

Mine Workings Consolidation Completion Report

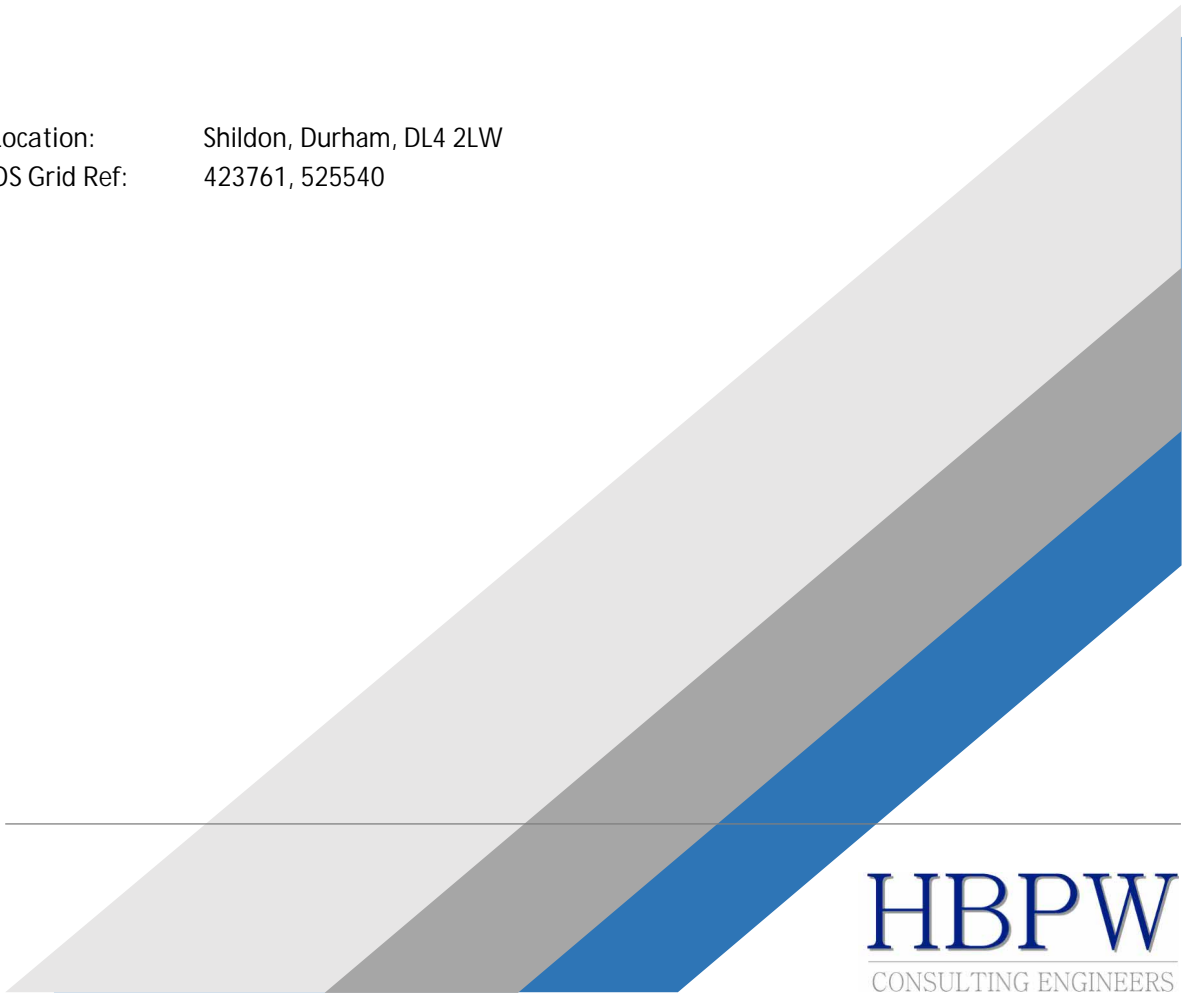
for

***Locomotion New Hall, National
Rail Museum, Shildon, Durham***

Project Ref: SL07622

SL07622-HBPW-DOC-C-GE-MWC Rev A01

Location: Shildon, Durham, DL4 2LW
OS Grid Ref: 423761, 525540



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Document Control Sheet

HBPW Project No.	SL07622
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Document Issue Record

Issue No.	Description	Date
A01	First issue	June 2023

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1 INTRODUCTION

1.1 BACKGROUND

HBPW have been commissioned by Nationwide Engineering Ltd (the client) to provide engineering advice in relation to the proposed development at a site at Locomotion New Hall, Shildon. The site is located off Dale Road, Shildon, County Durham and is centred on approximate National Grid Reference 423761, 525540.

Two ground investigations have been undertaken on the site, the first by Sirius in 2009 – 2010 and the second by Geotechnical & Environmental in 2021. A ground investigation report was prepared by Dunelm Geotechnical & Environmental. Following the ground investigations, a Coal Mining Risk Assessment was completed by Buro Happold.

The data collected from the ground investigation indicated that abandoned shallow mine workings are present beneath the site and wider area. As a result, consolidation of shallow mine workings was deemed necessary within the zone of influence of the proposed site.

HBPW designed the consolidation works and completes a drilling and grouting specification to treat the shallow mine workings at the location of the proposed development.

Groundshire Limited was appointed by Nationwide Engineering to undertake the consolidation works in accordance with the specification provided by HBPW.

1.2 PROPOSED DEVELOPMENT

The development comprises the construction of a new archive and rail vehicle display building. The new building will provide a footprint of 2000m² to accommodate up to 45 vehicles from the National Collection. The new building is set within a brownfield site covering some 2.6ha situated to the north west of the existing Railway Museum.

The development also comprises the construction of external surfacing, drainage and landscaping works.

1.3 SCOPE OF THE REPORT

The scope of this report is to provide a summary of the geological features at the site as previously reported and to detail the design and treatment of the shallow mine workings located within the zone of influence of the proposed development.

In addition, the report has been produced to confirm the treatment of the shallow mine workings within the zone of influence of the proposed development in accordance with specification for grouting works.

1.4 FACTUAL INFORMATION

This report has been produced on behalf of the Client, Nationwide Engineering Ltd and no responsibility is accepted to any Third Party for all or any part. This report should not be relied upon or transferred to any other parties without the express written authorisation of HBPW. If

any unauthorised Third Party comes into possession of this specification, they rely on it at their own risk and the authors owe them no duty of care or skill.

Findings and opinions conveyed within this specification are based on information obtained from a variety of sources as detailed within, which HBPW believes are reliable. Nevertheless, HBPW cannot and does not guarantee the authenticity or reliability of the information it has relied upon.

The site plans enclosed should not be used for scaling purposes.

1.5 SOURCE OF INFORMATION

The following sources of information have been consulted as part of this report for the site:

- Groundshire Limited Factual Report, Mineworking Remediation (Reference 13485, dated 3rd May 2023)
- HBPW Drilling & Grouting Method Specification (Reference SL7622-HBPW-DOC-C-GE-DGS, dated September 2022)
- Buro Happold Coal Mining Risk Assessment (Reference RWM-BHE-XX-XX-RP-CG-0002 P01, dated June 2021);
- Dunelm Geotechnical & Environmental Factual Report (Reference D10357/00, dated 17th June 2021);
- BGS online Open Viewers, and
- Coal Authority Online Interactive Map.

2 GEOLOGY

2.1 GEOLOGICAL CONDITIONS

According to the inspected published geological information, the underlying superficial deposits shown on site are Glacial Till.

The underlying bedrock strata is shown to be the Pennine Lower Coal Measures Formation (PLCM) described as mudstone, siltstone, sandstone and coal.

There are no dip arrows recorded on the geological maps in close proximity to the site. The maps indicate that there is an anticline present onsite.

There are no recorded geological faults shown on site, an unnamed fault is shown to be located at approximately 1000m north east of the site, trending in a general north west to south east direction, downthrown to the north east by an unknown magnitude.

A number of coal seams are expected to be present within the PLCM as shown on the generalised vertical section on the geological maps. The Busty (split into Top and Bottom) and Brockwell coal seams are shown to be underlying the site.

2.2 MINING

There is no evidence to suggest that the site and/or the surrounding area has been subject to mining activity over the mapped dates on the historical maps. However, shallow coal seams of the PLCM are expected at the site and the Buro Happold mining risk assessment which includes liaison with the Coal Authority suggests that coal mining has taken place at the site and within the local area in the past.

Broken ground was encountered during the ground investigations undertaken at the site. This was identified at the estimated depth of named coal seams, the Busty (Top and Bottom) Coal. Therefore, this was considered to be evidence of mine workings in those seams and drilling and grouting works were required.

3 CONSOLIDATION WORKS

3.1 DESIGN METHODOLOGY

Based on the various sources of information made available to HBPW, it was considered likely that the site of the proposed development would be underlain by abandoned shallow mine workings and that these would require treatment prior to any construction works taking place.

The abandoned shallow mine workings present beneath the site represented a significant potential risk to the safety of any development and its users. As a result, the following design methodology was developed in accordance with Ciria Guidance C758 'Abandoned mine workings' and Ciria Special Publication 32 'Construction over abandoned mine workings' to mitigate this risk.

From the assessment of historical mining activity as described in Section 2, it was considered that the likely presence of workings within the Busty (Top and Bottom) Coal seams at depths of between 16.60m and 30.25m below the site would pose the greatest risk to the proposed development and, as such, would form the focus of the treatment works.

Assuming successful treatment of the Busty (Top and Bottom) Coal seams. The underlying Brockwell Coal, anticipated to be approximately 50m below the Busty (Top and Bottom) Coal seams, would be at sufficient depth not to pose a risk to the proposed development.

The extent of the grouting works is shown on Drawing SL07622-HBPW-00-ZZ-DR-C-900_C04 provided in Appendix A.

3.1.1 Perimeter Grouting

The perimeter grout curtain was offset from the footprint of the proposed structure by 6m in all directions with the exception of the north western corner as there is insufficient distance between the building and site boundary. The offset was reduced to the sites boundary in these areas. However, assuming a grout spread of 1.5 to 3.0m from the perimeter holes it was considered that sufficient area of treatment would be undertaken in these areas.

The design of the perimeter grout holes specified that the boreholes were bored at 1.5m to 3.0m centres and grouted using a grout mix of 1:6:1 Ordinary Portland Cement (OPC) to Pulverised Fuel Ash (PFA) to Sand with a flowability readings of 300 to 600mm.

The boreholes were specified to be drilled to 1.5m beneath the base of the coal seam and/or workings. The base of the workings is anticipated to be at approximately 18.20 to 33.00m below ground level across the site. The minimum diameter of holes for the perimeter curtain wall was specified to be 100mm.

3.1.2 Infill Grouting

The infill grouting was initially specified to be completed in a grid pattern at 6m centres. The boreholes were specified to be drilled to 1.5m beneath the base of the coal seam and/or workings. The base of the workings is anticipated to be at approximately 18.20 to 33.00m below ground level across the site. The minimum diameter of holes for the infill treatment holes was to be 75mm.

During the infill drilling and grouting the grid spacing was reduced down to 3m x 3m as a result of high grout takes and test hole S11 suggesting that the grout was not infilling the 6m grid.

It is not unusual for consolidation works to evolve as the works are undertaken as it is difficult to know for sure what the ground conditions are until drilling has taken place and grout takes have been confirmed.

3.1.3 Testing

Six 100mm³ grout cubes were specified to be cast each week or when directed and crushed at 7, 14 and 28 days in accordance with BS1881. The minimum 28 day crushing strength to be achieved was 1.0MN/m².

Test holes were to be specified by the Engineer once grouting at the initial holes has been completed. The test holes were to be located as specified by the Engineer and were deemed successful if the quantity of grout accepted was less than 0.5 tonnes. As discussed above, the initial test holes were inconclusive and therefore the grid spacing was reduced.

Following the reduction in grid spacing the further test holes (Be27, Am25, Ao19, Q11, E3 and Y3) confirmed that the drilling and grouting works had been successful.

3.2 ENCOUNTERED SITE CONDITIONS

Full records of Groundshire drilling and grouting operations are provided in Appendix B.

Overburden was recorded within all boreholes underlain by PLCM.

Evidence of abandoned mine workings was encountered in one seam believed to have been the Busty (Top and Bottom) Coal seams at the anticipated depths, this was generally encountered as broken ground. Voids were only encountered within two boreholes.

No unrecorded mine entries were encountered during the drilling works.

3.3 DRILLING WORKS

Site works were carried out between 22nd February and 30th March 2023. The drilling records are provided within Appendix B.

The works comprised 97No. perimeter boreholes and 175No. infill boreholes combined totalling 8963m of drilling. Details of the number of holes bored and the length of drilling for the perimeter, infill, and test holes are summarised in Table 3.3.

The locations of the grout holes are identified on the borehole location plan in Appendix A.

3.4 GROUTING WORKS

Site works were carried out between 22nd February and 30th March 2023. A record of the grouting progress is provided in within Appendix B.

Approximately 445 tonnes of grout were injected into the perimeter and infill boreholes. A summary of the grout takes for the perimeter, infill and test holes is displayed in Table 3.3.

The grout mixes utilised were a PFA to OPC ratio of 10:1 and 12:1 for the perimeter wall and infill grouting respectively flow rate of 460-480mm for the perimeter and infill grouting. The flow rate results are displayed in Table 3.1.

Table 3.1 Flow Test Results		
Date	Grout Mix (PFA:OPC)	Flow Rate (mm)
09/03/2023	12:1	480
10/03/2023	12:1	480
	12:1	460
14/03/2023	12:1	470
	12:1	470
16/03/2023	10:1	480
	12:1	470
17/03/2023	10:1	480
	12:1	470
20/03/2023	10:1	460
	10:1	460
	12:1	480
21/03/2023	10:1	470
	12:1	480
22/03/2023	10:1	460
	12:1	480
23/03/2023	10:1	470
	12:1	480
27/03/2023	12:1	480
	12:1	470
	12:1	480
28/03/2023	12:1	470
29/03/2023	12:1	470
	12:1	480
30/03/2023	12:1	480

As specified in the contract specification, 6 No. sets of 100mm³ grout cubes were cast weekly to provide samples for crushing at 7, 14 and 28 days in order to obtain the compressive strength of the grout. A selection of the results from the cube tests are shown in table 3.2.

The cube test results are provided within Appendix B. Table 3.2 documents some of the results from the cube tests. The target compressive strength at 28 days was 1MPa and, as the results demonstrate, this was achieved.

Table 3.2 Grout Cube Test Results		
Date Cubes Cast	Age at Testing (days)	Compressive Strength (MPa)
10/03/2023	28	2.4
10/03/2023	28	1.7
14/03/2023	28	5.9
14/03/2023	28	5.5
22/03/2023	28	5.7
22/03/2023	28	5.5
22/03/2023	28	4.4
22/03/2023	28	4.5
29/03/2023	28	4.1
29/03/2023	28	4.0

3.5 SUMMARY OF COMPLETED WORKS

Table 3.3 below summarises the total drilling and grouting works carried out across the site for the purposes of consolidating the historical mine workings.

Table 3.3 Consolidation Works Summary			
	Number of Boreholes	Meters Bored (m)	Grout Injected (tonnes)
Perimeter	97	8963	445
Infill	169		
Test	6		

4 COMPLETION STATEMENT

The Grouting Completion Report has been produced to provide a record of the treatment works carried out at the site, in order to mitigate the risk posed to the future development of the site by abandoned shallow mine workings.

The consolidation works were carried out by Groundshire and were completed in accordance with the Specification for Grouting produced by HBPW.

HBPW can confirm that Groundshire carried out the grouting works in accordance with the grouting specification which was prepared using guidance as set out in the Ciria Special Publication 32 'Construction over abandoned mine workings' and Ciria C758D 'Abandoned mine workings'.

HBPW provided office support for the duration of the works to ensure that the works were completed in accordance with the specification. It can be confirmed that all drilling and grouting works associated with the specified treatment of abandoned shallow mine workings across the site have been undertaken and are now complete.

A total of 272No. boreholes were drilled as part of the contract, giving a total drilled length of 8963m. A total of 445No. tonnes of grout were mixed and injected into the encountered mine workings.

5 REFERENCES

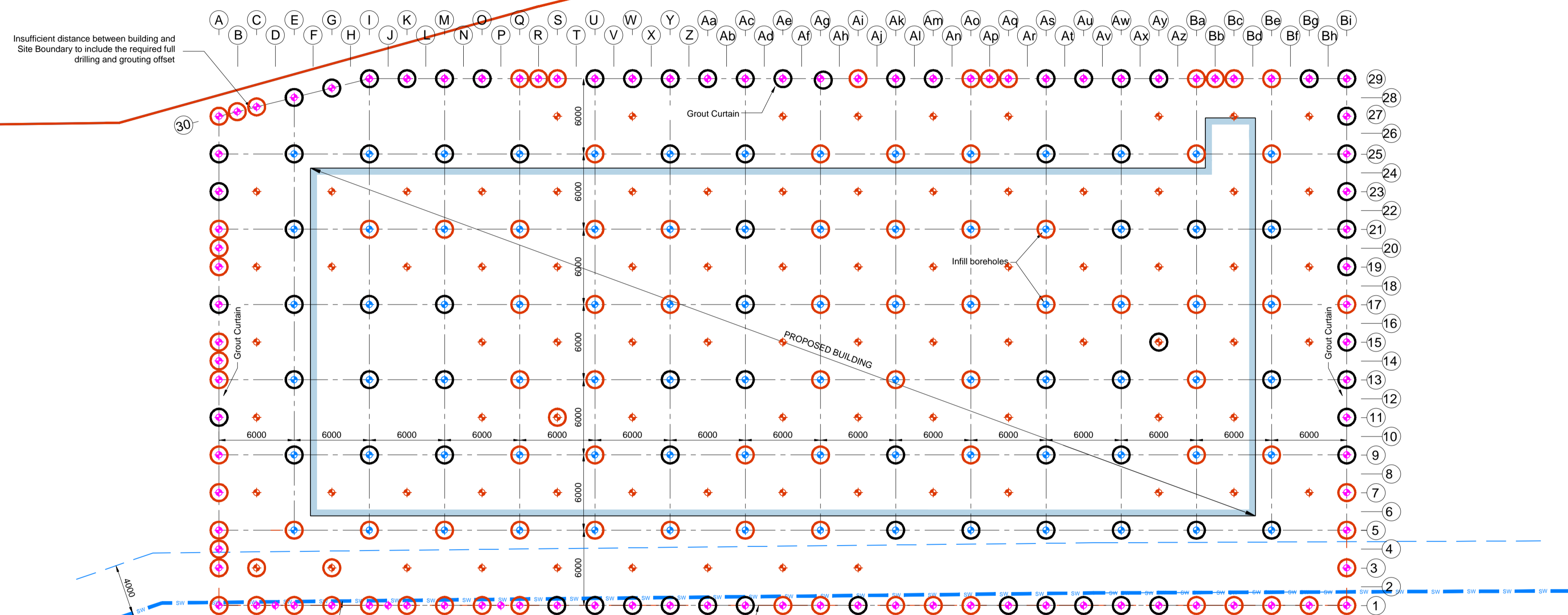
1. CIRIA Special Publication 32 "Construction over Abandoned Mine Workings"
2. CIRIA C758D 'Abandoned mine workings'

APPENDIX A

Drawings

KEY:

- Perimeter Grout Curtain Boreholes at 3.0m c/c
- Infill Boreholes at 6.0m c/c
- Infill boreholes at 6.0 c/c to form 3m x 3m grid or 4.24m c/c
- Site of Proposed Development
- Land Ownership Boundary
- Borehole encountering voids/broken ground
- Borehole encountering solid ground



PLAN
Scale 1:250

- NOTES**
- DO NOT SCALE OFF THIS DRAWING.
 - SHOULD THERE BE ANY CONFLICT BETWEEN THE DETAILS INDICATED ON THIS DRAWING AND THOSE INDICATED ON OTHER DRAWINGS THE ENGINEER SHOULD BE INFORMED PRIOR TO CONSTRUCTION ON SITE.
 - ALL DRAWINGS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXECUTE THE WORKS AT ALL TIMES IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE HEALTH AND SAFETY AT WORK ACT 1974 AND CDM REGULATIONS 2015.
 - THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE DRILLING & GROUTING METHOD SPECIFICATION AND ALL OTHER RELEVANT DRAWINGS. THE FOLLOWING DRAWING NOTES IDENTIFY KEY ELEMENTS OF THE SPECIFICATION WHICH THE SPECIALIST CONTRACTOR SHALL MAKE SPECIFIC REFERENCE TO THE SPECIFICATION FOR. WHERE CONFLICT ARISES BETWEEN THE DRAWING NOTES AND SPECIFICATION, THE SPECIFICATION SHALL TAKE PRECEDENCE.
 - THE CONTRACTOR SHALL SUBMIT SUITABLE METHOD STATEMENTS FOR ALL ASPECTS OF THE WORKS INCLUDING TRIAL TESTING, DRILLING, GROUTING AND VERIFICATION OF THE WORKS FOR APPROVAL BY THE ENGINEER.
 - THE CONTRACTOR SHALL SUBMIT A CEMENT/PFA DESIGN MIX THAT COMPLIES WITH THE SPECIFICATION AND MEETS THE OBJECTIVE OF TREATMENT WORKS FOR AGREEMENT BY THE ENGINEER BEFORE THE GROUTING WORKS COMMENCE.
 - PRIOR TO COMMENCEMENT OF THE GROUTING WORKS THE CONTRACTOR SHALL UNDERTAKE A TRIAL DRILLING AND GROUTING OPERATION IN AN AREA TO BE AGREED WITH THE ENGINEER TO DETERMINE SUITABILITY OF PROPOSED METHODOLOGIES, GROUT MIXES AND TO OPTIMISE THE SPACING FOR THE PERIMETER AND INFILL BOREHOLES.
 - ALL BOREHOLES FOR GROUTING PURPOSES SHALL EXTEND TO AT LEAST 1.5m BELOW SEAM PAVEMENT LEVEL.
 - DRILLING AND GROUTING SHALL PROCEED FROM THE DEEPEST POINT OF THE SEAM AND PROGRESS TOWARDS THE SHALLOWEST POINT OF THE SEAM.
 - A GROUT CURTAIN SHALL INITIALLY BE FORMED AROUND THE AREA TO BE GROUTED FROM GROUT HOLES INITIALLY SPACED AT 1.5m CENTRES TO BE CONFIRMED/OPTIMISED BY THE TRIAL DRILLING AND GROUTING OPERATION AND AGREED WITH THE ENGINEER. WHERE NECESSARY TO SUCCESSFULLY FORM THE PERIMETER CURTAIN, PEA GRAVEL AND/OR BENTONITE SHALL BE PLACED WITH THE GROUT AT A RATIO OF 1:1 BY WEIGHT.
 - INFILL GROUTING SHALL THEN BE UNDERTAKEN FROM GROUT HOLES SET OUT IN A DIAMOND PATTERN AT INITIALLY 6m CENTRES (TO BE CONFIRMED/OPTIMISED BY THE TRIAL DRILLING AND GROUTING OPERATION AND AGREED WITH ENGINEER).
 - DRILLING RECORDS DETAILING GROUND CONDITIONS ENCOUNTERED WITHIN EACH GROUTING BOREHOLE SHALL BE IMMEDIATELY AVAILABLE ON COMPLETION OF THE BOREHOLE FOR ASSESSMENT BY THE CONTRACTOR AND THE ENGINEER.
 - VERIFICATION TESTING BY PRESSURE INJECTION OF GROUT WITHIN FRESH BOREHOLES DRILLED THROUGH THE INFILLED MASS SHALL BE CARRIED OUT THROUGHOUT THE WORKS. LOCATION OF VERIFICATION BOREHOLES SHALL BE AGREED WITH THE ENGINEER.
 - GROUT INJECTION SHALL BE CARRIED OUT AT THE APPROVED RATES UNTIL EITHER A LIMITING PRESSURE OF 10KPA PER METRE OF OVERBURDEN OR A MAXIMUM OF 200KPA IS REACHED.
 - GROUT MIXES SHALL HAVE A MINIMUM CUBE CRUSHING STRENGTH OF 1.0N/m² AT 28 DAYS.
 - THE CONTRACTOR SHALL ALLOW FOR TAKING ALL NECESSARY HEALTH AND SAFETY PRECAUTIONS AND CONSIDER THE POTENTIAL FOR MIGRATION OF MINE GAS TO ADJACENT PROPERTIES.
 - THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO ENSURE ADEQUATE POLLUTION CONTROL INCLUDING PREVENTING FLUSH GROUT OR ANY OTHER ARISING EMANATING FROM INJECTION HOLES OR ANY OTHER AREAS OF WORKS FROM ENTERING WATER COURSES.
 - THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO ENSURE THAT NUISANCE FROM NOISE, DUST AND VIBRATIONS ARE KEPT TO A MINIMUM.
 - THE CONTRACTORS ATTENTION IS DRAWN TO EXISTING UNDERGROUND DRAINAGE. THE PATTERN OF DRILLING AND GROUTING IS TO BE ADJUSTED LOCALLY.
 - THE CONTRACTORS ATTENTION IS DRAWN TO THE POSSIBLE PRESENCE OF UNIDENTIFIED UNRECORDED MINE SHAFTS AT THE SITE. THE CONTRACTOR SHALL TAKE ALL NECESSARY HEALTH AND SAFETY PRECAUTIONS ASSOCIATED WITH THE POSSIBLE PRESENCE OF UNRECORDED ABANDONED MINE SHAFTS.
 - THE DRILLING & GROUTING LAYOUT DOES NOT TAKE INTO ACCOUNT ANY FUTURE EXTENSIONS TO THE BUILDING LAYOUT. IF THE CONFIGURATION/LOCATION OF THE BUILDINGS CHANGES THE RISK ASSOCIATED WITH SHALLOW MINE WORKINGS WILL NEED TO BE RE-ASSESSED.
 - THE DRAWING SHOWS AN ARRANGEMENT OF INFILL BOREHOLES AT 6m c/c. IN THE EVENT THAT EXTENSIVE WORKINGS BE ENCOUNTERED THE SPACING OF INFILL BOREHOLES SHALL BE REDUCED TO BEING 3m c/c.

GROUT CURTAIN CORNER BOREHOLE SETTING OUT

GRID REF	EASTING (m)	NORTHING (m)
A/1	423708.823	525582.796
Bi/1	423766.998	525514.126
Bi/29	423799.044	525541.274
I/30	423748.626	525600.789
A/30	423739.580	525608.006

CONSTRUCTION

REV	DESCRIPTION	BY	CHK	APP	DATE
C03	DRAWING UPDATED	EP	SS	EP	22/03/23
C02	GRIDLINES UPDATED	EP	SS	EP	03/03/23
C01	ISSUED FOR CONSTRUCTION	EP	SS	EP	07/02/23
01	FIRST ISSUE	EP	SS	EP	12/09/22

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HAZARD SUMMARY TABLE

SIGNIFICANT DESIGNER'S IDENTIFIED HAZARDS	LIFE SAVING RULES
<p>SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION</p> <p>THE FOLLOWING NOTES HIGHLIGHT SIGNIFICANT RESIDUAL HAZARD IDENTIFIED BY THE DESIGNER. TYPICAL HAZARDS THAT SHOULD BE IDENTIFIED BY A COMPETENT CONTRACTOR ARE WORKS USING AN APPROVED SAFE SYSTEM OF WORK</p> <p>SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED DURING THE COURSE OF THE WORKS, THE CONTRACTOR SHALL NOTIFY ALL RELEVANT MEMBERS OF THE PROJECT TEAM</p>	
<p>01 Buried Services - Injury or death due to striking or damaging buried cables</p>	<p>TRAINING & COMPETENCY NO MOBILE PHONES CORRECT EQUIPMENT OBEY DRIVING RULES</p>
<p>02 Existing drainage exists on site refer to survey drawing - Damage to existing underground from grouting works</p>	<p>EXCLUSION ZONE PLANS AND PERMITS SAFETY WARNINGS AT HEIGHT ISOLATION</p>
<p>03 Collapse of mine workings and/or unrecorded abandoned mine shafts resulting in collapse of ground</p>	<p>ISOLATION</p>
<p>04 Combustion of mine gases & combustion of coal seam during grouting operation</p>	<p>ISOLATION</p>
<p>05 Grouting of abandoned mine workings - ground heave, collapse of workings, danger to public in working areas</p>	<p>ISOLATION</p>

NATIONWIDE ENGINEERING

CONTRACTOR:

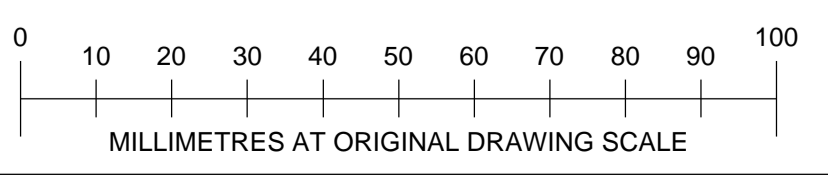
HBPW PROJECT NUMBER:
SL07622

PROJECT:
LOCOMOTION NEW HALL
NATIONAL RAIL MUSEUM, SHILDON, DURHAM

DRAWING:
DRILLING AND GROUTING PLAN

PROJECT ENGINEER: E. PARRY	DRAWN: E. PARRY
CHECKED: J. OLIVER	APPROVED: E. PARRY
DATE: 12/09/2022	SCALE: AS SHOWN
SIZE: A1	SUITABILITY: S0
REVISION: C03	

DOCUMENT REFERENCE NUMBER:
SL07622-HBPW-00-ZZ-DR-C-0900



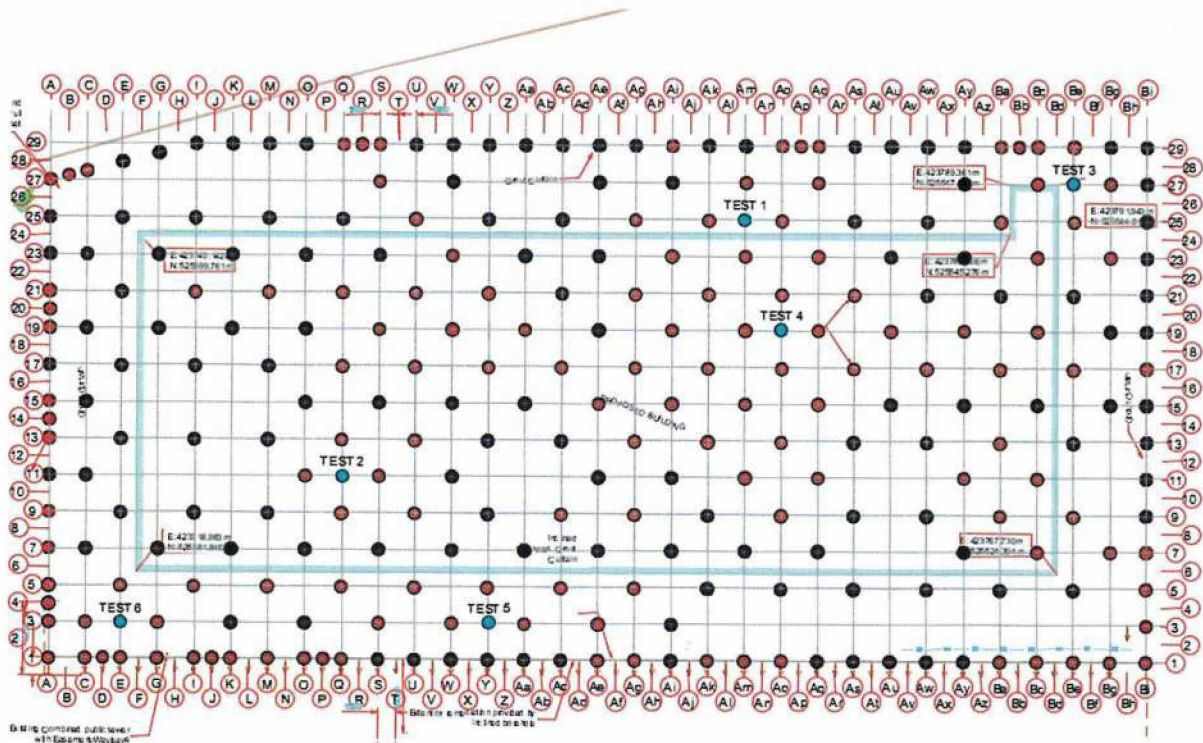
APPENDIX B

Groundshire Limited Factual Report, Mineworking Remediation

FACTUAL REPORT, MINEWORKINGS REMEDIATION

Locomotion 2, New Hall, Shildon, DL2 2RE

For Nationwide Engineering,



Report prepared for:
Nationwide Engineering,
 Units 19-20,
 The Bluestone Centre,
 Sun Rise Way,
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Order Number: 742/12/Gro
 Coal Authority Permit: 26202
 Planning Reference: DM/22/00717

Dated: 03/05/2023
 Contract No: 13485

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APPENDIX

1	Coal Authority Permit Ref: 26202
2	Grout Hole Layout 13485-001
3	Daily Drilling Records
4	Daily Grouting Records
5	Materials Delivery Tickets
6	Test Results
7	Notes and Limitations

1 INTRODUCTION

1.1 General

This report describes the grid drilling and pressure grouting works carried below a brownfield residential development site known Locomotion 2, New Hall, Shildon, DL2 2RE.

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

The Client for Groundshire works (the employer) was Nationwide Engineering, Units 19-20, The Bluestone Centre, Sun Rise Way, Amesbury, Salisbury, SP4 7YR.

HBPW Consulting Engineers of 43 Bridgegate, Retford, Nottinghamshire, DN22 7UX, are the Designer for these works and prepared a:

'Drilling & Grouting Method Specification for Locomotion New Hall, National Rail Museum, Shildon, Durham Project Ref: SL07622, September 2022'

This document re-assessed existing site information including:

Buro Happold Coal Mining Risk Assessment RWM-BHEXX-XX-RPCG-0002 of June 2021

The HBPW document included a number of site investigation boreholes put down at, or in the vicinity of, the site by others including The Sirius Group and Dunelm Geotechnical and Environmental.

Groundshire have no Contractual relationship with HBPW or Buro Happold regarding these Works.

1.2 Objectives

Buro Happold prepared a Coal Mining Risk Assessment at the subject site during June 2021. The report conclusions were [amongst others] that:

'The risk to the site associated with former coal mining activities is thus considered to be medium in the western portion of the site (i.e. the area shown to contain workings within the Busty seam on the abandonment plans). Given the nature of the development and the degree of risk from coal mining, it is considered that the associated risks of subsidence beneath the proposed building requires additional risk mitigation and requires remediation (i.e. grouting). The additional risk mitigation measures are detailed below-

- The Contractor should remain vigilant for evidence of unrecorded mining features/potential shafts during site clearance and excavation works. If a potential unrecorded mine shaft is identified onsite, investigation and treatment is likely to be required.*

- The design, validation, testing and reporting of shallow mine workings treatment beneath the collections warehouse and display track by grouting shall be carried out by a specialist drill and grout contractor/ suitably qualified engineers.'*

HBPW subsequently prepared a Specification and Drawings for the treatment of the Legacy Mine Workings.

Groundshire successfully tendered to Nationwide Engineering undertake the drilling and grouting works, across the proposed footprint of the structure plus off-set.

HBPW applied for and obtained the Coal Authority Permit 26202 for these works, 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 Legacy Mine Workings in accordance with the HBPW Specification.

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 an extension to the existing 'Locomotion' railway museum. It lies south of Shildon, County Durham and is centred on approximate National Grid Reference 423761, 525540.

Access to the site is off an unnamed road, which is itself accessed via Dale Road to the west of the site.

The works area covers a broadly rectangular structure measuring approximately 75m by 27m with long axes aligned north west to south east, extending some way beyond to allow for the angle of draw effect.

The site is surrounded by residential and commercial developments with the existing museum to the east. A railway is located north of the site, trending approximately north west to south east. The site is currently occupied by an open air car parking / hardstanding and some landscaped areas..

3 FIELDWORK

3.1 Drilling and Grouting Operations

Site work was carried out between 22nd February and 30th March 2023.

The work was undertaken in accordance with the HBPW Specification and Coal Authority Permit No. 26202. The Coal Authority Permit is included in Appendix 1.

The positions of the grout holes are shown on the drawing 13485 -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 depth of casing, the date drilled and any testing carried out, together with any other relevant information. These records can be found in the daily drilling records, Appendix 3.

The grout mix was as per the requirements of the Specification. 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 JCB top drive rotary percussive hydraulic drill rigs.

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 '13485-001 Grout Hole Layout', included in Appendix 2.

266 grout holes and six test holes were put down in accordance with the instruction of the Designer together with the Drawing and Specification for the works.

A total of 8,963 metres (m) of drilling was undertaken and circa 455 tonnes of grout was injected in to the workings in accordance with the Specification for the works, included as Appendix 1.

4.2 Testing

The grout was tested for flow and bleed. The results of which are included 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 attached in Appendix 6.

Six rotary open holes were drilled and subjected to grout acceptance testing, to the instruction of the Designer and in the presence of the Clients representative, to check the efficacy of the consolidation works. Details of the tests are given on the daily grouting records, Appendix 4.

4.3 Gas Monitoring

Concentrations of the monitored gases were recorded and are included in Appendix 6.

5 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.

6 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.,BSc.,FGS.,MIMMM.,MIEnvSc.		19 th May 2023
Approved by	K E L Dempster BSc(Hons).,MSc.,FGS.,MIMMM.,MIEnvSc., FCMI.		19. May 2023

APPENDIX ONE

COAL AUTHORITY PERMIT REF: 26202



The Coal
Authority

Permit to Enter or Disturb Coal Authority Interests

Permit 26202

Name and Address of Permit Holder:

*Railway Museum
National Rail Museum
Leeman Road
York
YO26 4XJ*

Site Location:

*Land adjacent to
Dale Road Industrial Estate
Shildon*

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

Treatment of shallow mine workings by drilling and grouting on 6m grid

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*
- *Gas Monitoring CO, CH₄, CO₂, O₂, H₂S at borehole and rig*
- *Operators undertaking the work must be in possession of this certificate and the Permit boundary plan at the time of works*
- *Appropriate borehole sealing without delay and to withstand site level changes*

Signed: Stuart Brown Granted Date: 07/02/2023

For and on behalf of The Coal Authority

Nominated Representative: Stuart Brown, Permitting Manager;

The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG

Tel: 01623 637450; E-Mail: permissions@coal.gov.uk

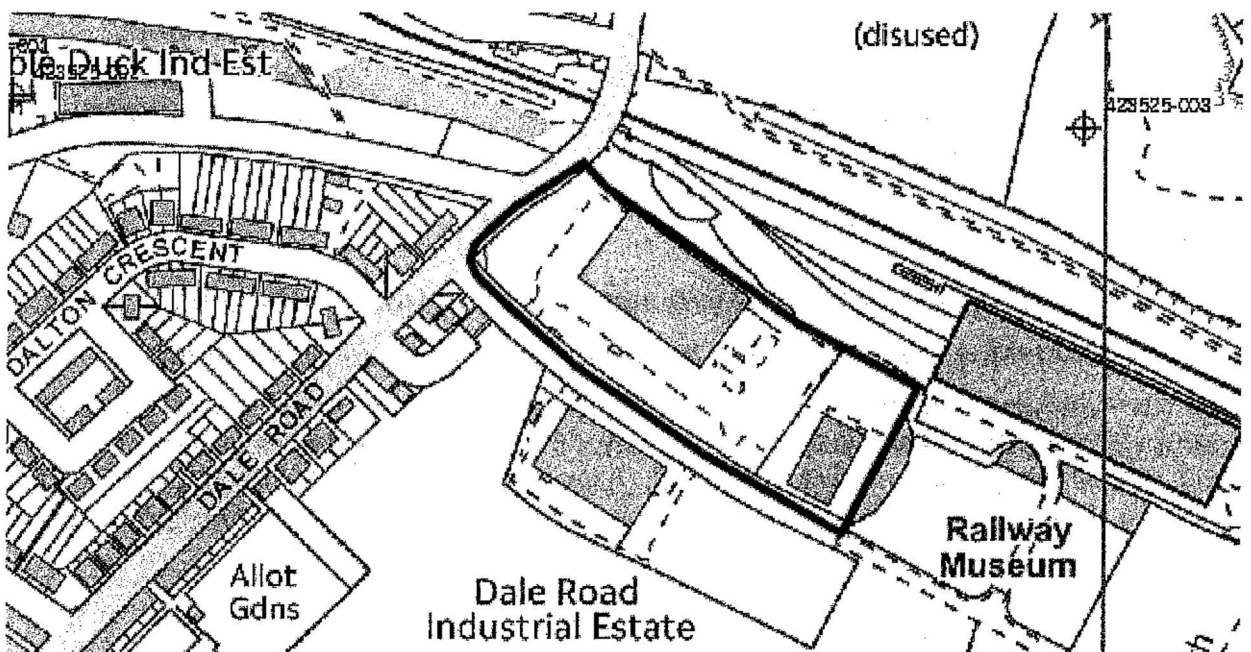


The Coal
Authority

Granted Permit Boundary

Permit Ref: 26202

Permit Boundary:



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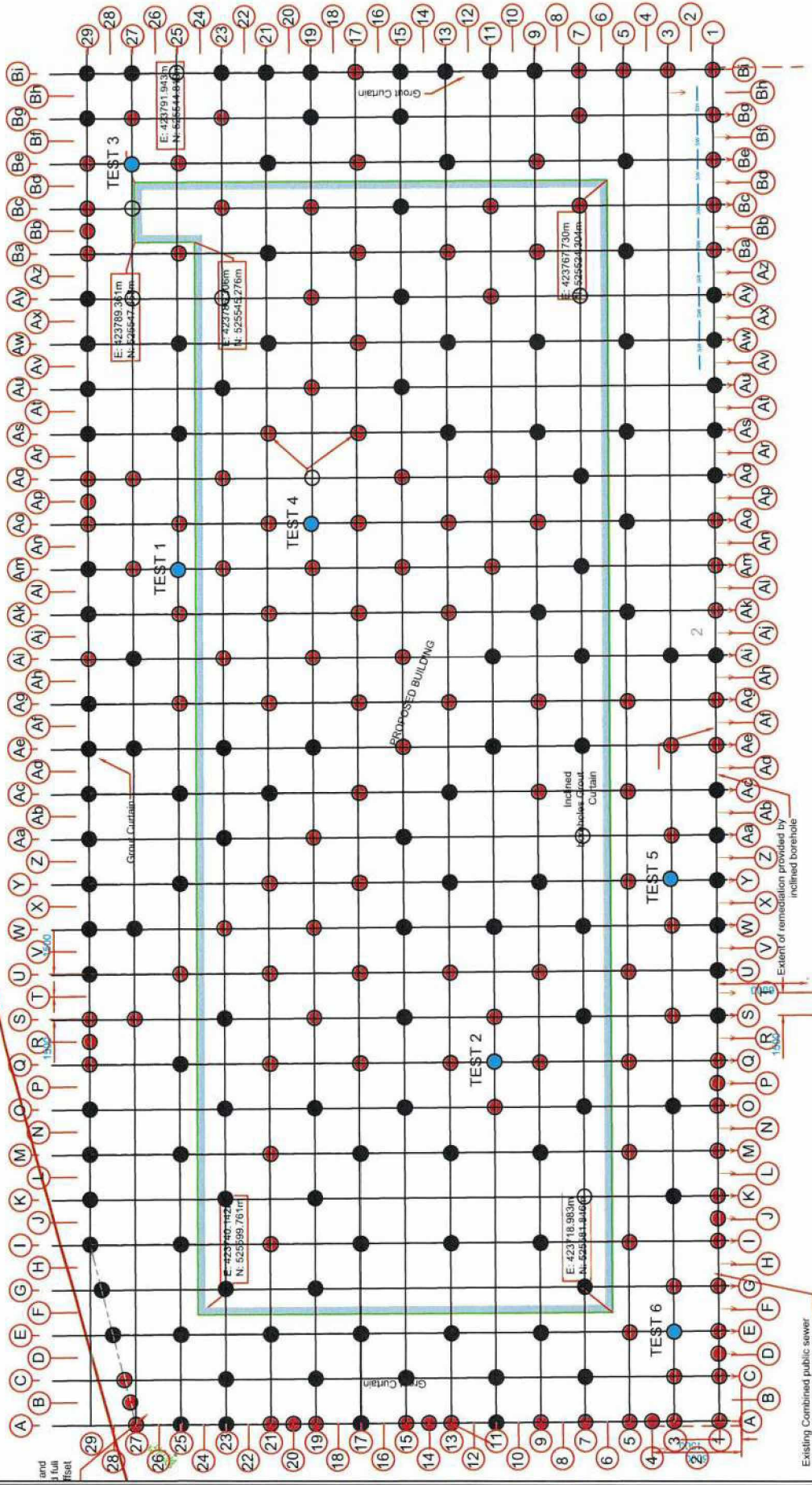
APPENDIX TWO

DRAWING 13485-001 GROUT HOLE LAYOUT

BOREHOLE LEGEND

- Coal
- Legacy Mine Working
- Test

— DO NOT SCALE —



AMENDMENT	REV	BY	DATE
Client			
NATIONWIDE ENGINEERING HPBW CONSULTING ENGINEERS			
Project LOCOMOTION NEW HALL SHILDON DL4 2RE			
Drawing Title GROUT HOLE LAYOUT			
Drawn	KELD	Date	17/02/2023
Checked	WRD	Date	17/02/2023
Scale	Do Not Scale sketch only		
Groundshire Limited THE MINEWORKINGS RESEARCH & DESIGN LTD Lambton House, Lambton Industrial Estate Langley Moor, DURHAM, DH7 8JL E: 0191 279 3000 F: 0191 279 3001			
Dep. No.	13485		
Rev.			

APPENDIX THREE

DAILY DRILLING RECORDS

DAILY DRILLING RETURNS

SHEET NO. 1

CLIENT NATIONWIDE ENGINEERING

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA				
E5	35.00	10.00	22.2.23	DC	0.00 - 8.80	OVERBURDEN	E9	34.00	11.00	22.2.23	DC	0.00 - 11.40	OVERBURDEN				
					8.80 - 26.50	MUDSTONE/SANDSTONE						11.40 - 29.80	MUDSTONE/SANDSTONE				
					26.50 - 32.50	BROKEN GROUND						29.80 - 32.20	COAL/MUDSTONE BAND				
					32.50 - 35.00	SOLID						32.20 - 34.00	MUDSTONE/SANDSTONE				
15	34.00	10.00	22.2.23	DC	0.00 - 8.80	OVERBURDEN	113	36.00	12.00	23.2.23	DC	0.00 - 12.00	OVERBURDEN				
					8.80 - 19.20	MUDSTONE/SANDSTONE						12.00 - 14.00	MUDSTONE/SANDSTONE				
					19.20 - 20.00	SHALE/COAL						14.00 - 15.20	SOFT SHALE COAL TRACES				
					20.00 - 27.00	SANDSTONE/MUDSTONE						15.20 - 36.00	SOLID/POOR RETURNS				
					27.00 - 32.60	BROKEN GROUND											
					32.60 - 34.00	SOLID											
19	34.00	10.00	22.2.23	DC	0.00 - 11.40	OVERBURDEN	117	34.00	12.00	23.2.23	DC	0.00 - 12.00	OVERBURDEN				
					11.40 - 30.60	MUDSTONE/SANDSTONE						12.00 - 14.50	MUDSTONE/SANDSTONE				
					30.60 - 32.30	COAL/MUDSTONE BAND						14.50 - 16.50	SOFT SHALE COAL TRACES				
					32.30 - 34.00	MUDSTONE/SANDSTONE						16.50 - 34.00	SOLID/POOR RETURNS				
DRILLING METRES						HOLES DRILLED						STRATA ENCOUNTERED					
PAGE TOTAL			207.00			CASING METRES			65.00			HOLES			6 COAL		
PREV. TOTAL			0.00			PAGE TOTAL			0.00			PREVIOUS HOLES			0 COAL		
RUN. TOTAL			207.00			RUN. TOTAL			65.00			TOTAL HOLES			6 COAL		

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

2

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA				
E13	34.00	12.00	23.2.23	DC	0.00 11.50 30.00 32.80 34.00	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	Q5	36.00	9.00	24.2.23	DC	0.00 9.00 28.40 29.30 31.10 32.50 36.00	OVERBURDEN MUDSTONE/SANDSTONE COAL MUDSTONE BROKEN GROUND SOLID				
E17	36.00	12.00	24.2.23	DC	0.00 13.50 29.90 32.70 36.00	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	Q9	34.00	9.00	24.2.23	DC	0.00 13.00 28.50 32.00	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID				
M5	36.00	10.00	24.2.23	DC	0.00 9.00 28.50 32.80	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID	Y5	34.00	9.00	24.2.23	DC	0.00 13.00 27.90 31.00 34.00	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID				
DRILLING METRES						CASING METRES						STRATA ENCOUNTERED					
PAGE TOTAL						PAGE TOTAL						4 VOID 0					
PREV. TOTAL						PREV. TOTAL						2 VOID 0					
RUN. TOTAL						RUN. TOTAL						6 VOID 0					
6 COAL												2		B/G		0	
6 COAL												4		B/G		0	
12 COAL												6		B/G		0	

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

3

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	
																STRATA ENCOUNTERED
AG5	32.00	10.00	27.2.23	DC	0.00	10.50	OVERBURDEN	E25	36.00	12.00	27.2.23	DC	0.00	14.00	OVERBURDEN	
					10.50	26.80	MUDSTONE/SANDSTONE						14.00	30.00	MUDSTONE/SANDSTONE	
					26.80	29.40	VOID/BROKEN GROUND						30.00	32.80	COAL/MUDSTONE BAND	
					29.40	32.00	SOLID						32.80	36.00	MUDSTONE/SANDSTONE	
AO5	32.00	10.00	27.2.23	DC	0.00	10.50	OVERBURDEN	Q21	34.00	12.00	27.2.23	DC	0.00	13.50	OVERBURDEN	
					10.50	26.50	MUDSTONE/SANDSTONE						13.50	30.70	MUDSTONE/SANDSTONE	
					26.50	29.20	SOLID/POOR RETURNS						30.70	32.70	BROKEN GROUND	
					29.20	32.00	SOLID						32.70	34.00	SOLID	
E21	36.00	13.00	27.2.23	DC	0.00	13.50	OVERBURDEN	Q21	34.00	12.00	27.2.23	DC	0.00	13.00	OVERBURDEN	
					13.50	29.70	MUDSTONE/SANDSTONE						13.00	22.10	MUDSTONE/SANDSTONE	
					29.70	30.60	COAL						22.10	23.30	VOID	
					30.60	31.30	MUDSTONE						23.30	32.00	BROKEN GROUND	
					31.30	32.30	COAL						32.00	34.00	SOLID	
					32.30	36.00	MUDSTONE									
DRILLING METRES							CASING METRES				HOLES DRILLED					
PAGE TOTAL	204.00				PAGE TOTAL		69.00	HOLES		6	COAL	3	B/G	1	VOID	2
PREV. TOTAL	417.00				PREV. TOTAL		126.00	PREVIOUS HOLES		12	COAL	6	B/G	6	VOID	0
RUN. TOTAL	621.00				RUN. TOTAL		195.00	TOTAL HOLES		18	COAL	9	B/G	7	VOID	2

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

4

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
Q13	34.00	12.00	27.2.23	DC	0.00 13.00	OVERBURDEN	AG21	33.00	12.00	28.2.23	DC	0.00 13.00	OVERBURDEN	
					13.00 25.70	MUDSTONE/SANDSTONE						13.00 27.80	MUDSTONE/SANDSTONE	
					25.70 32.00	BROKEN GROUND						27.80 29.50	BROKEN GROUND	
					32.00 34.00	SOLID						29.50 33.00	SOLID	
Y13	33.00	12.00	28.2.23	DC	0.00 13.50	OVERBURDEN	AO21	33.00	12.00	28.2.23	DC	0.00 13.80	OVERBURDEN	
					13.50 29.00	MUDSTONE/SANDSTONE						13.80 27.00	MUDSTONE/SANDSTONE	
					29.00 31.70	COAL/MUDSTONE BAND						27.00 29.30	PACKED WASTE	
					31.70 33.00	MUDSTONE/SANDSTONE						29.30 33.00	SOLID	
Y21	33.00	12.00	28.2.23	DC	0.00 13.20	OVERBURDEN	AO13	33.00	12.00	28.2.23	DC	0.00 14.20	OVERBURDEN	
					13.20 27.00	MUDSTONE/SANDSTONE						14.20 18.50	MUDSTONE/SANDSTONE	
					27.00 31.10	BROKEN GROUND						18.50 21.00	BROKEN GROUND	
					31.10 33.00	SOLID						21.00 26.80	SOFT DRILLING	
												26.80 29.50	BROKEN GROUND	
												29.50 33.00	SOLID	
DRILLING METRES							STRATA ENCOUNTERED							
PAGE TOTAL	199.00				72.00	HOLES	6	COAL	1		B/G	5	VOID	0
PREV. TOTAL	621.00				195.00	PREVIOUS HOLES	18	COAL	9		B/G	7	VOID	2
RUN. TOTAL	820.00				267.00	TOTAL HOLES	24	COAL	10		B/G	12	VOID	2

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

5

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA				
AG13	33.00	12.00	28.2.23	DC	0.00 13.00	OVERBURDEN	BE5	30.00	12.00	1.3.23	DC	0.00 13.40	OVERBURDEN				
					13.00 27.10	MUDSTONE/SANDSTONE						13.40 24.40	MUDSTONE/SANDSTONE				
					27.10 30.00	BROKEN GROUND						24.40 27.00	COAL/MUDSTONE BAND				
					30.00 33.00	SOLID						27.00 30.00	MUDSTONE/SANDSTONE				
AW13	33.00	12.00	28.2.23	DC	0.00 13.00	OVERBURDEN	BE9	30.00	12.00	1.3.23	DC	0.00 14.50	OVERBURDEN				
					13.00 26.00	MUDSTONE/SANDSTONE						14.50 24.00	MUDSTONE/SANDSTONE				
					26.00 28.50	COAL/MUDSTONE BAND						24.00 27.00	BROKEN GROUND				
					28.50 33.00	MUDSTONE/SANDSTONE						27.00 30.00	SOLID				
BE13	33.00	12.00	28.2.23	DC	0.00 13.00	OVERBURDEN	AW5	30.00	12.00	1.3.23	DC	0.00 12.70	OVERBURDEN				
					13.00 25.00	MUDSTONE/SANDSTONE						12.70 25.20	MUDSTONE/SANDSTONE				
					25.00 27.70	COAL/MUDSTONE BAND						25.20 28.00	COAL/MUDSTONE BAND				
					27.70 33.00	MUDSTONE/SANDSTONE						28.00 30.00	MUDSTONE/SANDSTONE				
DRILLING METRES						CASING METRES						STRATA ENCOUNTERED					
PAGE TOTAL 189.00						PAGE TOTAL 72.00						6 COAL 4 B/G 2 VOID 0					
PREV. TOTAL 820.00						PREV. TOTAL 267.00						24 COAL 10 B/G 12 VOID 2					
RUN. TOTAL 1009.00						RUN. TOTAL 339.00						30 COAL 14 B/G 14 VOID 2					

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

6

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
AW21	30.00	12.00	1.3.23	DC	0.00 14.70	OVERBURDEN	AW17	32.00	12.00	1.3.23	DC	0.00 14.50	OVERBURDEN	
					14.70 25.00	MUDSTONE/SANDSTONE						14.50 25.50	MUDSTONE/SANDSTONE	
					25.00 27.80	COAL/MUDSTONE BAND						25.50 28.30	BROKEN GROUND	
					27.80 30.00	MUDSTONE/SANDSTONE						28.30 32.00	SOLID	
BE21	30.00	12.00	1.3.23	DC	0.00 16.00	OVERBURDEN	BE25	32.00	12.00	1.3.23	DC	0.00 16.50	OVERBURDEN	
					16.00 25.00	MUDSTONE/SANDSTONE						16.50 25.70	MUDSTONE/SANDSTONE	
					25.00 27.80	COAL/MUDSTONE BAND						25.70 28.50	BROKEN GROUND	
					27.80 30.00	MUDSTONE/SANDSTONE						28.50 32.00	SOLID	
BE17	30.00	12.00	1.3.23	DC	0.00 14.50	OVERBURDEN	BA25	30.00	12.00	2.3.23	DC	0.00 16.50	OVERBURDEN	
					14.50 24.00	MUDSTONE/SANDSTONE						16.50 25.30	MUDSTONE/SANDSTONE	
					24.00 27.70	BROKEN GROUND						25.30 28.50	BROKEN GROUND	
					27.70 30.00	SOLID						28.50 30.00	SOLID	
DRILLING METRES							STRATA ENCOUNTERED							
PAGE TOTAL	184.00				72.00	HOLES	6	COAL	2		B/G	4	VOID	0
PREV. TOTAL	1009.00				339.00	PREVIOUS HOLES	30	COAL	14		B/G	14	VOID	2
RUN. TOTAL	1193.00				411.00	TOTAL HOLES	36	COAL	16		B/G	18	VOID	2

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

7

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA				
AW25	30.00	12.00	2.3.23	DC	0.00 15.80	OVERBURDEN	AK25	33.00	12.00	2.3.23	DC	0.00 14.40	OVERBURDEN				
					15.80 25.60	MUDSTONE/SANDSTONE						14.40 16.50	MUDSTONE/SANDSTONE				
					25.60 28.50	COAL/MUDSTONE BAND						16.50 17.30	SHALE/COAL TRACES				
					28.50 30.00	MUDSTONE/SANDSTONE						17.30 28.00	MUDSTONE/SANDSTONE				
												28.00 28.90	BROKEN GROUND				
												28.90 33.00	SOLID				
AS25	30.00	12.00	2.3.23	DC	0.00 14.80	OVERBURDEN	AG25	33.00	12.00	2.3.23	DC	0.00 14.40	OVERBURDEN				
					14.80 25.60	MUDSTONE/SANDSTONE						14.40 28.00	MUDSTONE/SANDSTONE				
					25.60 28.50	COAL/MUDSTONE BAND						28.00 30.40	BROKEN GROUND				
					28.50 30.00	MUDSTONE/SANDSTONE						30.40 33.00	SOLID				
AO25	33.00	12.00	2.3.23	DC	0.00 14.60	OVERBURDEN	AC25	33.00	12.00	2.3.23	DC	0.00 14.50	OVERBURDEN				
					14.60 26.00	MUDSTONE/SANDSTONE						14.50 28.00	MUDSTONE/SANDSTONE				
					26.00 29.40	BROKEN GROUND						28.00 30.80	COAL/MUDSTONE BAND				
					29.40 33.00	SOLID						30.80 33.00	MUDSTONE/SANDSTONE				
DRILLING METRES						CASING METRES	HOLES DRILLED						STRATA ENCOUNTERED				
PAGE TOTAL	192.00						PAGE TOTAL	72.00	HOLES					B/G	3	VOID	0
PREV. TOTAL	1193.00						PREV. TOTAL	411.00	PREVIOUS HOLES					B/G	16	VOID	2
RUN. TOTAL	1385.00						RUN. TOTAL	483.00	TOTAL HOLES					B/G	19	VOID	2

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

8

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	Depth To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	Depth To	STRATA	
Y25	33.00	12.00	2.3.23	DC	0.00	13.80	OVERBURDEN	M17	36.00	12.00	3.3.23	DC	0.00	14.20	OVERBURDEN	
					13.80	28.70	MUDSTONE/SANDSTONE						14.20	30.30	MUDSTONE/SANDSTONE	
					28.70	31.40	COAL/MUDSTONE BAND						30.30	33.00	COAL/MUDSTONE BAND	
					31.40	33.00	MUDSTONE/SANDSTONE						33.00	36.00	MUDSTONE/SANDSTONE	
U25	53.00	12.00	2.3.23	DC	0.00	13.30	OVERBURDEN	M21	36.00	12.00	3.3.23	DC	0.00	13.50	OVERBURDEN	
					13.30	29.00	MUDSTONE/SANDSTONE						13.50	30.00	MUDSTONE/SANDSTONE	
					29.00	31.70	BROKEN GROUND						30.00	32.70	BROKEN GROUND	
					31.70	33.00	SOLID						32.70	36.00	SOLID	
Q25	36.00	12.00	3.3.23	DC	0.00	13.60	OVERBURDEN	M25	36.00	12.00	3.3.23	DC	0.00	13.10	OVERBURDEN	
					13.60	29.80	MUDSTONE/SANDSTONE						13.10	30.00	MUDSTONE/SANDSTONE	
					29.80	32.80	COAL/MUDSTONE BAND						30.00	32.70	COAL/MUDSTONE BAND	
					32.80	36.00	MUDSTONE/SANDSTONE						32.70	36.00	MUDSTONE/SANDSTONE	
DRILLING METRES																
PAGE TOTAL	210.00				CASING METRES		HOLES DRILLED						STRATA ENCOUNTERED			
PREV. TOTAL	1385.00				PAGE TOTAL	72.00	HOLES	6	COAL	4		B/G	2	VOID	0	
RUN. TOTAL	1595.00				PREV. TOTAL	483.00	PREVIOUS HOLES	42	COAL	19		B/G	21	VOID	2	
					RUN. TOTAL	555.00	TOTAL HOLES	48	COAL	23		B/G	23	VOID	2	

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO. 9

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA										
M25	34.00	12.00	3.3.23	DC	0.00	OVERBURDEN	O17	36.00	12.00	6.3.23	DC	0.00	OVERBURDEN										
					13.30	MUDSTONE/SANDSTONE						14.20	MUDSTONE/SANDSTONE										
					30.00	COAL/MUDSTONE BAND						29.30	BROKEN GROUND										
					32.80	MUDSTONE/SANDSTONE						31.90	SOLID										
												36.00											
M13	34.00	12.00	3.3.23	DC	0.00	OVERBURDEN	U21	33.00	12.00	6.3.23	DC	0.00	OVERBURDEN										
					13.60	MUDSTONE/SANDSTONE						13.10	MUDSTONE/SANDSTONE										
					29.30	COAL/MUDSTONE BAND						28.50	BROKEN GROUND										
					32.00	MUDSTONE/SANDSTONE						31.50	SOLID										
												33.00											
M9	34.00	12.00	3.3.23	DC	0.00	OVERBURDEN	U17	33.00	12.00	6.3.23	DC	0.00	OVERBURDEN										
					13.00	MUDSTONE/SANDSTONE						13.00	MUDSTONE/SANDSTONE										
					29.30	COAL/MUDSTONE BAND						28.00	BROKEN GROUND										
					32.00	MUDSTONE/SANDSTONE						31.10	SOLID										
												33.00											
DRILLING METRES						HOLES DRILLED						STRATA ENCOUNTERED											
PAGE TOTAL						204.00						6 COAL						3 VOID					
PREV. TOTAL						1595.00						48 COAL						23 VOID					
RUN. TOTAL						1799.00						54 COAL						26 VOID					

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

10

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	STRATA ENCOUNTERED					
														B/G	VOID				
U13	33.00	12.00	6.3.23	DC	0.00 13.00	OVERBURDEN	Y9	36.00	12.00	7.3.23	DC	0.00 12.80	OVERBURDEN	0	0				
					13.00 27.60	MUDSTONE/SANDSTONE						12.80 28.30	MUDSTONE/SANDSTONE	2	2				
					27.60 31.30	BROKEN GROUND						28.30 31.10	COAL/MUDSTONE BAND	26	2				
					31.30 33.00	SOLID						31.10 36.00	MUDSTONE/SANDSTONE	30	2				
U9	33.00	12.00	6.3.23	DC	0.00 12.50	OVERBURDEN	AC9	33.00	12.00	7.3.23	DC	0.00 12.80	OVERBURDEN	0	0				
					12.50 28.00	MUDSTONE/SANDSTONE						12.80 27.80	MUDSTONE/SANDSTONE	2	0				
					28.00 30.80	BROKEN GROUND						27.80 30.00	BROKEN GROUND	2	0				
					30.80 33.00	SOLID						30.00 33.00	SOLID	28	0				
U5	33.00	12.00	6.3.23	DC	0.00 11.60	OVERBURDEN	AC13	33.00	12.00	7.3.23	DC	0.00 13.10	OVERBURDEN	0	0				
					11.60 28.50	MUDSTONE/SANDSTONE						13.10 28.30	MUDSTONE/SANDSTONE	2	0				
					28.50 31.00	BROKEN GROUND						28.30 31.00	COAL/MUDSTONE BAND	26	2				
					31.00 33.00	SOLID						31.00 33.00	MUDSTONE/SANDSTONE	30	2				
					DRILLING METRES			CASING METRES			HOLES DRILLED			STRATA ENCOUNTERED					
PAGE TOTAL					201.00			PAGE TOTAL			72.00 HOLES			6 COAL			4 VOID 0		
PREV. TOTAL					1799.00			PREV. TOTAL			627.00 PREVIOUS HOLES			54 COAL			26 VOID 2		
RUN. TOTAL					2000.00			RUN. TOTAL			699.00 TOTAL HOLES			60 COAL			30 VOID 2		

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

11

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	Depth To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	Depth To	STRATA
Y17	33.00	12.00	7.3.23	DC	0.00	13.20	OVERBURDEN	AG17	33.00	12.00	7.3.23	DC	0.00	13.30	OVERBURDEN
					13.20	25.70	MUDSTONE/SANDSTONE						13.30	27.50	MUDSTONE/SANDSTONE
					26.70	31.10	BROKEN GROUND						27.50	30.20	BROKEN GROUND
					31.10	33.00	SOLID						30.20	33.00	SOLID
AC17	33.00	12.00	7.3.23	DC	0.00	13.10	OVERBURDEN	AK17	33.00	12.00	7.3.23	DC	0.00	13.60	OVERBURDEN
					13.10	28.00	MUDSTONE/SANDSTONE						13.60	26.90	MUDSTONE/SANDSTONE
					28.00	30.60	COAL/MUDSTONE BAND						26.90	30.00	BROKEN GROUND
					30.60	33.00	MUDSTONE/SANDSTONE						30.00	33.00	SOLID
AC21	33.00	12.00	7.3.23	DC	0.00	13.50	OVERBURDEN	AK21	33.00	12.00	8.3.23	DC	0.00	14.00	OVERBURDEN
					13.50	29.40	MUDSTONE/SANDSTONE						14.00	26.50	MUDSTONE/SANDSTONE
					29.40	30.30	COAL/MUDSTONE BAND						26.50	28.50	BROKEN GROUND
					30.30	33.00	MUDSTONE/SANDSTONE						28.50	33.00	SOLID
STRATA ENCOUNTERED															
DRILLING METRES								HOLES DRILLED							
PAGE TOTAL 198.00								6 COAL 2 B/G 4 VOID 0							
PREV. TOTAL 2000.00								60 COAL 28 B/G 30 VOID 2							
RUN. TOTAL 2198.00								66 COAL 30 B/G 34 VOID 2							

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO. 12

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
AO17	33.00	12.00	8.3.23	DC	0.00 13.70	OVERBURDEN	BA21	33.00	12.00	8.3.23	DC	0.00 15.00	OVERBURDEN	
					13.70 27.50	MUDSTONE/SANDSTONE						15.00 25.00	MUDSTONE/SANDSTONE	
					27.50 29.50	BROKEN GROUND						25.00 27.80	COAL/MUDSTONE BAND	
					29.50 33.00	SOLID						27.80 33.00	MUDSTONE/SANDSTONE	
AS17	33.00	12.00	8.3.23	DC	0.00 14.50	OVERBURDEN	BA13	33.00	12.00	8.3.23	DC	0.00 13.30	OVERBURDEN	
					14.50 26.50	MUDSTONE/SANDSTONE						13.30 21.40	MUDSTONE/SANDSTONE	
					26.50 28.60	BROKEN GROUND						21.40 27.80	BROKEN GROUND	
					28.60 33.00	SOLID						27.80 33.00	SOLID	
BA17	33.00	12.00	8.3.23	DC	0.00 14.50	OVERBURDEN	BA9	33.00	12.00	8.3.23	DC	0.00 13.20	OVERBURDEN	
					14.50 25.20	MUDSTONE/SANDSTONE						13.20 24.70	MUDSTONE/SANDSTONE	
					25.20 28.00	BROKEN GROUND						24.70 27.00	BROKEN GROUND	
					28.00 33.00	SOLID						27.00 33.00	SOLID	
DRILLING METRES							STRATA ENCOUNTERED							
PAGE TOTAL	198.00				PAGE TOTAL	72.00	HOLES	6	COAL	1	B/G	5	VOID	0
PREV. TOTAL	2198.00				PREV. TOTAL	771.00	PREVIOUS HOLES	66	COAL	30	B/G	34	VOID	2
RUN. TOTAL	2396.00				RUN. TOTAL	843.00	TOTAL HOLES	72	COAL	31	B/G	39	VOID	2

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

13

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA
AW9	33.00	12.00	8.3.23	DC	0.00 13.30	OVERBURDEN	ASS	33.00	12.00	9.3.23	DC	0.00 12.50	OVERBURDEN
					13.30 25.80	MUDSTONE/SANDSTONE						12.50 26.20	MUDSTONE/SANDSTONE
					25.80 28.30	COAL/MUDSTONE BAND						26.20 29.00	COAL/MUDSTONE BAND
					28.30 33.00	MUDSTONE/SANDSTONE						29.00 33.00	MUDSTONE/SANDSTONE
AS13	33.00	12.00	8.3.23	DC	0.00 14.00	OVERBURDEN	AO9	33.00	12.00	9.3.23	DC	0.00 12.50	OVERBURDEN
					14.00 26.40	MUDSTONE/SANDSTONE						12.50 19.70	MUDSTONE/SANDSTONE
					26.40 29.00	COAL/MUDSTONE BAND						19.70 29.80	BROKEN GROUND
					29.00 33.00	MUDSTONE/SANDSTONE						29.80 33.00	SOLID
AS21	33.00	12.00	8.3.23	DC	0.00 14.60	OVERBURDEN	AK9	33.00	12.00	9.3.23	DC	0.00 12.00	OVERBURDEN
					14.60 26.00	MUDSTONE/SANDSTONE						12.00 27.30	MUDSTONE/SANDSTONE
					26.00 28.50	BROKEN GROUND						27.30 30.00	COAL/MUDSTONE BANDS
					28.50 33.00	SOLID						30.00 33.00	MUDSTONE/SANDSTONE
DRILLING METRES													
PAGE TOTAL	198.00				PAGE TOTAL	72.00 HOLES	6 COAL	4			B/G	2 VOID	0
PREV. TOTAL	2396.00				PREV. TOTAL	843.00 PREVIOUS HOLES	72 COAL	31			B/G	39 VOID	2
RUN. TOTAL	2594.00				RUN. TOTAL	915.00 TOTAL HOLES	78 COAL	35			B/G	41 VOID	2
STRATA ENCOUNTERED													

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

14

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
AK13	33.00	12.00	9.3.23	DC	0.00 13.50 27.00 29.70 33.00	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID	BA5	33.00	12.00	9.3.23	DC	0.00 12.50 26.80 28.50 33.00	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	
AG9	33.00	12.00	9.3.23	DC	0.00 12.00 27.00 30.00 33.00	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID	AC5	33.00	12.00	10.3.23	DC	0.00 10.80 26.90 30.30 33.00	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID	
AS5	33.00	12.00	9.3.23	DC	0.00 11.00 26.30 26.30 28.00 33.00	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	AK5	33.00	12.00	10.3.23	DC	0.00 10.30 27.40 29.70 33.00	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	
DRILLING METRES						HOLES DRILLED	STRATA ENCOUNTERED							
PAGE TOTAL	198.00				PAGE TOTAL	72.00	6	COAL	3		B/G	3	VOID	0
PREV. TOTAL	2594.00				PREV. TOTAL	915.00	78	COAL	35		B/G	41	VOID	2
RUN. TOTAL	2792.00				RUN. TOTAL	987.00	84	COAL	38		B/G	44	VOID	2

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4.2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

15

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA
BC29	30.00	12.00	13.3.23	AC	0.00 17.40	OVERBURDEN	BC29	30.00	12.00	13.3.23	AC	0.00 17.00	OVERBURDEN
					17.40 24.30	MUDSTONE/SANDSTONE						17.00 24.40	MUDSTONE/SANDSTONE
					24.30 27.10	COAL/MUDSTONE BAND						24.40 28.50	BROKEN GROUND
					27.10 30.00	MUDSTONE/SANDSTONE						28.50 30.00	SOLID
BG28	30.00	12.00	13.3.23	AC	0.00 17.40	OVERBURDEN	BA29	30.00	12.00	13.3.23	AC	0.00 16.70	OVERBURDEN
					17.40 24.50	MUDSTONE/SANDSTONE						16.70 25.30	MUDSTONE/SANDSTONE
					24.50 27.30	COAL/MUDSTONE BAND						25.30 28.70	BROKEN GROUND
					27.30 30.00	MUDSTONE/SANDSTONE						28.70 30.00	SOLID
BE29	30.00	12.00	13.3.23	AC	0.00 17.20	OVERBURDEN	AY29	30.00	12.00	13.3.23	AC	0.00 16.50	OVERBURDEN
					17.20 20.10	MUDSTONE/SANDSTONE						16.50 25.60	MUDSTONE/SANDSTONE
					20.10 28.30	BROKEN GROUND						25.60 28.40	COAL/MUDSTONE BAND
					28.30 30.00	SOLID						28.40 30.00	MUDSTONE/SANDSTONE

DRILLING METRES		CASING METRES			HOLES DRILLED			STRATA ENCOUNTERED			
PAGE TOTAL	180.00	PAGE TOTAL	72.00	HOLES	6	COAL	3	B/G	3	VOID	0
PREV. TOTAL	2792.00	PREV. TOTAL	987.00	PREVIOUS HOLES	84	COAL	38	B/G	44	VOID	2
RUN. TOTAL	2972.00	RUN. TOTAL	1059.00	TOTAL HOLES	90	COAL	41	B/G	47	VOID	2

DAILY DRILLING RETURNS

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA
AW29	30.00	12.00	14.3.23	AC	0.00 16.70 25.90 28.70	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	AO29	32.00	12.00	14.3.23	AC	0.00 16.40 24.70 29.50	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID
AU29	30.00	12.00	14.3.23	AC	0.00 16.70 26.10 28.90	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE MUDSTONE/SANDSTONE	AO29	32.00	12.00	14.3.23	AC	0.00 16.00 25.10 29.70	OVERBURDEN MUDSTONE/SANDSTONE BROKEN GROUND SOLID
AS29	31.00	12.00	14.3.23	AC	0.00 16.70 26.80 29.50	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE	AM29	32.00	12.00	14.3.23	AC	0.00 15.40 27.10 29.90	OVERBURDEN MUDSTONE/SANDSTONE COAL/MUDSTONE BAND MUDSTONE/SANDSTONE
DRILLING METRES							STRATA ENCOUNTERED						
PAGE TOTAL	187.00					PAGE TOTAL	6 COAL	4			B/G	2 VOID	0
PREV. TOTAL	2972.00					PREV. TOTAL	90 COAL	41			B/G	47 VOID	2
RUN. TOTAL	3159.00					RUN. TOTAL	96 COAL	45			B/G	49 VOID	2

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

17

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA
AK29	33.00	12.00	14.3.23	AC	0.00 15.50	OVERBURDEN	A1	35.00	6.00	15.3.23	KW	0.00 9.00	OVERBURDEN
					27.50 30.40	MUDSTONE/SANDSTONE						9.00 30.60	MUDSTONE/SANDSTONE
					30.40 33.00	COAL/MUDSTONE BAND						30.60 33.00	BROKEN GROUND
						MUDSTONE/SANDSTONE						33.00 35.00	SOLID
AI29	33.00	12.00	14.3.23	AC	0.00 15.00	OVERBURDEN	A5	35.00	6.00	15.3.23	KW	0.00 8.90	OVERBURDEN
					26.70 31.20	MUDSTONE/SANDSTONE						8.90 28.80	MUDSTONE/SANDSTONE
					31.20 33.00	BROKEN GROUND						29.80 32.70	BROKEN GROUND
						SOLID						32.70 35.00	SOLID
A3	35.00	6.00	15.3.23	KW	0.00 8.80	OVERBURDEN	A7	35.00	6.00	15.3.23	KW	0.00 9.00	OVERBURDEN
					8.80 30.50	MUDSTONE/SANDSTONE						9.00 30.00	MUDSTONE/SANDSTONE
					30.50 33.00	BROKEN GROUND						30.00 32.80	BROKEN GROUND
					33.00 35.00	SOLID						32.80 35.00	SOLID
DRILLING METRES							STRATA ENCOUNTERED						
PAGE TOTAL	206.00	PAGE TOTAL	48.00	HOLES	6	COAL	1	B/G	5	VOID	0		
PREV. TOTAL	3159.00	PREV. TOTAL	1131.00	PREVIOUS HOLES	96	COAL	45	B/G	49	VOID	2		
RUN. TOTAL	3365.00	RUN. TOTAL	1179.00	TOTAL HOLES	102	COAL	46	B/G	54	VOID	2		

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

18

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
A9	36.00	6.00	15.3.23	KW	0.00	OVERBURDEN	AC29	33.00	12.00	15.3.23	AC	0.00	OVERBURDEN	
					11.00	MUDSTONE/SANDSTONE						14.60	MUDSTONE/SANDSTONE	
					30.20	BROKEN GROUND						28.40	COAL/MUDSTONE BAND	
					32.80	SOLID						31.10	MUDSTONE/SANDSTONE	
					36.00							33.00	MUDSTONE/SANDSTONE	
AG29	33.00	12.00	15.3.23	AC	0.00	OVERBURDEN	AA29	33.00	12.00	15.3.23	AC	0.00	OVERBURDEN	
					15.30	MUDSTONE/SANDSTONE						14.40	MUDSTONE/SANDSTONE	
					28.00	COAL/MUDSTONE BAND						28.80	COAL/MUDSTONE BAND	
					30.70	MUDSTONE/SANDSTONE						31.60	MUDSTONE/SANDSTONE	
												33.00	MUDSTONE/SANDSTONE	
AE29	33.00	12.00	15.3.23	AC	0.00	OVERBURDEN	Y29	33.00	12.00	15.3.23	AC	0.00	OVERBURDEN	
					15.30	MUDSTONE/SANDSTONE						14.50	MUDSTONE/SANDSTONE	
					28.30	COAL/MUDSTONE BAND						29.00	COAL/MUDSTONE BAND	
					31.00	MUDSTONE/SANDSTONE						31.70	MUDSTONE/SANDSTONE	
					33.00							33.00	MUDSTONE/SANDSTONE	
DRILLING METRES														
CASING METRES														
HOLES DRILLED														
STRATA ENCOUNTERED														
PAGE TOTAL	201.00				66.00	HOLES	6	COAL	5		B/G	1	VOID	0
PREV. TOTAL	3965.00				1179.00	PREVIOUS HOLES	102	COAL	46		B/G	54	VOID	2
RUN. TOTAL	3566.00				1245.00	TOTAL HOLES	108	COAL	51		B/G	55	VOID	2

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SHEET NO. 19

CLIENT NATIONWIDE ENGINEERING

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

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
W29	33.00	12.00	15.3.23	AC	0.00	14.50	OVERBURDEN	O29	35.00	12.00	16.3.23	AC	0.00	14.60	OVERBURDEN
					14.50	29.20	MUDSTONE/SANDSTONE						14.60	24.70	MUDSTONE/SANDSTONE
					29.20	32.00	COAL/MUDSTONE BAND						24.70	32.60	BROKEN GROUND
					32.00	33.00	MUDSTONE/SANDSTONE						32.60	35.00	SOLID
U29	35.00	12.00	15.3.23	AC	0.00	14.70	OVERBURDEN	O29	35.00	12.00	16.3.23	AC	0.00	14.40	OVERBURDEN
					14.70	29.60	MUDSTONE/SANDSTONE						14.40	28.70	MUDSTONE/SANDSTONE
					29.60	32.30	COAL/MUDSTONE BAND						28.70	32.60	COAL/MUDSTONE BAND
					32.30	35.00	MUDSTONE/SANDSTONE						32.60	35.00	MUDSTONE/SANDSTONE
S29	35.00	12.00	16.3.23	ACO	0.00	14.70	OVERBURDEN	M29	35.00	12.00	16.3.23	AC	0.00	14.70	OVERBURDEN
					14.70	28.10	MUDSTONE/SANDSTONE						14.70	29.20	MUDSTONE/SANDSTONE
					28.10	32.00	PACKED WASTE						29.20	33.00	COAL/MUDSTONE BAND
					32.00	35.00	SOLID						33.00	35.00	SOLID

DRILLING METRES	CASING METRES		HOLES DRILLED		STRATA ENCOUNTERED						
PAGE TOTAL	208.00	PAGE TOTAL	72.00	HOLES	6	COAL	4	B/G	2	VOID	0
PREV. TOTAL	3566.00	PREV. TOTAL	1245.00	PREVIOUS HOLES	108	COAL	51	B/G	55	VOID	2
RUN. TOTAL	3774.00	RUN. TOTAL	1317.00	TOTAL HOLES	114	COAL	55	B/G	57	VOID	2

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

21

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
A15	35.00	6.00	16.3.23	KW	0.00 12.50	OVERBURDEN	S11	33.00	12.00	16.3.23	KW	0.00 13.00	OVERBURDEN	
					12.50 30.40	MUDSTONE/SANDSTONE						13.00 28.00	MUDSTONE/SANDSTONE	
					30.40 33.10	BROKEN GROUND						28.00 31.50	BROKEN GROUND	
					33.10 35.00	SOLID						31.50 33.00	SOLID	
A17	35.00	6.00	16.3.23	KW	0.00 12.70	OVERBURDEN	A15	33.00	12.00	16.3.23	KW	0.00 13.60	OVERBURDEN	
					12.70 30.70	MUDSTONE/SANDSTONE						13.60 25.70	MUDSTONE/SANDSTONE	
					30.70 33.30	COAL/MUDSTONE BAND						25.70 28.20	COAL/MUDSTONE BAND	
					33.30 35.00	MUDSTONE/SANDSTONE						28.20 33.00	MUDSTONE/SANDSTONE	
A19	35.00	6.00	16.3.23	KW	0.00 13.70	OVERBURDEN	B529	30.00	12.00	17.3.23	KW	0.00 16.80	OVERBURDEN	
					13.70 30.80	MUDSTONE/SANDSTONE						16.80 25.20	MUDSTONE/SANDSTONE	
					30.80 33.50	BROKEN GROUND						25.20 28.60	BROKEN GROUND/GROUT TRACES	
					33.50 35.00	SOLID						28.60 30.00	SOLID	
DRILLING METRES						CASING METRES						STRATA ENCOUNTERED		
PAGE TOTAL 201.00						PAGE TOTAL 54.00 HOLES						B/G 4 VOID 0		
PREV. TOTAL 3984.00						PREV. TOTAL 1377.00 PREVIOUS HOLES						B/G 58 VOID 2		
RUN. TOTAL 4185.00						RUN. TOTAL 1431.00 TOTAL HOLES						B/G 62 VOID 2		

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

22

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA				
AP29	32.00	12.00	17.3.23	KW	0.00 16.20	OVERBURDEN MUDSTONE/SANDSTONE	B115	30.00	6.00	17.3.23	KW	0.00 13.40	OVERBURDEN MUDSTONE/SANDSTONE				
					25.00	BROKEN GROUND GROUT TRACES						13.40	MUDSTONE/SANDSTONE				
					29.60	SOLID						24.80	COAL/MUDSTONE BAND				
					32.00							27.30	MUDSTONE/SANDSTONE				
												30.00					
B111	30.00	6.00	17.3.23	KW	0.00 12.80	OVERBURDEN MUDSTONE/SANDSTONE	B117	30.00	6.00	17.3.23	KW	0.00 14.00	OVERBURDEN MUDSTONE/SANDSTONE				
					25.00	COAL/MUDSTONE BAND						14.00	BROKEN GROUND				
					27.30							24.00	SOLID				
					30.00							27.30					
B113	30.00	6.00	17.3.23	KW	0.00 13.00	OVERBURDEN MUDSTONE/SANDSTONE	C27/28	36.00	12.00	17.3.23	AC	0.00 14.30	OVERBURDEN MUDSTONE/SANDSTONE				
					24.70	COAL/MUDSTONE BAND						14.30	BROKEN GROUND				
					27.30							27.00	SOLID				
					30.00							33.90					
												36.00					
													STRATA ENCOUNTERED				
DRILLING METRES													HILES DRILLED		HILES		
PAGE TOTAL 188.00													6	3	B/G	3	VOID 0
PREV. TOTAL 4185.00													126	62	B/G	62	VOID 2
RUN. TOTAL 4373.00													132	65	B/G	65	VOID 2

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

23

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA		
A27	36.00	12.00	17.3.23	AC	0.00 15.00	OVERBURDEN	A21	36.00	12.00	17.3.23	AC	0.00 14.00	OVERBURDEN		
					15.00 29.80	MUDSTONE/SANDSTONE						14.00 27.40	MUDSTONE/SANDSTONE		
					29.80 34.20	BROKEN GROUND						27.40 33.60	BROKEN GROUND		
					34.20 36.00	SOLID						33.60 36.00	SOLID		
A25	36.00	12.00	17.3.23	AC	0.00 15.00	OVERBURDEN	C1	35.00	6.00	17.3.23	AC	0.00 9.00	OVERBURDEN		
					15.00 31.10	MUDSTONE/SANDSTONE						9.00 24.70	MUDSTONE/SANDSTONE		
					31.10 33.90	COAL/MUDSTONE BAND						24.70 33.20	BROKEN GROUND		
					33.90 36.00	MUDSTONE/SANDSTONE						33.20 34.50	SOLID		
A23	36.00	12.00	17.3.23	AC	0.00 14.30	OVERBURDEN	E1	35.00	6.00	17.3.23	AC	0.00 9.00	OVERBURDEN		
					14.30 31.00	MUDSTONE/SANDSTONE						9.00 24.40	MUDSTONE/SANDSTONE		
					31.00 33.70	COAL/MUDSTONE BAND						24.40 33.30	BROKEN GROUND		
					33.70 36.00	MUDSTONE/SANDSTONE						33.00 26.00	SOLID		
DRILLING METRES													STRATA ENCOUNTERED		
PAGE TOTAL	214.00	PAGE TOTAL	60.00	HOLES	6	COAL	2	B/G	4	VOID	0				
PREV. TOTAL	4373.00	PREV. TOTAL	1479.00	PREVIOUS HOLES	132	COAL	65	B/G	65	VOID	2				
RUN. TOTAL	4587.00	RUN. TOTAL	1539.00	TOTAL HOLES	138	COAL	67	B/G	69	VOID	2				

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

25

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA				
S1	33.00	6.00	20.3.23	AC	0.00 12.20	OVERBURDEN	B19	30.00	12.00	20.3.23	KW	0.00 15.00	OVERBURDEN				
					12.20 29.30	MUDSTONE/SANDSTONE						15.00 24.70	MUDSTONE/SANDSTONE				
					29.30 32.00	COAL/MUDSTONE BAND						24.70 27.30	COAL/MUDSTONE BAND				
					32.00 33.00	MUDSTONE/SANDSTONE						27.30 30.00	MUDSTONE/SANDSTONE				
U1	33.00	6.00	20.3.23	AC	0.00 12.50	OVERBURDEN	B121	30.00	12.00	20.3.23	KW	0.00 15.70	OVERBURDEN				
					12.50 29.00	MUDSTONE/SANDSTONE						15.70 24.70	MUDSTONE/SANDSTONE				
					29.00 31.70	COAL/MUDSTONE BAND						24.70 27.30	COAL/MUDSTONE BAND				
					31.70 33.00	MUDSTONE/SANDSTONE						27.30 30.00	MUDSTONE/SANDSTONE				
W1	33.00	6.00	20.3.23	AC	0.00 12.70	OVERBURDEN	B123	30.00	12.00	20.3.23	KW	0.00 16.00	OVERBURDEN				
					12.70 28.70	MUDSTONE/SANDSTONE						16.00 24.70	MUDSTONE/SANDSTONE				
					28.70 31.50	COAL/MUDSTONE BAND						24.70 27.40	COAL/MUDSTONE BAND				
					31.50 33.00	MUDSTONE/SANDSTONE						27.40 30.00	MUDSTONE/SANDSTONE				
DRILLING METRES						CASING METRES						STRATA ENCOUNTERED					
PAGE TOTAL						189.00						6 COAL					
PREV. TOTAL						4797.00						144 COAL					
RUN. TOTAL						4986.00						150 COAL					
PAGE TOTAL						54.00						6 B/G					
PREV. TOTAL						1575.00						74 B/G					
RUN. TOTAL						1629.00						74 B/G					
						HOLES						VOID					
						PREVIOUS HOLES						2					
						TOTAL HOLES						2					

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

27

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	
BE1	30.00	6.00	21.3.23	KW	0.00 12.80	OVERBURDEN	BC1	30.00	6.00	21.3.23	KW	0.00 11.90	OVERBURDEN	
					12.80 24.40	MUDSTONE/SANDSTONE						11.90 24.50	MUDSTONE/SANDSTONE	
					24.40 27.00	BROKEN GROUND						24.50 27.00	BROKEN GROUND	
					27.00 30.00	SOLID						27.00 30.00	SOLID	
BC1	30.00	6.00	21.3.23	KW	0.00 12.60	OVERBURDEN	BA1	30.00	6.00	21.3.23	KW	0.00 12.00	OVERBURDEN	
					12.60 24.30	MUDSTONE/SANDSTONE						12.00 24.80	MUDSTONE/SANDSTONE	
					24.30 27.00	BROKEN GROUND						24.80 27.50	BROKEN GROUND	
					27.00 30.00	SOLID						27.50 30.00	SOLID	
BE1	30.00	6.00	21.3.23	KW	0.00 12.30	OVERBURDEN	AY1	30.00	6.00	21.3.23	KW	0.00 12.00	OVERBURDEN	
					12.30 24.30	MUDSTONE/SANDSTONE						12.00 25.00	MUDSTONE/SANDSTONE	
					24.30 27.00	BROKEN GROUND						25.00 27.90	COAL/MUDSTONE BAND	
					27.00 30.00	SOLID						27.90 30.00	MUDSTONE/SANDSTONE	
DRILLING METRES						HOLES DRILLED						STRATA ENCOUNTERED		
PAGE TOTAL	180.00	PAGE TOTAL	36.00	HOLES	6	COAL	1	B/G	5	VOID	0			
PREV. TOTAL	5166.00	PREV. TOTAL	1677.00	PREVIOUS HOLES	156	COAL	77	B/G	77	VOID	2			
RUN. TOTAL	5346.00	RUN. TOTAL	1713.00	TOTAL HOLES	162	COAL	78	B/G	82	VOID	2			

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

30

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA		
AQ1	32.00	6.00	22.3.23	KW	0.00	12.00 OVERBURDEN	A20	35.00	12.00	22.3.23	AC	0.00	13.80 OVERBURDEN		
					12.00	MUDSTONE/SANDSTONE						13.80	30.00 MUDSTONE/SANDSTONE		
					26.60	COAL						30.00	34.00 BROKEN GROUT/GROUT TRACES		
					29.30	MUDSTONE/SANDSTONE						34.00	35.00 SOLID		
R29	35.00	12.00	22.3.23	AC	0.00	14.60 OVERBURDEN	A14	35.00	12.00	22.3.23	AC	0.00	12.30 OVERBURDEN		
					14.60	MUDSTONE/SANDSTONE						12.30	30.50 MUDSTONE/SANDSTONE		
					27.40	BROKEN GROUT/GROUT TRACES						30.50	33.00 BROKEN GROUT/GROUT TRACES		
					32.70	SOLID						33.00	35.00 SOLID		
B27/28	35.00	12.00	22.3.23	AC	0.00	14.70 OVERBURDEN	P1	35.00	6.00	22.3.23	AC	0.00	10.80 OVERBURDEN		
					14.70	MUDSTONE/SANDSTONE						10.80	29.00 MUDSTONE/SANDSTONE		
					28.40	BROKEN GROUT/GROUT TRACES						29.00	32.30 PACKED WASTE		
					34.00	SOLID						32.30	35.00 SOLID		
DRILLING METRES						HOLES DRILLED						STRATA ENCOUNTERED			
PAGE TOTAL	207.00					60.00	HOLES	6	COAL	1	1	B/G	5	VOID	0
PREV. TOTAL	5721.00					1785.00	PREVIOUS HOLES	174	COAL	85	85	B/G	87	VOID	2
RUN. TOTAL	5928.00					1845.00	TOTAL HOLES	180	COAL	86	86	B/G	92	VOID	2

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

31

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA
J1	35.00	6.00	22.3.23	KW	0.00 9.50	OVERBURDEN	C3	35.00	6.00	22.3.23	KW	0.00 9.00	OVERBURDEN
					9.50 31.00	MUDSTONE/SANDSTONE						9.00 31.00	MUDSTONE/SANDSTONE
					31.00 32.00	BROKEN GROUND/GROUT TRACES						31.00 32.00	BROKEN GROUND
					32.00 35.00	SOLID						32.00 35.00	SOLID
D1	35.00	6.00	22.3.23	KW	0.00 9.00	OVERBURDEN	G3	35.00	6.00	22.3.23	KW	0.00 9.00	OVERBURDEN
					9.00 24.50	MUDSTONE/SANDSTONE						9.00 29.40	MUDSTONE/SANDSTONE
					24.50 33.20	BROKEN GROUND/GROUT TRACES						29.40 32.30	BROKEN GROUND
					33.20 35.00	SOLID						32.30 35.00	SOLID
A4	36.00	6.00	22.3.23	KW	0.00 9.50	OVERBURDEN	S27	35.00	12.00	23.3.23	AC	0.00 14.00	OVERBURDEN
					9.50 27.00	MUDSTONE/SANDSTONE						14.00 26.40	MUDSTONE/SANDSTONE
					27.00 34.10	BROKEN GROUND/GROUT TRACES						26.40 32.00	BROKEN GROUND
					34.10 36.00	SOLID						32.00 35.00	SOLID
STRATA ENCOUNTERED													
HOLES DRILLED													
STRATA ENCOUNTERED													
DRILLING METRES	211.00												
PAGE TOTAL	42.00												
PREV. TOTAL	1845.00												
RUN. TOTAL	1887.00												
		6 COAL	0	B/G	6 VOID	0							
		180 COAL	86	B/G	92 VOID	2							
		186 COAL	86	B/G	98 VOID	2							

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

32

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA
W27	33.00	12.00	23.3.23	AC	0.00 14.00	OVERBURDEN	AM27	33.00	12.00	23.3.23	AC	0.00 15.00	OVERBURDEN
					14.00 28.60	MUDSTONE/SANDSTONE						15.00 25.40	MUDSTONE/SANDSTONE
					28.60 31.50	COAL/MUDSTONE BAND						25.40 29.90	BROKEN GROUND/GROUT TRACES
					31.50 33.00	MUDSTONE/SANDSTONE						29.90 33.00	SOLID
AE27	33.00	12.00	23.3.23	AC	0.00 14.50	OVERBURDEN	AO27	33.00	12.00	23.3.23	AC	0.00 15.50	OVERBURDEN
					14.50 28.30	MUDSTONE/SANDSTONE						15.50 25.70	MUDSTONE/SANDSTONE
					28.30 31.00	COAL/MUDSTONE BAND						25.70 29.50	BROKEN GROUND/GROUT TRACES
					31.00 33.00	MUDSTONE/SANDSTONE						29.50 33.00	SOLID
AI27	33.00	12.00	23.3.23	AC	0.00 14.70	OVERBURDEN	AY27	33.00	12.00	23.3.23	AC	0.00 16.20	OVERBURDEN
					14.70 28.00	MUDSTONE/SANDSTONE						16.20 25.90	MUDSTONE/SANDSTONE
					28.00 30.60	COAL/MUDSTONE BAND						25.90 28.60	COAL/MUDSTONE BAND
					30.60 33.00	MUDSTONE/SANDSTONE						28.60 33.00	MUDSTONE/SANDSTONE
DRILLING METRES						HOLES DRILLED						STRATA ENCOUNTERED	
PAGE TOTAL	198.00	PAGE TOTAL	72.00	HOLES	6	COAL	4	B/G	2	VOID	0		
PREV. TOTAL	6139.00	PREV. TOTAL	1887.00	PREVIOUS HOLES	186	COAL	86	B/G	98	VOID	2		
RUN. TOTAL	6337.00	RUN. TOTAL	1959.00	TOTAL HOLES	192	COAL	90	B/G	100	VOID	2		

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

34

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												
AA3	33.00	6.00	23.3.23	KW	0.00	11.50	OVERBURDEN	A17	33.00	6.00	23.3.23	KW	0.00	11.50	OVERBURDEN												
					11.50	28.00	MUDSTONE/SANDSTONE						11.50	28.00	MUDSTONE/SANDSTONE												
					28.00	30.70	BROKEN GROUND/GROUT TRACES						26.00	29.70	COAL/MUDSTONE BAND												
					30.70	33.00	SOLID						29.70	33.00	MUDSTONE/SANDSTONE												
AE3	33.00	6.00	23.3.23	KW	0.00	11.00	OVERBURDEN	BG23	30.00	12.00	24.3.23	AC	0.00	16.00	OVERBURDEN												
					11.00	24.00	MUDSTONE/SANDSTONE						16.00	24.50	MUDSTONE/SANDSTONE												
					24.00	30.00	BROKEN GROUND						24.50	28.50	BROKEN GROUND												
					30.00	33.00	SOLID						28.50	30.00	SOLID												
AI3	33.00	6.00	23.3.23	KW	0.00	11.00	OVERBURDEN	BC23	30.00	12.00	24.3.23	AC	0.00	15.70	OVERBURDEN												
					11.00	26.00	MUDSTONE/SANDSTONE						15.70	22.10	MUDSTONE/SANDSTONE												
					26.00	29.70	COAL/MUDSTONE BAND						22.10	28.40	BROKEN GROUND												
					29.70	33.00	MUDSTONE/SANDSTONE						28.40	30.00	SOLID												
DRILLING METRES							CASING METRES							HOLES DRILLED													
PAGE TOTAL							192.00							PAGE TOTAL							48.00 HOLES						
PREV. TOTAL							6533.00							PREV. TOTAL							2007.00 PREVIOUS HOLES						
RUN. TOTAL							6725.00							RUN. TOTAL							2055.00 TOTAL HOLES						
																					STRATA ENCOUNTERED						
																					B/G						
																					2 VOID						
																					B/G						
																					104 VOID						
																					B/G						
																					106 VOID						
																					2						

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

41

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		
AE11	33.00	6.00	28.3.23	KW	0.00	13.00	OVERBURDEN	S19	33.00	6.00	28.3.23	AC	0.00	13.50	OVERBURDEN		
					13.00	27.50	MUDSTONE/SANDSTONE						13.50	28.30	MUDSTONE/SANDSTONE		
					27.50	30.20	COAL/MUDSTONE BAND						29.30	31.90	PACKED WASTE		
					30.20	33.00	MUDSTONE/SANDSTONE						31.90	33.00	SOLID		
AA19	33.00	6.00	28.3.23	AC	0.00	13.20	OVERBURDEN	O19	35.00	6.00	28.3.23	AC	0.00	13.50	OVERBURDEN		
					13.20	27.30	MUDSTONE/SANDSTONE						13.50	29.70	MUDSTONE/SANDSTONE		
					27.30	30.80	BROKEN GROUND						29.70	32.30	COAL/MUDSTONE BAND		
					30.80	33.00	SOLID						32.30	35.00	MUDSTONE/SANDSTONE		
W19	33.00	6.00	28.3.23	AC	0.00	13.20	OVERBURDEN	K19	35.00	6.00	28.3.23	AC	0.00	13.60	OVERBURDEN		
					13.20	28.40	MUDSTONE/SANDSTONE						13.60	30.00	MUDSTONE/SANDSTONE		
					28.40	31.20	BROKEN GROUND						30.00	32.70	COAL/MUDSTONE BAND		
					31.20	33.00	SOLID						32.70	35.00	MUDSTONE/SANDSTONE		
							HOLES DRILLED				STRATA ENCOUNTERED						
DRILLING METRES		CASING METRES					HOLES DRILLED					STRATA ENCOUNTERED					
PAGE TOTAL	202.00	PAGE TOTAL					36.00	HOLES					B/G				
PREV. TOTAL	7921.00	PREV. TOTAL					2403.00	PREVIOUS HOLES					B/G				
RUN. TOTAL	8123.00	RUN. TOTAL					2439.00	TOTAL HOLES					B/G				
							6	COAL					3				
							240	COAL					123				
							246	COAL					126				
								VOID					0				
								VOID					2				
								VOID					2				

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

42

Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA	Hole No	Total Depth	Casing Depth	Date	Driller	Depth From To	STRATA							
G19	35.00	6.00	28.3.23	AC	0.00 13.50	OVERBURDEN	S15	33.00	6.00	29.3.23	AC	0.00 13.00	OVERBURDEN							
					13.50 30.10	MUDSTONE/SANDSTONE						13.00 28.90	MUDSTONE/SANDSTONE							
					30.10 32.80	COAL/MUDSTONE BAND						28.90 31.50	COAL/MUDSTONE BAND							
					32.80 35.00	MUDSTONE/SANDSTONE						31.50 33.00	MUDSTONE/SANDSTONE							
O15	35.00	6.00	28.3.23	AC	0.00 13.70	OVERBURDEN	W15	33.00	6.00	29.3.23	AC	0.00 13.00	OVERBURDEN							
					13.70 29.40	MUDSTONE/SANDSTONE						13.00 28.60	MUDSTONE/SANDSTONE							
					29.40 32.00	COAL/MUDSTONE BAND						28.60 31.20	COAL/MUDSTONE BAND							
					32.00 35.00	MUDSTONE/SANDSTONE						31.20 33.00	MUDSTONE/SANDSTONE							
O11	35.00	6.00	28.3.23	AC	0.00 13.20	OVERBURDEN	AA15	33.00	6.00	29.3.23	AC	0.00 13.00	OVERBURDEN							
					13.20 29.20	MUDSTONE/SANDSTONE						13.00 28.20	MUDSTONE/SANDSTONE							
					29.20 32.00	BROKEN GROUND						28.20 30.80	COAL/MUDSTONE BAND							
					32.00 35.00	SOLID						30.80 33.00	SOLID							
DRILLING METRES							HOLES DRILLED							STRATA ENCOUNTERED						
PAGE TOTAL							PAGE TOTAL							B/G						
PREV. TOTAL							PREV. TOTAL							B/G						
RUN. TOTAL							RUN. TOTAL							B/G						
204.00							36.00							5						
8123.00							2439.00							126						
8327.00							2475.00							131						
							HOLES							VOID						
							PREVIOUS HOLES							VOID						
							TOTAL HOLES							VOID						

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY DRILLING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO.

45

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					
BG7	30.00	6.00	29.3.23	KW	0.00	13.00	OVERBURDEN	TEST 2	33.00	12.00	30.3.23	AC	0.00	13.20	OVERBURDEN					
					13.00	25.70	MUDSTONE/SANDSTONE						13.20	29.00	MUDSTONE/SANDSTONE					
					25.70	27.30	BROKEN GROUND/GROUT						29.00	31.70	BROKEN GROUND/GROUT					
					27.30	30.00	MUDSTONE/SANDSTONE						31.70	33.00	SOLID					
BG15	30.00	6.00	29.3.23	KW	0.00	13.50	OVERBURDEN	TEST 3	30.00	6.00	30.3.23	AC	0.00	16.70	OVERBURDEN					
					13.50	24.60	MUDSTONE/SANDSTONE						16.70	25.00	MUDSTONE/SANDSTONE					
					24.60	27.30	COAL/MUDSTONE BAND						25.00	28.00	BROKEN GROUND/GROUT					
					27.30	30.00	MUDSTONE/SANDSTONE						28.00	30.00	SOLID					
BC15	30.00	6.00	29.3.23	KW	0.00	13.70	OVERBURDEN	TEST 4	32.00	12.00	30.3.23	KW	0.00	13.80	OVERBURDEN					
					13.70	25.00	MUDSTONE/SANDSTONE						13.80	26.70	MUDSTONE/SANDSTONE					
					25.00	27.80	COAL/MUDSTONE BAND						26.70	29.30	BROKEN GROUND/GROUT					
					27.80	30.00	MUDSTONE/SANDSTONE						29.30	32.00	SOLID					
DRILLING METRES							CASING METRES							STRATA ENCOUNTERED						
PAGE TOTAL 185.00							PAGE TOTAL 48.00							B/G 4 VOID 0						
PREV. TOTAL 8711.00							PREV. TOTAL 2553.00							B/G 129 VOID 2						
RUN. TOTAL 8896.00							RUN. TOTAL 2601.00							B/G 133 VOID 2						
							HOLES DRILLED													
							HOLES													
							PREVIOUS HOLES													
							TOTAL HOLES													

APPENDIX FOUR

DAILY GROUTING RECORDS

C8B

DAILY GROUTING RETURNS

SITE

13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT

NATIONWIDE ENGINEERING

SHEET NO. 1

DATE

9.3.23

MIX

12to1

GROUND SHIRE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
AS17	2.60	0.20	2.40				30.00			
AW17	3.90	0.30	3.60				30.00			
BA17	1.95	0.15	1.80				30.00			
AS21	2.60	0.20	2.40				30.00			
AW21	0.39	0.03	0.36				30.00			
BA21	0.39	0.03	0.36				30.00			
Q13	2.60	0.20	2.40			V				
BA13	1.95	0.15	1.80			V				
Q9	2.60	0.20	2.40				30.00			
U9	2.60	0.20	2.40				30.00			
U13	1.95	0.15	1.80				30.00			
PAGE TOTAL	23.53	1.81	21.72	0.00	0.00	COMPLETE	9.00			
PREV. TOTAL	0.00	0.00	0.00	0.00	0.00	PREV. COMP.	0.00			
RUN. TOTAL	23.53	1.81	21.72	0.00	0.00	TOTAL COMP.	9.00			

DELIVERIES (TONNES)					
	CEMENT	P.F.A.	SAND	GRAVEL	
TODAYS	24.00	28.86			
DELIVERIES					
PREVIOUS	0.00	0.00	0.00	0.00	0.00
DELIVERIES					
TOTAL	24.00	28.86	0.00	0.00	0.00
DELIVERIES					
TOTAL	1.81	21.72	0.00	0.00	0.00
USED					
STOCK	22.19	7.14	0.00	0.00	0.00
ON SITE					

TICKET NUMBERS / CUBES / REMARKS	
PFA	
63118	28.86
CEMENT	
DN0133053	24
Flow Test	480mm Bleed Test 5%

DAILY GROUTING RETURNS

SHEET NO. 2
 DATE 10.3.23
 MIX 12to1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE
 I

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

QUANTITIES USED (TONNES)											
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	DELIVERIES (TONNES)			
								CEMENT	P.F.A.	SAND	GRAVEL
BE5	0.39	0.03	0.36				30.00		28.22		
BE13	0.39	0.03	0.36				30.00				
BE21	0.39	0.03	0.36				30.00	24.00	28.86	0.00	0.00
BA5	0.39	0.03	0.36				30.00				
AW5	0.39	0.03	0.36				30.00	24.00	57.08	0.00	0.00
AW9	0.39	0.03	0.36				30.00				
AW13	0.39	0.03	0.36				30.00	2.35	28.20	0.00	0.00
AW25	0.39	0.03	0.36				30.00				
AS5	0.39	0.03	0.36				30.00	21.65	28.88	0.00	0.00
AS9	0.39	0.03	0.36				30.00				
AS13	0.39	0.03	0.36				30.00				
AS25	0.39	0.03	0.36				30.00				
AO5	0.39	0.03	0.36				30.00				
AK5	0.39	0.03	0.36				30.00				
AK9	0.39	0.03	0.36				30.00				
AC13	0.39	0.03	0.36				30.00				
AC17	0.39	0.03	0.36				30.00				
AC21	0.39	0.03	0.36				30.00				
PAGE TOTAL	7.02	0.54	6.48	0.00	0.00	COMPLETE	18.00				
PREV. TOTAL	23.53	1.81	21.72	0.00	0.00	PREV. COMP.	9.00				
RUN. TOTAL	30.55	2.35	28.20	0.00	0.00	TOTAL COMP.	27.00				

TICKET NUMBERS / CUBES / REMARKS	
PFA	
471231	28.22

Flow Test	480mm	Bleed Test	5%
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DAILY GROUTING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO. 5
 DATE 14.3.23
 MIX 12to1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
BI29	0.33	0.03	0.30				30.00			
BG29	0.33	0.03	0.30				30.00			
AY29	0.33	0.03	0.30				30.00			
AW29	0.33	0.03	0.30				30.00			
AU29	0.33	0.03	0.30				30.00			
AM29	0.33	0.03	0.30				30.00			
AK29	0.33	0.03	0.30				30.00			
BE29	4.95	0.45	4.50			v				
BC29	4.40	0.40	4.00				30.00			
BA29	4.40	0.40	4.00				30.00			
AQ29	4.95	0.45	4.50				30.00			
AO29	4.95	0.45	4.50				30.00			
AI29	2.75	0.25	2.50			v				
AS29	0.33	0.03	0.30				30.00			
PAGE TOTAL	29.04	2.64	26.40	0.00	0.00	COMPLETE	12.00			
PREV. TOTAL	47.32	3.64	43.68	0.00	0.00	PREV. COMP.	47.00			
RUN. TOTAL	76.36	6.28	70.08	0.00	0.00	TOTAL COMP.	59.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS				
DELIVERIES				
PREVIOUS	24.00	84.50	0.00	0.00
DELIVERIES				
TOTAL	24.00	84.50	0.00	0.00
DELIVERIES				
TOTAL	6.28	70.08	0.00	0.00
USED				
STOCK	17.72	14.42	0.00	0.00
ON SITE				

TICKET NUMBERS / CUBES / REMARKS
Curtain wall grouting 10:1
Flow Test 470mm Bleed Test 4%

DAILY GROUTING RETURNS

SHEET NO. 6
 DATE 16.3.23
 MIX 10 to 1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

QUANTITIES USED (TONNES)									
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI		
A129	2.20	0.20	2.00				30.00		
AG29	0.33	0.03	0.30				30.00		
AE29	0.33	0.03	0.30				30.00		
AC29	0.33	0.03	0.30				30.00		
AA29	0.33	0.03	0.30				30.00		
Y29	0.33	0.03	0.30				30.00		
W29	0.33	0.03	0.30				30.00		
U29	0.33	0.03	0.30				30.00		
A11	0.33	0.03	0.30				30.00		
A17	0.33	0.03	0.30				30.00		
A1	4.40	0.40	4.00				30.00		
A3	2.20	0.20	2.00				30.00		
A5	2.75	0.25	2.50				30.00		
A7	4.40	0.40	4.00				30.00		
A9	1.65	0.15	1.50				30.00		
A13	1.65	0.15	1.50				30.00		
A15	1.65	0.15	1.50				30.00		
A19	1.65	0.15	1.50				30.00		
PAGE TOTAL	25.52	2.32	23.20	0.00	0.00	COMPLETE	18.00		
PREV. TOTAL	76.36	6.28	70.08	0.00	0.00	PREV. COMP.	59.00		
RUN. TOTAL	101.88	8.60	93.28	0.00	0.00	TOTAL COMP.	77.00		

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS		56.42		
DELIVERIES				
PREVIOUS	24.00	84.50	0.00	0.00
DELIVERIES				
TOTAL	24.00	140.92	0.00	0.00
DELIVERIES				
TOTAL	8.60	93.28	0.00	0.00
USED				
STOCK	15.40	47.64	0.00	0.00
ON SITE				

TICKET NUMBERS / CUBES / REMARKS		
PFA		
471882	28.1	
471883	28.32	
Curtain wall grouting 10 to 1		
Flow Test	480mm	Bleed Test 5%

DAILY GROUTING RETURNS

SHEET NO. 8

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 17.3.23

CLIENT NATIONWIDE ENGINEERING

MIX 10to1

QUANTITIES USED (TONNES)										DELIVERIES (TONNES)							
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	CEMENT	P.F.A.	SAND	GRAVEL	TODAYS DELIVERIES	PREVIOUS DELIVERIES	TOTAL DELIVERIES	TOTAL USED	STOCK	ON SITE
E28	0.33	0.03	0.30				30.00										
G28/29	0.33	0.03	0.30				30.00										
I29	0.33	0.03	0.30				30.00						24.00	140.92	0.00	0.00	0.00
K29	0.33	0.03	0.30				30.00										
M29	0.33	0.03	0.30				30.00										
O29	0.33	0.03	0.30				30.00										
A25	0.33	0.03	0.30				30.00										
A23	0.33	0.03	0.30				30.00										
S29	0.33	0.03	0.30				30.00										
Q29	0.55	0.05	0.50				30.00										
AP29	0.55	0.05	0.50				30.00										
A21	0.88	0.08	0.80				30.00										
A27	1.10	0.10	1.00			v											
C27/28	1.10	0.10	1.00			v											
PAGE TOTAL	7.15	0.65	6.50	0.00	0.00	COMPLETE	12.00										
PREV. TOTAL	133.08	11.00	122.08	0.00	0.00	PREV. COMP.	77.00										
RUN. TOTAL	140.23	11.65	128.58	0.00	0.00	TOTAL COMP.	89.00										

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

C8B

DAILY GROUTING RETURNS

SHEET NO. 9

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 17.3.23

CLIENT NATIONWIDE ENGINEERING

MIX 12to1

QUANTITIES USED (TONNES)											DELIVERIES (TONNES)					
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	CEMENT	P.F.A.	SAND	GRAVEL	TODAYS DELIVERIES	PREVIOUS DELIVERIES	TOTAL DELIVERIES	TOTAL USED	STOCK ON SITE
AG25	1.30	0.10	1.20				30.00									
AK25	1.04	0.08	0.96				30.00									
AO25	1.04	0.08	0.96				30.00						24.00	140.92	0.00	0.00
AG21	1.30	0.10	1.20				30.00									
AK21	0.65	0.05	0.60				30.00									
AO21	1.30	0.10	1.20				30.00									
AG17	1.30	0.10	1.20			v										
AK17	1.30	0.10	1.20			v										
AO17	1.30	0.10	1.20				30.00									
PAGE TOTAL	10.53	0.81	9.72	0.00	0.00	COMPLETE	7.00									
PREV. TOTAL	140.23	11.65	128.58	0.00	0.00	PREV. COMP.	89.00									
RUN. TOTAL	150.76	12.46	138.30	0.00	0.00	TOTAL COMP.	96.00									
TICKET NUMBERS / CUBES / REMARKS																
Infill grouting																
Flow Test 470mm Bleed Test 4%																

C8B

DAILY GROUTING RETURNS

SHEET NO. 10

GROUNDSHIRE
GROUNDSHIRE
GROUNDSHIRE
GROUNDSHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 20.3.23

CLIENT NATIONWIDE ENGINEERING

MIX 10 to 1

QUANTITIES USED (TONNES)											
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	DELIVERIES (TONNES)			
								CEMENT	P.F.A.	SAND	GRAVEL
C27/28	0.55	0.05	0.50				30.00				
A27	0.55	0.05	0.50				30.00		56.82		
M1	0.33	0.03	0.30				30.00	24.00	140.92	0.00	0.00
S1	0.33	0.03	0.30				30.00				
U1	0.33	0.03	0.30				30.00	24.00	197.74	0.00	0.00
W1	0.33	0.03	0.30				30.00				
G1	0.55	0.05	0.50				30.00	13.14	145.10	0.00	0.00
I1	0.55	0.05	0.50				30.00				
K1	0.55	0.05	0.50				30.00	10.86	52.64	0.00	0.00
O1	0.55	0.05	0.50				30.00				
Q1	0.55	0.05	0.50				30.00				
B127	0.33	0.03	0.30				30.00				
B125	0.33	0.03	0.30				30.00				
B123	0.33	0.03	0.30				30.00				
B121	0.33	0.03	0.30				30.00				
B119	0.33	0.03	0.30				30.00				
B115	0.33	0.03	0.30				30.00				
B113	0.33	0.03	0.30				30.00				
PAGE TOTAL	7.48	0.68	6.80	0.00	0.00	COMPLETE	18.00				
PREV. TOTAL	150.76	12.46	138.30	0.00	0.00	PREV. COMP.	96.00				
RUN. TOTAL	158.24	13.14	145.10	0.00	0.00	TOTAL COMP.	114.00				

TICKET NUMBERS / CUBES / REMARKS	
PFA	
472352	28.24
472357	28.58
Curtain wall grouting	
Flow Test	460mm Bleed Test 4%

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

DAILY GROUTING RETURNS

SHEET NO. 12
 DATE 20.3.23
 MIX 12to1
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE
 I

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

QUANTITIES USED (TONNES)											
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	DELIVERIES (TONNES)			
								CEMENT	P.F.A.	SAND	GRAVEL
U25	2.20	0.20	2.00				30.00				
I21	1.10	0.10	1.00				30.00				
M21	1.10	0.10	1.00				30.00	24.00	197.74	0.00	0.00
Q21	3.30	0.30	3.00				30.00				
U21	1.10	0.10	1.00				30.00	24.00	197.74	0.00	0.00
Y21	2.20	0.20	2.00				30.00				
Q17	0.55	0.05	0.50				30.00	16.27	176.40	0.00	0.00
U17	1.10	0.10	1.00				30.00				
AK17	0.55	0.05	0.50				30.00	7.73	21.34	0.00	0.00
BE17	0.55	0.05	0.50				30.00				
BA25	1.10	0.10	1.00				30.00				
BE25	1.10	0.10	1.00				30.00				
Y17	4.40	0.40	4.00		v						
AG17	4.40	0.40	4.00		v						
PAGE TOTAL	24.75	2.25	22.50	0.00	0.00	COMPLETE	12.00				
PREV. TOTAL	167.92	14.02	153.90	0.00	0.00	PREV. COMP.	119.00				
RUN. TOTAL	192.67	16.27	176.40	0.00	0.00	TOTAL COMP.	131.00				

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

DAILY GROUTING RETURNS

SHEET NO. 13

GROUNDSHIRE
GROUNDSHIRE
GROUNDSHIRE
GROUNDSHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 21.3.23

CLIENT NATIONWIDE ENGINEERING

MIX 10 to 1

QUANTITIES USED (TONNES)											DELIVERIES (TONNES)				
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI				TODAYS	CEMENT	P.F.A.	SAND	GRAVEL
Y1	0.33	0.03	0.30				30.00				DELIVERIES		57.17		
AA1	0.33	0.03	0.30				30.00				PREVIOUS	24.00	197.74	0.00	0.00
AC1	0.33	0.03	0.30				30.00				DELIVERIES				
AI1	0.33	0.03	0.30				30.00				TOTAL	24.00	254.91	0.00	0.00
BI9	0.33	0.03	0.30				30.00				DELIVERIES				
AY1	0.33	0.03	0.30				30.00				TOTAL	17.29	186.60	0.00	0.00
AW1	0.33	0.03	0.30				30.00				USED				
AU1	0.33	0.03	0.30				30.00				STOCK	6.71	68.31	0.00	0.00
AS1	0.33	0.03	0.30				30.00				ON SITE				
BI7	0.55	0.05	0.50				30.00				TICKET NUMBERS / CUBES / REMARKS				
BI5	0.55	0.05	0.50				30.00				PFA				
BI1	0.55	0.05	0.50				30.00				472447	28.52			
BC1	1.10	0.10	1.00				30.00				472461	28.65			
BI3	1.10	0.10	1.00				30.00				Curtian wall grouting				
BG1	1.10	0.10	1.00				30.00				Flow Test	470mm	Bleed Test	4%	
BE1	1.10	0.10	1.00												
BA1	1.10	0.10	1.00												
AE1	1.10	0.10	1.00												
PAGE TOTAL	11.22	1.02	10.20	0.00	0.00	COMPLETE	14.00								
PREV. TOTAL	192.67	16.27	176.40	0.00	0.00	PREV. COMP.	131.00								
RUN. TOTAL	203.89	17.29	186.60	0.00	0.00	TOTAL COMP.	145.00								

DAILY GROUTING RETURNS

SHEET NO. 14
 DATE 21.3.23
 MIX 12fo1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE
 I

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

QUANTITIES USED (TONNES)											
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI	DELIVERIES (TONNES)			
								CEMENT	P.F.A.	SAND	GRAVEL
Y17	2.60	0.20	2.40				30.00				
AG17	2.60	0.20	2.40				30.00				
AG13	1.30	0.10	1.20				30.00	24.00	254.91	0.00	0.00
AK13	1.30	0.10	1.20				30.00				
AO13	1.30	0.10	1.20				30.00	24.00	254.91	0.00	0.00
AC9	2.60	0.20	2.40				30.00				
AG9	2.60	0.20	2.40				30.00	20.52	224.96	0.00	0.00
AO9	2.60	0.20	2.40				30.00				
BA9	2.60	0.20	2.40				30.00	3.48	29.95	0.00	0.00
BE9	2.60	0.20	2.40				30.00				
E5	3.90	0.30	3.60				30.00				
I5	2.60	0.20	2.40				30.00				
M5	3.90	0.30	3.60				30.00				
Q5	3.90	0.30	3.60				30.00				
U5	2.60	0.20	2.40				30.00				
AY15	0.39	0.03	0.36				30.00				
S11	2.20	0.20	2.00				30.00				
PAGE TOTAL	41.59	3.23	38.36	0.00	0.00	COMPLETE	17.00				
PREV. TOTAL	203.89	17.29	186.60	0.00	0.00	PREV. COMP.	145.00				
RUN. TOTAL	245.48	20.52	224.96	0.00	0.00	TOTAL COMP.	162.00				

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

C8B

DAILY GROUTING RETURNS

SHEET NO. 15

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 22.3.23

CLIENT NATIONWIDE ENGINEERING

GROUND SHIRE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

MIX 10 to 1

I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
AQ1	0.39	0.03	0.36				30.00			
BB29	0.55	0.05	0.50				30.00			
BI3	2.20	0.20	2.00				30.00			
BE1	1.10	0.10	1.00				30.00			
BA1	0.55	0.05	0.50				30.00			
AE1	2.20	0.20	2.00				30.00			
AO1	2.20	0.20	2.00				30.00			
AM1	1.10	0.10	1.00				30.00			
AK1	2.20	0.20	2.00				30.00			
AG1	1.10	0.10	1.00				30.00			
PAGE TOTAL	13.59	1.23	12.36	0.00	0.00	COMPLETE	10.00			
PREV. TOTAL	245.48	20.52	224.96	0.00	0.00	PREV. COMP.	162.00			
RUN. TOTAL	259.07	21.75	237.32	0.00	0.00	TOTAL COMP.	172.00			

DELIVERIES (TONNES)					
	CEMENT	P.F.A.	SAND	GRAVEL	
TODAYS					
DELIVERIES					
PREVIOUS	24.00	254.91	0.00	0.00	
DELIVERIES					
TOTAL	24.00	254.91	0.00	0.00	
DELIVERIES					
TOTAL	21.75	237.32	0.00	0.00	
USED					
STOCK	2.25	17.59	0.00	0.00	
ON SITE					

TICKET NUMBERS / CUBES / REMARKS
Curtain wall grouting
Flow Test 460mm Bleed Test 4%

DAILY GROUTING RETURNS

SHEET NO. 16
 DATE 22.3.23
 MIX 12to1

GROUND SH RE
 GROUND SHIRE
 GROUND SHIRE
 GROUND SHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

QUANTITIES USED (TONNES)							
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI
Y5	2.60	0.20	2.40				30.00
AC5	2.60	0.20	2.40				30.00
AG5	3.90	0.30	3.60				30.00
PAGE TOTAL	9.10	0.70	8.40	0.00	0.00	COMPLETE	3.00
PREV. TOTAL	259.07	21.75	237.32	0.00	0.00	PREV. COMP.	172.00
RUN. TOTAL	268.17	22.45	245.72	0.00	0.00	TOTAL COMP.	175.00

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES				
PREVIOUS DELIVERIES	24.00	254.91	0.00	0.00
TOTAL DELIVERIES	24.00	254.91	0.00	0.00
TOTAL USED	22.45	245.72	0.00	0.00
STOCK ON SITE	1.55	9.19	0.00	0.00

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

DAILY GROUTING RETURNS

SHEET NO. 18

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 23.3.23

CLIENT NATIONWIDE ENGINEERING

MIX 12to1

I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
W27	0.39	0.03	0.36				30.00			
AE27	0.39	0.03	0.36				30.00			
AI27	0.39	0.03	0.36				30.00			
K3	0.39	0.03	0.36				30.00			
O3	0.39	0.03	0.36				30.00			
AI3	0.39	0.03	0.36				30.00			
AI7	0.39	0.03	0.36				30.00			
S27	5.20	0.40	4.80			v				
AM27	3.90	0.30	3.60			v				
AQ27	3.90	0.30	3.60			v				
C3	5.20	0.40	4.80			v				
G3	5.20	0.40	4.80			v				
S3	3.90	0.30	3.60			v				
W3	3.90	0.30	3.60			v				
AA3	5.20	0.40	4.80			v				
AE3	5.20	0.40	4.80			v				
BC27	5.20	0.40	4.80			v				
BG27	3.90	0.30	3.60			v				
PAGE TOTAL	53.43	4.11	49.32	0.00	0.00	COMPLETE	7.00			
PREV. TOTAL	274.22	23.00	251.22	0.00	0.00	PREV. COMP.	183.00			
RUN. TOTAL	327.65	27.11	300.54	0.00	0.00	TOTAL COMP.	190.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS				
DELIVERIES				
PREVIOUS	36.00	310.09	0.00	0.00
DELIVERIES				
TOTAL	36.00	310.09	0.00	0.00
DELIVERIES				
TOTAL	27.11	300.54	0.00	0.00
USED				
STOCK	8.89	9.55	0.00	0.00
ON SITE				

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

C8B

DAILY GROUTING RETURNS

SHEET NO. 19

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

SITE

13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 27.3.23

CLIENT

NATIONWIDE ENGINEERING

MIX

12to1

I

QUANTITIES USED (TONNES)										
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI			
AY27	0.39	0.03	0.36				30.00			
AY23	0.39	0.03	0.36				30.00			
AU23	0.39	0.03	0.36				30.00			
AE23	0.39	0.03	0.36				30.00			
AA23	0.39	0.03	0.36				30.00			
S23	0.39	0.03	0.36				30.00			
O23	0.39	0.03	0.36				30.00			
K23	0.39	0.03	0.36				30.00			
G23	0.39	0.03	0.36				30.00			
C23	0.39	0.03	0.36				30.00			
BG19	0.39	0.03	0.36				30.00			
BC19	0.39	0.03	0.36				30.00			
AU19	0.39	0.03	0.36				30.00			
C19	0.39	0.03	0.36				30.00			
C15	0.39	0.03	0.36				30.00			
C11	0.39	0.03	0.36				30.00			
C7	0.39	0.03	0.36				30.00			
G7	0.39	0.03	0.36				30.00			
PAGE TOTAL	7.02	0.54	6.48	0.00	0.00	COMPLETE	18.00			
PREV. TOTAL	327.65	27.11	300.54	0.00	0.00	PREV. COMP.	190.00			
RUN. TOTAL	334.67	27.65	307.02	0.00	0.00	TOTAL COMP.	208.00			

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS		56.46		
DELIVERIES				
PREVIOUS	36.00	310.09	0.00	0.00
DELIVERIES				
TOTAL	36.00	366.55	0.00	0.00
DELIVERIES				
TOTAL	27.65	307.02	0.00	0.00
USED				
STOCK	8.35	59.53	0.00	0.00
ON SITE				

TICKET NUMBERS / CUBES / REMARKS	
PFA	
472690	28.06
472695	28.4
Flow Test	480mm Bleed Test 5%

DAILY GROUTING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

SHEET NO. 20

DATE 27.3.23

GROUND SHIRE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

CLIENT NATIONWIDE ENGINEERING

MIX 12to1

I

QUANTITIES USED (TONNES)									
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI		
K7	0.39	0.03	0.36				30.00		
O7	0.39	0.03	0.36				30.00		
S27	0.65	0.05	0.60				30.00		
AM27	1.04	0.08	0.96				30.00		
AQ27	1.30	0.10	1.20				30.00		
BC27	1.30	0.10	1.20				30.00		
BG27	2.60	0.20	2.40				30.00		
C3	2.60	0.20	2.40				30.00		
G3	1.30	0.10	1.20				30.00		
S3	1.30	0.10	1.20				30.00		
W3	2.60	0.20	2.40				30.00		
AA3	1.30	0.10	1.20				30.00		
AE3	2.60	0.20	2.40				30.00		
W23	3.90	0.30	3.60				30.00		
AI23	3.90	0.30	3.60				30.00		
AM23	3.90	0.30	3.60				30.00		
AQ23	3.90	0.30	3.60				30.00		
BC23	5.20	0.40	4.80				30.00		
PAGE TOTAL	40.17	3.09	37.08	0.00	0.00	COMPLETE	18.00		
PREV. TOTAL	334.67	27.65	307.02	0.00	0.00	PREV. COMP.	208.00		
RUN. TOTAL	374.84	30.74	344.10	0.00	0.00	TOTAL COMP.	226.00		

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES				
PREVIOUS DELIVERIES	36.00	366.55	0.00	0.00
TOTAL DELIVERIES	36.00	366.55	0.00	0.00
TOTAL USED	30.74	344.10	0.00	0.00
STOCK ON SITE	5.26	22.45	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS
Flow Test 470mm Bleed Test 4%

C8B

DAILY GROUTING RETURNS

SHEET NO. 21

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

SITE

13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE

27.3.23

CLIENT

NATIONWIDE ENGINEERING

MIX

12to1

I

QUANTITIES USED (TONNES)							
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI
BG23	2.60	0.20	2.40				30.00
AQ19	5.20	0.40	4.80				30.00
AE19	2.60	0.20	2.40			v	
AY19	2.60	0.20	2.40			v	
AM19	2.60	0.20	2.40			v	
AI19	2.60	0.20	2.40			v	
PAGE TOTAL	18.20	1.40	16.80	0.00	0.00	COMPLETE	2.00
PREV. TOTAL	374.84	30.74	344.10	0.00	0.00	PREV. COMP.	226.00
RUN. TOTAL	393.04	32.14	360.90	0.00	0.00	TOTAL COMP.	228.00

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS				
DELIVERIES				
PREVIOUS	36.00	366.55	0.00	0.00
DELIVERIES				
TOTAL	36.00	366.55	0.00	0.00
DELIVERIES				
TOTAL	32.14	360.90	0.00	0.00
USED				
STOCK	3.86	5.65	0.00	0.00
ON SITE				

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

C8B

DAILY GROUTING RETURNS

SHEET NO. 22
 DATE 28.3.23
 MIX 12to1

GROUNDSHIRE
 GROUNDSHIRE
 GROUNDSHIRE
 GROUNDSHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

QUANTITIES USED (TONNES)									
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMPLETE		
O19	0.39	0.03	0.36				30.00		
K19	0.39	0.03	0.36				30.00		
G19	0.39	0.03	0.36				30.00		
O15	0.39	0.03	0.36				30.00		
S7	0.39	0.03	0.36				30.00		
W7	0.39	0.03	0.36				30.00		
AA7	0.39	0.03	0.36				30.00		
AE7	0.39	0.03	0.36				30.00		
AM7	0.39	0.03	0.36				30.00		
AQ7	0.39	0.03	0.36				30.00		
AY7	0.39	0.03	0.36				30.00		
S19	0.39	0.03	0.36				30.00		
AY19	0.65	0.05	0.60				30.00		
AM19	0.65	0.05	0.60				30.00		
AI19	0.39	0.03	0.36				30.00		
AE19	0.39	0.03	0.36				30.00		
AA19	1.30	0.10	1.20				30.00		
W19	1.04	0.08	0.96				30.00		
PAGE TOTAL	9.10	0.70	8.40	0.00	0.00	COMPLETE	18.00		
PREV. TOTAL	393.04	32.14	360.90	0.00	0.00	PREV. COMP.	228.00		
RUN. TOTAL	402.14	32.84	369.30	0.00	0.00	TOTAL COMP.	246.00		

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES		56.52		
PREVIOUS DELIVERIES	36.00	366.55	0.00	0.00
TOTAL DELIVERIES	36.00	423.07	0.00	0.00
TOTAL USED	32.84	369.30	0.00	0.00
STOCK ON SITE	3.16	53.77	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS			
PFA			
473097	28.64		
473098	27.88		
Flow Test	470mm	Bleed Test	5%

Contractor: Groundshire Limited, Durham, DH7 8HJ

Contract Ref: 13485

Site Manager: B Fisher

C8B

DAILY GROUTING RETURNS

SHEET NO. 23

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

DATE 29.3.23

CLIENT NATIONWIDE ENGINEERING

MIX 12to1

I

QUANTITIES USED (TONNES)									
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	COMP / PSI		
W11	0.39	0.03	0.36				30.00		
AE11	0.39	0.03	0.36				30.00		
AI11	0.39	0.03	0.36				30.00		
BC7	5.20	0.40	4.80				30.00		
BG7	3.90	0.30	3.60				30.00		
S15	0.39	0.03	0.36				30.00		
W15	0.39	0.03	0.36				30.00		
AA15	0.39	0.03	0.36				30.00		
AU15	0.39	0.03	0.36				30.00		
BC15	0.39	0.03	0.36				30.00		
BG15	0.39	0.03	0.36				30.00		
AE15	1.30	0.10	1.20				30.00		
AI15	1.30	0.10	1.20				30.00		
O11	2.60	0.20	2.40				30.00		
AM11	5.20	0.40	4.80				30.00		
AQ11	5.20	0.40	4.80				30.00		
AY11	5.20	0.40	4.80				30.00		
BC11	5.20	0.40	4.80				30.00		
PAGE TOTAL	38.61	2.97	35.64	0.00	0.00	COMPLETE	18.00		
PREV. TOTAL	402.14	32.84	369.30	0.00	0.00	PREV. COMP.	246.00		
RUN. TOTAL	440.75	35.81	404.94	0.00	0.00	TOTAL COMP.	264.00		

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES	14.00			
PREVIOUS DELIVERIES	36.00	423.07	0.00	0.00
TOTAL DELIVERIES	50.00	423.07	0.00	0.00
TOTAL USED	35.81	404.94	0.00	0.00
STOCK ON SITE	14.19	18.13	0.00	0.00

TICKET NUMBERS / CUBES / REMARKS	
CEMENT	
0012/01138766	14
Flow Test	480 mm Bleed Test 5%

DAILY GROUTING RETURNS

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE

CLIENT NATIONWIDE ENGINEERING

SHEET NO. 24

DATE 29.3.23

MIX 12to1

GROUND SH RE
GROUND SHIRE
GROUND SHIRE
GROUND SHIRE

I

QUANTITIES USED (TONNES)							COMP / PSI
HOLE NO.	GROUT	CEMENT	P.F.A.	SAND	GRAVEL	INCOMPLETE	
AM15	5.20	0.40	4.80				30.00
AQ15	5.20	0.40	4.80				30.00
PAGE TOTAL	10.40	0.80	9.60	0.00	0.00	COMPLETE	2.00
PREV. TOTAL	440.75	35.81	404.94	0.00	0.00	PREV. COMP.	264.00
RUN. TOTAL	451.15	36.61	414.54	0.00	0.00	TOTAL COMP.	266.00

DELIVERIES (TONNES)				
	CEMENT	P.F.A.	SAND	GRAVEL
TODAYS DELIVERIES				
PREVIOUS DELIVERIES	50.00	423.07	0.00	0.00
TOTAL DELIVERIES	50.00	423.07	0.00	0.00
TOTAL USED	36.61	414.54	0.00	0.00
STOCK ON SITE	13.39	8.53	0.00	0.00

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

APPENDIX FIVE

MATERIALS DELIVERY TICKETS

DESPATCH NOTE

DN0133053



Mannok Cement (GB) Limited

Scotline Transit, Crown Wharf, Rochester, Kent, England,
ME2 4EW

t: +44 (0) 28 6774 8866

www.mannokbuild.com

Confirm Pick User: **Niall McMahon**

Vehicle Driver: **Jxz9367 + Doug**

Trailer Reg/ Code: **XSFL558**

Delivery Area:

Wirral - Kirklees

Date: **06/03/2023**

Load ID: **ML66334**

Mileage: **0.00**

Drop: **2 of 2**

Customer:
JOSEPH PARR MIDDLESBOROUGH H&B

Unique Order No.:
16B7A0031652

Delivery site:
WEST YORKSHIRE FIRE AND RESCUE

Order date:
28/02/2023

Customer No:
16611

Hub Order No.:
M0176749

GROUNDSHIRE LIMITED
WEST YORKSHIRE FIRE AND RESCUE
BIRKENSRAW
JOE 07753898995

Collection date:
02/03/2023
Date required:
03/03/2023

Customer PO:
0012/8010732

LOC.	PROD. CODE	DESCRIPTION	QTY.	UM.	LOG.	LOADED	DELIV.
B7	0753	General Purpose Paper1.5tonDEL	24	TNC	pallet	16	16

Picker:
Patrick McCarron

**DIVERTED TO LOCOMOTION
SHILDON
DL4 2RE**

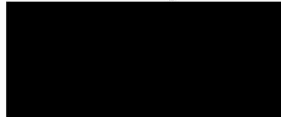
Customer general comments:

No. of pallets Returned: 0

Customer name: **Bfian fisher**

Date & Time **07/03/2023 16:04:23**

Customer Signature:



Drivers / Haulier (Please read carefully)

Driver / Haulier is responsible for securing load to all legal requirements before leaving premises.

Customer Terms & Conditions (Please read carefully)

Goods sold subject to our conditions of sale, a copy of which is available on request.



For information on essential characteristics/DOP visit:
www.mannokbuild.com

Brennan & Coates Haulage Ltd

Ex Stock

Collection/Delivery Note

Abnormal Load Specialists

Thistle Road, Langley Moor, Durham DH7 8HJ

Tel: 0191 3780156 Fax: 0191 3781501

email: brennanandcoates@btconnect.com

T7431

Customer: <p style="text-align: center;">GROUND SHIRE</p>				
Order Description: <p style="text-align: center;">1 LOAD CEMENT 8. PALLET CEMENT 12 TONNES</p>			From: LANGLEY MOOR	
			To: SHILDON LOCOMOTION MUSEUM	
Time In	Time Out	Time In	Time Out	Vehicle Reg. No.
				KV080FB
ALL GOODS CARRIED IN ACCORDANCE WITH THE ROAD HAULAGE ASSOCIATION CONDITIONS OF CARRIAGE 2009				
The above goods have been received in good condition		Date: 22.3.2023	Signed on behalf of customer:	



Joseph Parr (Tyne & Wear)

TIMBER & BUILDERS MERCHANTS

TEL: 0191 215 4030 EMAIL: sales.benton@josephparr.co.uk WEBSITE: www.jparrboro.co.uk



Advice Note

Advice No.
0012/01163477

Invoice to:-
GROUNDSHIRE LIMITED
LITTLEBURN HOUSE
LITTLEBURN IND EST
LANGLEY MOOR DURHAM
DH7 8HJ

Deliver to:-
GROUNDSHIRE LIMITED
LOCOMOTION MUSUEM
SHILDON
RYAN 07872817849
DL4 2RE

Account	Our Operator	Telephone	Order Date	Order Ref
GR0953	Gary.b	0191 378 4005	27/03/2023	195280
Your Contact	Your Reference	Date Required		Page
ASHLEY	13485/101	29/03/2023		1

Line	Quantity	Product
1	560 EA	Rugby Premium Cement 25kg PAPER BAG ** NON RETURNABLE ** (56) 10000178

Items marked FSC® are FSC Mix 70% (INT-COC-001447),
Items marked PEFC are 70% PEFC certified(CATG-PEFC-COC-105)

Weight(KGS)
14000.0000

Customer Signature:

Supplied by Joseph Parr - Benton

Our Opening Times are:
Mon-Fri 07:00 17:00
Saturday 07:30 12:00

Registered Office : Dunnings Bridge Road, Bootle, L30 6UU Registered in England No. 969846 VAT Reg : GB 165 1407 79

Goods correctly supplied and returned will be subject to a £40 haulage charge if we collect. Goods must be returned in same condition as delivered and including original packaging. Credits are at the discretion of the management this does not affect your statutory rights

Powered by KB



Final Weighing Ticket
(By Products)

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

Ticket Number : 471231

Arrival Date : 10/03/2023 07:13
Exit Date : 10/03/2023 08:02

Vehicle Reg : JL04PET

Trade ID : AA04167

Order No : 2233727

Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE

Product Title :
EN13055-1 COND

Driver : RYAN LAWSON

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	036706	IN1	10/03/2023	07:13
43660kg	010648	OUT2	10/03/2023	08:02
28220kg				

Signed By Driver:-

Received By:-

Fiddlers Ferry Power Station

Weighbridge Ticket

Trans No: FF-17/ 63L18

Vehicle: YJ18MDF

Cust/Supp: 177 *S.H.C. DON*
G/Shire - ~~Bradford~~

Material: 002
1 Screened Ash - PFA BSEN 13055-

Consignment: 820-506-561

Release/Load No:

	Date	Time	Consec	Weight
1st Wt	07/03/2023	07:10:33	37063	14960 kg
2nd Wt	07/03/2023	07:38:15	49779	43820 kg

Net Wt 28860kg

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



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Final Weighing Ticket
(By Products)

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

Ticket Number : 471882
Arrival Date : 15/03/2023 08:25
Exit Date : 15/03/2023 10:04
Vehicle Reg : YY70PMX
Trade ID : AA04167
Order No : 2240626
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
15520kg	037306	IN1	15/03/2023	09:25
43620kg	011289	OUT2	15/03/2023	10:04
28100kg				

Signed By Driver:-

.....
Received By:-

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

Final Weighing Ticket
(By Products)

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

Ticket Number : 471727

Arrival Date : 14/03/2023 08:42
Exit Date : 14/03/2023 09:02

Vehicle Reg : YX65NKB

Trade ID : AA04167

Order No : 2239690

Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE

Product Title :
EN13055-1 COND

Driver : ALLAN RAPER

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
16000kg	037166	IN1	14/03/2023	08:42
43500kg	011128	OUT2	14/03/2023	09:02
27420kg				

Signed By Driver:-

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Received By:-



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Final Weighing Ticket
(By Products)

Final Weighing Ticket
(By Products)

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

Ticket Number : 472352
Arrival Date : 20/03/2023 10:36
Exit Date : 20/03/2023 11:09
Vehicle Reg : YY70PMV
Trade ID : AA04167
Order No : 2243263
Product : EN13055-1 COND

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

Ticket Number : 471883
Arrival Date : 15/03/2023 09:29
Exit Date : 15/03/2023 10:14
Vehicle Reg : YX210CR
Trade ID : AA04167
Order No : 2240827
Product : EN13055-1 COND

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

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

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

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT SERIAL WB ID DATE TIME
15320kg 037751 IN1 20/03/2023 10:36
43640kg 053104 MANUAL 20/03/2023 11:09
28320kg

WEIGHT SERIAL WB ID DATE TIME
15320kg 037307 IN1 15/03/2023 09:29
43640kg 053050 MANUAL 15/03/2023 10:13
28320kg

Signed By Driver:-
.....
Received By:-
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Signed By Driver:-
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Received By:-
.....

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

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

Final Weighing Ticket
(By Products)

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

Ticket Number : 472447

Arrival Date : 21/03/2023 09:08
Exit Date : 21/03/2023 09:53

Vehicle Reg : YY710NB

Trade ID : AA04167

Order No : 2243282

Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE

Product Title :
EN13055-1 COND

Driver : IAN PARKER

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
15260kg	037844	IN1	21/03/2023	09:08
43780kg	011826	OUT2	21/03/2023	09:53

28520kg

Signed By Driver:-

.....
Received By:-



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.L.

Final Weighing Ticket
(By Products)

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

Ticket Number : 472357

Arrival Date : 20/03/2023 11:00
Exit Date : 20/03/2023 11:36

Vehicle Reg : YX210CR

Trade ID : AA04167

Order No : 2243280

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
15400kg	037753	IN1	20/03/2023	11:00
43980kg	053107	MANUAL	20/03/2023	11:36

28580kg

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'.

Final Weighing Ticket
(By Products)



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

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Final Weighing Ticket
(By Products)

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

Ticket Number : 472529
Arrival Date : 22/03/2023 13:57
Exit Date : 22/03/2023 14:29
Vehicle Reg : YE65AFO
Trade ID : AA04167
Order No : 2245554
Product : EN13055-1 COND
Product Use :
FILLER IN CEMENT MANUFACTURE

Ticket Number : 472481
Arrival Date : 21/03/2023 13:23
Exit Date : 21/03/2023 13:24
Vehicle Reg : YY70PMV
Trade ID : AA04167
Order No : 2245383
Product : EN13055-1 COND

Product Title :
EN13055-1 COND
Driver : GARY SYKES
Haulier : POWER001
POWERMIN

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

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

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

Nature of Business :-
CONCRETE BLOCK MANUFACTURE

WEIGHT	SERIAL	WB ID	DATE	TIME
15900kg	037915	IN1	22/03/2023	13:57
43920kg	011896	OUT2	22/03/2023	14:29
26020kg				

WEIGHT	SERIAL	WB ID	DATE	TIME
15130kg	053127	MANUAL	21/03/2023	13:23
43780kg	053128	MANUAL	21/03/2023	13:24
28650kg				

Signed By Driver:-

Signed By Driver:-

Received By:-

Received By:-

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

Final Weighing Ticket
(By Products)



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

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Ticket Number : 472690

Arrival Date : 24/03/2023 13:41
Exit Date : 24/03/2023 14:13

Vehicle Reg : YE65APO

Trade ID : AA04167

Order No : 2245557

Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE

Product Title :
EN13055-1 COND

Driver : GARY SYKES

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
15860kg	038062	IN1	24/03/2023	13:41
43920kg	012043	OUT2	24/03/2023	14:13
28060kg				

Signed By Driver:-

Received By:-

Final Weighing Ticket
(By Products)

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

Ticket Number : 472531
Arrival Date : 22/03/2023 14:05
Exit Date : 22/03/2023 14:40
Vehicle Reg : DX15KCY
Trade ID : AA04167
Order No : 2245555
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
15580kg	037916	IN1	22/03/2023	14:05
42740kg	053146	MANUAL	22/03/2023	14:39
27160kg				

Signed By Driver:-

Received By:-

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

Final Weighing Ticket
(By Products)

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

Ticket Number : 473097

Arrival Date : 28/03/2023 06:17
Exit Date : 28/03/2023 07:46

Vehicle Reg : PJ17VNL

Trade ID : AA04167

Order No : 2246456

Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE

Product Title :
EN13055-1 COND

Driver : JOHN MURTAGH

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
15120kg	038434	IN1	28/03/2023	06:1
43760kg	012474	OUT2	28/03/2023	07:4
28640kg				

Signed By Driver:-

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Received By:-

Final Weighing Ticket
(By Products)

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

Ticket Number : 472695

Arrival Date : 24/03/2023 14:11
Exit Date : 24/03/2023 14:35

Vehicle Reg : JL04PET

Trade ID : AA04167

Order No : 2245556

Product : EN13055-1 COND

Product Use :
FILLER IN CEMENT MANUFACTURE

Product Title :
EN13055-1 COND

Driver : RYAN LAWSON

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	038066	IN1	24/03/2023	14:11
43700kg	012047	OUT2	24/03/2023	14:35
28400kg				

Signed By Driver:-

.....
Received By:-



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.L.

Final Weighing Ticket
(By Products)

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

Ticket Number : 473098
Arrival Date : 28/03/2023 06:23
Exit Date : 28/03/2023 08:12
Vehicle Reg : SV69LNO
Trade ID : AA04167
Order No : 2246455
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
16060kg	012472	OUT2	28/03/2023	06:23
43940kg	012477	OUT2	28/03/2023	08:11
27880kg				

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

Unit 4, Faraday Close, Pattinson North Industrial Estate, Washington, NE38 8QJ. Tel: 0191 482 8500 Fax: 0191 482 8520
washington@ianfarmer.co.uk www.ianfarmer.co.uk

Client: Groundshire

Address: Littleburn House
Littleburn Industrial Estate
Langley Moor

Project Name: Various Sites
Project Number: 2250038.1

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

Ian Farmer Ref:	7085A	7085B	7085C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	No Class No Slump No Delivery Ticket			
Pour Location	Shildon			
Date Cast	29-Mar-23	29-Mar-23	29-Mar-23	
Date Received	03-Apr-23	03-Apr-23	03-Apr-23	
Age at Test (Days)	28	28	SPARE	-
Date Tested	26-Apr-23	26-Apr-23		
Cube Width Length (mm) Measured	100 100	100 100		
Weight in Air (g)	1503.9	1501.8		
Weight in Water (g)	414.4	410.9		
Saturated Density (Kg/m ³)	1480	1480		
Maximum Load at Failure (kN)	41	40		
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal		
Compressive Strength (N/mm²)	4.1	4.0		
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		

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: 26/04/2023

Page 1 of 1

Unit 4, Faraday Close, Pattinson North Industrial Estate, Washington, NE38 8QJ. Tel: 0191 482 8500 Fax: 0191 482 8520
washington@ianfarmer.co.uk www.ianfarmer.co.uk

Client: Groundshire

Address: Littleburn House
Littleburn Industrial Estate
Langley Moor

Project Name: Various Sites
Project Number: 2250038.1

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

Ian Farmer Ref:	7087A	7087B	7087C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	No Class No Slump No Delivery Ticket			
Pour Location	Shildon			
Date Cast	22-Mar-23	22-Mar-23	22-Mar-23	
Date Received	03-Apr-23	03-Apr-23	03-Apr-23	
Age at Test (Days)	28	28	SPARE	-
Date Tested	19-Apr-23	19-Apr-23		
Cube Width Length (mm) Measured	100 100	100 100		
Weight in Air (g)	1492	1470.8		
Weight in Water (g)	415	393.8		
Saturated Density (Kg/m ³)	1490	1470		
Maximum Load at Failure (kN)	57	55		
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal		
Compressive Strength (N/mm²)	5.7	5.5		
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		

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 Curling 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: 19/04/2023

Page 1 of 1

Unit 4, Faraday Close, Pattinson North Industrial Estate, Washington, NE38 8QJ. Tel: 0191 482 8500 Fax: 0191 482 8520
 washington@ianfarmer.co.uk www.ianfarmer.co.uk

Client: Groundshire

Address: Littleburn House
 Littleburn Industrial Estate
 Langley Moor

Project Name: Various Sites
 Project Number: 2250038.1

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

Ian Farmer Ref:	7088A	7088B	7088C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	No Class No Slump No Delivery Ticket			
Pour Location	Shildon			
Date Cast	14-Mar-23	14-Mar-23	14-Mar-23	
Date Received	03-Apr-23	03-Apr-23	03-Apr-23	
Age at Test (Days)	28	28	SPARE	-
Date Tested	11-Apr-23	11-Apr-23		
Cube Width Length (mm) Measured	100 100	100 100		
Weight in Air (g)	1463.8	1499.9		
Weight in Water (g)	400.8	421.4		
Saturated Density (Kg/m ³)	1480	1490		
Maximum Load at Failure (kN)	59	55		
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal		
Compressive Strength (N/mm²)	5.9	5.5		
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		

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: 13/04/2023

Page 1 of 1

Client: Groundshire

Address: Littleburn House
 Littleburn Industrial Estate
 Langley Moor

Project Name: Various Sites
 Project Number: 2250038.1

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

Ian Farmer Ref:	7089A	7089B	7089C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	No Class No Slump No Delivery Ticket			
Pour Location	Shildon			
Date Cast	22-Mar-23	22-Mar-23	22-Mar-23	
Date Received	03-Apr-23	03-Apr-23	03-Apr-23	
Age at Test (Days)	28	28	SPARE	-
Date Tested	19-Apr-23	19-Apr-23		
Cube Width Length (mm) Measured	100 100	100 100		
Weight in Air (g)	1498.6	1457.9		
Weight in Water (g)	422	380.9		
Saturated Density (Kg/m ³)	1500	1450		
Maximum Load at Failure (kN)	44	45		
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal		
Compressive Strength (N/mm²)	4.4	4.5		
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		

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 Curling 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: 19/04/2023

Unit 4, Faraday Close, Pattinson North Industrial Estate, Washington, NE38 8QJ. Tel: 0191 482 8500 Fax: 0191 482 8520
washington@ianfarmer.co.uk www.ianfarmer.co.uk

Client: Groundshire

Address: Littleburn House
Littleburn Industrial Estate
Langley Moor

Project Name: Various Sites
Project Number: 2250038.1

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

Ian Farmer Ref:	7090A	7090B	7090C	-
Client Ref:	Not Supplied	Not Supplied	Not Supplied	-
Classification Slump Delivery Ticket No:	No Class No Slump No Delivery Ticket			
Pour Location	Shildon			
Date Cast	10-Mar-23	10-Mar-23	10-Mar-23	
Date Received	03-Apr-23	03-Apr-23	03-Apr-23	
Age at Test (Days)	28	28	SPARE	-
Date Tested	07-Apr-23	07-Apr-23		
Cube Width Length (mm) Measured	100 100	100 100		
Weight in Air (g)	1426.5	1379		
Weight in Water (g)	349.5	302		
Saturated Density (Kg/m ³)	1420	1380		
Maximum Load at Failure (kN)	24	17		
Conditions of Failure If abnormal, failure type given by number Please refer to BS EN 12390-3:1990 Clause 8, Figure 2	Normal	Normal		
Compressive Strength (N/mm²)	2.4	1.7		
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		

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: 11/04/2023

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GAS MONITORING

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE							1
CLIENT NATIONWIDE ENGINEERING							
DATE	O2	Flam. Gas	CO	H2S	RIG	remarks	
22.2.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
23.2.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
24.2.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
27.2.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.00	0.00	0.00	0.00			
28.2.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
1.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
2.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
3.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
6.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
7.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
8.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
9.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			
10.3.23							
AM	20.90	0.00	0.00	0.00			
NOON	20.90	0.00	0.00	0.00			
PM	20.90	0.00	0.00	0.00			

GAS MONITORING

SITE 13485 - LOCOMOTION, SHILDON, DL4 2RE						2
CLIENT NATIONWIDE ENGINEERING						
DATE	O2	Flam. Gas	CO	H2S	RIG	remarks
13.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
14.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
15.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
16.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
17.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
20.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
21.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
22.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
23.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
24.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
27.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
28.3.23						
AM	20.09	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		
29.3.23						
AM	20.90	0.00	0.00	0.00		
NOON	20.90	0.00	0.00	0.00		
PM	20.90	0.00	0.00	0.00		

APPENDIX SEVEN

NOTES AND LIMITATIONS

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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.

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