

MINEWORKINGS REMEDIATION

**land adjacent to Orchard Close,
 Twizell Lane,
 West Pelton,
 DH9 6ST.**

For Mr Paul McVittie,



Report prepared for:
Mr Paul McVittie,
 Poppyfield,
 West Pelton,
 County Durham,
 DH9 6SG

Report prepared by:
Groundshire Limited
The Mineworkings Remediation Specialists
 Littleburn House
 Littleburn Industrial Estate
 Langley Moor
 DURHAM
 DL17 9LH



www.groundshire.com

Order Number: WRD/KELD/12364
 Coal Authority Permit: 25230
 Planning Reference: DM/22/00255/FPA

Dated: 01/09/2022
 Contract No: 12364

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1 INTRODUCTION

1.1 General

This report describes the grid drilling and pressure grouting works carried below a brownfield residential development site known land adjacent to Orchard Close, Twizell Lane, West Pelton, DH9 6ST. The site was formerly a Public House with associated car parking and landscaped areas. The site was being redeveloped as a private residential dwelling by the owner Mr McVittie.

The works were undertaken by Groundshire Limited, Littleburn House, Littleburn Industrial Estate, Langley Moor, DH7 8HJ.

The Client for Groundshire works (the employer) was Mr Paul McVittie, Poppyfield, West Pelton, County Durham, DH9 6SG

ARC Environmental of Rivergreen Centre, Aykley Heads, Durham, DH1 5ST, prepared a Geoenvironmental Assessment Report for the subject site during 2011. This investigation included three rotary open boreholes drilled to assist in assessing the legacy coal mining risks in relation to the site.

Groundshire have no Contractual relationship with ARC in regard to these Works.

1.2 Objectives

The 2011 ARC report indicated that the site was at risk from shallow mining in the High Main coal seam and concluded that

'there would appear to be insufficient rock cover to prevent potential void migration, and as such further investigation and consolidation of the workings / broken ground, typically in the form of pressure grouting, will be required prior to commencing with the proposed development.

In addition when considering the mine shaft recorded on site.....it is likely that during any drilling and grouting of the recorded workings below the site additional probing and grouting for the shaft may need to be carried out'.

The mine shaft CA Ref 423552-004 was not located during the 2011 ARC investigations.

The mine shaft was ultimately encountered at the co-ordinates provided by the Coal Authority during site clearing works undertaken on behalf of Mr McVittie.

Groundshire successfully tendered to Mr McVittie to undertake the drilling and grouting works, across the proposed footprint of the new build residential dwelling plus off-set, together with treatment to the mine shaft.

Groundshire designed a grout grid layout and prepared a method statement for the works. Groundshire applied for and obtained the Coal Authority Permit 25230 for these works. Both are included in Appendix 1.

The objective of the work was to reduce the risk of ground subsidence arising from the presence of mineral workings, across the footprint of the plot to a low residual level. This was to be achieved by drilling and pressure grouting the shallow coal workings where these were present and where there was insufficient rock cover over the workings. In addition the mine shaft was to be stabilised by drilling and grouting.

The comments and opinions expressed in this report are based on the ground conditions encountered during the site works. There may, however, be particular conditions prevailing on the site that have not been encountered during these works and which have, therefore, not been taken into account by this report.

2 THE SITE

The site is a brownfield redevelopment plot known as land adjacent to Orchard Close, Twizell Lane, West Pelton, DH9 6ST.

The treatment area comprised the proposed footprint of the new build residential dwelling extending some way beyond the footprint to allow for the angle of draw effect. A borehole layout drawing 12364-001 is included in Appendix 2.

Drilling and grouting works were also to be undertaken to mine shaft 423552-004.

The treatment area was a broadly square shaped tract of land, measuring approximately 24m by 27m with long axes aligned broadly WSW to ENE.

The site is bounded by Stone Row roadway, that gives access to the site, to the west. New build residential development lies further to the west across the road. Orchard Close lies along the northern site boundary with residential development north of the roadway. Recently constructed residential dwellings lie to the south. A belt of woodland, forming part of a golf course development lies to the east.

The nearest large settlements are Gateshead and Durham both lying 11km distant to the north and south respectively.

At the time of the works the Public House formerly on the site had been demolished. A hardstanding grout base, likely the former car park surface was present and grouting work was undertaken from that hardstanding.

The surface of the site is broadly flat and levels across the site are at approximately 128mAOD.

The approximate grid reference for the site is 423150mE, 552750mN.

3 FIELDWORK

3.1 Drilling and Grouting Operations

Site work was carried out between 21st June and 6th July 2022.

The work was undertaken in general accordance with standard industrial practice; the Groundshire Method Statement and Coal Authority Permit No. 25230 which are included in Appendix 1.

The positions of the grout holes are shown on the drawing 12364-001 'Grout Hole Layout', included in Appendix 2.

During the drilling works records were made of the depths of the grout boreholes, descriptions of material encountered, the diameter of the boreholes, the depth of casing, the date drilled and any testing carried out, together with any other relevant information. These records can be found on the daily drilling records, Appendix 3.

The grout mix consisted of a 12:1 PFA:cement for all grid treatment boreholes. The grout for the shaft treatment boreholes was a 10:1 PFA:cement mix. Details of materials placed into each hole, the date that the grouting took place, the plant used, the pressure applied to the boreholes together with any other relevant information can be found on the grouting records, Appendix 4.

Details of the materials delivered to site can be found on the attached delivery records, Appendix 5.

3.2 Plant and Equipment

Rotary open holes were drilled using Groundshire's Klemm 802.2 top hammer drive rotary hydraulic drill rig.

At the grout station the grout materials were loaded by a loading shovel into a nominal five tonne grout batching plant. Grout was then injected by a double acting diaphragm pumps into the holes via a grout head. The grout head consists of an inlet and outlet valve, a pressure relief valve and a pressure gauge.

4 RESULTS

4.1 Drilling and Grouting

The position of the grout holes and test holes are shown on the drawing number '12364-001 Grout Hole Layout', included in Appendix 2.

Thirty eight grout holes and one test hole were put down in accordance with the Drawing and Method Statement for the works. A further treatment hole and test hole were put down in mine shaft 423552-004.

A total of 782 metres (m) of drilling was undertaken and circa 235 tonnes of grout was injected into the workings in accordance with the Method Statement for the works across the footprint of the proposed dwelling, included as Appendix 1. A total of 47.2m of drilling and circa 110 tonnes of grout were placed into mineshaft 423552-004

Across the site rockhead was encountered at between 3.9m and 5.1m depth and was on average 4.7m depth.

Two coal seams were present at shallow depth below the site, indicated (by others) to be the High Main 'E', and the Main 'F' coal seams. We have referred to these as Seam 1 to Seam 2 below.

4.1.1 Seam 1

The upper seam or evidence of mineworkings consistent with the position of the seam, was encountered in all boreholes put down at the site.

The seam was encountered as intact in 19 of the boreholes. The coal was recorded at between 1.1m and 1.4m in thickness and at an average depth of 17.3m (to the floor).

In the remaining 19 boreholes evidence of historic mining was recorded at a horizon consistent with the position of the seam. Zones of 'Broken Ground' extending up to 7.6m above the floor of the seam were recorded.

The broken strata were recorded at an average depth of 17.6m (to the floor) that is consistent with the position of the seam. For this seam a comparison of holes intersecting broken ground with those proving coal pillars indicated an extraction rate of circa 50%.

4.1.2 Seam 2

A single borehole put down to confirm that there was rock cover over the lower seam. It was encountered at a depth of 26.1m (the floor) and at a thickness of 0.7m.

This seam is at a depth such that it would not normally be considered to require treatment and it is not considered further in this report.

4.1.3 Mineshaft 423552-004

This shaft had been located by Mr McVittie during site clearance works. The position was not surveyed in by us but we are advised (Mr McVittie) that it is at its given location NGR 423178mE, 552765mN.

The shaft diameter was recorded to be 6 foot (1.8m) in the NCB records relating to its inspection and subsequent infilling in the mid 1960's.

Groundshire set up a safety platform over the shaft during 27th June 2022.

One borehole, BH1, was drilled vertically in the centre of the shaft and encountered a variety of fill materials of varying consistency / density to 18.2m depth and was drilled a further five metres to prove that the shaft had been 'bottomed out' to 23.2m total depth. The shaft fill was grouted with 112.2 tonnes in three metre ascending stages, as described in our method statement.

A second injection hole / test hole, BH2 was drilled in the shaft. This hole was drilled to the base of the shaft at 18.4m and was terminated in solid rock at 24.0m depth. Circa 0.55 tonne of grout was injected into the shaft fill in three metre ascending stages which was considered acceptable to demonstrate that the treatment works were complete.

4.2 Testing

The grout was tested for flow and bleed. The results of which were satisfactory, and details of which are shown on the grouting records, in Appendix 4. Grout cubes were taken to confirm the crushing strength of the grout at 28 day intervals. The results of which are considered acceptable and are included in Appendix 6.

One rotary open hole was drilled and subjected to grout acceptance testing, in the presence of the Client, to check the efficacy of the consolidation works. Groundshire was satisfied that the results were acceptable and had been witnessed. Details of the tests are given on the daily grouting records, Appendix 4.

4.3 Gas Monitoring

No concentrations of the monitored gases were recorded that would be considered to be of concern to the operatives.

5 CONCLUSIONS

One shallow coal seam showed evidence of former mining activity likely to represent a legacy mineworkings risk to the safe and stable status of the site for redevelopment.

The average depth to rockhead was generally 4.7m.

The mined seam indicated [by others] to be the High Main 'E' coal was present at an average depth of 17.3m [to the floor of the seam] and at an average thickness of 1.3m.

Shallow mine workings in the worked coal seam were treated beneath the positions indicated on the drawing 'Grout Hole Layout 12364-001', included in Appendix 2.

The workings were treated in accordance with Method Statement for the works. Thirty eight grout boreholes were drilled and circa 235 tonnes of grout were injected to consolidate the workings.

One rotary open hole was drilled and subjected to grout acceptance testing to check the efficacy of the consolidation works. The results of the testing were considered to be acceptable.

Mineshaft 423552-004 was treated by two boreholes which were drilled to the base of the shaft at circa 18m. Both holes were extended a further five metres into rock. The shaft was grouted from its base to the surface in three metre ascending stages to the surface. The shaft was injected with approximately 110 tonnes of grout.

The grout was tested for flow, bleed and crushing strength, the results of which were also satisfactory.

Gas monitoring records made during the work revealed no gas concentrations of concern.

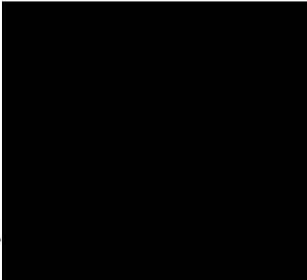
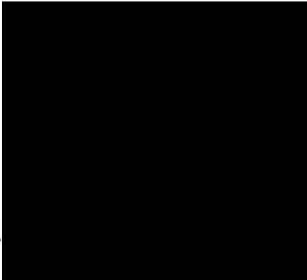
In view of the findings of the drilling and pressure grouting programme and the results of the testing regime, it is our view that the risk of subsidence from the abandoned workings in the shallow coal and mineshaft treated and across the development area has been reduced to a low residual level.

6 NOTE

The report is based on the borehole results. The Report is made on condition that we will not in any circumstances be liable for any loss whatsoever arising directly or indirectly from any opinion given on a possible configuration of strata both between hole positions and below the maximum depth of the investigation. Any such opinion, where given, is for guidance only.

7 COPYRIGHT

Groundshire Limited retains all copyright and other intellectual property rights in all reports, written advice and other material provided by us to you.

	Name	Signature	Date
Prepared by	W Dempster BSc(Hons),MSc.,FGS.,MIMMM.,MIEnvSc.		28/09/2022
Approved by	K E L Dempster BSc(Hons),MSc.,FGS.,MIMMM.,MIEnvSc., FCMI.		28.09.2022

Mineworkings Remediation
Site: land adjacent to Orchard Close, Twizell Lane, West
Pelton, DH9 6ST.
Contract No: 12364

Groundshire Limited
01/09/2022

APPENDIX ONE

METHOD STATEMENT

COAL AUTHORITY PERMIT REF: 25230



METHOD STATEMENT – OPTION 2

TREATMENT OF SHALLOW MINE WORKINGS BY DRILLING AND GROUTING

E-mail: enquiries@groundshire.com
www.groundshire.com

SITE: Former Highwayman Public House, West Pelton, DH9 6SG

REF: 12364

DATE: 18/08/2021

Drilling Rig

Drilling will be carried out by rotary hydraulic rigs using water, air or mist flush.

Primary Grid Drilling

Primary holes will be vertical, 100mm in diameter and taken to a depth of 0.5m below the floor of the seam or workings. Casing will be inserted through the overburden as necessary.

Holes will be drilled at 3.5m intervals 3m outside the footprint of the buildings and a grout curtain formed subsequently to prevent leakage of grout outside the required treatment zones and to allow for the angle of draw effect of crown hole development through the overburden.

Where necessary, the spacing of primary grid perimeter holes will be reduced.

Inclined drilling will replace vertical drilling where necessary.

Secondary Grid Drilling

Secondary infill holes will be drilled between the primary holes, as required, where excessive quantities of grout are injected.

Inclined drilling will replace vertical drilling where necessary.

Grout Injection

Grout will consist of a 12:1 PFA/cement mixture at a water/solids ratio generally of 0.45 but varied where necessary to suit the prevailing geological conditions.

This blend will give a 28 day strength of more than 0.7 N/mm².

Where grout takes are excessive or where large cavities are encountered by the perimeter or infill holes, dry sand or pea-gravel will be added to the grout at the mouth of the hole.

Grout will be mixed by loading bulk PFA from the sheeted stockpile into the grout plant by a loading shovel fitted with a weighing device while cement will be added from 25kg bags.

The surrounding areas will be sprayed to minimise dust nuisance.

Gravity pressure will be used on the primary and secondary grid perimeter boreholes.

The grout will be injected by double-acting diaphragm pumps via a grout head screwed to the hole casings or via a packer at a maximum pressure of 15 psi for the primary and secondary grid infill boreholes.



Director:
UTR No. 76250 17636



K E L Dempster BSc(Hons), MSc., FGS., MIMMM., MIEnvSc., FCMI.
Reg No. 1328803



VAT No. 301065910

SPECIALISTS IN:
Exploratory Rotary Drilling,
Treatment of Mine Workings,
Treatment of Mine Shafts and Adits,
Pressure Grouting and Void Filling,
Geothermal Boreholes and Anchors

Est. 1978



E-mail: enquiries@groundshire.com
www.groundshire.com

Testing

Grout flow tests and bleed tests will be carried out as necessary.

Grout crushing strengths at 28 days will be determined weekly.

At the conclusion of grouting 1 random hole will be drilled and subjected to grout acceptance testing as a check on the efficacy of the consolidation.

Working Hours

The plant will typically work from 8.00am to 4.30pm Monday to Thursday and 8.00am until 3.30pm on Friday.

Records

All holes will be referenced on a master plan and colour-coded to indicate whether pillars, cavities or broken strata are encountered.

Daily returns will be completed giving a brief log of each hole, the daily and cumulative totals of drilling, the dry weight of grout injected into each hole with daily and cumulative totals and the type and weight of materials brought to site, again on a daily and cumulative basis.

Supervision

An engineer with more than 10 years' experience will control the work with frequent visits as necessary from a geologist (MSc., FGS., MIMMM.). Further back-up if required will be given by a mining engineer (C.Eng., MIMMM.).

Environmental Issues

Environmental issues will be managed by a Member of the Institute of Environmental Sciences (MIEnvSc.).

Health & Safety

Health and Safety matters, COSHH and risk assessments will be managed by our Safety Officer.



Director:
UTR No. 76250 17636



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Est. 1978



The Coal
Authority

Permitting Office
Coal Authority
200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

T 01623 637450 (Permitting)
www.gov.uk/coalauthority

Our Ref: 25230

21st June 2022

Groundshire Limited
Littleburn House
Littleburn Industrial Estate
Langley Moor
Durham
DH78HJ

For the attention of Ellen Dempster

By Email: [REDACTED]

Dear Ellen,

**Orchard Close, Twizel Lane, West Pelton, County Durham, DH9 6ST
Application for a Permit to Enter or Disturb Coal Authority Mining Interests**

I refer to your application on behalf of your client for permission to enter the Coal Authority's property. Attached to this letter is the signed permit certificate and supporting documentation which allows you to carry out the works to the specifications in the documents you submitted within "the site" as shown on the attached plan.

Please note that you may require permission from other property owners such as the surface land owner or other mineral owners.

You should be aware that mine gas may be present within coal seams, voids in shallow mine workings, mine entries, voids above such workings and in any permeable strata or surface fill material. More guidance on managing the risk of hazardous gases can be viewed on our website.

Consequently there is a risk of encountering mine gas during the proposed works. All boreholes and excavations should be regularly tested, particularly at times of falling barometric pressure, for all gases associated with coal mining, commonly carbon dioxide, carbon monoxide, methane, oxygen and hydrogen sulphide.

If mine gas or mine water is encountered, you should ensure that such occurrences are documented and that appropriate actions are taken. Any surface construction must take account of the risks associated with building on land that may be susceptible to surface emissions of mine gases and mining related instability. Care should be taken to ensure any exposed coal seams and all boreholes and excavations are effectively sealed with a cement based material at the earliest opportunity to prevent continued ingress of air.

Please ensure that the site supervisor and operatives working under this Permit, have a copy of and are familiar with the attached *Guidance for site operatives on the risk of hazardous gases when drilling or piling through coal*.

The accompanying permit certificate and supporting documentation should be distributed to all interested parties (especially the site operatives) and be available on site for inspection by ourselves or by the HSE.

Coal Authority records confirm that the site occupies a Development High Risk Area (DHRA) which covers the site apart from the SW corner. This categorisation results from the recorded underground working of coal in two seams and the presence of a mine entry in the SE of the site. Surface mining was undertaken across a wide area east of the site abutting to this sites boundary and whilst we expect backfill and connections to the shallow workings under the site backfilled areas do not have receptors located over them. The details as currently held of mine entries on site and within 50m of the boundary are presented in the table below.

This permit certificate is issued on the understanding that, under no circumstances will works other than those specified, be carried out without the prior written approval of the Authority.

You must employ systems for managing health and safety; identifying hazards, assessing risks, creating risk profiles and establishing control measures to control risk to 'As low As Reasonably Practicable' (ALARP). You must ensure at all times that control measures are maintained to prevent and if necessary mitigate against any loss of control. Risks must be controlled to ALARP.

It is your duty to consider if the Borehole Sites and Operations Regulations 1995 apply to your activity and comply with the regulations as required. However, your health and safety systems should include as assessment of potential hazards and if relevant, a plan for the prevention of fire and explosions including the potential for blowouts (gas/fluids); on-site and off-site receptors should be considered and how any risks to them will be mitigated.

Manned entry into Coal Authority property is strictly prohibited. Under no circumstances should any person enter any Coal Authority property such as mine entries, underground workings or crop-workings.

It is the responsibility of the Designer to ensure that the proposed works are sufficient for any planned developments at the site, especially if the discharge of a planning condition is necessary. If at any point you consider that additional works may be required please contact me to discuss this.

Mine Entry Details

Reference:	Approx Co-ordinates:	Departure:	Depth:	Drift Thickness:	Assumed Diameter:	Shaft Diameter:	Treatment Date:	Treatment Details:	Source:
Reference: 423552-004 Shaft	423178 552765*	Departure: 5m	Depth: 17m	Drift Thickness: 4.42m	N/A	Shaft Diameter: 1.8m	Treatment Date: 05/12/1967	Treatment Details: This entry was filled in December 1967 with pit stones and washery debris from the surface to the High Main seam. In 2011 a ground probing radar survey was carried out By Quicksurv to try and locate its presence. Several anomalies were identified and Arc Environmental Ltd carried out a series of trial trenches to investigate the anomalies but no evidence of a mine entry was recorded	Source: OS 1:2500 NZ2352 1960, OS 1:2500 25 inch Durham 12/11 1939, 1920. Ab Plan: D638
Reference: 423552-003 Shaft	423171 552829	Departure: 8m	Unknown	Unknown	Assumed Diameter: 2m	N/A	N/A	Treatment Details: An area of 10m radius around the assumed position of the shaft was searched down to clay without any trace of the shaft.	Source: Ab Plan: 5437(b) dated 1938.

*Note that as a result of a data improvement exercise shaft -004's location was recently revised and the coordinated quoted above are the new position.

As you will be aware the permitting process is separate to and not dependent upon Planning, the granting of this permit should therefore not be construed to indicate in anyway endorsement of a remedial strategy and its aim to discharge any relevant Planning Condition/s. The latter, if we are consulted by the LPA will be considered at a time when completion reporting has been provided detailing all of the works carried out, their validation and the ground conditions/mining circumstances established. Planning considers if the site has been made safe and stable for the intended development and this includes all the area within the Planning Boundary.

You have confirmed today that the depth and conditions within the next seam down, the High Main, a seam with a history of spontaneous combustion and recorded as worked beneath the site will be probed to confirm the assumption made by others and from BGS data and other records that it is beyond the need for treatment.

Please submit full details of all works undertaken as required by section 8 of the permit terms and conditions, when the works are complete. At this time you will need to confirm if the permit should remain in place. If you wish to discuss this or any other matter, please do not hesitate to contact me using the contact details shown.

Please quote the Coal Authority Reference No.25230 on all future correspondence.

If you want further information on the Permitting process, please visit:

<https://www.gov.uk/get-a-permit-to-deal-with-a-coal-mine-on-your-property>

The Permitting Office is open: Monday to Thursday – 8:45am to 5pm and Friday – 8:45am to 4.30pm for any queries.

Yours faithfully



Permitting Manager





The Coal
Authority

Permit to Enter or Disturb Coal Authority Interests

Permit 25230

Name and Address of Permit Holder:

*Paul McVittie
Poppyfield
West Pelton
County Durham
DH9 6SY*

Site Location:

*Orchard Close
Twizel Lane
West Pelton
County Durham
DH9 6ST*

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

*Treatment of shallow mine workings by drilling and grouting to commencing on a 4.25m primary grid and the treatment of one mine entry (423552-004) by grouting all within the Authority's interests at the identified site location above as shown on the Grant Permit Boundary (overleaf) 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 Permit Holder's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.*

Conditions:

- *Manned entry (i.e.) into mine entries/workings) is strictly prohibited.*
- *Water flush drilling only*
- *Gas Monitoring for CO, CH₄, CO₂, O₂, and H₂S at borehole and drill rig*
- *Operators undertaking the work must be in possession of this certificate and the Permit boundary plan at the time of works*
- *Appropriate borehole reinstatement and sealing without delay and to withstand site level changes*

Signed: _____

Granted Date: _____

21/06/2022

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 637450; E-Mail: permissions@coal.gov.uk*



The Coal
Authority

Granted Permit Boundary

Permit Ref: 25230

Permit Boundary:



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APPENDIX TWO

DRAWING 12364-001 GROUT HOLE LAYOUT

LEGEND

- Coal
- Broken Ground
- Test Hole

AMENDMENT	REV	BY	DATE

Client
Mr Paul McVittie

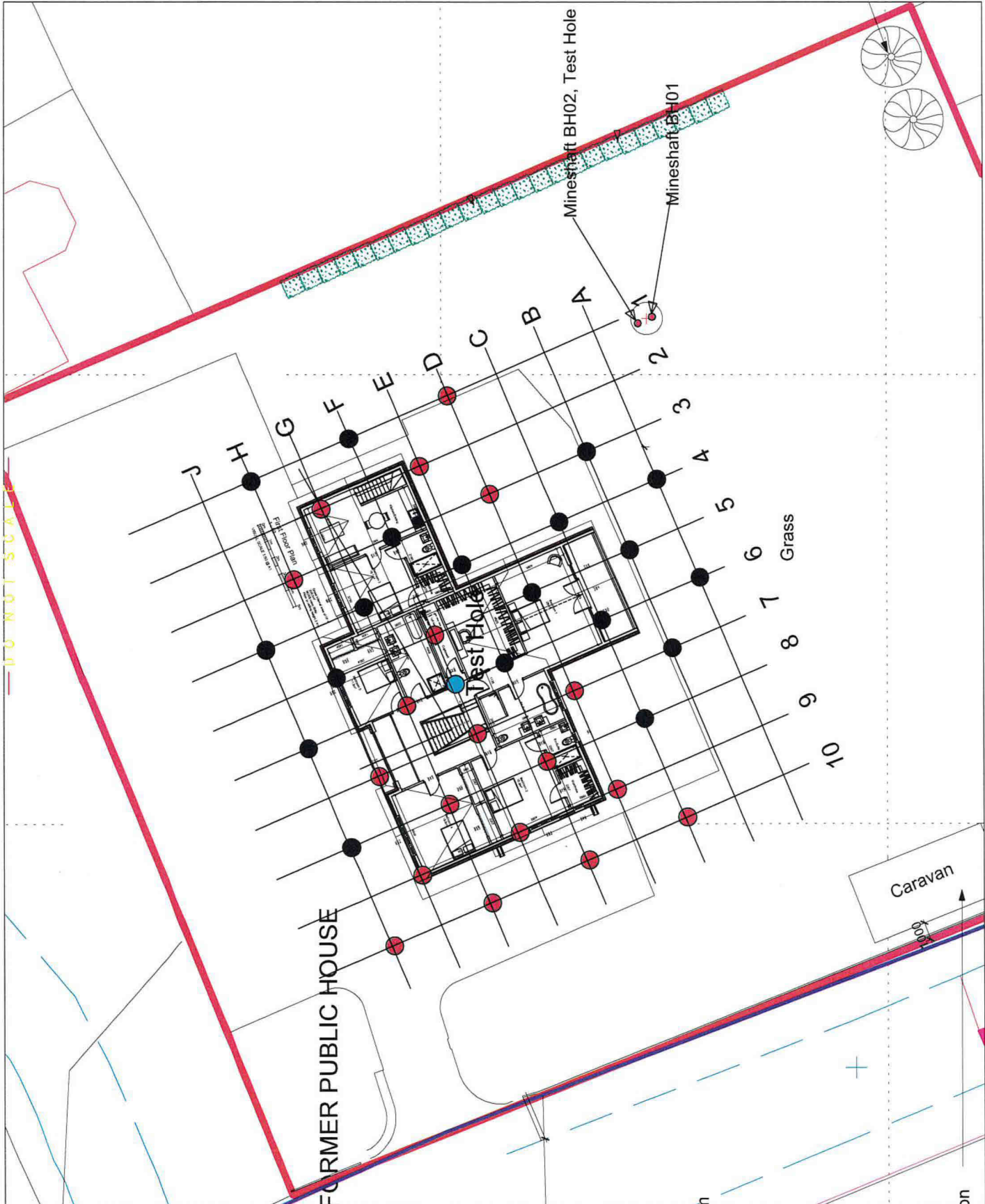
Project
Land adjacent to Orchard Close
Twizzel Lane
West Peilton
DH9 6ST

Drawing Title
Grout Hole Layout

Drawn	WRD	Date	August 2022
Checked	KELD	Date	August 2022
Scale	NTS		

Groundshire Limited
REMEDIATION SPECIALISTS
Lilburn House, Lilburn Industrial Estate
Langley Moor, DURHAM, DH7 8JU
E: enquiries@groundshire.com

Proj. No. 12364-001 Rev.



APPENDIX THREE

DAILY DRILLING RECORDS

DAILY DRILLING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

SHEET NO. 1

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From	Depth To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From	Depth To	STRATA
A4	19.00	6.00	21.6.2022	SR	0.00	4.40	OVERBURDEN	B5	19.00	6.00	21.6.2022	SR	0.00	4.50	OVERBURDEN
					4.40	15.90	SANDSTONE						4.50	15.90	SANDSTONE
					15.90	17.20	COAL						15.90	17.20	COAL
					17.20	19.00	MUDSTONE						17.20	19.00	MUDSTONE
A6	19.00	6.00	21.6.2022	SR	0.00	4.10	OVERBURDEN	B3	19.00	6.00	21.6.2022	SR	0.00	4.60	OVERBURDEN
					4.10	15.90	SANDSTONE						4.60	15.80	SANDSTONE
					15.90	17.00	COAL						15.80	17.20	COAL
					17.00	19.00	MUDSTONE						17.20	19.00	MUDSTONE
B7	18.00	6.00	21.6.2022	SR	0.00	3.90	OVERBURDEN	C4	19.00	6.00	21.6.2022	SR	0.00	4.60	OVERBURDEN
					3.90	15.80	SANDSTONE						4.60	16.00	SANDSTONE
					15.80	17.00	COAL						16.00	17.30	COAL
					17.00	18.00	MUDSTONE						17.30	19.00	MUDSTONE
							Holes Drilled				Strata Encountered				
DRILLING METRES							CASING METRES				STRATA ENCOUNTERED				
PAGE TOTAL 113.00							PAGE TOTAL 36.00				6 COAL 6 B/G 0 VOID 0				
PREV. TOTAL 0.00							PREV. TOTAL 0.00				0 COAL 0 B/G 0 VOID 0				
RUN. TOTAL 113.00							RUN. TOTAL 36.00				6 COAL 6 B/G 0 VOID 0				

DAILY DRILLING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

SHEET NO. 5

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From	Depth To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From	Depth To	STRATA				
G6	21.00	6.00	23.6.2022	SR	0.00	4.70	OVERBURDEN	G4	21.00	6.00	23.6.2022	SR	0.00	4.80	OVERBURDEN				
					4.70	13.20	SANDSTONE						4.80	16.00	SANDSTONE				
					13.20	17.80	BROKEN GROUND						16.00	17.40	COAL				
					17.80	21.00	SOLID						17.40	21.00	MUDSTONE				
G8	21.00	6.00	23.6.2022	SR	0.00	4.90	OVERBURDEN	F3	21.00	6.00	23.6.2022	SR	0.00	5.00	OVERBURDEN				
					4.90	14.30	SANDSTONE						5.00	16.00	SANDSTONE				
					14.30	17.80	BROKEN GROUND						16.00	17.40	COAL				
					17.80	21.00	SOLID						17.40	21.00	MUDSTONE				
G2	21.00	6.00	23.6.2022	SR	0.00	4.90	OVERBURDEN	F1	21.00	6.00	23.6.2022	SR	0.00	4.80	OVERBURDEN				
					4.90	14.10	SANDSTONE						4.80	15.90	SANDSTONE				
					14.10	17.50	BROKEN GROUND						15.90	17.30	COAL				
					17.50	21.00	SOLID						17.30	21.00	MUDSTONE				
							HOLES DRILLED								STRATA ENCOUNTERED				
PAGE TOTAL		126.00		PAGE TOTAL		36.00		6		COAL		3		3		VOID		0	
PREV. TOTAL		467.00		PREV. TOTAL		144.00		24		COAL		11		13		VOID		0	
RUN. TOTAL		593.00		RUN. TOTAL		180.00		30		COAL		14		16		VOID		0	

DAILY DRILLING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

SHEET NO.

6

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From	Depth To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From	Depth To	STRATA
F7	21.00	6.00	23.6.2022	SR	0.00	4.90	OVERBURDEN	H3	21.00	6.00	24.6.2022	SR	0.00	4.80	OVERBURDEN
					4.90	13.60	SANDSTONE						4.80	13.20	SANDSTONE
					13.60	17.30	BROKEN GROUND						13.20	17.60	BROKEN GROUND
					17.30	21.00	SOLID						17.60	21.00	SOLID
F5	21.00	6.00	23.6.2022	SR	0.00	4.80	OVERBURDEN	J6	21.00	6.00	24.6.2022	SR	0.00	4.70	OVERBURDEN
					4.80	14.20	SANDSTONE						4.70	16.20	SANDSTONE
					14.20	17.50	BROKEN GROUND						16.20	17.60	COAL
					17.50	21.00	SOLID						17.60	21.00	MUDSTONE
H5	21.00	6.00	24.6.2022	SR	0.00	4.80	OVERBURDEN	J8	30.00	6.00	24.6.2022	SR	0.00	4.80	OVERBURDEN
					4.80	16.10	SANDSTONE						4.80	16.10	SANDSTONE
					16.10	17.50	COAL						16.10	17.50	COAL
					17.50	21.00	MUDSTONE						17.50	25.40	SANDSTONE/MUDSTONE
													25.40	26.10	COAL
													26.10	30.00	SANDSTONE/MUDSTONE
							STRATA ENCOUNTED								
PAGE TOTAL		135.00	PAGE TOTAL		36.00	HOLES		6	COAL	3	B/G		3	VOID	0
PREV. TOTAL		593.00	PREV. TOTAL		180.00	PREVIOUS HOLES		30	COAL	14	B/G		16	VOID	0
RUN. TOTAL		728.00	RUN. TOTAL		216.00	TOTAL HOLES		36	COAL	17	B/G		19	VOID	0

APPENDIX FOUR

DAILY GROUTING RECORDS

DAILY GROUTING RETURNS

SHEET NO. 2
 DATE 27.6.2022
 MIX 12to1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE
 I

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	DELIVERIES (TONNES)		
								CEMENT	P.F.A.	GRAVEL
E10	1.04	0.08	0.96			1.00				
F1	0.26	0.02	0.24				1.00			
F3	0.26	0.02	0.24				1.00			
F5	1.04	0.08	0.96			1.00				
F7	1.04	0.08	0.96			1.00				
F9	1.04	0.08	0.96			1.00				
G2	1.04	0.08	0.96			1.00				
G4	0.26	0.02	0.24				1.00			
G6	1.04	0.08	0.96			1.00				
G8	1.04	0.08	0.96			1.00				
G10	1.04	0.08	0.96			1.00				
H1	0.26	0.02	0.24				1.00			
H3	1.04	0.08	0.96			1.00				
H5	0.26	0.02	0.24				1.00			
H7	1.04	0.08	0.96			1.00				
H9	1.04	0.08	0.96			1.00				
J4	0.26	0.02	0.24				1.00			
J6	0.26	0.02	0.24				1.00			
PAGE TOTAL	13.26	1.02	12.24	0.00	0.00	COMPLETE	7.00			
PREV. TOTAL	10.14	0.78	9.36	0.00	0.00	PREV. COMP.	11.00			
RUN. TOTAL	23.40	1.80	21.60	0.00	0.00	TOTAL COMP.	18.00			

TICKET NUMBERS / CUBES / REMARKS			
TODAYS			
DELIVERIES			
PREVIOUS	9.00	28.52	0.00
DELIVERIES			
TOTAL	9.00	28.52	0.00
DELIVERIES			
TOTAL	1.80	21.60	0.00
USED			
STOCK	7.20	6.92	0.00
ON SITE			

DAILY GROUTING RETURNS

SHEET NO. 4
 DATE 28.6.2022
 MIX 12to1

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	CEMENT	P.F.A.	GRAVEL
C10	3.25	0.25	3.00			1.00				
D1	3.25	0.25	3.00			1.00				
D3	3.25	0.25	3.00				1.00			
D7	3.25	0.25	3.00				1.00			
D9	3.25	0.25	3.00				1.00			
E2	3.25	0.25	3.00			1.00				
E8	3.25	0.25	3.00				1.00			
E10	3.25	0.25	3.00			1.00				
F5	3.25	0.25	3.00				1.00			
F7	3.25	0.25	3.00				1.00			
F9	3.25	0.25	3.00			1.00				
G2	3.25	0.25	3.00			1.00				
G6	3.25	0.25	3.00				1.00			
G8	3.25	0.25	3.00			1.00				
G10	3.25	0.25	3.00			1.00				
H3	3.25	0.25	3.00			1.00				
H7	3.25	0.25	3.00				1.00			
H9	3.25	0.25	3.00			1.00				
PAGE TOTAL	58.50	4.50	54.00	0.00	0.00	COMPLETE	8.00			
PREV. TOTAL	24.70	1.90	22.80	0.00	0.00	PREV. COMP.	19.00			
RUN. TOTAL	83.20	6.40	76.80	0.00	0.00	TOTAL COMP.	27.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES		56.76		
PREVIOUS DELIVERIES	9.00	28.52	0.00	0.00
TOTAL DELIVERIES	9.00	85.28	0.00	0.00
TOTAL USED	6.40	76.80	0.00	0.00
STOCK ON SITE	2.60	8.48	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS			
PFA			
446150	28.38		
446188	28.38		
Flow Test	390mm	Bleed Test	3%
Flow Test	420mm	Bleed Test	4%

DAILY GROUTING RETURNS

SHEET NO. 6
 DATE 29.6.2022
 MIX 12to1

GROUNDSHIRE
 GROUNDSHIRE
 GROUNDSHIRE
 GROUNDSHIRE

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
C10	5.20	0.40	4.80			1.00				
D1	5.20	0.40	4.80			1.00				
E2	6.50	0.50	6.00			1.00				
E10	5.20	0.40	4.80			1.00				
F9	6.50	0.50	6.00			1.00				
G2	5.20	0.40	4.80			1.00				
G8	6.50	0.50	6.00			1.00				
G10	5.20	0.40	4.80			1.00				
H3	5.20	0.40	4.80			1.00				
H9	6.50	0.50	6.00			1.00				
J10	5.20	0.40	4.80			1.00				
PAGE TOTAL	62.40	4.80	57.60	0.00	0.00	COMPLETE	0.00			
PREV. TOTAL	86.45	6.65	79.80	0.00	0.00	PREV. COMP.	27.00			
RUN. TOTAL	148.85	11.45	137.40	0.00	0.00	TOTAL COMP.	27.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES	7.00	56.98		
PREVIOUS DELIVERIES	9.00	85.28	0.00	0.00
TOTAL DELIVERIES	16.00	142.26	0.00	0.00
TOTAL USED	11.45	137.40	0.00	0.00
STOCK ON SITE	4.55	4.86	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS			
PFA	CEMENT		
446251	28.86	T7423	7
446257	28.12		
Flow Test	390mm	Bleed Test	3%
Flow Test	470mm	Bleed Test	4%

DAILY GROUTING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

SHEET NO. 7

DATE 30.6.2022

MIX 12to1

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE
I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
C10	1.95	0.15	1.80			1.00				
G10	1.95	0.15	1.80		1.00	1.00				
J10	1.95	0.15	1.80		1.00	1.00				
F9	3.25	0.25	3.00			1.00				
H9	3.25	0.25	3.00			1.00				
G8	3.25	0.25	3.00			1.00				
H3	3.25	0.25	3.00			1.00				
E2	3.25	0.25	3.00			1.00				
G2	3.25	0.25	3.00			1.00				
D1	1.95	0.15	1.80			1.00				
E10	1.95	0.15	1.80		1.00	1.00				
PAGE TOTAL	32.25	2.25	27.00	0.00	3.00	COMPLETE	0.00			
PREV. TOTAL	148.85	11.45	137.40	0.00	0.00	PREV. COMP.	27.00			
RUN. TOTAL	181.10	13.70	164.40	0.00	3.00	TOTAL COMP.	27.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES	1.50	56.56		3.00
PREVIOUS DELIVERIES	16.00	142.26	0.00	0.00
TOTAL DELIVERIES	17.50	198.82	0.00	3.00
TOTAL USED	13.70	164.40	0.00	3.00
STOCK ON SITE	3.80	34.42	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS				
PFA	CEMENT			
446272	28.18	T7424	1.5	
446273	28.38			
GRAVEL				
T7425	3			
Flow Test	460mm	Bleed Test	4%	

DAILY GROUTING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

Mineshaft Borehole 1

SHEET NO. 8
 DATE 30.6.2022
 MIX 10 to 1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE
 I

QUANTITIES USED (TONNES)									
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI		
18Mts	30.80	2.80	28.00			✓			
PAGE TOTAL	30.80	2.80	28.00	0.00	0.00	COMPLETE	0.00		
PREV. TOTAL	181.10	13.70	164.40	0.00	3.00	PREV. COMP.	27.00		
RUN. TOTAL	211.90	16.50	192.40	0.00	3.00	TOTAL COMP.	27.00		

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES				
PREVIOUS DELIVERIES	17.50	198.82	0.00	3.00
TOTAL DELIVERIES	17.50	198.82	0.00	3.00
TOTAL USED	16.50	192.40	0.00	3.00
STOCK ON SITE	1.00	6.42	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS
Flow Test 480mm Bleed Test 5%

DAILY GROUTING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

SHEET NO. 9

DATE 1.7.2022

GROUNDSHIRE
GROUNDSHIRE
GROUNDSHIRE
GROUNDSHIRE

CLIENT MR P MCVITTIE

MIX 10 to 1

Mineshaft Borehole 1

QUANTITIES USED (TONNES)									
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI		
18MTS	11.00	1.00	10.00				✓		
16MTS	12.10	1.10	11.00				✓		
14MTS	11.00	1.00	10.00			✓			
PAGE TOTAL	34.10	3.10	31.00	0.00	0.00	COMPLETE	0.00		
PREV. TOTAL	211.90	16.50	192.40	0.00	3.00	PREV. COMP.	27.00		
RUN. TOTAL	246.00	19.60	223.40	0.00	3.00	TOTAL COMP.	27.00		

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES	10.50	56.94		19.20
PREVIOUS DELIVERIES	17.50	198.82	0.00	3.00
TOTAL DELIVERIES	28.00	255.76	0.00	22.20
TOTAL USED	19.60	223.40	0.00	3.00
STOCK ON SITE	8.40	32.36	0.00	19.20

TICKET NUMBERS / CUBES / REMARKS	
PFA	
446298	28.48
446328	28.46
CEMENT	
T7428	10.5
GRAVEL	
3307367	19.2
Flow Test	480mm Bleed Test
	5%

DAILY GROUTING RETURNS

SHEET NO. 10
 DATE 1.7.2022
 MIX 12to1

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE

I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
E10	2.60	0.20	2.40		1.00		1.00			
F9	2.60	0.20	2.40		1.00		1.00			
E2	1.30	0.10	1.20				1.00			
D1	1.30	0.10	1.20				1.00			
C10	5.20	0.40	4.80		2.00		1.00			
J10	3.90	0.30	3.60		3.00					
G10	2.60	0.20	2.40		1.00		1.00			
PAGE TOTAL	27.50	1.50	18.00	0.00	8.00	COMPLETE	5.00			
PREV. TOTAL	246.00	19.60	223.40	0.00	3.00	PREV. COMP.	27.00			
RUN. TOTAL	273.50	21.10	241.40	0.00	11.00	TOTAL COMP.	32.00			

DELIVERIES (TONNES)				
TODAYS DELIVERIES	CEMENT	P.F.A.	SAND	GRAVEL
PREVIOUS DELIVERIES	28.00	255.76	0.00	22.20
TOTAL DELIVERIES	28.00	255.76	0.00	22.20
TOTAL USED	21.10	241.40	0.00	11.00
STOCK ON SITE	6.90	14.36	0.00	11.20

TICKET NUMBERS / CUBES / REMARKS
Flow Test 460mm Bleed Test 5%

DAILY GROUTING RETURNS

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

Mineshaft Borehole 1

SHEET NO. 13

DATE 5.7.2022

MIX 10 to 1

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE
I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
10MTS	6.60	0.60	6.00				✓			
8MTS	6.60	0.60	6.00				✓			
6MTS	3.30	0.30	3.00				✓			
4MTS	3.30	0.30	3.00		Grout rising to surface		1			
					Borehole 1 complete					
PAGE TOTAL	19.80	1.80	18.00	0.00	0.00	COMPLETE	1.00			
PREV. TOTAL	326.50	25.10	284.40	0.00	17.00	PREV. COMP.	38.00			
RUN. TOTAL	346.30	26.90	302.40	0.00	17.00	TOTAL COMP.	39.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES				
PREVIOUS DELIVERIES	28.00	312.42	0.00	22.20
TOTAL DELIVERIES	28.00	312.42	0.00	22.20
TOTAL USED	26.90	302.40	0.00	17.00
STOCK ON SITE	1.10	10.02	0.00	5.20

TICKET NUMBERS / CUBES / REMARKS
Flow Test 460 Bleed Test 5%

DAILY GROUTING RETURNS

SHEET NO. 14
 DATE 6.7.2022
 MIX 10 to 1

GROUNDSHIRE
 GROUNDSHIRE
 GROUNDSHIRE
 GROUNDSHIRE

SITE 123364 OFF ORCHARD CLOSE, WEST PELTON, DH9 6ST

CLIENT MR P MCVITTIE

Mineshaft Borehole 2

QUANTITIES USED (TONNES)																	
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	DELIVERIES (TONNES)									
18MTS TO G/L	0.55	0.05	0.50				✓	TODAYS	CEMENT	P.F.A.	SAND	GRAVEL					
								DELIVERIES									
								PREVIOUS	28.00	312.42	0.00	22.20					
								DELIVERIES									
								TOTAL	28.00	312.42	0.00	22.20					
								DELIVERIES									
								TOTAL	26.95	302.90	0.00	17.00					
								USED									
								STOCK	1.05	9.52	0.00	5.20					
								ON SITE									
PAGE TOTAL										0.55	0.05	0.50	0.00	0.00	0.00	17.00	1.00
PREV. TOTAL										346.30	26.90	302.40	0.00	17.00	0.00	17.00	39.00
RUN. TOTAL										346.85	26.95	302.90	0.00	17.00	0.00	17.00	40.00
TICKET NUMBERS / CUBES / REMARKS																	

Mineworkings Remediation
Site: land adjacent to Orchard Close, Twizell Lane, West
Pelton, DH9 6ST.
Contract No: 12364

Groundshire Limited
01/09/2022

APPENDIX FIVE

MATERIALS DELIVERY TICKETS



.BO
.L.

Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446298
Arrival Date : 23/06/2022 15:13
Exit Date : 23/06/2022 15:34
Vehicle Reg : JL04PET
Trade ID : AA04167
Order No : 2085572
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB	ID	DATE	TIME
15300kg	053859	IN2		23/06/2022	15:13
43780kg	046102	MANUAL		23/06/2022	15:34
28480kg					

Signed By Driver:-

.....
Received By:-

.....
+
These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



.BO
.L.

Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446328
Arrival Date : 24/06/2022 08:54
Exit Date : 24/06/2022 09:18
Vehicle Reg : YJ18MDN
Trade ID : AA04167
Order No : 2085571
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB	ID	DATE	TIME
15040kg	053886	IN2		24/06/2022	08:54
43500kg	046132	MANUAL		24/06/2022	09:18
28460kg					

Signed By Driver:-

.....
Receiv 

.....
+
These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



.BO
.L.

Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446272
Arrival Date : 23/06/2022 06:51
Exit Date : 23/06/2022 07:48
Vehicle Reg : PJ67HLW
Trade ID : AA04167
Order No : 2085255
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB ID	DATE	TIME
15780kg	053838	IN2	23/06/2022	06:51
43960kg	046076	MANUAL	23/06/2022	07:48
28180kg				

Signed By Driver:-

Received By:-

These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446273
Arrival Date : 23/06/2022 07:28
Exit Date : 23/06/2022 07:56
Vehicle Reg : JL04PET
Trade ID : AA04167
Order No : 2085254
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB ID	DATE	TIME
15220kg	053839	IN2	23/06/2022	07:28
43600kg	046077	MANUAL	23/06/2022	07:56
28380kg				

Signed By Driver:-

Received By:-

These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446251
Arrival Date : 22/06/2022 09:52
Exit Date : 22/06/2022 10:09
Vehicle Reg : YJ18MDF
Trade ID : AA04167
Order No : 2085253
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB	ID	DATE	TIME
14840kg	053821	IN2		22/06/2022	09:52
43700kg	046059	MANUAL		22/06/2022	10:09
28860kg					

Signed By Driver

Received By:-

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These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446257
Arrival Date : 22/06/2022 11:18
Exit Date : 22/06/2022 11:41
Vehicle Reg : DX15KFD
Trade ID : AA04167
Order No : 2085252
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB	ID	DATE	TIME
15600kg	053826	IN2		22/06/2022	11:18
43720kg	046064	MANUAL		22/06/2022	11:41
28120kg					

Signed By Driver:-

Received By:-

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These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446150
Arrival Date : 20/06/2022 15:58
Exit Date : 20/06/2022 16:37
Vehicle Reg : YJ18MDN
Trade ID : AA04167
Order No : 2084684
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB	ID	DATE	TIME
15140kg	053730	IN2		20/06/2022	15:58
43520kg	045960	MANUAL		20/06/2022	16:37
28380kg					

Signed By Driver:-

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Received By:-

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These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446188
Arrival Date : 21/06/2022 09:17
Exit Date : 21/06/2022 09:40
Vehicle Reg : YX65NXB
Trade ID : AA04167
Order No : 2084683
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB	ID	DATE	TIME
15620kg	053766	IN2		21/06/2022	09:17
44000kg	045994	MANUAL		21/06/2022	09:40
28380kg					

Signed By Driver:-

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Received By:-

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These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446090
Arrival Date : 17/06/2022 15:09
Exit Date : 17/06/2022 15:27
Vehicle Reg : YX180VR
Trade ID : AA04167
Order No : 2084682
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB ID	DATE	TIME
15040kg	053879	IN2	17/06/2022	15:09
43560kg	045908	MANUAL	17/06/2022	15:27
28520kg				

Signed By Driver:-

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Received By:-

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These products have been produced in compliance with the 'Pulverised Fuel Ash Quality Protocol'.

Thompson's Quarry
 Cambridge, NE45 5LX
 Tel: 01454 632015 Fax: 01454 394932
 License No.: NBL1120

THOMPSONS OF BRIDFORD
 WY 87M THOMPSONS (Quarries) Ltd
 Thompsons of Bridford Ltd
 Head Office
 Telephone: 0121 3624722 Fax: 0121 361 833687



CUSTOMER COPY

Header: C111000 WY87M THOMPSON
 Customer: DORRONS QUARRY
 GROUNDSHIRE LTD
 ORCHARD CROSE
 WESTBELTON
 DERBY

Product: 011
 CONVEYANCE NOTE

Ticket No. 3607307



Registration: NL689EPO
 Veh Code: V410274
 Order No: 123542104
 Customer REF:

Source: 5606
 Destination: 5612
 Remark:

Product: 5605062
 Delivered Today: 10.201
 COMM WASHED GRAVEL

Final Weight: 12680 kg 24/06/2022 16:50:30 245.354 121
 Final Weight: 31880 kg 24/06/2022 16:50:40 245.383 121
 Net: 19200 kg

Weighted Operator Signature	Driver Name G. YOUNG	Customer Signature	Ham Name
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Order

T74-25

Date: 23/6/22

From: DURHAM DEPOSIT

To: WEST BELTON

Order Number: T7425

Please Supply:

Quantity	Description
3	TONE GRAVEL

Required by: R. FISHER
 Signed: [Redacted]
 Print Name: [Redacted]
 Please deliver to above address

Please quote above Order No. on all invoices and Delivery Notes



Order

T74 28

Date: 24/6/22

From: Durham Depot

To: West Preston

Order Number: T7428

Please Supply:

Quantity	Description
10.5	TRADE CEMENT

Required to deliver to above address

Signed

Print Name

Please quote above Order No. on all Invoices and Delivery Notes



Order

T74 24

Date: 23/6/22

From: Durham Depot

To: West Preston

Order Number: T7424

Please Supply:

Quantity	Description
1.5	TRADE CEMENT

Required to deliver to above address

Signed

Print Name

Please quote above Order No. on all Invoices and Delivery Notes



Order

T7423

Date: 22/6/22

From: DURHAM DEAST

To: ORWARD CLOSE

Order Number: T7423

Please Supply:

Quantity	Description
7	TOWNE CEMENT

Required Please deliver to above address

Signed

Print Name

Please quote above Order No. on all Invoices and Delivery Notes



Order

T7420

Date: 16/6/22

From: DURHAM DEAST

To: ORWARD CLOSE, WEST RETON

Order Number: T7420

Please Supply:

Quantity	Description
9	TOWNE CEMENT

Required Please deliver to above address

Signed

Print Name

Please quote above Order No. on all Invoices and Delivery Notes



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446353
Arrival Date : 24/06/2022 15:07
Exit Date : 24/06/2022 15:29
Vehicle Reg : YX65NXB
Trade ID : AA04167
Order No : 2086134
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

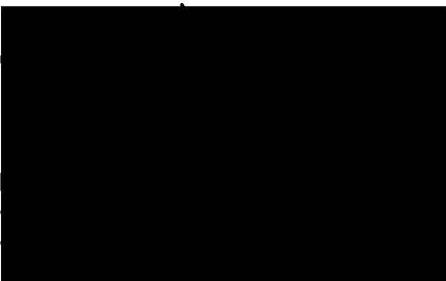
Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB ID	DATE	TIME
15640kg	020367	IN1	24/06/2022	15:07
43880kg	046160	MANUAL	24/06/2022	15:29
28240kg				

Signed By Driver:-

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Receive



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Ash Qu



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Final Weighing Ticket
(By Products)

DRAX POWER LIMITED
DRAX POWER STATION
DRAX
SELBY
Y08 8PH
01757 618381

Ticket Number : 446388
Arrival Date : 27/06/2022 09:36
Exit Date : 27/06/2022 09:52
Vehicle Reg : JL04PET
Trade ID : AA04167
Order No : 2086135
Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE
Product Title :
EN13055-1 COND
Driver :
Haulier : POWER001
POWERMIN

Cust Address :-
POWER MINERALS
DRAX POWER STATION
DRAX
SELBY
Y08 8PH

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB ID	DATE	TIME
15440kg	053919	IN2	27/06/2022	09:36
43860kg	046191	MANUAL	27/06/2022	09:51
28420kg				

Signed By Driver:-

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Received By:-

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These products have been produced in
compliance with the 'Pulverised Fuel
Ash Quality Protocol'.

APPENDIX SIX

GROUT CUBE TEST RESULTS

GAS MONITORING SHEETS

Client: Groundshire

Address: Littleburn House
 Littleburn Industrial Estate
 Langley Moor

Project Name: 18060, Various Sites
 Project Number: 2250038

TEST CERTIFICATE
Determination of Compressive Strength of Concrete Cubes
BS EN 12390 - Part 3 : 2009

Ian Farmer Ref:	5832A	5832B	5832C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	12:1 Grout No Slump No Delivery Ticket			
Pour Location	House Plot West Pelton			
Date Cast	21-Jun-22	21-Jun-22	21-Jun-22	
Date Received	30-Jun-22	30-Jun-22	30-Jun-22	
Age at Test (Days)	28	28	28	-
Date Tested	19-Jul-22	19-Jul-22	19-Jul-22	
Cube Width Length (mm) Measured	100 100	100 100	100 100	
Weight in Air (g)	1659.5	1723.3	1677.7	
Weight in Water (g)	529.1	485.8	525.4	
Saturated Density (Kg/m ³)	1570	1480	1560	
Maximum Load at Failure (kN)	79	73	64	
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal	Normal	
Compressive Strength (N/mm²)	7.9	7.3	6.4	
Remarks Deviations Condition of Cube when received	No Remarks No Deviations No Surface Defects / No Fins, Received Protected from water loss	No Remarks No Deviations No Surface Defects / No Fins, Received Protected from water loss	No Remarks No Deviations No Surface Defects / No Fins, Received Protected from water loss	

Note: Cubes retained for inspection will be kept for 14 days after test date unless otherwise notified. Cubes received with no surface defects/no fines & protected from moisture loss, unless stated. Water curing temperature 20 ± 2°C on receipt into laboratory, unless stated. Cubes tested in saturated surface dry condition.

BS EN 12390 - 2 : 2019 Clause 6.5 Curing of test specimens

BS EN 12390 - 1 : 2012 Clause 4 Shape, dimensions and tolerances of specimens

BS EN 12390 - 7 : 2019 Density of hardened concrete. Volume obtained by water displacement

BS EN 12390 - 3 : 2009 Clause 6 Procedure for determining compressive strength of test specimens

Approved By: _____

(Signature)

Richard Telford
 Contracts Manager

Date Approved: 20/07/2022

Page 1 of 1

Client: Groundshire

Address: Littleburn House
 Littleburn Industrial Estate
 Langley Moor

Project Name: 18060, Various Sites
 Project Number: 2250038

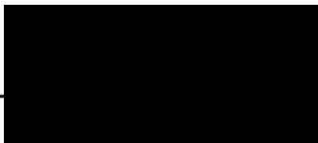
TEST CERTIFICATE
Determination of Compressive Strength of Concrete Cubes
BS EN 12390 - Part 3 : 2009

Ian Farmer Ref:	5831A	5831B	5831C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	10:1 Grout No Slump No Delivery Ticket			
Pour Location	West Pelton Shaft			
Date Cast	24-Jun-22	24-Jun-22	24-Jun-22	
Date Received	30-Jun-22	30-Jun-22	30-Jun-22	
Age at Test (Days)	28	28	28	-
Date Tested	22-Jul-22	22-Jul-22	22-Jul-22	
Cube Width Length (mm) Measured	100 100	100 100	100 100	
Weight in Air (g)	1619.7	1679.4	1638.7	
Weight in Water (g)	542.7	609.4	561.7	
Saturated Density (Kg/m ³)	1620	1690	1640	
Maximum Load at Failure (kN)	75	109	98	
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal	Normal	
Compressive Strength (N/mm²)	7.5	10.9	9.8	
Remarks Deviations Condition of Cube when received	No Remarks No Deviations No Surface Defects / No Fins, Received Protected from water loss	No Remarks No Deviations No Surface Defects / No Fins, Received Protected from water loss	No Remarks No Deviations No Surface Defects / No Fins, Received Protected from water loss	

Note: Cubes retained for inspection will be kept for 14 days after test date unless otherwise notified. Cubes received with no surface defects/no fines & protected from moisture loss, unless stated. Water curing temperature 20 ± 2°C on receipt into laboratory, unless stated. Cubes tested in saturated surface dry condition.

- BS EN 12390 - 2 : 2019 Clause 6.5 Curing of test specimens
- BS EN 12390 - 1 : 2012 Clause 4 Shape, dimensions and tolerances of specimens
- BS EN 12390 - 7 : 2019 Density of hardened concrete. Volume obtained by water displacement
- BS EN 12390 - 3 : 2009 Clause 6 Procedure for determining compressive strength of test specimens

Approved By: _____



Richard Telford
 Contracts Manager

Date Approved: 19/08/2022



APPENDIX SEVEN

NOTES AND LIMITATIONS

This report has been provided by Groundshire Limited ("Groundshire") for the information and sole use of Mr Paul McVittie,. No reliance can be placed upon the content or results of this report by anyone other than Mr Paul McVittie,. Groundshire makes no warranty or representation (express or implied) with respect of the use of the information contained in this report by anyone other than Mr Paul McVittie, or for uses other than those described in the Objectives section of this report.

Groundshire makes no warranties or representations as to either the suitability of land/property for any particular use or purpose or its value, and shall not in any circumstances be liable for any loss or damage at all arising from reliance on Reports in relation to these matters.

No representations, warranties or terms (whether express or implied by statute, common law, custom, trade usage, course of dealing or otherwise) are given in relation to the Report unless they are expressly set out in these terms or in the Report itself, save to the extent that such terms cannot be excluded by law.

Groundshire is engaged to carry out treatment in relation to shallow mineworkings and/or mine entries. The report is based on the borehole results obtained during explorative works done prior to this report.

The findings contained in this report reflect the conditions encountered on site at the time of the investigations. There may be other permanent or temporary conditions prevailing on site that have not been discovered or encountered during the investigations, none of which are taken into account in the preparation of this report.

Groundshire does not indemnify Mr Paul McVittie, or any third parties against any dispute, claim or consequential losses arising from any finding or other result of this report. No aspect of this report should be taken as a guarantee that a site is free of hazardous or potentially contaminative materials.

Groundshire will not in any circumstances be liable for any loss arising directly or indirectly from any opinion given on a possible configuration of strata both between hole positions and below the maximum depth of the investigation. Any such opinion, where given, is for guidance only and should not be relied upon.