			Flow:	500	&	485
			Bleed:	2hr	2%	6hr
Hours worked on site From To Total			Testing:			
			Checks on Manholes for Grout Ingress:			
			All OK			
			Holes pressurised to 2Bar YES			

Foreman Grouter: Alan Gentles	
Client Signature:	

N.B ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY

Forkers Ltd Drill & Grout Technology Contractors Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TY Tel: 0121 805 1010 - Fax: 10218023828										Date: 12/12/2017	
Contract: CRANGO LANE					Contract No: F822		Sheet No: G 2				
Grouting Method and Plant/Equipment in use Edeko/Screed Pump							Cement Type		SRG OPC ☒ X		

Hole Nos. Or Sewer Lengths	Grout Mixes							Water Supply:		
	PFA	Cement	Sand	Pea Gravel		Additives	W/S Ratio	TANK		
	10	1								

Borehole No., Type, Position, Diameter, Depth or Sewer Length, Size and Manhole Nos.	Depth of Grout Tube or Rods or Casing B.G.L. (M)	Tonnage Pumped Today Per Hole (T)	Borehole or Sewer filled up Yes or No	Previous Total Per Hole (T)	New Total Per Hole (T)
A12		5	NO	5	10
B13		5	NO	5	10
C1		5	NO	0	5
B1		4.2	YES	0	4.2
A1		4.4	YES	0	4.4
F7		0.3	YES	0	0.3
F8		0.3	YES	0	0.3
F9		0.3	YES	0	0.3
E13		0.3	YES	0	0.3
D13		0.3	YES	0	0.3
A9		5	NO	0	5
A7		3.6	YES	0	3.6
A6		4.3	YES	0	4.3
A3		4.7	YES	0	4.7
E5		0.3	YES	0	0.3
Grout Pumped Today (T)	43.00	Total Grout Pumped on Site (T)			56.00

Standing Time			Approximate Quantities left on Site at end of Shift		Total Quantities Delivered to Site	
From	To	Total	PFA (T)			
			Cement (T)	9.09	60	
			Sand (T)	2.71	7.80	
				0.00	0.00	

Hours worked on site			Testing:			
From	To	Total	Cubes:	Cube Numbers 5,6,7 & 8		
			Flow:	510	&	485
			Bleed: 2hr	2%	6hr	4%

Checks on Manholes for Grout Ingress: All OK			Holes pressurised to 2bar YES		
---	--	--	-------------------------------	--	--

Materials Delivered <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Ticket No.</th> <th>Quantity (T)</th> <th>Total (T)</th> </tr> <tr> <td>PFA</td> <td>C/F</td> <td>20.00</td> </tr> <tr> <td>61482</td> <td>20</td> <td></td> </tr> <tr> <td>64125</td> <td>20</td> <td></td> </tr> <tr> <td>Del:</td> <td></td> <td>40.00</td> </tr> <tr> <td>Stock:</td> <td></td> <td>48.18</td> </tr> <tr> <td>Used:</td> <td></td> <td>39.09</td> </tr> <tr> <td>Total Left:</td> <td></td> <td>9.09</td> </tr> <tr> <td>Cement</td> <td>C/F</td> <td>0.00</td> </tr> <tr> <td>P9465086</td> <td>2.80</td> <td></td> </tr> <tr> <td>Del:</td> <td></td> <td>2.80</td> </tr> <tr> <td>Stock:</td> <td></td> <td>6.62</td> </tr> <tr> <td>Used:</td> <td></td> <td>3.91</td> </tr> <tr> <td>Total Left:</td> <td></td> <td>2.71</td> </tr> <tr> <td>Sand</td> <td>C/F</td> <td>0.00</td> </tr> <tr> <td>Del:</td> <td></td> <td>0.00</td> </tr> <tr> <td>Stock:</td> <td></td> <td>0.00</td> </tr> <tr> <td>Used:</td> <td></td> <td>0.00</td> </tr> <tr> <td>Total Left:</td> <td></td> <td>0.00</td> </tr> </table>			Ticket No.	Quantity (T)	Total (T)	PFA	C/F	20.00	61482	20		64125	20		Del:		40.00	Stock:		48.18	Used:		39.09	Total Left:		9.09	Cement	C/F	0.00	P9465086	2.80		Del:		2.80	Stock:		6.62	Used:		3.91	Total Left:		2.71	Sand	C/F	0.00	Del:		0.00	Stock:		0.00	Used:		0.00	Total Left:		0.00
Ticket No.	Quantity (T)	Total (T)																																																									
PFA	C/F	20.00																																																									
61482	20																																																										
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Total Left:		2.71																																																									
Sand	C/F	0.00																																																									
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Stock:		0.00																																																									
Used:		0.00																																																									
Total Left:		0.00																																																									
Foreman Grouter: Alan Gentles																																																											
Client Signature:																																																											

N.B ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY

Forkers Ltd (Joint & General Engineering Contractors)						Date:		13/12/2017			
Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX Tel: 0121 605 1010 - Fax: 0121 8023828											
Contract: GRANGO LANE						Contract No: P922		Sheet No: C 3			
Grouting Method and Plant/Equipment in use Edeko Mixer/7m Telehandler						Copy No:					
						Cement Type		SRC OPC X			
Hole Nos. Or Sewer Lengths						Grout Mixes					
						PFA	Cement	Sand	Pea Gravel	Additives	W/S Ratio
						TANK					
						Materials Delivered					
						Ticket No.	Quantity (T)	Total (T)			
						PFA	C/F	60.00			
Borehole No., Type, Position, Diameter, Depth or Sewer Length, Size and Manhole Nos.						Depth of Grout Tube or Rods or Casing B.G.L. (M)		Tonnage Pumped Today Per Hole (T)	Borehole or Sewer filled up Yes or No	Previous Total Per Hole (T)	New Total Per Hole (T)
F10						5		NO	0	5	
F13						5		NO	0	5	
F11						2.2		YES	0	2.2	
E/F 12						0.3		YES	0	0.3	
C13						3.3		YES	0	3.3	
B13						2		YES	10.0	12	
A12						3.8		YES	10.0	13.8	
A9						4.9		YES	5.0	9.9	
E3						0.3		YES	0.0	0.3	
F3						0.3		YES	0.0	0.3	
F2						0.3		YES	0.0	0.3	
E4						0.3		YES	0.0	0.3	
C1						2.5		YES	5	7.5	
Total Left:											
Grout Pumped Today (T)						30.2		Total Grout Pumped on Site (T)		86.2	
Standing Time From To Total						Approximate Quantities left on Site at end of Shift		Total Quantities Delivered to Site			
						PFA (T)	1.64	80			
						Cement (T)		10.80			
						Sand (T)		0.00			
						Cubes:		Cube 9,10,11 & 12			
						Flow:		800 & 495			
Hours worked on site From To Total						Bleed:		2hr 2% 24hr 3%			
						Testing:					
Checks on Manholes for Grout Ingress:						All OK					
						Holes pressurised to 2bar YES					
Foreman Grouter:						Alan Gentles					
						Client Signature:					
N.B ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY											

Foreman's Daily Journal - Grouting

Forkers Ltd Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX Tel: 0121 505 1010 • Fax: 0121 502 3828										Date 14/12/17								
Contract: Grango Lane Ponciau								Contract No: F822		Sheet No: G4								
Grouting Method and Plant/Equipment in use EDECO ST EXCAVATOR.										Copy No:		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width: 30%;">Cement Type</td> <td style="width: 30%;">SRC</td> <td style="width: 40%;"></td> </tr> <tr> <td>OPC</td> <td style="text-align: center;">✓</td> </tr> </table>		Cement Type	SRC		OPC	✓
Cement Type	SRC																	
	OPC	✓																

Hole Nos. or Sewer Lengths	Grout Mixes							Water Supply		
	PFA	Cement	Sand	Pea Gravel		Additives	W/S Ratio			
	10	1						Mains		
								Materials Delivered		
								Ticket No.	Quantity (T)	Total (T)
								PFA	C/F	80T
Borehole No., Type, Position, Diameter, Depth or Sewer Legth, Size and Manhole Nos.	Depth of Grout Tube or Rods or Casing B.G.L. (M)	Tonnage Pumped Today per Hole (T)	Borehole or Sewer filled up Yes or No	Previous Total per Hole (T)	New Total per Hole (T)					
F10		3.85	YES	5T	8.85	FF17				
F13		2.75	YES	5T	7.75T	3478	18.60T	9860T		
D5		0.3T	YES	—	.3T	28007	19.90	118.5T		
C5		4.5T	YES	—	4.5T					
B5		2.0T	YES	—	2.0T					
E9		.3T	YES	—	.3T					
D9		2.75T	YES	—	2.75T	Cement	C/F	10.8T		
C9		0.5T	YES	—	.5T	F87312	1.5T	12.3T		
B9		0.35T	YES	—	.35T					
E6		0.3T	YES	—	.3T					
Grout Pumped Today (T)		17.6T	Total Grout Pumped on Site (T)			103.8T				
Approximate Quantities left on Site at end of Shift		PFA (T)	24.14	Cement (T)		2.86	Other			
Standing Time From To Total			Testing/Sampling Cubes 13, 14, 15, 16.							
			Checks on the Manholes and Sewers for Grout							
Hours worked on site From To Total			Remarks, Instructions							
			Foreman/Grouter Client Signature							

N.B. ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY

[illegible]

Forsters Ltd Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX Tel: 0121 808 1010 - Fax: 10218023929						Date: 19/12/2017	
Contract: GRANGO LANE				Contract No: F822		Sheet No: G 7	
Grouting Method and Plant/Equipment in use Edeko Mixer/7m Telehandler				Cement Type SRC OPC X			

Hole Nos. Or Sewer Lengths	Grout Mixes							Water Supply: TANK			
	PFA	Cement	Sand	Pea Gravel		Additives	W/S Ratio				
	10	1									
PLOT 512											
Borehole No., Type, Position, Diameter, Depth or Sewer Length, Size and Manhole Nos.	Depth of Grout Tube or Rods or Casing B.G.L. (M)	Tonnage Pumped Today Per Hole (T)	Borehole or Sewer filled up Yes or No	Previous Total Per Hole (T)	New Total Per Hole (T)						
A 1		1.3	YES	0	1.3						
A 2		1	YES	0	1						
A 3		0.5	YES	0	0.5						
A 4		0.75	YES	0	0.75						
C 5		4	YES	0	4						
B 4/5		2	YES	0	2						
D 5		0.3	YES	0	0.3						
E 5		0.45	YES	0	0.45						
F 5		2.3	YES	0	2.3						
B 1		3	YES	0	3						
C 1		1.8	YES	0	1.8						
D 1		3	YES	0	3						
E 1		0.3	YES	0	0.3						
F 2		0.5	YES	0	0.5						
F 3		0.3	YES	0	0.3						
Grout Pumped Today (T)		21.50	Total Grout Pumped on Site (T)		150.2						
		Approximate Quantities left on Site at end of Shift		Total Quantities Delivered to Site							
Standing Time From To Total		PFA (T)	21.51	158.06							
		Cement (T)	3.14	16.80							
		Sand (T)	0.00	0.00							
		Testing:	Cubes:	25,26,27 & 28							
			Flow:	460	&	800					
Hours worked on site From To Total			Bleed: 2hr	2%	6	3%					
		Checks on Manholes for Grout Ingress:									
		All OK									
		Remarks, Instructions									
N.B ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY											

Materials Delivered		
Ticket No.	Quantity (T)	Total (T)
PFA	C/F	
Del:		
Stock:		41.06
Used:		19.58
Total Left:		21.51
Cement	C/F	0.00
Del:		16.80
Stock:		5.10
Used:		1.95
Total Left:		3.14
Sand	C/F	0.00
Del:		0.00
Stock:		0.00
Used:		0.00
Total Left:		0.00
Foreman Grouter:		
Alan Gentles		
Client Signature:		

Forkers Ltd Olds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX Tel: 0121 808 1010 - Fax: 10218023828										Date: 10/12/2017	
Contract: GRANGO LANE						Contract No: F822		Sheet No: G 8			
Grouting Method and Plant/Equipment in use Edeko Mixer/7m Telehandler								Cement Type		SRG OPC X	

Hole Nos. Or Sewer Lengths	Grout Mixes							Water Supply: TANK			
	PFA	Cement	Sand	Pea Gravel		Additives	W/S Ratio				
	10	1									
PLOT 812											
Borehole No., Type, Position, Diameter, Depth or Sewer Length, Size and Manhole Nos.	Depth of Grout Tube or Rods or Casing B.G.L. (M)		Tonnage Pumped Today Per Hole (T)		Borehole or Sewer filled up Yes or No		Previous Total Per Hole (T)		New Total Per Hole (T)		
F 4			0.3		YES		0		0.3		
Grout Pumped Today (T)	0.3		Total Grout Pumped on Site (T)				150.5				
Standing Time From To Total			Approximate Quantities left on Site at end of Shift		Total Quantities Delivered to Site						
			PFA (T)	21.24	158.06						
			Cement (T)		16.80						
			3.11								
			Sand (T)		0.00						
			0.00								
			Cubes:		SHEET G7						
			Flow:				&				
			Bleed: 2hr				24hr				
Hours worked on site			Testing:		Checks on Manholes for Grout Ingress:						
From To Total					All OK						
					Remarks, Instructions						

N.B ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY

Materials Delivered		
Ticket No.	Quantity (T)	Total (T)
PFA	C/F	
Del:		158.06
Stock:		21.51
Used:		0.27
Total Left:		21.24
Cement	C/F	
Del:		16.80
Stock:		3.14
Used:		0.03
Total Left:		3.11
Sand	C/F	0.00
Del:		0.00
Stock:		0.00
Used:		0.00
Total Left:		0.00
Foreman Grouter:		
Alan Gentles		
Client Signature:		

[illegible]

Forkers Ltd

Golds Green House, Shaw Street, West Bromwich, West Midlands B70 6TG
Tel: 0121 808 1010 - Fax: 10218023828

Date:

21/12/2017

Contract:

GRANGO LANE

Contract No:

F822

Sheet No:

G 10

Copy No:

Grouting Method and Plant/Equipment in use

Edeko Mixer/7m Telehandler

Cement Type

SRC

OPC

X

Hole Nos. Or Sewer
Lengths

Grout Mixes

PFA

Cement

Sand

Pea Gravel

Additives

W/S Ratio

10

1

Water Supply:

TANK

Materials Delivered

Ticket No.

Quantity (T)

Total (T)

PFA

C/F

158.06

64037

19.72

Borehole No., Type, Position,
Diameter, Depth or Sewer
Length, Size and Manhole Nos.Depth of Grout
Tube or Rods or
Casing B.G.L. (M)Tonnage
Pumped Today
Per Hole (T)Borehole or
Sewer filled
up Yes or NoPrevious Total
Per Hole (T)New Total
Per Hole
(T)

VAL A/B 3

0.5

YES

0

0.5

VAL D/E 7

2

YES

0

2

VAL B/C 11

0.3

YES

0

0.3

Del:

177.78

Stock:

25.14

Used:

2.55

Total Left:

22.59

Cement

C/F

1.53

Del:

16.80

Stock:

1.53

Used:

0.25

Total Left:

1.28

Sand

C/F

0.00

Grout Pumped Today (T)

2.8

Total Grout Pumped on Site (T)

170.70

Approximate Quantities left
on Site at end of Shift

Total Quantities Delivered to Site

Standing Time
From To Total

PFA (T)

22.59

177.78

Cement (T)

1.28

16.80

Sand (T)

0.00

0.00

Testing:

Cubes:

Flow:

&

Bleed: 2hr

24hr

Hours worked on site
From To Total

Checks on Manholes for Grout Ingress:

All OK

Remarks, Instructions

Foreman Grouter:

Alan Gentles

Client Signature:

N.B ALL TONNAGES PUMPED ARE APPROXIMATE QUANTITIES ONLY

APPENDIX G

PFA & Cement Dockets

PURCHASE ORDER

Order No F822/179371

Order Date 29/11/2017

Page: 1 \ 1

Forkers Ltd

Civil & Ground Engineering Contractors

Forkers Ltd, Golds Green House,
Shaw Street, West Bromwich, B70 0TX
Tel: 0121 505 1010 - Fax: 0121 505 1026

Supplier / Sub-contractor

Delivery Address

COMPANY TRAVIS PERKINS - WREXHAM
ADDRESS AFON GOCH
RUABON
WREXHAM
CLWYD
LL14 6RA
Contact:
Tel: 01978 822 826
Mobile:
Fax: 01978 810 597
Email:

SITE NAME GRANGO LANE
SITE ADDRESS PONCIAU
RHOSLLANNERCHRUGOG
WREXHAM
LL14 1ER
Site Contact: IAIN HARROP
Site Tel: 07764 145 764
Notes: ** NO ARTICS **

No	Quantity	Units	Description	Price	Discount %	Sub Total	Due Date
01	200.00	Bag	OP CEMENT 25KG (PAPER BAG)	2.88000	0.00	576.00	29/11/2017
02	1.00	No.	CALL-OFF'S: KEVIN/SALES - 01978 822 826	0.00000	0.00	0.00	29/11/2017

QUANTITY APPROXIMATE

SUBJECT TO SITE CALL-OFF FROM W/C 4TH
DECEMBER

ALL DELIVERIES MUST HAVE M.O.L. FACILITY

Total Nett Order Value (excl. VAT)

£ 576.00

Payment Terms: Nett - paid end of month following date of invoice unless otherwise agreed.

This is a fixed price order. Subject to Forkers Limited standard terms and conditions already in your possession. Order number must be stated on all invoices to avoid delay in payment.

All orders are subject to the Engineer's approval, must comply with the appropriate prevailing British Standards and attached specification, adhere to all relevant Health and Safety provisions, where available, all relevant test certificates and product data sheets must be forwarded to site along with a copy to Head Office.

In the interest of Health & Safety, all delivery drivers or suppliers' personnel/visitors must report to the site office for instructions. They must also wear minimum standards of Personal Protective Equipment whilst on site which must include a hard hat, hi-visibility clothing, gloves and safety boots. Curtain sided vehicles are not permitted on-site unless able to self offload or by prior arrangement with the site manager/buyer.

Signed.....

Authorised By.....

Raised By M FORKER

Company Reg. No. 1073245

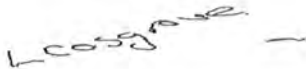
VAT Reg. No. 110 5355 20

TRAVIS PERKINS TRADING CO.
LTD
AFON GOCH
RUABON WREXHAM
CLWYD, LL14 6RA



DELIVERY CONFIRMATION
VAT Regn. No.: GB408556737

Order No.: F87240

Branch: 0834 RUABON TP		Telephone: 01978 822826		Order Date: 06/12/2017	
Customer Details: 064028 FORKERS LIMITED GOLDS GREEN HOUSE SHAW STREET WEST BROMWICH B70 0TX		Deliver To: SITE GRANGO LANE PONCIAU WREXHAM LL14 1ER, LL141ER		Sales Person : COPET Payment Method : Account Delivered Your Order No. : F822/179371 Contact : FORKERS LIMITED Tel No. : 01215051010 Date Required : 07/12/2017 Vehicle Reg : FE11UCM	
Item	Description	Order Quantity	Delivered Quantity	Weight	
1	CE 846581:BG;BLUE CIRCLE CEMENT GY 25KG NOM	180 BG	180 BG	4500.00 kgs	
** TOTAL ORDER WEIGHT 4500.00 kgs					
The indicated weights on this document are approximate and are intended to assist in manual handling considerations. Building aggregate materials allow for a +/- 5% tolerance. Items noted as "CE" are CE marked under the Construction Product Regulations. Further details and Declarations of Performance can be obtained from your branch upon request. IAN HARROP 07764145764 Shortages must be reported within 2 working days and damages must be reported within 7 days of receipt of materials If you purchase goods or services from us, our sale terms apply - Please see www.travisperkins.co.uk/terms-and-conditions/standard-conditions-of-sale If you hire goods from us, our hire terms apply - Please see hire.travisperkins.co.uk/hire/conditions-hire.asp ADDITIONAL DELIVERY DETAILS Contact Name 1 : Contact Mobile 1 : Delivery Slot : Collected : N					
Delivery Date: 07/12/17		Arrival Time: 11:09		Departure Time: 11:23	
Customer Signature 		Customer Printed Name Cosgrove		Driver Printed Name DARRAN JAMES SHARPE	

DELIVERY NOTE


www.huwsgray.co.uk

Invoice to:

FORKERS LTD
GOLDS GREEN HOUSE
SHAW STREET
WEST BROMWICH
WEST MIDLANDS
B70 0TX

Deliver To:

Grango Lane (FORKERS)
Ponciau
Rhosllanerchrugog
LL14 1ER
Ilan - 07764145764

Rhif Cyf:	Account No:F0548
Rhif:	No: P9465086
Dyddiad:	Date: 8Dec17
Page:	1



NEW CHRISTMAS COLLECTION
DEALS ON TOOLS, WORKWEAR AND MORE!
CATALOGUE OUT NOW!

0121 505 1010

TALLY COLLECT
tdj 10:57 Order ref F822/179569

You were served today by:
tdj THOMAS DAVID JONES(14)

Nifer Qty	Disgrifiad Description	Pris a Telerau Price & Terms	Gwerth heb Taw Value ex Vat	Cyfradd Taw Vat Rate
112	HANSON GENERAL PURPOSE CEMENT 32.5R 25kg BAG OPC 2 packs <i>TUES</i> <i>12/12/17</i>	<i>2.8 TON</i>		

CUSTOMER COPY

NOT A TAX DOCUMENT

RETURNED GOODS MAY INCUR A HANDLING CHARGE

PLEASE REPORT ANY DISCREPANCIES WITHIN 3 DAYS

Approximate weight 2800 kg

SIGN: _____

PRINT: _____

All materials purchased should be used and/or fitted in accordance with manufacturers instructions/details.

Dioch am eich cefnogaeth. Thank you for your business!

CROESFOEL INDUSTRIAL ESTATE
RHOSTYLLEN WREXHAM LL14 4BJ
T: 01978 264269 F:01978 264164

TELERAU: Nett taliad cyn diwedd y mis sy'n canlyn dyddiad yr anfoneb. Mae'r rwyddau yn eiddo i ni hyd at daliad.

TERMS: Nett payment before end of month following date of invoice. These goods remain the property of Huws Gray Limited until payment has been effected.

Swyddfa Gofrestradig / Prif Swyddfa: Stad Ddwyddannol, Llangedfni, Ynys Môn LL77 7JA Registered Office / Head Office: Industrial Estate, Llangedfni, Anglesey LL77 7JA
Huws Gray Limited, Rhif Cof. Cwmni Co. Reg. No.: 2506633 Rhif Cof. TAW/VAT Reg. No.: 713 6074 54

Gwelir trosodd am delerau gwerthu. For conditions of sale see over.

Ymwelwch a'n gwefan am manylion y canghennau. Please visit our website for branch details.

BRANCH	0934 RUABON TP	TEL:	01978 822822	DELIVERY INDICATOR	1	DATE	08/12/17 10:11
CUSTOMER DETAILS:		DELIVER TO:		SALES PERSON : LUPET			
064028				PAYMENT METHOD :			
FORKERS LIMITED				YOUR ORDER No. : FB22/179271			
GOLDS GREEN HOUSE		SITE GRANGE LANE		CONTACT : FORKERS LIMITED			
SHAW STREET		PONCIRU		TEL NO : 01215051010			
WEST BROMWICH		WREXHAM		DATE RECD : 14/12/17			
WEST MIDLANDS		LL14 1ER		CONTRACT REF:			
B70 0TY				VEHICLE-REG : EE11UDN			

ITEM DESCRIPTION	QUANTITY	CE
1 BLUE CIRCLE CEMENT GREY 25KG NORMAL B46581	60.00 BAG	1500.00 Y

** TOTAL ORDER WEIGHT 1500.000 kgs (LINES 1)

The indicated weights on this document are approximate and are intended to assist in manual handling considerations. Building aggregate material weights allow for a +/- 5% tolerance.

Products marked Y in the "CE" column are CE marked under the Construction Product Regulations. Further details and Declarations of Performance can be obtained from your branch upon request.

Does your initial assessment of the delivery area identify any problems? Yes/No

If yes, complete the Loading/Unloading Risk Assessment Form, with the customer if necessary.

Remember to keep your feet on the ground!

Based on the information that you have supplied we will on arrival at site check to ensure that we can deliver safely in addition we will assess that there are no additional risks or hazards. Should there be hazards or risks that prevent our delivery driver from making the delivery to the point requested, the delivery driver will offer to deliver to the nearest point that fits within our generic lifting plan according to BS7121. Should this not be suitable we will return the goods to branch until a compromise on delivery point can be agreed, this may incur further charges

ADDITIONAL DELIVERY DETAILS

Delivery Slot :
Collected : N

Price increases during 2017/18, we are working hard to keep these as low as possible. When pricing for this period please obtain an updated quotation.

HIRES ARE SUBJECT TO OUR CONDITIONS OF HIRE

Shortages must be reported within 2 working days and damages must be reported within 7 days of receipt of materials.

Health & Safety: For information on products (e.g. COSHH) please visit www.travisperkins.co.uk. Contact the H&S Dept. during office hours on (01604) 752424 if data not available.

A worksip confers no rights to remove goods from our branches. An invoice or delivery note must be obtained from counter staff. A delivery note is not a VAT invoice.

SIGNATURE

TIME

PRINTED

DATE

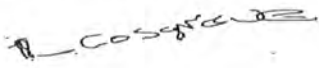
PLEASE SEE REVERSE FOR OUR SALE TE

TRAVIS PERKINS TRADING CO.
LTD
AFON GOCH
RUABON WREXHAM
CLWYD, LL14 6RA



PARTDELIVERY CONFIRMATION
VAT Regn. No.: GB408556737

Order No.: F87371

Branch: 0834 RUABON TP		Telephone: 01978 822826		Order Date: 08/12/2017	
Customer Details: 064028 FORKERS LIMITED GOLDS GREEN HOUSE SHAW STREET WEST BROMWICH B70 0TX		Deliver To: SITE GRANGO LANE PONCIAU WREXHAM LL14 1ER, LL141ER		Sales Person : COPET Payment Method : Account Delivered Your Order No. : F822/179371 Contact : FORKERS LIMITED Tel No. : 01215051010 Date Required : 09/12/2017 Vehicle Reg : FE11UCM	
Item	Description	Order Quantity	Delivered Quantity	Weight	
1	CE 846581:BG;BLUE CIRCLE CEMENT GY 25KG NOM	120 BG	120 BG	3000.00 kgs	
** TOTAL ORDER WEIGHT 3000.00 kgs					
The indicated weights on this document are approximate and are intended to assist in manual handling considerations. Building aggregate materials allow for a +/- 5% tolerance. Items noted as "CE" are CE marked under the Construction Product Regulations. Further details and Declarations of Performance can be obtained from your branch upon request. IAN HARROP 07764145764 Shortages must be reported within 2 working days and damages must be reported within 7 days of receipt of materials If you purchase goods or services from us, our sale terms apply - Please see www.travisperkins.co.uk/terms-and-conditions/standard-conditions-of-sale If you hire goods from us, our hire terms apply - Please see hire.travisperkins.co.uk/hire/conditionshire.asp ADDITIONAL DELIVERY DETAILS Contact Name 1 : Contact Mobile 1 : Delivery Slot : Collected : N					
Delivery Date: 13/12/17		Arrival Time: 08:21		Departure Time: 08:40	
Customer Signature 		Customer Printed Name Cosgrove		Driver Printed Name DARRAN JAMES SHARPE	

TRAVIS PERKINS TRADING CO.
LTD
AFON GOCH
RUABON WREXHAM
CLWYD, LL14 6RA



DELIVERY CONFIRMATION
VAT Regn. No.: GB408556737

Order No.: F87780

Branch: 0834 RUABON TP		Telephone: 01978 822826		Order Date: 20/12/2017	
Customer Details: 064028 FORKERS LIMITED GOLDS GREEN HOUSE SHAW STREET WEST BROMWICH B70 0TX		Deliver To: SITE GRANGO LANE PONCIAU WREXHAM LL14 1ER, LL141ER		Sales Person : KLJON Payment Method : Account Delivered Your Order No. : F822/179371 Contact : FORKERS LIMITED Tel No. : 01215051010 Date Required : 21/12/2017 Vehicle Reg : FE11UCM	
Item	Description	Order Quantity	Delivered Quantity	Weight	
1	CE 846581:BG;BLUE CIRCLE CEMENT GY 25KG NOM	60 BG	60 BG	1500.00 kgs	
** TOTAL ORDER WEIGHT 1500.00 kgs					
The indicated weights on this document are approximate and are intended to assist in manual handling considerations. Building aggregate materials allow for a +/- 5% tolerance. Items noted as "CE" are CE marked under the Construction Product Regulations. Further details and Declarations of Performance can be obtained from your branch upon request. IAN HARROP 07764145764 Shortages must be reported within 2 working days and damages must be reported within 7 days of receipt of materials If you purchase goods or services from us, our sale terms apply - Please see www.travisperkins.co.uk/terms-and-conditions/standard-conditions-of-sale If you hire goods from us, our hire terms apply - Please see hire.travisperkins.co.uk/hire/conditionshire.asp ADDITIONAL DELIVERY DETAILS Contact Name 1 : Contact Mobile 1 : Delivery Slot : Collected : N					
Delivery Date: 21/12/17		Arrival Time: 14:26		Departure Time: 14:31	
Customer Signature 		Customer Printed Name		Driver Printed Name DARRAN JAMES SHARPE	

C ELWELL TRANSPORT LTD

Waste Carriers Licence No. CB/AN5274UA

BRIDGE HOUSE, POWER STATION ROAD, RUGELEY, STAFFS. WS15 2WT
Tel: 01889 584044 FAX: 01889 579794 E.MAIL: c.elwell@tiscali.co.uk

WASTE TRANSFER NOTE DUTY OF CARE NO: 61480

Producer / Holder of Material / Transfer

Date

C. ELWELL

7/12/17

Site Address

RUGELEY

Postcode:

8 Wheel Load : Collected -

Inert Spoil - EWC 17 - 05 - 04

Hardcore - EWC 17 - 01 - 07

Topsoil - EWC 17 - 05 - 04

Tarmac - EWC 17 - 03 - 02

Other

S.I.C. Code 43.12



or Delivered

Recycled 6F2

Recycled Type 1

Topsoil : Screened ☐ as Dug

Other

P.F.A

Other



Weight: Gross 32.000

Tare 12.000

Net 20.000

Time: On Site

Off Site

Reason

Person collecting the material - Transferee

Vehicle No:

Dx66 02R

Driver's Name

LEE

Transferee's Signature

L. HILL

Address of Place of Delivery / Transfer

FORKERS

GRANGE LANE

WREXHAM

Site Signature

Print Name

Representing:

By signing above I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulation 2011

L. COSGROVE

ALL RECYCLED MATERIALS ARE PRODUCED TO WRAP FPC

C ELWELL TRANSPORT LTD

Waste Carriers Licence No. CB/AN5274UA

BRIDGE HOUSE, POWER STATION ROAD, RUGELEY, STAFFS. WS15 2WT
Tel: 01889 584044 FAX: 01889 579794 E.MAIL: c.elwell@tiscali.co.uk

WASTE TRANSFER NOTE DUTY OF CARE NO: 61482

Producer / Holder of Material / Transfer

Date

C. ELWELL

11/12/17

Site Address

RUGELEY

Postcode:

8 Wheel Load : Collected -

Inert Spoil - EWC 17 - 05 - 04

Hardcore - EWC 17 - 01 - 07

Topsoil - EWC 17 - 05 - 04

Tarmac - EWC 17 - 03 - 02

Other

S.I.C. Code 43.12

☐☐☐☐☐☐☐

or Delivered

Recycled 6F2

Recycled Type 1

Topsoil : Screened ☐ as Dug

Other P.F.A.

Other

☒☐☐☐☒☐

Weight: Gross 32.000

Tare 12.000

Net 20.000

Time: On Site

Off Site

Reason

Person collecting the material - Transferee

Vehicle No:

DX66 OZR

Driver's Name

LEE

Transferee's Signature

L. HILL

Address of Place of Delivery / Transfer

FORKERS

GRANCO LANE

WREXHAM

Site Signature

L. COSGROVE

Print Name

Representing:

L. COSGROVE

By signing above I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulation 2011

ALL RECYCLED MATERIALS ARE PRODUCED TO WRAP FPC

C ELWELL TRANSPORT LTD

Waste Carriers Licence No. CBDU88440

BRIDGE HOUSE, POWER STATION ROAD, RUGELEY, STAFFS. WS15 2WT
Tel: 01889 584044 FAX: 01889 579794 E.MAIL: chris@elwelltransport.com

WASTE TRANSFER NOTE DUTY OF CARE NO: 64125

Producer / Holder of Material / Transfer

Date

Elwell

11-12-17

Site Address

Rugeley

Postcode:

8 Wheel Load : Collected -

Inert Spoil - EWC 17 - 05 - 04

Hardcore - EWC 17 - 01 - 07

Topsoil - EWC 17 - 05 - 04

Tarmac - EWC 17 - 03 - 02

Other

S.I.C. Code 43.12

☒
☐
☐
☐
☐
☐
☐

or Delivered

Recycled 6F2

Recycled Type 1

Topsoil : Screened ☐ as Dug

Other

Other

D.F.A.

☒
☐
☐
☐
☐
☐
☐

Weight: Gross

Tare

Net

Time: On Site

Off Site

Reason

32000

12000

20000

Person collecting the material - Transferee

Vehicle No:

Driver's Name

Transferee's Signature

W209 HWM

Andy

Andy

Address of Place of Delivery / Transfer

FORKERS - GRANGE LANE
WREXHAM

Site Signature

Print Name

Representing:

L. COSGROVE

L. COSGROVE

By signing above I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulation 2011

ALL RECYCLED MATERIALS ARE PRODUCED TO WRAP FPC

C ELWELL TRANSPORT LTD

Waste Carriers Licence No. CBDU88440

BRIDGE HOUSE, POWER STATION ROAD, RUGELEY, STAFFS. WS15 2WT

Tel: 01889 584044 FAX: 01889 579794 E.MAIL: chris@elwelltransport.com

WASTE TRANSFER NOTE DUTY OF CARE NO: 64177

Producer / Holder of Material / Transfer

Date

C. ELWELL

13-12-17

Site Address

RUGELEY

Postcode:

8 Wheel Load : Collected -

Inert Spoil - EWC 17 - 05 - 04

Hardcore - EWC 17 - 01 - 07

Topsoil - EWC 17 - 05 - 04

Tarmac - EWC 17 - 03 - 02

Other

S.I.C. Code 43.12

☐☐☐☐☐☐☐

or Delivered

Recycled 6F2

Recycled Type 1

Topsoil : Screened ☐ as Dug

Other

Other

☒☐☐☐☐☐

P-F-A

Weight: Gross 32.00 Tare 12.00 Net 20.00

Time: On Site

Off Site

Reason

Person collecting the material - Transferee

Vehicle No.

Dx66028

Driver's Name

STEVE

Transferee's Signature

Address of Place of Delivery / Transfer

FORKERS
GLANGO LANE NONCIAN
RHOSIANMERCHYDOL WREXHAM

Site Signature

L. COSCROE

Print Name

L-L-K-I-E-R

Representing:

By signing above I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulation 2011

L. COSCROE

ALL RECYCLED MATERIALS ARE PRODUCED TO WRAP FPC



FIDDLER'S FERRY
Power Station

THURS

Ticket Number

28007

Date

14/12

Consignment Note

Material	PFA
Haulier	
Vehicle Reg.	DX66 OZR
Time of Loading	
Drivers Signature	L. HUL

Gross Weight	32.200
Tare Weight	12.300
Nett Weight	19.900
Issued by (Signature)	

Consignee & Delivery Address	FORKERS WREXHAM
	ALW 107-789-403

Received by	<u>F. Paul</u>	(signed)
-------------	----------------	----------

FF040

Mon

C ELWELL TRANSPORT LTD

Waste Carriers Licence No. CB/ANS274UA

BRIDGE HOUSE, POWER STATION ROAD, RUGELEY, STAFFS. WS15 2WT

Tel: 01889 584044 FAX: 01889 579794 E.MAIL: c.elwell@tiscali.co.uk

WASTE TRANSFER NOTE DUTY OF CARE NO: 61486

Producer / Holder of Material / Transfer

Date

C ELWELL

16/12/17

Site Address

RUGELEY

Postcode:

8 Wheel Load : Collected -

Inert Spoil - EWC 17 - 05 - 04

Hardcore - EWC 17 - 01 - 07

Topsoil - EWC 17 - 05 - 04

Tarmac - EWC 17 - 03 - 02

Other

S.I.C. Code 43.12

☐ or Delivered

☐ Recycled 6F2

☐ Recycled Type 1

☐ Topsoil - Screened

☐ as Dug

☒ P.F.A

☐ Other

Consignment:

Release/Load No: 757-846-253

Date	Time	Consec	Weight
1st Wt	18/12/2017 08:49:22	3667	12500k
2nd Wt	18/12/2017 09:04:07	3633	32000k

Net Wt 19500kg

A record of this weighing will be kept for a period of 6 months from date of the weighing.

Weight: Gross 32.000 Tare 12.000 Net 20.000

Time: On Site

Off Site

Reason

Person collecting the material - Transferee

Vehicle No:

DXBB 0ZR

Driver's Name

LEE

Transferee's Signature

L. HALL

Address of Place of Delivery / Transfer

FARKES
CRANCO LANE
WREXHAM

Site Signature

L Cosgrove

Print Name

L. COSGROVE

Representing:

By signing above I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulation 2011

Mon

DUPLICATE TICKET

Fiddlers Ferry Power Station

Weighbridge Ticket

Trans No: FF-17/ 3739

Vehicle: DXBB0ZR

Cust/Supp: 0310
Forkers Wrexham

Material: 204
PFA BSEN 13055-1

110 12W
180 130

Rich Hill
from Valley

C. ELWELL TRANSPORT LTD

Waste Transfer Station

Waste Transfer Station, 15000 Highway 101, Station 5, West 2501
15000 Highway 101, West 2501, Station 5, West 2501

WASTE TRANSFER NOTE DUTY OF CARE NO: 64037

Product Name: Material Name

Date

Film 1000 1000 1000

21-11-17

Site Address

For use

When Load collected

☐

or delivered

☐

at Special EWC 17-01-01

☐

Received 5/2

☐

where EWC 17-01-01

☐

Excluded Type 1

☐

with EWC 17-01-01

☐

Excluded Material ☐ as Dug

☐

for EWC 17-01-01

☐

Other

☐

Code 43.12

☐

Other

Grav 32.98

Net 13.26

No 19.72

On Site

Off Site

Known

APPENDIX H

Summary Spreadsheet

Sheet No.	Hole No.	Driller	Incl. or Vert	Vert Depth (m)	Inclined Depth (m)	Drilled Depth (m)	Coal Seam Info	Flush	Cased Depth (m)	Date Started	Date Filled	Hole No.	Sheet No.	Grout Take 1	Sheet No.	Grout Take 2	Sheet No.	Grout Take 3	Total Injected	Remarks	Hole No.	
F822 - Grango Lane																						
Primary Boreholes																						
3	A1	AG	V	14		14	9.7-11.7 SOFT	0%	5	05/12/2017	12/12/2017		G2	4.40					4.400	Perimeter	A1	
2	A2	AG	V	13		13	4.8-5.5, 10.7-12	100%	5	05/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	A2	
2	A3	AG	V	13		13	5.2-6 coal, 9.8-11.8 SOFT	0%	5	05/12/2017	12/12/2017		G2	4.70					4.700	Perimeter	A3	
1	A4	AG	V	13		13	5.5-6.3, 10.7-12	100%	5.5	05/12/2017	07/12/2017		G1	0.300					0.300	Perimeter	A4	
1	A5	AG	V	13.5		13.5	5.5-6.5, 10.9-12.2	100%	6	05/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	A5	
6	A6	AG	V	13		13	3-4, 10.8-12	100%	3	06/12/2017	12/12/2017		G2	0.30					0.300	Perimeter	A6	
6	A7	AG	V	13.1		13.1	3-4 coal, 4-5.6, 11-12.1 SOFT	0%	3	06/12/2017	12/12/2017		G2	3.60					3.600	Perimeter	A7	
6	A8	AG	V	13.3		13.3	3.5-5.5, 11.1-12.3	100%	3.5	06/12/2017	07/12/2017		G1	0.300					0.300	Perimeter	A8	
5	A9	AG	V	13		13	4-6, 9.7-12 BROKEN GROUND	0%	4	06/12/2017	13/12/2017		G2	5.00	G3	4.90			9.900	Perimeter	A9	
5	A10	AG	V	13.3		13.3	3.5-5.8, 11.1-12.3	0%	3.5	06/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	A10	
5	A11	AG	V	13.6		13.6	4-6, 11.5-12.6	100%	4	06/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	A11	
5	A12	AG	V	13.8		13.8	4-6, 9.8-12.8 BROKEN GROUND	0%	4	06/12/2017	13/12/2017		G1	5.000	G2	5.00	G3	3.80	13.800	Perimeter	A12	
4	A13	AG	V	13.8		13.8	11.5-12.8	100%	4.5	06/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	A13	
3	B1	AG	V	12.5		12.5	4.8-5, 9.8-11.5 SOFT COAL	75%	5	05/12/2017	12/12/2017		G2	4.20					4.200	Perimeter	B1	
12	B5	AG	V	11		11	8.5-10 SOFT	0%	4	13/12/2017	14/12/2017		G4	2.00					2.000	Perimeter	B5	
13	B9	AG	V	13		13	9.8-11.3 SOFT COAL	50%	4	13/12/2017	14/12/2017		G4	0.35					0.350	Perimeter	B9	
4	B13	AG	V	13.3		13.3	10.7-12.3 BROKEN GROUND	0%	4.5	06/12/2017	13/12/2017		G1	5.00	G2	5.00	G3	2.00	12.000	Perimeter	B13	
3	C1	AG	V	12.5		12.5	4.6-5, 10-11.3 SOFT	0%	4	05/12/2017	13/12/2017		G2	5.00	G3	2.50			7.500	Perimeter	C1	
12	C5	AG	V	11.7		11.7	9-10.7 BROKEN GROUND	0%	4	13/12/2017	14/12/2017		G4	4.50					4.500	Perimeter	C5	
13	C9	AG	V	12.4		12.4	9.8-11.4 SOFT COAL	50%	4	13/12/2017	14/12/2017		G4	0.50					0.500	Perimeter	C9	
7	C13	AG	V	13.5		13.5	4.5-6.3, 11-12.5 SOFT	25%	4.5	07/12/2017	13/12/2017		G3	3.300					3.300	Perimeter	C13	
3	D1	AG	V	12.5		12.5	4.6-5.1, 9.9-11.3	100%	4	05/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	D1	
12	D5	AG	V	11.7		11.7	4-5, 9.3-10.7 coal	100%	4	13/12/2017	14/12/2017		G4	0.30					0.300	Perimeter	D5	
13	D9	AG	V	12.3		12.3	9.8-11.3 SOFT	0%	4	13/12/2017	14/12/2017		G4	2.750					2.750	Perimeter	D9	
7	D13	AG	V	13.4		13.4	4.5-6.3, 11-12.4	100%	4.5	07/12/2017	12/12/2017		G2	0.30					0.300	Perimeter	D13	
2	E1	AG	V	12		12	3-5, 9.6-11	100%	3	05/12/2017	07/12/2017		G1	0.30					0.300	Perimeter	E1	
11	E3	AG	V	12		12	3-5, 9.5-11	100%	3	12/12/2017	13/12/2017		G3	0.30					0.300	Perimeter	E3	
10	E4	AG	V	11.4		11.4	3.7-4.8, 9-10.4	100%	3.7	08/12/2017	13/12/2017		G3	0.30					0.300	Perimeter	E4	
9	E5	AG	V	11.7		11.7	3.6-4.8, 8.7-10.7 SOFT	50%	3.6	08/12/2017	12/12/2017		G2	4.30					4.300	Perimeter	E5	
9	E6	AG	V	11.7		11.7	3.5-4.7, 9.5-10.7	100%	3.5	08/12/2017	14/12/2017		G4	0.30					0.300	Perimeter	E6	
12	E9	AG	V	12.2		12.2	4-4.9, 9.8-11.2 COAL	100%	4	13/12/2017	14/12/2017		G4	0.30					0.300	Perimeter	E9	
7	E13	AG	V	13.2		13.2	4.5-6.1, 10.7-12.2	100%	4.5	07/12/2017	12/12/2017		G2	0.30					0.300	Perimeter	E13	
2	F1	AG	V	12		12	3-4.7, 9.3-10.7	100%	3	05/12/2017	07/12/2017		G1	0.300					0.300	Perimeter	F1	
11	F2	AG	V	11.6		11.6	3-4.7, 9.3-10.6	100%	3	12/12/2017	13/12/2017		G3	0.300					0.300	Perimeter	F2	
11	F3	AG	V	12		12	3.5-4.8, 9.5-11	100%	3.5	12/12/2017	13/12/2017		G3	0.300					0.300	Perimeter	F3	
9	F7	AG	V	11.8		11.8	3.5-4.7, 9.5-10.8	100%	3.5	08/12/2017	12/12/2017		G2	0.300					0.300	Perimeter	F7	
9	F8	AG	V	12		12	3.5-4.7, 9.7-11	100%	3.5	08/12/2017	12/12/2017		G2	0.300					0.300	Perimeter	F8	
8	F9	AG	V	12.1		12.1	3.6-4.8, 9.8-11.1	100%	3.6	08/12/2017	12/12/2017		G2	0.300					0.300	Perimeter	F9	
8	F10	AG	V	12.2		12.2	3.6-4.5, 9.5-11.2 SOFT	0%	3.8	08/12/2017	14/12/2017		G3	5.000	G4	3.85			8.850	Perimeter	F10	
8	F11	AG	V	12.8		12.8	4.3-5.8 SOFT	25%	4.3	08/12/2017	13/12/2017		G3	2.200					2.200	Perimeter	F11	
8	E/F12	AG	V	12.8		12.8	4.5-5.8, 10.2-11.8	100%	4.5	08/12/2017	13/12/2017		G3	0.300					0.300	Perimeter	E/F12	
7	F13	AG	V	13		13	4.2-5.8 coal, 10.5-12 BROKEN GROUND	0%	4.2	07/12/2017	14/12/2017		G3	5.000	G4	2.75			7.750	Perimeter	F13	
16	D2/3	AG	V	11.7		11.7	9-10.7 BROKEN GROUND	0%	4	14/12/2017	15/12/2017		G5	3.200					3.200		D2/3	
16	D3/4	AG	V	12.6		12.6	10.2-11.6 COAL	100%	4	14/12/2017	15/12/2017		G5	0.300					0.300		D3/4	
14	D/C6	AG	V	12.1																		

APPENDIX I

Permit Closure Forms



Permit Ref.	14816	Project / Site Location	Plot 1&3, Grango Lane, Ponciau, Wrexham,
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Please complete and return this e-form within **3 months** of the permitted works being completed. It is supplementary to, and should form part of, the full completion/validation reporting.

Where relevant the report should include; borehole logs and details of mine or mine entry treatment works carried out (incl. engineering drawings, grout takes etc.) and a scaled site layout plan (correlated to O.S N' Grid) showing all relevant mine entry positions, coal seams, voids and broken ground proved by the works.

Summary of works

Start date 7/12/2017

Finish date 22/12/2017

Have variations occurred to the scope / design of the works since the Permit was granted? ☐ No, ☐ Yes.

If yes, please describe; PLOT 2 INCLUDED IN WORKS AT LAST MINUTE

Did if any of the following incidents occur?

- ☐ Spontaneous combustion, ☐ Water emission, ☐ Gas emission (elevated or above action levels)
☐ Geotechnical instability, ☐ Legal issues incl. damage or potential claims, ☒ None

If yes, please detail each item;

If shallow coal or coal workings were encountered please describe the conditions.

- ☐ Intact coal only, ☐ Broken ground, ☐ Backfilled ground, ☐ Voids

Please provide a general description; 33% encountered backfilled / collapsed workings. Rest encountered solid coal.

Will further works be necessary that require a Permit? ☐ No ☒ Yes

If yes, please describe, including any recommendations;

Possible shaft encountered, see report.

Will the closure information be submitted to the LPA for discharge of a Planning Condition? ☒ No ☐ Yes

Relevant Planning Application Reference No.	
Please provide the details;	

Name: M. J. SCOTT	Email: mikescott@groundsolive.com
Company: Groundsolive Ltd.	Tel: 01244 661361



Permit Ref.	14817	Project / Site Location	Plot 5, Grango Lane, Ponciau, Wrexham,
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Please complete and return this e-form within **3 months** of the permitted works being completed. It is supplementary to, and should form part of, the full completion/validation reporting.

Where relevant the report should include; borehole logs and details of mine or mine entry treatment works carried out (incl. engineering drawings, grout takes etc.) and a scaled site layout plan (correlated to O.S N' Grid) showing all relevant mine entry positions, coal seams, voids and broken ground proved by the works.

Summary of works

Start date

7/12/17

Finish date

22/12/17

Have variations occurred to the scope / design of the works since the Permit was granted? ☐ No, ☒ Yes.

If yes, please describe;

Seam below Brasseley grouted
as well i.e. Crank Seam

Did if any of the following incidents occur?

- ☐ Spontaneous combustion, ☐ Water emission, ☐ Gas emission (elevated or above action levels)
☐ Geotechnical instability, ☐ Legal issues incl. damage or potential claims, ☒ None

If yes, please detail each item;

If shallow coal or coal workings were encountered please describe the conditions.

- ☐ Intact coal only, ☐ Broken ground, ☐ Backfilled ground, ☐ Voids

Please provide a general description;

Two old seams encountered
both with 50% back filled / collapsed
working

Will further works be necessary that require a Permit? ☒ No ☐ Yes

If yes, please describe, including any recommendations;

Will the closure information be submitted to the LPA for discharge of a Planning Condition? ☒ No ☐ Yes

Relevant Planning Application Reference No.

Please provide the details;

Name:

M. J. Scott

Email:

mikescott@groundsolve.com

Company:

Ground Solve Ltd

Tel:

01244 661 361

APPENDIX J

Cube Results



Nicholls Colton Group
7-11 Harding Street, Leicester, LE1 4DH
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Website: www.nicholls-colton.co.uk
Tel: 0116 253 6333

TEST REPORT

EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES

F822 - Grango Lane, Wrexham

Report no. L18/0133/FOK / 001

Order reference: 0000000FGE/0000160644	Date cast: 07/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2156	1	100x100x100	wet	46	1.530	1530	15	1.5
18-2157	2	100x100x100	wet	46	1.498	1440	18	1.8
18-2158	3	100x100x100	wet	46	1.527	1520	18	1.8
18-2159	4	100x100x100	wet	46	1.518	1520	15	1.5

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

.....
W. Elson

Manager – Testing Services
Nicholls Colton Group

Forkers Limited
Golds Green House
Shaw Street
West Bromwich
West Midlands
B70 0TX



0320



Nicholls Colton Group
7-11 Harding Street, Leicester, LE1 4DH
E-mail: info@nicholls-colton.co.uk
Website: www.nicholls-colton.co.uk
Tel: 0116 253 5333

TEST REPORT

EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES

F822 - Grango Lane, Wrexham

Report no. L18/0133/FOK / 002

Order reference: 0000000FGE/0000160644	Date cast: 12/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2160	5	100x106x100	wet	41	1.635	1570	32	3.1
18-2161	6	100x100x100	wet	41	1.727	1740	25	2.5
18-2162	7	100x105x100	wet	41	1.645	1570	32	3.1
18-2163	8	100x100x100	wet	41	1.748	1550	23	2.3

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3; cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

.....
W. Elson
Manager – Testing Services
Nicholls Colton Group

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TEST REPORT**EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES****F822 - Grango Lane Wrexham****Report no. L18/0133/FOK / 003**

Order reference: 000000FGE/0000160644	Date cast: 13/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2164	9	100x103x100	wet	40	1.580	1550	32	3.1
18-2165	10	100x100x100	wet	40	1.505	1510	16	1.6
18-2166	11	100x105x100	wet	40	1.634	1570	32	3.1
18-2167	12	100x104x100	wet	40	1.588	1570	30	2.9

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

.....
W. Elson

Manager – Testing Services
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TEST REPORT

EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES

F822 - Grango Lane, Wrexham

Report no. L18/0133/FOK / 004

Order reference: 0000000FGE/0000160644	Date cast: 14/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2168	13	100x103x100	wet	39	1.579	1550	32	3.1
18-2169	14	100x106x100	wet	39	1.611	1540	33	3.2
18-2170	15	100x103x100	wet	39	1.749	1730	24	2.3
18-2171	16	100x104x100	wet	39	1.554	1530	28	2.7

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

.....
W. Elson
Manager – Testing Services
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TEST REPORT

EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES

F822 - Grango Lane, Wrexham

Report no. L18/0133/FOK / 005

Order reference: 0000000FGE/0000160644	Date cast: 15/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2172	17	100x100x100	wet	38	1.620	1620	27	2.7
18-2173	18	100x100x100	wet	38	1.501	1520	15	1.5
18-2174	19	100x100x100	wet	38	1.617	1560	26	2.6
18-2175	20	100x100x100	wet	38	1.622	1510	26	2.6

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

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TEST REPORT**EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES****F822 - Grango Lane, Wrexham****Report no. L18/0133/FOK / 006**

Order reference: 0000000FGE/0000160644	Date cast: 18/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2176	21	100x100x100	wet	35	1.545	1550	22	2.2
18-2177	22	100x100x100	wet	35	1.549	1530	22	2.2
18-2178	23	100x100x100	wet	35	1.623	1560	27	2.7
18-2179	24	100x100x100	wet	35	1.525	1530	23	2.3

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3; cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

.....
W. Elson

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TEST REPORT

EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES

F822 - Grango Lane, Wrexham

Report no. L18/0133/FOK / 007

Order reference: 0000000FGE/0000160644	Date cast: 19/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2180	25	100x100x100	wet	34	1.627	1600	27	2.7
18-2181	26	100x100x100	wet	34	1.534	1550	22	2.1
18-2182	27	100x100x100	wet	34	1.539	1540	27	2.7
18-2183	28	100x100x100	wet	34	1.537	1540	24	2.4

NOTES

- Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
- Density was determined by water displacement.
- A certificate of sampling was not supplied.
- Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
- The type of failure was satisfactory.

.....
W, Elson

Manager – Testing Services
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TEST REPORT**EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES****F822 - Grango Lane, Wrexham****Report no. L18/0133/FOK / 008**

Order reference: 0000000FGE/0000160644	Date cast: 20/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m^3)	Maximum load at failure (kN)	Compressive strength (N/mm^2)
18-2184	29	100x100x100	wet	33	1.507	1510	23	2.3
18-2185	30	100x100x100	wet	33	1.542	1550	24	2.4
18-2186	31	100x100x100	wet	33	1.525	1530	22	2.1
18-2187	32	100x100x100	wet	33	1.574	1560	24	2.4

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

.....
W. Elson

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TEST REPORT

EN 12390-3 COMPRESSIVE STRENGTH AND EN 12390-7 DENSITY OF CONCRETE CUBES

F822 - Grango Lane, Wrexham

Report no. L18/0133/FOK / 009

Order reference: 000000FGE/0000160644	Date cast: 21/12/2017	Date of receipt: 22/01/2018	Date of testing: 22/01/2018	Date of issue: 23/01/2018
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NCA sample reference	Client sample reference	Measured dimensions of cube (mm)	Condition of cube at time of test	Age of cube at test (days)	Mass of cube in air (kg)	Apparent density of cube (kg/m ³)	Maximum load at failure (kN)	Compressive strength (N/mm ²)
18-2189	33	100x100x100	wet	32	1.644	1640	25	2.5
18-2190	34	100x100x100	wet	32	1.543	1540	24	2.4
18-2191	35	100x100x100	wet	32	1.546	1540	24	2.4
18-2192	36	100x100x100	wet	32	1.645	1640	26	2.5

NOTES

1. Cubes were tested for compressive strength in accordance with EN 12390-3:2009 and density in accordance with EN 12390-7: 2009 unless stated otherwise.
2. Density was determined by water displacement.
3. A certificate of sampling was not supplied.
4. Cubes tested were outside tolerance as specified in EN 12390-3, cubes were tested under customer's instruction.
5. The type of failure was satisfactory.

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APPENDIX K

Plot 3 Revised Layout

Mike Scott

From: John Hughes Lloyd <grangeeng@aol.com>
Sent: 02 January 2018 17:55
To: mikescott@groundsolve.com
Subject: Re: Grango Lane.
Attachments: further revised layout due to mine shaft-Model.pdf

Hi Mike,

Best wishes for the New Year.

Regarding the mineshaft discovered on plot 3 I enclose a PDF showing revised positions for dwellings for plots 3 and 4. I have also revised the position of the single storey kitchen/diner area to the opposite side on plots 2 and 3. I am hoping this will improve the situation. We have managed to obtain this by repositioning the proposed adopted road as shown in the enclosed drawing. I do not envisage any issues with planning if we adopt this route.

Is it possible for Steffan to forward me an AutoCAD drawing showing the positions of the positions of the drillings and position of the discovered shaft.

Regards,

John

John Hughes Lloyd.
Ellbay Properties Ltd
Tel: 07952 359601.
email: grangeeng@aol.com

