Earth Science Partnership

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Former Tudor Inn, Cimla

Proposed Residential Development

Drilling and Grouting

Verification Report

Report Reference: ESP.9254.03.4539

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Former Tudor Inn, Cimla
Proposed Residential Development
Drilling and Grouting
Verification Report

Prepared for:
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Report Reference: **ESP.9254.03.4539**

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1 Introduction

1.1 Background

A new residential development is to be constructed at the former Tudor Inn, Cimla. Bluefield Land, hereafter known as the Client, have been appointed Principal Contractor for the construction of the housing development.

Previous intrusive ground investigations have identified the presence of probable abandoned mine workings at shallow depth beneath the proposed development, which could pose a subsidence risk. The Earth Science Partnership Ltd (ESP), Consulting Engineers, Geologists and Environmental Scientists, were appointed by the Client to verify the works carried out by a specialist contractor to stabilise the shallow mine workings and mitigate the subsidence risks to the proposed development. ESP previously designed the works specification (ref. ESO.9254.4399). The works were conducted by Van Elle, under instruction of the Client.

The proposed development will comprise a large apartment block and conventional two-storey residential dwellings with private gardens, landscaping and estate roads. A new access road for the development will be constructed from Beacons View to the northeast, created by the demolition of two existing properties. An infiltration basin (for SuDS) is shown just to the east of the new access. We understand that there will be no significant changes to the current ground levels. The proposed development layout is presented as Figure 1 in the supporting appendices.

1.2 Objective and Scope of Works

The objective of the works was to initially undertake a programme of works to either stabilise the suspected mine workings beneath the proposed development, or to undertake adequate work via proof drilling to confidently declassify the site from a high risk, to a lower risk.

The works specification was detailed in the ESP July 2025 report 'Grouting Specification Report' Ref. 9254.4399. The works were conducted by Van Elle under instruction of the Client (and Principal Contractor). A representative of ESP was on site for the duration of the works for verification purposes.

The contract was awarded on the basis of a competitive quotation. The terms of reference for the works are as laid down in the Earth Science Partnership proposal of 20th January 2025 (ref. mte/ESP.9254.It1 Offer). The stabilisation works were completed between November and December 2025.

1.3 Limitations of Report

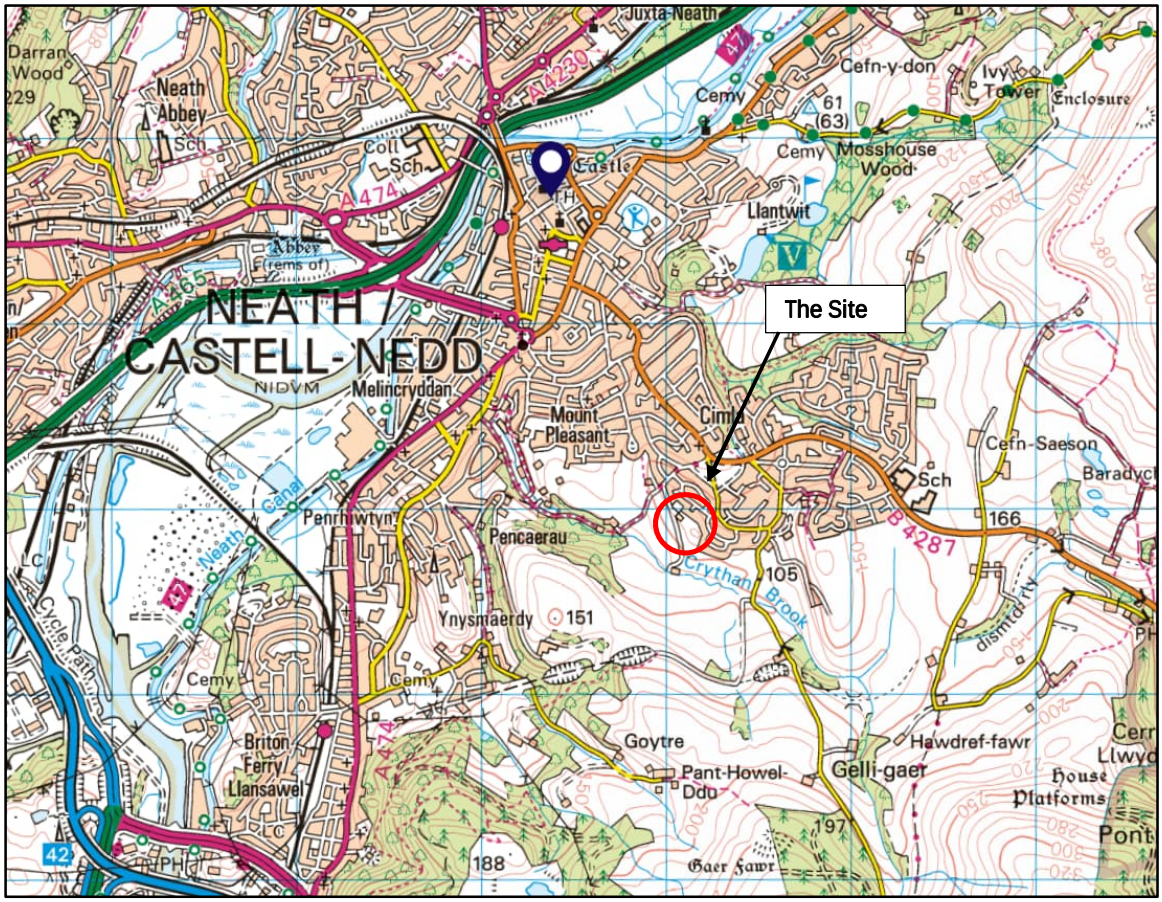
This report represents the findings of the brief solely relating to the stabilisation of possible abandoned workings beneath the proposed development as detailed in the text. It does not comprise a geotechnical or geo-environmental assessment of the shallow ground conditions, and should not be construed as such.

This report represents the findings and opinions of experienced geo-environmental and geotechnical specialists. Earth Science Partnership does not provide legal advice and the advice of lawyers may also be required.

2 Summary of Mining Setting

2.1 Site Location and Description

The proposed housing development is on the grounds of the former Tudor Inn, located on the south-western side of Cimla, Neath. The National Grid Reference of the centre of the site is (SS) 276060 196010 and the postcode is SA11 1JA. A Site Location Plan is presented as Insert 1 below.



Insert 1 - Site Location Plan from Ordnance Survey 1:25,000 scale map. Reproduced with permission (OS License No.: AL100015788).

The site is irregular in shape, consisting in the main of a roughly rectangular area around 100m by 60m in size, with a narrow triangular extension running up to the site entrance on Cae Rhys Ddu Road in the north-western margins and an irregular shaped portion covering two residential properties off Beacons View in the north-east (see Figure 1). In total, the site is approximately 0.8 hectares in area.

2.2 Previous Investigations and Assessments

ESP have previously undertaken a series of prior works comprising:

- Geo-environmental Assessment - Ref. 5201e/1933 dated 2013;
- Geotechnical and Geo-environmental Assessment Review of the 2013 Investigation and an Integral Geotechnique Wales Limited (2022) - Ref. 8398.3830 dated January 2023;

- Geotechnical and Geo-environmental Assessment - Ref. 8398.3830 dated October 2024;
- Additional Soakaway Investigation – Ref. ESP.8398.02.4057 dated 22nd February 2024;
- Updated Coal Mining Risk Assessment - Ref. 8398.03.4163 dated 11th November 2024;
- Additional Investigation - Ref. 8398.03.4230 dated December 2024;
- Ground Gas Addendum Report – Ref. ESP.8398.03.4285 dated February 2025;
- Grouting Specification Report - Ref. 9254.4399 dated July 2025;
- Additional Geo-environmental Assessment – Ref. ESP.9254.02.4507 dated December 2025;
- Remediation Strategy and Implementation Plan. – Ref. ESP.9254.02.4511 dated January 2026;
- Slope Stability Assessment Letter – Ref. 9254.02.4518 dated January 2026.

Whilst pertinent information is referred to and summarised within this report, our previous assessments should be referred to for full content and context as this document addresses only the verification of the drill and grout ground stabilisation works (see Section 1.2).

2.3 Ground Model and Coal Setting

For the purposes of this report, the overall site ground conditions based upon all previous phases of investigation have been summarised below. An investigation point plan for previous investigation is presented in Figure 2.

Made Ground – near Tudor Inn and northern boundary: encountered to a maximum depth of 0.8m around the Former Tudor Inn and hardstanding areas as what are likely to be 'sub-base' gravels or dark brown gravelly sandy silts and clays with fragments of brick, ash, glass, concrete and plastic or re-worked topsoil.

Made Ground – along western boundary: thicker, with depths in excess of 3.2m, typically as heterogeneous sandy, clayey gravel with fill and tip material.

Topsoil: encountered in the field away from the Tudor Inn and hardstanding area to a maximum depth of 0.5m.

Swansea Member - Pennant Sandstone Formation: encountered at shallow depth across site beneath the topsoil or Made Ground. Typically comprising a weathered horizon of soft orange-brown slightly sandy gravelly clay or a sandy gravel or cobble of sandstone to a maximum encountered depth of 1.6m. Below the relatively thin weathered horizons, competent bedrock was encountered, typically comprising the Sandstone. A coal seam with several leaves was identified at the base of the sandstone which was noted to have evidence of being worked/mined.

Hughes Member - Pennant Sandstone Formation
Below the coal seam, thought to be the Graigola coal seam, the boreholes encountered mudstone which is likely to be of the Hughes Member.

The coal seam was encountered between depths of 4.0m (RO1) and 17.6m (RO206) depth and was typically 1.5 to 2m in thickness, and likely dipping northeast.

2.3.1 Summary of Findings of Rotary Borehole Investigations

Table 1 below, presents a summary of previous investigation works, focusing exclusively on the rotary boreholes and evidence of coal/workings etc. encountered.

Table 1 - Summary of Findings of Rotary Borehole Investigations

Drillhole	Borehole Elevation (m OD)	Depth to bedrock (m)	Graigola Seam Depths (m)	Bedrock Cover for the Graigola Seam (m)	Void *and/or* Possible Backfilled Workings
Geotechnical and Geo-environmental Assessment (ESP.8398.3830)					
RO1	110.00	1.20	4.00 – 6.80	2.80	Intact ground conditions; interbedded coal and mudstone.
RO2	110.00	0.30	8.80 – 10.40	8.50	Intact ground conditions; interbedded coal and mudstone.
RO3	110.00	0.40	12.50 – 13.50	12.10	Intact ground conditions; interbedded coal and mudstone.
Additional Site Investigation (ESP.8398.03.4230)					
RO201	114.00	0.40	5.50 – 8.40	5.10	6.00 –6.30m (Void) 6.30 – 7.80m (Possible Backfilled Workings)
RO202	114.00	0.80	10.40 – 13.80	9.60	12.30 – 12.50m (Void) 12.50 – 13.80m (Possible Backfilled Workings)
RO203	113.00	0.25	14.20 – 15.60	13.95	None, solid coal encountered.
RO204	115.00	0.30	12.3 – 13.90	11.80	12.30 – 12.60m (Void) 12.60 - 13.90m (Possible Backfilled Workings)
RO205	115.00	0.25	11.2 – 13.2	10.60	11.20 – 11.50m (Void) 11.50 – 13.20m (Possible Backfilled Workings)
RO205a	115.00	0.25	13.6 – 15.40	13.0	Intact, weathered interbedded coal and mudstone.
RO206	114.00	0.40	15.80 – 17.60	15.40	None, solid coal encountered.
RO207	116.00	0.25	8.00 – 9.80	7.75	Intact ground conditions; interbedded coal and mudstone.
RO208	116.00	0.40	6.70 – 9.10	6.30	Possible Backfilled workings with solid coal and mudstone.

Table 2 provides a summary of the Graigola coal seam thickness and bedrock cover encountered during previous investigations.

Table 2 - Summary of Findings of Rotary Borehole Investigations – Graigola Seam

Minimum Graigola Coal Seam Thickness (m)	Maximum Graigola Coal Seam Thickness (m)	Average Graigola Coal Seam Thickness (m)	Minimum Bedrock Cover (m)	Maximum Bedrock Cover (m)
1.0	2.80	1.88[1]	2.8	14.80

Notes:
1 – Average seam thickness includes rock between top of coal and base of coal at the anticipated seam horizon of the Graigola Seam and thus represents the potential void if all coal and rock in between was extracted. Note that possible void may be bigger.

2.3.2 Coal Mining Hazard – Shallow Mine Workings

The investigations identified potential abandoned coal workings within the suspected Graigola coal seam at between 4m and 15.8m depth beneath the site. A small void, generally around 0.2 to 0.3m thickness was noted in four boreholes above 'soft drilling', as described by the driller. Solid coal was noted in six of the 11no. boreholes drilled to date.

A supplementary borehole (BH205a) was drilled using windowless sampling techniques near to BH205, where suspected backfilled workings were identified to recover the soft backfill. BH205a showed what looked to be intact ground conditions, with coal and interbedded mudstone. The coal seam was either found as a single bed, or the seam was split, sometime with a thin upper seam, or rider above a thicker seam.

The total thickness from the top of any coal encountered to the base of the seam varied between 1m and 2.9m. The thickness of rock cover above the workings varied from 2.8m to 13.9m providing a ratio of bedrock cover to height of workings in the low single figures to the highest of 10. The seam was notably shallower in the western portion of the site and becomes deeper toward the east.

It is commonly accepted, based on observational evidence, that the risk from abandoned mine workings is acceptable to most developments where this ratio exceeds 10:1 (i.e. the bedrock cover thickness is at least ten the void height). Given the findings of the investigation, it is likely there is insufficient bedrock cover above the workings and the risk of subsidence is moderate to high.

2.3.3 Coal Mining Hazard – Mine Entries

Some adits are noted on the geological mapping providing access the Graigola Seam within 150m of the site, other adits may be present closer the site and some even be near the southwestern boundary. No mine entries on or immediately near the site were identified in the desk study or previous phases of work.

It should be appreciated that in any area of past mining activity, particularly where the seam is present at as shallow a depth as identified beneath this site, the possibility of the existence of unrecorded mine entries cannot be discounted. The hard sandstone band overlying the coal seam may have encouraged any entries to be adits located on the lower-lying ground outside the western site boundary rather than as shafts from the site surface.

2.3.4 Groundwater

The previous investigations did not identify any groundwater to a depth of 19m. However, the investigation points were completed within one working day and the near-surface soils were fine-grained in nature. Due to the soils low permeability, it is possible that groundwater may be present within the depth of investigation, but there was insufficient time for it to be recorded.

Based on the Conceptual Ground Model, we consider that the main groundwater body beneath the site is within the Pennant Sandstone Formation bedrock at depth. There may be perched pockets of water, notably near existing structures (the former Tudor Inn) or services and with Made Ground, particularly on the southwestern portion of the site.

2.3.5 Ground Gas Risk

Previous investigation included the installation and monitoring of gas wells across the site to assess the risk of ground gas from both the shallow coal and possible workings, and the Made Ground found across the site.

Nine wells were installed, six with response zones targeting the coal seam/workings and three with shallow response zones within shallow bedrock and/or Made Ground. Methane, and Carbon dioxide was measured in both the shallow and deeper wells, and preliminary Gas Screening Values generated. Using the calculated GSVs the site was given the classification Characteristic Situation CS-2 for a residential development (CIRIA C665:2007).

Whilst the below preliminary GSV is provided, further monitoring will be undertaken following the stabilisation to re assess the ground gas regime and allow an updated assessment to be done, including a mines gas risk assessment.

Table 3 – Preliminary Gas Screening Values, taken from Ground Gas Addendum Report (ESP.8398.03.4285, February 2025)

		Maximum Recorded Level (%)	Maximum Gas Flow Rate (L/hr)	GSV (L/hr)
Shallow Wells	Methane	<0.1	6.3	0.0063
	Carbon dioxide	2.1	6.3	0.13
Deeper Wells	Methane	<0.1	63	0.063
	Carbon dioxide	3.1	63	1.95
*GSV calculated using method derived in CIRIA 665 (2007).				

Hydrogen Sulphide was also recorded, generally as peaks before dropping to zero, with one occasion of steady state of hydrogen sulphide was noted in RO204 (deep well). There is no obvious source of the gas.

3 Stabilisation Works and Proof Drilling

As discussed in Section 1.2, the scope of works were dictated upon by the findings of the rotary drilling investigations. The full drill and grout specification is detailed in the ESP report ESP.9254.4399 and available a Appendix A.

The below sets out the areas of work for the drilling, how it was carried out and what was done. Surveying was undertaken by Zenith Land Surveys and drilling, grouting and grout cube testing was undertaken by Van Elle, both under instruction of the Client. Works were observed by ESP for verification purposes only.

3.1 Areas of Work

The proposed development comprises one apartment block and 14 conventional two-storey residential dwellings with private gardens, landscaping and estate roads. A new access road for the development will be constructed from Beacons View to the northeast, created by the demolition of two existing properties. An infiltration basin (for SuDS) is shown just to the east of the new access. The Drill and Grout Grid designed by ESP covers the 'Development Zone' of the site, treating beneath the buildings, gardens, hardstanding and estate roads. Treatment of the new access road and sections of the wider site not proposed for development were not allowed for. The Drill and Grout Grid and development boundary is presented in blue in Figure 3.

The corners of the plots and additional grid points were surveyed and set out by Zenith Land Surveys (under instruction of the Client) and the remaining borehole positions were set out by Van Elle following the Drill and Grout Grid proposed by ESP (Figure 3).

3.2 Summary of Methodology

For any abandoned workings to be stabilised, a series of rotary boreholes were constructed using water flush. These were taken down to just below identified workings or solid coal –ensuring multiple leaves of coal were penetrated. A sacrificial plastic casing pipe was installed in each drillhole to maintain stability of the borehole in the weathered rock.

Grout was then mixed on site from imported pfa, cement and water to the project specification and pumped down the boreholes to infill any possible voids or lose ground.

The stabilisation works were undertaken by Van Elle in general accordance with CIRIA guidance (Parry and Chiverrell, 2019) with the permission of the Mining Remediation Authority, who own all abandoned coal workings and seams in the UK. The Mining Remediation Authority Permit Reference Number for the project was 30518. The treatment works commenced on 11th November 2025 and were completed on 11th December 2025.

3.3 Rotary Drilling

The results of the drilling and grouting including borehole details are summarised in Appendix B. The borehole positions are shown on Figure 4a and 4b.

3.3.1 Primary Boreholes

The Primary Grid boreholes (154 proposed) were constructed in a grid with a general spacing of 6m. The borehole nomenclature is based on the row and column references as shown on Figure 4a.

Drilling of the primary grid commenced on 11th November 2025 and were completed on 10th December 2025.

Due to the proximity of some holes to unavoidable hazards or obstructions (such as neighbouring structures, steep drops or areas of known Japanese Knotweed) 16 boreholes were moved and where possible drilled at an angle to intercept the coal horizon at the required position. These boreholes are featured on Figure 4a. Depth of angled boreholes are not adjusted to true depths and represent distance along the drill string.

Van Elle moved an additional 21 boreholes due to initial access issues or avoidable obstructions. ESP advised that these access issues were resolved and those holes should be redrilled in, or as close as possible to, the proposed positions, with suitable drill angle calculated appropriately where needed. All 21 boreholes where re-drilled, and are featured on Figure 4b.

Including the 154 proposed positions and the 21 redrilled positions, 175 primary boreholes were drilled.

None of the 175 primary grid boreholes identified open voids. Soft drill was encountered in 83 of the boreholes, with 71 recorded as soft coal or backfilled workings and 12 as broken ground. Solid coal was recorded in 92 of the primary boreholes.

Groundwater was not recorded in any of the boreholes, however the drilling utilised a water flush which would have masked the presence of any groundwater strikes. As 80 of the 175 primary boreholes recorded as having partially or fully lost flush, it is unlikely that the boreholes encountered a saturated groundwater table.

The findings of the boreholes has been used to update the Ground Model, as presented in Section 4 below.

3.3.2 Secondary Boreholes

A secondary borehole grid, at 3m spacing was utilised where workings or potential workings would not have been effectively treated using the primary 6m spacing alone.

As no voids were found across site, these areas of concern were predominantly determined by excessive grout takes of primary boreholes, typically over 3t total volume. Grouting methodology and specific grout take results are discussed further in Section 3.4 below.

A total of 41 secondary boreholes were drilled between the 5th and 10th December 2025 and their positions are presented in Figure 4a.

3.3.3 Additional Test Boreholes

On the 9th and 10th of December, 8 test boreholes were undertaken to provide additional lines of evidence that there were no large-scale interconnecting voids remaining and that the grouting process had been successful. Positions were dominantly selected beneath the footprint of the proposed buildings, with two positioned between two areas of high secondary drilling. Test hole positions are presented in Figure 4a.

No evidence of voids was identified in these positions and while grout traces were noted only in some, they were all backfilled with minimal grout takes.

3.4 Grouting

The grouting of the proof drilling boreholes weas undertaken between 13th November 2025 and 10th December 2025. The grout comprised pfa delivered to site in approximately 30 tonne loads from a supplier in Ironbridge, and Ordinary Portland Cement (OPC), provided by a local supplier, and mixed with water provided on site. Information on site deliveries of PFA and OPC is presented in Appendix C, along with copies of available PFA delivery notes provided by Van Elle.. The grout was mixed on site by an experienced operative using 9 parts PFA to 1 part cement.

As discussed above, no voids were encountered during the drilling, with coal seam descriptions either as soft drill (broken ground or soft coal/backfilled workings) or as solid coal. Grout takes however were not consistent across site or strata, with five areas where primary boreholes took greater that 3t of grout. These areas of high grout take are summarised below and displayed in Table 4. Plans showing grout takes are presented as Figure 5 and the results of the drilling and grouting including borehole details are summarised in Appendix B.

- Primary borehole O13, to the northwest of the site, took 3.0t of grout, though neighbouring boreholes took lower quantities. This appears to have been an isolate area as the two secondary boreholes drilled nearby had low grout take volumes (0.3 and 0.4t).
- A cluster of primary boreholes (S25 through AA29) in the lower central section of site, took the highest quantities of grout, between 3t and 36t. Once the primary boreholes were grouted to full, 21 secondary boreholes were drilled around the primaries. Again, no voids were recorded and low secondary grout quantities (between 0.2t and 1.0t) implies that any interconnected possible voids, possible backfilled workings have been infilled.
- Two primary boreholes AG21 and AI21, in the northeast corner of site took grout quantities of 8.0t and 11t respectively. No voids were recorded, and secondary drill holes took lower quantities of grout (between 0.2t and 0.5t) suggesting any interconnected voids had been filled.
- Primary borehole AI25, to the east of the site, took 10t of grout, while surrounding primary boreholes took low quantities. Three of the four secondaries also took low volumes of grout (0.2t to 0.5t) one secondary took 2.0t of grout. Review of the ground model in this area suggested that works would have infilled any workings below the targeted area.
- Two primary boreholes, AC33 and AE33 the southeast corner of site took 10t of grout each, with no voids recorded. Six of the seven subsequent secondaries took 0.2t to fill, and one took 2t. None of the secondaries recorded a void or required a significant grout take.

On completion of grouting all holes were ‘topped’ up to ensure the injection holes were fully filled and sealed with liquid grout, this was verified by the ESP engineer on site. A total of around 293 tonnes of PFA:cement grout was used to complete the stabilisation of the development area. No gravel was used in any of the grouting. The excess PFA on site is to be used or removed from site by the client.

Table 4 - Summary of primary boreholes with high grout quantities, and subsequent secondary boreholes.

Primary Borehole	Recorded Coal Seam Strata	Void Recorded?	Primaries Grout Take (t)	Secondaries Drilled	Void Recorded?	Secondaries Grout Take (t)
O13	Soft Drill - Soft Coal/Infill	No	3.0	O12	No	0.3
				P13	No	0.4
S25	Soft Drill - Soft Coal/Infill	No	36.0	R25	No	0.2
				S24	No	0.2
U25	Soft Drill - Soft Coal/Infill	No	33.2	S26	No	0.2
				T25	No	0.2
				U24	No	1.0
W25	Soft Drill - Soft Coal/Infill	No	20.5	U26	No	1.0
				V25	No	0.1
				W24	No	1.0
Y25	Soft Drill - Soft Coal/Infill	No	34.0	W26	No	0.6
				X25	No	1.0
				X27	No	0.3
Y27	Soft Drill - Broken Ground	No	5.0	Y24	No	0.2
				Y26	No	0.2
				Y28	No	1.0
AA25	Soft Drill - Broken Ground	No	18.0	Z25	No	0.2
				Z27	No	0.6
				AA24	No	1.0
AA27	Soft Drill - Broken Ground	No	3.0	AA26	No	1.0
				AA28	No	0.5
AA29	Soft Drill - Broken Ground	No	4.0	AA30	No	1.0
				AB25	No	0.2
AG21	Soft Drill - Soft Coal/Infill	No	8.0	AF21	No	0.2
				AG20	No	0.5
				AG22	No	0.2
AI21	Soft Drill - Soft Coal/Infill	No	11.0	AH21	No	0.4
				AI20	No	0.2
				AI22	No	0.2
				AJ21	No	0.4
AI25	Soft Drill - Soft Coal/Infill	No	10.0	AH25	No	0.5
				AI24	No	0.2
				AI26	No	2.0
				AJ25	No	0.2
AC33	Soft Drill - Broken Ground	No	10.0	AB33	No	2.0
				AC32	No	0.2
				AC34	No	0.2
AE33	Soft Drill - Broken Ground	No	10.0	AD33	No	0.2
				AE32	No	0.2
				AE34	No	0.2
				AF33	No	0.2

3.5 Sample Testing

3.5.1 Compressive Strength of Grout

Under instruction of Van Elle, grout cube testing was conducted by Socotec UK Ltd. Van Elle sampled, prepared and shipped the grout cubes. The Grout Cube Testing results provided by Van Elle are presented in Appendix D, and summarised below.

Eight 100mm cubes were sampled from the grout manufactured during the works, and were subjected to strength testing in the laboratory to ensure they obtained sufficient strength on curing. The cubes were cured for either 9, 13, 15 or 28 days within water and then tested for their compressive strength.

Table 5 - Summary of Grout Cube Test Results

Specimen ID	Age at Test (days)	Test Date	Density (kg/m³)	Failure Load (kN)	Compressive Strength (N/mm²)
049787\A	13	08/12/2025	1450	23.8	2.4
049787\B	28	23/12/2025	1440	41.4	4.1
049790\A	28	17/12/2025	1270	27.1	2.7
049790\B	28	17/12/2025	1280	28.3	2.8
051478\A	15	19/12/2025	1410	32.0	3.2
051478\B	28	01/01/2026	1380	41.1	4.1
051479\A	9	19/12/2025	1480	29.2	2.9
051479\B	28	07/01/2026	1500	37.3	3.7

The specification requires that, after 28 days, the compressive strength of the injected grout should be at least 0.7 N/mm². From Table 5, the measured compressive strength of the tested grout cube was above this, and have achieved the required strength.

3.5.2 Bleed Tests on Grout

Six grout bleed tests (three tests in duplicate) were carried out on site by ESP on the 13th November, 24th November and 3rd December 2025. The results are presented in Appendix E, and show no significant dewatering of the grout mixture with results all below 5%, as set out in the specification.

3.5.3 Leachate Testing

Three samples of the grout were collected by ESP and analysed in a UKAS accredited testing laboratory, under instruction from ESP, for a range of leachable contaminants including metals, pH, cyanide, sulphate, chloride and fluoride. The test results are presented in Appendix F.

The potential impact of contamination within the pfa used for the grout on controlled waters in the site (i.e. groundwater and surface water) has been evaluated in line with the Environment Agency guidance (Carey et al, 2006). Levels of leachable contamination have been analysed,

There are no surface water courses in the vicinity of the site, so the groundwater within the Coal Measures bedrock beneath the site, which is classified as a Secondary A aquifer, has been adopted as the most sensitive potential receptor to leachable contaminants. No groundwater abstractions are in the vicinity and, due to extensive past mining, the groundwater is unlikely to be used as a potable

supply in the future. To assess the potential risk to groundwater as a general resource beneath the site, therefore, the '*concentrations of hazardous substances within groundwater below which the danger of deterioration of the groundwater quality is avoided'* published by UKTAG (2016) have been adopted as assessment criteria. These UKTAG concentrations have been calculated from thresholds designed to be protective of drinking water, so may be conservative in this instance. Therefore, an exceedance may not necessarily indicate an unacceptable risk.

The results of the leachate testing and their comparison to the relevant assessment criteria are presented in Table 6 below, based on the general groundwater as the most vulnerable receptor.

Table 6 - Level One Controlled Waters Risk Assessment – Leachate Results (General Groundwater)

Compound	Range Recorded	UKTAG[5]	Exceedances
Metals			
Arsenic[1]	3.97 – **8.7 µg/l**	5.0µg/l	**2 of 3**
Chromium VI[1,3]	4.23 – **9.1 µg/l**[3]	5.0µg/l	**2 of 3**
Lead[1]	<0.09 µg/l	5.0µg/l	None of 3
Mercury[1]	0.02 – 0.05 µg/l	0.5µg/l	None of 3
Polyaromatic Hydrocarbons			
Anthracene[1]	<0.01 µg/l	0.05µg/l	None of 3
Benzo[a]pyrene[1]	<0.01 µg/l	0.005µg/l	None of 3
BbF[1]	<0.01 - 0.01 µg/l	0.05µg/l	None of 3
BghiP[1]	<0.01 µg/l	0.05µg/l	None of 3
BkF[1]	<0.01 µg/l	0.05µg/l	None of 3
IDP[1]	<0.01 µg/l	0.05µg/l	None of 3

Notes to Table 4:

1. Hazardous substance (JAGDAG, 2019).
2. Non-hazardous substance (JAGDAG, 2019).
3. All chromium present assumed to be chromium VI (conservative approach).
4. Assessment based on non-potable groundwater beneath the site.
5. UKTAG – UK TAG concentration below which the danger of deterioration in the groundwater quality is avoided. For hazardous substances only.
6. Exceedances indicated in bold and colour coded as shown.
7. Test results presented in Appendix F.

Key to PAH compounds:

BbF: benzo[b]fluoranthene
BghiP: benzo[ghi]perylene
BkF: benzo[k]fluoranthene
IDP: indeno[123-cd]pyrene

From Table 6, it is clear that the levels of contaminants are generally below the assessment criteria adopted to be protective of general groundwater. However, the levels of leachable Arsenic exceeds the assessment criteria of 5µg/l in two of three samples of grout analysed. These exceedances range from 8.2 to 8.7 µg/l. The assessment criteria for potable groundwater for Arsenic (Prescribed Concentration Value - WSR, 2016) is 10µg/l, therefore, all concentrations of the leachable Arsenic measured would be suitable for a potable groundwater source.

The levels of leachable Chromium (all assumed to be Chromium VI) also exceeds the assessment criteria of 5µg/l in two of three samples of grout analysed. These exceedances range from 8.8 to 9.1 µg/l. The assessment criteria for potable groundwater for Chromium VI (Prescribed Concentration Value - WSR, 2016) is 50µg/l, therefore, all concentrations of the leachable Chromium measured would be suitable for a potable groundwater source, even if the Chromium measured is all Chromium VI which is considered unlikely.

Given this, we consider that the levels of leachable Arsenic and Chromium within the grout are acceptable for the site setting, and that the injected grout should not pose an unacceptable risk to controlled waters.

3.6 Gas Well Borehole and Installations

To allow post grouting ground gas monitoring, additional boreholes were added to the wells remaining in-situ from previous investigations. The response zones were also selected to ensure sufficient coverage of key strata across the existing and new wells.

Four new boreholes were drilled, one with a response zone targeting the coal seam (BH301) and three targeting shallow sandstone (BH302, BH303 and BH304). Four wells remain in-situ from previous investigations, three with response zones within the coal seam (RO204, RO206 and RO207), and one with a shallow response zone (RO208).

The four new boreholes were Rotary Openhole drilled to the target depth and a 50mm diameter monitoring well was installed in accordance with BS8576:2013 to allow monitoring of hazardous ground gases. The wells, comprising slotted plastic pipe with a gravel surround (the response zone), bentonite seals above and below the response zone, and a lockable vandal proof cover, were installed as detailed on the borehole records and summarised in Table 7 below.

Table 7 - Gas Well Installations

Well ID	Date of Installation	Response Zone Depth	Response Zone Stratum
BH301	11/12/2025	8.2 – 10.2	Coal
BH302	11/12/2025	1.0 – 3.0	Shallow Sandstone
BH303	11/12/2025	1.0 – 3.0	Shallow Sandstone
BH304	11/12/2025	1.0 – 3.0	Shallow Sandstone
RO204	29/10/2024	12.3 – 13.9	Coal and Mudstone
RO206	29/10/2024	14.9 – 17.6	Coal and Mudstone
RO207	29/10/2024	8.0 – 9.8	Coal and Mudstone
RO208	29/10/2024	0.8 – 4.0	Made Ground and Shallow Sandstone
Notes: Details of each monitoring well is presented in Appendix G as logs. The well positions are presented in Figure 6.			

4 Updated Ground Model

The extensive proof drilling of the site has enabled a detailed understanding of the Ground Model and the below section updates previous ground models in earlier reports.

Made Ground – near Tudor Inn and northern boundary: encountered to a maximum depth of 0.8m around the Former Tudor Inn and hardstanding areas as what are likely to be 'sub-base' gravels or dark brown gravelly sandy silts and clays with fragments of brick, ash, glass, concrete and plastic or re-worked topsoil.

Made Ground – along western boundary: thicker, with depths in excess of 3.2m, typically as heterogeneous sandy, clayey gravel with fill and tip material.

Topsoil: encountered in the field away from the Tudor Inn and hardstanding area to a maximum depth of 0.5m.

Swansea Member - Pennant Sandstone Formation: encountered at shallow depth across site beneath the topsoil or Made Ground. Typically comprising a weathered horizon of soft orange-brown slightly sandy gravelly clay or a sandy gravel or cobble of sandstone. Encountered at its shallowest depth of 0.1m BGL to a maximum depth of 1.8m. Below the relatively thin weathered horizons, competent bedrock was encountered, typically comprising the Sandstone.

Coal Seam (likely Graigola):
A coal seam with several leaves was identified at the base of the Swansea Member sandstone. In previous investigations it was noted to have evidence of being worked/mined. While the Drill and Grout works did not record any voids, the seam was encountered as either solid coal, or as soft drill, with backfilled workings inferred, further evidencing the seam having been worked.
The coal seam was encountered between depths of 3.0m and 17.26m, typically 1.2 to 3m in thickness and generally dipping north-east or north-north-east.

Hughes Member - Pennant Sandstone Formation
Below the coal seam, the boreholes encountered mudstone which is likely to be of the Hughes Member.

5 Discussion

Previous investigations indicated that a coal seam beneath the Development Area was of workable thickness, and there were possible mine entries located within 150m of the site. As such the Development Area was considered to be in a High Risk setting.

The scope of works covered in this report was to either drill a series of boreholes such that if voids were encountered they could be infilled by a programme of grouting and the risk of subsidence reduced or to robustly prove that the seam below the Development Area was not worked or contained no voids such that the risk of subsidence at the site can be reduced.

In total, 175 primary boreholes were constructed in the Development Area with injection pipes under and near the proposed structures, with a further 41 secondary boreholes and 8 test holes. The boreholes encountered the coal seam between depths of 3.0m and 17.2m below ground level, either as solid coal or as soft drill, inferred as soft coal or backfilled workings; no voids were encountered.

The boreholes were backfilled as per the specification using a pfa:cement grout mix injected into the boreholes. The total grout take across the proposed footprint totalled around 293 tonnes. Primary boreholes with grout takes of over 3t had additional secondary boreholes drilled in the vicinity. Grout takes of secondary boreholes and test holes were all below 3t, and typically between 0.2 and 0.5 tonnes. The low grout takes of the low-grout primary boreholes, secondary boreholes and test holes implies that any voids, or small interconnected voids have been successfully infilled.

The compressive strength of the injected grout has been tested and shown to be above specified limits. The levels of contaminants within the grout are not considered likely to pose an unacceptable risk to local controlled waters. We consider that the abandoned workings have been successfully stabilised beneath the Development Area and the subsidence risk has been reasonably mitigated. Nonetheless, we recommend suitably reinforced raft foundations for all proposed structures.

It should be appreciated that abandoned mine workings may extend under the access road portion of the site. Whilst the sensitivity and temporal use of this proposed area may be low, it is at a possible risk of subsidence. Mitigation measures to reduce the risk could be considered, in the form of light-reinforcement. An example would be to incorporate a suitably designed geo-grid with reinforced layers of granular fill which would need to be capable of spanning any crown hole which migrated to the surface. The likely size of crown hole could be calculated with further consideration. The use of a geogrid would not eliminate the risk of damage to the road, if any unrecorded workings are present and subsidence does occur, localised future treatment/maintenance may be required.

The objective of this solution would be to reduce the effect of any crown hole creation and prevent catastrophic collapse during its use. It should be noted that some settlement of the surface may occur which may affect the serviceability of these areas.

It should also be appreciated that in any area of past mining activity the possibility of the existence of unrecorded mine entries cannot be discounted. During site clearance operations and all excavation, a careful watch should be maintained for any isolated pockets of loose fill, brickwork or other anomalous features which may be indicative of past mining operations. Any such features should be subject to further investigation.

A programme of ground gas monitoring is ongoing and will assess the risk of mine gas, and other gasses at the site and will be reported separately.

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LEGEND:

- Site Boundary
- Development Boundary

NOTES:

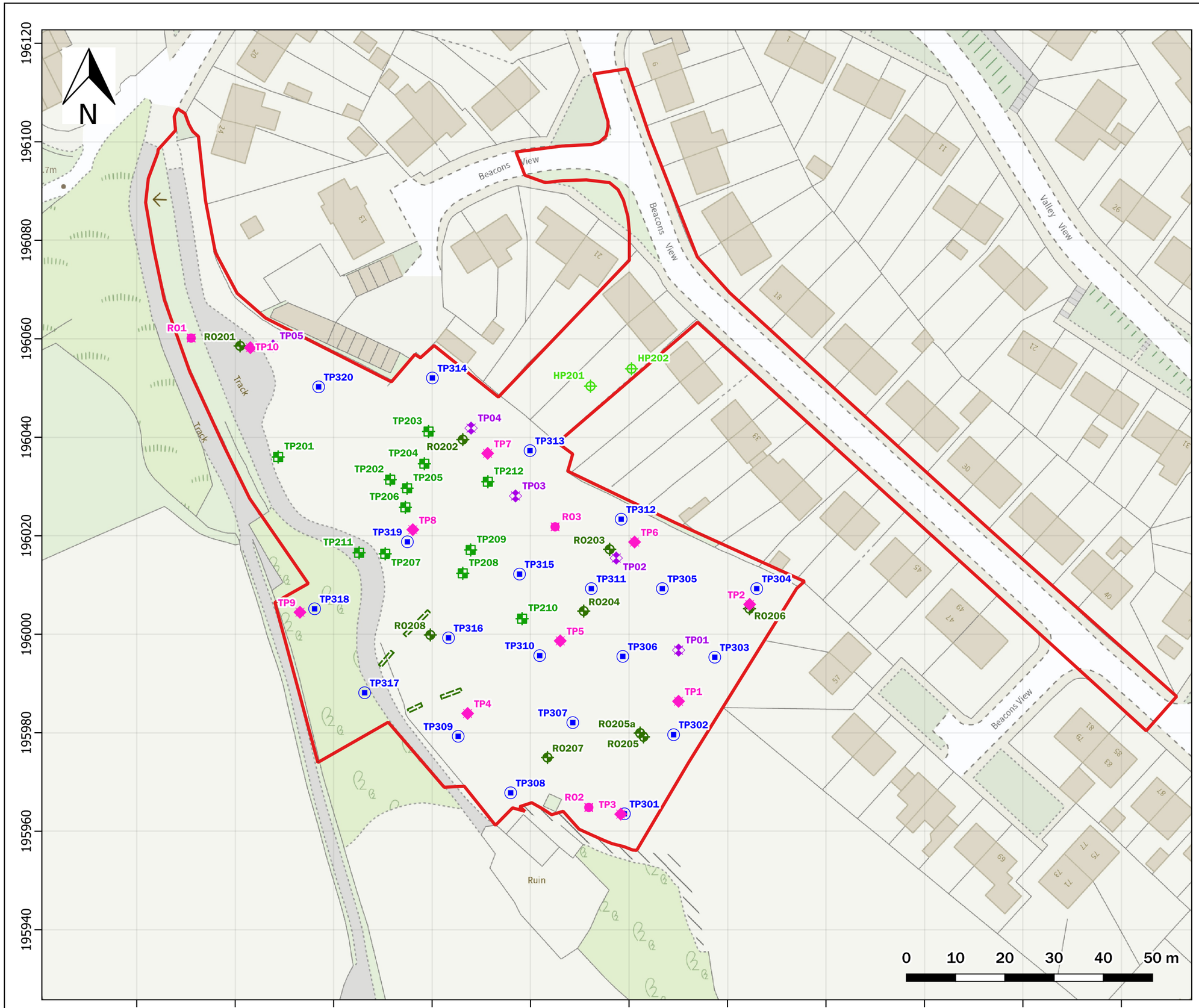
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PROJECT NAME:	**Former Tudor Inn - Drill and Grout Verification**
REPORT REF:	**ESP.9254.03.4539**
CLIENT:	**Bluefield Land Ltd**
FIGURE TITLE:	**Proposed Development Plan**
FIGURE NO: *01*	**REV.:** *00*
DATE: *05/02/2026*	**SCALE:** *1: 500*
DRAWN BY: *NS*	**CHECKED BY:** *MTE*

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LEGEND:

- Site Boundary

Investigation Points

ESP (2013)
- Trial Pits
- Rotary Openhole Boreholes

ESP (February 2024)
- Trial Pits

ESP (October 2024)
- Trenches
- Hand Pits
- Trial Pits
- Rotary Openhole Boreholes

ESP (October 2025)
- Topsoil Sampling Points

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CLIENT:	Bluefield Land Ltd
FIGURE TITLE:	Previous Investigation Point Plan
FIGURE NO: 02	REV.: 00
DATE: 05/02/2026	SCALE: 1: 750
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LEGEND:

- Site Boundary
- Development Boundary
- Drill and Grout Boreholes

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PROJECT NAME:	Former Tudor Inn - Drill and Grout Verification
REPORT REF:	ESP.9254.03.4539
CLIENT:	Bluefield Land Ltd
FIGURE TITLE:	Proposed Drill and Grout Grid
FIGURE NO: *03*	REV.: *00*
DATE: *05/02/2026*	SCALE: *1: 500*
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LEGEND:

- Site Boundary
- Primary Boreholes
- Secondary Boreholes
- Test Holes
- Primary Boreholes (moved and/or angled to avoid hazard or obstruction)
- 30 Drill Angle (degrees)

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PROJECT NAME:	Former Tudor Inn - Drill and Grout Verification
REPORT REF:	ESP.9254.03.4539
CLIENT:	Bluefield Land Ltd
FIGURE TITLE:	Drill and Grout Positions
FIGURE NO: *04a*	REV.: *00*
DATE: *05/02/2026*	SCALE: *1: 500*
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LEGEND:

- Site Boundary
- Primary Boreholes (incorrectly moved or angled - subsequently re-drilled)
- 30 Drill Angle (degrees)

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PROJECT NAME:	Former Tudor Inn - Drill and Grout Verification
REPORT REF:	ESP.9254.03.4539
CLIENT:	Bluefield Land Ltd
FIGURE TITLE:	Incorrectly Drilled Boreholes
FIGURE NO: 04b	REV.: 00
DATE: 05/02/2026	SCALE: 1: 500
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LEGEND:

- Site Boundary
- Primary Boreholes
- Primary Boreholes (incorrectly moved or angled, subsequently re-drilled)
- Primary Boreholes (moved and/or angled to avoid hazard or obstruction)
- Secondary Boreholes
- Test Holes

Grout quantities as shown (t).

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REPORT REF:	ESP.9254.03.4539
CLIENT:	Bluefield Land Ltd
FIGURE TITLE:	Grout Intakes
FIGURE NO: *05*	REV.: *00*
DATE: *05/02/2026*	SCALE: *1: 500*
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LEGEND:

- Site Boundary
- Primary Boreholes
- Primary Boreholes (incorrectly moved or angled, subsequently re-drilled)
- Primary Boreholes (moved and/or angled to avoid hazard or obstruction)

Grout quantities as shown (t).

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REPORT REF:	ESP.9254.03.4539
CLIENT:	Bluefield Land Ltd
FIGURE TITLE:	Grout Intakes Primary Boreholes
FIGURE NO: *05a*	REV.: *00*
DATE: *05/02/2026*	SCALE: *1: 500*
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LEGEND:

- Site Boundary
- New Well Installations
- Existing Wells from Previous Investigations

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REPORT REF:	**ESP.9254.03.4539**
CLIENT:	**Bluefield Land Ltd**
FIGURE TITLE:	**Well Installation Positions**
FIGURE NO: *06*	**REV.:** *00*
DATE: *05/02/2026*	**SCALE:** *1: 500*
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Former Tudor Inn, Cimla
Proposed Residential Development
Specification for Treatment of Shallow Mine Workings

Report Reference: ESP.9254.4399

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Former Tudor Inn, Cimla
Proposed Residential Development
Specification for Treatment of Shallow Mine Workings

Prepared for:
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Report Reference: **ESP.9254.4399**

Revision	Status	Date	Written by	Checked by	Approved by
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		Signature:			
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Figure 1 Proposed Development Layout

Figure 2 Conceptual Ground Model

Figure 3 Proposed Primary Grouting Grid Layout

Appendix A Drilling and Grouting Cost Estimate

General Notes

1 Introduction

1.1 Background

A new residential development is to be constructed at the former Tudor Inn, Cimla. Bluefield Land, hereafter known as the Client, have been appointed Principal Contractor for the construction of the housing development.

Previous intrusive ground investigations have identified the presence of probable abandoned mine workings at shallow depth beneath the proposed development, which could pose a subsidence risk. The Earth Science Partnership Ltd (ESP), Consulting Engineers, Geologists and Environmental Scientists, have been appointed by the Client to design and manage works to stabilise the shallow mine workings and mitigate the subsidence risks to the proposed development. The proposed development layout is presented as Insert 1 below and also as Figure 1 in the supporting appendices.



Insert 1: *Proposed Development Layout*

1.2 Proposed Scheme

The proposed development will comprise conventional two-storey residential dwellings with private gardens, landscaping and estate roads. The proposed development layout is presented as Insert 1, and shows a large apartment block in the northwest, with link of three dwellings and seven further residential structures around a central northwest to south-east orientated estate road.

A new access road for the development will be constructed from Beacons View to the northeast, created by the demolition of two existing properties. An infiltration basin (for SuDS) is shown just to the east of the new access.

The proposed development layout is presented as Insert 1 below and also as Figure 1 in the supporting appendices.

Based on the above, we understand that the proposed structures would be classified as Geotechnical Category 2 (BS5930:2020), i.e. conventional structures, with no exceptional risk.

1.3 Objective and Scope of Works

The treatment works to mitigate subsidence risks have been designed by ESP based on the findings of the investigation phases undertaken to date (see Section 2 for a summary of these findings) and the Client's requirements.

In summary, any voids or very loose ground within the abandoned workings will be filled using PFA/cement grout pumped down injection holes created using rotary open-hole drilling. Any significant voiding will be filled by the injection of gravel prior to grouting. The grout injection will initially take place via a regular 'primary' grid of drillholes, with infill 'secondary' drillholes undertaken where grout takes are high in the primary drillholes. The proposed grid of drillholes is shown on Figure 3.

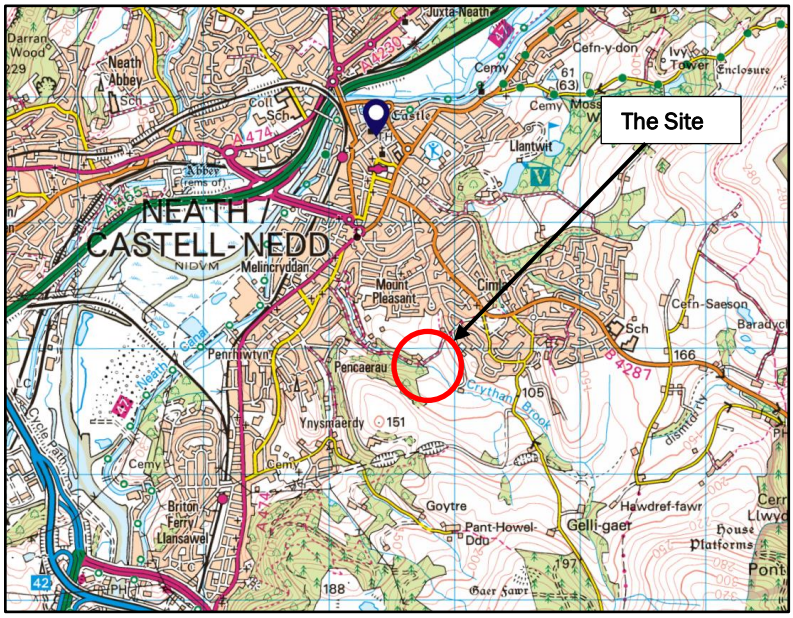
All works will be carried out in accordance with the Construction Design Management (CDM) Regulations and Coal Authority guidance/requirements.

This Specification provides details of the remedial strategy and the methods to be used to mitigate the subsidence risks. This document is issued as a digital version only.

2 Summary of Mining Setting

2.1 Site Location and Brief Description

The site comprises the grounds of the former Tudor Inn, located on the south-western side of Cimla, Neath. The National Grid Reference of the centre of the site is (SS) 276060 196010 and the postcode is SA11 1JA. A Site Location Plan is presented as Insert 2 below.



Insert 2: *Site Location Plan from Ordnance Survey 1:25,000 scale map. Reproduced with permission (OS License No.: AL100015788).*

The site is irregular in shape, consisting in the main of a roughly rectangular area around 100m by 60m in size, with a narrow triangular extension running up to the site entrance on Cae Rhys Ddu Road in the north-western margins and an irregular shaped portion covering two residential properties off Beacons View in the north-east (see Insert 1 and Figure 2). In total, the site is approximately 0.8 hectares in area.

It is bounded by:

- to the north-east: residential properties on Beacons View.
- to the south-east: open grassed pastureland behind the houses on Beacons View.
- to the south-west: a farm track and open land.
- to the south: an old sandstone quarry, and derelict building.

2.2 Previous Investigations and Assessments

ESP have undertaken, the following previous investigations and assessments at the site. Pertinent information has been used to inform this specification, however, the previous assessments should be referred to for context.

- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Geotechnical and Geo-environmental Assessment. January 2023. Ref: ESP.8398.3830.

- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Additional Soakaway Investigation. February 2024. Ref: ESP.8398.02.4057.
- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Additional Exploratory Investigation. Ref: ESP.8398.03.4230. December 2024.
- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Phase One Coal Mining Risk Assessment. Ref. ESP.8398.03.4163.
- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Grouting Cost Estimate. Ref: ESP.8398.04.4259. January 2025.

2.3 Ground Model and Mining Hazard

2.3.1 Ground Conditions

A Conceptual Ground Model has been developed utilising the investigation information, obtained during all ESP site investigation work. The findings have identified a ground model comprising Made Ground and/or Topsoil, over the Swansea and Hughes Member Sandstone Formations. These strata are discussed in more detail in the following sections and the geological succession identified in the investigation points is presented on a Conceptual Ground Model in Figure 2.

Made Ground – near Tudor Inn: encountered to a maximum depth of 0.8m around the Former Tudor Inn and hardstanding areas as what are likely to be 'sub-base' gravels or dark brown gravelly sandy silts and clays with fragments of brick, glass, concrete and plastic or re-worked topsoil.

Made Ground – along western boundary: thicker, with depths in excess of 3.2m, typically as heterogeneous sandy, clayey gravel with fill and tip material.

Topsoil: encountered in the field away from the Tudor Inn and hardstanding area to a maximum depth of 0.5m.

Swansea Member - Pennant Sandstone Formation: encountered at shallow depth across site beneath the topsoil or Made Ground. Typically comprising a weathered horizon of soft orange-brown slightly sandy gravelly clay or a sandy gravel or cobble of sandstone to a maximum encountered depth of 1.6m. Below the relatively thin weathered horizons, competent bedrock was encountered, typically comprising the Sandstone. A coal seam with several leaves was identified at the base of the sandstone which was noted to have evidence of being worked/mined.

Hughes Member - Pennant Sandstone Formation

Below the coal seam, thought to be the Graigola coal seam, the boreholes encountered mudstone which is likely to be of the Hughes Member. The coal seam was encountered between depths of 4.0m (RO1) and 17.6m (RO206) depth and was typically 1.5 to 2m in thickness and likely dipping northeast.

2.3.2 Summary of Findings of Rotary Drillhole Investigations

Table 1 below, presents a summary of the investigation works, focusing exclusively on the rotary boreholes and evidence of coal/workings etc. encountered. Table 2 provides a summary of the Graigola coal seam thickness and bedrock cover encountered during previous investigations.

Table 1: Summary of Findings of Rotary Borehole Investigations

Drillhole	Borehole Elevation (m OD)	Depth to bedrock (m)	Graigola Seam Depths (m)	Bedrock Cover for the Graigola Seam (m)	Void *and/or* Possible Backfilled Workings
Initial Site Investigation (ESP.8398.3830)					
R01	110.00	1.20	4.00 – 6.80	2.80	Intact ground conditions; interbedded coal and mudstone.
R02	110.00	0.30	8.80 – 10.40	8.50	Intact ground conditions; interbedded coal and mudstone.
R03	110.00	0.40	12.50 – 13.50	12.10	Intact ground conditions; interbedded coal and mudstone.
Additional Site Investigation (ESP.8398.03.4230)					
R0201	114.00	0.40	5.50 – 8.40	5.10	6.00 –6.30m (Void) 6.30 – 7.80m (Possible Backfilled Workings)
R0202	114.00	0.80	10.40 – 13.80	9.60	12.30 – 12.50m (Void) 12.50 – 13.80m (Possible Backfilled Workings)
R0203	113.00	0.25	14.20 – 15.60	13.95	None, solid coal encountered.
R0204	115.00	0.30	12.3 – 13.90	11.80	12.30 – 12.60m (Void) 12.60 - 13.90m (Possible Backfilled Workings)
R0205	115.00	0.25	11.2 – 13.2	10.60	11.20 – 11.50m (Void) 11.50 – 13.20m (Possible Backfilled Workings)
R0205a	115.00	0.25	13.6 – 15.40	13.0	Intact, weathered interbedded coal and mudstone.
R0206	114.00	0.40	15.80 – 17.60	15.40	None, solid coal encountered.
R0207	116.00	0.25	8.00 – 9.80	7.75	Intact ground conditions; interbedded coal and mudstone.
R0208	116.00	0.40	6.70 – 9.10	6.30	Possible Backfilled workings with solid coal and mudstone.
Notes:					

Table 2: Summary of Findings of Rotary Borehole Investigations – Graigola Seam

Minimum Graigola Coal Seam Thickness (m)	Maximum Graigola Coal Seam Thickness (m)	Average Graigola Coal Seam Thickness (m)	Minimum Bedrock Cover (m)	Maximum Bedrock Cover (m)
1.0	2.80	1.88[1]	2.8	14.80

Notes:
1 – Average seam thickness includes rock between top of coal and base of coal at the anticipated seam horizon of the Graigola Seam and thus represents the potential void if all coal and rock in between was extracted. Note that possible void may be bigger.

2.3.3 Coal Mining Hazard – Shallow Mine Workings

The investigation identified potential abandoned coal workings within the suspected Graigola coal seam at between 4m and 15.8m depth beneath the site. A small void, generally around 0.2 to 0.3m thickness was noted in four boreholes above 'soft drilling', as described by the driller. Solid coal was noted in six of the 11no. boreholes drilled to date.

A supplementary borehole (BH205a) was drilled using windowless sampling techniques near to BH205, where suspected backfilled workings were identified to recover the soft backfill. BH205a showed what looked to be intact ground conditions, with coal and interbedded mudstone. The coal seam was either found as a single bed, or the seam was split, sometime with a thin upper seam, or rider above a thicker seam.

The total thickness from the top of any coal encountered to the base of the seam varied between 1m and 2.9m. The thickness of rock cover above the workings varied from 2.8m to 13.9m providing a ratio of bedrock cover to height of workings in the low single figures to the highest of 10. The seam was notably shallower in the western portion of the site and becomes deeper toward the east.

It is commonly accepted, based on observational evidence, that the risk from abandoned mine workings is acceptable to most developments where this ratio exceeds 10:1 (i.e. the bedrock cover thickness is at least ten the void height). Given the findings of the investigation, we consider that there is likely to be insufficient bedrock cover above the workings and the risk of subsidence is likely to be moderate to high.

2.3.4 Coal Mining Hazard – Mine Entries

Some adits are noted on the geological mapping providing access the Graigola Seam within 150m of the site, other adits may be present closer the site and some even be near the southwestern boundary.

It should be appreciated that in any area of past mining activity, particularly where the seam is present at as shallow a depth as identified beneath this site, the possibility of the existence of unrecorded mine entries cannot be discounted. The hard sandstone band overlying the coal seam may have encouraged any entries to be adits located on the lower-lying ground outside the western site boundary rather than as shafts from the site surface.

During site clearance operations and all excavation, a careful watch should be maintained for any isolated pockets of loose fill, brickwork or other anomalous features which may be indicative of past mining operations. Any such features should be subject to further investigation.

2.4 Conceptual Ground Model - Hydrogeology

The investigation did not identify any groundwater to a depth of 19m. However, the investigation points were completed within one working day, and the near-surface soils were fine-grained in nature. Due to the soils low permeability, it is possible that groundwater may be present within the depth of investigation, but there was insufficient time for it to be recorded.

Based on the Conceptual Ground Model, we consider that the main groundwater body beneath the site is within the Pennant Sandstone Formation bedrock at depth. There may be perched pockets of water, notably near existing structures (the former Tudor Inn) or services and with Made Ground, particularly on the southwestern portion of the site.

3 Treatment Method Statement

3.1 Summary of Proposed Works

The workings within the Coal seam beneath the footprint of the proposed buildings will be stabilised by the injection of cement/PFA grout.

3.2 Constraints

Service plans were obtained by ESP from the utility companies in 2022 with written confirmation from the landowner (2024) that no changes to services have occurred on site. These utility plans suggests that there are no live services within the site boundaries though remnants of the underground utilities originally servicing the former Tudor Inn are likely to remain in the ground, albeit potentially disconnected. It should be appreciated that the above should be used with caution as the source records are now two years old. Updated service records should be obtained prior to any further intrusive investigation or development.

The former Tudor Inn has been demolished, and we understand that the site, including the treatment areas will generally be cleared of underground services by a PAS128 survey, carried out by the client.

Some proposed structures are located near to the site boundaries. It may be necessary to target the coal seams at these positions by drilling boreholes/injections wells and angles. The specific angle will need to be determined once the building footprints have been set out on site, and we understand the available access and ground conditions in these areas.

Portions of the site surface comprises tarmacadam and we assume a concrete slab will be present in the former location of the Care Home.

3.3 Drilling of Injection Holes – Primary Grids

In order to provide the most economical and robust approach to treat the possible risks, ESP have formulated and provided previous costs estimates for two scenarios (see ESP 8398.4.4259).

The depth of coal seams, coal seam thickness and thickness of superficial cover has been derived from the investigations undertaken to date. Once the initial gridded drilling works have been completed, the remedial requirements are to be reviewed/refined.

3.3.1 Scenario 1: Proposed Development Area (Houses, Hardstanding, Paths, and Roads)

Assumes that all the structures within the Development Area of the site will be grouted, along with all the roads and hard standing areas. We have not allowed to treat the new access road to the north east of the development area at this time. All quoted costs exclude VAT.

The estimated total number of boreholes required to proof drill the proposed plots and access roads in the Development Area is 159no., with depths ranging from approximately 6m in the northwest to 20m in the northeast.

3.3.2 Scenario 2: Estimate: Proposed Houses Only Scenario

Should it be deemed unnecessary to drill and grout in areas of hardstanding, paths, and roads due to the encountered ground conditions during the initial period of the remediation works, it may only be necessary to grout beneath the footprint and in the immediate vicinity of each plot.

For this scenario, the estimated total number of boreholes required to proof drill the proposed plots only is 103no, with depths ranging from approximately 6m in the northwest to 20m in the northeast.

For this scenario to be realised, it is proposed to undertake an initial phase of rotary coring in the road area to determine the condition of the sandstone roof rock. If suitable based upon emerging conditions, ESP will discuss the option to omit treatment under the roadways and look to agree this course of action with the Mining Remediation Authority.

3.3.3 Primary Grid Hole Positions – Main Buildings

The grout will be injected via a series of injection holes constructed using rotary drilling techniques. The injection holes shall penetrate to around 0.5m beneath the base of the seam or workings. Steel casing will be used to maintain stability of the drillhole in the superficial deposits and weathered bedrock during construction and, on completion of drilling, a plastic casing shall be installed within the injection hole to keep the drillhole open for the injection of grout.

The drillholes will initially be drilled as an initial 'primary grid' of nominally 6m spacing over the area of treatment. The drillhole positions will be set out by ESP from the corners of the proposed building which will need to be set out by the Client. The drillhole nomenclature is based on 'rows' (A to AM alternating) and 'columns' (1 to 37 alternating), e.g. Drillholes A1, C1, A3, C3 etc.

The majority of the injection holes will be constructed vertically, near the boundaries and once the plots are set out, injection holes may need to be drilled on an angle to intercept the seam/workings beneath the relevant row positions. If required, angled drillhole will be no more than 25° in order to ensure good flow for the injected grout and gravel.

Once the Primary Grid injection holes have been completed, drilling will then cease, and a first phase of grouting will be undertaken.

3.3.4 Primary Grid Hole Construction

Due to the proximity of nearby houses and the risk from hazardous mine gas within the abandoned workings, the drillholes will be constructed using air flush within the Superficial Deposits and the upper horizons of the bedrock, with water flush used over the zone of the coal seam/workings.

The primary grid of drillholes will also act as further investigation drillholes and will allow a more comprehensive understanding of the extent, height and nature of workings beneath the proposed buildings.

3.4 Grouting of Injection Holes

3.4.1 Grout Mix

The injected grout will be mixed from PFA, cement and water in various proportions depending on requirements. Depending upon the availability of PFA within South Wales, the PFA for the works may need to be sourced from middle/northern England. Cement will be Ordinary Portland Cement sourced locally. Water for the grout mix will be provided by the Client from their site supply.

If significant voids are encountered, or grout is lost within waterlogged workings (although these are not anticipated), locally gravel may be used to infill the workings. This will then be grouted.

3.4.2 Grout Injection

The grout will be mixed and prepared at a central point on site to be agreed with the Client and pumped to the injection holes and down to the workings. The objective is that the grout is only sufficiently fluid to flow and infill any voids between the primary grid drillholes, and not to migrate outside the building footprint areas, and particularly down dip.

If grout takes are high at any injection hole, the grout injection may be undertaken in a series of phases. As a general rule, to minimise losses, the down-dip side of the treatment area will be grouted first as a grout curtain, using grout of higher viscosity to minimise grout losses down-dip. Once the grout curtain has been constructed, grouting will continue with a more fluid grout working up-dip.

Cubes of the grout will be collected during mixing and tested to assess the compressive strength of the material once set (after 28 days).

During the grouting works, drilling will cease to ensure that the installed grout is not damaged by the flush from nearby drilling works.

3.5 Secondary Grid Injection Holes

Where significant open voids are encountered, or significant amounts of grout are required to fill primary grid drillholes, further injection holes will be constructed on a secondary grid of nominally 3m centres, using the infill row and column nomenclature, not utilised for the primary gird (i.e. B1, B3, D1, D3 etc.). Grout will be injected into these holes as discussed in previous sections.

3.6 Test Drillholes

Following completion of the grouting works, a series of validation drillholes will be constructed across the treatment areas/building footprints, to confirm that the grout has filled the voids between the primary and secondary holes and the treatment has successfully stabilised the workings beneath the properties.

3.7 Health and Safety Risk Management

A Construction Phase Health and Safety Plan will be prepared for the treatment works by ESP and will be adhered to on site. All Client site rules will also be adhered to during the treatment works.

3.8 Environmental Risk Management

The injection of PFA based grout into the ground poses a potential risk to local controlled waters.

The Coal Measures bedrock beneath the site is classified as a Secondary A Aquifer by Natural Resources Wales. No groundwater abstractions or source protections zones have been identified in the vicinity of the site.

The River Neath, which flows northeast to southwest some 1km to the west. The closest surface water features to the site are the Crythan Brook, which flows from east to west some 240m to the southwest of the site, and the Eastland Brook, which flows from east to west some 150m to the northeast. Given our experience, any excessive grout injection into the workings beneath the site is unlikely to impact on this surface water feature.

Any leachable contaminants within the grout have the potential to impact on groundwater within the Coal Measures aquifer. The most likely source of contaminants within the grout is the PFA. PFA is used as a bulking agent within the grout injected into voids and broken ground. It is the waste product at the end of the burning of coal at power stations and comprises a fine dust composed mainly of oxides of silicon, aluminium and iron. However, it also includes trace elements some of which are toxic to humans or the environment (e.g. heavy metals).

The BRE (2009) published a Code of Practice for the assessment of the potential risks posed by the use of PFA within grouts injected into the ground. The main risks are from metals within the 'bleed water' shortly after placing or from metals leached from the PFA in the long term. Bleed water occurs as the PFA, cement and water can separate following injection. It occurs mainly in 'wet' grouts of low viscosity used to infill workings between the injection boreholes. As discussed in Section 3.4.2, the grout mix for this project will be designed with the minimum amount of water possible used. Therefore, issues of contaminants within bleed waters are not likely for this project.

Previous experience using PFA within grouts has indicated that the levels of leachable metals within the materials are well below controlled waters acceptance criteria, so the risks to controlled waters is likely to be low. However, samples of mixed grout will be collected by ESP and analysed for levels of leachable metal contaminants.

4 Specification for Treatment Works

4.1 Introduction

The following specification is to be followed by the drilling and grouting contractor undertaking the works. The works will be fully supervised by ESP, and the scope of works may be altered as necessary as more pertinent information is obtained on the mine workings present and, hence, the subsidence risk posed.

It is recognised that grouting of mine workings is a 'dirty' task, but the contractor shall keep the site as clean and tidy as possible at all times during the works. No grout run-off is to be allowed outside the site boundaries, and any such surface run off which does occur shall be cleaned up immediately.

The drilling and grouting contractor shall not contaminate or cause to be contaminated any surface water courses or water supplies.

4.2 Drilling Procedure

4.2.1 Drillhole Positions

The drillholes for the treatment are to be drilled on an approximate 6m 'primary' grid as shown on Figure 3. Secondary drillholes may be required at closer centres locally to any injection holes encountering significant voids or exhibiting high grout takes. The spacing of secondary grid injection holes is nominally 3m, but to be advised by the ESP Supervising Engineer.

At the present time, 103no. and 159no. primary grid drillholes are proposed, dependant on scenario (see Figure 3).

Any deviation from the proposed layout shown on Figure 3, including the drilling of additional holes shall be recorded by the Contractor and advised to the ESP Supervising Engineer as soon as possible.

During the course of the works, the ESP Supervising Engineer will review the drillhole records generated and will review the potential for an amendment to the programmed drillhole depths and positions. ESP may instruct the contractor to undertake supplemental investigation drillholes in areas outside the proposed treatment area to confirm the presence or otherwise of workings at shallow depth. If such workings are suspected or identified, the stabilisation works may be extended to treat such areas.

4.2.2 Drillhole Construction

All drillholes to be used for the injection of grout, including those which strike solid coal (likely pillars), shall be constructed by rotary or rotary percussive techniques, down to at least 0.5m beyond the base of the abandoned workings or coal seam to be treated. Anticipated borehole depths are presented in Appendix B, but it should be appreciated that these are estimates only.

The drilling system and flushing medium to be used to drill through coal seams or the abandoned workings shall be water. The contractor may use air flush to commence drilling the drillhole through the superficial deposits and the upper bedrock strata, however, air flush will not be allowed within 3m above the anticipated workings/coal seam where water flush will be used. The contractor shall allow for the provision of appropriate dust suppression, and protection of the PFA stockpile to minimise blowing of particles onto the nearby residential properties and the school to the east.

The minimum diameter of the drillholes shall be 70mm unless otherwise specified by ESP. The diameter may need to be increased to 100mm or 150mm if large voids/workings are encountered. When it is impracticable to drill at the minimum diameter for the full depth, the diameter of the drillholes shall be increased in the upper lengths.

During drilling the holes shall be temporarily steel cased through superficial deposits down to at least the top of competent bedrock, and if directed by ESP, down through the bedrock strata. The injection holes shall be kept open using plastic pipework until grout injection into the workings is completed. Where a drillhole proves abortive because it becomes obstructed, it shall be re-drilled in a suitable location as directed by the ESP Supervising Engineer, at a large diameter and re-cased.

Some 30no. drillholes will have two injection depths, targeting different seams. It is proposed to drill the borehole to the deepest seam first and treat as set out in this specification. The temporary casing will then be withdrawn to the depth of the shallower seam level and grouting will occur at that depth. If for any reason the integrity of the hole or the temporary pipe is questioned, the hole will be redrilled to the shallower depth and treatment will be carried out as per this specification.

Drillhole records shall be provided to the ESP Supervising Engineer on a daily basis – see Section 4.5. The Contractor will recover all steel borehole casing employed in any drillhole and no payment will be made for any casing abandoned in any hole on completion of the Contract.

On encountering workings or the coal seam in each drillhole, the drilling shall be halted, and the levels of hazardous gas measured at the drillhead.

4.3 Grout Materials

4.3.1 Constituent Materials for Grout

The injected grout shall comprise:

- **Water:** shall be from the mains supply supplied by the Client. The contractor shall provide sufficient tanks for storage of water.
- **Cement:** shall be Ordinary Portland cement complying with BS12 or Sulphate Resisting Portland cement (SRPC) complying with BS4027.
- **PFA**: shall be conditioned hopper ash, or dry powder ash, or a type suitable as a constituent for grout and obtained from an approved supplier.
- **Thixotropic admixtures**: (if required) shall be bentonite or another admixture approved by ESP.

In addition, the following materials are also likely to be required:

- **Gravel**: shall generally comply with BS882, with a particle size of no more than 10mm, and be of grading approved by ESP.

4.3.2 Storage and Use of Materials

Storage of materials shall be such as to prevent contamination, deterioration or loss in the wind. Cement shall be kept in a dry location, and the sequence of deliveries recorded so that cement can be used in rotation.

PFA shall be stored under impermeable covers which shall be weighted down to prevent dust nuisance and to retain moisture.

4.4 Grouting Procedure

4.4.1 Grouting Plant

The contractor shall submit for approval to ESP/the Client, details of the proposed method of mixing and pumping of grout to the injection points, together with the means of monitoring the quantities injected. The grout mixer shall be capable of producing a homogenous mix, all particles being thoroughly wetted without segregation.

4.4.2 Grout Mixes

The grout shall consist of a PFA:cement grout which should normally be mixed in the proportions of 9 parts PFA to 1 part cement (9:1) but could increase to 20(PFA):1(cement) depending on site conditions. The exact proportion of the mix to be used at any one time shall be as instructed by the ESP Supervising Engineer but will be such with the aim of achieving the required compressive strength of 0.7MN/m^2 after 28 days. The minimum amount of water shall be added to the mixture to create a working consistency.

Where excessive lateral flow of grout is anticipated or when voids greater than 500mm are encountered, the ESP Supervising Engineer may order or agree to the addition of pea gravel to the mix.

The actual proportions to be used initially for the various grouts shall be agreed with the ESP Supervising Engineer paying due regard of the conditions met in drilling and the results of any trial grouting carried out before work commences.

The grout should be mixed in batches of appropriate size for the works currently ongoing and to ensure that correct proportionality and uniformity is achieved.

4.4.3 Grout Properties and Testing

With water/solids (cement and PFA) ratios generally in the range of 0.4 to 0.45, (including the moisture in the aggregates), the mixes proposed should produce pumpable grout with flowability readings of between 300 to 600mm, when measured in a meter of the “Colcrete” type. The sample for the flowability test shall be obtained by the grouting Contractor at the point of injection i.e. from the end of the tremmie pipe.

A minimum of two flowability tests per week or per batch as appropriate shall be performed by the contractor as directed by the ESP Supervising Engineer.

High-bleed grouts shall be avoided. Bleed capacity should be limited to 5% maximum unless agreed otherwise with ESP. A minimum of one bleed capacity test shall be performed by the contractor per week, or as directed by the ESP Supervising Engineer. The sample of grout for the test shall be taken from the point of injection i.e. the end of the tremmie pipe. Bleed capacity shall be measured in a clear plastic or glass graduated cylinder which has an internal diameter not less than 50mm and with a volume of approximately 1,000ml. After placing the grout, a cover shall be placed over the cylinder to avoid evaporation. Bleed capacity shall be read at hourly intervals and should continue for not less than 6 hours.

The contractor shall prepare two sets of test cubes of grout per week, as directed by the ESP Supervising Engineer. Each cube shall be of 100mm side, or as agreed with the ESP Supervising Engineer, and shall be taken from the grout at the point of injection.

The cube testing shall be arranged by ESP at an independent laboratory. The mixes shall produce cubes with crushing strengths of not less than 0.7MN/m^2 at 28 days.

If the ESP Supervising Engineer considers the results of the test indicate that a change of mix proportions is required, the Contractor shall make such modifications as ESP may direct.

4.4.4 Grout Injection - General

Grout shall be introduced into all injection holes drilled. Immediately prior to grouting any hole, the contractor shall check by plumbing or other approved method that the temporary casing is open to the full depth of drillhole. Where any collapse or obstruction is identified, the hole shall be re-drilled or cleaned/flushed.

Grout shall be tremmied into position down each hole via an approved T-connection and flexing tube, or series of steel tubes, placed to the base of the hole or to such other depth to receive the tubing or pipes for grout. The grout shall be injected until grout appears near the point of injection, when the borehole shall be deemed complete. If this criterion is reached unexpectedly quickly, the grout tubes shall be lifted to check that a local obstruction is not preventing flow of the grout into the strata.

If grout has not appeared at the point of injection after 5 tonnes of grouting materials have been introduced, then grouting shall be temporarily halted. Grout shall be injected into the hole again on the following working day – if grout takes on this day exceed 3 tonnes, grouting shall be halted and reported to the ESP Supervising Engineer. Alternative strategies such as the injection of pea gravel may be adopted prior to the injection of further grout.

Grouting records shall be provided to the ESP Supervising Engineer on a daily basis – see Section 4.5.

4.4.5 Grout Injection – Curtain Holes

Injection holes on the down-dip side of the treatment area will be constructed as perimeter curtain holes – these holes are marked in Appendix B and will be the first holes grouted as part of the scheme. A viscous grout composed of appropriate proportions of cement and PFA, or pea gravel and water shall be injected. The mix, proportions and method are to be agreed with ESP prior to injection.

If necessary, the spacing between the curtain holes will be reduced to ensure all potential voids are backfilled and ensure the integrity of the grout curtain. Any amendments to the spacing will be recorded in the normal way and reported in the validation report.

4.4.6 In-Situ Testing

If directed by the Supervising ESP Engineer, the contractor shall test the treated area to assess the efficacy of the treatment works. This shall be done by undertaking grout pressure injection tests at selected locations.

Grout acceptance testing may be checked by drilling validation holes in positions to be selected by ESP and injecting grout at pressures appropriate to the depth, all in accordance with the requirements for infill grouting. Each test shall consist of injecting grout into the test hole noting the quantity of grout required to produce the appropriate injection pressure. When this injection pressure has been reached the injection pump shall be switched off. The test shall be deemed successful if the pressure is maintained and if grout takes are not considered excessive.

If the ESP Supervising Engineer considers that the quantities of grout accepted are excessive, further holes shall be drilled and grouted in accordance with the specification for the treatment of mine workings.

4.5 Records and Reports

4.5.1 General

The contractor shall prepare records and plans showing the positions of all boreholes, daily drilling records (see below), together with the total amounts of grout injected. The plans shall be updated daily in conformity with the records noted below.

As works proceed, the Contractor shall maintain separate daily records for drilling, for grouting, and for materials and plant received in a form to be approved by ESP. The daily records signed by the contractor's agent shall be submitted each day to the ESP Supervising Engineer for his agreement. The contractor shall provide one copy of the agreed record for ESP's retention and keep a further copy available for inspection on site.

4.5.2 Daily Drilling Records

Daily drilling records shall be provided for each borehole and contain the following information:

1. Job title and location;
2. Borehole reference number;
3. Date;
4. Contractor's name;
5. Plant in use, crew members;
6. Hours worked;
7. Visitors to Site;
8. Instructions Received;
9. Method of boring or drilling;
10. Orientation of Drillhole;
11. Type, diameter and depth of casing used;
12. Diameter and depth of hole at the beginning and end of each working day or shift;
13. Flushing medium used over specified depth ranges, and any flush losses experienced during drilling;
14. Standing time, with reason, or time lost overcoming obstructions;
15. Weather conditions during day;
16. Details of any underground services located;
17. Details of any settlement or ground heave;
18. Daily and cumulative length drilled;
19. Depth to each major change of stratum;
20. Description , with identification, of the stratum and whether it is intact or broken;
21. Depths and details of any voids, broken ground or suspected workings;
22. Every depth at which groundwater is encountered (if apparent), the depth to which it rose, and any steps taken to stop the flow;
23. Details of gas monitoring;
24. Depths at which any samples are taken; and
25. Details of any voids or suspected workings.

4.5.3 Daily Grouting Records

Daily grouting records shall be provided for each borehole and contain the following information:

1. Job title and location;
2. Borehole reference number;
3. Date;
4. Contractor's name;
5. Plant in use, crew members;
6. Hours worked;
7. Visitors to site;
8. Details of type of injection grout-line dimensions and length of standpipes inserted;
9. Type of grout mix and volumetric quantity injected including total quantity by weight by each type of grouting material introduced;
10. The results of all flow and bleed tests;
11. Weather conditions during day;

12. Details of casing abandoned;
13. Details of grouting materials delivered to the site and a running total of each of the materials delivered;
14. The nature, frequency and results of all inspections of services to check for grout penetration;
15. Any observed ground settlement or heave; and
16. Details of all stoppages or delays and any other relevant information.

The daily records of materials and plant received shall show, in particular, that day's quantities by weight of each type of material and cumulative quantities. With the daily records, the contractor shall submit to ESP copies of receipts or invoices for all materials delivered and he shall keep them on site until the treatment works are complete.

Notwithstanding the information listed above, the Contractor shall provide any other information required by ESP.

4.5.4 Validation Report

On completion of the works, ESP will prepare a validation report containing copies of drillhole records, an injection hole location plan, procedures followed during the works, grout takes, the results of validation drillholes and pressure tests, and a record of any deviation from this specification.

5 References

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Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

LEGEND:

Site Boundary

NOTES:

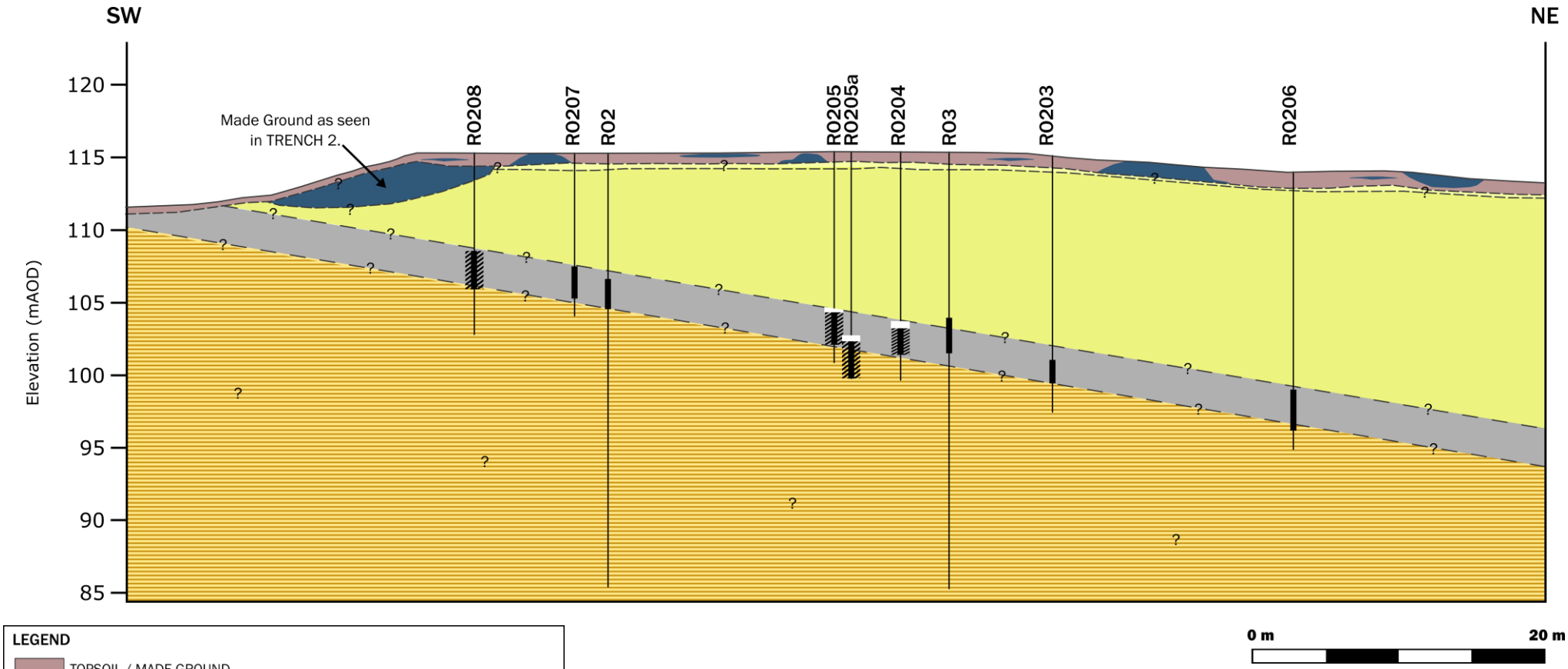
1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information.

2. Contains OS data © Crown copyright and database right (2024). Data may be re-used under the terms of the Open Government Licence (OGL).

3. Site Layout Plan after 'Site Layout' by Spring Design Consultancy, 2024. Drawing number 2617-00(03)100.

PROJECT NAME:	**Former Tudor Inn Cimla, Neath**
REPORT REF:	ESP.9254.4399
CLIENT:	Rhyd Consult
FIGURE TITLE:	**Proposed Development Plan**
FIGURE NO: *01*	**REV.:** *00*
DATE: *04/12/2024*	**SCALE:** *1: 750*
DRAWN BY: *NS*	**CHECKED BY:** *MTE*

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LEGEND

- TOPSOIL / MADE GROUND
- MADE GROUND
- Weathered Sandstone - SWANSEA MEMBER, PENNANT SANDSTONE FORMATION
- Sandstone - SWANSEA MEMBER, PENNANT SANDSTONE FORMATION
- VOID
- Coal / Mudstone with Coal - GRAIGOLA COAL SEAM *(Pale where Inferred)*
- Possible Backfilled Workings
- Mudstone - HUGHES MEMBER, PENNANT SANDSTONE FORMATION

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information. All measurements by hand and are approximate only.
2. Ground model is inferred where '?' is shown.
3. No groundwater was encountered during excavation or drilling.
4. Site access for ground investigation was limited in the southwest due to steep topography and Japanese Knotweed.
5. For cross-sections of trench excavations see Figure 5. For detailed logs see Appendix I.

PROJECT NAME:	Former Tudor Inn		
REPORT REF:	ESP.9254.4399		
CLIENT:	Rhyd Consult		
FIGURE TITLE:	Conceptual Ground Model		
FIGURE NO:	*02*	**REV:**	*00*
DATE:	*13/12/2024*	**SCALE:**	*As Shown*
DRAWN BY:	*NS*	**CHECKED BY:**	*MTE*

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LEGEND:

- Site Boundary
- Drill and Grout Boreholes

NOTES:

1. Do not scale from drawing. This drawing should be read in conjunction with all other associated project information.

2. Contains OS data © Crown copyright and database right (2024). Data may be re-used under the terms of the Open Government Licence (OGL).

3. Proposed Development Plan after 'Site Layout' by Spring Design Consultancy, 2024. Drawing number 2617-00(03)100.

PROJECT NAME:	**Former Tudor Inn**
REPORT REF:	ESP.9254.4399
CLIENT:	Rhyd Consult
FIGURE TITLE:	**Drill and Grout Plan**

FIGURE NO: 03	**REV.:** *00*
DATE: *07/01/2025*	**SCALE:** *1: 500*
DRAWN BY: *NS*	**CHECKED BY:** *MTE*

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Our Ref: ESP.8398.03.4259

Tuesday, 14 January 2025

Mr Richard Oatway

Tai Tarian Ltd
Ty Gwyn
Brunel Way
Neath
Neath Port Talbot SA11 2FP

BY EMAIL

Dear Richard,

FORMER TUDOR INN, CIMLA, NEATH
MINE WORKING REMEDIATION – ESTIMATED DRILLING & GROUTING COSTINGS

Following review of our previous investigation findings, please find our cost estimate for the drilling and grouting works to treat the identified potential shallow mine workings beneath the proposed site development.

1.0 Background

The proposed development will comprise conventional two-storey residential dwellings with private gardens, an apartment block, landscaping and estate roads. The proposed development layout is presented as Insert 1 and shows a large apartment block in the northwest, with link of three dwellings and seven further residential structures around a central northwest to south-east orientated estate road. A new access road for the development will be constructed from Beacons View to the northeast, created by the demolition of two existing properties. An infiltration basin (for SuDS) is shown just to the east of the new access.

For the purposes of this report, the area shaded in orange in Insert 1 will be referred to as the 'Development Area.' The northeast portion of the site, which includes the new access road, will be referred to as the 'Access Area'.



*Insert 1: Site Plan showing red line boundary of the site, the Development Area shaded in **orange**, and the Access Area to the northeast.*

Earth Science Partnership Ltd (ESP) have previously completed three separate investigations at the site.

- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Geotechnical and Geo-environmental Assessment. January 2023. Ref: ESP.8398.3830.
- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Additional Soakaway Investigation. February 2024. Ref: ESP.8398.02.4057.
- Former Tudor Inn, Cimla, Neath. Proposed Residential Development. Additional Exploratory Investigation. Ref: ESP.8398.03.4230. December 2024.

These reports should be read in conjunction with this drilling and grouting costings report and can be provided upon request if needed.

ESP have now been appointed by the Client to design and provide a plan for the further investigation and stabilisation of recorded shallow mine workings in order to mitigate the subsidence risks to the proposed development.

2.0 Summary of Mining Hazards

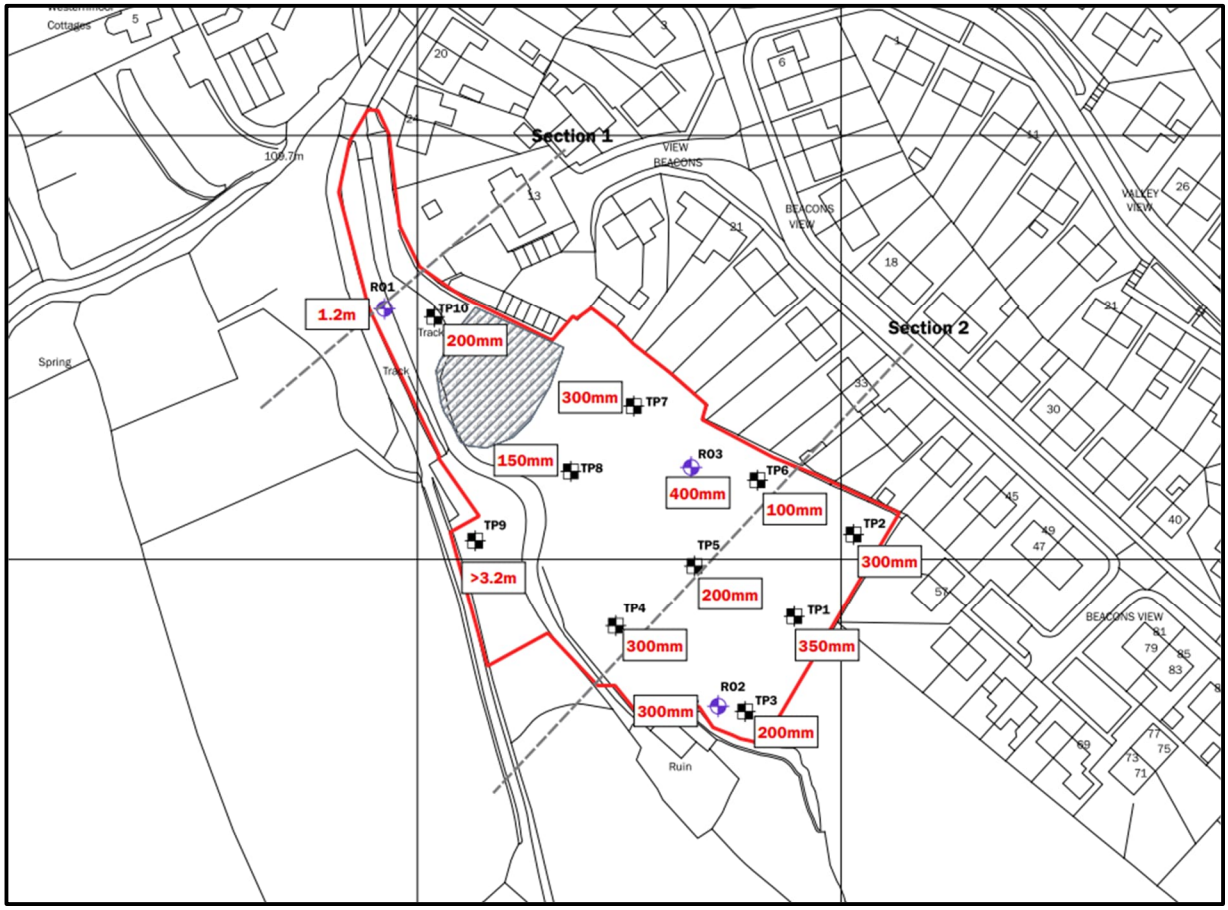
For ease of reference, copies of the investigation point plans for both the initial and additional site investigations are provided as Insert 2 and Insert 3, respectively

2.1 Initial Site Investigation (ESP.8398.3830)

During the initial site investigation, three rotary boreholes were drilled, encountering very shallow bedrock (commonly less than 0.5m) but varying ground conditions in terms of mining risk. Insert 2 displays each drillhole position, and the depth of bedrock encountered in each of these positions is shown adjacent.

In the northwest, borehole RO1 encountered a 2.8m thick coal seam at a depth of just 4.0m. In contrast, in the south, drillhole RO2 found a 1.6m thick coal seam at 8.8m depth, and in the east, borehole RO3 identified a 1.0m seam at 12.5m depth. Coal was present in all three drillholes, with no direct evidence of mine workings.

The coal identified in the boreholes was determined likely to be that of the Graigola seam, which crops out on the slopes below the site to the west and was extensively worked in the Neath area according to the geological memoirs of the area. There is also evidence of past mine entries in the vicinity of the site, according to the Coal Authority and British Geological Maps, which are likely to have accessed workings within the seam.



Insert 2: Inspection Point Plan from the Initial Site Investigation (ESP.8398.3830). Depth to bedrock is displayed adjacent to each inspection point.

2.2 Additional Site Investigation (ESP.8398.03.4230)

The additional investigation identified potential abandoned coal workings within the suspected Graigola coal seam at between 4m and 15.8m depth beneath the site. A small void, generally around 0.2 to 0.3m thickness was noted in four boreholes above 'soft drilling', as described by the driller. Solid coal was noted in six of the 11no. boreholes drilled to date.

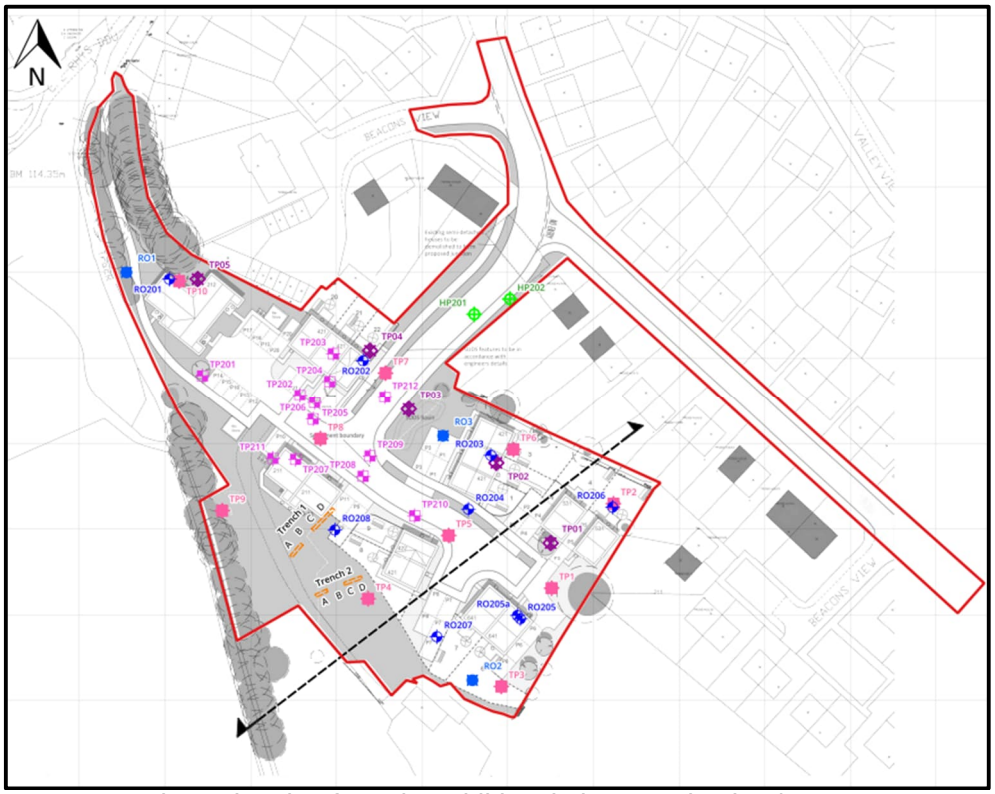
A supplementary borehole (BH205a) was drilled using windowless sampling techniques near to BH205, where suspected backfilled workings were identified to recover the possible soft backfill. BH205a showed what looked to be intact ground conditions, with coal and interbedded mudstone. Given that the window sampling was able to penetrate the weathered rock and coal seam, it is in a highly weathered state and this may be the reason for the soft drilling conditions noted elsewhere on site. However, this does not account for the void noted in several boreholes and, although natural ground conditions were recovered, workings are still anticipated due to the voiding noted.

The coal seam was either found as a single bed, or the seam was split, sometime with a thin upper seam, or rider above a thicker seam.

The total thickness from the top of any coal encountered to the base of the seam varied between 1m and 2.9m. The thickness of rock cover above the workings varied from 2.8m to 13.9m providing a ratio of bedrock cover to height of workings in the low single figures to the highest of 10. The seam was notably shallower in the western portion of the site and becomes deeper toward the east.

It is commonly accepted, based on observational evidence, that the risk from abandoned mine workings is acceptable to most developments where this ratio exceeds 10:1 (i.e. the bedrock cover thickness is at least ten the void height).

Given the findings of this additional investigation, we considered that there is likely to be insufficient bedrock cover above the workings and the risk of subsidence is likely to be moderate to high.



Insert 3: Inspection Point Plan from the Additional Site Investigation (ESP.8398.03.4230).

2.3 Summary of Findings of Rotary Drillhole Investigations

Table 1 presents the findings from the initial (ESP.8398.3830) and additional (ESP.8398.03.4230) investigations, focusing exclusively on the rotary boreholes. Table 2 provides a summary of the Graigola coal seam thickness and bedrock cover encountered during both site investigations.

Table 1: Summary of Findings of Rotary Borehole Investigations

Drillhole	Borehole Elevation (m OD)	Depth to bedrock (m)	Graigola Seam Depths (m)	Bedrock Cover for the Graigola Seam (m)	Void *and/or* Possible Backfilled Workings
Initial Site Investigation (ESP.8398.3830)					
RO1	110.00	1.20	4.00 – 6.80	2.80	Intact ground conditions; interbedded coal and mudstone.
RO2	110.00	0.30	8.80 – 10.40	8.50	Intact ground conditions; interbedded coal and mudstone.
RO3	110.00	0.40	12.50 – 13.50	12.10	Intact ground conditions; interbedded coal and mudstone.
Additional Site Investigation (ESP.8398.03.4230)					
RO201	114.00	0.40	5.50 – 8.40	5.10	6.00 –6.30m (Void) 6.30 – 7.80m (Possible Backfilled Workings)
RO202	114.00	0.80	10.40 – 13.80	9.60	12.30 – 12.50m (Void) 12.50 – 13.80m (Possible Backfilled Workings)
RO203	113.00	0.25	14.20 – 15.60	13.95	None, solid coal encountered.
RO204	115.00	0.30	12.3 – 13.90	11.80	12.30 – 12.60m (Void) 12.60 - 13.90m (Possible Backfilled Workings)
RO205	115.00	0.25	11.2 – 13.2	10.60	11.20 – 11.50m (Void) 11.50 – 13.20m (Possible Backfilled Workings)
RO205a	115.00	0.25	13.6 – 15.40	13.0	Intact, weathered interbedded coal and mudstone.
RO206	114.00	0.40	15.80 – 17.60	15.40	None, solid coal encountered.
RO207	116.00	0.25	8.00 – 9.80	7.75	Intact ground conditions; interbedded coal and mudstone.
RO208	116.00	0.40	6.70 – 9.10	6.30	Possible Backfilled workings with solid coal and mudstone.
Notes:					

Table 2: Summary of Findings of Rotary Borehole Investigations – Graigola Seam

Minimum Graigola Coal Seam Thickness (m)	Maximum Graigola Coal Seam Thickness (m)	Average Graigola Coal Seam Thickness (m)	Minimum Bedrock Cover (m)	Maximum Bedrock Cover (m)
1.0	2.80	1.88[1]	2.8	14.80

Notes:
1 – Average seam thickness includes rock between top of coal and base of coal at the anticipated seam horizon of the Graigola Seam, and thus represents the potential void if all coal and rock in between was extracted. Note that possible void may be bigger.

3.0 Grouting Costing

Figure 1 enclosed shows the proposed Development layout, with a 6m primary grid of treatment boreholes overlain.

We have prepared two main grout costing scenarios:

- Scenario 1 – Treat Graigola seam beneath the footprints of the Proposed Buildings, Car parking areas, Paths, and Roads – not including soft landscaping.

- Scenario 2 – Treat Graigola seam beneath the footprint of the Proposed Buildings only.

Insert 4 displays the general area of proposed drilling and grouting for each plot, should this scenario be suitable.

The Access Road area to the northeast of the Development Area (Insert 1) has not been considered for drilling and grouting purposes/costing. This is due to the absence of significant development (e.g., plots) planned in these areas. The initial phases of the drilling and grouting will include some rotary coring and we also proposed to discuss treatment requirements with the Mining Remediation Authority, which could be done in tandem with preparation of the Specification.

Consequently, this areas are not included in the current predicted grouting costs, as indicated by the absence of planned boreholes for drilling and grouting purposes (Figure 1). However, it would be important to emphasise that, during the mine remediation works, this plan could change. If ground conditions are assessed and found to require grouting, additional boreholes and grouting remediation may take place in this area.

Refined estimate costs based on any updated layout or estimate costs to treat the entire site could be provided if/as required.

The stabilisation works have been designed in general accordance with current CIRIA guidance (C758D Abandoned Mine Workings) and the general methodology will consist of the injection of PFA/cement grout via a regular grid of rotary drillholes at 6m centres in the first instance, followed by secondary and check boreholes where necessary.



Insert 4: Proposed Site Layout highlighting plot and plot numbers of essential drilling and grouting remediation for Scenario 2, marked in grey.

3.1 Influencing Factors

As illustrated in Section 2 and Table 2 and Table 3, the extent, thickness and depth of the possible backfilled mine workings within the Graigola seam beneath the site is variable and given the current unknowns as to the extent of possible backfilled workings and voids, we have provided cost estimates based upon three varying percentage of voids within the workings, of 5%, 10% and 20%.

Significant voids were not encountered during the site investigation, with a maximum void thickness of 0.30m and this has guided the percentage of voids used in this assessment, it is possible that a larger percentage of voids could be encountered and this is a possibility that the Client should be aware of for planning and budgeting purposes.

As discussed in Section 2.0 and shown in Table 1 and 2, the thickness of the Graigola seam identified in the boreholes varied from 0.10m to 2.8m. We have assumed a potential void thickness of 1.8m across the site for grout cost estimating purposes. The seam thickness will generally dictate the height of the workings present, except in the areas of spine roads (the main access roads around the workings), which may be around 6ft (1.8m height) or more.

Also as discussed previously, the depth to the Graigola seam identified in the drillholes varied from 4.0 to 17.6m. Where the seam is deeper, with associated increased thickness of bedrock above any workings, the subsidence risks will be reduced. For the purposes of this assessment, we have assumed a variable depth to the coal seam beneath various parts of the site, with depths estimated from the available borehole information.

In addition to the depth and thickness of the Graigola coal seam beneath the site, a further variable in assessing costs of grouting works is the proportion of the coal seam which has been removed beneath the site. It was common in the western South Wales Coalfield area for around 25% of the coal to have been worked initially, leaving the remaining coal in-situ as pillars to support the adjacent open workings. On completion of the mine workings, a further 15% of the coal may have then been taken from the pillars on retreat. Our three potential scenarios of 5%, 10%, and 20% are based upon the site investigation data to date.

No significant tipping is evident on historical maps in the area, which suggests that the waste from coal workings was packed loosely in the abandoned workings themselves (known as 'backfilled workings'), which correlates with findings in the additional site investigation. If this is the case site-wide, the volume of open voids may also have been reduced from the 5-20% used for our cost assessment.

The costs estimates are based on grout injection holes on a 6m primary grid drilling pattern as shown in Figure 1, with no significant allowance at this stage for secondary grid (closer spaced) injection holes.

All costings also assume the following;

- There will be free, unhindered access to the site for all plant and equipment during the works.
- The corners of the proposed building will be clearly marked out on site by others prior to commencement of the works.
- We have assumed a treatment area of around 4,900m^2 for the Development Area (houses, roads, car parking spaces) option and around 1,600m^2 for treatment of just the plots. The actual amount or treatment area will vary on geological conditions of the coal seam and possible backfill and is somewhat uncontrollable.
- We've assumed at this early stage that there will be no waiting or limitations due to Japanese knotweed locations or processes to drill in areas of knotweed. The offer could be amended once the area of the knotweed is known at the time of drilling to account for any special measures/time impacts etc.
- A mains water supply is available on site, which will be free for our use.
- We have assumed that the site will be surveyed with a PAS128 type B survey (or better) and that all services will be marked out and/or disconnected.
- A suitable grout mixing area will be available close to the works area.
- The PFA is delivered in 20 tonne, 8 wheel lorries. There must be access available for them to the grout mixing area during the works. Note this cannot be across the treatment areas. The existing access will therefore need to be improved and cleared or the new access will need to be made and ground treated accordingly for large wheeled lorries.
- The cost is based on PFA delivered from sources outside of Wales at the time of this letter, costs may vary depending upon site work dates and we will need to update our offer accordingly for current market rates.
- All excess materials, including PFA will be left on site. A cost for removal of this can be provided if required.
- We have assumed PFA availability will allow us to grout 40tonne per day on most cost options, or 60tonne per day on the higher take scenarios.
- The possible workings encountered were backfilled/partially voided and therefore an allowance for a grout curtain has not been included at this stage. If the workings are proven to be open/significantly voided following the initial investigatory works, this may need to be included which would involve drilling closer spaced boreholes.
- We have not allowed for herras fencing as we assume the site will be secured with a hoarded formal/semi permanent boundary. We've allowed for outline security as previous investigations has needed security.

3.2 Estimates

Due to the potential variability in the voiding and backfilling within the workings in the Graigola Coal Seam, we have projected costs dependant on the percentage of voids/workings; 5% (low estimate), 10% and 20% (higher estimate).

The depth of coal seams, coal seam thickness and thickness of superficial cover has been derived from the investigations undertaken to date.

Where voids are encountered, we have not allowed for the use of gravel in the void model(s) but have included as a rate only item, where that would be backfilled with 75% grout and 25% gravel; the use of gravel is to be assessed during site works and relayed to the Client at the earliest opportunity.

For the low estimate scenario we have assumed that the voids encountered in the additional site investigation are of a minimal extent across the proposed development.

Due to the potential variability of factors influencing cost, it will be re-measured on completion of the works.

Once the initial gridded drilling works have been completed, the remedial requirements can be confirmed and the estimates provided can be refined.

If significant workings are found, it may be possible to add additional teams/rigs to reduce the programme times, and costs to a lesser extent.

3.2.1 Scenario 1 Estimate: Proposed Development Area (Houses, Hardstanding, Paths, and Roads)

Based on the available historical drilling information for the site, we have assumed that all the structures within the Development Area of the site will be grouted, along with all the roads and hard standing areas. We have not allowed to treat the new access road to the north east of the development area at this time. All quoted costs exclude VAT.

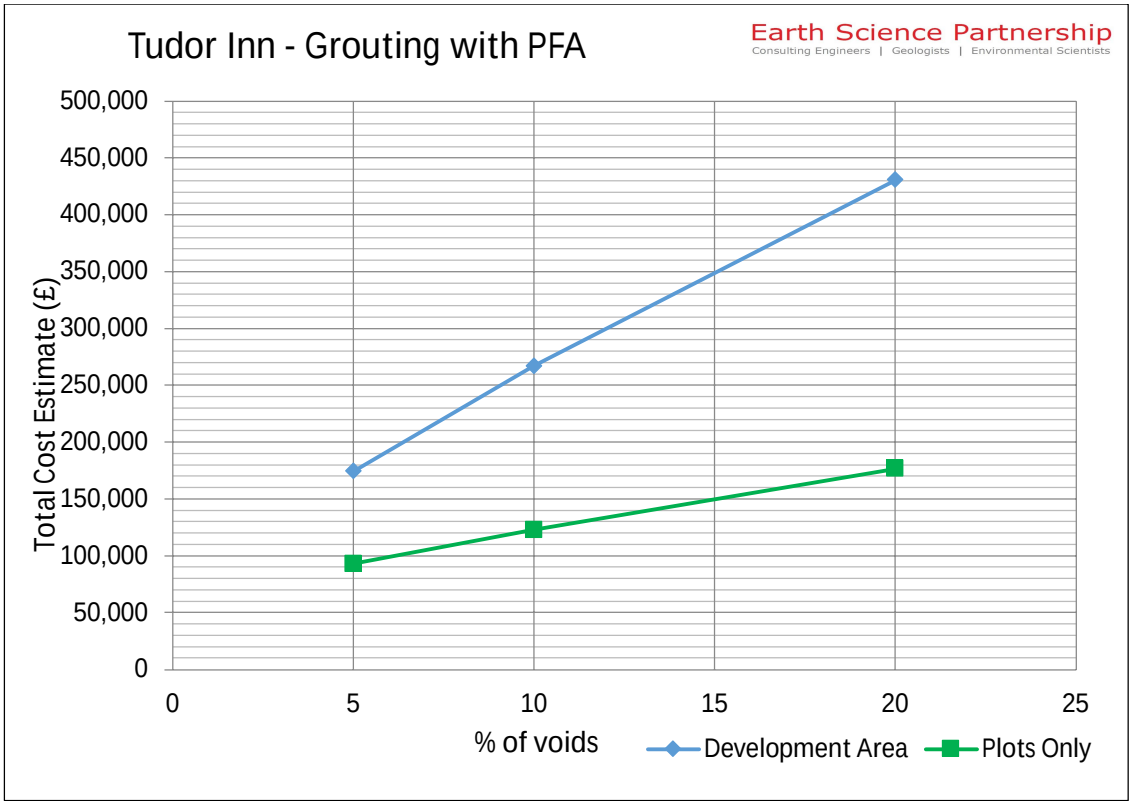
The estimated total number of boreholes required to proof drill the proposed plots and access roads in the Development Area is 159no., with depths ranging from approximately 6m in the northwest to 20m in the northeast. Insert 5 below displays a cost analysis relative to the potential void percentage.

3.2.2 Scenario 2 Estimate: Proposed Houses Only Scenario

Should it be deemed unnecessary to drill and grout in areas of hardstanding, paths, and roads due to the encountered ground conditions during the initial period of the remediation works, it may only be necessary to grout beneath the footprint and in the immediate vicinity of each plot.

For this scenario, the estimated total number of boreholes required to proof drill the proposed plots only is 103no, with depths ranging from approximately 6m in the northwest to 20m in the northeast.

Insert 5 below displays a cost analysis relative to the potential void percentage.



Insert 5: Cost Analysis Relative to % of Potential Voids – Houses, Hardstanding, Paths and Roads Scenario and Houses only scenario

3.3 Secondary and Test Boreholes – Both Scenarios

Secondary and test boreholes will likely be required following the grouting works, if grout takes are high, a higher number of secondary, or perhaps even tertiary boreholes will be needed. The site investigation to date suggests that there is probably unlikely to be large grout takes and due to this, we have assumed that we would need about 15% secondary and/or check holes.

For the treatment of the house plots, roads and hardstanding area, 15% secondary boreholes of the 159 proposed would equate to 24 secondary/test boreholes.

For the option where only the house plots were treated, 15% would be 16 secondary/test boreholes.

4.0 Detailed Grouting Specification & Validation Reports

In addition to this cost exercise, it would be prudent for a competent geotechnical/geoenvironmental engineer to prepare a detailed grouting specification following submission of this report and prior to any mine stabilisation works, which should also include an initial mine gas risk assessment. If additional works are required to further assess the mine gas risk, these should be provided.

On completion of the grouting works, a report detailing all remedial works undertaken will required to be submitted to the Local Planning Authority and Mining Remediation (formerly Coal) Authority to allow full discharge of a likely planning condition. This should include detailed records of the works undertaken including confirmation of the grout quantities injected and additional evidence verifying the success of the stabilisation works. To ensure this, our full-time supervision of the works has been allowed for. The report will be prepared within 5 to 7 weeks of completion of the works following receipt of the quality testing of the grout cubes which will take 28 days.

Following the completion of grouting and validation reporting, additional gas wells should be installed on site. The ground model of the site will have changed due to mine stabilisation (drilling, and grouting)

which may affect the source (Graigola Seam and possible workings) and pathways (likely through joints and fractures in the bedrock) of mine gas.

5.0 Timescales

Mining Remediation Authority permission will be required to be obtained for undertaking the remedial works and we have allowed to obtain this on a standard four-week turnaround.

The duration of the works will be dependent on the amount of grouting required which is still unknown (the full status of the workings is yet to be confirmed), however they will take a minimum of up to around 11 weeks and 6 weeks to complete for Scenario 1 and Scenario 2, respectively.

It should be noted that the aim of the primary drilling grid is to expand the current information on the ground model and refine both this and costs, which will be undertaken "live" as works progress. Should the primary drilling begin to identify ground conditions different to those encountered so far, both the drilling and grouting elements could see significant increase.

For scenario 1 (Development Area), the anticipated timeframes to complete the proposed mine stabilisation work are as follows:

- **11 Weeks** – for a 5% void scenario.
- **14 Weeks** – for a 10% void scenario.
- **16 Weeks** – for a 20% void scenario.

For Scenario 2 (just House Plots), the anticipated timeframes are as follows:

- **6 Weeks** – for a 5% void scenario.
- **7 Weeks** – for a 10% void scenario.
- **8 Weeks** – for a 20% void scenario.

6.0 Discussion

The above estimates are based on the currently available information on the Graigola seam. However, this information indicates a wide variation in seam thickness (between 0.10 and 2.8m) and seam depth (between 4.0 and 17.6m). Given the very shallow depth of bedrock, these variables will have a significant impact on the degree of subsidence risk and, hence, the requirement for risk mitigation measures in any part of the site.

Given the very shallow depth to the seam beneath the northwest of the proposed development, subsidence risks in this area are likely to be high. However, as the seam deepens and is less thick further to the southeast, the subsidence risks may reduce, and areas may not require any risk mitigation.

We trust that the above and attached is clear and provides sufficient information for your present requirements. Should you have any queries, or require further clarification, please do not hesitate to contact us. This offer is valid for a period of 21 days from the date of issue.

Yours sincerely,



Aaron Case

Enc. **Figure 1** – Proposed Grouting Plan (6m Spacing)
Appendix A – Blank Schedule of Rates

GENERAL NOTES

1. Earth Science Partnership (ESP) believes that providing information about limitations is essential to help clients identify and therefore manage their risks. These risks can be mitigated through further investigation or research, but they cannot be eliminated. This report may not be used for any purpose other than that for which it was commissioned.

2. This report includes available factual data for the site as obtained only from the sources described in the text. The data are related to the site on the basis of the site location and boundary information provided by the client. The findings and opinions conveyed in this assessment are based on the information obtained from a variety of sources as detailed in the report, which ESP believe are reliable. Nevertheless, ESP cannot and does not guarantee the authenticity or reliability of the information it has relied on. It is possible that the assessment failed to indicate the existence of further sources of information on the site. Assuming such sources do exist, their information could not have been considered in the formulation of the opinions and findings in this report. It should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.

3. In preparing this report it has been assumed that all past and present occupants of the site have provided all relevant and other information, especially relating to known or potential hazards. This report is not required to identify insufficiencies or mistakes in the information provided by the user/owner or from any other source, but has sought to compensate for these where obvious in the light of other information.

4. Reports are normally prepared and written in the context of a stated purpose, and should not, therefore be used in a different context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission.

5. The opinions presented in this report are based on the findings derived from a site inspection, investigations and a review of historical and other records. The report details any indicators that may suggest that hazardous substances exist at the site at levels likely to warrant mitigation. Not finding such indicators does not mean that hazardous substances do not exist at the site. The most recent site inspection was undertaken as detailed within the report. Circumstances on sites are subject to change and certain indicators of the presence of hazardous substances that may have been latent at the time of this inspection may subsequently have become observable.

6. The work carried out for the assessment can only investigate a small portion of the subsurface conditions. Certain indicators or evidence of hazardous substances may have been outside the limited portion of the subsurface investigated, latent at the time of the work or only partially intercepted by the works, and thus their full significance could not be appreciated. In this regard, groundwater levels are particularly susceptible to variation and it should be noted that groundwater levels are subject to diurnal, seasonal, and climatic changes and are solely dependent on the time the ground investigation was carried out and the weather before and during the investigation.

7. Accordingly, it is possible that the assessment failed to indicate the presence or significance of hazardous substances. Assuming such substances exist, their presence could not have been considered in the formulation of the report's findings and opinions. The conclusions resulting from this study and contained in this report are not necessarily indicative of future conditions or operating practices at or adjacent to the site. Where differing ground conditions or suspect materials are encountered during future site works, additional specialist advice should be sought to assess whether the new information will materially affect the recommendations currently provided herein and whether further consideration is required. Any limiting factors should be assessed by an appropriately qualified specialist.

8. The assessment was prepared for the sole internal use and reliance of the Client. The report shall not be relied upon by or transferred to other parties without the express written authorisation of the Earth Science Partnership. If an unauthorised party comes into possession of the report, they rely on it at their peril and the authors owe them no duty of care and skill.

9. The copyright in this report and other plans and documents prepared by the ESP is owned by them and no such report, plan or document may be reproduced, published or adapted without their consent. Complete copies of this report may, however, be made and distributed by the Client as an expedient in dealing with matters related to its commission.

PROJECT	**Tudor Inn - Drill And Grout Verification**
PROJECT No	**9254.03.4539**

Table 1: Summary of Treatment Works

Borehole	Location	Curtain?	Angle (°)	Distance from Original Position (m)	Anticpated Depth to Coal (vertical - m)	Date drilled	Depth of borehole (m)	Depth to bedrock (m)	Depth of casing (m)	Depth of injection pipe (m)	Depth to workings (m)	Status of coal/workings	Loss of flush?	Workings height (m)	Water strike (m)	Date grouted	Grout (t)	Gravel (t)	Grout mix (pfa:cement)	Notes
Primary Holes																				
A3	Access Lane		v		5.0	27/11/2025	10	1.5	-	2	6.5	Solid Coal - 6.5-8.5m	N	2	-	27/11/2025	0.10	0	9:1	Full
A5	Access Lane		v	2	5.0	27/11/2025	9	1.5	-	2	6	Soft Coal/Infill - 6.0-8.0m	Y	2	-	27/11/2025	0.10	0	9:1	Full
C3	NW Flat (former Tudor Inn)		v		5.0	27/11/2025	10	1.5	-	2	6.2	Solid Coal - 6.2-8.2m	N	2	-	27/11/2025	0.10	0	9:1	Full
C5	NW Flat (former Tudor Inn)		v		5.0	27/11/2025	9	1.5	-	2	5.8	Solid Coal - 5.8-7.8m	N	2	-	27/11/2025	0.10	0	9:1	Full
C7	NW Flat (former Tudor Inn)		v		5.0	27/11/2025	8	1.5	-	2	4.5	Soft Coal/Infill - 4.5-6.5m	Y	2	-	27/11/2025	0.20	0	9:1	Full
C9	Access Lane		v	2	5.0	27/11/2025	8	1.8	-	2	4.4	Soft Coal/Infill - 4.4-6.5m	Y	2.1	-	27/11/2025	0.10	0	9:1	Full
E3	Landscaping - NW		20	2	5.0	27/11/2025	12	1.5	-	2	8.5	Solid Coal - 8.5-10.5m	N	2	-	27/11/2025	0.10	0	9:1	Full
E5	NW Flat (former Tudor Inn)		v		5.0	27/11/2025	10	1.5	-	2	6.5	Solid Coal - 6.5-8.5m	N	2	-	27/11/2025	0.10	0	9:1	Full
E7	NW Flat (former Tudor Inn)		v		5.0	27/11/2025	10	1.5	-	2	6.2	Soft Coal/Infill - 6.2-8.2m	Y	2	-	27/11/2025	0.10	0	9:1	Full
E9	NW Flat (former Tudor Inn)		v		5.0	26/11/2025	9	1.4	-	2	5.2	Solid Coal - 5.2-7.2m	N	2	-	27/11/2025	0.10	0	9:1	Full
E11	Access Lane		v		5.0	27/11/2025	7	1.5	-	2	4	Soft Coal/Infill - 4.0-6.0m	Y	2	-	27/11/2025	0.20	0	9:1	Full
G3	NW Flat (former Tudor Inn)		16	2	6.0	26/11/2025	13	1.8	-	2	9.2	Solid Coal - 9.2-11.2m	N	2	-	27/11/2025	0.10	0	9:1	Full
G5	NW Flat (former Tudor Inn)		v		6.0	26/11/2025	10	1.6	-	2	7	Soft Coal/Infill - 7.0-9.0m	Y	2	-	27/11/2025	0.10	0	9:1	Full
G7	NW Flat (former Tudor Inn)		v		6.0	26/11/2025	10	1.6	-	2	7	Soft Coal/Infill - 7.0-9.0m	Y	2	-	27/11/2025	0.20	0	9:1	Full
G9	NW Flat (former Tudor Inn)		v		6.0	26/11/2025	10	1.5	-	2	6.8	Solid Coal - 6.8-8.6m	N	1.8	-	27/11/2025	0.10	0	9:1	Full
G11	Flats - Parking		v		6.0	26/11/2025	8	1.2	-	2	5	Solid Coal - 5.0-7.0m	N	2	-	27/11/2025	0.10	0	9:1	Full
G13	Access Lane		v		6.0	26/11/2025	8	1.2	-	2	4.5	Soft Coal/Infill - 4.5-6.5m	Y	2	-	27/11/2025	0.10	0	9:1	Full
G15	Landscaping - W		v		6.0	26/11/2025	8	1.4	-	2	5.2	Soft Coal/Infill - 5.2-7.2m	Y	2	-	05/12/2025	0.20	0	9:1	Full
G17	Landscaping - W		15	1	6.0	01/12/2025	7	1.2	-	2	3.3	Soft Coal/Infill - 3.3-5.5m	Y	2.2	-	03/12/2025	0.50	0	9:1	Full
I5	NW Flat (former Tudor Inn)		v		6.0	26/11/2025	12	1	-	2	9	Solid Coal - 9.0-11.0m	N	2	-	27/11/2025	0.10	0	9:1	Full
I7	Flats - Parking		v		6.0	26/11/2025	12	1.2	-	2	8.6	Solid Coal - 8.6-10.6m	N	2	-	27/11/2025	0.10	0	9:1	Full
I9	Flats - Parking		v		6.0	26/11/2025	11	1	-	2	7.5	Solid Coal - 7.5-9.5m	N	2	-	27/11/2025	0.10	0	9:1	Full
I11	Flats - Parking		v		6.0	26/11/2025	11	0.8	-	2	7.2	Solid Coal - 7.2-9.2m	N	2	-	27/11/2025	0.10	0	9:1	Full
I13	Flats - Parking		v		6.0	25/11/2025	10	0.5	-	2	6.8	Solid Coal - 6.8-8.8m	N	2	-	27/11/2025	0.10	0	9:1	Full
I15	Access Lane		v		6.0	25/11/2025	11	1.5	-	2	7.5	Solid Coal - 7.5-9.5m	N	2	-	26/11/2025	0.20	0	9:1	Full
I17	Landscaping - W		v		6.0	01/12/2025	7	1	-	2	3	Soft Coal/Infill - 3.0-5.2m	Y	2.2	-	02/12/2025	0.50	0	9:1	Full
I19	Landscaping - W		15	1	6.0	01/12/2025	7	1.2	-	2	3.3	Soft Coal/Infill - 3.3-5.4m	Y	2.1	-	02/12/2025	0.50	0	9:1	Full
K5	Landscaping - NW		10	1	8.0	27/11/2025	13	1.5	-	2	9.9	Soft Coal/Infill - 9.9-12.0m	Y	2.1	-	27/11/2025	0.20	0	9:1	Full
K7	Flats - Parking		v		8.0	27/11/2025	10	1.2	-	2	6.2	Soft Coal/Infill - 6.2-8.2m	Y	2	-	26/11/2025	0.20	0	9:1	Full
K9	Flats - Parking		v		8.0	25/11/2025	12	1.5	-	2	8.8	Soft Coal/Infill - 8.8-11.0m	Y	2.2	-	27/11/2025	0.30	0	9:1	Full
K11	Flats - Parking		v		8.0	25/11/2025	11	1.5	-	2	8	Soft Coal/Infill - 8.0-10.0m	Y	2	-	27/11/2025	0.30	0	9:1	Full
K13	Flats - Parking		v		8.0	25/11/2025	10	1.5	-	2	6.4	Soft Coal/Infill - 6.4-8.5m	Y	2.1	-	27/11/2025	0.30	0	9:1	Full
K15	Landscaping - W		v		8.0	25/11/2025	9	1.5	-	2	6	Soft Coal/Infill - 6.0-8.0m	Y	2	-	02/12/2025	1.00	0	9:1	Full
K17	Plot 10 - Parking		v		8.0	01/12/2025	8	1.4	-	2	4.2	Solid Coal - 4.2-6.2m	N	2	-	02/12/2025	0.20	0	9:1	Full
K19	Plot 10		v		8.0	01/12/2025	7	1.3	-	2	4	Soft Coal/Infill - 4.0-6.0m	Y	2	-	05/12/2025	0.20	0	9:1	Full
K21	Landscaping - SW		v		7.0	01/12/2025	7	1	-	2	3	Soft Coal/Infill - 3.0-6.0m	Y	3	-	04/12/2025	0.40	0	9:1	Full
M7	Plot 20 - Parking	Y	v		8.0	25/11/2025	15	1.2	-	2	11.2	Soft Coal/Infill - 11.2-13.2m	Y	2	-	26/11/2025	0.20	0	9:1	Full
M9	Plot 20		v		8.0	25/11/2025	15	1	2	2	11.5	Soft Coal/Infill - 11.5-13.5m	Y	2	-	26/11/2025	0.20	0	9:1	Full
M11	Plot 21 - Parking		v		8.0	25/11/2025	15	1.2	-	2	11.8	Soft Coal/Infill - 11.8-13.8m	Y	2	-	26/11/2025	0.30	0	9:1	Full
M13	Plot 21 - Parking		v		8.0	25/11/2025	11	1	-	2	7.5	Soft Coal/Infill - 7.5-9.5m	Y	2	-	02/12/2025	1.00	0	9:1	Full
M15	Proposed Road		v		8.0	25/11/2025	10	1	-	2	7	Soft Coal/Infill - 7.0-9.0m	Y	2	-	02/12/2025	0.50	0	9:1	Full
M17	Plot 10		v		8.0	25/11/2025	10	0.8	-	2	7	Soft Coal/Infill - 7.0-9.0m	Y	2	-	26/11/2025	0.40	0	9:1	Full
M19	Plot 10		v		8.0	01/12/2025	8	1.4	-	2	4.2	Solid Coal - 4.2-6.2m	N	2	-	02/12/2025	0.20	0	9:1	Full
M21	Plot 10		v		8.0	01/12/2025	8	1.2	-	2	5	Solid Coal - 5.0-7.0m	N	2	-	02/12/2025	0.50	0	9:1	Full
M23	Landscaping - SW		23	5	7.0	01/12/2025	7	1.5	-	2	3.5	Soft Coal/Infill - 3.5-6.0m	Y	2.5	-	02/12/2025	0.20	0	9:1	Full
O7	Plot 20	Y	10	2	9.0	24/11/2025	14	1.2	-	2	11	Soft Coal/Infill - 11.0-13.0m	Y	2	-	26/11/2025	0.40	0	9:1	Full
O9	Plot 20		v		9.0	24/11/2025	15	1	-	2	11.5	Soft Coal/Infill - 11.5-13.5m	Y	2	-	26/11/2025	0.60	0	9:1	Full
O11	Plot 21		v		9.0	24/11/2025	15	0.8	-	2	12	Soft Coal/Infill - 12.0-14.0m	Y	2	-	26/11/2025	1.00	0	9:1	Full
O13	Plot 22 - Parking		v		9.0	24/11/2025	15	0.5	-	2	11.6	Soft Coal/Infill - 11.6-13.6m	Y	2	-	26/11/2025	3.00	0	9:1	Full
O15	Proposed Road		v		9.0	24/11/2025	12	0.5	-	2	8.5	Solid Coal - 8.5-10.4m	N	1.9	-	26/11/2025	0.20	0	9:1	Full
O17	Proposed Road		v		9.0	24/11/2025	11	0.5	-	2	7.4	Soft Coal/Infill - 7.4-9.5m	Y	2.1	-	26/11/2025	2.00	0	9:1	Full
O19	Plot 11		v		9.0	24/11/2025	10	0.5	-	2	7	Solid Coal - 7.0-9.0m	N	2	-	26/11/2025	0.20	0	9:1	Full
O21	Plot 11		30	2	9.0	20/11/2025	11	0.4	-	2	7	Soft Coal/Infill - 7.0-9.3m	Y	2.3	-	26/11/2025	2.00	0	9:1	Full
O21 - Redrill	Plot 11				7.0	04/12/2025	10	0.4	-	2	6.6	Solid Coal - 6.6-8.6m	N	2	-	05/12/2025	0.20	0	9:1	Full
O23	Landscaping - SW		35	8	9.0	20/11/2025	11	0.5	-	2	7.3	Soft Coal/Infill - 7.3-9.7m	Y	2.4	-	26/11/2025	1.00	0	9:1	Full
O23 - Redrill	Landscaping - SW				7.3	04/12/2025	10	0.5	-	2	6.4	Solid Coal - 6.4-8.4m	N	2	-	05/12/2025	0.20	0	9:1	Full
Q7	Plot 21 - Garden	Y	v		10.0	28/11/2025	14.5	1	-	2	11.5	Solid Coal - 11.5-13.5m	N	2	-	05/12/2025	0.20	0	9:1	Full
Q9	Plot 21	Y	v		10.0	28/11/2025	15	1	-	2	11.6	Solid Coal - 11.6-13.6m	N	2	-	05/12/2025	0.20	0	9:1	Full
Q11	Plot 22		v		10.0	01/12/2025	16	1	-	2	12.3	Solid Coal - 12.3-14.3m	N	2	-	05/12/2025	0.20	0	9:1	Full
Q13	Plot 22 - Parking		v		10.0	21/11/2025	12	0.4	-	2	9	Solid Coal - 9.0-11.0m	N	2	-	25/11/2025	0.20	0	9:1	Full
Q15	Proposed Road		v		10.0	21/11/2025	12	0.4	-	2	9	Soft Coal/Infill - 9.0-11.0m	Y	2	-	04/12/2025	0.20	0	9:1	Full
Q17	Proposed Road		v		10.0	20/11/2025	12	0.3	-	2	8.8	Soft Coal/Infill - 8.8-10.8m	Y	2	-	03/12/2025	0.20	0	9:1	Full
Q19	Proposed Road		v		10.0	20/11/2025	13	0.3	-	2	9.3	Solid Coal - 9.3-11.3m	N	2	-	25/11/2025	0.20	0	9:1	Full
Q21	Plot 11 - Parking		v		9.0	20/11/2025	11	0.4	-	2	7.6	Solid Coal - 7.6-9.6m	N	2	-	25/11/2025	0.20	0	9:1	Full
Q23	Plot 9 - Parking		30	2	9.0	19/11/2025	11	0.3	-	2	8	Solid Coal - 8.0 - 10.0m	N	2	-	25/11/2025	0.20	0	9:1	Full
Q23 - Redrill	Plot 9 - Parking				8.0	04/12/2025	12	0.3	-	2	8.5	Soft Coal/Infill - 8.5-10.5m	Y	2	-	05/12/2025	0.20	0	9:1	Full
Q25	Landscaping - S		35	8	9.0	19/11/2025	12	0.4	-	2	8.2	Solid Coal - 8.2 - 10.2m.	N	2	-	25/11/2025	0.20	0	9:1	Full
Q25 - Redrill	Landscaping - S				8.2	04/12/2025	11	0.3	-	2	7.6	Solid Coal - 7.6-9.6m	N	2	-	05/12/2025	0.20	0	9:1	Full
S9	Plot 22 - Garden	Y	v		10.0	28/11/2025	15	1	-	2	11.6	Solid Coal - 11.6-13.6m	N	2	-	05/12/2025	0.20	0	9:1	Full
S11	Plot 22		17	3	10.0	01/12/2025	16	1	-	2	12.4	Solid Coal - 12.4-14.5m	N	2.1	-	05/12/2025	0.20	0	9:1	Full
S13	Proposed Road		v		10.0	21/11/2025	12.5	0.4	-	2	9.5	Solid Coal - 9.5-11.5m	N	2	-	25/11/2025	0.20	0	9:1	Full
S15	Proposed Road		v		10.0	21/11/2025	13	0.4	-	2	9.5	Soft Coal/Infill - 9.5-11.5m	Y	2	-	25/11/2025	1.00	0	9:1	Full
S17	Proposed Road		v		10.0	20/11/2025	13	0.4	-	2	9.3	Soft Coal/Infill - 9.3-11.3m	Y	2	-	25/11/2025	2.00	0	9:1	Full
S19	Proposed Road		v		10.0	20/11/2025	12	0.3	-	2	9	Solid Coal - 9.0-11.0m	N	2	-	24/11/2025	0.20	0	9:1	Full
S21	Plot 9 - Parking		v		9.0	20/11/2025	12	0.3	-	2	8.9	Solid Coal - 8.9-10.8m	N	1.9	-	24/11/2025	0.20	0	9:1	Full
S23	Plot 9 - Garden		v		9.0	20/11/2025	11	0.3	-	2	8	Solid Coal - 8.0 - 10.0m	N	2	-	24/11/2025	0.20	0	9:1	Full
S25	Plot 8 - Garden		v	2	9.0	19/11/2025	11	0.2	-	2	7.5	Soft Coal/Infill - 7.5 - 9.5m	Y	2	-	24/11/2025	1.00	0	9:1	Still Taking
																25/11/2025	5.00	0	9:1	Still Taking
																26/11/2025	6.00	0	9:1	Still Taking
																02/12/2025	2.00	0	9:1	Still Taking
																03/12/2025	7.00	0	9:1	Still Taking
																04/12/2025	15.00	0	9:1	Full
S25 - Redrill	Plot 8 - Garden				7.5	04/12/2025	11	0.3	-	2	7.8	Soft Coal w Grout - 7.8-9.8m	N	2	-	10/12/2025	0.30	0	9:1	Full
S27	Landscaping - S		35	8	9.0	19/11/2025	11	0.3	-	2	7.8	Solid Coal - 7.8 - 9.8m	N	2	-	20/11/2025	0.20	0	9:1	Full
S27 - Redrill	Landscaping - S				7.8	04/12/2025	11	0.3	-	2	7.4	Soft Coal/Infill - 7.4-9.4m	N	2	-	05/12/2025	0.20	0	9:1	Full
U9	Proposed Road	Y	v		11.0	01/12/2025	16	1.2	-	2	12.6	Soft Coal/Infill - 12.6-14.6m	Y	2	-	05/12/2025	0.20	0	9:1	Full
U11	Proposed Road		v		11.0	24/11/2025	15	0.5	-	2	11.9	Soft Coal/Infill - 11.9-13.8m	Y	1.9	-	05/12/2025	0.20	0	9:1	Full
U13	Proposed Road		v		11.0	21/11/2025	12.5	0.5	-	2	9.6	Solid Coal - 9.6-11.5m	N	1.9	-	25/11/2025	0.20	0	9:1	Full
U15	Proposed Road		v		11.0	21/11/2025	13	0.5	-	2	9.7	Soft Coal/Infill - 9.7-11.7m	Y	2	-	25/11/2025	2.00	0	9:1	Full
U17	SUDs Basin		v		11.0	20/11/2025	13	0.4	-	2	9.4	Soft Coal/Infill - 9.4-11.4m	Y	2	-	25/11/2025	2.00	0	9:1	Full
U19	Proposed Road		v		11.0	20/11/2025	12	0.3	-	2	8.6	Soft Coal/Infill - 8.6-10.6m	Y	2	-	25/11/2025	1.00	0	9:1	Full
U21	Proposed Road		v		10.0	19/11/2025	15	0.3	-	2	11.2	Solid Coal - 11.2 - 13.2m	N	2	-	24/11/2025	0.20	0	9:1	Full
U23	Plot 9 - Garden		v		9.0	19/11/2025	14	0.3	-	2	10.6	Solid Coal - 10.6 - 12.6m	N	2	-	24/11/2025	0.20	0	9:1	Full
U25	Plot 8		v		9.0	19/11/2025	11	0.3	-	2	8	Soft Coal/Infill - 8.0 - 10.0m	Y	2	-	24/11/2025	1.00	0	9:1	Still Taking
																25/11/2025	5.00	0	9:1	Still Taking
																26/11/2025	4.00	0	9:1	Still Taking
																02/12/2025	1.00	0	9:1	Still Taking
																03/12/2025	7.00	0	9:1	Still Taking
																04/12/2025	15.00	0	9:1	Still Taking
																05/12/2025	0.20	0	9:1	Full
U27	Plot 8		v		9.0	19/11/2025	12	0.4	-	2	8.1	Solid Coal - 8.1 - 10.1m	N	2	-	20/11/2025	0.20	0	9:1	Full
U29	Plot 8 - Garden		30	2	9.0	19/11/2025	12	0.2	-	2	8.2	Solid Coal - 8.2 - 10.2m.	N	2	-	20/11/2025	0.20	0	9:1	Full
U29 - Redrill	Plot 8 - Garden				8.2	09/12/2025	11	0.4	-	2	9.4	Soft Coal/Infill - 8.0-10.0m	N	2	-	09/12/2025	0.20	0	9:1	Full

W9	Proposed Road	Y	30	6	13.0	21/11/2025	13	0.5	-	2	9.6	Soft Coal/Infill - 9.6-11.6m	Y	2	-	25/11/2025	1.00	0	9:1	Full
W9 - Redrill	Proposed Road	Y			9.6	10/12/2025	13	0.7	-	2	9.7	Soft Coal/Infill - 9.7-11.7m	Y	2	-	10/12/2025	0.20	0	9:1	Full
W11	Proposed Road	Y	v		13.0	24/11/2025	13	0.5	-	2	9.6	Soft Coal/Infill - 9.6-11.6m	Y	2	-	25/11/2025	0.50	0	9:1	Full
W13	SUDs Basin	Y	v		13.0	24/11/2025	15	0.5	-	2	12.2	Solid Coal - 12..2-13.8m	N	1.6	-	25/11/2025	1.00	0	9:1	Full
W15	SUDs Basin	Y	v		13.0	14/11/2025	15	0.3	-	2	12	Solid Coal - 12.0 - 14.0m	N	2	-	25/11/2025	0.20	0	9:1	Full
W17	SUDs Basin		v		13.0	17/11/2025	15	0.2	-	2	11.2	Soft - Broken Ground - 11.20 - 13.20m	Y	2	-	25/11/2025	2.00	0	9:1	Full
W19	Plot 3 - Parking		v		12.0	17/11/2025	15	0.2	-	2	11	Soft - Broken Ground - 11.0 - 13.10m	Y	2.1	-	25/11/2025	2.00	0	9:1	Full
W21	Proposed Road		v		11.0	17/11/2025	14	0.2	-	2	10.7	Soft - Broken Ground - 10.7 - 12.70m	Y	2	-	25/11/2025	1.00	0	9:1	Full
W23	Proposed Road		v		11.0	19/11/2025	16	0.3	-	2	11.4	Soft Coal/Infill - 11.4 - 14.2m	Y	2.8	-	24/11/2025	1.00	0	9:1	Full
W25	Plot 9		v		10.0	19/11/2025	14	0.3	-	2	10	Soft Coal/Infill - 10.0 - 12.2m	Y	2.2	-	24/11/2025	2.00	0	9:1	Still Taking
																25/11/2025	5.00	0	9:1	Still Taking
																26/11/2025	6.00	0	9:1	Still Taking
																02/12/2025	2.00	0	9:1	Still Taking
																03/12/2025	5.50	0	9:1	Full
W27	Plot 8		v		10.0	19/11/2025	14	0.2	-	2	9	Solid Coal - 9.0 - 11.2m	N	2.2	-	24/11/2025	0.20	0	9:1	Full
W29	Plot 8 - Parking		v		10.0	19/11/2025	11	0.2	-	2	8	Soft Coal/Infill - 8.0 0 10.0m	Y	2	-	19/11/2025	4.00	0	9:1	Full
W31	Plot 8 - Parking		v	2	10.0	18/11/2025	12	0.2	-	2	8.1	Solid Coal - 8.1 - 10.1m	N	2	-	19/11/2025	0.20	0	9:1	Full
W31 - Redrill	Plot 8 - Parking		v		8.1	03/12/2025	11	0.5	-	2	8	Solid Coal - 8.0-10.0m	N	2	-	05/12/2025	0.20	0	9:1	Full
W33	Landscaping - S		35	7	10.0	18/11/2025	12	0.5	-	2	8.4	Solid Coal - 8.4 - 10.6m.	N	2.2	-	19/11/2025	0.20	0	9:1	Full
W33 - Redrill	Landscaping - S		13	2	8.4	03/12/2025	11	0.6	-	2	7.8	Soft Coal/Infill - 7.8-9.9m	Y	2.1	-	05/12/2025	0.20	0	9:1	Full
Y11	SUDs Basin	Y	v		14.0	21/11/2025	13	0.4	-	2	9.5	Soft Coal/Infill - 9.5-11.5m	Y	2	-	25/11/2025	0.50	0	9:1	Full
Y15	SUDs Basin	Y	v		14.0	14/11/2025	15	0.3	-	2	12	Solid Coal - 12.0 - 14.0m	N	2	-	25/11/2025	0.20	0	9:1	Full
Y17	Plot 1 - Parking		v		14.0	14/11/2025	15	0.2	-	2	11.7	Soft Coal/Infill - 11.7 - 13.8m	Y	2.1	-	25/11/2025	1.00	0	9:1	Full
Y19	Plot 1 - Parking		v		13.0	14/11/2025	15	0.3	-	2	12	Solid Coal 12.0 - 14.0m	N	2	-	24/11/2025	0.20	0	9:1	Full
Y21	Proposed Road		v		13.0	14/11/2025	15	0.2	-	2	11.4	Solid Coal 11.4 - 13.4m	N	2	-	24/11/2025	0.20	0	9:1	Full
Y23	Proposed Road		v		12.0	19/11/2025	14	0.2	-	2	10.5	Soft Coal/Infill - 10.5 - 12.7m	Y	2.2	-	24/11/2025	2.00	0	9:1	Full
Y25	Plot 9		v		11.0	19/11/2025	14	0.3	-	2	10.2	Soft Coal/Infill - 10.2 - 12.5m	Y	2.3	-	24/11/2025	1.00	0	9:1	Still Taking
																25/11/2025	5.00	0	9:1	Still Taking
																26/11/2025	4.00	0	9:1	Still Taking
																02/12/2025	2.00	0	9:1	Still Taking
																03/12/2025	7.00	0	9:1	Still Taking
																04/12/2025	15.00	0	9:1	Full
Y27	Proposed Road		v		11.0	18/11/2025	13	0.1	-	2	9.7	Soft Broken Ground - 9.7 - 11.7m	Y	2	-	20/11/2025	3.00	0	9:1	Still Taking
																24/11/2025	2.00	0	9:1	Full
Y29	Plot 7 - Parking		v		11.0	18/11/2025	13	0.1	-	2	9.2	Solid Coal - 9.2 - 11.2m	N	2	-	19/11/2025	0.20	0	9:1	Full
Y31	Plot 7 - Parking		v		10.0	18/11/2025	11	0.3	-	2	8	Solid Coal - 8.0 - 10.0m	N	2	-	19/11/2025	0.20	0	9:1	Full
Y33	Plot 7 - Parking		30	6	10.0	18/11/2025	12	0.5	-	2	8.3	Solid Coal - 8.3 - 10.3m	N	2	-	19/11/2025	0.20	0	9:1	Full
Y33 - Redrill	Plot 7 - Parking		v		8.3	03/12/2025	11	0.5	-	2	8	Soft Coal/Infill - 8.0-10.0m	Y	2	-	05/12/2025	0.20	0	9:1	Full
AA15	Plot 3	Y	30	3	15.0	13/11/2025	16	0.3	-	2	12.6	Solid Coal - 12.6-14.6m	N	2	-	13/11/2025	0.20	0	9:1	Full
AA15 - Redrill	Plot 3	Y	17	4	12.6	04/12/2025	16	0.4	-	2	12.8	Solid Coal - 12.8-14.8m	N	2	-	09/12/2025	0.20	0	9:1	Full
AA17	Plot 2		v		15.0	14/11/2025	16	0.3	-	2	12.6	Solid Coal - 12.6 - 14.6m	N	2	-	14/11/2025	0.20	0	9:1	Full
AA19	Plot 1		v		14.0	14/11/2025	16	0.3	-	2	12.3	Solid Coal - 12.3 - 14.3m	N	2	-	14/11/2025	0.20	0	9:1	Full
AA21	Plot 1		v		14.0	14/11/2025	16	0.3	-	2	12	Solid Coal - 12.0 - 14.1m	N	2.1	-	20/11/2025	0.20	0	9:1	Full
AA23	Proposed Road		v		13.0	18/11/2025	15	0.3	-	2	11.2	Solid Coal - 11.2 - 13.2m	N	2	-	20/11/2025	0.20	0	9:1	Full
AA25	Proposed Road		v		12.0	18/11/2025	14	0.3	-	2	10.6	Soft Broken Ground - 10.6 - 12.8m	Y	2.2	-	24/11/2025	1.00	0	9:1	Still Taking
																25/11/2025	4.00	0	9:1	Still Taking
																26/11/2025	6.00	0	9:1	Still Taking
																02/12/2025	2.00	0	9:1	Still Taking
																03/12/2025	5.00	0	9:1	Full
AA27	Proposed Road		v		12.0	18/11/2025	14	0.2	-	2	10.1	Soft Broken Ground -10.1 - 12.1m	Y	2	-	19/11/2025	3.00	0	9:1	Full
AA29	Plot 7		v		12.0	18/11/2025	13	0.2	-	2	9.6	Soft Broken Ground - 9.6 - 12.0m	Y	2.4	-	20/11/2025	2.00	0	9:1	Still Taking
																24/11/2025	2.00	0	9:1	Full
AA31	Plot 7 - Garden		v		12.0	18/11/2025	13	0.2	-	2	9.2	Solid Coal - 9.2 - 11.2m	N	2	-	19/11/2025	0.20	0	9:1	Full
AC15	Plot 3	Y	35	3	16.0	13/11/2025	16	0.3	-	2	12.8	Solid Coal - 12.8-14.8m	N	2	-	13/11/2025	0.20	0	9:1	Full
AC15 - Redrill	Plot 3	Y	13	3	12.8	04/12/2025	17	0.5	-	2	13.1	Solid Coal - 13.1-15.1m	N	2	-	09/12/2025	0.20	0	9:1	Full
AC17	Plot 3		v		16.0	13/11/2025	16	0.2	-	2	12.6	Solid Coal - 12.6-14.6m	N	2	-	13/11/2025	0.20	0	9:1	Full
AC19	Plot 2		v		15.0	13/11/2025	16	0.3	-	2	12.4	Solid Coal - 12.4-14.6m	N	2.2	-	13/11/2025	0.20	0	9:1	Full
AC21	Plot 1 - Garden		v		15.0	13/11/2025	16	0.3	-	2	12.2	Solid Coal - 12.2-14.2m	N	2	-	14/11/2025	0.20	0	9:1	Full
AC23	Proposed Road		v		14.0	18/11/2025	15	0.4	-	2	11.3	Solid Coal - 11.3 - 13.3m	N	2	-	20/11/2025	0.20	0	9:1	Full
AC25	Proposed Road		v		13.0	18/11/2025	14	0.4	-	2	11	Solid Coal - 11.0 - 13.0m	N	2	-	19/11/2025	0.20	0	9:1	Full
AC27	Proposed Road		v		13.0	18/11/2025	14	0.2	-	2	10.6	Solid Coal - 10.6 - 12.6m	N	2	-	19/11/2025	0.20	0	9:1	Full
AC29	Plot 7		v		13.0	17/11/2025	14	0.2	-	2	10.7	Solid Coal - 10.7 - 12.7m	N	2	-	19/11/2025	0.20	0	9:1	Full
AC31	Plot 6		v		13.0	17/11/2025	14	0.2	-	2	10.4	Solid Coal - 10.4 - 10.4m	N	2	-	19/11/2025	0.20	0	9:1	Full
AC33	Plot 6 - Garden		v		12.0	17/11/2025	14	0.2	-	2	10	Soft Broken Ground - 10.0 - 12.2m	Y	2.2	-	19/11/2025	5.00	0	9:1	Still taking
																20/11/2025	5.00	0	9:1	Full
AC35	Plot 6 - Garden	Y	30	6	12.0	17/11/2025	13	0.2	-	2	9.5	Soft - Broken Ground - 9.5 - 11.7m	Y	2.2	-	19/11/2025	1.00	0	9:1	Full
AC35 - Redrill	Plot 6 - Garden	Y	v		9.5	03/12/2025	13	0.3	-	2	9.7	Soft Coal/Infill - 9.7-11.7m	Y	2	-	05/12/2025	0.20	0	9:1	Full
AE15	Plot 3 - Garden	Y	35	8	17.0	13/11/2025	16	0.4	-	2	12.8	Solid Coal - 12.8-14.8m	N	2	-	13/11/2025	0.20	0	9:1	Full
AE15 - Redrill	Plot 3 - Garden	Y	13	3	12.8	04/12/2025	16	0.4	-	2	13	Solid Coal - 13.0-15.0m	N	2	-	09/12/2025	0.20	0	9:1	Full
AE17	Plot 3 - Garden	Y	35	6	17.0	13/11/2025	16	0.4	-	2	12.9	Solid Coal - 12.9-15.0m	N	2.1	-	13/11/2025	0.20	0	9:1	Full
AE17 - Redrill	Plot 3 - Garden	Y	v		12.9	04/12/2025	17	0.5	-	2	13.1	Solid Coal - 12.8-14.8m	N	2	-	09/12/2025	0.20	0	9:1	Full
AE19	Plot 2 - Garden	Y	v		16.0	13/11/2025	16	0.3	-	2	12.7	Solid Coal - 12.7-14.7m	N	2	-	13/11/2025	0.20	0	9:1	Full
AE21	Plot 1 - Garden	Y	v		16.0	12/11/2025	16	0.2	-	2	12.8	Solid Coal - 12.8-14.8m	N	2	-	13/11/2025	0.20	0	9:1	Full
AE23	Plot 4 - Parking		v		15.0	12/11/2025	16	o.3	-	2	12.6	Solid Coal - 12.6-14.6m	N	2	-	13/11/2025	0.20	0	9:1	Full
AE25	Proposed Road		v		14.0	12/11/2025	16	0.3	-	2	12.2	Solid Coal - 12.2-14.2m	N	2	-	13/11/2025	0.20	0	9:1	Full
AE27	Proposed Road		30	7	14.0	13/11/2025	16	0.2	-	2	12	Solid Coal - 12.0-14.2m	N	2.2	-	13/11/2025	0.20	0	9:1	Full
AE27 - Redrill	Proposed Road		v		12.0	04/12/2025	16	0.3	-	2	12.1	Solid Coal - 12.1-14.1m	Y	2	-	09/12/2025	0.20	0	9:1	Full
AE29	Plot 6		v		14.0	17/11/2025	14	0.2	-	2	11.8	Solid Coal - 11.8 - 13.0m	N	1.2	-	19/11/2025	0.20	0	9:1	Full
AE31	Plot 6	Y	v		14.0	17/11/2025	14	0.2	-	2	10.2	Soft Broken Ground - 10.2 -12.3m	Y	2.1	-	19/11/2025	1.00	0	9:1	Full
AE33	Plot 6 - Parking	Y	v		13.0	17/11/2025	14	0.2	-	2	10	Soft - Broken Ground - 10.0 - 12.2m	Y	2.2	-	19/11/2025	5.00	0	9:1	Still Taking
																20/11/2025	5.00	0	9:1	Full
AE35	Landscaping - SE	Y	v		12.0	17/11/2025	13	0.1	-	2	9.3	Soft - Broken Ground - 9.3 - 11.5m	Y	2.2	-	19/11/2025	1.00	0	9:1	Full
AG21	Plot 4 - Parking	Y	v		16.0	12/11/2025	17	0.3	-	2	13.2	Soft Coal/Infill - 13.2-15.2m	Y	2	-	13/11/2025	5.00	0	9:1	Still Taking
																14/11/2025	3.00	0	9:1	Full
AG23	Plot4		v		15.0	12/11/2025	16	0.3	-	2	13	Soft Coal/Infill - 13.0-15.0m	Y	2	-	13/11/2025	0.30	0	9:1	Full
AG25	Plot 4	Y	v		14.0	12/11/2025	16	0.3	-	2	12.4	Solid Coal - 12.4-14.4m	N	2	-	13/11/2025	0.20	0	9:1	Full
AG27	Proposed Road	Y	v		14.0	13/11/2025	16	0.3	-	2	12.4	Solid Coal - 12.4-14.4m	N	2	-	13/11/2025	0.20	0	9:1	Full
AG29	Proposed Road	Y	30	6	14.0	17/11/2025	15	0.3	-	2	11	Solid Coal - 11.0 - 13.3m	N	2.3	-	19/11/2025	0.20	0	9:1	Full
AG29 - Redrill	Proposed Road	Y	v		11.0	03/12/2025	15	0.3	-	2	11.6	Solid Coal - 11.6-13.6m	N	2	-	09/12/2025	0.20	0	9:1	Full
AG31	Landscaping - SE	Y	35	6	14.0	17/11/2025	14	0.3	-	2	10.4	Soft Coal/Infill - 10.4 - 12.4m	Y	2	-	19/11/2025	2.00	0	9:1	Full
AG31 - Redrill	Landscaping - SE	Y	v		10.4	03/12/2025	14	0.4	-	2	11	Soft Coal/Infill w Grout - 11.0-13.0m	N	2	-	09/12/2025	0.20	0	9:1	Full
AI21	Plot 4	Y	v		18.0	12/11/2025	17	0.3	-	2	13.5	Soft Coal/Infill - 13.5-15.5m	Y	2	-	13/11/2025	3.00	0	9:1	Still Taking
																14/11/2025	4.00	0	9:1	Still Taking
																19/11/2025	4.00	0	9:1	Full
AI23	Plot 4		v		17.0	12/11/2025	17	0.3	-	2	13.2	Soft Coal/Infill - 13.2-15.2m	Y	2	-	13/11/2025	0.40	0	9:1	Full
AI25	Plot 5 - Parking	Y	v		17.0	12/11/2025	16	0.3	-	2	12.6	Soft Coal/Infill - 12.6-15.0m	Y	2.4	-	13/11/2025	5.00	0	9:1	Still Taking
																14/11/2025	5.00	0	9:1	Full
AK21	Plot 5 - Garden	Y	v		19.0	11/11/2025	21	0.3	-	2	14	Solid Coal - 14.0-16.2m	N	2.2	-	13/11/2025	0.20	0	9:1	Full
AK23	Plot 5	Y	v		17.0	12/11/2025	17	0.3	-	2	13.5	Solid Coal - 13.5-15.5m	N	2	-	13/11/2025	0.20	0	9:1	Full
AK25	Plot 5	Y	v		16.0	13/11/2025	16	0.4	-	2	12.7	Solid Coal - 12.7-14.8m	N	2.1	-	13/11/2025	0.20	0	9:1	Full
AK27	Landscaping - E	Y	35	8.6	16.0	13/11/2025	16	0.3	-	2	12.3	Solid Coal - 12.3-14.3m	N	2	-	13/11/2025	0.20	0	9:1	Full
AK27 - Redrill	Landscaping - E	Y	25	6	12.3	03/12/2025	16	0.5	-	2	12.5	Soft Coal/Infill - 12.5-14.7m	Y	2.2	-	09/12/2025	0.20	0	9:1	Full
AM23	Plot 5 - Garden	Y	30	6	20.0	12/11/2025	17	0.4	-	2	13.7	Solid Coal - 13.7-15.7m	N	2	-	13/11/2025	0.20	0	9:1	Full
AM23 - Redrill	Plot 5 - Garden	Y	24	6	13.7	04/12/2025	17	0.5	-	2	13.9	Solid Coal - 13.9-15.9m	N	2	-	09/12/2025	0.20	0	9:1	Full
Totals:	**No Primary Holes:**	**175**					**2258.50**		**2.00**	**350.00**							**271.10**	**0.00**		

Borehole	Location	Curtain?	Angle (°)		Anticpated Depth to Coal (vertical - m)	Date drilled	Depth of borehole (m)	Depth to bedrock (m)	Depth of casing (m)	Depth of injection pipe (m)	Depth to workings (m)	Status of coal/workings	Loss of flush?	Workings height (m)	Water strike (m)	Date grouted	Grout (t)	Gravel (t)	Grout mix (pfa:cement)	Notes
Secondary Holes																				
O12	Plot 21 - Parking		v		11.8	10/12/2025	16.00	0.10	-	2.00	12.50	Soft Coal/Infill - 12.5-14.5m	Y	2.00	-	10/12/2025	0.30	0	9:1	Full
P13	Plot 22 - Parking		v		9.0	10/12/2025	16.00	0.10	-	2.00	12.40	Soft Coal/Infill - 12.4-14.4m	Y	2.00	-	10/12/2025	0.40	0	9:1	Full
R25	Plot 8 - Garden		v		7.9	05/12/2025	11.00	0.30	-	2.00	7.50	Soft Coal/Infill - 7.5-9.5m	Y	2.00	-	05/12/2025	0.20	0	9:1	Full
S24	Plot 9 - Garden		v		7.7	05/12/2025	11.00	0.30	-	2.00	8.00	Soft Coal/Infill - 8.0-10.0m	N	2.00	-	05/12/2025	0.20	0	9:1	Full
S26	Plot 8 - Garden		v		7.7	05/12/2025	11.00	0.30	-	2.00	7.60	Soft Coal w Grout - 7.6-9.6m	Y	2.00	-	05/12/2025	0.20	0	9:1	Full
T25	Plot 8 - Garden		v		8.2	05/12/2025	12.00	0.30	-	2.00	8.10	Soft Coal/Infill - 8.1-10.1m	Y	2.00	-	05/12/2025	0.20	0	9:1	Full
U24	Plot 9 - Garden		v		9.6	05/12/2025	12.00	0.30	-	2.00	8.30	Soft Coal/Infill - 8.3-10.3m	Y	2.00	-	05/12/2025	1.00	0	9:1	Full
U26	Plot 8		v		9.6	05/12/2025	11.00	0.30	-	2.00	8.00	Soft Coal w Grout - 8.0-10.0m	Y	2.00	-	05/12/2025	1.00	0	9:1	Full
V25	Plot 9		v		9.6	05/12/2025	12.00	0.30	-	2.00	8.70	Soft Coal w Grout - 8.7-10.7m	Y	2.00	-	05/12/2025	0.10	0	9:1	Full
W24	Plot 9		v		10.8	08/12/2025	14.00	0.30	-	2.00	10.30	Soft Coal w Grout - 10.3-12.3m	Y	2.00	-	08/12/2025	1.00	0	9:1	Full
W26	Plot 8		v		9.6	09/12/2025	13.00	0.30	-	2.00	9.80	Soft Coal w Grout - 9.8-11.8m	N	2.00	-	09/12/2025	0.60	0	9:1	Full
X25	Plot 9		v		10.2	08/12/2025	14.00	0.30	-	2.00	10.10	Soft Coal/Infill - 10.1-12.1m	Y	2.00	-	08/12/2025	1.00	0	9:1	Full
X27	Plot 8		v		9.4	10/12/2025	13.00	0.20	-	2.00	9.60	Soft Coal/Infill - 9.6-11.6m	Y	2.00	-	10/12/2025	0.30	0	9:1	Full
Y24	Proposed Road		v		10.3	08/12/2025	14.00	0.30	-	2.00	10.50	Soft Coal/Infill - 10.5-12.5m	N	2.00	-	08/12/2025	0.20	0	9:1	Full
Y26	Proposed Road		v		9.9	09/12/2025	13.00	0.30	-	2.00	10.00	Soft Coal/Infill - 10.0-12.0m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
Y28	Plot 8 - Parking		v		9.5	09/12/2025	14.00	0.30	-	2.00	10.20	Soft Coal w Grout - 10.2-12.2m	N	2.00	-	09/12/2025	1.00	0	9:1	Full
Z25	Proposed Road		v		10.4	08/12/2025	14.00	0.30	-	2.00	10.30	Soft Coal/Infill - 10.3-12.3m	N	2.00	-	08/12/2025	0.20	0	9:1	Full
Z27	Proposed Road		v		9.8	09/12/2025	13.00	0.30	-	2.00	10.00	Soft Coal/Infill - 10.0-12.0m	Y	2.00	-	09/12/2025	0.60	0	9:1	Full
AA24	Proposed Road		v		10.8	08/12/2025	14.00	0.30	-	2.00	10.50	Soft Coal/Infill - 10.5-12.5m	Y	2.00	-	08/12/2025	1.00	0	9:1	Full
AA26	Proposed Road		v		10.4	09/12/2025	14.00	0.30	-	2.00	10.30	Soft Coal w Grout - 10.3-12.3m	N	2.00	-	09/12/2025	1.00	0	9:1	Full
AA28	Proposed Road		v		9.8	09/12/2025	13.00	0.30	-	2.00	9.80	Soft Coal/Infill - 9.8-11.8m	N	2.00	-	09/12/2025	0.50	0	9:1	Full
AA30	Plot 7		v		9.4	09/12/2025	13.00	0.30	-	2.00	9.40	Soft Coal/Infill - 9.4-11.4m	N	2.00	-	09/12/2025	1.00	0	9:1	Full
AB25	Proposed Road		v		10.8	08/12/2025	14.00	0.30	-	2.00	10.80	Soft Coal/Infill - 10.8-12.8m	N	2.00	-	08/12/2025	0.20	0	9:1	Full
AB33	Plot 6 - Garden	Y	V		10.0	02/12/2025	13.00	0.30	-	2.00	10.00	Soft Drill - 10.0-12.0m	Y	2.00	-	09/12/2025	2.00	0	9:1	Full
AC32	Plot 6		V		10.0	02/12/2025	14.00	0.30	-	2.00	10.40	Soft Coal/Infill - 10.40-12.40m	Y	2.00	-	09/12/2025	0.20	0	9:1	Full
AC34	Plot 6 - Garden		V		10.0	03/12/2025	13.00	0.30	-	2.00	10.00	Soft Drill w. Grout - 10.0-12.0m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
AD33	Plot 6 - Parking		V		10.0	03/12/2025	14.00	0.30	-	2.00	10.20	Solid Coal - 10.2-12.2m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
AE32	Plot 6 - Parking		V		10.0	03/12/2025	14.00	0.30	-	2.00	10.40	Soft Coal/Infill - 10.4-12.6m	N	2.20	-	09/12/2025	0.20	0	9:1	Full
AE34	Landscaping - SE		V		10.0	03/12/2025	14.00	0.30	-	2.00	10.10	Soft Drill w. Grout - 10.1-12.1m	Y	2.00	-	09/12/2025	0.20	0	9:1	Full
AF21	Plot 2 - Parking	Y	V		13.0	02/12/2025	17.00	0.30	-	2.00	13.20	Soft Drill w. Grout - 13.2-15.2m	Y	2.00	-	09/12/2025	0.20	0	9:1	Full
AF33	Landscaping - SE	Y	V		10.0	03/12/2025	14.00	0.30	-	2.00	10.20	Soft Drill w. Grout - 10.2-12.2m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
AG20	Plot 2 - Garden	Y	V		13.2	02/12/2025	17.00	0.30	-	2.00	13.20	Soft Drill w. Grout - 13.2-15.2m	Y	2.00	-	09/12/2025	0.50	0	9:1	Full
AG22	Plot 4 - Parking		V		13.2	02/12/2025	17.00	0.30	-	2.00	13.30	Soft Coal/Infill - 13.3-15.3m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
AH21	Plot 4 - Parking	Y	V		13.2	01/12/2025	17.00	0.30	-	2.00	13.50	Soft Drill w. Grout - 13.5-15.5m	Y	2.00	-	09/12/2025	0.40	0	9:1	Full
AH25	Plot 5 - Parking		V		12.6	02/12/2025	16.00	0.30	-	2.00	12.40	Soft Drill - 12.4-14.4m	Y	2.00	-	09/12/2025	0.50	0	9:1	Full
AI20	Plot 4 - Garden	Y	V		13.5	01/12/2025	17.00	0.30	-	2.00	13.60	Coal w. Grout - 13.6-15.6m	Y	2.00	-	09/12/2025	0.20	0	9:1	Full
AI22	Plot 4		V		13.6	02/12/2025	17.00	0.30	-	2.00	13.60	Soft Coal/Infill - 13.6-15.6m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
AI24	Plot 5 - Parking		V		13.0	02/12/2025	16.00	0.30	-	2.00	12.60	Soft Coal/Infill - 12.6-14.4m	Y	1.80	-	09/12/2025	0.20	0	9:1	Full
AI26	Landscaping - E	Y	V		12.6	02/12/2025	16.00	0.30	-	2.00	12.40	Soft Drill - 12.4-14.4m	Y	2.00	-	09/12/2025	2.00	0	9:1	Full
AJ21	Plot 4 - Garden	Y	V		13.7	01/12/2025	17.00	0.30	-	2.00	13.70	Soft Drill w. Grout - 13.7-15.7m	Y	2.00	-	09/12/2025	0.40	0	9:1	Full
AJ25	Plot 5				12.6	02/12/2025	16.00	0.30	-	2.00	12.50	Soft Coal/Infill - 12.5-14.5m	N	2.00	-	09/12/2025	0.20	0	9:1	Full
Totals for secondary holes	**No Secondary Holes: 41**						**581.00**		**0.00**	**82.00**							**20.60**	**0.00**		

Borehole	Location	Curtain?	Angle (°)		Anticpated Depth to Coal (vertical - m)	Date drilled	Depth of borehole (m)	Depth to bedrock (m)	Depth of casing (m)	Depth of injection pipe (m)	Depth to workings (m)	Status of coal/workings	Loss of flush?	Workings height (m)	Water strike (m)	Date grouted	Grout (t)	Gravel (t)	Grout mix (pfa:cement)	Notes
Test Holes																				
F7	NW Flat (former Tudor Inn)		v		6.6	10/12/2025	10.00	1.30	-	2.00	6.30	Soft Coal/Infill - 6.3-8.2m	Y	2.00	-	10/12/2025	0.20	0	9:1	Full
N19	Plot 10		v		5.5	10/12/2025	8.00	0.40	-	2.00	4.30	Soft Coal/Infill - 4.3-6.3m	Y	2.00	-	10/12/2025	0.30	0	9:1	Full
P10	Plot 21		v		11.5	10/12/2025	15.00	0.40	-	2.00	12.00	Soft Coal/Infill - 12.0-14.0m	Y	2.00	-	10/12/2025	0.20	0	9:1	Full
AB18	Plot 2		v		12.5	10/12/2025	16.00	0.30	-	2.00	12.40	Soft Coal/Infill - 12.4-14.4m	N	2.00	-	10/12/2025	0.20	0	9:1	Full
AC22	Plot 1 - Garden		v		11.8	09/12/2025	15.00	0.40	-	2.00	11.70	Solid Coal - 11.7-13.7m	N	2.00	-	10/12/2025	0.20	0	9:1	Full
AC24	Proposed Road		v		11.2	09/12/2025	15.00	0.40	-	2.00	11.30	Soft Coal/Infill - 11.3-13.3m	N	2.00	-	10/12/2025	0.20	0	9:1	Full
AC30	Plot 7		v		10.5	09/12/2025	14.00	0.30	-	2.00	10.50	Solid Coal - 10.5-12.5m	N	2.00	-	10/12/2025	0.20	0	9:1	Full
AH23	Plot 4		v		13.4	09/12/2025	17.00	0.30	-	2.00	13.40	Soft Coal w Grout - 13.4-15.4m	N	2.00	-	10/12/2025	0.20	0	9:1	Full
Totals for test holes	**No Secondary Holes: 8**						**110.00**		**0.00**	**16.00**							**1.70**	**0.00**		

Tudor Inn, Cimla
Site Deliveries

Earth Science Partnership
Consulting Engineers | Geologists | Environmental Scientists

Date	PFA (t)	Ticket No.	Cement (t)	Ticket No.	Gravel (t)	Ticket No.
22/10/2025	N/A	N/A	3	F02930	N/A	N/A
22/10/2025	N/A	N/A	3	F93860	N/A	N/A
17/11/2025	28.24	74681	N/A	N/A	N/A	N/A
17/11/2025	N/A	N/A	9	Sent electronically to Van Elle.	N/A	N/A
19/11/2025	28.5	74742	N/A	N/A	N/A	N/A
19/11/2025	27.9	74736	N/A	N/A	N/A	N/A
20/11/2025	28.2	74756	N/A	N/A	N/A	N/A
24/11/2025	28.18	74773	N/A	N/A	N/A	N/A
25/11/2025	N/A	N/A	9	Sent electronically to Van Elle.	N/A	N/A
27/11/2025	N/A	N/A	6	F24530	N/A	N/A
01/12/2025	27.8	31137	N/A	N/A	N/A	N/A
01/12/2025	28.5	31138	N/A	N/A	N/A	N/A
02/12/2025	28.88	31141	N/A	N/A	N/A	N/A
04/12/2025	28	31149	N/A	N/A	N/A	N/A
04/12/2025	N/A	N/A	4.5	Sent electronically to Van Elle.	N/A	N/A
07/12/2025	28.2	4429	N/A	N/A	N/A	N/A
09/12/2025	28.5	48912	N/A	N/A	N/A	N/A
Totals	**310.9**		**34.5**		**0**	

Note
Unused PFA stockpile to remain on-site on completion of works.
Copies of some delivery tickets were not provided by Van Elle, deliveries confirmed visually by ESP Site Operative.

NOT TO BE ACCEPTED FOR CASH TRANSACTIONS

SF 126 SERIES 05/12

Harworth

ROADBORNE CREDIT SALE LOADING AUTHORISATION

74633

PLEASE HAND THIS TICKET TO THE YARDMAN OR BUNKER ATTENDANT BEFORE LOADING.

DATE AUTHORISED

TIME IN 07:15

DATE OF SALE 13-11-25

TIME OUT 07:32

DATE ISSUED IF DIFFERENT FROM DATE OF SALE

MEMO (M.O.L. ETC.) 876

MAXIMUM PERMITTED GROSS WEIGHT 44

BUYER VAN ELLE

SENDER IRONBRIDGE

CONSIGNEE

QUALITY PFA

C. [illegible]

C. HENDERSON

DESTINATION GLAMORGAN

TRANSPORT RESPONSIBILITY

	CODE: CONSEC. No.	TONNES
GROSS		43820
TARE		15660
NET		28160
MOISTURE ALLOWANCE PER TABLE		
NET WEIGHT CHARGEABLE		
ADJUSTED GROSS WEIGHT		

VEHICLE REG. No. PN73 EFC

HAULIER CLWYD

PERSON IN CHARGE OF VEHICLE MARK

THE VEHICLE HAS BEEN FULLY/PART LOADED WITH FUEL AS AUTHORISED YARDMAN/BUNKER ATTENDANT

74633

The Fuel loaded onto this vehicle shall remain the property and subject to the control and directions of Harworth Estates Ltd. until weighing has been completed and a Weigh Ticket has been issued by Harworth Estates Ltd. and signed by the person in charge of the vehicle, whereupon the property in so much of the Fuel as is correctly recorded on the Weigh Ticket shall pass to the buyer.

NOT TO BE ACCEPTED FOR CASH TRANSACTIONS

SF 126 SERIES 05/12

Harworth

ROADBORNE CREDIT SALE LOADING AUTHORISATION

74681

PLEASE HAND THIS TICKET TO THE YARDMAN OR BUNKER ATTENDANT BEFORE LOADING.

DATE AUTHORISED

TIME IN 09:34

DATE OF SALE 17-11-25

TIME OUT 09:47

DATE ISSUED IF DIFFERENT FROM DATE OF SALE

MEMO (M.O.L. ETC.) 324

MAXIMUM PERMITTED GROSS WEIGHT 44

BUYER VAN ELLE

SENDER IRONBRIDGE

CONSIGNEE

QUALITY PFA - Swim

C. [illegible]

C. HENDERSON

DESTINATION WEST GLAMORGAN

TRANSPORT RESPONSIBILITY

	CODE: CONSEC. No.	TONNES
GROSS		43820
TARE		15580
NET		28240
MOISTURE ALLOWANCE PER TABLE		
NET WEIGHT CHARGEABLE		
ADJUSTED GROSS WEIGHT		

VEHICLE REG. No. PN73 EFC

HAULIER CLWYD

PERSON IN CHARGE OF VEHICLE M

THE VEHICLE HAS BEEN FULLY/PART LOADED WITH FUEL AS AUTHORISED YARDMAN/BUNKER ATTENDANT

74681

The Fuel loaded onto this vehicle shall remain the property and subject to the control and directions of Harworth Estates Ltd. until weighing has been completed and a Weigh Ticket has been issued by Harworth Estates Ltd. and signed by the person in charge of the vehicle, whereupon the property in so much of the Fuel as is correctly recorded on the Weigh Ticket shall pass to the buyer.

NOT TO BE ACCEPTED FOR CASH TRANSACTIONS

Harworth

ROADBORNE CREDIT SALE LOADING AUTHORISATION

SF 126 SERIES 05/12

74742

PLEASE HAND THIS TICKET TO THE YARDMAN OR BUNKER ATTENDANT BEFORE LOADING.

DATE AUTHORISED

DATE OF SALE 19-11-25

TIME IN 14:57

TIME OUT 15:14

DATE ISSUED IF DIFFERENT FROM DATE OF SALE

MEMO (M.O.L. ETC.) 582

MAXIMUM PERMITTED GROSS WEIGHT 44

BUYER VAN ELLE

SENDER IRONBRIDGE

CONSIGNEE

QUALITY PFA

DESTINATION W' GLAMORGAN

TRANSPORT RESPONSIBILITY

CODE: CONSEC. No.	TONNES
GROSS	43720
TARE	15220
NET	28500

MOISTURE ALLOWANCE PER TABLE

NET WEIGHT CHARGEABLE

ADJUSTED GROSS WEIGHT

VEHICLE REG. No.	HAULIER	PERSON IN CHARGE OF VEHICLE	THE VEHICLE HAS BEEN FULLY/PART LOADED WITH FUEL AS AUTHORISED YARDMAN/BUNKER ATTENDANT
DF71 FVL	CLWYD	PHIL	

74742

The Fuel loaded onto this vehicle shall remain the property and subject to the control and directions of Harworth Estates Ltd. until weighing has been completed and a Weigh Ticket has been issued by Harworth Estates Ltd. and signed by the person in charge of the vehicle, whereupon the property in so much of the Fuel as is correctly recorded on the Weigh Ticket shall pass to the buyer.

NOT TO BE ACCEPTED FOR CASH TRANSACTIONS

Harworth

ROADBORNE CREDIT SALE LOADING AUTHORISATION

SF 126 SERIES 05/12

74736

PLEASE HAND THIS TICKET TO THE YARDMAN OR BUNKER ATTENDANT BEFORE LOADING.

DATE AUTHORISED

DATE OF SALE 19-11-25

TIME IN 07:42

TIME OUT 08:17

DATE ISSUED IF DIFFERENT FROM DATE OF SALE

MEMO (M.O.L. ETC.) 856

MAXIMUM PERMITTED GROSS WEIGHT 44

BUYER VAN ELLE

SENDER IRONBRIDGE

CONSIGNEE

QUALITY PFA - 5mm

DESTINATION WEST GLAMORGAN

TRANSPORT RESPONSIBILITY

CODE: CONSEC. No.	TONNES
GROSS	43860
TARE	15960
NET	27900

MOISTURE ALLOWANCE PER TABLE

NET WEIGHT CHARGEABLE

ADJUSTED GROSS WEIGHT

VEHICLE REG. No.	HAULIER	PERSON IN CHARGE OF VEHICLE	THE VEHICLE HAS BEEN FULLY/PART LOADED WITH FUEL AS AUTHORISED YARDMAN/BUNKER ATTENDANT
DX67 KFS	CLWYD	MARIUS	

74736

The Fuel loaded onto this vehicle shall remain the property and subject to the control and directions of Harworth Estates Ltd. until weighing has been completed and a Weigh Ticket has been issued by Harworth Estates Ltd. and signed by the person in charge of the vehicle, whereupon the property in so much of the Fuel as is correctly recorded on the Weigh Ticket shall pass to the buyer.

NOT TO BE ACCEPTED FOR CASH TRANSACTIONS

SF 126 SERIES 05/12

Harworth

ROADBORNE CREDIT SALE LOADING AUTHORISATION

74756

PLEASE HAND THIS TICKET TO THE YARDMAN OR BUNKER ATTENDANT BEFORE LOADING.

DATE AUTHORISED

TIME IN 12:37

DATE OF SALE 20-11-25

TIME OUT 12:51

DATE ISSUED IF DIFFERENT FROM DATE OF SALE

MEMO (M.O.L. ETC.) 628

MAXIMUM PERMITTED GROSS WEIGHT 44

BUYER VAN ELLE

SENDER IRONBRIDGE

QUALITY PFA

C. K

C. HARRISON

CONSIGNEE

DESTINATION NEATH W GLAMORGAN

TRANSPORT RESPONSIBILITY

CODE: CONSEC. No.	TONNES
GROSS	44000
TARE	15800
NET	28200
MOISTURE ALLOWANCE PER TABLE	
NET WEIGHT CHARGEABLE	
ADJUSTED GROSS WEIGHT	

VEHICLE REG. No.	HAULIER	PERSON IN CHARGE OF VEHICLE	THE VEHICLE HAS BEEN FULLY/PART LOADED WITH FUEL AS AUTHORISED YARDMAN/BUNKER ATTENDANT
MV66 WLU	CLWYD	VINNY	

74756

The Fuel loaded onto this vehicle shall remain the property and subject to the control and directions of Harworth Estates Ltd. until weighing has been completed and a Weigh Ticket has been issued by Harworth Estates Ltd. and signed by the person in charge of the vehicle, whereupon the property in so much of the Fuel as is correctly recorded on the Weigh Ticket shall pass to the buyer.

NOT TO BE ACCEPTED FOR CASH TRANSACTIONS

Harworth

ROADBORNE CREDIT SALE LOADING AUTHORISATION

74773

PLEASE HAND THIS TICKET TO THE YARDMAN OR BUNKER ATTENDANT BEFORE LOADING.

DATE AUTHORISED

DATE OF SALE 24-11-25

TIME IN 14:27

TIME OUT 14:40

DATE ISSUED IF DIFFERENT FROM DATE OF SALE

BUYER VAN ELLE

SENDER IRONBRIDGE

MEMO (M.O.L. ETC.) 576

MAXIMUM PERMITTED GROSS WEIGHT 44

CONSIGNEE

QUALITY PFA

C. H

C. Hanson

CODE: CONSEC. No.

TONNES

GROSS 43960

TARE 15780

NET 28180

DESTINATION W' GLAMORGAN

TRANSPORT RESPONSIBILITY

MOISTURE ALLOWANCE PER TABLE

NET WEIGHT CHARGEABLE

ADJUSTED GROSS WEIGHT

VEHICLE REG. No. HN73 EFC

HAULIER CLW45

PERSON IN CHARGE OF VEHICLE MN

THE VEHICLE HAS BEEN FULLY/PART LOADED WITH FUEL AS AUTHORISED YARDMAN/BUNKER ATTENDANT

74773

The Fuel loaded onto this vehicle shall remain the property and subject to the control and directions of Harworth Estates Ltd. until weighing has been completed and a Weigh Ticket has been issued by Harworth Estates Ltd. and signed by the person in charge of the vehicle, whereupon the property in so much of the Fuel as is correctly recorded on the Weigh Ticket shall pass to the buyer.

SF 126 SERIES 05/12

STEPHENS FUEL OIL LTD.

BALTIC WORKS
OLD TOWN DOCK, NEWPORT, S. WALES, NP20 2BW
Tel: 01633 214710 Fax: 01633 253186

VAT No. 483 8211 35

Co. Reg. No. 5205360

Invoice:
Craggs Energy Ltd T/A Tank Topper
The Craggs Country Business Park
New Road
Hebden Bridge
Halifax
HX7 5TT

Deliver To:
Van Elle
27 Beacons View
Castell-Nedd
West Glamorgan
SA11 3SB

C. Hanson

Product Description	Quantity	Quantity Delivered	Price Per Litre	Total
Derv (UN 1202 3.3)	~~900~~ 834 (FULL)		LTR	

Vehicle Number | Driver

Drivers Instructions
Chris - 07834 800630 (w3w: judges.vivid.drain)

Payment Received By

Cash ☐ Cheque ☐ Credit Card ☐ Debit Card ☐

Amount £

Goods

VAT @

TOTAL £

Meter Reading At Finish

DELIVERY NUMB
INIT. GROSS TOT
FINAL GROSS TOT
PRESET:
PRODUCT:
COMPARTMENT SEQ:

Meter Reading At Start

END DATE

Meter Sale Number

2025-11-24 11:01:
1425086.2
1425086.2
DIESEL
1-2-4-5-3

Account Number C00492

Delivery Note Number 655745

Date Ordered 19/11/25

Date Delivered 24/11/25

Customer Order Number 1107499/1032614

Customer VAT Reg. .....

I confirm the above is NOT VAT Registere

Sign .....

Usage .....

I confirm that the tank contents have been checked and there is sufficient room for the grade and quantity shown on the ticket.

Customer's Signature .....

Print Name Emlyn Griffiths

Date .....

Goods Received By And Date

Sign:

QC 19/A

31137

DELIVERY NOTE

(Official Advice to Follow)

HATFIELD

Date 1 12 25

To Wales

Received from:-

ROY HATFIELD LIMITED
Fullerton Road, Rotherham, S. Yorks S60 1DH
Tel: (01709) 820855 Fax: (01709) 374062

YOUR ORDER No. ~~VE~~ CAS 1

HAULIER JW

VEHICLE REG No. WU22 YSE

DESCRIPTION		Tonnes	Kilos
pfA 5mm	GROSS		
	TARE		
RECEIVED BY C	NET	27	800

The buyer must notify the seller in writing within 7 days of any discrepancy in the materials, after this time no claims will be entered into.

Customer Copy (Green) - Haulier's Copy (White) - Depot Copy (Pink)

QC 19/A

31138

DELIVERY NOTE

(Official Advice to Follow)

HATFIELD

Date 1 12 25

To Wales

Received from:-

ROY HATFIELD LIMITED
Fullerton Road, Rotherham, S. Yorks S60 1DH
Tel: (01709) 820855 Fax: (01709) 374062

YOUR ORDER No. VECAS 2

HAULIER JW

VEHICLE REG No. WD24 CZE

DESCRIPTION		Tonnes	Kilos
pfA 5mm	GROSS		
	TARE		
RECEIVED BY	NET	28	800

The buyer must notify the seller in writing within 7 days of any discrepancy in the

QC 19/A

DELIVERY NOTE

(Official Advice to Follow)

31141

HATFIELD

Date 2 12 25

To WALES

Received from:-

ROY HATFIELD LIMITED
Fullerton Road, Rotherham, S. Yorks S60 1DH
Tel: (01709) 820855 Fax: (01709) 374062

YOUR ORDER No. VECAS3

HAULIER JJW

VEHICLE REG No. D5TRM

DESCRIPTION		Tonnes	Kilos
PFA 5mm	GROSS		
C. HARRISON	TARE		
RECEIVED BY C. [signature]	NET	28	880

The buyer must notify the seller in writing within 7 days of any discrepancy in the materials, after this time no claims will be entered into.

Customer Copy (Green) - Haulier's Copy (White) - Depot Copy (Pink)

QC 19/A

DELIVERY NOTE

(Official Advice to Follow)

31149

HATFIELD

Date 4 12 25

To Wales

Received from:-

ROY HATFIELD LIMITED
Fullerton Road, Rotherham, S. Yorks S60 1DH
Tel: (01709) 820855 Fax: (01709) 374062

YOUR ORDER No. VECAS2

HAULIER JJW

VEHICLE REG No. YK24VNM

DESCRIPTION		Tonnes	Kilos
PFA 5mm	GROSS		
	TARE		
RECEIVED BY [signature]	NET	28	000

Abbey part of SITA Group

DELIVERY NOTE

004429

Date	01/12/2025
Customer	
JOB No.	

Delivered To:

VAN ELLE
27 BEACONS VIEW
CASTELL NEDD
NEATH
SA11 3SB

CHRIS 07834 800630

Delivery Reference
Account
Vessel

	From	To
Waiting Time		

	From	To
Waiting Time		

WU22 YSE

TASCC Reg. No.
YY935

Proof of Delivery	
Printed Name	C. HORN
Signature	C. [signature]

Approx Tonnage Collected	Tonnage Delivered	Product Description	Weighbridge Ticket No.	Weighbridge Registration No.
28.200				

Trailer ID No.	PREVIOUS THREE LOADS		
	1 WHEAT FEED	2 WHEAT	3 STONE (F79)
TP008	Swept ☑	Swept ☑	Swept ☑
	Washed ☐	Washed ☐	Washed ☐
	Sanitised ☐	Sanitised ☐	Sanitised ☐

GOODS CARRIED IN ACCORDANCE WITH RHA CURRENT CONDITIONS OF CARRIAGE - Copy available on request.

QC 19/A

HATFIELD

DELIVERY NOTE

(Official Advice to Follow)

48912

Date 9 12 25

To Wales

Received from:-

ROY HATFIELD LIMITED
Fullerton Road, Rotherham, S. Yorks S60 1DH
Tel: (01709) 820855 Fax: (01709) 374062

YOUR ORDER No. VECAS5

HAULIER JW

VEHICLE REG No. X100 ECL

DESCRIPTION		Tonnes	Kilos
pfa 5mm	GROSS		
	TARE		
	NET	28	500

RECEIVED BY .....

The buyer must notify the seller in writing within 7 days of any discrepancy in the materials, after this time no claims will be entered into.

Customer Copy (Green) - Haulier's Copy (White) - Depot Copy (Pink)

SOCOTEC UK Limited
Unit 11, Cowley Mill Trading Estate
Longbridge Way, Uxbridge
Middlesex
UB8 2YG, United Kingdom
Telephone: 01895 235 235

Concrete Test Report

TEST REPORT

UKAS TESTING 0001

Project Details

Client:	**VAN ELLE LTD**
Client Address:	SUMMIT CLOSE KIRKBY IN ASHFIELD NOTTINGHAM NG17 8GJ
Project:	**P255275 - 250176-03 27 Beacons View, Castell-Nedd, West Glamorgan SA11 3SB**

Report Details

Report No.:	CONC:SOU25-43864-C0001
Report Date:	24/12/2025
Issue No.:	2
Recipients:	Dave Bourne

Field Details and Results

Location in Works: GRID **Mix:** 9-P-R-A

Fresh Concrete Sampling performed by third party and not covered under this laboratory's accreditation

Sample ID: SOU25-43864-C0001 **Client Sample ID:** SOU273363

Compressive Strength of test specimens (100 mm Cube)

Making and initial curing of specimens for strength tests performed by third party and not covered under this laboratory's accreditation

Date Made: 25/11/2025 **Date and Time Received:** 04/12/2025 11:36

Laboratory Test Methods: BS EN 12390-7 - 2019, BS EN 12390-1 - 2021, BS EN 12390-3 - 2019

Specimen ID	Client ID	Age at Test (Days)	Test Date	Width/Depth/ Height (mm)	Density (kg/m³)	Failure Load (kN)	Compressive Strength (N/mm²)	Specified Strength (N/mm²)
049787\A	1A	13	08/12/2025	100/100/100	1450	23.8	2.4	
049787\B	1B	28	23/12/2025	100/100/100	1440	41.4	4.1	

Notes

The following apply unless otherwise stated in specimen notes:

Laboratory curing tank temperature range (°C): 18 to 22.
Specimen appearance as received satisfactory.
Specimens transported within 16 hours of making are classified as deviating from the standard requirements.

BS EN 12390-7 - 2019
Hardened concrete density test carried out in saturated condition.
Volume determined by measurement or designated size. Any fins removed by abrasive stone.
BS EN 12390-3 - 2019
Specimen failure normal, specimen appearance normal.

Signed: 

Signed Date: 24/12/2025

Magfur Alauddin - Technical Manager

For and on behalf of SOCOTEC UK Limited
Certified that testing was carried out in accordance with the test methods identified herein. This test report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

The results relate to the item(s) tested only. Opinions and interpretations expressed herein are outside of the scope of our UKAS accreditation.
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SOCOTEC UK Limited
Unit 11, Cowley Mill Trading Estate
Longbridge Way, Uxbridge
Middlesex
UB8 2YG, United Kingdom
Telephone: 01895 235 235

Concrete Test Report

TEST REPORT

UKAS TESTING 0001

Project Details

Client:	**VAN ELLE LTD**
Client Address:	SUMMIT CLOSE KIRKBY IN ASHFIELD NOTTINGHAM NG17 8GJ
Project:	**P255275 - 250176-03 27 Beacons View, Castell-Nedd, West Glamorgan SA11 3SB**

Report Details

Report No.:	CONC:SOU25-43864-C0002
Report Date:	19/12/2025
Issue No.:	1
Recipients:	Dave Bourne

Field Details and Results

Location in Works: GRID **Mix:** 9-P-R-A

Fresh Concrete Sampling performed by third party and not covered under this laboratory's accreditation

Sample ID: SOU25-43864-C0002 **Client Sample ID:** SOU236706

Compressive Strength of test specimens (100 mm Cube)

Making and initial curing of specimens for strength tests performed by third party and not covered under this laboratory's accreditation

Date Made: 19/11/2025 **Date and Time Received:** 04/12/2025 11:37

Laboratory Test Methods: BS EN 12390-7 - 2019, BS EN 12390-1 - 2021, BS EN 12390-3 - 2019

Specimen ID	Client ID	Age at Test (Days)	Test Date	Width/Depth/ Height (mm)	Density (kg/m³)	Failure Load (kN)	Compressive Strength (N/mm²)	Specified Strength (N/mm²)
049790\A	1-A	28	17/12/2025	100/100/100	1270	27.1	2.7	
049790\B	1-B	28	17/12/2025	100/100/100	1280	28.3	2.8	

Notes

The following apply unless otherwise stated in specimen notes:

Laboratory curing tank temperature range (°C): 18 to 22.
Specimen appearance as received satisfactory.
Specimens transported within 16 hours of making are classified as deviating from the standard requirements.

BS EN 12390-7 - 2019
Hardened concrete density test carried out in saturated condition.
Volume determined by measurement or designated size. Any fins removed by abrasive stone.

BS EN 12390-3 - 2019
Specimen failure normal, specimen appearance normal.

Signed: 

Signed Date: 19/12/2025

Magfur Alauddin - Technical Manager

For and on behalf of SOCOTEC UK Limited
Certified that testing was carried out in accordance with the test methods identified herein. This test report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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SOCOTEC UK Limited
Unit 11, Cowley Mill Trading Estate
Longbridge Way, Uxbridge
Middlesex
UB8 2YG, United Kingdom
Telephone: 01895 235 235

Concrete Test Report

TEST REPORT

UKAS TESTING 0001

Project Details

Client:	**VAN ELLE LTD**
Client Address:	SUMMIT CLOSE KIRKBY IN ASHFIELD NOTTINGHAM NG17 8GJ
Project:	**P255275 - 250176-03 27 Beacons View, Castell-Nedd, West Glamorgan SA11 3SB**

Report Details

Report No.:	CONC:SOU25-45305-C0001
Report Date:	08/01/2026
Issue No.:	2
Recipients:	Dave Bourne

Field Details and Results

Location in Works: GRID **Mix:** 9-1 9-P-F-A

Fresh Concrete Sampling performed by third party and not covered under this laboratory's accreditation

Sample ID: SOU25-45305-C0001 **Client Sample ID:** SOU273364

Compressive Strength of test specimens (100 mm Cube)

Making and initial curing of specimens for strength tests performed by third party and not covered under this laboratory's accreditation

Date Made: 04/12/2025 **Date and Time Received:** 17/12/2025 11:46

Laboratory Test Methods: BS EN 12390-7 - 2019, BS EN 12390-1 - 2021, BS EN 12390-3 - 2019

Specimen ID	Client ID	Age at Test (Days)	Test Date	Width/Depth/ Height (mm)	Density (kg/m³)	Failure Load (kN)	Compressive Strength (N/mm²)	Specified Strength (N/mm²)
051478\A	1	15	19/12/2025	100/100/100	1410	32.0	3.2	
051478\B	2	28	01/01/2026	100/100/100	1380	41.1	4.1	

Notes

The following apply unless otherwise stated in specimen notes:

Laboratory curing tank temperature range (°C): 18 to 22.
Specimen appearance as received satisfactory.
Specimens transported within 16 hours of making are classified as deviating from the standard requirements.

BS EN 12390-7 - 2019
Hardened concrete density test carried out in saturated condition.
Volume determined by measurement or designated size. Any fins removed by abrasive stone.
BS EN 12390-3 - 2019
Specimen failure normal, specimen appearance normal.

Signed: 

Signed Date: 08/01/2026

Magfur Alauddin - Technical Manager

For and on behalf of SOCOTEC UK Limited
Certified that testing was carried out in accordance with the test methods identified herein. This test report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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SOCOTEC UK Limited
Unit 11, Cowley Mill Trading Estate
Longbridge Way, Uxbridge
Middlesex
UB8 2YG, United Kingdom
Telephone: 01895 235 235

Concrete Test Report

TEST REPORT

UKAS TESTING 0001

Project Details

Client:	VAN ELLE LTD
Client Address:	SUMMIT CLOSE KIRKBY IN ASHFIELD NOTTINGHAM NG17 8GJ
Project:	P255275 - 250176-03 27 Beacons View, Castell-Nedd, West Glamorgan SA11 3SB

Report Details

Report No.:	CONC:SOU25-45305-C0002
Report Date:	09/01/2026
Issue No.:	2
Recipients:	Dave Bourne

Field Details and Results

Location in Works: GRID Mix: 9-1 9-P-F-A

Fresh Concrete Sampling performed by third party and not covered under this laboratory's accreditation

Sample ID: SOU25-45305-C0002 Client Sample ID: SOU273365

Compressive Strength of test specimens (100 mm Cube)

Making and initial curing of specimens for strength tests performed by third party and not covered under this laboratory's accreditation

Date Made: 10/12/2025 Date and Time Received: 17/12/2025 11:47

Laboratory Test Methods: BS EN 12390-7 - 2019, BS EN 12390-1 - 2021, BS EN 12390-3 - 2019

Specimen ID	Client ID	Age at Test (Days)	Test Date	Width/Depth/ Height (mm)	Density (kg/m³)	Failure Load (kN)	Compressive Strength (N/mm²)	Specified Strength (N/mm²)
051479\A	1	9	19/12/2025	100/100/100	1480	29.2	2.9	
051479\B	2	28	07/01/2026	100/100/100	1500	37.3	3.7	

Notes

The following apply unless otherwise stated in specimen notes:

Laboratory curing tank temperature range (°C): 18 to 22.
Specimen appearance as received satisfactory.
Specimens transported within 16 hours of making are classified as deviating from the standard requirements.

BS EN 12390-7 - 2019
Hardened concrete density test carried out in saturated condition.
Volume determined by measurement or designated size. Any fins removed by abrasive stone.
BS EN 12390-3 - 2019
Specimen failure normal, specimen appearance normal.

Signed: 

Signed Date: 09/01/2026

Magfur Alauddin - Technical Manager

For and on behalf of SOCOTEC UK Limited
Certified that testing was carried out in accordance with the test methods identified herein. This test report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

The results relate to the item(s) tested only. Opinions and interpretations expressed herein are outside of the scope of our UKAS accreditation.
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Results of Grout Bleed Test 1

esp
ENGINEERS
GEOLOGISTS
SCIENTISTS

Project: Tudor Inn - Drill and Grout
Project No: 9254.03
Date of Test: 13-Nov-25

Test 1-A

Time	Volume of Grout (ml)	Volume of Water (ml)	% Loss
0	1700	0	0
1 hr	1670	30	3
2 hr	1650	50	5
3 hr	1650	50	5
4 hr	1650	50	5
5 hr	1650	50	5
6 hr	1650	50	5

Container Details:
Volume: 2,000ml
Diameter: 160mm

Grout Mix Details:
pfa:cement ratio: 9:1

Test 1-B

Time	Volume of Grout (ml)	Volume of Water (ml)	% Loss
0	1800	0	0
1 hr	1770	30	3
2 hr	1750	50	5
3 hr	1750	50	5
4 hr	1750	50	5
5 hr	1750	50	5
6 hr	1750	50	5

Container Details:
Volume: 2,000ml
Diameter: 160mm

Grout Mix Details:
pfa:cement ratio: 9:1

Results of Grout Bleed Test 2

esp
ENGINEERS
GEOLOGISTS
SCIENTISTS

Project: Tudor Inn - Drill and Grout
Project No: 9254.03
Date of Test: 24-Nov-25

Test 2-A

Time	Volume of Grout (ml)	Volume of Water (ml)	% Loss
0	1900	0	0
1 hr	1885	5	1
2 hr	1880	10	1
3 hr	1880	10	1
4 hr	1880	10	1
5 hr	1880	10	1
6 hr	1880	10	1

Container Details:
Volume: 2,000ml
Diameter: 160mm

Grout Mix Details:
pfa:cement ratio: 9:1

Test 2-B

Time	Volume of Grout (ml)	Volume of Water (ml)	% Loss
0	1700	0	0
1 hr	1685	5	1
2 hr	1680	10	1
3 hr	1680	10	1
4 hr	1680	10	1
5 hr	1680	10	1
6 hr	1680	10	1

Container Details:
Volume: 2,000ml
Diameter: 160mm

Grout Mix Details:
pfa:cement ratio: 9:1

Results of Grout Bleed Test 3

esp
ENGINEERS
GEOLOGISTS
SCIENTISTS

Project: Tudor Inn - Drill and Grout
Project No: 9254.03
Date of Test: 03-Dec-25

Test 3-A

Time	Volume of Grout (ml)	Volume of Water (ml)	% Loss
0	1600	0	0
1 hr	1595	5	1
2 hr	1590	10	1
3 hr	1590	10	1
4 hr	1590	10	1
5 hr	1590	10	1
6 hr	1590	10	1

Container Details:
Volume: 2,000ml
Diameter: 160mm

Grout Mix Details:
pfa:cement ratio: 9:1

Test 3-B

Time	Volume of Grout (ml)	Volume of Water (ml)	% Loss
0	1500	0	0
1 hr	1495	5	1
2 hr	1490	10	1
3 hr	1490	10	1
4 hr	1490	10	1
5 hr	1490	10	1
6 hr	1490	10	1

Container Details:
Volume: 2,000ml
Diameter: 160mm

Grout Mix Details:
pfa:cement ratio: 9:1

Certificate of Analysis

Certificate Number	25-28042	*Issued:*	17-Dec-25

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference	25-28042
Client Reference ~	9254
Order No ~	13950
Contract Title ~	Tudor Inn - Drill + Grout
Description	2 Leachate prepared by DETS samples.
Date Received	02-Dec-25
Date Started	02-Dec-25
Date Completed	17-Dec-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited
Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info-dets@normecgroup.com • normecdets.com

Summary of Chemical Analysis
Leachate Samples

Our Ref 25-28042
Client Ref ~ 9254
Contract Title ~ Tudor Inn - Drill + Grout

Lab No	2608234	2608235
Sample ID ~	PFA - 1	PFA - 2
Depth ~		
Other ID ~		
Sample Type ~	LEACHATE	LEACHATE
Sampling Date ~	25/11/2025	25/11/2025
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Aluminium, Dissolved	DETSC 2306	10	ug/l	880	930
Antimony, Dissolved	DETSC 2306	0.17	ug/l	3.9	4.3
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	8.2	8.7
Barium, Dissolved	DETSC 2306	0.26	ug/l	73	68
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.1	< 0.1
Boron, Dissolved	DETSC 2306*	12	ug/l	1228	1458
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	8.8	9.1
Cobalt, Dissolved	DETSC 2306	0.16	ug/l	< 0.16	< 0.16
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.2	1.1
Iron, Dissolved	DETSC 2306	5.5	ug/l	< 5.5	< 5.5
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.02	0.02
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	7.7	6.7
Silver, Dissolved	DETSC 2306*	0.13	ug/l	< 0.13	< 0.13
Sodium, Dissolved	DETSC 2306	0.07	mg/l	3.3	3.9
Tin, Dissolved	DETSC 2306*	0.4	ug/l	< 0.4	< 0.4
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	20	17
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	1.4
Inorganics					
pH	DETSC 2008		pH	8.3	8.4
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	< 0.1	< 0.1
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	1.7	< 1.5
Chloride	DETSC 2055	0.1	mg/l	1.7	3.2
Fluoride	DETSC 2055*	0.1	mg/l	< 0.10	0.23
Sulphate as SO4	DETSC 2055	100	ug/l	100000	130000
PAHs					
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01

Summary of Chemical Analysis
Leachate Samples

Our Ref 25-28042
Client Ref ~ 9254
Contract Title ~ Tudor Inn - Drill + Grout

			Lab No	2608234	2608235
			Sample ID ~	PFA - 1	PFA - 2
			Depth ~		
			Other ID ~		
			Sample Type ~	LEACHATE	LEACHATE
			Sampling Date ~	25/11/2025	25/11/2025
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20

Information in Support of the Analytical Results

Our Ref 25-28042
Client Ref ~ 9254
Contract ~ Tudor Inn - Drill + Grout

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2608234	PFA - 1 LEACHATE	25/11/25	GJ 250ml, GJ 60ml, PT 1L	pH/Cond (1 days), PAH MS (4 days)	
2608235	PFA - 2 LEACHATE	25/11/25	GJ 250ml, GJ 60ml, PT 1L	pH/Cond (1 days), PAH MS (4 days)	

Key: G-Glass P-Plastic J-Jar T-Tub
Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
-MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

Certificate of Analysis

Certificate Number 25-28689 *Issued:* 23-Dec-25

Client Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference 25-28689

Client Reference ~ 9254

Order No ~ 13950

Contract Title ~ Tudor Inn Drill & Grout

Description 1 Leachate prepared by DETS sample.

Date Received 08-Dec-25

Date Started 08-Dec-25

Date Completed 23-Dec-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Reyhan Irfan
Operations Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Normec DETS Limited
Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY
Tel: 01207 582333 • email: info-dets@normecgroup.com • normecdets.com

Summary of Chemical Analysis
Leachate Samples

Our Ref 25-28689
Client Ref ~ 9254
Contract Title ~ Tudor Inn Drill & Grout

Lab No	2611899
Sample ID ~	PFA-3
Depth ~	
Other ID ~	
Sample Type ~	LEACHATE
Sampling Date ~	04/12/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Preparation				
BS EN 12457 10:1	DETSC 1009*			Y
Metals				
Aluminium, Dissolved	DETSC 2306	10	ug/l	3748
Antimony, Dissolved	DETSC 2306	0.17	ug/l	5.26
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	3.97
Barium, Dissolved	DETSC 2306	0.26	ug/l	147.5
Beryllium, Dissolved	DETSC 2306*	0.1	ug/l	< 0.10
Boron, Dissolved	DETSC 2306*	12	ug/l	950.1
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.04
Chromium, Dissolved	DETSC 2306	0.25	ug/l	4.23
Cobalt, Dissolved	DETSC 2306	0.16	ug/l	< 0.16
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.00
Iron, Dissolved	DETSC 2306	5.5	ug/l	< 5.50
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.05
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.50
Selenium, Dissolved	DETSC 2306	0.25	ug/l	9.47
Silver, Dissolved	DETSC 2306*	0.13	ug/l	< 0.13
Sodium, Dissolved	DETSC 2306	0.07	mg/l	76
Tin, Dissolved	DETSC 2306*	0.4	ug/l	< 0.40
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	26.87
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.30
Inorganics				
pH	DETSC 2008		pH	8.7
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	0.3
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	5.5
Chloride	DETSC 2055	0.1	mg/l	80
Fluoride	DETSC 2055*	0.1	mg/l	0.34
Sulphate as SO4	DETSC 2055	100	ug/l	46000
PAHs				
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.02

Summary of Chemical Analysis
Leachate Samples

Our Ref 25-28689
Client Ref ~ 9254
Contract Title ~ Tudor Inn Drill & Grout

Lab No	2611899
Sample ID ~	PFA-3
Depth ~	
Other ID ~	
Sample Type ~	LEACHATE
Sampling Date ~	04/12/2025
Sampling Time ~	n/s

Test	Method	LOD	Units	
Fluorene	DETSC 3304	0.01	ug/l	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05
Phenanthrene	DETSC 3304	0.01	ug/l	0.01
Pyrene	DETSC 3304	0.01	ug/l	0.02
PAH Total	DETSC 3304	0.2	ug/l	< 0.20

Information in Support of the Analytical Results

Our Ref 25-28689
Client Ref ~ 9254
Contract ~ Tudor Inn Drill & Grout

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2611899	PFA-3 LEACHATE	04/12/25	GJ 250ml, GJ 60ml, PT 1L	pH/Cond (1 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
-MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:	Former Tudor Inn - Drill and Grout
Site Location:	Cimla, Neath
Client:	Rhyd Consult
Project No:	9254.03
Drilling method	Rotary open hole
Equipment	CasaGrande C6-XP Drill Rig
Ground Level:	
Easting:	276010 m
Northing:	196058 m

BH301

Start date:	11/12/2025	Driller:	Van Elle
End date:	11/12/2025	Logged by:	NS
Backfill date:	11/12/2025	Date logged:	11/12/2025

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N

Strata Details

Depth	Description	Legend	Water Strikes/ Standing	Depth (Thickness)	Depth mOD	Backfill/ Install-ations
0.0	Overburden [Drillers Description].			(1.00)	1.00	
1.0	Sandstone [Drillers Description].			(7.20)	8.20	
8.2	Soft Coal [Drillers Description].			(2.00)		
10.2						

Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed

Hole Diameter

Hole Depth	Hole Diameter

Casing Diameter

Casing Diameter	Casing Depth

General Remarks

1. Co-ordinates of investigation points obtained via Drill and Grout grid.
2. Setting out, clearance, drilling and installation undertaken by Van Elle.
3. Water flush used. No groundwater strike recorded.
4. 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 8.2 and 10.2m

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:	Former Tudor Inn - Drill and Grout
Site Location:	Cimla, Neath
Client:	Rhyd Consult
Project No:	9254.03
Drilling method	Rotary open hole
Equipment	CasaGrande C6-XP Drill Rig

BH301

Start date:	11/12/2025	Driller:	Van Elle
End date:	11/12/2025	Logged by:	NS
Backfill date:	11/12/2025	Date logged:	11/12/2025

Ground Level:
Easting: 276010 m
Northing: 196058 m

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N

Strata Details

Depth	Description	Legend	Water Strikes/ Standing	Depth (Thickness)	mOD	Backfill/ Install-ations
	Soft Coal [Drillers Description].			10.20		
10.5	Mudstone [Driller Description].			(1.00)		
11.0				11.20		
11.5						
12.0						
12.5						
13.0						
13.5						
14.0						
14.5						
15.0						
15.5						
16.0						
16.5						
17.0						
17.5						
18.0						
18.5						
19.0						
19.5						

Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed

Hole Diameter

Hole Depth	Hole Diameter

Casing Diameter

Casing Diameter	Casing Depth

General Remarks

1. Co-ordinates of investigation points obtained via Drill and Grout grid.
2. Setting out, clearance, drilling and installation undertaken by Van Elle.
3. Water flush used. No groundwater strike recorded.
4. 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 8.2 and 10.2m

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Start date:	11/12/2025	Driller:	Van Elle
End date:	11/12/2025	Logged by:	NS
Backfill date:	11/12/2025	Date logged:	11/12/2025

Project Name: Former Tudor Inn - Drill and Grout

Site Location: Cimla, Neath

Client: Rhyd Consult

Project No: 9254.03

Drilling method: Rotary open hole

Equipment: CasaGrande C6-XP Drill Rig

Ground Level:

Easting: 276019 m

Northing: 196055 m

BH302

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N

Strata Details

Depth	Description	Legend	Water Strikes/ Standing	Depth (Thickness)	mOD	Backfill/ Install-ations
0.0	Overburden [Drillers Description].			(1.00)		
1.0	Sandstone [Drillers Description].			1.00		
3.2				(2.20)		
				3.20		

0.5 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5

Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed

Hole Diameter

Hole Depth	Hole Diameter

Casing Diameter

Casing Diameter	Casing Depth

General Remarks

1. Co-ordinates of investigation points obtained via Drill and Grout grid.
2. Setting out, clearance, drilling and installation undertaken by Van Elle.
3. Water flush used. No groundwater strike recorded.
4. 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 3.0m

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:	Former Tudor Inn - Drill and Grout
Site Location:	Cimla, Neath
Client:	Rhyd Consult
Project No:	9254.03
Drilling method	Rotary open hole
Equipment	CasaGrande C6-XP Drill Rig
Ground Level:	
Easting:	276052 m
Northing:	196046 m

BH303

Start date:	11/12/2025	Driller:	Van Elle
End date:	11/12/2025	Logged by:	NS
Backfill date:	11/12/2025	Date logged:	11/12/2025

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N

Strata Details

Depth	Description	Legend	Water Strikes/ Standing	Depth (Thickness)	mOD	Backfill/ Install-ations
0.0	Overburden [Drillers Description].			(0.60)		
0.5				0.60		
1.0	Sandstone [Drillers Description].					
1.5						
2.0				(2.40)		
2.5						
3.0				3.00		
3.5						
4.0						
4.5						
5.0						
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						

Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed

Hole Diameter

Hole Depth	Hole Diameter

Casing Diameter

Casing Diameter	Casing Depth

General Remarks

1. Co-ordinates of investigation points obtained via Drill and Grout grid.
2. Setting out, clearance, drilling and installation undertaken by Van Elle.
3. Water flush used. No groundwater strike recorded.
4. 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 3.0m

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:	Former Tudor Inn - Drill and Grout
Site Location:	Cimla, Neath
Client:	Rhyd Consult
Project No:	9254.03
Drilling method	Rotary open hole
Equipment	CasaGrande C6-XP Drill Rig
Ground Level:	
Easting:	276082 m
Northing:	195971 m

BH304

Start date:	11/12/2025	Driller:	Van Elle
End date:	11/12/2025	Logged by:	NS
Backfill date:	11/12/2025	Date logged:	11/12/2025

Core Details and SPT Data

Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	Sample	SPT-N

Strata Details

Depth	Description	Legend	Water Strikes/ Standing	Depth (Thickness)	mOD	Backfill/ Install-ations
0.0	Overburden [Drillers Description].			(0.30)		
0.3	Sandstone [Drillers Description].			0.30		
0.5						
1.0						
1.5						
2.0				(2.70)		
2.5						
3.0				3.00		
3.5						
4.0						
4.5						
5.0						
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						

Progress & Standing Water Levels

Date	Time	Hole Depth	Casing Depth	Water Depth

Water Strikes

Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed

Hole Diameter

Hole Depth	Hole Diameter

Casing Diameter

Casing Diameter	Casing Depth

General Remarks

1. Co-ordinates of investigation points obtained via Drill and Grout grid.
2. Setting out, clearance, drilling and installation undertaken by Van Elle.
3. Water flush used. No groundwater strike recorded.
4. 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 1.0 and 3.0m

VAN ELLE
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Website: www.van-elle.co.uk E-mail: info@van-elle.co.uk

Open Hole Drillers Log

Site: TUDOR INN - CIMLA | Sheet: 1 of 1

Rig: C6XP | Crew: M. COLE - S. BELL | Date: 11-11-25

Hours on Site: | Travelling Time:

BH	Depth	Strata Description	BH	Depth	Strata Description
AK21	0-0-3	OVERBURDEN			
	0-3-14-0	SANDSTONE			
	14-0-16-20	COAL			
	16-20-21-0	MUDSTONE			
		2m CASING			

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed					
						Today	1	21-0	2-0	
						Previous	—	—	—	
						To Date	1	21-0	2-0	

I confirm this is a true record.
Van Elle operative name C. HENSON
Drill hole Nos. checked Yes ☒ No ☐
Hole Depth checked Yes ☒ No ☐
SIGNED C. Henson
Dated 11-11-25

Client's Name
Client's position
Signature
Dated

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Open Hole Drillers Log

Site: TUDOR INN - CIMLA | Sheet: 1 of 2

Rig: C6XP | Crew: M. COLE - S. BELL | Date: 12-11-25

Hours on Site: | Travelling Time:

BH	Depth	Strata Description	BH	Depth	Strata Description
AI21	0-0-3	OVERBURDEN	AM23	0-0-4	OVERBURDEN
	0-3-13-50	SANDSTONE	30°	0-4-13-70	SANDSTONE
	13-50-15-50	SOFT		13-70-15-70	COAL
	15-50-17-0	SOLID - NO RETURNS		15-70-17-0	MUDSTONE
		2m CASING			2m CASING
AG21	0-0-3	OVERBURDEN	AK23	0-0-3	OVERBURDEN
	0-3-13-20	SANDSTONE		0-3-13-50	SANDSTONE
	13-20-15-20	SOFT		13-50-15-50	COAL
	15-20-17-0	SOLID - NO RETURNS		15-50-17-0	MUDSTONE
		2m CASING			2m CASING
AE21	0-0-2	OVERBURDEN	AI23	0-0-3	OVERBURDEN
	0-2-12-80	SANDSTONE		0-3-13-20	SANDSTONE
	12-80-14-80	COAL		13-20-15-20	SOFT
	14-80-16-0	MUDSTONE		15-20-17-0	SOLID - NO RETURNS
		2m CASING			2m CASING

Casing/Water Level Details

BH	Casing		Water		
	Dia	Depth	Strike	Rise	Sealed

Totals	BH	Drill	Case	Install
Today	6	101-0	12-0	
Previous	1	21-0	2-0	
To Date	7	122-0	14-0	

I confirm this is a true record.
Van Elle operative name C. HENDERSON

Drill hole Nos. checked Yes ☑ No ☐

Hole Depth checked Yes ☑ No ☐

SIGNED C. H

Dated 12-11-25

Client's Name

Client's position

Signature

Dated

VAN ELLE
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Open Hole Drillers Log

Site: TUDOR INN - CIMLA Sheet: 2 of 2

Rig: C6 x P Crew: M. COLE - A. CLYDE Date: 12-11-25

Hours on Site: Travelling Time:

BH	Depth	Strata Description	BH	Depth	Strata Description
AG23	0-0-3	OVERBURDEN	AG25	0-0-3	OVERBURDEN
	0-3-13-0	SANDSTONE		0-3-12-40	SANDSTONE
	13-0-15-0	SOFT		12-40-14-40	COAL
	15-0-16-0	SOLID - NO RETURNS		14-40-16-0	MUDSTONE
		2m CASING			2m CASING
AE23	0-0-3	OVERBURDEN	AI25	0-0-3	OVERBURDEN
	0-3-12-60	SANDSTONE		0-3-12-60	SANDSTONE
	12-60-14-60	COAL		12-60-15-0	SOFT
	14-60-16-0	MUDSTONE		15-0-16-0	SOLID - NO RETURNS
		2m CASING			2m CASING
AE25	0-0-3	OVERBURDEN			
	0-3-12-0	SANDSTONE			
	12-20-14-20	COAL			
	14-20-16-0	MUDSTONE			
		2m CASING			

Casing/Water Level Details

BH	Casing		Water		
	Dia	Depth	Strike	Rise	Sealed

Totals	BH	Drill	Case	Install
Today	5	~~80-0~~ 202-0	10-0	
Previous	7	122-0	14-0	
To Date	12	202-0	24-0	

I confirm this is a true record.
Van Elle operative name C. HENDERSON

Drill hole Nos. checked Yes ☒ No ☐
Hole Depth checked Yes ☒ No ☐
SIGNED C. H
Dated 12-11-25

Client's Name
Client's position
Signature
Dated

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Open Hole Drillers Log

Site: TUDOR RNW - CIMLA			Sheet: 1 of 2		
Rig: C6XP	Crew: M. COLE - A - CLYDE		Date: 13-11-25		
Hours on Site:			Travelling Time:		
BH	**Depth**	**Strata Description**	**BH**	**Depth**	**Strata Description**
AK25	0-0-4	OVERBURDEN	AR27	0-0-2	OVERBURDEN
30°	0-4-12-70	SANDSTONE	30°	0-2-12-0	SANDSTONE
	12-70-14-80	COAL		12-0-14-20	COAL
	14-80-16-0	MUDSTONE		14-20-16-0	MUDSTONE
		2m CASING			2m CASING
AK27	0-0-3	OVERBURDEN	AR17	0-0-4	OVERBURDEN
35°	0-3-12-30	SANDSTONE	35°	0-4-12-90	SANDSTONE
	12-30-14-30	COAL		12-90-15-0	COAL
	14-30-16-0	MUDSTONE		15-0-16-0	MUDSTONE
		2m CASING			2m CASING
AG27	0-0-3	OVERBURDEN	AR19	0-0-3	OVERBURDEN
	0-3-12-40	SANDSTONE		0-3-12-70	SANDSTONE
	12-40-14-40	COAL		12-70-14-70	COAL
	14-40-16-0	MUDSTONE		14-70-16-0	MUDSTONE
		2m CASING			2m CASING

Casing/Water Level Details

BH	Casing		Water		
	Dia	Depth	Strike	Rise	Sealed

Totals	BH	Drill	Case	Install
Today	6	96-0	12-0	
Previous	12	202-0	24-0	
To Date	18	298-0	36-0	

I confirm this is a true record.
Van Elle operative name C. HENDERSON
Drill hole Nos. checked Yes ☒ No ☐
Hole Depth checked Yes ☒ No ☐
SIGNED C. Henderson
Dated 13-11-25

Client's Name
Client's position
Signature
Dated

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Open Hole Drillers Log

Site: TYDDYN IRW - CIMLA | Sheet: 2 of 2

Rig: C6XP | Crew: M. COLE - A. CLIDER | Date: 13-11-25

Hours on Site: | Travelling Time:

BH	Depth	Strata Description	BH	Depth	Strata Description
AB15	0-0-4	OVERBURDEN	AC19	0-0-3	OVERBURDEN
35°	0-4-12-80	SANDSTONE		0-3-12-40	SANDSTONE
	12-80-14-80	COAL		12-40-14-60	COAL
	14-80-16-0	MUDSTONE		14-60-16-0	MUDSTONE
		2m CASING			2m CASING
AC15	0-0-3	OVERBURDEN	AC21	0-0-3	OVERBURDEN
35°	0-3-12-80	SANDSTONE		0-3-12-20	SANDSTONE
	12-80-14-80	COAL		12-20-14-20	COAL
	14-80-16-0	MUDSTONE		14-20-16-0	MUDSTONE
		2m CASING			2m CASING
AC17	0-0-2	OVERBURDEN	AA15	0-0-3	OVERBURDEN
	0-2-12-60	SANDSTONE		0-3-12-60	SANDSTONE
	12-60-14-60	COAL		12-60-14-60	COAL
	14-60-16-0	MUDSTONE		14-60-16-0	MUDSTONE
		2m CASING			2m CASING

Casing/Water Level Details

BH	Casing		Water		
	Dia	Depth	Strike	Rise	Sealed

Totals	BH	Drill	Case	Install
Today	6	96-0	12-0	
Previous	18	298-0	36-0	
To Date	24	394-0	48-0	

I confirm this is a true record.
Van Elle operative name C. HENDERSON

Drill hole Nos. checked Yes ☒ No ☐

Hole Depth checked Yes ☐ No ☒

SIGNED

Dated 13-11-25

Client's Name

Client's position

Signature

Dated

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Open Hole Drillers Log

Site: TUDOR INN - CIMLA | Sheet: 1 of 2

Rig: C6XP | Crew: M. COLE - A. CLYDE | Date: 14-11-25

Hours on Site: | Travelling Time:

BH	Depth	Strata Description	BH	Depth	Strata Description
AA19	0-0-3	OVERBURDEN	Y19	0-0-3	OVERBURDEN
	0-3-12-30	SANDSTONE		0-3-12-0	SANDSTONE
	12-30-16-30	COAL		12-0-14-0	COAL
	16-30-16-0	MUDSTONE		14-0-15-0	MUDSTONE
		2m CASING			2m CASING
AA21	0-0-3	OVERBURDEN	Y17	0-0-2	OVERBURDEN
	0-3-12-0	SANDSTONE		0-2-11-70	SANDSTONE
	12-0-14-10	COAL		11-70-13-80	SOFT
	14-10-16-0	MUDSTONE		13-80-15-0	SAND - NO RETURNS
		2m CASING			2m CASING
Y15	0-0-3	OVERBURDEN	Y21	0-0-2	OVERBURDEN
	0-3-12-0	SANDSTONE		0-2-11-40	SANDSTONE
	12-0-14-0	COAL		11-40-13-40	COAL
	14-0-15-0	MUDSTONE		13-40-15-0	MUDSTONE
		2m CASING			2m CASING

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today	6	92-0	12-0	
						Previous	24	394-0	48-0	
						To Date	30	486-0	60-0	

I confirm this is a true record.
Van Elle operative name C. HENDERSON
Drill hole Nos. checked Yes ☒ No ☐
Hole Depth checked Yes ☒ No ☐
SIGNED
Dated 14-11-25

Client's Name Blue Circle
Client's position SM
Signature
Dated 14/11/2025

VAN ELLE
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Open Hole Drillers Log

Site: TUDOR INN - CIMLA			Sheet: 2 of 2		
Rig: C6XP	Crew: M. COOKE A. CLYDE		Date: 14-11-25		
Hours on Site:			Travelling Time:		

BH	Depth	Strata Description	BH	Depth	Strata Description
W15	0-0-3	OVERBURDEN			
	0-3-12-0	SANDSTONE			
	12-0-14-0	COAL			
	14-0-15-0	MUDSTONE			
		2m CASING			
AA17	0-0-3	OVERBURDEN			
	0-3-12-60	SANDSTONE			
	12-60-14-60	COAL			
	14-60-16-0	MUDSTONE			
		2m CASING			

Casing/Water Level Details

BH	Casing		Water			Totals	BH	Drill	Case	Install
	Dia	Depth	Strike	Rise	Sealed	Today	2	31-0	4-0	
						Previous	30	486-0	60-0	
						To Date	32	517-0	64-0	

I confirm this is a true record.
Van Elle operative name C. HENSON

Drill hole Nos. checked Yes ☒ No ☐
Hole Depth checked Yes ☒ No ☐
SIGNED C. L
Dated 14-11-25

Client's Name Bluefield
Client's position SM
Signature A Read
Dated 14/11/25