

## Co-op Academy Smithies Moor, Heckmondwike

### Ground Investigation Report

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**Engineering  
opportunity.**

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## 1.0 Introduction

### 1.1 Project Background

Hexa has been instructed by Bowmer & Kirkland (Client) to undertake a ground investigation at Co-op Academy Smithies Moor, Leeds Old Road, Heckmondwike, WF16 9BB.

It is understood the subject site is being considered of the demolition for the existing school building and a new school and MUGA to be constructed.

The site location plan is shown on Figure 1-1.

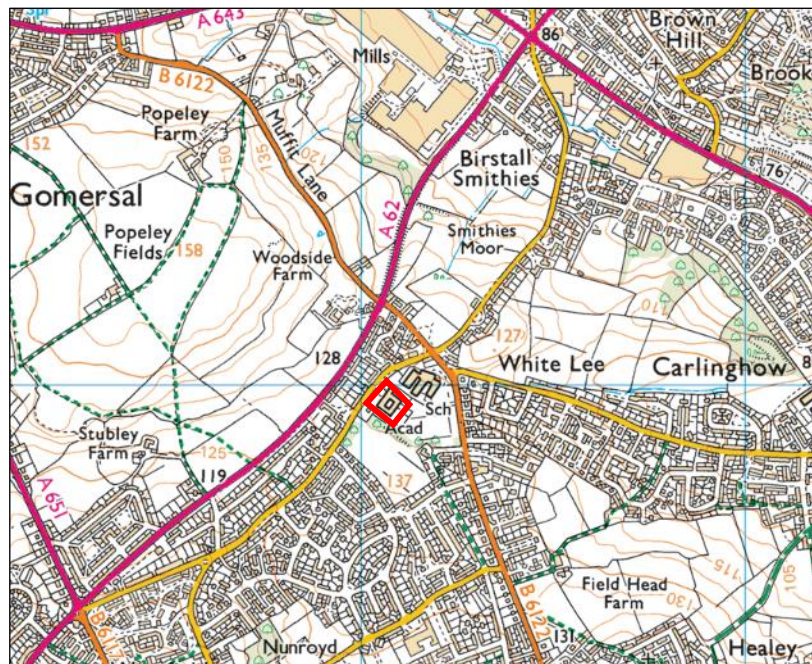


Figure 1-1 - Site Location Plan

### 1.2 Scope of Services

This report has been prepared to interpret the findings of the ground investigation undertaken at the site.

The scope of services to be provided by Hexa comprised design and completion of a supplementary ground investigation, to determine and characterise the ground, gas, and groundwater conditions, specifically targeting known coal workings and also to investigate existing foundations across the site.

Intrusive ground investigation along with in-situ and laboratory testing has been completed, the findings of which will be discussed within this report.

### 1.3 Sources of Information

Background information was sought from the following sources:

- British Geological Survey (BGS) maps
- British Standard BS10175:2011+A2:2017 – Investigation of Potentially Contaminated Sites – Code of Practice
- British Standard BS5930:2015+A1:2020 – Code of Practice for Ground Investigations

- British Standard BS1377-9:1990 Incorporating Amendment No. 1 – Methods of Test for Soils for Civil Engineering Purposes – Part 9: In-situ Tests.

In addition to the above, the report has also considered factual data within the following reports:

- Sweco, Coal Mining Risk Assessment, Co-op Academy, Smithies Moor, 65208318-SWE-XX-XX-T-GE-0001, C01, 17<sup>th</sup> February 2023.
- RSK Geosciences, Phase 1 and Phase 2 Geo-environmental and Geotechnical Factual and Interpretative, Co-op Academy Smithies Moor, 323197-R02 (00), 7<sup>th</sup> February 2024.

## 2.0 Site Setting

### 2.1 Site Setting

The site setting is summarised in Table 2-1.

Table 2-1 - Site Setting

|                                |                                                                                                                                                                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Site Address</b>            | Co-op Academy Smithies Moor, Leeds Old Rd, Heckmondwike, WF16 9BB                                                                                                                                                                               |
| <b>National Grid Reference</b> | SE 22045 24954                                                                                                                                                                                                                                  |
| <b>Site Area</b>               | 0.9 Ha                                                                                                                                                                                                                                          |
| <b>Topographic Level</b>       | <p>The site generally is 126 m – 127.5 m Above Ordnance Datum (AOD) with the site sloping gently to the north.</p> <p>To the north east of the school building, the ground sits lower than the rest of the site at approximately 123 m AOD.</p> |

Site location plan is shown in Figure 2-1.

### 2.2 Current Site Use



Figure 2-1 - Red Line Boundary Plan

### 2.2.1 Site Description

The site comprises a two-storey school with a central courtyard and a smaller single storey extension to the north of the site. To the north of the school is a bituminous hardstanding car park, with access from Leeds Old Road. From the south west to the south east of the school building are areas of bituminous hardstanding that form the school playground and grassed soft landscaped areas.

To the north west are areas of soft landscaping and mature trees. To the north east of the site is an enclosed, overgrown, soft landscaped area. The site also includes part of the grassed public open space located to the east of the school.

The topography of the site generally slopes downwards to the north, with an elevation change of c. 3 m across the site.

## 3.0 Ground and Groundwater Conditions

### 3.1 Anticipated Ground Conditions

Anticipated ground conditions at the site have been determined from a review of geological maps, historical BGS borehole data, the Sweco Coal Mining Risk Assessment (2023), and RSK Geosciences' Phase I and Phase II report (February 2024).

A review of the BGS maps (Sheet 77 Huddersfield, 1:50,000 scale, and SE22SW, 1:10,000 scale (Solid and Drift)) indicates that the site is underlain by the Pennine Lower Coal Measures Formation, comprising mainly mudstone, siltstone, and sandstone, and including coal seams.

Made Ground is anticipated based on the development history of the site and is shown on the 1:10,000 mapping (SE22SW) present in the south west corner of the site. The RSK report and the historic BGS boreholes encountered Made Ground generally consisting of surface capping materials and subbases.

A review of the underlying geology of the site suggests the presence of three coal seams present at relatively shallow depths, potentially within influencing depth of the proposed development. Two of these seams are shown in Figure 3-1, one outcropping onsite (Unnamed Coal Seam) and another to the southwest (Flockton Thick Seam), both of which are presumed to dip to the northwest. On the 1:10,000 map presented within Figure 3-1 is an area of worked ground along the south western side of the site.

According to the RSK Ground Investigation Report, the coal seams are expected to be encountered at approximate elevations of 121.0 - 124.0 m, 100.0 – 108.0 m and 93.0 m AOD. The RSK Ground Investigation Report comments on the workings with 'The investigation did not reveal direct evidence of shallow coal workings beneath the favoured development option, but a potential mining feature was revealed as an obstruction at R01 at a depth of 25.50m bgl'.



Figure 3-1 - Extract From BGS map sheet No. 77 Huddersfield 1:50,000 (Left) and BGS map sheet SE22SW 1:10,000 (right)– Approx. site boundary highlighted in red.

There are three historic BGS boreholes (SE22SW1175-6-7) across the centre of the site, these also indicate coal seams and mine workings. The boreholes note 'old workings' at 107.4 m AOD, with a thickness of 1.06 m and at 108.2 m AOD, with a thickness of 0.43 m.

The boreholes also indicate a shallow coal seam at 122.2 m AOD (0.55 m thickness) and 121.8 m AOD (0.60 m thickness) and a deeper coal seam at 108.5 m AOD (0.05 m thickness) and 107.9 m AOD (0.40 m thickness).

Based on information obtained from the Mine Remediation Authority Interactive Map, the site is shown to be in a Development High Risk Area. No mine entries are recorded to be present within the site boundaries, however, mine entries are recorded approximately 50 m to the south and east. The site is also in an area of probable shallow coal mining workings.

Section 5.4 Coal and Coal Mining provides more detail on encountered conditions.

## 4.0 Ground Investigation

### 4.1 Scope of Ground Investigation

The ground investigation has been designed by Hexa, primarily to further characterise the coal mining risk posed to the new development. In addition, the investigation was intended to inform civil and structural design and refine the ground model with respect to contamination, with particular focus on the potential ground gas risk arising from the site's coal mining legacy.

Site investigation works were undertaken between the 27<sup>th</sup> May and 6<sup>th</sup> June 2025.

The exploratory holes designed and undertaken by Hexa, to feed into the design works at the proposed site are summarised in Table 4-1.

**Table 4-1** - Summary of Ground Investigation Scope

| Scope of Works                              |       |                                                                                                                                      |
|---------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------|
| Rotary Boreholes                            | 8 No. | Advanced up to 28.85 m bgl to investigate the deep ground conditions (specifically known coal workings) to inform foundation design. |
| BRE365 Infiltration Tests                   | 3 No. | Machine excavated pits advanced up to 1.90 m bgl to conduct soakaway testing to aid in preliminary drainage design.                  |
| Hand Excavated Pits                         | 5 No. | Advanced up to 1.24 m bgl to investigate preexisting foundations.                                                                    |
| Geotechnical In-situ and Laboratory Testing | N/A   | To inform on ground conditions, and derive geotechnical parameters for design.                                                       |

Exploratory hole arisings were logged onsite by a qualified Engineer and in accordance with the requirements of BS5930:2015, including recording observed visual and olfactory indications of contamination. Exploratory hole logs are provided in Appendix B.

Rotary boreholes were advanced in accordance with the Coal Authority Permit, ref: 29935, dated: 20<sup>th</sup> May 2025.

### 4.2 In-situ Testing

#### 4.2.1 Standard Penetration Testing

Standard Penetration Tests (SPT) were carried out in the rotary cored boreholes in accordance with techniques outlined in BS1377-9:1990, to assess the strength/density of the underlying strata. The 'N' value (number of blows per 300 mm penetration) was recorded for each test. The results of these in-situ tests, including full blow counts, are presented on the borehole logs within Appendix B.

8 No. SPT tests were undertaken within the rotary cored boreholes.

### 4.3 Laboratory Testing

#### 4.3.1 Environmental Analysis

Selected soil samples were submitted to i2 for a range of environmental testing, in accordance with UKAS methodology where applicable, are listed in Table 4-2.

**Table 4-2** - Environmental Chemistry Analysis Suite: Soils.

| Suite Ref.  | Analyte                                                              | LOD               |
|-------------|----------------------------------------------------------------------|-------------------|
| Soils Suite | Asbestos Screen, pH and Soil Organic Matter (SOM)                    | -                 |
|             | Arsenic, Chromium, Chromium VI, Copper, Lead, Selenium, Zinc, Nickel | 1 to 1.8 mg/kg    |
|             | Boron (water soluble)                                                | 0.2 mg/kg         |
|             | Cadmium                                                              | 0.2 mg/kg         |
|             | Mercury                                                              | 0.3 mg/kg         |
|             | Sulphate as SO <sub>4</sub> (water soluble)                          | 1.25 mg/l         |
|             | Speciated PAHs (USEPA 16)                                            | 0.05 mg/kg        |
|             | TPH CWG (Aro/Alk Split) including BTEX and MTBE                      | 0.001 to 10 mg/kg |

Testing for Waste Acceptance Criteria (WAC) was also undertaken on seven samples. Four samples were tested for speciated PAHs to identify the potential presence of coal tar in bituminous hardstanding.

Full laboratory testing results are provided in Appendix C.

#### 4.3.2 Geotechnical Analysis

Selected soil samples were submitted to i2 for a range of geotechnical testing, in accordance with the UKAS methodology where applicable, and are listed in Table 4-3:

**Table 4-3** - Summary of Geotechnical Laboratory Test Results

| Testing                                       | Quantity | Standard                                       |
|-----------------------------------------------|----------|------------------------------------------------|
| Atterberg Limits (4 Point)                    | 3        | BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022 |
| Unconfined Compressive Strength Test          | 2        | BS EN ISO 17892-7:2017                         |
| Suite D Concrete Aggressivity Assessment Suit | 5        | -                                              |
| Point Load Test                               | 6        | ISRM: 2007, pages 125-132                      |

Full laboratory testing results are provided in Appendix C.

#### 4.4 Groundwater Conditions

##### 4.4.1 Groundwater Strikes

All hand dug inspection pits and trial pits remained dry during excavation, except for HDP205 which had a slow ingress of water whilst being hand excavated.

Depths to strikes in the deeper boreholes were masked due to the use of water flush used during the drilling.

##### 4.4.2 Groundwater Monitoring Installations

Monitoring wells comprise of 50mm diameter HDPE standpipe completed at surface with a flush cover installed at four locations, summarised in Table 4-4.

**Table 4-4** - Summary of Dual Groundwater and Gas Monitoring Installations.

| Borehole     | Installation Strata | Response Zones<br>(m bgl) | Rationale                                                                          |
|--------------|---------------------|---------------------------|------------------------------------------------------------------------------------|
| RH201 (HEXA) | Coal Measures       | 13.00-15.00               | Targeting suspected workings to establish groundwater levels                       |
| RH203 (HEXA) | Made Ground         | 3.00-4.00                 | Targeting potential shallow workings to confirm shallow groundwater and gas regime |
| RH205 (HEXA) | Coal Measures       | 19.00-20.00               | Targeting suspected workings to establish groundwater levels                       |
| RH206 (HEXA) | Coal Measures       | 21.50-22.50               |                                                                                    |

#### 4.5 Obstructions

There was one obstruction encountered at a borehole location. This was borehole RH208 refusing on timber and metal at 17.70 m bgl suspected to represent mine workings (discussed in more detail in Section 5.4).

## 5.0 Ground Model

A summary of the ground conditions encountered during the site investigations works is presented below in Table 5-1, with detailed information presented in the exploratory hole logs included within Appendix B.

See Section 5.4 for detailed information on coal and coal mine workings.

**Table 5-1** - Summary of Ground Conditions

| Strata                                                    | Min           |                   |                        | General Description and Notes                                                                                  |
|-----------------------------------------------------------|---------------|-------------------|------------------------|----------------------------------------------------------------------------------------------------------------|
|                                                           | Thickness (m) | Max thickness (m) | Max Base Depth (m bgl) |                                                                                                                |
| <b>Made Ground</b> - Bituminous Hardstanding              | 0.05          | 0.16              | 0.16                   | Bituminous hardstanding was present within the carpark to the north and within the playground to the south.    |
| <b>Made Ground</b> - Topsoil                              | 0.15          | 0.40              | 0.40                   | Generally recovered as a slightly sandy slightly gravelly to very gravelly silt/clay.                          |
| <b>Made Ground</b> - Coarse Gravel/Subbase                | 0.30          | 0.91              | 1.0                    | Typically sub-base beneath bituminous hardstanding. Generally sandy angular to subangular gravel of limestone. |
| <b>Made Ground</b> - Fine grained Gravel                  | 0.20          | 0.80              | 1.2                    | Typically gravelly to very gravelly occasionally sandy clay/silt.                                              |
| <b>Shallow Potential Coal Workings</b> - Reworked Natural | 4.20          | 4.20              | 5.00                   | Typically slightly sandy gravelly clay containing gravel of coal, sandstone and mudstone.                      |
| <b>Residual Soils</b> (Pennine Lower Coal Measures)       | 1.70          | 4.80              | 6.00                   | Usually firm grey/brown occasionally gravelly clay                                                             |
| <b>Mudstone / Sandstone</b> (Pennine Lower Coal Measures) | 9.15          | 24.50             | 28.85*                 | Typically very fine to fine grained fossiliferous sandstone and fine grained fossiliferous mudstone.           |

\*Depth to base not proven

### 5.1 Surfacing and Made Ground

#### 5.1.1 Bituminous Hardstanding

Bituminous hardstanding was recorded at seven locations (RH201-05, HDP202, HDP205), comprising a single layer between 0.05 m to 0.16 m thick. This was located within the car park to the northwest and the playground to the south.

#### 5.1.2 Topsoil

Topsoil was located in areas of soft landscaping to the northeast and southwest of the site. This was recovered as brown occasionally sandy rly gravelly to very gravelly silt/clay with gravels of coal, brick, shale, plastic, slag and ironstone. With the occasional low cobble content of sandstone and brick.

### 5.1.3 Flagstones

Two hand pits (HDP206-207) had a surface capping of concrete flagstones. These were located at the entrance to the rugby club changing rooms. These were 0.06 m thick and had Made Ground gravel beneath.

### 5.1.4 Made Ground Summary

The surface capping across the site consisted of bituminous hardstanding, topsoil and concrete flagstones.

Beneath the flagstones and bituminous hardstanding were varies similar subbases, these were typically type 1/subbase slightly sandy gravel of limestone.

There were potential workings encountered across the site at varying depths, these are covered in more detail in Section 5.4.

Shallow workings were identified along the south western side of the site (in the approximate area indicated by 1:10,000 BGS mapping (Figure 3.1)), these were encountered as reworked material and voiding. Due to the drilling method, RH204 has the clearest description of the shallow workings, these were encountered as brownish grey mottled orange slightly sandy gravelly clay with gravel of mudstone, shale, sandstone and coal with frequent plant fibres and rootlets.

There were 3 No. SPTs conducted within the reworked natural material at RH204 this is presumed to be associated with potential shallow coal workings. The SPT 'N' values were low within this material and averaged an 'N' value of 7.3, this indicates a weak material.

## 5.2 Residual Soils- Pennine Lower Coal Measures

Residual soils of the Pennine Lower Coal Measures (PLCM), were generally recovered as a firm grey/brown occasionally gravelly clay. These soils are found to a maximum depth of 6.00 m bgl with a maximum thickness of 4.80 m, and remained similar across the site. The summary of the geotechnical testing results are shown in Table 5-2 and the SPT 'N' values plotted against elevation is shown in Figure 5-1.

**Table 5-2** - Summary of Geotechnical Testing on Residual Soils (PLCM)

| Test                                        |                           | Quantity | Range    | Average |
|---------------------------------------------|---------------------------|----------|----------|---------|
| <b>In-Situ</b>                              |                           |          |          |         |
| Standard Penetration Testing – Fine Grained |                           | 3        | 4-50     | 19.6    |
| <b>Laboratory Testing</b>                   |                           |          |          |         |
| Atterberg Test                              | Liquid Limit (%)          | 3        | 57-68    | 63.6    |
|                                             | Plastic Limit (%)         |          | 28-31    | 29      |
|                                             | Plasticity Index          |          | 29-40    | 34.6    |
|                                             | Modified Plasticity Index |          | 28.42-40 | 34.47   |

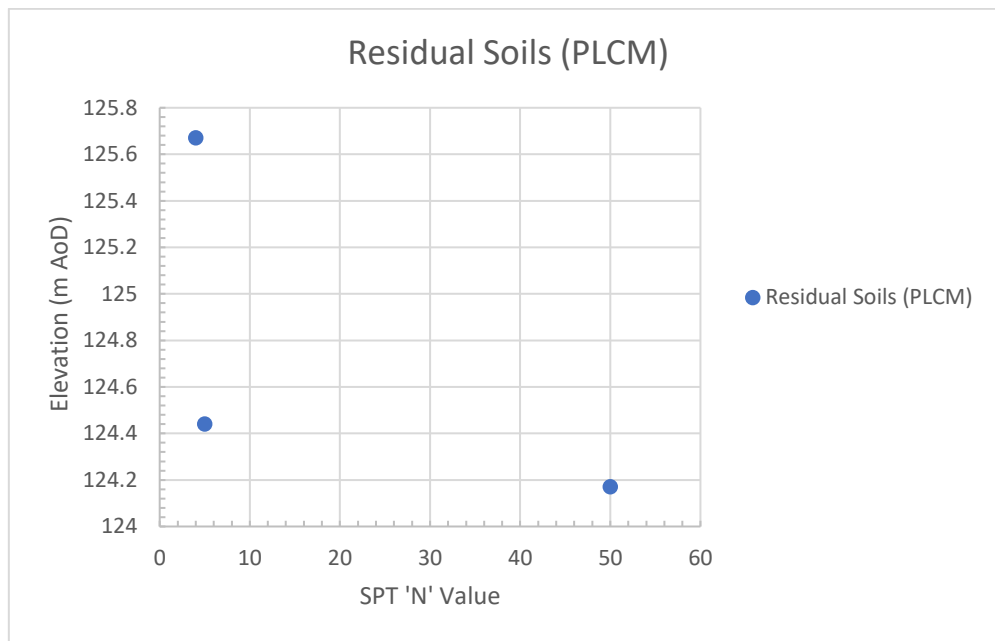


Figure 5-1 - SPT 'N' Value vs. Elevation - Residual Soils

### 5.3 Mudstone and Sandstone – Pennine Lower Coal Measures

Mudstone and sandstone bedrock was encountered underlying PLCM residual soils.

The bedrock was slightly to highly weathered and extremely weak to moderately strong. With thin and thick laminations and ironstone bands throughout.

With coal seams dispersed throughout the ground between the mudstones and sandstone.

Table 5-3 - Summary of Geotechnical Testing Results on Pennine Lower Coal Measures Rock

| Test                               | Quantity | Range     | Average |
|------------------------------------|----------|-----------|---------|
| <b>In-Situ</b>                     |          |           |         |
| Standard Penetration Testing ('N') | 2        | 35-50     | 42.5    |
| <b>Laboratory Testing</b>          |          |           |         |
| Point Load (Is (50))               | 8        | 0.24-4.03 | 1.88    |

Laboratory testing comprising point load tests were completed on samples of sandstones. The results are summarised in Table 5-3. The UCS values for the sandstone were determined using a correlation with these point load values, using a conversion factor of 24 (Tomlinson.M.J, 2000). The results from the RSK Geosciences Ground Investigation are also shown, these are results from UCS testing of the siltstones and from point load testing of siltstones. The UCS values for the siltstones were determined using a correlation factor of 14 (Tomlinson.M.J, 2000). The results are compiled and shown on Figure 5-2.

The Rock Quality Designation (RQDs) of the rock determined are shown on Figure 5-3 - RQD vs. Elevation. These shows a large variation in ground conditions.

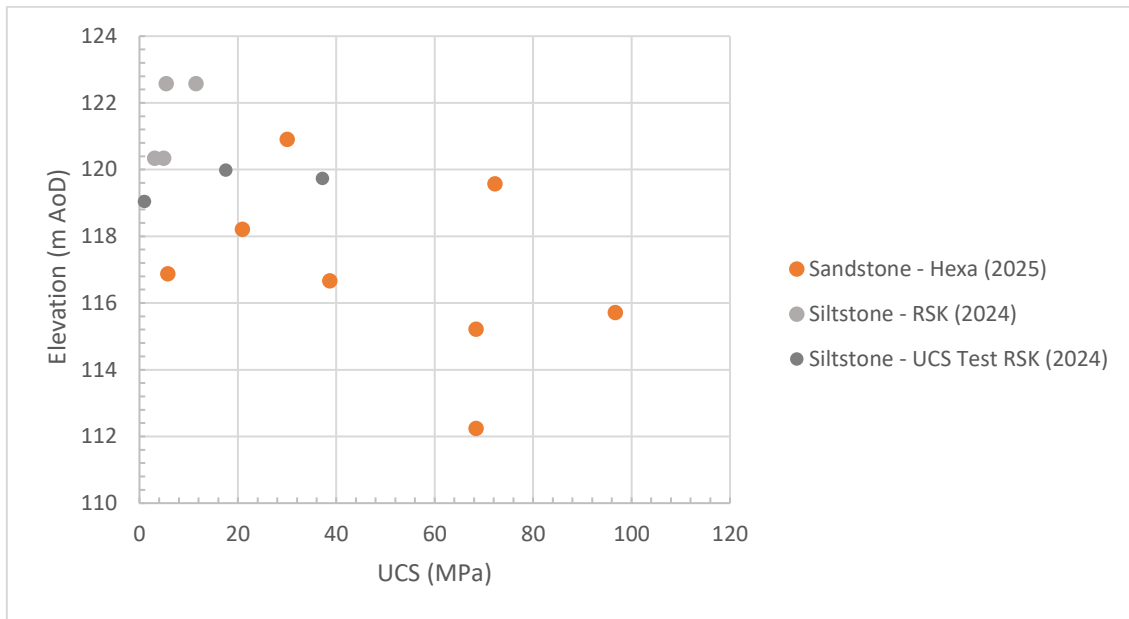


Figure 5-2 - Point Load correlation to UCS and UCS testing vs. Elevation – Sandstones and Siltstones

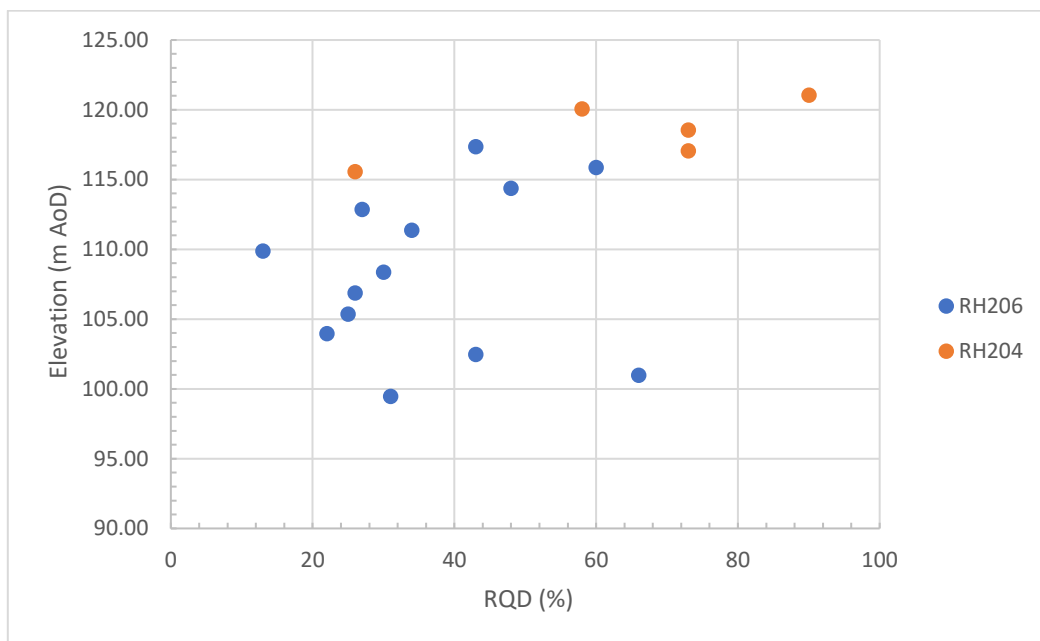


Figure 5-3 - RQD vs. Elevation

#### 5.4 Coal and Coal Mining

The site is located within a Development High Risk Area as designated by the Coal Authority. As discussed previously, a review of previous reports and historic data indicated the presence of three coal seams beneath the site and unrecorded shallow workings.

From the previous RSK ground investigation coal seams and associated workings were encountered at approximately 121.0 - 124.0 m, 100.0 – 108.0 m and 93.0 m AOD. Therefore, the ground investigation was designed and undertaken to investigate presence of coal workings within the influence zone of the proposed works.

The coal and associated workings encountered during this ground investigation are summarised in Table 5-4. Cross sections across the length of the proposed footprint of the building and along the shallow workings are provided in Appendix B.

**Table 5-4 - Summary of Encountered Worked and Unworked Coal Seams from Hexa Ground Investigation**

| Exploratory Hole ID | Encountered Units            | Descriptions                                                                                                                                                                                                                   | Depth Range (m bgl) | Depth Range (m AOD) | Thickness (m) |
|---------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------|
| RH201               | Potential Coal Workings      | Loss of returns at 13.0 m bgl and coal (possible slurry waste)                                                                                                                                                                 | 13.00-15.45         | 112.98-110.53       | 2.45          |
| RH202               | Potential Coal Workings      | Loss of returns at 4.25 m bgl, over 1000 kg (c1m <sup>3</sup> ) of bentonite were used to backfill position.                                                                                                                   | 4.25-6.15*          | 122.62-120.72*      | 1.9*          |
| RH203               | Potential Coal Workings      | Voiding, loss of flush and returns.                                                                                                                                                                                            | 3.30-4.00           | 123.40-123.10       | 0.70          |
|                     | Coal Workings                | Coal fragments within flush, 'metallic' sound when casing was lowered into hole at 15.50 m bgl, over 1250 kg (c1.25m <sup>3</sup> ) of bentonite were used to backfill position and still measured below shallow coal workings | 17.60-19.50         | 109.10-107.20       | 1.9           |
| RH204               | Potential Coal Workings      | Recovered reworked material with coal and organics, and low SPTs.                                                                                                                                                              | 0.80-5.00           | 126.02-121.82       | 4.2           |
| RH205               | <b>Potential Intact Coal</b> | Sludge/coal mix in flush returns.                                                                                                                                                                                              | 2.40-4.60           | 124.06-121.86       | 2.2           |
|                     | Potential Coal Workings      | Sludge/coal mix in flush returns.                                                                                                                                                                                              | 18.90-20.00*        | 107.56-106.46*      | 1.1*          |
| RH206               | <b>Intact Coal</b>           | Seen in core.                                                                                                                                                                                                                  | 2.60-3.35           | 123.04-122.29       | 0.75          |
|                     | Coal Workings                | Clay and gravel, angular to subrounded mudstone and coal, random orientation, loss of returns and flush. (Broken Ground)                                                                                                       | 17.05-17.65         | 108.59-107.87       | 0.60          |

| Exploratory Hole ID | Encountered Units        | Descriptions                                                                                                          | Depth Range (m bgl) | Depth Range (m AOD) | Thickness (m) |
|---------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------|
|                     | <b>Poor Quality Coal</b> | Seen in Core, very thin band and lack of evidence to suggest it has been worked.                                      | 21.90-22.07         | 103.74-103.57       | 0.17          |
| RH207               | <b>Intact Coal</b>       |                                                                                                                       | 2.69-3.50           | 122.45-121.64       | 0.81          |
|                     | Potential Coal Workings  | Coal mix with mudstone, organic matter in returns, reduction in flush.                                                | 15.60-18.62         | 109.54-106.52       | 3.02          |
| RH208               | <b>Intact Coal</b>       |                                                                                                                       | 1.70-3.84           | 123.49-121.35       | 2.14          |
|                     | Coal Workings            | Returns included a coal, clay and timber mix, with a reduction in flush and the position refused on timber and metal. | 14.70-17.70*        | 110.49-107.49*      | 3.0*          |
| SA203               | <b>Intact Coal</b>       | Seen in trial pit.                                                                                                    | 0.80-1.30           | 122.90-122.40       | 0.50          |

\*depth to base not reached

Two main coal seams and lower coal seams were encountered during this investigation.

The shallow coal seam was encountered across the site. The seam is presumed to have been worked along the south western edge of the site (RH204-02) and appears to be unworked and intact to the centre (RH205) and eastern sides of the site (SA203).

The shallow workings are on the south eastern edge of the proposed building footprint and underneath the proposed MUGA. This shallow coal seam has been encountered at 0.80 - 6.15 m bgl at an elevation of 126.02 - 120.72 m AOD with a maximum thickness of 4.2 m.

Shallow workings to the south west of the site have been logged at varying thicknesses. Within the rotary cored position the ground could be clearly observed and recorded, providing a more accurate representation of the extent and composition of the workings. It is possible that the shallow workings are more extensive and thicker than indicated in some of the borehole logs. The shallow coal seam is presumed to be mined from the surface using an opencast method.

The middle seam (presumed to be the Flockton Thick seam) was encountered between 13.00 - 20.00 m bgl at an elevation of 112.98-106.46 m AOD and a maximum thickness of 3.02 m. Evidence of coal workings was recorded within this seam across the entire site. This is concurrent with the historic BGS borehole logs and the encountered coal in the RSK investigation.

Lower seams were encountered within three boreholes across the Hexa and RSK Ground Investigations. In the RSK investigation, potential coal workings were noted at 25.50 m bgl (100.61 m AOD) where drilling was

terminated on an obstruction and suspected to be metal. In borehole R05, coal was encountered at 32.20 - 32.70 m bgl at an elevation of 92.98 - 92.48 m AOD and a thickness of 0.50 m. This position was open holed and there is no detail/no evidence to suggest mine workings. The Hexa Ground Investigation encountered a presumed poor quality coal at RH206 at 21.90 - 22.07 m bgl this had elevation of 103.74-103.57 m AOD and a thickness of 0.17 m.

## 5.5 Dynamic Cone Penetrometer Results

6 No. Dynamic Cone Penetrometer (DCP) tests were undertaken, with a minimum CBR of 3% recorded within the top 0.10 m. All six tests were undertaken along the proposed temporary haulage road for use during construction, with the average CBR generally decreasing across each test location from east to west. The results of the DCP tests are summarised in Table 5-5. DCP results are presented in Appendix D.

**Table 5-5 - Average CBR (%) values from DCP testing**

| Position | Average CBR (%) across whole depth (0.0-1.0 m bgl) | Average CBR (%) (0.0-0.5 m bgl) | Average CBR (%) (0.5-1.0 m bgl) |
|----------|----------------------------------------------------|---------------------------------|---------------------------------|
| DCP201   | 53.1                                               | 44.0                            | 62.2                            |
| DCP202   | 116.0                                              | 48.1                            | 184.0                           |
| DCP203   | 31.9                                               | 29.6                            | 34.2                            |
| DCP204   | 28.0                                               | 37.7                            | 18.2                            |
| DCP205   | 21.9                                               | 27.5                            | 16.2                            |
| DCP206   | 11.2                                               | 13                              | 9                               |

## 5.6 Groundwater Monitoring Results

Groundwater strikes were not recorded during the site investigation in any of boreholes, except a slow ingress of water at HDP205, however, strikes in deeper holes were likely masked by the use of water flush.

Four groundwater monitoring visits have been undertaken by Hexa, the results of which are shown below in Table 5-6. The groundwater monitoring results from the RSK ground investigation (2024) are provided within Figure 5-4.

**Table 5-6 - Groundwater Monitoring Summary**

| Borehole  | Installation Strata                      | Response Zones<br>(m bgl) | Depth to Water (m bgl) |            |            |            |
|-----------|------------------------------------------|---------------------------|------------------------|------------|------------|------------|
|           |                                          |                           | 09/07/2025             | 16/07/2025 | 30/07/2025 | 04/08/2025 |
| R01 (RSK) | Bedrock - Pennine<br>Lower Coal Measures | 5.00-14.00                | -                      | 10.35      | 13.12      | 10.72      |
| R03 (RSK) | Bedrock - Pennine<br>Lower Coal Measures | 6.00-8.00                 | -                      | 6.30       | 6.21       | Dry        |

| Borehole     | Installation Strata                         | Response Zones<br>(m bgl) | Depth to Water (m bgl) |            |            |            |
|--------------|---------------------------------------------|---------------------------|------------------------|------------|------------|------------|
|              |                                             |                           | 09/07/2025             | 16/07/2025 | 30/07/2025 | 04/08/2025 |
| WS01 (RSK)   | Cohesive Soil - Pennine Lower Coal Measures | 0.30-1.00                 | Dry                    | Dry        | Dry        | Dry        |
| WS02 (RSK)   | Cohesive Soil - Pennine Lower Coal Measures | 1.00-4.00                 | 2.20                   | 2.27       | 2.26       | 2.20       |
| WS04 (RSK)   | Cohesive Soil - Pennine Lower Coal Measures | 0.50-1.50                 | 1.50                   | 1.50       | 1.50       | 1.54       |
| WS05 (RSK)   | Cohesive Soil - Pennine Lower Coal Measures | 1.00-2.00                 | -                      | 1.95       | 1.94       | 2.00       |
| RH201 (HEXA) | Coal Workings                               | 13.00-15.00               | 10.80                  | 14.30      | -          | -          |
| RH203 (HEXA) | Potential Coal Workings                     | 3.00-4.00                 | 4.00                   | 4.10       | 4.10       | 4.08       |
| RH205 (HEXA) | Coal Workings                               | 19.00-20.00               | 12.20                  | 12.0       | 11.13      | 10.55      |
| RH206 (HEXA) | Coal Workings                               | 21.50-22.50               | 17.00                  | 15.77      | 16.75      | 17.00      |

\*Missing data marked by - is due to restricted access to the positions.

| Monitoring well | Response zone stratum | TOC elevation (m AOD) | Depth to water (mb TOC) | Product thickness (m) | Groundwater elevation (m AOD) – min. | Groundwater elevation (m AOD) – max. | Dipped depth to base (m) | Install Depth (m) |
|-----------------|-----------------------|-----------------------|-------------------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------|-------------------|
| R01             | Bedrock               | 126.11                | 8.58-12.88              | N/A                   | 113.23                               | 117.53                               | 13.69                    | 14                |
| R03             | Bedrock               | 125.78                | 4.81-5.90               | N/A                   | 119.88                               | 120.97                               | 6.64                     | 8                 |
| WS01            | Cohesive soil         | 126.50                | 0.84-1.08               | N/A                   | 125.42                               | 125.66                               | 1.08                     | 1                 |
| WS02            | Cohesive soil         | 126.70                | 1.95-2.98               | N/A                   | 123.72                               | 124.75                               | 3.82                     | 4                 |
| WS04            | Cohesive soil         | 125.87                | 1.36-1.50               | N/A                   | 124.37                               | 124.51                               | 1.61                     | 1.50              |
| WS05            | Cohesive soil         | 125.59                | 1.33-2.15               | N/A                   | 123.44                               | 124.26                               | 2.15                     | 2                 |

Figure 5-4 - Excerpt taken from RSK Geosciences Phase I and Phase II Report (February 2024) titled (Table 36 Summary of groundwater levels encountered during monitoring)

## 5.7 Ground Conditions Summary

With respect to the proposed development and sub-structure design the ground conditions underlying the site are dominated by the presence of shallow workings within at least two seams. There is considered to be insufficient competent rock cover between these seams and the proposed structure and as such treatment is likely to be required to ensure stability of the proposed development.

Given the observed variation in calculated Unconfined Compressive Strength (UCS), the reduction in Rock Quality Designation (RQD), and the identification of shallow mine workings, the use of uniform characteristic values for the PLCM (Presumed Low Competency Material) in geotechnical design should be approached with caution.

It is important that sufficient conservatism is incorporated into the design to account for the variability and potential localised weaknesses in the ground conditions.

## 5.8 Concrete Aggressivity Classification

The concrete aggressivity classification is based on the laboratory test results samples retrieved from 5 No. samples within the Pennine Lower Coal Measures. Table 5-7 summarises the concrete classifications per stratum derived from the BRE Suite D testing.

**Table 5-7 - Aggressive Chemical Environment for Concrete (ACEC) Site Classification**

| Stratum                 | Location       | Depth of sample (m) | Quantity                      | Range     | Classification |
|-------------------------|----------------|---------------------|-------------------------------|-----------|----------------|
| Siltstone (PLCM)        | RH204          | 5.70                | Water soluble Sulphate (mg/l) | 94.9      | DS1 - AC1      |
|                         |                |                     | pH                            | 8.8       |                |
| Sandstone (PLCM)        | RH204<br>RH206 | 11.10<br>13.40      | Water soluble Sulphate (mg/l) | 15.6-20.2 | DS1 - AC1      |
|                         |                |                     | pH                            | 8.3-9.1   |                |
| Mudstone (PLCM)         | RH206          | 16.50               | Water soluble Sulphate (mg/l) | 90.3      | DS4 - AC4      |
|                         |                |                     | pH                            | 8.7       |                |
| Potential Coal Workings | RH206          | 17.45               | Water Soluble Sulphate (mg/l) | 474       | DS4 - AC4      |
|                         |                |                     | pH                            | 5.8       |                |

(1) ACEC assessment was based on the static groundwater condition in natural ground scheme area.

The results indicate a DS1 – AC1 classification for sandstone and siltstone of the Pennine Lower Coal Measures. However, at greater depths within RH206 high levels of total sulphur were found, confirming with the exploratory hole logs that pyrite is present. On this basis, the mudstone stratum has been designated a category of DS4 – AC4 classification.

Should the foundation encroach on the underlying mudstone DS4-AC4 classification should be adopted.

### **5.9 Foundation Inspection Pits**

Within the playground along the southeastern elevation of the school (HDP204) the depth to bottom of the foundations was not reached. This was due to the foundation exceeding the limit of hand pitting (more than 1.20 m bgl). The concrete foundations step out at 1.04m bgl and is shaped/shuttered concrete.

Two hand dug inspection pits were excavated adjacent to the entrance of the rugby club changing rooms. Within HDP207 the foundations were encountered at 0.30 m bgl, this stepped out and then sloped towards the building. The pit could not be extended further southeast without disturbing a nearby clay drainage pipe. Around HDP206 there were multiple surface expressions of different surface water utilities, with the high likelihood of a drain crossing the inspection pit and with no other locations to move the pit to. At 0.15 m bgl a sandstone slab was encountered; this had been presumed to be a drainpipe cover. For this reason, the inspection pit was terminated. The foundation inspection pits drawings and logs are provided within Appendix B.

### **5.10 Soakaway Testing**

Soakaway testing was conducted to BRE Digest 365 guidance in three machine excavated trial pits across the site, with three tests per location. The pits were filled up with a 500 litre IBC. The soakaway testing results are provided within Appendix E.

## 6.0 Ground Contamination Assessment

The ground investigation revealed ground conditions broadly in line with the anticipated strata based on the desk-based review and site history.

Samples representative of near surface soils were submitted for a broad suite of typical organic and inorganic contaminants including asbestos presence.

Laboratory test results are presented in Appendix C.

### 6.1 Adopted Soil Human Health GACs Screening Methodology

Detailed guidance on human health risk assessment is available within several documents, published by both the Environment Agency and Defra. Guidance includes Contaminated Land Exposure Assessment (CLEA) v1.071 model (Ref. 16) Report SC050021/SR2: Human Health Toxicological Assessment of Contaminants in Soil and Report SC059921/SR3: Updated Technical Background to the CLEA Model.

A generic quantitative risk assessment (GQRA) has been carried out by screening of soil contamination data against relevant Generic Assessment Criteria (GAC).

The GACs selected by Hexa comprise Defra/ Environment Agency published Soil Guideline Values (SGVs) and Category 4 Screening Levels (C4SLs) where available, supplemented by LQM/CIEH Suitable for Use Levels (S4UL) and EIC/AGS/CL:AIRE published thresholds.

Hexa have conservatively adopted a GAC for a 'Public open space near residential housing' scenario. The site development is being considered for the demolition of the existing school and construction of a new school and MUGA.

The soil Organic Matter (SOM) content has an influence on the volatilisation of organic contaminants (i.e., the higher the SOM, the lower the volatilisation rate and therefore inhalation exposure risk). Soil organic matter (SOM) values for the shallow soils ranged between 1.4 – 12% and averaged a SOM of 7.1% across the site.

As such a comparison against Tier 1 thresholds for a SOM of 6% has been used where a C4SL value is not available. This is considered a suitably conservative initial screen.

For Polyaromatic Hydrocarbons (PAHs) Public Health England recommend the adoption of a Surrogate Marker approach for assessing risk from genotoxic PAHs utilising the concentration of Benzo(a)pyrene as surrogate marker, being ubiquitous in sites contaminated with PAHs and providing a consistent indicator of the amount of PAHs in contaminated soil.

### 6.2 Generic Assessment Criteria Screening of Soil Laboratory Results

#### 6.2.1 Made Ground

A total of seven shallow soil samples recovered from across the site were screened conservatively against 'Public open space near residential housing' end use criteria. There were no exceedances recorded in any sample analysed

#### 6.2.2 Asbestos

No asbestos was recorded in any sample analysed.

### 6.3 Controlled Water Assessment

The RSK Phase 1 and Phase 2 assessment (Feb 2024) identified a low risk to Groundwater and Surface Waters.

Review of the site setting identifies the site as being within a low sensitivity area with regard to controlled waters and within a Secondary A aquifer, not within a Source Protection Zone.

No indications of mobile phase contamination have been identified during the ground investigation undertaken to date.

Generally low levels of contaminants of concern were shown in soils tested, no indicators of mobile contamination and the low sensitivity of the site setting indicates that there is low risk to Controlled Waters from on-site soils.

## 7.0 Ground Gas Risk Assessment

The following section aims to present a comprehensive Ground Gas Appraisal for the site, utilising relevant current guidance and Standards, historical and contemporary testing and monitoring data to supplement a detailed assessment of the Ground Gas Conceptual Site Model.

### 7.1 Regulatory Framework

The following current British Standards have formed the basis of the approach to, and undertaking of, the ground gas risk assessment at the site:

1. BS8485:2015+A1:2019 - Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings
2. BS8576:2013 - Guidance on Investigations for Ground Gas - Permanent Gases and Volatile Organic Compounds (VOCs).

The above British Standards refer to additional guidance documents which include CIRIA C665 *Assessing risks posed by hazardous ground* (2007).

Reference is made to the framework provided in the British Standard throughout this report and, where deemed appropriate, supplemented by the current guidance listed below;

- CIRIA C665 *Assessing Risks Posed by Hazardous Ground* (2007).
- CL: AIRE RB17 A Pragmatic Approach to Ground Gas Risk Assessment, 2012
- CL: AIRE TB17 Ground Gas Monitoring and 'Worst-Case' Conditions, 2018
- Ambisense and EPG Ltd Using ternary plots for interpretation of ground gas monitoring results. Ground Gas Information Sheet No. 1, 2018
- Ground Engineering Technical paper: Risk and reliability in gas protection design – 20 years on: Part 1 and Part 2, 2019
- CL:AIRE, Good practice for risk assessment for coal mine gas emissions, 2021
- NHBC, NF94 Hazardous ground gas - an essential guide for housebuilders, 2023

### 7.2 Site Setting and Preliminary Ground Gas Source Assessment

The following section aims to highlight the geological and anthropogenic features on, or within influencing distance of, the site which are considered to represent relevant potential ground gas sources.

The magnitude of the generation potential of each of the identified sources has been determined using the framework outlined in Clause 8.7 of BS8576:2013, Figure 6. This generation potential will be used to justify the requirement for, amount and duration of monitoring undertaken (discussed further in Section 7.4).

#### 7.2.1 On-site Ground Gas Source Appraisal

The RSK Phase I and Phase II Report (Ref: 323197 R02 (00), February, 2024) identifies both Made Ground and mine workings as potential on-site sources of ground gas with the Made Ground having a 'very low' potential for ground gas generation and the mine workings having a 'low/moderate' potential for ground gas generation. The Made Ground encountered as typically thin deposits (a maximum depth of 0.80 m was found during the ground investigation) and typically consisted of either a layer of bituminous hardstanding underlain by a sub-base, or a silty topsoil.

Coal mine workings were encountered across the site within this ground investigation as outlined in Table 5-4.

No inclusions of putrescible materials have been recorded at any of the locations investigated to date.

Seven samples were analysed for Soil Organic Matter (SOM). SOM values for the shallow soils ranged between 1.4 – 12% and averaged an SOM of 7.1% across the site.

As outlined within NF94 NHBC Guidance for hazardous ground gas published in April 2023, Made Ground soils are not considered a credible source of ground gas, unless a substantial proportion of putrescible material (i.e. vegetation, food waste, paper, cardboard, wood etc.) is present.

#### 7.2.2 Other Potential Sources of Gas

A review of the RSK Phase I and Phase II report indicates there are no known historic or active landfills within 500 m of the site and that the potential ground gas sources are Made Ground and mine workings.

#### 7.2.3 Source Risk Appraisal

When considering the gas generation potential of the above sources given the presence of shallow coal and identified workings, reference has been made to Clause 8.7 in BS8576:2013 (Figure 3.3 as extracted below) and the classification framework provided within CL:AIRE, Good practice for risk assessment for coal mine gas emissions, 2021 (Figure 13.1 as extracted below).

With reference to this figure the site source risk is characterised as Moderate to High being that shallow workings have been identified. The shallowest workings identified in the south west of the site are likely to have been excavated from surface given that there would be limited rock cover overhead to allow traditional pillar and stall workings to have been undertaken safely. This is highlighted in Hexa locations RH204 where reworked natural clays described as soft to firm brownish grey mottled orange lightly sandy clay with a low cobble content and gravel of shale, sandstone and coal. In addition frequent plant fibres and rootlets were identified but no indicators of highly putrescible material are noted. Potential gasses originating from this zone in the site are likely to migrate vertically to atmosphere through existing Made Ground and surface coverings.

Deeper workings in the suspected Flockton Thick seam have been shown to be majority flooded limiting their source potential, this is discussed further in this Section.

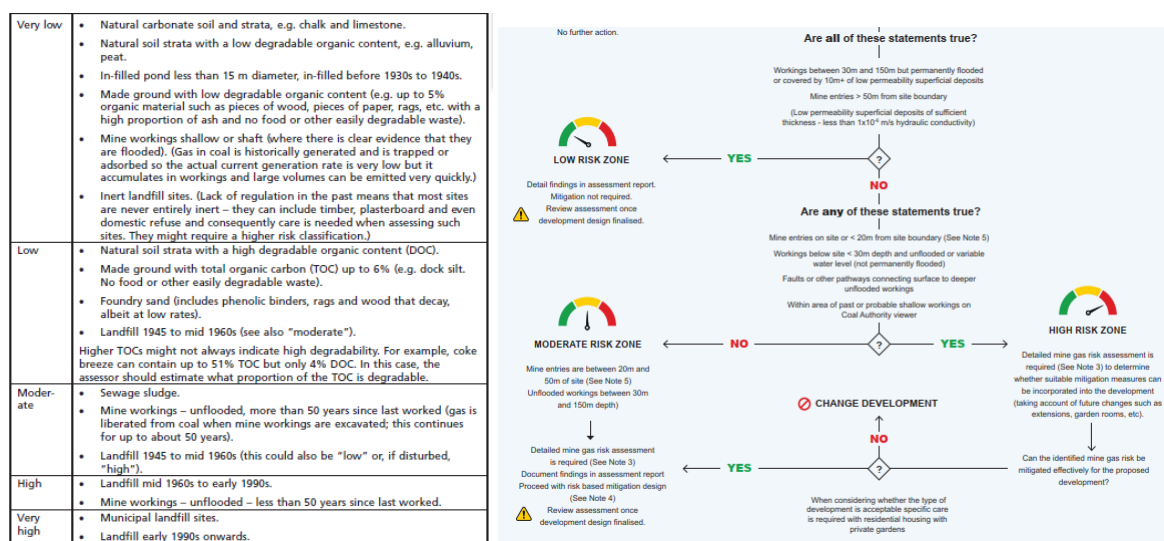


Figure 7.2.3 – Risk ratings from BS8576:2013 Figure 3.3 and CL:AIRE Guidance Figure 13.1 .

## 7.3 Monitoring

### 7.3.1 Frequency of Monitoring and Factual Data Summary

The appropriate monitoring and frequency of such should be determined by the CSM following the framework defined in BS8576:2013. As detailed in Section 7.2 using the framework defined BS8576:2013 Figure 6, the overall gas generation potential **on the site** is 'Moderate to High'. This is based on a conservative worst-case scenario and considers the highest source generation potential.

BS8576 Figure 6 also provides further guidance on monitoring frequencies for Low to Moderate gas generation potential sites extracted below in Figure 7-1.

Figure 6 Decision matrix for initial monitoring

| Gas monitoring requirements                                                                                                               | Generation potential of source |     |          |      |           |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----|----------|------|-----------|
|                                                                                                                                           | Very low                       | Low | Moderate | High | Very high |
| Gas monitoring might not be necessary                                                                                                     |                                |     |          |      |           |
| Gas monitoring over a period of 2 months with up to weekly measurements                                                                   |                                |     |          |      |           |
| Gas monitoring over a period of 2 months up to 6 months with up to fortnightly readings                                                   |                                |     |          |      |           |
| Gas monitoring over a period of 6 months up to 12 months with up to fortnightly readings. Use high frequency monitoring where appropriate |                                |     |          |      |           |

NOTE The darker the section on the matrix, the more likely it is that monitoring is needed.

Figure 7-1 - Figure 6 BS8576

Based on the requirements defined in the appropriate standards, the worst-case requirement would be readings taken over a two month period and up to six month period, with up to fortnightly measurements.

Table 5.5a and Table 5.5b within CIRIA guidance C665 (Assessing Risk Posed by Hazardous Ground Gasses to Buildings) as shown in Figure 7-2 outline the 'idealised/typical' frequencies and periods. As highlighted in Section 5 of CIRIA guidance C665, 'that during longer periods of monitoring, once the temporal pattern of gas emission is established, monitoring frequency can be decreased unless specific threshold concentrations are detected'. As such the framework outlined within Table 5.5a and Table 5.5b should be considered as guidance only when compared to that detailed in the current Standard BS8576.

Regardless, taking these tables as a framework, this would recommend a monitoring period of 6 to 12 months with 9 to 12 visits:

**Table 5.5a**

**Typical/idealised periods of monitoring (after Wilson et al, 2005)**

|                            |                                 | Generation potential of source |          |          |                        |           |
|----------------------------|---------------------------------|--------------------------------|----------|----------|------------------------|-----------|
|                            |                                 | Very low                       | Low      | Moderate | High                   | Very high |
| Sensitivity of development | Low (commercial)                | 1 month                        | 2 months | 3 months | 6 months               | 12 months |
|                            | Moderate (flats)                | 2 months                       | 3 months | 6 months | 12 months              | 24 months |
|                            | High (residential with gardens) | 3 months <sup>1</sup>          | 6 months | 6 months | 12 <sup>1</sup> months | 24 months |

**Table 5.5b**

**Typical/idealised frequency of monitoring (after Wilson et al, 2005)<sup>3</sup>**

|                            |                                 | Generation potential of source |     |          |                 |           |
|----------------------------|---------------------------------|--------------------------------|-----|----------|-----------------|-----------|
|                            |                                 | Very low                       | Low | Moderate | High            | Very high |
| Sensitivity of development | Low (commercial)                | 4                              | 6   | 6        | 12              | 12        |
|                            | Moderate (flats)                | 6                              | 6   | 9        | 12              | 24        |
|                            | High (residential with gardens) | 6 <sup>1</sup>                 | 9   | 12       | 24 <sup>1</sup> | 24        |

**Note**

- 1 NHBC guidance also recommends this period of monitoring (Boyle and Witherington, 2007).
- 2 There is no industry consent over "high", "medium" or "low" generation potential of source.
- 3 At least two sets of readings should be at low and falling atmospheric pressure (but not restricted to periods below <1000 mb) known as worst case conditions. Historical data can be used as part of the data set (Table 5.5b).

**Figure 7-2 - Table 5.5a, 5.5b Excerpted from C665**

As part of the RSK and Hexa ground investigations 10 no. monitoring wells were installed and monitored for bulk gases. A summary of the monitoring wells and the number of times the positions have been monitored during the Hexa Ground Investigation is provided in Table 7-1.

**Table 7-1 - Number of visits of Groundwater and Gas Monitoring Visits**

| Exploratory Hole ID | Reference | Response Zone (m bgl) | Strata Screened                                                                   | No. of times monitored (HEXA) | No. of times monitored (RSK) |
|---------------------|-----------|-----------------------|-----------------------------------------------------------------------------------|-------------------------------|------------------------------|
| RSK, 2024           | RO1       | 5.00-14.00            | Pennine Lower Coal Measures                                                       | 3*                            | 6                            |
|                     | RO3       | 6.00-8.00             | Pennine Lower Coal Measures                                                       | 3*                            | 6                            |
|                     | WS01      | 0.30-1.00             | Clay                                                                              | 4                             | 6                            |
|                     | WS02      | 1.00-4.00             | Clay (within zone indicated to have been worked based on adjacent Hexa locations) | 4                             | 6                            |
|                     | WS04      | 0.50-1.50             | Clay                                                                              | 4                             | 6                            |
|                     | WS05      | 1.00-2.00             | Clay                                                                              | 3                             | 6                            |
| Hexa, 2025          | RH201     | 13.00-15.00           | Coal Workings                                                                     | 2***                          | -                            |
|                     | RH203     | 3.00-4.00             | Potential Coal Workings                                                           | 4                             | -                            |
|                     | RH205     | 19.00-20.00           | Coal Workings                                                                     | 3**                           | -                            |
|                     | RH206     | 21.50-22.50           | Coal Workings & PLCM                                                              | 4                             | -                            |

\* Select RSK boreholes were inaccessible during the first monitoring visit due to ceased well covers requiring remedial action.

\*\*Ground Gas Monitoring stopped due to flooding of the well head.

\*\*\*Position inaccessible due to a skip present on 3rd visit

A total of 3 to 4 No. visits on Hexa drilled positions and 9 to 10 No. visits on RSK drilled positions have been undertaken by Hexa and RSK with the RSK monitoring period being undertaken between November 2023 and January 2024 and Hexa's monitoring was undertaken between July and August 2025. As such the total amount of spot monitoring is considered too broadly comply with the referenced guidance when the data set is considered as a whole.

In addition to frequency and total number of spot visits consideration should be given to the range of temporal and atmospheric conditions under which monitoring was undertaken. This adds confidence to the data set. Given the monitoring periods were undertaken during winter and late spring/early summer months a suitable range of temporal conditions have been monitored with recorded temperatures across the rounds ranging from -1° to 22°C.

With regards to atmospheric conditions monitoring rounds have been completed during periods of low (<1000 mb) atmospheric pressure with low and falling pressure trends by RSK (2024) and for one visit during the Hexa gas monitoring (2025). TB17 notes that the monitoring of 'worst case' atmospheric pressure conditions is relevant only when there is likely to be a reservoir of gas beneath or within influencing distance of the site. The conceptual site model indicates that the likelihood of a reservoir of gas being present at the site is low relatively low.

The monitoring round undertaken by Hexa on 4th August 2025 was undertaken at the end of a pressure drop of around 10.5mb over a 10hr period (based on recorded pressure at Eckwitt Station) with a 4mb fall in the three hours preceding the monitoring event. This reading was undertaken close to the 'worst case' zone defined in TB17. As such the pressure ranges including low and falling pressure events are considered to be suitably representative.

## 7.4 Gas Data Assessment

### 7.4.1 Suitability

Consideration of the suitability of the wells is required to ensure that data collected is representative and reflective of the ground gas regime.

Deeper monitoring wells have been installed in both the Hexa and RSK investigation. The depths of the boreholes are deeper than would typically be advised for ground gas assessment however they provide important context with regards to mine gas risk assessment, primarily in forming if the workings are likely/unlikely to be flooded.

The presence of groundwater is also a material consideration in shallow wells on the site which have targeted areas of Made Ground (likely backfill) and also natural strata which may represent the pathway for gas migration.

**Table 7-2 - Monitoring well response zones and if they were flooded at the time of the Monitoring Visits.**

| Exploratory Hole ID | Reference | Response Zone (m bgl) | Response Zone Flooded (Yes/No) |
|---------------------|-----------|-----------------------|--------------------------------|
| RSK, 2024           | RO1       | 5.00-14.00            | No                             |
|                     | RO3       | 6.00-8.00             | Yes                            |
|                     | WS01      | 0.30-1.00             | No                             |
|                     | WS02      | 1.00-4.00             | No                             |
|                     | WS04      | 0.50-1.50             | No                             |
|                     | WS05      | 1.00-2.00             | No                             |
| Hexa, 2025          | RH201     | 13.00-15.00           | Yes(Round1) No(Round2)         |
|                     | RH203     | 3.00-4.00             | No                             |
|                     | RH205     | 19.00-20.00           | Yes                            |
|                     | RH206     | 21.50-22.50           | Yes                            |

Based on the review of the monitoring data the wells installed within RO3, RH205 and RH206 would not be considered suitable for gas monitoring. These wells do however highlight that at the workings within the suspected Flockton Thick seam are majority flooded which greatly reduces their potential for mine gases to be present. This information is presented within Table 7-2.

Within RH201 groundwater levels dropped between the first and second visit with the levels dropping into the screened section of the well, potentially representing a section of unflooded workings within the workings. During the third and fourth rounds this well was not accessible due to a skip.

### 7.4.2 Data Summary

Table 7-3 presents a summary of the peak ground gas data recorded across all monitoring rounds. Hexa Gas monitoring data is provided in Appendix F.

**Table 7-3 - Combined Gas Monitoring Results from RSK Ground Investigation (2024) and HEXA Ground Investigation (2025) with Peak CH<sub>4</sub>/Co<sub>2</sub> and Min Oxygen**

| Exploratory Hole ID | Strata Screened             | Peak Methane (CH <sub>4</sub> %/vol) | Peak Carbon Dioxide (CO <sub>2</sub> %/vol) | Minimum Oxygen (%/vol) |
|---------------------|-----------------------------|--------------------------------------|---------------------------------------------|------------------------|
| RH201 (HEXA)        | Coal Workings               | <0.1                                 | 0.4                                         | 19.7                   |
| RH203 (HEXA)        | Potential Coal Workings     | <0.1                                 | 4.6                                         | 16.3                   |
| RH205 (HEXA)        | Coal Workings               | <0.1                                 | 1.9                                         | 17.5                   |
| RH206 (HEXA)        | Coal Workings & PLCM        | <0.1                                 | 0.3                                         | 19.1                   |
| RO1 (RSK)           | Pennine Lower Coal Measures | 0.3                                  | 5.5                                         | 0.3                    |
| RO3 (RSK)           | Pennine Lower Coal Measures | 0.9                                  | 6.2                                         | 0.5                    |
| WS01 (RSK)          | Clay                        | 0.6                                  | 4                                           | 14.1                   |
| WS02 (RSK)          | Clay                        | 0.4                                  | 11.7                                        | <0.1                   |
| WS04 (RSK)          | Clay                        | 0.9                                  | 2.5                                         | 10.3                   |
| WS05 (RSK)          | Clay                        | 0.7                                  | 6.6                                         | 3.4                    |

#### 7.4.3 Flow

Across the monitoring rounds undertaken the highest flows were recorded in R03 during the RSK monitoring with negative flows recorded on all rounds however as noted in Table 7-2 the well was flooded on all visits and this is considered likely the cause of these readings rather than an indication of potential mine gas risk.

Within unflooded wells peak and steady flows positive flows were recorded across all monitoring rounds. Peak positive results were recorded by RSK at 0.1 l/hr (with a steady state of 0.1 l/hr) which is the limit of detection of the analyser. Within the Hexa investigation all flows in all wells (RSK and HEXA) were recorded at <0.1l/hr.

#### 7.4.4 Methane

Methane was recorded at generally low levels (below detection limits <0.1%) within the Hexa gas monitoring rounds (2025) and <1% in the RSK (2024) monitoring rounds.

#### 7.4.5 Carbon Dioxide

Carbon Dioxide were recorded at moderate levels with four positions (R01, R03, WS02, WS05) having peak CO<sub>2</sub> levels above 5%.

The highest recorded methane concentrations were recorded at a peak value of 15.1% in WS02.

#### 7.4.6 Carbon Monoxide

Carbon monoxide was not recorded above detection limits in any of the boreholes across both monitoring programs.

For this reason it is unlikely to pose a risk to development and not considered further.

### 7.5 Elevated Carbon Dioxide

Levels of carbon dioxide in select shallow wells are recorded >5% warranting further consideration in accordance with BS8485.

It is notable that where elevated Carbon Dioxide was recorded depleted Oxygen was also recorded. In the context of mine gas risk CL:AIRE Coal Mine Gas Guidance notes that *'Carbon dioxide and depleted oxygen are commonly recorded in monitoring wells installed in either unworked strata with no credible pathway to workings or in superficial deposits. This is caused by carbon cycling processes that occur in the vadose zone such as biological oxidation and the concentration varies with temperature, soil moisture, nutrient availability and oxygen supply.'*

This occurrence is further detailed in CL:AIRE Research Bulletin 17 'A Pragmatic Approach to Ground Gas Risk Assessment' (2012), *'Gas concentration in the ground (or monitoring well) should not be confused with volume of gas present. The two are very different and a small volume of gas can give rise to a high concentration in a monitoring well.'* Gas trapped within pore spaces in the soil can readily collect in monitoring wells installed in the ground providing this over estimation of total gas concentration. Similarly microbial action (respiration) can occur within monitoring wells producing elevated gases, typically Carbon Dioxide and associated reduction in oxygen.

The source of bulk gases within monitoring wells can be assessed using ternary plots. Recorded concentrations within wells at the site have been plotted and are shown in Figure 7-3.

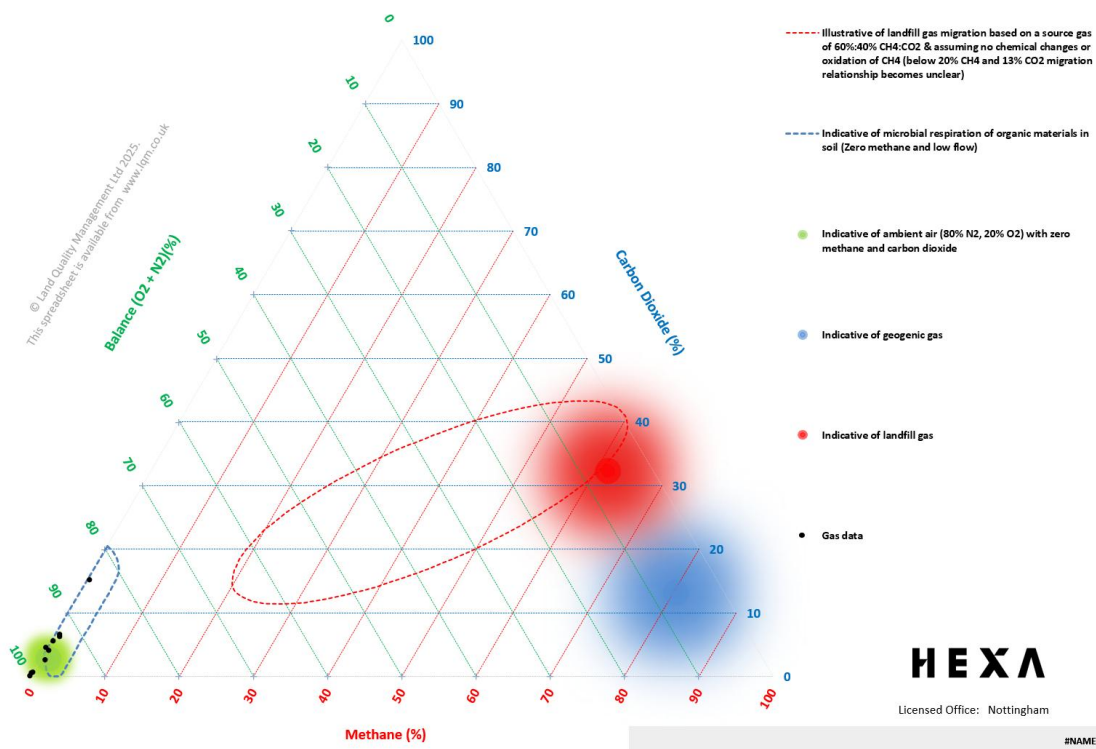


Figure 7-3 - Relationship between Carbon dioxide, methane, and balance of gas + oxygen.

This graph illustrates that there is no indication of landfill gas or other sources of bulk ground gas. The concentrations recorded are most likely attributable to microbial respiration occurring within the borehole.

The data points on the ternary plot are based on peak methane and carbon dioxide concentrations, alongside minimum oxygen levels. While these readings may not represent typical site conditions, they highlight a potential worst-case scenario for ground gas presence.

As noted in the CL:AIRE Mine Gas Risk Guidance, carbon dioxide migrating from depth may also plot within the same zone highlighted in Figure 7-3. Where this occurs, it is expected that elevated carbon dioxide levels will not be accompanied by a corresponding decrease in the oxygen:nitrogen ratio, i.e., there is no oxygen consumption, as would occur with microbial activity.

To confirm this, carbon dioxide and oxygen data can be plotted together. In cases of deep-source carbon dioxide, results typically plot well above the biological respiration line shown on Figure 7-4. However, this is not the case with the data collected from this site, further supporting the interpretation that the elevated concentrations are due to biological activity rather than mine gas.

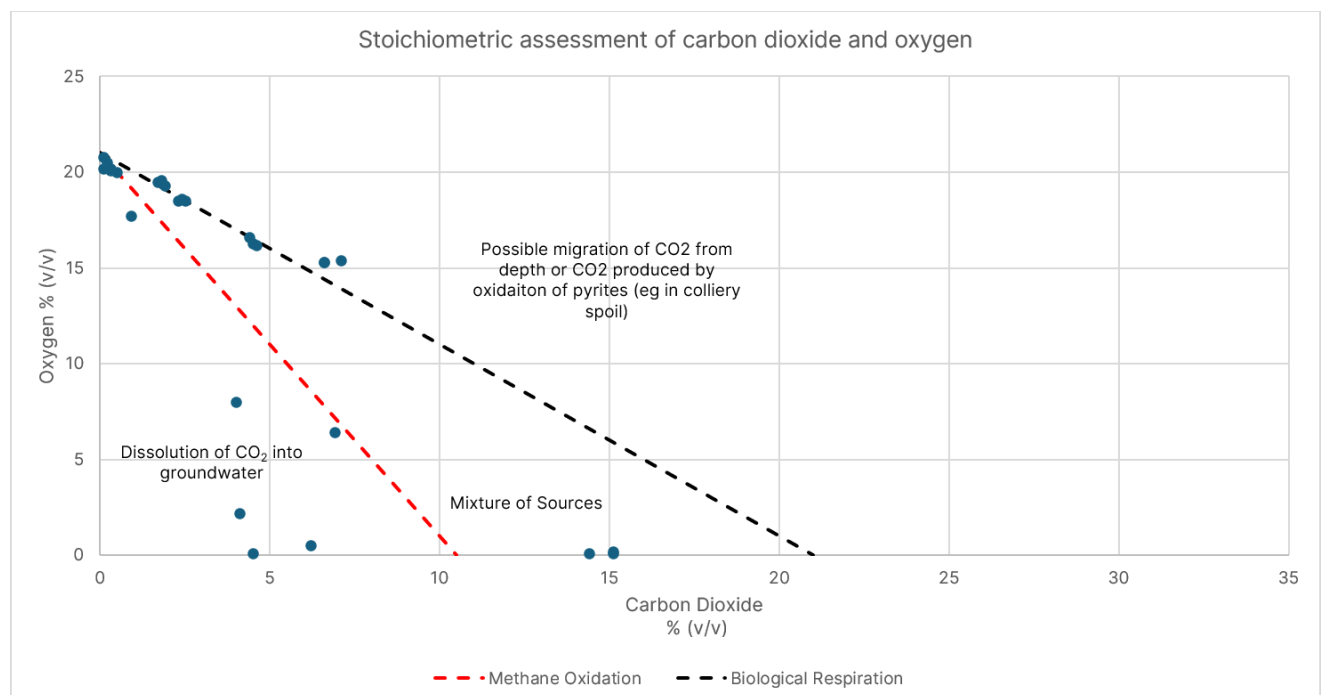


Figure 7-4 - Stoichiometric Assessment of Carbon Dioxide and Oxygen

## 7.6 Gas Screening Values

The CL:AIRE guidance advises that the use gas screening value (GSV) as part of mine gas risk assessment should be used with caution. Given that the assessment of available data to date has not identified the presence of mine gas the use of GSVs as part of the line of evidence approach used is considered applicable. The definition of GSV in BS8485:2015+A1:2019 is provided below for clarity in Figure 7-5:

### 3.4 gas screening value (GSV)

flow rate of a specific hazardous gas representative of a site or zone, derived from assessment of borehole concentration and flow rate measurements and taking account of all other influencing factors, in accordance with a conceptual site model

*NOTE 1 This definition is different from the definition of GSV in CIRIA C665 [6].*

*NOTE 2 GSV is based on measured data but ultimately derived using professional judgement.*

Figure 7-5 - Excerpt from BS8485:2015+A1:2019

Clause 6.2.1.1 in BS8485:2015+A1:2019 dictates that GSVs should be derived from the CSM and monitoring data collected from gas monitoring standpipes installed in the ground.

As such the data cannot be viewed in isolation and must be considered against the CSM.

As discussed above no positive flows have been recorded across a range of atmospheric and temporal conditions.

Using the method detection limit of the analyser and therefore a positive flow of 0.1 l/hr as defined in Clause 3.4 of BS8485:2015+A1:2019, calculated GSVs would fall within a Characteristic Situation 1 (CS1) classification.

## 7.7 Conclusion

A detailed review of the Conceptual Site Model (CSM) has been undertaken for the site, with reference to relevant British Standards and supplemented by recognised industry guidance, including specific documents relating to mine gas risk assessment.

The CSM has been validated through intrusive ground investigation and sufficient monitoring, undertaken in accordance with current British Standards as outlined in this report.

Mine workings identified beneath the site are considered a potential source of ground gas. However, the assessment to date has not identified any credible evidence of mine gas emissions. The deeper workings are largely flooded, and where unflooded, monitoring has generally recorded low gas concentrations.

A critical review of the monitoring data confirms the validity of the CSM. Instances of elevated carbon dioxide are considered to be associated with gas trapped in pore spaces and/or microbial respiration, a commonly recognised phenomenon in ground gas monitoring, and are not considered indicative of a ground gas risk.

Based on all available information, there are sufficient lines of evidence to characterise the site as Low Risk (Characteristic Situation 1).

However, the presence of underlying mine workings remains a factor, and mitigation, such as grouting, is likely to be required to render the site suitable for the proposed development. Accordingly, the ground gas CSM should be re-assessed during and after any grouting works. This may include monitoring of existing or new wells (e.g RH201) during the works.

The potential for unrecorded mine shafts cannot be discounted. These may represent a direct pathway for mine gas and should be taken into account as the development progresses.

As part of the development works and in accordance with best practice the existing monitoring wells should be suitability decommissioned through grout filling to remove potential pathways for mine gas.

## 8.0 Preliminary Waste Assessment

This Section provides a preliminary waste assessment for shallow soils likely to be encountered during the development at the site.

The assessment has been based on provided laboratory reports included as part the ground investigation undertaken by Hexa in May 2025. Samples recovered during the Hexa investigation were recovered specifically to support this assessment and were selected to be representative of the strata encountered.

For the purposes of this assessment the site soils are being considered as List of Waste (LoW) 17 Construction and Demolition Wastes (including excavated soil from contaminated sites) which can be coded:

- 17 05 03: Soil and stones containing hazardous substances (i.e. Hazardous)
- 17 05 04: Soil and stones other than those mentioned in 17 05 03 (i.e. Non-hazardous).

Samples have been analysed for a broad suite of organic and inorganic compounds to facilitate a hazard classification screen in accordance with WM3 guidance.

Samples of asphalt concrete have also been tested to determine potential presence of coal tar and considered against LoW Codes:

- 17 03 01: Bituminous mixtures containing coal tar (i.e. Hazardous)
- 17 03 02: Bituminous mixtures other than those mentioned in 17 03 01 (i.e. non-hazardous)

Received results have been screened using Haz-Waste-Online software to determine applicable EWC waste codes for each sample.

### 8.1 Soils Assessment

A total of 7 samples recovered across both phases of investigation have been screened with samples recovered from Made Ground and reworked natural.

Asbestos fibres were not identified in any sample.

When screened with through Haz-waste all samples with the exception of the sample recovered from RH204 at 1.0 m returned a classification of Non-hazardous (EWC 17 05 04). The sample from RH204 reported a pH of 12.1 which is above the threshold for hazardous waste. The sample is recovered from reworked natural and immediately beneath sub-base including references to concrete. Concrete within Made Ground can give elevated pH during testing as it grounded and mixed, biasing the wider pH of the sample. A corresponding WAC sample of the same strata was scheduled which included additional pH testing reporting PH of 7.7, more comparable with the wider testing on the site and the observations made in the field. As such it is considered that the high pH in the soil sample from RH204 should be discounted.

As such to date all soils tested on the site as part of the Hexa investigation are preliminarily classified as **non-hazardous (EWC 17 05 04)**

As part of the Hexa investigation 7 No. samples of Made Ground and reworked natural were scheduled for Waste Acceptance Criteria Testing.

Of those seven samples, four (RH207, SA201, SA202, and SA203) exceeded the limits for inert landfill, exceeding both the Total Organic Carbon (TOC) and Loss on Ignition limits.

Samples exceeded the limits for inert waste landfill for lead (RH201) and fluoride (SA201, SA203).

Based on the initial testing undertaken it is recommended that Made Ground and reworked soils are considered unsuitable for disposal to an inert landfill and should be considered as Non-hazardous for offsite disposal.

Although this initial screen is considered suitable for a robust preliminary assessment it should be noted that the assessment of waste construction materials can be an iterative process and is driven by open market conditions. Waste carriers and receivers are not duty bound to accept waste and may require additional testing above that currently undertaken.

## 8.2 Asphalt Assessment

As existing areas of asphalt surfaces are to be broken out and potentially disposed off-site, PAH testing has been undertaken to identify whether benzo(a)pyrene is present at a level that is indicative of the presence of coal tar within the hardstanding.

Four hardstanding surface samples were tested for a suite of speciated polycyclic aromatic hydrocarbons (PAHs), as the benzo(a)pyrene concentration can be used as a PAH marker to classify bituminous mixtures in accordance with WM3. Laboratory testing indicates that one of four hardstanding samples contained concentrations of benzo(a)pyrene in excess of 50 mg/kg, thereby indicating the likely presence of coal tar within the hardstanding.

Table 8-1 - Recorded Benzo(a)pyrene levels within surfacing

| Location | Depth (m bgl) | Recorded Level of Benzo(a)pyrene (mg/kg) | Exceedance of Benzo(a)pyrene Indicator Threshold |
|----------|---------------|------------------------------------------|--------------------------------------------------|
| RH201    | 0.10          | 720                                      | Yes                                              |
| RH202    | 0.05          | <0.05                                    | No                                               |
| RH204    | 0.05          | <0.05                                    | No                                               |
| RH205    | 0.05          | 1.4                                      | No                                               |

As seen in Table 8-1, coal tar is likely present in the car park to the north of the site (RH201). This area is distinct from the hardstanding found to the south of the site, where coal tar is unlikely to be found, and as such should be treated separately.

The asphalt surfacing from this area can be considered hazardous (waste code 17 03 01) and disposed of separately to the asphalt surfacing to the rear of the school.

The area to the south may be suitable for disposal as non-hazardous (waste code 17 03 02). However, this should be confirmed following excavation, careful segregation and stockpiling and additional testing.

## 9.0 Revised Conceptual Site Model

A Revised Conceptual Site Model (CSM) is summarised in Table 9.0.

The CSM details the source-pathway-receptor linkages to identify potential pollutant linkages (PPL) that may be present on the site currently or realised through development. The QRA details the associated level of risk relating to these potential pollutant linkages.

The CSM and QRA concern risk to human health and water environment (controlled waters).

The QRA follows the framework outlined within CIRIA C552. Unless specifically stated it does not necessarily refer to an immediate risk and is intended to be used as a tool to assess the necessity for further assessment/investigation.

It has been assumed that any future construction works on site will be undertaken in compliance with current health and safety legislation specifically the Construction Design Management (CDM) Regulations, 2015 which require that potential risks to human health and the environment from construction activities are appropriately identified and all necessary steps taken to eliminate / manage that risk. these requirements. Reference should be made to the environmental testing results discussed within Section 6.0 and presented within Appendix C.

**Table 9-1** - Conceptual Site Model

| Source                                                                                              | Pathway                                                                                                                                                                             | Receptor                                                                     | Risk Classification                                                                                                                                                                                                                                                                                                                                     | Recommendation                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Human Health</b>                                                                                 |                                                                                                                                                                                     |                                                                              |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |
| <b>On-site Sources of potential contamination:</b><br>Made Ground from previous development on site | Risk of chronic disease caused by:<br>Dermal contact with and or ingestion of contaminants in soil and soil derived dust.<br>Inhalation of soil derived dust and fibres (asbestos). | Future site users, visitors and trespassers.<br>&<br>Off-site residents/uses | <b>Low</b><br><br>No concentrations of contaminants of concern were reported above the adopted generic assessment criteria.<br><br>No asbestos identified.                                                                                                                                                                                              | Strategy for unexpected contamination should be followed (Appendix G) in the unlikely event that gross or mobile phase contamination is identified during development.                                                                     |
| Ground born gasses (excluding radon) (elevated Carbon Dioxide reported above instrument limits)     | Migration of ground borne gases leading to:<br>Inhalation of hazardous gases (Carbon dioxide, methane).<br>Build up of gases in enclosed areas causing an explosive atmosphere.     | Future site users, visitors and trespassers.<br>&<br>Off-site residents      | <b>Low</b><br><br>No notable putrescible material was identified within the Made Ground and natural deposits, therefore no significant ground gas source identified on site.<br><br>No evidence of Mine gases have been recorded to date.<br><br>An assessment of the ground gas conceptual model in accordance with BS 8576:2013 indicates a low risk. | Presence of mine workings underlying the site requires ongoing consideration of the GCSM to confirm that ground works do not increase the risk of from mine gases.<br><br>Site is currently assessed to be Characteristic Situation 1.     |
| <b>Controlled Waters</b>                                                                            |                                                                                                                                                                                     |                                                                              |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |
| Made Ground from previous development on site                                                       | Vertical migration of contaminants through the unsaturated zone to underlying groundwater.                                                                                          | Groundwater                                                                  | <b>Low</b><br><br>No exceedances in contaminants were identified or any gross mobile phase contaminants. were identified within the Made Ground.                                                                                                                                                                                                        | No mitigation measures are required as part of future works.<br><br>Strategy for unexpected contamination should be followed (Appendix G) in the unlikely event that gross or mobile phase contamination is identified during development. |
|                                                                                                     | Horizontal Migration over and through the superficial deposits (soils).                                                                                                             | Secondary A bedrock Aquifer                                                  |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |

## 10.0 Conclusions and Recommendations

### 10.1 Contamination

Human Health GQRA undertaken by Hexa has revealed contaminants above limit of detection, with one sample of Made Ground exceeding the GAC limits imposed due to the presence of coal tar in the bituminous hardstanding.

No asbestos was recorded in any sample analysed.

No visual or olfactory evidence of contamination was encountered.

The risk to Controlled Waters is considered low and no further assessment or mitigation is considered to be required.

### 10.2 Ground Gas

Mine workings identified beneath the site are considered a potential source of ground gas. However, the assessment to date has not identified any credible evidence of mine gas emissions.

Based on all available information, there are sufficient lines of evidence to characterise the site as Low Risk (Characteristic Situation 1).

However, the presence of underlying mine workings remains a factor, and mitigation, such as grouting, is likely to be required to render the site suitable for the proposed development. Accordingly, the ground gas CSM should be re-assessed during and after any grouting works. This may include monitoring of existing or new wells (e.g RH201) during the works.

The potential for unrecorded mine shafts cannot be discounted. These may represent a direct pathway for mine gas and should be taken into account as the development progresses.

As part of the development works and in accordance with best practice the existing monitoring wells should be suitability decommissioned through grout filling to remove potential pathways for mine gas.

### 10.3 Ground Model

#### 10.3.1 Ground Condition Summary

The ground conditions encountered on site indicates between 0.05 m and 5.00 m of Made Ground across the site, consisting of bituminous hardstanding, topsoils, subbases and shallow workings on the south western side.

This is underlain by the residual soil of the Pennine Lower Coal Measures, typically a firm clay containing mudstone and coal gravel, encountered at a maximum depth of 6.00 m bgl. A shallow coal seam is present across the site and is worked on the south western side and is intact on the central and eastern side of the site.

The solid geology of the Pennine Lower Coal Measures underlays this, predominantly interbedded mudstone and sandstones.

Two main coal seams and lower coal seams were encountered during this investigation. The shallow coal seam was encountered across the site. The seam is presumed to have been worked along the south western edge of the site and appears to be unworked and intact to the centre and eastern sides of the site. This shallow coal seam has been encountered at 0.80 - 6.15 m bgl at an elevation of 126.02 - 120.72 m AOD. This coal seam is presumed to be mined from the surface using an opencast method.

The middle seam was encountered between 13.00 - 20.00 m bgl at an elevation of 112.98-106.46 m AOD and a maximum thickness of 3.02 m. Evidence of coal workings was recorded within this seam across the entire site.

Lower seams were encountered within three boreholes across the Hexa and RSK Ground Investigations. In the RSK investigation, potential coal workings were noted at 25.50 m bgl (100.61 m AOD) where drilling was terminated on an obstruction and suspected to be metal. In borehole R05, coal was encountered at 32.20 - 32.70 m bgl at an elevation of 92.98 - 92.48 m AOD. This position was open holed and there is no detail/no evidence to suggest mine workings. The Hexa Ground Investigation encountered poor quality coal at RH206 at 21.90 - 22.07 m bgl this had elevation of 103.74-103.57 m AOD.

Groundwater was recorded in the majority of wells and the groundwater levels varied across the site. The groundwater level is approximately 121.16 - 108.64 m AOD based on the Hexa groundwater monitoring visits.

#### **10.4 Stabilisation of Mine Workings**

The thickness and depth of encountered mine workings is considered to pose a risk to the proposed development and associated foundations, for this reason prior to development stabilisation of the workings is recommended. The most appropriate stabilisation method is considered to be grouting solution is recommended as part of the site remediation.

Grout stabilisation will need to be undertaken underneath the footprint of all proposed structures including but not inclusive to the teaching block, MUGA, retaining structures and vulnerable service runs. There will also need to be an offset of grout treatment from the building.

A detailed scope/strategy of works and specification will need to be prepared once development layouts are confirmed, however, it is anticipated that the stabilisation will comprise drilling and grouting of identified and suspected workings of the Flockton Thick (112.98-106.46 m AOD) and the lower seams (approximately 103.57 m to 100.61 m AOD). This scope/strategy should be developed with reference to CIRIA Abandoned mine workings manual (C758D) and be submitted to the Mining Remediation Authority /Coal Authority for approval prior to commencement.

Whilst grouting there will be disturbance in the coal mine workings, therefore, as part of all the stabilisation works continual mine gas monitoring should be undertaken.

Consequently, in order to in support of the development site being deemed suitable for the planned end use the following recommendations are made

- Production of a Scope of Works and Specification for the treatment of all the shallow mine workings present beneath the proposed development.
- Undertaking ongoing ground gas risk assessment during and on completion of the proposed stabilisation works.

## 10.5 Foundations

The presence of workings and also intact coal at a shallow depths are likely to negate the adoption of shallow foundations for the proposed development deep made ground in areas of former workings are not considered to be a suitable founding strata and where intact the coal is likely to be located at or within influencing distance of shallow foundations and there foundations would need to be taken through the seams to depths which are likely to render mass-fill economically unviable.

It is likely that a piled solution (post stabilisation) will be the most appropriate to support structural loads.

It is anticipated that structural loads will be relatively low and that pile may be formed within the PLCM between the shallow and suspected Flockton Thick seam however the design of the piles should be undertaken by specialist with due regard of the depth to (treated) workings and where deemed necessary advanced through treated zones.

A Coal Authority permit will be required in advance of piling works commencing and works should be undertake with cognisance of Coal Authority guidance 'Guidance on managing the risk of hazardous gases when drilling or piling near coal' 2019.

## 10.6 Floor Slab

Given the depth of Made Ground noted in areas of shallow working it is recommended that a suspended slab is adopted.

## 10.7 Concrete Classification

From the BRE Suite D testing undertaken on the samples of bedrock, a DS1-AC1 classification was found for three of the samples. However, the two of the samples from RH206 were found to have a high value of Total Sulphur and as such classified as DS4-AC4. Therefore, a DS4-AC4 classification should be used in the design of any concrete foundations which are embedded in the bedrock on site.

## 10.8 Groundworks

Shallow excavations (<1.2 m) into the natural soils were generally observed to be stable. However, excavation support should be considered in areas of deeper Made Ground or where excavations are left open for extended periods.

Where shallow coal is encountered during excavations (e.g., for infrastructure or pile caps), it should be inspected by a suitably qualified engineer, who should assess for the presence of open joints that may indicate a potential ground gas risk. In line with CIRIA C758D guidance, coal seams encountered in excavations should be fully excavated and replaced with suitable fill material. Seams identified beneath the site are not known to be susceptible to spontaneous combustion, however, suitable precautions should also be taken against combustibility during excavations.

Large-scale cut and fill operations are not anticipated based on current and proposed site levels. However, due to the variability of the shallow soils, it is recommended that any earthworks are carried out in accordance with a detailed Earthworks Specification.

Shallow groundwater was not encountered during drilling, however, it is anticipated that perched water may be present in shallow excavations (and indicated by post site work monitoring) and dewatering of shallow excavations may be required in the form of typical pump sumps.

A Coal Authority Permit should be obtained prior to works commencing given the shallow presence of coal at the site. Specific requirements for actions to be undertaken during excavations are likely to be confirmed by the Mining Remediation Authority/Coal Authority as part of the permit process, however, in general where shallow coal is encountered within excavations (e.g. infrastructure or pile caps) it should be inspected by a suitably qualified Engineer.

### 10.9 Pavement Design

It is recommended that for preliminary design a CBR of 3% is adopted for pavements to be constructed over residual natural soils. Higher CBRs may be achievable following proof rolling and removal or treatment of soft/loose spots.

It must be noted that weather conditions and machinery traffic over the ground can impact the conditions and reduce the CBR values, therefore it is suggested that the sub-formation is protected using a sacrificial layer of suitable granular materials up to the point of placement of the pavement build ups.

Consideration of the risk posed by shallow workings should be considered as part of the detailed treatment strategy and unacceptable risk to permanent hardstanding suitably mitigated.

Confirmatory testing to prove design CBRs should be undertaken at the exact line and level of pavement construction formation.

### 10.10 Infiltration

Infiltration testing was undertaken as part of the Hexa site investigation, with results provided in Appendix E.

The presence of relatively deep Made Ground, associated with previous coal excavation, and the existence of shallow coal seams pose a potential risk to soakaway systems. While general infiltration through soft landscaping is unlikely to present a significant hazard, point infiltration via soakaways may lead to collapse/settlement of underlying fill, particularly in areas affected by known or unrecorded shallow workings.

As a result, the use of soakaways is not recommended as part of the proposed drainage design.

### 10.11 Recommendations

#### 10.11.1 Contamination and Waste

- Contamination requiring formal remediation has not been encountered. General vigilance should be maintained during earthworks for any unexpected visual or olfactory signs of contamination and if suspected the procedure in Appendix G should be followed.
- Made Ground should be considered as non-hazardous waste for offsite disposal.
- Asphalt should be screened on-site using PAK spray and visual/olfactory indicators as areas to the north have been shown likely to contain coal tar. Asphalt should be segregated to avoid cross contamination.
- No asbestos was identified in soils to date, however, suitable precautions should be considered by the Contractor in line with any brownfield development

#### 10.11.2 Mine Gas and Mine Workings Stabilisation.

- A Scope of Works and Specification should be produced for treatment (via grouting) of all shallow mine workings which may impact ground stability.
- The stabilisation strategy should comply with CIRIA C758D guidance and be submitted to the Coal Authority for approval.

- Reassessment of the ground gas Conceptual Site Model (CSM) should be carried out during and after mine working stabilisation, especially in proximity to the grouted zones.
- The potential for unrecorded mine shafts remains; these may act as gas pathways and should be considered during ongoing development.
- Existing monitoring wells should be decommissioned using grout post-development to remove potential migration pathways for ground gas.

#### 10.11.3 Foundations and Excavations

- Construction should be undertaken in line with guidance outlined in CIRIA C758D.
- A Coal Authority Permit should be obtained prior to excavations which may intercept coal seams or shallow workings and for piling operations.
- Suitable risk assessments and method statement should be prepared to mitigate potential risk of mine gas release and spontaneous combustion of seams of during construction.

## Appendix A – Drawings

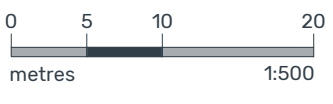


- LEGEND**
- Application Boundary
  - Asphalt Concrete (Vehicular Grade)
  - Asphalt Concrete (Pedestrian Grade)
  - Permeable PCC Concrete Block Paving Type 1
  - Permeable PCC Concrete Block Paving Type 2
  - Permeable PCC Concrete Block Paving Type 3
  - Concrete Hardstanding
  - Asphalt Concrete Multi Use Games Area (HPE25)
  - Cycle Parking (40 Spaces)
  - Accessible Cycle Parking (2 spaces)
  - External Canopy
  - 1.8m high Timber Close Board Fence with Matching Lockable Gate (with other fence types)
  - 3.0m high Sport Weldmesh Fencing (with matching lockable gates where indicated)
  - 2.4m high Secure Weldmesh Fencing (with matching lockable gates where indicated)
  - 1.8m high Secure Weldmesh Fencing (with matching lockable gates where indicated)
  - 1.2m high Bow Top Fencing (with matching lockable gates where indicated)
  - 900mm high Diamond Knee Rail
  - Existing Fence Retained (Subject to condition)
  - Active EV Charging Bays (4)
  - Accessible Bays (2)
  - Seats
  - Benches
  - Legacy Furniture Relocated (Subject to condition)
  - Legacy Storage Units
  - Legacy Cycle Storage Retained (Subject to condition)
  - Adventure Play Equipment (Spec tbc.)
  - Storage Container
  - Removable Bollard
  - Proposed Dwarf Wall
  - Proposed Tree Planting
  - Native Hedge Planting
  - Species Rich Ornamental Planting
  - Species Rich Native Scrub Planting
  - Amenity Grass
  - Existing Grassland & Vegetation Retained & Enhanced
  - Existing Trees & Vegetation Retained
  - Existing Trees & Vegetation Removed

NOTES

|                                                                                                                                                                                           |                 |         |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|--------------|
| REVISION   P06                                                                                                                                                                            | DATE   28.05.25 | BY   HN | CHECKED   KP |
| Revised in accordance with CEM6 feedback. 12m high timber fencing changed to 12m high bow top metal fencing                                                                               |                 |         |              |
| REVISION   P07                                                                                                                                                                            | DATE   18.06.25 | BY   KP | CHECKED   JE |
| Application boundary revised to include rugby field access. Car park turning head amended in accordance with latest swept path analysis. Planting numbers updated in accordance with BNG. |                 |         |              |
| REVISION   P08                                                                                                                                                                            | DATE   14.07.25 | BY   KP | CHECKED   JE |
| Existing main gate access retained for field maintenance access. Tree relocated. Bollards to car park increased, 1200mm spacing. Bin store access improved.                               |                 |         |              |

|               |                             |          |          |
|---------------|-----------------------------|----------|----------|
| CLIENT        | Bowmer + Kirkland           |          |          |
| PROJECT       | Co-Op Academy Smithies Moor |          |          |
| DRAWING TITLE | Whole Site Plan             |          |          |
| DRAWING No.   | SRP1128-ONE-ZZ-XX-D-L-0003  | REVISION | P08      |
| STATUS        | PRELIMINARY                 |          |          |
| SCALE         | 1:500 @ A1                  | DATE     | 24.04.25 |
|               |                             | DRAWN BY | KP       |







**Key:**

- Hand Dug Investigation Pits
- Rotary Open Hole
- Rotary Core
- BRE365 Infiltration Test
- Proposed Teaching Block
- Proposed MUGA

\*(GAS) Dual gas and groundwater install

|                                                                              |  |                |               |
|------------------------------------------------------------------------------|--|----------------|---------------|
| Project:<br>Co-op Academy Smithies Moor                                      |  | Status:<br>V01 |               |
| Drg Title:<br>Exploratory Hole Location Plan                                 |  | Drawn By: PS   |               |
|                                                                              |  |                | Date 15/07/25 |
|                                                                              |  | Scale: NTS     |               |
| Project No: Originator: Zone: Level: Type: Discipline: Category/Number: Rev: |  |                |               |
| 601124-HEX-00-XX-DR-GE-0001-P01                                              |  |                |               |

|                |      |              |       |     |
|----------------|------|--------------|-------|-----|
| GENERAL NOTES: | --   |              |       |     |
|                | Rev: | Description: | Date: | By: |





Key:

Rotary Open Hole

Rotary Core

BRE365 Infiltration Test

Proposed Teaching Block

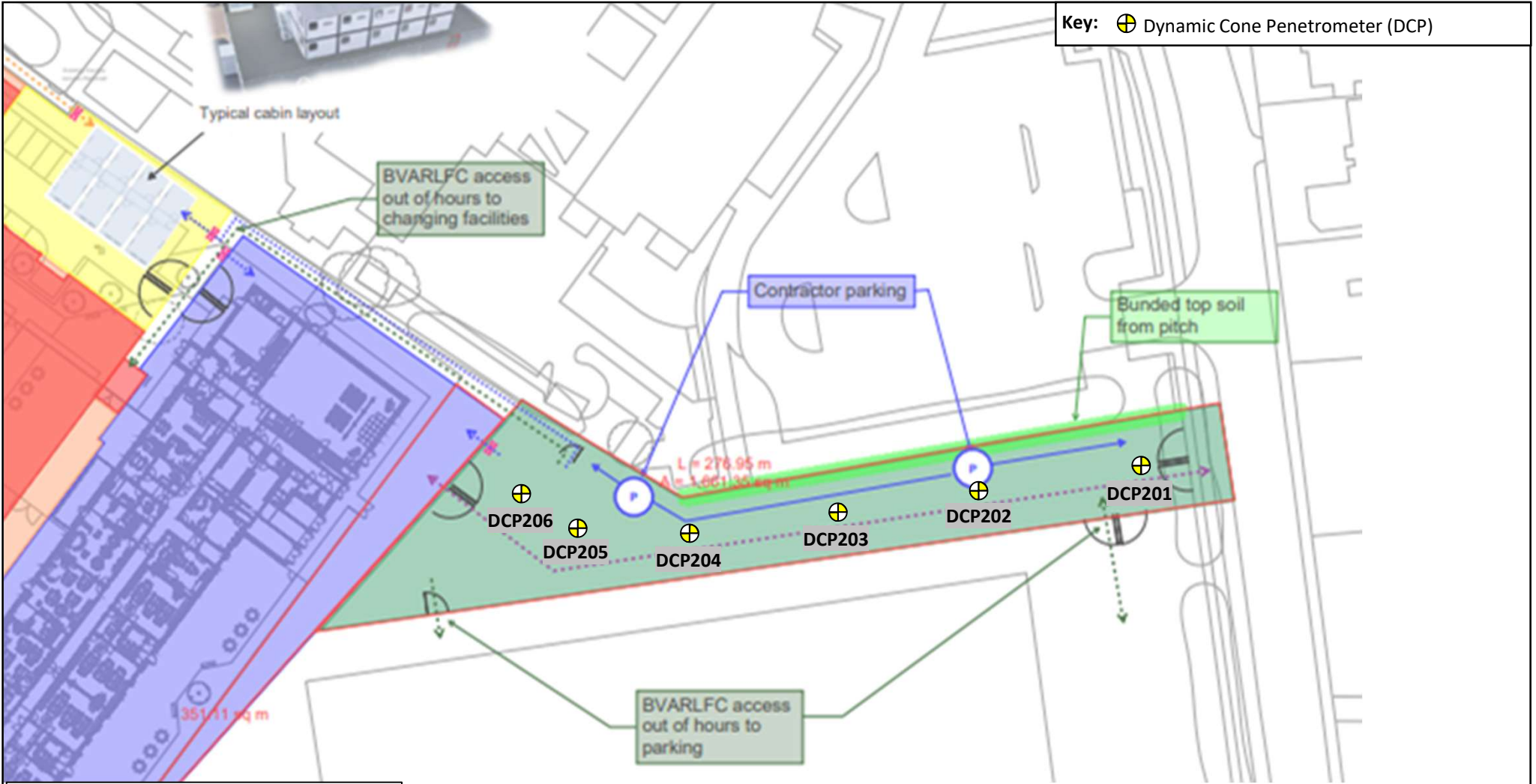
Proposed MUGA

\*(GAS) Dual gas and groundwater install

|                                                                              |  |                |               |
|------------------------------------------------------------------------------|--|----------------|---------------|
| Project:<br>Co-op Academy Smithies Moor                                      |  | Status:<br>V01 |               |
| Drg Title:<br>Exploratory Hole Location Plan –<br>Cross Sectional Lines      |  | Drawn By: PS   |               |
|                                                                              |  |                | Date 20/07/25 |
|                                                                              |  | Scale: NTS     |               |
| Project No: Originator: Zone: Level: Type: Discipline: Category/Number: Rev: |  |                |               |
| 601124-HEX-00-XX-DR-GE-0001-                                                 |  |                |               |

|                |      |              |       |     |
|----------------|------|--------------|-------|-----|
| GENERAL NOTES: | --   |              |       |     |
|                | Rev: | Description: | Date: | By: |

HEXA



**Note:** Site Phasing Plan supplied by B+K.

|                                                                              |  |                |               |
|------------------------------------------------------------------------------|--|----------------|---------------|
| Project:<br>Co-op Academy Smithies Moor                                      |  | Status:<br>V01 |               |
| Drg Title:<br>Exploratory Hole Location Plan -<br>DCPs for Haul Road         |  | Drawn By: PS   |               |
|                                                                              |  |                | Date 15/07/25 |
|                                                                              |  | Scale:         | NTS           |
| Project No: Originator: Zone: Level: Type: Discipline: Category/Number: Rev: |  |                |               |
| 601124-HEX-00-XX-DR-GE-0001-P01                                              |  |                |               |

|                |      |              |       |     |
|----------------|------|--------------|-------|-----|
| GENERAL NOTES: | --   |              |       |     |
|                | Rev: | Description: | Date: | By: |

HEXA

## Appendix B – Exploratory Hole Logs, Inspection Pits and Soakaways



# Open Hole Log

RH201  
Sheet 1 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422052.76  | Northing<br>424991.30 | Ground Level (m)<br>125.98 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill      | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                                                                                               |      |
|------------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|-----------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                        |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                                                                                                                                   |      |
|                        |                 |                   |              |         |             |            |            |            |      | 125.82       | (0.16)                      |        | MADE GROUND: Bituminous hardstanding.                                                                                                                                                         |      |
|                        |                 |                   |              |         |             |            |            |            |      | 125.68       | (0.16)                      |        | MADE GROUND: Yellow very sandy angular to subangular fine to coarse GRAVEL of brick and sandstone. With a low cobble content of sandstone.                                                    | 0.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (0.45)                      |        | MADE GROUND: Brownish red sandy angular to subangular fine to coarse GRAVEL of brick, concrete, mudstone and sandstone. With a medium cobble content of brick.                                |      |
|                        |                 |                   |              |         |             |            |            |            |      | 125.23       | (0.75)                      |        | MADE GROUND: Brownish red sandy angular to subangular fine to coarse very clayey GRAVEL of brick, concrete, mudstone and sandstone. With a medium cobble content of brick. [REWORKED NATURAL] | 1.0  |
|                        |                 |                   |              |         |             |            |            |            |      | 124.78       | 1.20                        |        | Soft to firm orangish grey gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone and coal. [Pennine Lower Coal Measures]                                                  | 1.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        | Brown and Grey CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                                                             | 2.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (1.80)                      |        |                                                                                                                                                                                               | 2.5  |
|                        |                 |                   |              |         |             |            |            |            |      | 122.98       | 3.00                        |        | Grey/Brown CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                                                                 | 3.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (0.85)                      |        |                                                                                                                                                                                               | 3.5  |
|                        |                 |                   |              |         |             |            |            |            |      | 122.13       | 3.85                        |        | Firm MUDSTONE with SANDSTONE (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                                                    | 4.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 4.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 5.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 5.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 6.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 6.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 7.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (9.15)                      |        |                                                                                                                                                                                               | 7.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 8.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 8.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 9.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 9.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               | 10.0 |
| Continued on next page |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                               |      |

| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions |    |               | Logger |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|--------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m                         | IP | Hand Tools    | PS     |
|                                                                                                                                                                                                                                                                                                                                                        | 1.20 - 17.20m                        | RC | Commachio 602 | PS     |



# Open Hole Log

RH201  
Sheet 2 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422052.76  | Northing<br>424991.30 | Ground Level (m)<br>125.98 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                                                                                                               |  |
|-------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|--------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------|--|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                                            | Legend | Description                                                                                                   |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        | As previous page.                                                                                             |  |
|                   |                 |                   |              |         |             |            |            |            |      | 112.98       | 13.00                                      |        | COAL (Possible slurry waste) (DRILLERS LOG). [POTENTIAL COAL WORKINGS]<br>Loss of returns at 13.0 m. (13.00m) |  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (2.45)                                     |        |                                                                                                               |  |
|                   |                 |                   |              |         |             |            |            |            |      | 110.53       | 15.45                                      |        | Grey CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                       |  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (1.75)                                     |        |                                                                                                               |  |
|                   |                 |                   |              |         |             |            |            |            |      | 108.78       | 17.20                                      |        | End of Borehole at 17.20m                                                                                     |  |

|                                                                                                                                                                                                                                                                                                                                                                   |                                      |                  |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions |                  | Logger<br>PS<br>PS |
|                                                                                                                                                                                                                                                                                                                                                                   | 0.00 - 1.20m                         | IP Hand Tools    |                    |
|                                                                                                                                                                                                                                                                                                                                                                   | 1.20 - 17.20m                        | RC Commachio 602 |                    |



# Open Hole Log

RH202  
Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422055.16  | Northing<br>424914.10 | Ground Level (m)<br>126.87 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |                                | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                                                                                                |      |
|-------------------|-----------------|-------------------|--------------|--------------------------------|-------------|------------|------------|------------|------|--------------|-----------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results                        | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                                                                                                                                    |      |
|                   |                 | 1.20              | SPT<br>B 1   | N=4 (1,1/1,1,1,1)              |             |            |            |            |      | 126.82       | (0.05)                      |        | MADE GROUND: Bituminous hardstanding.                                                                                                                                                          |      |
|                   |                 | 1.20 - 1.70       |              |                                |             |            |            |            |      | 126.72       | (0.49)                      |        | MADE GROUND: Light brown slightly sandy subangular coarse GRAVEL of limestone. [SUB BASE]                                                                                                      |      |
|                   |                 |                   |              |                                |             |            |            |            |      | 126.57       | (0.15)                      |        | MADE GROUND: Brown angular to subrounded fine to coarse GRAVEL of concrete, brick, quartzite and sandstone. With a medium cobble content of brick and concrete. ~1mm plastic membrane beneath. | 0.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              | (0.90)                      |        | Firm orangish grey slightly gravelly CLAY. Gravel is angular to subangular fine to medium coal. [Pennine Lower Coal Measures]                                                                  | 1.0  |
|                   |                 | 2.00              | D 2          |                                |             |            |            |            |      | 125.67       | 1.20                        |        | Brown/Grey CLAY with weathered grey mudstone (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                                     | 1.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              | (1.50)                      |        |                                                                                                                                                                                                | 2.0  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 2.5  |
|                   |                 | 2.60              | D 3          | N=50 (2,23/20,20,10 for 25m m) |             |            |            |            |      | 124.17       | 2.70                        |        | Dark grey CLAY with weathered mudstone (DRILLERS LOG).                                                                                                                                         | 3.0  |
|                   |                 | 2.70              | SPT          |                                |             |            |            |            |      |              | (1.55)                      |        |                                                                                                                                                                                                | 3.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 4.0  |
|                   |                 |                   |              |                                |             |            |            |            |      | 122.62       | 4.25                        |        | Loss of returns at 4.25m. [POTENTIAL COAL WORKINGS]                                                                                                                                            | 4.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              | (1.90)                      |        |                                                                                                                                                                                                | 5.0  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 5.5  |
|                   |                 |                   |              |                                |             |            |            |            |      | 120.72       | 6.15                        |        | End of Borehole at 6.15m                                                                                                                                                                       | 6.0  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 6.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 7.0  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 7.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 8.0  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 8.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 9.0  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 9.5  |
|                   |                 |                   |              |                                |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                | 10.0 |

|                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                     |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 1.20m IP Hand Tools<br>1.20 - 6.15m RC Commachio 602 | Logger<br>PS<br>PS |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------|



# Open Hole Log

RH202

SUPPLEMENTARY INFO

|                             |                                               |                 |                  |       |
|-----------------------------|-----------------------------------------------|-----------------|------------------|-------|
| Hole Type                   | Easting                                       | Northing        | Ground Level (m) | Scale |
| RO                          | 422055.16                                     | 424914.10       | 126.87           | 1:50  |
| Project Name                | Project No.                                   | Start Date      | End Date         |       |
| Co-op Academy Smithies Moor | 601124                                        |                 |                  |       |
| Client                      | Contractor                                    | Consultant      |                  |       |
| B+K                         | Central Alliance / RP Drilling / T.Godber Ltd | Hexa Consulting |                  |       |

## SPT - Details

| Top Depth (m) | Type | Results                      | Casing Depth (m) | Water Depth (m) | Hammer Serial No. | Energy Ratio |
|---------------|------|------------------------------|------------------|-----------------|-------------------|--------------|
| 1.20          | S    | N=4 (1,1/1,1,1,1)            |                  |                 |                   |              |
| 2.70          | S    | N=50 (2,23/20,20,10 for 2... |                  |                 |                   |              |

|                                                                                                                                                                                                                                                                                                                                                        |                                                             |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------|
| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions                        | Logger   |
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m IP Hand Tools<br>1.20 - 6.15m RC Commachio 602 | PS<br>PS |



# Open Hole Log

RH203  
Sheet 1 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422078.40  | Northing<br>424900.24 | Ground Level (m)<br>126.70 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                                                                                                 |      |
|-------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|-----------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                                                                                                                                     |      |
|                   |                 |                   |              |         |             |            |            |            |      | 126.65       | (0.05)                      |        | MADE GROUND: Bituminous hardstanding.                                                                                                                                                           |      |
|                   |                 |                   |              |         |             |            |            |            |      | 126.40       | (0.25)                      |        | MADE GROUND: Light brown slightly sandy subangular coarse GRAVEL of limestone. [SUB BASE]                                                                                                       |      |
|                   |                 |                   |              |         |             |            |            |            |      | 126.20       | (0.30)                      |        | MADE GROUND: Dark brown sandy very gravelly CLAY. Gravel is angular to subrounded fine to coarse of ironstone, sandstone, brick and mudstone. With a low cobble content of sandstone and brick. | 0.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (0.20)                      |        | MADE GROUND: Firm brownish grey CLAY. [REWORKED NATURAL]                                                                                                                                        | 1.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (0.50)                      |        |                                                                                                                                                                                                 | 1.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (2.80)                      |        |                                                                                                                                                                                                 | 2.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 2.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 3.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 3.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 4.0  |
|                   |                 |                   |              |         |             |            |            |            |      | 123.40       | 3.30                        |        | Void (DRILLERS LOG). [POTENTIAL COAL WORKINGS]                                                                                                                                                  |      |
|                   |                 |                   |              |         |             |            |            |            |      |              | (0.70)                      |        |                                                                                                                                                                                                 |      |
|                   |                 |                   |              |         |             |            |            |            |      | 122.70       | 4.00                        |        | PENNINE LOWER COAL MEASURES recovered as a grey silty clayey GRAVEL (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                               |      |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 4.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (2.00)                      |        |                                                                                                                                                                                                 | 5.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 5.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 6.0  |
|                   |                 |                   |              |         |             |            |            |            |      | 120.70       | 6.00                        |        | Hard grey rock with coal fragments (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                                                |      |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 6.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 7.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 7.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 8.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (11.60)                     |        |                                                                                                                                                                                                 | 8.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 9.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 9.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 | 10.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 |      |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 |      |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 |      |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                                                                                 |      |

|                                                                                                                                                                                                                                                                                                                                                                          |                                             |                  |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---------------|
| <b>Remarks</b><br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | <b>Method, Plant, Stability, Dimensions</b> |                  | <b>Logger</b> |
|                                                                                                                                                                                                                                                                                                                                                                          | 0.00 - 1.20m                                | IP Hand Tools    |               |
|                                                                                                                                                                                                                                                                                                                                                                          | 1.20 - 20.00m                               | RC Commachio 602 |               |

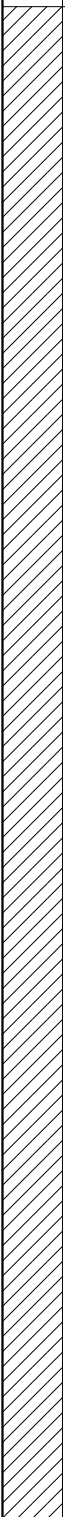


# Open Hole Log

RH203  
Sheet 2 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422078.40  | Northing<br>424900.24 | Ground Level (m)<br>126.70 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill                                                                 | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                                                                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                                            | Legend | Description       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |                 |                   |              |         |             |            |            |            |      |              |                                            |        | As previous page. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|                                                                                                                                                                                                                                                                                                                                                                          |                                             |                  |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---------------|
| <b>Remarks</b><br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | <b>Method, Plant, Stability, Dimensions</b> |                  | <b>Logger</b> |
|                                                                                                                                                                                                                                                                                                                                                                          | 0.00 - 1.20m                                | IP Hand Tools    |               |
|                                                                                                                                                                                                                                                                                                                                                                          | 1.20 - 20.00m                               | RC Commachio 602 |               |



# Rotary Core Log

RH204  
Sheet 1 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RC                             | Easting<br>422088.62  | Northing<br>424895.52 | Ground Level (m)<br>126.82 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill      | Water<br>Levels | Samples and Tests |              |                        | Coring        |            |            |            | Frac<br>FI | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                                                                                                                                                                                                                                        |      |
|------------------------|-----------------|-------------------|--------------|------------------------|---------------|------------|------------|------------|------------|--------------|-----------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                        |                 | Depth (m)         | Type/<br>Ref | Results                | Core<br>Run   | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |            |              |                             | Legend | Description                                                                                                                                                                                                                                                                                                                            |      |
|                        |                 | 0.05              | ES 1         |                        |               |            |            |            |            | 126.72       | (0.10)<br>0.10              |        | MADE GROUND: Bituminous hardstanding.                                                                                                                                                                                                                                                                                                  |      |
|                        |                 |                   |              |                        |               |            |            |            |            |              | (0.70)                      |        | MADE GROUND: Creamy brown sandy angular to sub-angular fine to coarse GRAVEL of limestone, brick and concrete. [SUB BASE]                                                                                                                                                                                                              | 0.5  |
|                        |                 | 1.00              | ES 2         |                        |               |            |            |            |            | 126.02       | 0.80                        |        | MADE GROUND: Soft to firm brownish grey mottled orange slightly sandy gravelly CLAY with a low cobble content. Gravel is angular fine to coarse mudstone, shale, sandstone and coal. Low to medium organic content with frequent plant fibres and rootlets (Reworked Natural). [POTENTIAL COAL WORKINGS]                               | 1.0  |
|                        |                 | 1.20              | SPT          | N=8 (1,1/2,2,2,2)      |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 1.5  |
|                        |                 | 2.00              | D 2          |                        |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 2.0  |
|                        |                 | 2.70              | SPT          | N=8 (1,2/2,1,2,3)      |               |            |            |            |            |              | (4.20)                      |        |                                                                                                                                                                                                                                                                                                                                        | 2.5  |
|                        |                 | 3.50              | B 3          |                        |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 3.0  |
|                        |                 | 4.20              | SPT          | N=6 (1,1/1,1,2,2)      |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 3.5  |
|                        |                 | 4.50              | D 4          |                        |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 4.0  |
|                        |                 | 5.10              | D 5          |                        |               |            |            |            |            | 121.82       | 5.00<br>(0.20)              |        | Extremely weak dark grey thinly laminated carbonaceous fractured MUDSTONE recovered non-intact as a gravelly clay. [Pennine Lower Coal Measures]                                                                                                                                                                                       | 4.5  |
|                        |                 | 5.30              | D 6          |                        |               |            |            |            |            | 121.62       | 5.20<br>(0.20)              |        |                                                                                                                                                                                                                                                                                                                                        | 5.0  |
|                        |                 | 5.40              | SPT          | N=50 (25,50/0 for 0mm) |               |            |            |            |            | 121.42       | 5.40                        |        | Extremely weak grey thinly laminated carbonaceous MUDSTONE recovered non-intact as a gravelly clay. [Pennine Lower Coal Measures]                                                                                                                                                                                                      | 5.5  |
|                        |                 | 5.70 - 5.90       | C 1          |                        | 5.40<br>6.40  | 100        | 100        | 90         | 4          |              | (1.00)                      |        | Very weak to weak grey thinly laminated fossiliferous SILTSTONE with occasional ironstone nodules and <1 mm coal laminations. Discontinuities are horizontal, horizontal to sub-vertical, undulated to planar, open to closed, smooth, localised gravel infill. [Pennine Lower Coal Measures]                                          | 6.0  |
|                        |                 |                   |              |                        |               |            |            |            | NI         | 120.42       | 6.40                        |        | Moderately weak to medium strong grey thinly laminated interbedded fossiliferous fine grained SANDSTONE with occasional ironstone nodules. Discontinuities are sub-horizontal to horizontal closely spaced to medium spaced, undulated to planar, open to closed, smooth, clay smeared and iron stained. [Pennine Lower Coal Measures] | 6.5  |
|                        |                 | 7.25 - 7.45       | C 2          |                        | 6.40<br>7.90  | 100        | 83         | 58         | 9          |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 7.0  |
|                        |                 |                   |              |                        |               |            |            |            | NI         |              | (3.20)                      |        |                                                                                                                                                                                                                                                                                                                                        | 7.5  |
|                        |                 |                   |              |                        | 7.90<br>9.40  | 100        | 100        | 73         | 8          |              |                             |        | Extremely weak to very weak thinly lamianted dark grey MUDSTONE with occasional <2 mm coal laminations. (8.30 - 8.45m)                                                                                                                                                                                                                 | 8.0  |
|                        |                 |                   |              |                        |               |            |            |            |            |              |                             |        | Extremely weak to very weak thinly lamianted dark grey MUDSTONE with occasional <2 mm coal laminations. (9.05 - 9.20m)                                                                                                                                                                                                                 | 8.5  |
|                        |                 |                   |              |                        | 9.40<br>10.90 | 100        | 100        | 73         |            | 117.22       | 9.60<br>(1.30)              |        | Medium strong grey thinly to thickly laminated fine to medium grained SANDSTONE. Discontinuities are horizontal, medium spaced,                                                                                                                                                                                                        | 9.0  |
|                        |                 |                   |              |                        |               |            |            |            | 8          |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 9.5  |
|                        |                 |                   |              |                        |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        | 10.0 |
| Continued on next page |                 |                   |              |                        |               |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                                                                                        |      |

|                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                      |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 1.20m IP Hand Tools<br>1.20 - 12.40m RC Commachio 602 | Logger<br>JE<br>JE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|



# Rotary Core Log

RH204  
Sheet 2 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RC                             | Easting<br>422088.62  | Northing<br>424895.52 | Ground Level (m)<br>126.82 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring         |            |            |            | Frac<br>FI | Level<br>(m) | Depth<br>(thickness)<br>(m) | Strata |                                                                                                                                                                                                                                                                          |              |
|-------------------|-----------------|-------------------|--------------|---------|----------------|------------|------------|------------|------------|--------------|-----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run    | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |            |              |                             | Legend | Description                                                                                                                                                                                                                                                              |              |
|                   |                 | 10.15 - 10.30     | C 3          |         |                |            |            |            |            |              |                             |        | undulated to planar, open to closed, smooth, clean. [Pennine Lower Coal Measures]                                                                                                                                                                                        | 10.5         |
|                   |                 | 11.10 - 11.21     | C 4          |         | 10.90<br>11.40 | 60         | 40         | 26         |            | 115.92       | 10.90<br>(0.80)             |        | Medium strong to strong dark grey to light grey thinly bedded medium grained SANDSTONE interlaminated with mudstone. Discontinuities are horizontal, closely spaced, undulated to planar, open, smooth, clean, iron stained, clay smeared. [Pennine Lower Coal Measures] | 11.0<br>11.5 |
|                   |                 |                   |              |         |                |            |            |            | AZCL       | 115.12       | 11.70<br>(0.70)             |        | Assumed Zone of Core Loss - No recorded/note of loss of flush or change in drilling. [Pennine Lower Coal Measures]                                                                                                                                                       | 12.0         |
|                   |                 |                   |              |         |                |            |            |            |            | 114.42       | 12.40                       |        | End of Borehole at 12.40m                                                                                                                                                                                                                                                | 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         |
|                   |                 |                   |              |         |                |            |            |            |            |              |                             |        |                                                                                                                                                                                                                                                                          | 20.0         |

|                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                      |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 1.20m IP Hand Tools<br>1.20 - 12.40m RC Commachio 602 | Logger<br>JE<br>JE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|



# Rotary Core Log

RH204

SUPPLEMENTARY INFO

|                             |             |            |                  |       |
|-----------------------------|-------------|------------|------------------|-------|
| Hole Type                   | Easting     | Northing   | Ground Level (m) | Scale |
| RC                          | 422088.62   | 424895.52  | 126.82           | 1:50  |
| Project Name                | Project No. | Start Date | End Date         |       |
| Co-op Academy Smithies Moor | 601124      |            |                  |       |

|        |                                               |                 |
|--------|-----------------------------------------------|-----------------|
| Client | Contractor                                    | Consultant      |
| B+K    | Central Alliance / RP Drilling / T.Godber Ltd | Hexa Consulting |

## SPT - Details

| Top Depth (m) | Type | Results                | Casing Depth (m) | Water Depth (m) | Hammer Serial No. | Energy Ratio |
|---------------|------|------------------------|------------------|-----------------|-------------------|--------------|
| 1.20          | S    | N=8 (1,1/2,2,2,2)      |                  |                 |                   |              |
| 2.70          | S    | N=8 (1,2/2,1,2,3)      |                  |                 |                   |              |
| 4.20          | S    | N=6 (1,1/1,1,2,2)      |                  |                 |                   |              |
| 5.40          | S    | N=50 (25,50/0 for 0mm) |                  |                 |                   |              |

|                                                                                                                                                                                                                                                                                                                                                        |                                      |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------|
| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions | Logger |
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m IP Hand Tools           | JE     |
|                                                                                                                                                                                                                                                                                                                                                        | 1.20 - 12.40m RC Commachio 602       | JE     |



# Open Hole Log

RH205  
Sheet 1 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422102.86  | Northing<br>424922.88 | Ground Level (m)<br>126.46 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                     |      |
|-------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------|------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                                                         |      |
|                   |                 |                   |              |         |             |            |            |            |      | 126.37       | (0.09)<br>0.09              |        | MADE GROUND: Bituminous hardstanding.                                                                               |      |
|                   |                 |                   |              |         |             |            |            |            |      |              | (0.91)                      |        | MADE GROUND: Light brown slightly sandy subangular coarse GRAVEL of limestone. [SUB BASE]                           | 0.5  |
|                   |                 |                   |              |         |             |            |            |            |      | 125.46       | 1.00<br>(0.20)              |        | Firm brownish grey slightly gravelly CLAY. Gravel is angular fine to coarse mudstone. [Pennine Lower Coal Measures] | 1.0  |
|                   |                 |                   |              |         |             |            |            |            |      | 125.26       | 1.20                        |        | Soft grey CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                        | 1.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (1.10)                      |        |                                                                                                                     | 2.0  |
|                   |                 |                   |              |         |             |            |            |            |      | 124.16       | (0.30)<br>0.30              |        | Hard SANDSTONE (DRILLERS LOG). [Pennine Lower Coal Measures]                                                        | 2.5  |
|                   |                 |                   |              |         |             |            |            |            |      | 124.06       | 2.40                        |        | MUDSTONE/COAL MIX (DRILLERS LOG). [POTENTIAL IN-TACT COAL]                                                          | 3.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (2.20)                      |        |                                                                                                                     | 3.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 4.0  |
|                   |                 |                   |              |         |             |            |            |            |      | 121.86       | 4.60                        |        | Grey MUDSTONE with occasional hard bands (DRILLERS LOG). [Pennine Lower Coal Measures]                              | 4.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 5.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 5.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 6.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 6.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 7.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              | (9.50)                      |        |                                                                                                                     | 7.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 8.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 8.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 9.0  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 9.5  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                     | 10.0 |

|                                                                                                                                                                                                                                                                                                                                                                   |                                      |                  |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions |                  | Logger<br>PS<br>PS |
|                                                                                                                                                                                                                                                                                                                                                                   | 0.00 - 1.20m                         | IP Hand Tools    |                    |
|                                                                                                                                                                                                                                                                                                                                                                   | 1.20 - 20.00m                        | RC Commachio 602 |                    |



# Open Hole Log

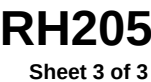
RH205  
Sheet 2 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422102.86  | Northing<br>424922.88 | Ground Level (m)<br>126.46 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |             |  |  |  |
|-------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|-----------------------------|--------|-------------|--|--|--|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |             |  |  |  |
|                   |                 |                   |              |         |             |            |            |            |      |              |                             | </     |             |  |  |  |

|                                                                                                                                                                                                                                                                                                                                                                          |                                             |                  |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---------------|
| <b>Remarks</b><br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | <b>Method, Plant, Stability, Dimensions</b> |                  | <b>Logger</b> |
|                                                                                                                                                                                                                                                                                                                                                                          | 0.00 - 1.20m                                | IP Hand Tools    |               |
|                                                                                                                                                                                                                                                                                                                                                                          | 1.20 - 20.00m                               | RC Commachio 602 |               |



| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions |    |               | Logger |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|--------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m                         | IP | Hand Tools    | PS     |
|                                                                                                                                                                                                                                                                                                                                                        | 1.20 - 20.00m                        | RC | Commachio 602 | PS     |



# Rotary Core Log

RH206  
Sheet 1 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RC                             | Easting<br>422114.77  | Northing<br>424934.72 | Ground Level (m)<br>125.64 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill      | Water<br>Levels | Samples and Tests |              |                      | Coring       |            |            |            | Frac | Level<br>(m)     | Depth<br>(thickness)<br>(m) | Strata                                                                                                               |                                                                                                                                                                          |                                                                                                       |     |     |
|------------------------|-----------------|-------------------|--------------|----------------------|--------------|------------|------------|------------|------|------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----|-----|
|                        |                 | Depth (m)         | Type/<br>Ref | Results              | Core<br>Run  | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |                  |                             | Legend                                                                                                               | Description                                                                                                                                                              |                                                                                                       |     |     |
|                        |                 | 1.20              | SPT          | N=5 (1,1/2,1,1,1)    |              |            |            |            |      | 125.29           | (0.35)<br>0.35              |                                                                                                                      | MADE GROUND: Brown slightly sandy gravelly SILT. Gravel is angular to subangular fine to coarse of mudstone, coal and ironstone. [TOPSOIL]                               |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       | 0.5 |     |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 1.0 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 1.5 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 2.0 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 2.5 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 3.0 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 3.5 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 4.0 |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     | 4.5 |
|                        |                 | 2.70              | SPT          | N=35 (3,3/12,12,6,5) | 1.20<br>2.60 |            |            |            |      |                  | 123.04                      | 2.60                                                                                                                 |                                                                                                                                                                          | Black dull COAL recovered as angular fine gravel of the same lithology. [Pennine Lower Coal Measures] |     |     |
|                        |                 |                   |              |                      | 2.60<br>3.45 | 50         |            |            |      |                  | (0.75)                      |                                                                                                                      |                                                                                                                                                                          | 3.0                                                                                                   |     |     |
|                        |                 |                   |              |                      |              |            |            |            |      | 122.29<br>122.19 | (0.10)<br>3.45<br>(0.23)    |                                                                                                                      | Soft orange very gravelly CLAY. Gravel is angular fine coal with the occasional thinly laminated coal. [Pennine Lower Coal Measures]                                     | 3.5                                                                                                   |     |     |
|                        |                 |                   |              |                      |              |            |            |            |      | 121.96           | 3.68                        |                                                                                                                      | Soft greyish orange gravelly CLAY. Gravel is angular fine to coarse coal with laminations of coal. [Pennine Lower Coal Measures]                                         |                                                                                                       |     |     |
|                        |                 |                   |              |                      | 3.45<br>4.95 | 90         | 90         | 86         |      | (0.82)           |                             | Highly weathered extremely weak grey fossilous thinly laminated fine grained MUDSTONE. [Pennine Lower Coal Measures] | 4.0                                                                                                                                                                      |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            |      | 121.14           | 4.50                        |                                                                                                                      | Moderately weak to moderately strong fossilous thinly to thickly laminated very fine grained SANDSTONE. Occasional gravel sized ironstone. [Pennine Lower Coal Measures] | 4.5                                                                                                   |     |     |
|                        |                 |                   |              |                      | 4.95<br>6.45 | 100        | 95         | 40         |      |                  |                             |                                                                                                                      | 5.0                                                                                                                                                                      |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          | 5.5                                                                                                   |     |     |
|                        |                 |                   |              |                      | 6.45<br>7.95 | 100        | 100        | 50         |      |                  | (5.60)                      |                                                                                                                      | 6.0                                                                                                                                                                      |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          | 6.5                                                                                                   |     |     |
| 7.95<br>9.45           | 100             | 100               | 33           |                      |              |            |            | 7.0        |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            | 7.5  |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
| 9.45<br>10.95          | 100             | 93                | 43           |                      |              |            |            | 8.0        |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            | 8.5  |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            | 9.0  |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            | 9.5  |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
|                        |                 |                   |              |                      |              |            |            |            | 10.0 |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |
| Continued on next page |                 |                   |              |                      |              |            |            |            |      |                  |                             |                                                                                                                      |                                                                                                                                                                          |                                                                                                       |     |     |

|                                                                                                                                                                                                                                                                                                                                                     |                                      |    |               |  |  |  |  |  |  |  |  |  |  |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|--|--|--|--|--|--|--|--|--|--|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit had a slow ingress of water. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions |    |               |  |  |  |  |  |  |  |  |  |  | Logger<br>PS<br>PS |
|                                                                                                                                                                                                                                                                                                                                                     | 1.20 - 3.00m                         | IP | Hand Tools    |  |  |  |  |  |  |  |  |  |  |                    |
|                                                                                                                                                                                                                                                                                                                                                     | 1.20 - 28.85m                        | RC | Commachio 602 |  |  |  |  |  |  |  |  |  |  |                    |



# Rotary Core Log

RH206  
Sheet 2 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RC                             | Easting<br>422114.77  | Northing<br>424934.72 | Ground Level (m)<br>125.64 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring         |            |            |            | Frac | Level<br>(m)               | Depth<br>(m)<br>(thickness)        | Strata    |                                                                                                                                                                                                                                                                                                                                                    |      |
|-------------------|-----------------|-------------------|--------------|---------|----------------|------------|------------|------------|------|----------------------------|------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run    | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |                            |                                    | Legend    | Description                                                                                                                                                                                                                                                                                                                                        |      |
|                   |                 |                   |              |         |                |            |            |            |      | 115.54                     | 10.10                              | • • • • • | As previous page.<br>Strong to very strong interbedded grey and black fine grained to coarse grained well cemented thinly bedded to thickly laminated SANDSTONE. Bands of weak black sandstone throughout. [Pennine Lower Coal Measures]                                                                                                           | 10.5 |
|                   |                 |                   |              |         | 10.95<br>12.45 | 100        | 100        | 60         |      |                            | (2.80)                             | • • • • • |                                                                                                                                                                                                                                                                                                                                                    | 11.0 |
|                   |                 |                   |              |         |                |            |            |            |      | 112.74                     | 12.90                              | • • • • • | Strong grey well cemented thickly laminated to thickly bedded coarse grained SANDSTONE. [Pennine Lower Coal Measures]                                                                                                                                                                                                                              | 13.0 |
|                   |                 |                   |              |         | 12.45<br>13.95 | 100        | 94         | 48         |      |                            | (0.94)                             | • • • • • |                                                                                                                                                                                                                                                                                                                                                    | 13.5 |
|                   |                 |                   |              |         |                |            |            |            |      | 111.80<br>111.69           | 13.84<br>(0.11)<br>13.95           | • • • • • | Moderately weak dark blackish grey thinly laminated fine grained MUDSTONE. [Pennine Lower Coal Measures]<br>Strong light grey fossilous thinly bedded fine to medium grained SANDSTONE. [Pennine Lower Coal Measures]                                                                                                                              | 14.0 |
|                   |                 |                   |              |         | 13.95<br>15.45 | 100        | 93         | 27         |      | 110.89                     | 14.75                              | • • • • • | Strong to weak interbedded light grey thinly laminated SANDSTONE and dark bluish grey thinly laminated MUDSTONE [Pennine Lower Coal Measures]                                                                                                                                                                                                      | 14.5 |
|                   |                 |                   |              |         |                |            |            |            |      |                            | (1.15)                             | • • • • • |                                                                                                                                                                                                                                                                                                                                                    | 15.0 |
|                   |                 |                   |              |         | 15.45<br>16.95 | 83         | 76         | 34         |      | 109.74                     | 15.90                              | • • • • • | Moderately weak to weak dark blackish grey fossilous thinly laminated fine grained MUDSTONE. Marine shell bands throughout, pyrite present. [Pennine Lower Coal Measures]                                                                                                                                                                          | 16.0 |
|                   |                 |                   |              |         |                |            |            |            |      | 108.94                     | 16.70<br>(0.25)                    | • • • • • | Assumed Zone of Core Loss                                                                                                                                                                                                                                                                                                                          | 16.5 |
|                   |                 |                   |              |         |                |            |            |            |      | 108.69<br>108.59           | 16.95<br>17.05<br>(0.34)           | • • • • • | Weak dark blackish grey thinly laminated fine grained MUDSTONE. [Pennine Lower Coal Measures]                                                                                                                                                                                                                                                      | 17.0 |
|                   |                 |                   |              |         | 16.95<br>18.45 | 100        | 100        | 13         |      | 108.25                     | 17.39<br>(0.26)                    | • • • • • | Very soft to soft very gravelly CLAY. Gravel is angular to subrounded fine to coarse fossilous mudstone. [POTENTIAL COAL WORKINGS]                                                                                                                                                                                                                 | 17.5 |
|                   |                 |                   |              |         |                |            |            |            |      | 107.89<br>107.83<br>107.87 | 17.65<br>17.77<br>(0.12)<br>(0.36) | • • • • • | Greyish black slightly clayey angular to subrounded fine to coarse GRAVEL of coal and mudstone. Pyrite present on coal. [POTENTIAL COAL WORKINGS]                                                                                                                                                                                                  | 18.0 |
|                   |                 |                   |              |         |                |            |            |            |      | 107.51                     | 18.13                              | • • • • • | Black COAL. [POTENTIAL COAL WORKINGS]<br>Grey subangular to subrounded coarse GRAVEL of mudstone. [POTENTIAL COAL WORKINGS]                                                                                                                                                                                                                        | 18.5 |
|                   |                 |                   |              |         | 18.45<br>19.95 | 100        | 93         | 30         |      |                            | (3.32)                             | • • • • • | Soft to stiff grey slightly gravelly slight silty CLAY. Gravel is angular fine to medium mudstone and thin laminations of mudstone. [Pennine Lower Coal Measures]<br>Slightly weathered very weak to weak grey thinly laminated fossilous fine grained MUDSTONE. Occasional strong bands of mudstone and coal bands. [Pennine Lower Coal Measures] | 19.0 |
|                   |                 |                   |              |         | 19.95<br>21.45 | 96         | 96         | 26         |      |                            |                                    | • • • • • |                                                                                                                                                                                                                                                                                                                                                    | 19.5 |
|                   |                 |                   |              |         |                |            |            |            |      |                            |                                    | • • • • • |                                                                                                                                                                                                                                                                                                                                                    | 20.0 |

|                                                                                                                                                                                                                                                                                                                                                     |                                                                                                            |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit had a slow ingress of water. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>1.20 - 3.00m IP Hand Tools PS<br>1.20 - 28.85m RC Commachio 602 PS | Logger<br>PS<br>PS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------|



# Rotary Core Log

RH206  
Sheet 3 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RC                             | Easting<br>422114.77  | Northing<br>424934.72 | Ground Level (m)<br>125.64 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring         |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                                                                                                                   |      |
|-------------------|-----------------|-------------------|--------------|---------|----------------|------------|------------|------------|------|--------------|-----------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run    | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                                                                                                                                                       |      |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        | As previous page.                                                                                                                                                                                                 |      |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 20.5 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 21.0 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 21.5 |
|                   |                 |                   |              |         |                |            |            |            |      | 104.19       | 21.45<br>(0.45)             |        | Very weak to weak light black thinly laminated fossilous fine grained MUDSTONE. [Pennine Lower Coal Measures]                                                                                                     |      |
|                   |                 |                   |              |         |                |            |            |            |      | 103.74       | 21.90<br>(0.17)             |        | Weak dull poor quality COAL recovered as greyish black very clayey angular to subrounded fine to coarse GRAVEL of coal and mudstone. With low cobble content of fossilous mudstone. [Pennine Lower Coal Measures] | 22.0 |
|                   |                 |                   |              |         | 21.45<br>22.85 | 85         | 85         | 25         |      | 103.57       | 22.07<br>(0.23)             |        |                                                                                                                                                                                                                   |      |
|                   |                 |                   |              |         |                |            |            |            |      | 103.34       | 22.30                       |        |                                                                                                                                                                                                                   | 22.5 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        | Grey soft gravelly CLAY. Gravel is angular fine to coarse of mudstone and coal. With occasional laminations of mudstone. [Pennine Lower Coal Measures]                                                            | 22.5 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        | Weak light grey thinly laminated fossilous fine grained MUDSTONE. Occasional coal laminations. [Pennine Lower Coal Measures]                                                                                      | 23.0 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 23.5 |
|                   |                 |                   |              |         | 22.85<br>24.35 | 93         | 66         | 22         |      |              | (2.80)                      |        |                                                                                                                                                                                                                   | 24.0 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 24.5 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 25.0 |
|                   |                 |                   |              |         | 24.35<br>25.85 | 100        | 95         | 43         |      | 100.54       | 25.10<br>(0.38)             |        | Strong to very strong dark grey thinly laminated tio thickly bedded fossilous fine grained SANDSTONE. [Pennine Lower Coal Measures]                                                                               | 25.5 |
|                   |                 |                   |              |         |                |            |            |            |      | 100.16       | 25.48                       |        | Weak light grey thinly laminated fossilous fine grained MUDSTONE. Occasional coal laminations. [Pennine Lower Coal Measures]                                                                                      | 26.0 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 26.5 |
|                   |                 |                   |              |         | 25.85<br>27.35 | 100        | 93         | 66         |      |              | (3.37)                      |        | Angular to rounded fine to medium GRAVEL of mudstone and ironstone. (26.25 - 26.30m)                                                                                                                              | 27.0 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 27.5 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 28.0 |
|                   |                 |                   |              |         | 27.35<br>28.85 | 77         | 58         | 31         |      |              |                             |        |                                                                                                                                                                                                                   | 28.5 |
|                   |                 |                   |              |         |                |            |            |            |      | 96.79        | 28.85                       |        | End of Borehole at 28.85m                                                                                                                                                                                         | 29.0 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 29.5 |
|                   |                 |                   |              |         |                |            |            |            |      |              |                             |        |                                                                                                                                                                                                                   | 30.0 |

|                                                                                                                                                                                                                                                                                                                                                     |                                                                                                      |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit had a slow ingress of water. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>1.20 - 3.00m IP Hand Tools<br>1.20 - 28.85m RC Commachio 602 | Logger<br>PS<br>PS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|



# Rotary Core Log

RH206

SUPPLEMENTARY INFO

|                             |                                               |                 |                  |       |
|-----------------------------|-----------------------------------------------|-----------------|------------------|-------|
| Hole Type                   | Easting                                       | Northing        | Ground Level (m) | Scale |
| RC                          | 422114.77                                     | 424934.72       | 125.64           | 1:50  |
| Project Name                | Project No.                                   | Start Date      | End Date         |       |
| Co-op Academy Smithies Moor | 601124                                        |                 |                  |       |
| Client                      | Contractor                                    | Consultant      |                  |       |
| B+K                         | Central Alliance / RP Drilling / T.Godber Ltd | Hexa Consulting |                  |       |

## SPT - Details

| Top Depth (m) | Type | Results              | Casing Depth (m) | Water Depth (m) | Hammer Serial No. | Energy Ratio |
|---------------|------|----------------------|------------------|-----------------|-------------------|--------------|
| 1.20          | S    | N=5 (1,1/2,1,1,1)    |                  |                 |                   |              |
| 2.70          | S    | N=35 (3,3/12,12,6,5) |                  |                 |                   |              |

|                                                                                                                                                                                                                                                                                                                                          |                                                              |          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------|
| Remarks                                                                                                                                                                                                                                                                                                                                  | Method, Plant, Stability, Dimensions                         | Logger   |
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit had a slow ingress of water. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 1.20 - 3.00m IP Hand Tools<br>1.20 - 28.85m RC Commachio 602 | PS<br>PS |



# Open Hole Log

RH207  
Sheet 1 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422130.30  | Northing<br>424951.90 | Ground Level (m)<br>125.14 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill      | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br>(thickness) | Strata |                                                                                                                                   |      |
|------------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|-----------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------|------|
|                        |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                                                                       |      |
|                        |                 |                   |              |         |             |            |            |            |      |              | (0.40)                      |        | MADE GROUND: Brown slightly gravelly SILT. Gravel is angular to subrounded fine to coarse of coal, brick and ironstone. [TOPSOIL] |      |
|                        |                 |                   |              |         |             |            |            |            |      | 124.74       | 0.40                        |        | MADE GROUND: Dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of coal and mudstone.                       | 0.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (0.60)                      |        |                                                                                                                                   |      |
|                        |                 |                   |              |         |             |            |            |            |      | 124.14       | 1.00                        |        | Reddish brown gravelly sandy SILT. Gravel is angular to rounded fine to medium of coal and slag.                                  | 1.0  |
|                        |                 |                   |              |         |             |            |            |            |      | 123.94       | (0.20)                      |        | CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                |      |
|                        |                 |                   |              |         |             |            |            |            |      |              | 1.20                        |        |                                                                                                                                   | 1.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (1.49)                      |        |                                                                                                                                   | 2.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 2.5  |
|                        |                 |                   |              |         |             |            |            |            |      | 122.45       | 2.69                        |        | COAL (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                | 3.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (0.81)                      |        |                                                                                                                                   | 3.5  |
|                        |                 |                   |              |         |             |            |            |            |      | 121.64       | 3.50                        |        | CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                                | 4.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (1.36)                      |        |                                                                                                                                   | 4.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 5.0  |
|                        |                 |                   |              |         |             |            |            |            |      | 120.28       | 4.86                        |        | SANDSTONE with MUDSTONE BANDS (DRILLERS LOG). [Pennine Lower Coal Measures]                                                       | 5.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              | (6.84)                      |        |                                                                                                                                   | 6.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 6.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 7.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 7.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 8.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 8.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 9.0  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 9.5  |
|                        |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   | 10.0 |
| Continued on next page |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                                                                   |      |

| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions |    |               | Logger |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|--------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m                         | IP | Hand Tools    | PS     |
|                                                                                                                                                                                                                                                                                                                                                        | 1.20 - 25.00m                        | RC | Commachio 602 | PS     |



| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions                                                                                        | Logger                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | <div>0.00 - 1.20m</div> <div>1.20 - 25.00m</div> <div>IP</div> <div>RC</div> <div>Hand Tools</div> <div>Commachio 602</div> | <div>PS</div> <div>PS</div> |



# Open Hole Log

RH207  
Sheet 3 of 3

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422130.30  | Northing<br>424951.90 | Ground Level (m)<br>125.14 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                           |      |
|-------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|--------------------------------------------|--------|---------------------------|------|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                                            | Legend | Description               |      |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        | As previous page.         | 20.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 21.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 21.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 22.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 22.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 23.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 23.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 24.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 24.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 25.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        | End of Borehole at 25.00m | 25.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 26.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 26.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 27.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 27.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 28.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 28.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 29.0 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 29.5 |
|                   |                 |                   |              |         |             |            |            |            |      |              |                                            |        |                           | 30.0 |

|                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                      |                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 1.20m IP Hand Tools<br>1.20 - 25.00m RC Commachio 602 | Logger<br>PS<br>PS |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------|

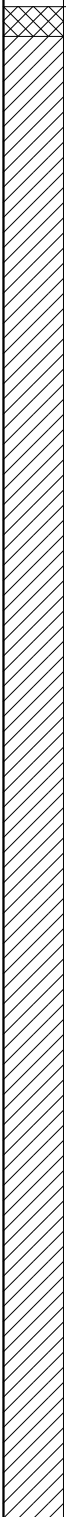
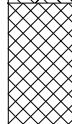


# Open Hole Log

RH208  
Sheet 1 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422122.25  | Northing<br>424957.49 | Ground Level (m)<br>125.19 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill                                                                 | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(thickness)<br>(m) | Strata                                                                            |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|-----------------|-------------------|--------------|---------|-------------|------------|------------|------------|------|--------------|-----------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend                                                                            | Description                                                                                                                   |                                                                                                                                                                                                                                                                                                                 |
|  |                 |                   |              |         |             |            |            |            |      | 124.84       | (0.35)                      |  | MADE GROUND: Brown slightly gravelly SILT. Gravel is angular to rounded fine to medium of mudstone, brick and coal. [TOPSOIL] | <div><div></div><div>0.5</div><div>1.0</div><div>1.5</div><div>2.0</div><div>2.5</div><div>3.0</div><div>3.5</div><div>4.0</div><div>4.5</div><div>5.0</div><div>5.5</div><div>6.0</div><div>6.5</div><div>7.0</div><div>7.5</div><div>8.0</div><div>8.5</div><div>9.0</div><div>9.5</div><div>10.0</div></div> |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | 0.35                        |  | MADE GROUND: Reddish brown gravelly sandy SILT. Gravel is angular to rounded fine to coarse of mudstone, brick and coal,      |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | (0.85)                      |                                                                                   |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | 1.20                        |  | CLAY (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                            |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | (0.50)                      |                                                                                   |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | 1.70                        |  | COAL (DRILLERS LOG). [Pennine Lower Coal Measures]                                                                            |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | (2.14)                      |                                                                                   |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | 3.84                        |                                                                                   | Light grey MUDSTONE (DRILLERS LOG). [Pennine Lower Coal Measures]                                                             |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | (0.70)                      |                                                                                   |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | 4.54                        |                                                                                   | MUDSTONE/SANDSTONE with occasional hard bands (DRILLERS LOG). [Pennine Lower Coal Measures]                                   |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | (10.16)                     |                                                                                   |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              | Continued on next page      |                                                                                   |                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |

| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions |    |               | Logger |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|--------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m                         | IP | Hand Tools    | PS     |
|                                                                                                                                                                                                                                                                                                                                                        | 1.20 - 17.70m                        | RC | Commachio 602 | PS     |

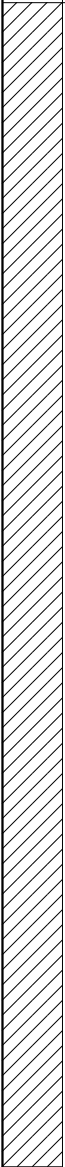


# Open Hole Log

RH208  
Sheet 2 of 2

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>RO                             | Easting<br>422122.25  | Northing<br>424957.49 | Ground Level (m)<br>125.19 | Scale<br>1:50 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill                                                                 | Water<br>Levels | Samples and Tests |              |         | Coring      |            |            |            | Frac | Level<br>(m) | Depth<br>(thickness)<br>(m) | Strata |                                                                                     |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                                                                   |                 | Depth (m)         | Type/<br>Ref | Results | Core<br>Run | TCR<br>(%) | SCR<br>(%) | RQD<br>(%) |      |              |                             | Legend | Description                                                                         |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |                 |                   |              |         |             |            |            |            |      |              |                             |        |  | As previous page. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                   |                 |                   |              |         |             |            |            |            |      |              |                             |        |                                                                                     |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| Remarks                                                                                                                                                                                                                                                                                                                                                | Method, Plant, Stability, Dimensions |    |               | Logger |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|--------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl prior to commencement of drilling, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m                         | IP | Hand Tools    | PS     |
|                                                                                                                                                                                                                                                                                                                                                        | 1.20 - 17.70m                        | RC | Commachio 602 | PS     |



# Trial Pit

SA201  
Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>TP                             | Easting<br>422042.96  | Northing<br>424935.26 | Ground Level (m)<br>127.19 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level<br>(m) | Depth<br>(thickness)<br>(m) | Strata |                                                                                                                                                                                                                                                   |  |
|-------------------|-----------------|-------------------|--------------|---------|--------------|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                   |                 | Depth (m)         | Type/<br>Ref | Results |              |                             | Legend | Description                                                                                                                                                                                                                                       |  |
|                   |                 | 0.20              | ES 1         |         | 126.89       | 0.30                        |        | MADE GROUND: Dark brown sandy very gravelly CLAY with grass cover and low cobble content. Gravel is angular to subrounded fine to coarse of sandstone, brick, mudstone, shale, plastic and slag. Cobble content of sandstone and brick. [TOPSOIL] |  |
|                   |                 |                   |              |         |              | 0.30                        |        | MADE GROUND: Dark brown sandy very gravelly CLAY. Gravel is angular to subrounded fine to coarse of sandstone, brick, mudstone, shale, plastic and slag. With a low cobble content and a low to medium boulder content of sandstone and brick.    |  |
|                   |                 |                   |              |         |              | 0.60                        |        |                                                                                                                                                                                                                                                   |  |
|                   |                 |                   |              |         |              | 0.90                        |        | Stiff to very stiff grey mottled brown orange slightly sandy slightly gravelly CLAY. Gravel is angular fine to coarse of mudstone and shale. [Pennine Lower Coal Measures]                                                                        |  |
|                   |                 |                   |              |         |              | 1.30                        |        | Stiff to very stiff dark grey mottled orange gravelly CLAY. Gravel is angular fine to coarse of mudstone and with a low cobble content of mudstone. [Pennine Lower Coal Measures]                                                                 |  |
|                   |                 |                   |              |         | 125.39       | 1.80                        |        | End of Trial Pit at 1.80m                                                                                                                                                                                                                         |  |
|                   |                 |                   |              |         |              |                             |        |                                                                                                                                                                                                                                                   |  |
|                   |                 |                   |              |         |              |                             |        |                                                                                                                                                                                                                                                   |  |
|                   |                 |                   |              |         |              |                             |        |                                                                                                                                                                                                                                                   |  |
|                   |                 |                   |              |         |              |                             |        |                                                                                                                                                                                                                                                   |  |

|                                                                                                                                                                                                                                                    |                                      |    |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|--------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Trial pitt remained dry and stable during excavation. 3) Soakaway test was conducted with an IBC container. | Method, Plant, Stability, Dimensions |    | Logger<br>PS |
|                                                                                                                                                                                                                                                    | 0.00 - 1.80m                         | TP |              |
|                                                                                                                                                                                                                                                    |                                      |    |              |



Trial Pit

SA202  
Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>TP                             | Easting<br>422125.79  | Northing<br>424931.62 | Ground Level (m)<br>125.65 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level  | Depth<br>(thickness) | Strata |                                                                                                                                                                              |     |
|-------------------|-----------------|-------------------|--------------|---------|--------|----------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                   |                 | Depth (m)         | Type/<br>Ref | Results | (m)    | (m)                  | Legend | Description                                                                                                                                                                  |     |
|                   |                 |                   |              |         | 125.50 | (0.15)<br>0.15       |        | MADE GROUND: Light brown gravelly SILT. Gravel is angular to subrounded fine to coarse of coal, brick, quartzite and mudstone. With an isolated fragment of glass. [TOPSOIL] |     |
|                   |                 |                   |              |         |        |                      |        | Soft to firm dark brown gravelly CLAY. Gravel is angular to subangular fine to coarse of coal and mudstone. [Pennine Lower Coal Measures]                                    | 0.5 |
|                   |                 |                   |              |         | 125.05 | 0.60                 |        | Firm to stiff light black slightly sandy angular fine to medium GRAVEL of mudstone. [Pennine Lower Coal Measures]                                                            | 1.0 |
|                   |                 |                   |              |         | 124.55 | 1.10                 |        | Light black highly weathered MUDSTONE. Recovered as a very clayey angular fine to coarse gravel of mudstone. [Pennine Lower Coal Measures]                                   |     |
|                   |                 |                   |              |         |        | (0.80)               |        |                                                                                                                                                                              | 1.5 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              |     |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              |     |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              |     |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              |     |
|                   |                 |                   |              |         | 123.75 | 1.90                 |        | End of Trial Pit at 1.90m                                                                                                                                                    | 2.0 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              | 2.5 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              | 3.0 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              | 3.5 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              | 4.0 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              | 4.5 |
|                   |                 |                   |              |         |        |                      |        |                                                                                                                                                                              | 5.0 |

|                                                                                                                                                                                                                                                    |                                                         |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Trial pitt remained dry and stable during excavation. 3) Soakaway test was conducted with an IBC container. | Method, Plant, Stability, Dimensions<br>0.00 - 1.90m TP | Logger<br>PS |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------|



| Method, Plant, Stability, Dimensions                                                                                                                                                | Logger |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 0.00 - 1.70m TP                                                                                                                                                                     | PS     |
| <div> <div><math>L = 2.20m</math></div> <div>  <div><math>W = 1.70m</math></div> </div> </div> |        |



# Hand Pit

## HDP202

Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>HP                             | Easting<br>422066.65  | Northing<br>424909.41 | Ground Level (m)<br>126.79 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                                                                                                                                                                                                     |     |
|-------------------|-----------------|-------------------|--------------|---------|--------------|--------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                   |                 | Depth (m)         | Type/<br>Ref | Results |              |                                            | Legend | Description                                                                                                                                                                                         |     |
|                   |                 |                   |              |         | 126.70       | (0.09)<br>0.09                             |        | MADE GROUND: Bituminous hardstanding.                                                                                                                                                               |     |
|                   |                 |                   |              |         | 126.57       | (0.13)<br>0.13                             |        | MADE GROUND: Light brown slightly sandy subangular coarse GRAVEL of limestone. [SUB BASE]                                                                                                           |     |
|                   |                 |                   |              |         | 126.49       | (0.22)<br>(0.08)<br>0.30                   |        | MADE GROUND: Brown sandy silty angular to rounded fine to coarse GRAVEL of quartzite and brick. With occasional metal rods and a low cobble content of brick. Overlaying a ~1mm black terram layer. |     |
|                   |                 |                   |              |         |              |                                            |        | Soft to firm blueish grey gravelly CLAY. Gravel is angular to subrounded fine to coarse of coal, mudstone, ironstone with a low cobble content of ironstone. [Pennine Lower Coal Measures]          | 0.5 |
|                   |                 |                   |              |         |              | (0.90)                                     |        |                                                                                                                                                                                                     | 1.0 |
|                   |                 |                   |              |         | 125.59       | 1.20                                       |        | End of Trial Pit at 1.20m                                                                                                                                                                           | 1.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 2.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 2.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 3.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 3.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 4.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 4.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                                                     | 5.0 |

|                                                                                                                                                                                                                                                                                                                                 |                                                                    |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 1.20m IP Hand Tools | Logger<br>PS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|



# Hand Pit

HDP204

Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>HP                             | Easting<br>422086.26  | Northing<br>424925.32 | Ground Level (m)<br>126.74 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                                                                                                                                                           |     |
|-------------------|-----------------|-------------------|--------------|---------|--------------|--------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                   |                 | Depth (m)         | Type/<br>Ref | Results |              |                                            | Legend | Description                                                                                                                                               |     |
|                   |                 |                   |              |         |              | (0.30)                                     |        | MADE GROUND: Brown gravelly SILT. Gravel is angular to subangular fine to coarse of glass, wood and plastic wrappers. With an isolated of nail. [TOPSOIL] |     |
|                   |                 |                   |              |         | 126.44       | 0.30<br>(0.20)                             |        | MADE GROUND: Brownish yellow gravelly CLAY. Gravel is angular to rounded fine to medium of coal, sandstone and ironstone. [REWORKED NATURAL]              |     |
|                   |                 |                   |              |         | 126.24       | 0.50<br>(0.54)                             |        | MADE GROUND: Soft to firm dark yellow gravelly CLAY. Gravel is angular to rounded fine to coarse of ironstone and coal. [REWORKED NATURAL]                | 0.5 |
|                   |                 |                   |              |         | 125.70       | 1.04<br>(0.20)                             |        | MADE GROUND: Dark yellow gravelly clayey SAND. Sand is medium. Gravel is angular to rounded fine to coarse of coal and ironstone. [REWORKED NATURAL]      | 1.0 |
|                   |                 |                   |              |         | 125.50       | 1.24                                       |        | End of Trial Pit at 1.24m                                                                                                                                 |     |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 1.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 2.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 2.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 3.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 3.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 4.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 4.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                           | 5.0 |

|                                                                                                                                                                                                                                                                                                                                 |                                                                    |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 1.24m IP Hand Tools | Logger<br>PS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|

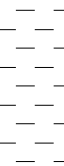


# Hand Pit

HDP205  
Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>HP                             | Easting<br>422097.09  | Northing<br>424913.55 | Ground Level (m)<br>126.47 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 |                       | Start Date                 | End Date      |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata                                                                            |                                                                                                                                           |     |
|-------------------|-----------------|-------------------|--------------|---------|--------------|--------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                   |                 | Depth (m)         | Type/<br>Ref | Results |              |                                            | Legend                                                                            | Description                                                                                                                               |     |
|                   |                 |                   |              |         | 126.37       | (0.10)<br>0.10                             |  | MADE GROUND: Bituminous hardstanding.                                                                                                     |     |
|                   |                 |                   |              |         |              | (0.48)                                     |  | MADE GROUND: Light brown slightly sandy subangular coarse GRAVEL of limestone. [SUB BASE]                                                 | 0.5 |
|                   |                 |                   |              |         | 125.89       | 0.58                                       |  | Soft dark greyish black gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone and coal. [Pennine Lower Coal Measures] | 1.0 |
|                   |                 |                   |              |         | 125.27       | 1.20                                       | -----<br>End of Trial Pit at 1.20m                                                |                                                                                                                                           | 1.5 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 2.0 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 2.5 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 3.0 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 3.5 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 4.0 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 4.5 |
|                   |                 |                   |              |         |              |                                            |                                                                                   |                                                                                                                                           | 5.0 |

| Remarks                                                                                                                                                                                                                                                                                                        | Method, Plant, Stability, Dimensions | Logger |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------|
| 1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl, inspection pit remained had a slow ingress of water 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | 0.00 - 1.20m IP Hand Tools           | PS     |
|                                                                                                                                                                                                                                                                                                                |                                      |        |



# Hand Pit

## HDP206

Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>HP                             | Easting<br>422103.99  | Northing<br>424947.13 | Ground Level (m)<br>127.97 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                                                                                                                                                                       |     |
|-------------------|-----------------|-------------------|--------------|---------|--------------|--------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                   |                 | Depth (m)         | Type/<br>Ref | Results |              |                                            | Legend | Description                                                                                                                                                           |     |
|                   |                 |                   |              |         | 127.91       | 0.06                                       |        | MADE GROUND: Concrete Flagstone                                                                                                                                       |     |
|                   |                 |                   |              |         | 127.81       | 0.06<br>0.10<br>0.16                       |        | MADE GROUND: Dark brown sandy silty angular to rounded fine to coarse GRAVEL of mudstone, glass, slag, coal, clinker and limestone. With an isolated cobble of brick. |     |
|                   |                 |                   |              |         |              |                                            |        | End of Trial Pit at 0.16m                                                                                                                                             |     |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 0.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 1.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 1.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 2.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 2.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 3.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 3.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 4.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 4.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                       | 5.0 |

|                                                                                                                                                                                                                                                                                                                                        |                                                                           |  |  |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--|--|---------------------|
| <b>Remarks</b><br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | <b>Method, Plant, Stability, Dimensions</b><br>0.00 - 0.16m IP Hand Tools |  |  | <b>Logger</b><br>PS |
|                                                                                                                                                                                                                                                                                                                                        |                                                                           |  |  |                     |



# Hand Pit

HDP207

Sheet 1 of 1

|                                             |                       |                       |                            |               |
|---------------------------------------------|-----------------------|-----------------------|----------------------------|---------------|
| Hole Type<br>HP                             | Easting<br>422111.34  | Northing<br>424957.85 | Ground Level (m)<br>124.81 | Scale<br>1:25 |
| Project Name<br>Co-op Academy Smithies Moor | Project No.<br>601124 | Start Date            | End Date                   |               |

|               |                                                             |                               |
|---------------|-------------------------------------------------------------|-------------------------------|
| Client<br>B+K | Contractor<br>Central Alliance / RP Drilling / T.Godber Ltd | Consultant<br>Hexa Consulting |
|---------------|-------------------------------------------------------------|-------------------------------|

| Inst/<br>Backfill | Water<br>Levels | Samples and Tests |              |         | Level<br>(m) | Depth<br>(m)<br><small>(thickness)</small> | Strata |                                                                                                                                                                         |     |
|-------------------|-----------------|-------------------|--------------|---------|--------------|--------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                   |                 | Depth (m)         | Type/<br>Ref | Results |              |                                            | Legend | Description                                                                                                                                                             |     |
|                   |                 |                   |              |         | 124.75       | (0.06)<br>0.06                             |        | MADE GROUND: Concrete Flagstone                                                                                                                                         |     |
|                   |                 |                   |              |         |              | (0.24)                                     |        | MADE GROUND: Dark blackish brown sandy angular to subangular fine to coarse GRAVEL of glass, brick and coal. With a low cobble content of brick and concrete flagstone. |     |
|                   |                 |                   |              |         | 124.51       | 0.30                                       |        | MADE GROUND: Black angular to subangular fine to coarse GRAVEL of coal and mudstone. With a low cobble content of mudstone and coal.                                    |     |
|                   |                 |                   |              |         |              | (0.30)                                     |        |                                                                                                                                                                         | 0.5 |
|                   |                 |                   |              |         | 124.21       | 0.60                                       |        | End of Trial Pit at 0.60m                                                                                                                                               |     |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 1.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 1.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 2.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 2.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 3.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 3.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 4.0 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 4.5 |
|                   |                 |                   |              |         |              |                                            |        |                                                                                                                                                                         | 5.0 |

|                                                                                                                                                                                                                                                                                                                                 |                                                                    |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|
| Remarks<br>1) Position set out and cleared for buried services by Central Alliance, with GPR, CAT & Genny prior to breaking ground. 2) Inspection pit hand dug to 1.2m bgl, inspection pit remained dry and stable during excavation. 3) SPT = Standard Penetration Test, B = bulk disturbed sample, D = small disturbed sample | Method, Plant, Stability, Dimensions<br>0.00 - 0.60m IP Hand Tools | Logger<br>PS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------|

NORTH  
WEST

SOUTH  
EAST

Key:

BUILDING

Brick  
(exterior  
wall)

Ground Level

300mm

TOPSOIL

200mm

REWORKED NATURAL: Brownish  
yellow gravelly CLAY.

1040mm

540mm

REWORKED NATURAL: Dark  
yellow gravelly CLAY.

200mm

Concrete

200mm\*

200mm

REWORKED NATURAL: Dark  
yellow gravelly clayey SAND.

200mm

Base of pit – 1240mm

\*Depth to base of  
concrete not reached?

NOT TO SCALE

|                                                                              |  |                |                 |
|------------------------------------------------------------------------------|--|----------------|-----------------|
| Project:<br>Former Beaumont Market                                           |  | Status:<br>V01 |                 |
| Drg Title:<br>Foundation Pit – Cross Section –<br>HDP204                     |  | Drawn By: PS   |                 |
|                                                                              |  |                | Date 13/06/2025 |
|                                                                              |  | Scale: NTS     |                 |
| Project No: Originator: Zone: Level: Type: Discipline: Category/Number: Rev: |  |                |                 |
| 601124-HEX-00-XX-DR-GE-0001                                                  |  |                |                 |

GENERAL NOTES:

|      |              |       |     |
|------|--------------|-------|-----|
| --   |              |       |     |
| Rev: | Description: | Date: | By: |

**Key:**



Presumed drainpipe

**Note:** Foundation Pit terminated early due to the presumed surface water drainpipe capping encountered nearly immediately below concrete flagstone.

GENERAL NOTES:

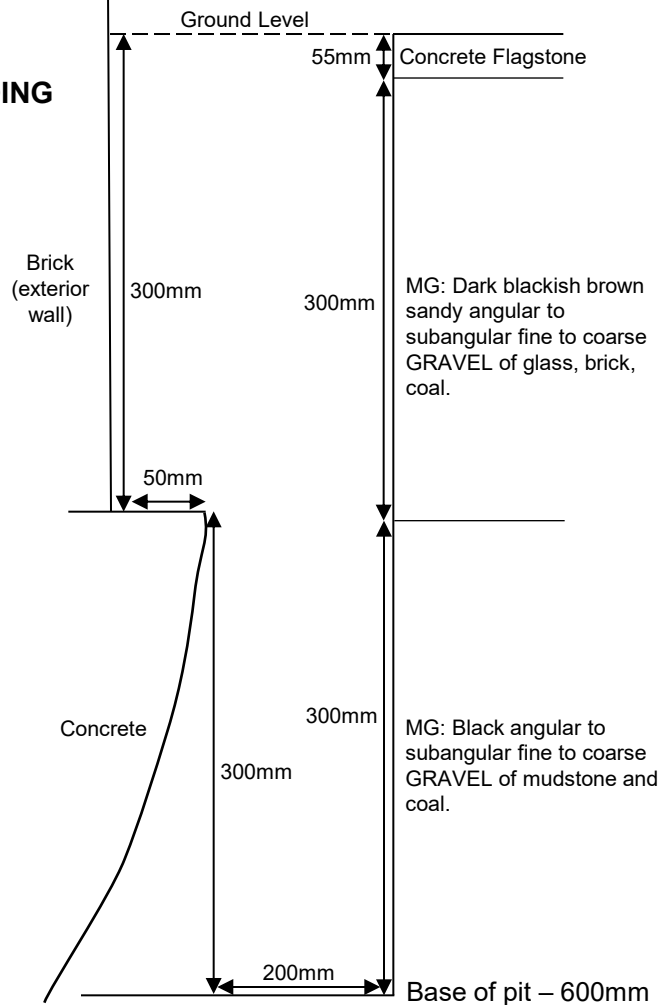
|      |              |       |     |
|------|--------------|-------|-----|
| --   |              |       |     |
| Rev: | Description: | Date: | By: |

NORTH  
WEST

SOUTH  
EAST

Key:

BUILDING



**Note:** Clay drainage pipe running close to the south east of the pit – Pit could not be extended further without disturbing the pipe.

|                                                                              |  |                |                 |
|------------------------------------------------------------------------------|--|----------------|-----------------|
| Project:<br>Former Beaumont Market                                           |  | Status:<br>V01 |                 |
| Drg Title:<br>Foundation Pit – Cross Section –<br>HDP207                     |  | Drawn By: PS   |                 |
|                                                                              |  |                | Date 13/06/2025 |
|                                                                              |  | Scale: NTS     |                 |
| Project No: Originator: Zone: Level: Type: Discipline: Category/Number: Rev: |  |                |                 |
| 601124-HEX-00-XX-DR-GE-0001                                                  |  |                |                 |

GENERAL NOTES:

|      |              |       |     |
|------|--------------|-------|-----|
| --   |              |       |     |
| Rev: | Description: | Date: | By: |



# Cross Section 1 - Across Length of Building Footprint\_V03

Project Name  
Co-op Academy Smithies Moor

Project No.  
601124

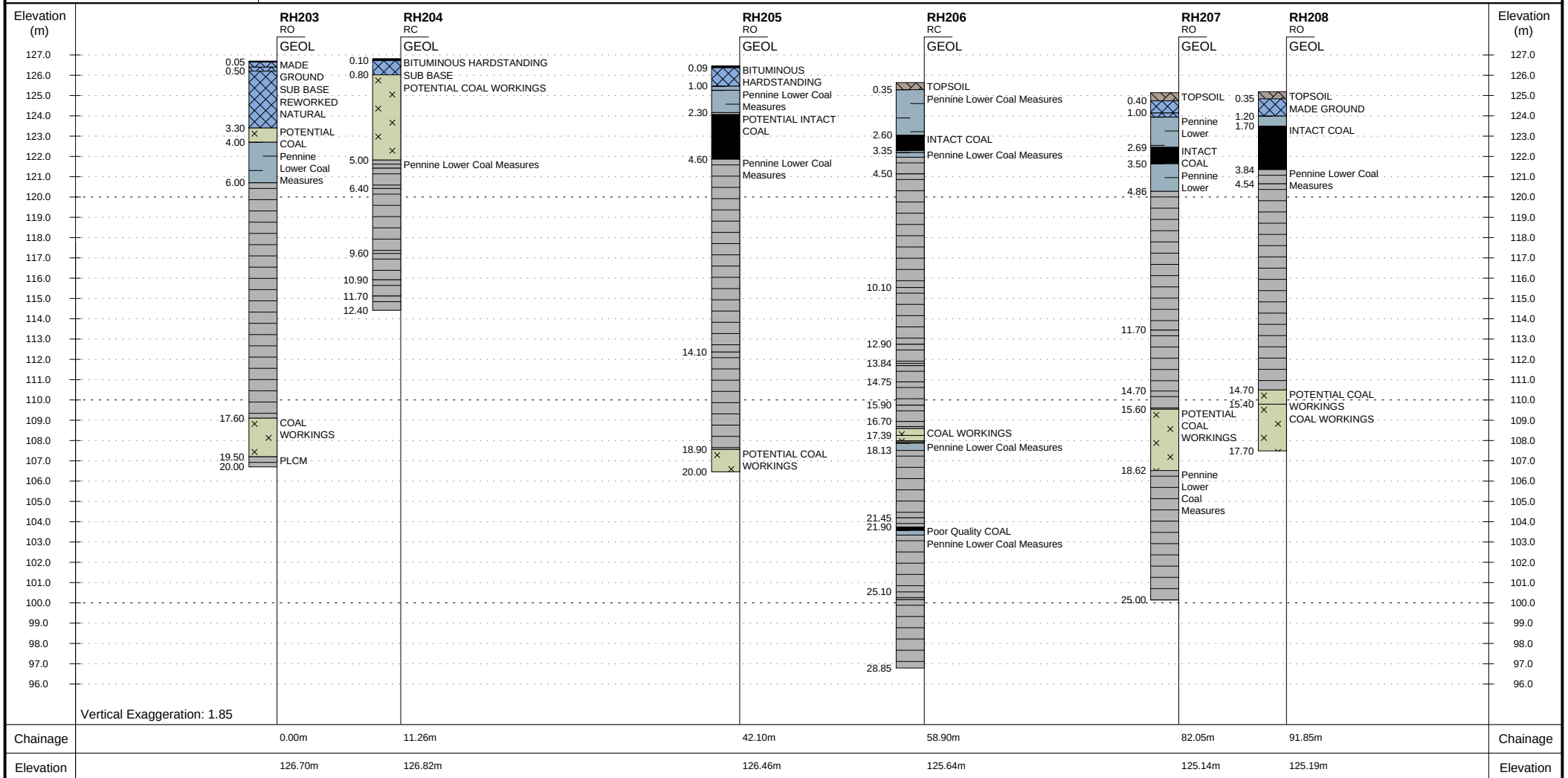
Vertical Scale  
1:277

Horizontal Scale  
1:512

Client  
B+K

Contractor  
Central Alliance / RP Drilling / T.Godber Ltd

Consultant  
Hexa Consulting



TOPSOIL MADE GROUND BITUMINOUS MAT. CLAY SILT MUDSTONE COAL

WATER LEVELS

REST  
STRIKE

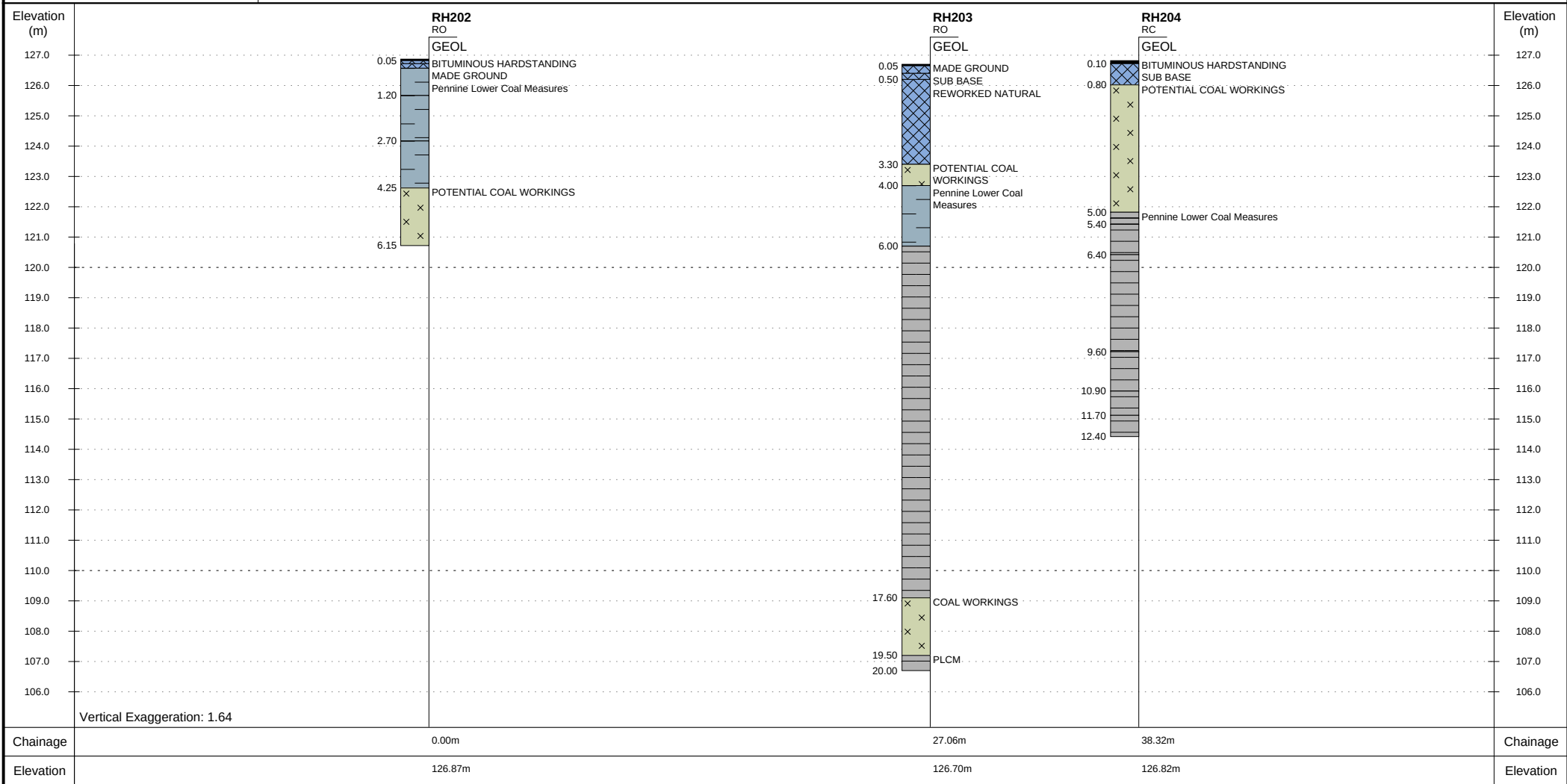
Pipe / Installation Details Omitted

Created using Pebble Geo



# Cross Section 2 - Shallow Workings

|                                                    |                                                                    |                                      |                                  |
|----------------------------------------------------|--------------------------------------------------------------------|--------------------------------------|----------------------------------|
| <b>Project Name</b><br>Co-op Academy Smithies Moor | <b>Project No.</b><br>601124                                       | <b>Vertical Scale</b><br>1:186       | <b>Horizontal Scale</b><br>1:305 |
| <b>Client</b><br>B+K                               | <b>Contractor</b><br>Central Alliance / RP Drilling / T.Godber Ltd | <b>Consultant</b><br>Hexa Consulting |                                  |



MADE GROUND

BITUMINOUS MAT.

CLAY

SILT

MUDSTONE

**WATER LEVELS**  
 REST  
 STRIKE

## Appendix C – Laboratory Test Results



## TEST CERTIFICATE

### DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,  
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,  
cl 5.2 and 6

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

4041

Client: Hexa Consulting Ltd  
Client Address: 4 St Mary's Place, NG11PH

Contact: James Elliott  
Site Address: Co-op Academy Smithles Moor  
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 601124  
Job Number: 25-034472-2  
Date Sampled: 27/05/2025  
Date Received: 30/06/2025  
Date Tested: 09/07/2025  
Sampled By: Not Given

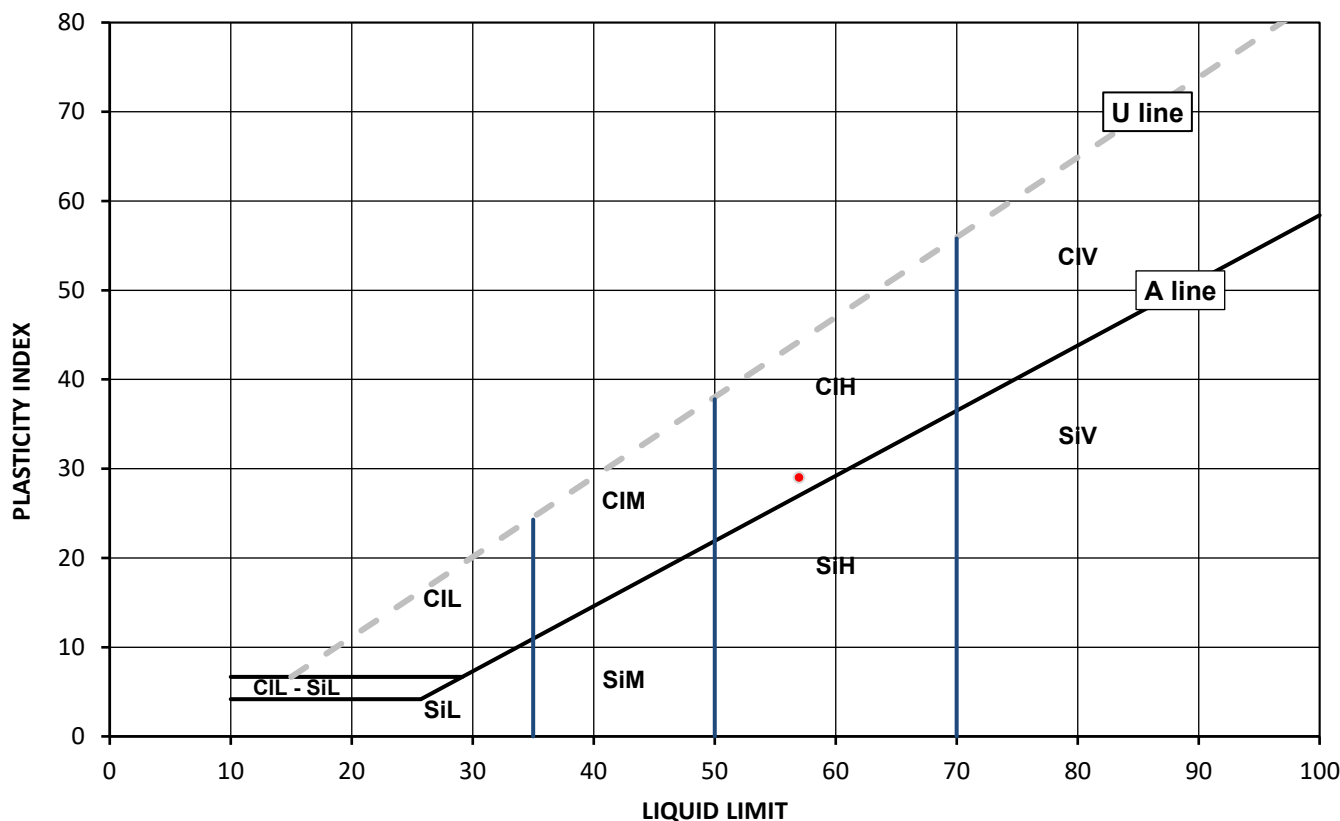
#### Test Results:

Laboratory Reference: 598724  
Hole No.: RC01  
Sample Reference: 1  
Sample Description: Brownish grey slightly gravelly slightly sandy CLAY

Depth Top [m]: 1.00  
Depth Base [m]: Not Given  
Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased  
Cone Type: 80g/30deg

| As Received Water Content [W] % | Liquid Limit [WL] % | Plastic Limit [Wp] % | Plasticity Index [Ip] % | Liquidity Index [IL] % # | Consistency Index [IC] % # | % Passing 425µm BS Test Sieve |
|---------------------------------|---------------------|----------------------|-------------------------|--------------------------|----------------------------|-------------------------------|
| 32.2                            | 57                  | 28                   | 29                      | 0.14                     | 0.86                       | 98                            |



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

|    |      | Plasticity  | Liquid Limit                                            |
|----|------|-------------|---------------------------------------------------------|
| Cl | Clay | L Low       | below 35                                                |
| Si | Silt | M Medium    | 35 to 50                                                |
|    |      | H High      | 50 to 70                                                |
|    |      | V Very high | exceeding 70                                            |
|    |      | O Organic   | append to classification for organic material (eg ClHO) |

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Signed:

Katarzyna Koziel  
Geotechnical Reporting Team Leader  
for and on behalf of i2 Analytical Ltd

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## TEST CERTIFICATE

### DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,  
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,  
cl 5.2 and 6

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

4041

Client: Hexa Consulting Ltd  
Client Address: 4 St Mary's Place, NG11PH

Contact: James Elliott  
Site Address: Co-op Academy Smithles Moor

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 601124  
Job Number: 25-034472-2  
Date Sampled: 29/05/2025  
Date Received: 30/06/2025  
Date Tested: 09/07/2025  
Sampled By: Not Given

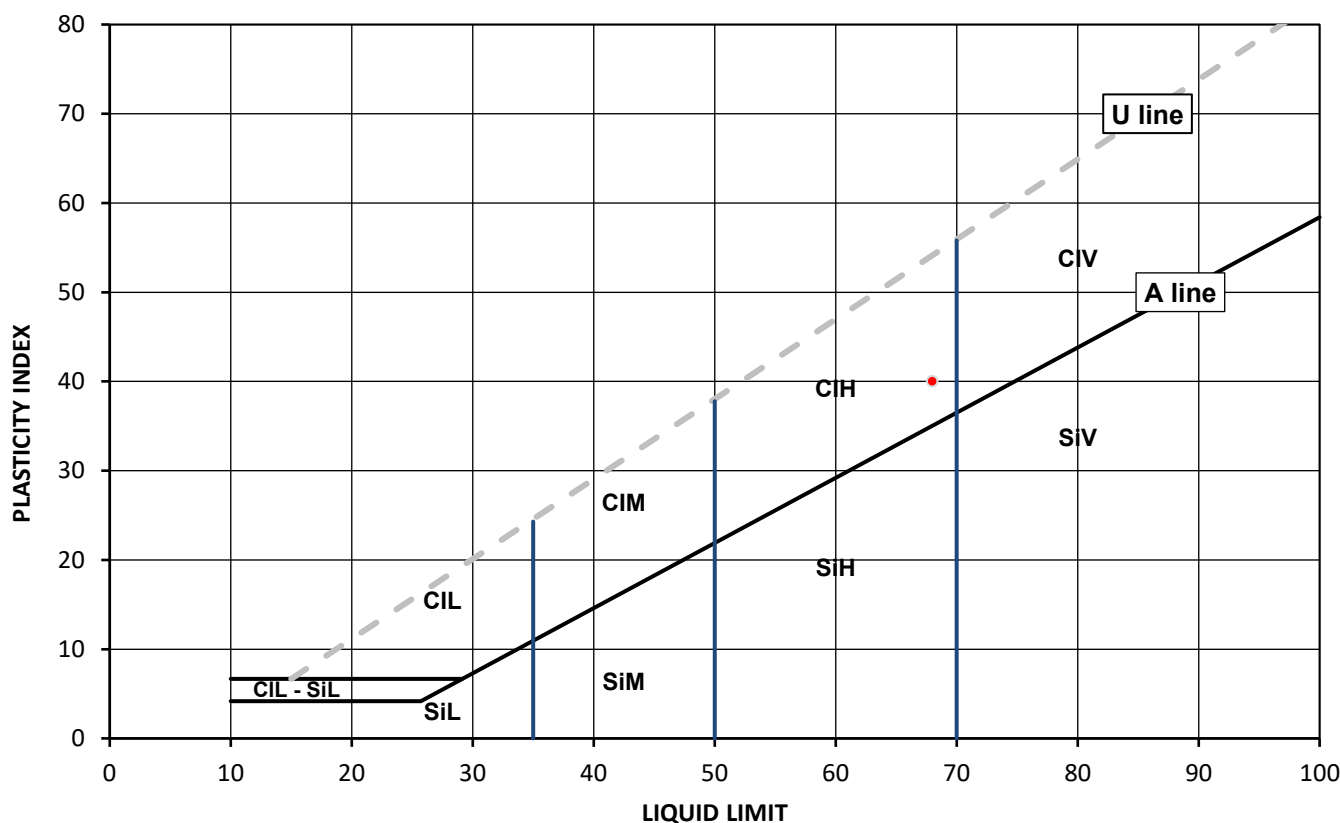
#### Test Results:

Laboratory Reference: 598725  
Hole No.: SA203  
Sample Reference: 1  
Sample Description: Brownish grey CLAY

Depth Top [m]: 1.60  
Depth Base [m]: Not Given  
Sample Type: D

Sample Preparation: Tested in natural condition; The water content in the sample was increased  
Cone Type: 80g/30deg

| As Received Water Content [W] % | Liquid Limit [WL] % | Plastic Limit [Wp] % | Plasticity Index [Ip] % | Liquidity Index [IL] % # | Consistency Index [IC] % # | % Passing 425µm BS Test Sieve |
|---------------------------------|---------------------|----------------------|-------------------------|--------------------------|----------------------------|-------------------------------|
| 30.3                            | 68                  | 28                   | 40                      | 0.05                     | 0.95                       | 100                           |



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

|    | Plasticity | Liquid Limit                                            |
|----|------------|---------------------------------------------------------|
| Cl | Clay       | below 35                                                |
| Si | Silt       | 35 to 50                                                |
|    | L          | Low                                                     |
|    | M          | Medium                                                  |
|    | H          | High                                                    |
|    | V          | Very high                                               |
|    | O          | Organic                                                 |
|    |            | append to classification for organic material (eg ClHO) |

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Signed:

Katarzyna Koziel  
Geotechnical Reporting Team Leader  
for and on behalf of i2 Analytical Ltd

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## TEST CERTIFICATE

### DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,  
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,  
cl 5.2 and 6

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

4041

Client: Hexa Consulting Ltd  
Client Address: 4 St Mary's Place, NG11PH

Contact: James Elliott  
Site Address: Co-op Academy Smithles Moor  
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 601124  
Job Number: 25-034472-2  
Date Sampled: 27/05/2025  
Date Received: 30/06/2025  
Date Tested: 09/07/2025  
Sampled By: Not Given

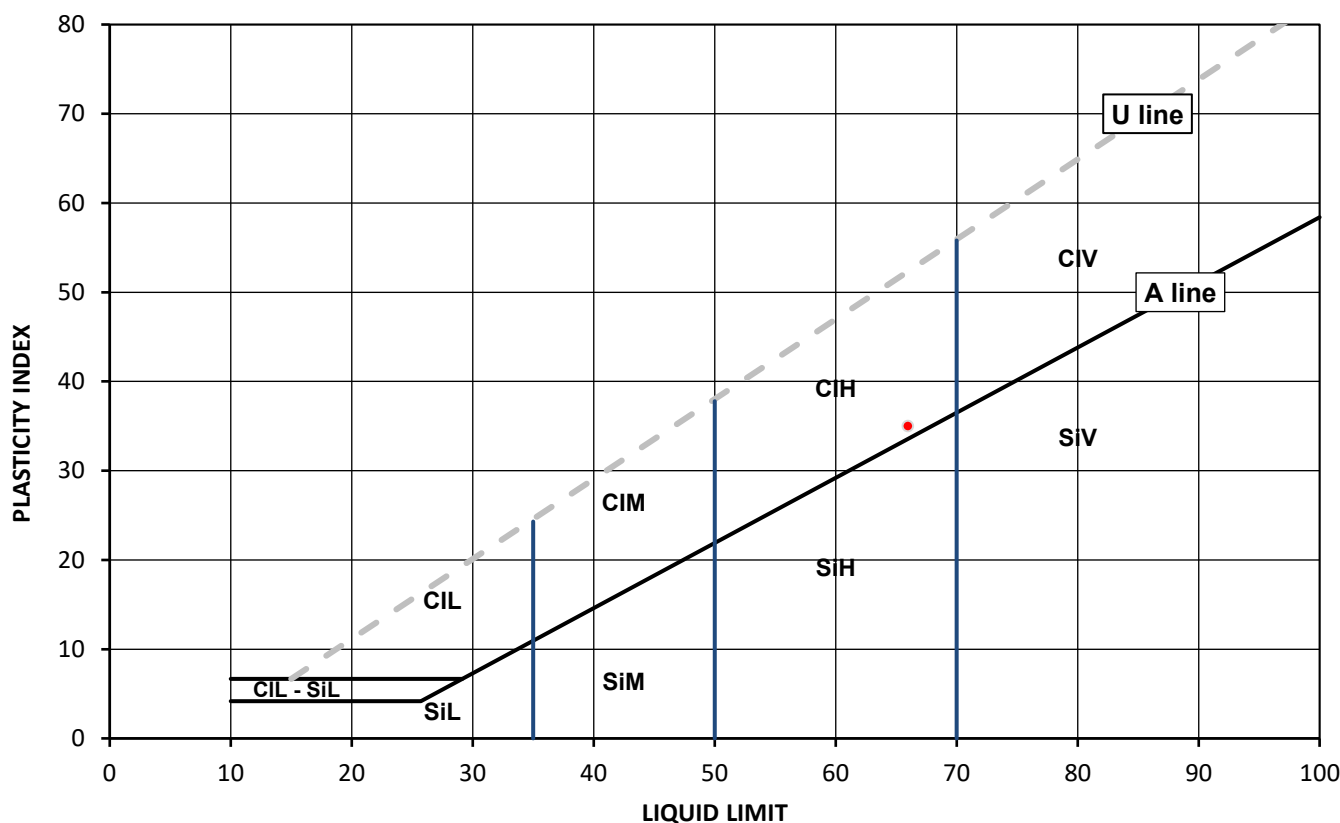
#### Test Results:

Laboratory Reference: 598726  
Hole No.: RC02  
Sample Reference: 1  
Sample Description: Brownish grey silty CLAY

Depth Top [m]: 1.00  
Depth Base [m]: Not Given  
Sample Type: D

Sample Preparation: Tested in natural condition; The water content in the sample was increased  
Cone Type: 80g/30deg

| As Received Water Content [W] % | Liquid Limit [WL] % | Plastic Limit [Wp] % | Plasticity Index [Ip] % | Liquidity Index [IL] % # | Consistency Index [IC] % # | % Passing 425µm BS Test Sieve |
|---------------------------------|---------------------|----------------------|-------------------------|--------------------------|----------------------------|-------------------------------|
| 27.1                            | 66                  | 31                   | 35                      | -0.11                    | 1.11                       | 100                           |



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

|    | Plasticity | Liquid Limit                                            |
|----|------------|---------------------------------------------------------|
| Cl | Clay       | below 35                                                |
| Si | Silt       | 35 to 50                                                |
|    | L          | Low                                                     |
|    | M          | Medium                                                  |
|    | H          | High                                                    |
|    | V          | Very high                                               |
|    | O          | Organic                                                 |
|    |            | append to classification for organic material (eg ClHO) |

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Signed:

Katarzyna Koziel  
Geotechnical Reporting Team Leader  
for and on behalf of i2 Analytical Ltd

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# SUMMARY REPORT

## SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

4041

Client: Hexa Consulting Ltd

Client Address:  
4 St Mary's Place, NG11PH

Contact: James Elliott

Site Address: Co-op Academy Smithles Moor

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

BS EN ISO 17892-12:2018+A2:2022 cl 5.3 and 5.5, Fall Cone Method, 4 Pt  
Test, BS 1377-2:2022, cl 5.2 and 6. W by BS EN ISO 17892-1:2014+A1:2022.

Client Reference: 601124

Job Number: 25-034472-2

Date Sampled: 27/05 - 29/05/2025

Date Received: 30/06/2025

Date Tested: 09/07/2025

Sampled By: Not Given

### Test results

| Laboratory Reference | Hole No. | Sample    |           |            |      | Description                                         | Remarks           | W    | Liquid & Plastic Limit |     |                    |    |    |            |                    |      | Density |    |       |
|----------------------|----------|-----------|-----------|------------|------|-----------------------------------------------------|-------------------|------|------------------------|-----|--------------------|----|----|------------|--------------------|------|---------|----|-------|
|                      |          | Reference | Depth Top | Depth Base | Type |                                                     |                   |      | % Passing 425um        | WL* | Correlation Factor | Wp | Ip | Cone type  | Sample Preparation | bulk | dry     | PD |       |
|                      |          |           | m         | m          |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    | Mg/m3 |
| 598724               | RC01     | 1         | 1.00      | Not Given  | D    | Brownish grey slightly gravelly slightly sandy CLAY | Atterberg 4 Point | 32.2 | 98                     | 57  | -                  | 28 | 29 | 80g/30 deg | R / I              |      |         |    |       |
| 598725               | SA203    | 1         | 1.60      | Not Given  | D    | Brownish grey CLAY                                  | Atterberg 4 Point | 30.3 | 100                    | 68  | -                  | 28 | 40 | 80g/30 deg | N / I              |      |         |    |       |
| 598726               | RC02     | 1         | 1.00      | Not Given  | D    | Brownish grey silty CLAY                            | Atterberg 4 Point | 27.1 | 100                    | 66  | -                  | 31 | 35 | 80g/30 deg | N / I              |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |
|                      |          |           |           |            |      |                                                     |                   |      |                        |     |                    |    |    |            |                    |      |         |    |       |

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, WR - Tested after washing to remove >425mm; I - The water content in the sample was increased , D - The water content in the sample was decreased; \* - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Signed:

Katarzyna Koziel  
Geotechnical Reporting Team Leader  
for and on behalf of i2 Analytical Ltd

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**SUMMARY REPORT**  
**DETERMINATION OF WATER CONTENT**

Tested in Accordance with: BS EN ISO 17892-1:2014+A1:2022, BS 1377-2: 2022, clause 4.1

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

**4041**  
Client: Hexa Consulting Ltd  
Client Address: 4 St Mary's Place, NG11PH

Contact: James Elliott  
Site Address: Co-op Academy Smithles Moor

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 601124  
Job Number: 25-034472-2  
Date Sampled: 27/05 - 29/05/2025  
Date Received: 30/06/2025  
Date Tested: 09/07/2025  
Sampled By: Not Given

**Test results**

| Laboratory Reference | Hole No. | Sample    |                |                 |      | Description                                         | Remarks | WC   |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|----------|-----------|----------------|-----------------|------|-----------------------------------------------------|---------|------|--|--|--|--|--|--|--|--|--|--|--|
|                      |          | Reference | Depth Top<br>m | Depth Base<br>m | Type |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
| 598724               | RC01     | 1         | 1.00           | Not Given       | D    | Brownish grey slightly gravelly slightly sandy CLAY |         | 32.2 |  |  |  |  |  |  |  |  |  |  |  |
| 598725               | SA203    | 1         | 1.60           | Not Given       | D    | Brownish grey CLAY                                  |         | 30.3 |  |  |  |  |  |  |  |  |  |  |  |
| 598726               | RC02     | 1         | 1.00           | Not Given       | D    | Brownish grey silty CLAY                            |         | 27.1 |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |
|                      |          |           |                |                 |      |                                                     |         |      |  |  |  |  |  |  |  |  |  |  |  |

Comments:

**Signed:**  
Katarzyna Koziel  
Geotechnical Reporting Team Leader  
for and on behalf of i2 Analytical Ltd

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## SUMMARY REPORT

### DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd  
Unit 8 Harrowden Road  
Brackmills Industrial Estate  
Northampton NN4 7EB



Environmental Science

4041

Client: Hexa Consulting Ltd  
Client Address: 4 St Mary's Place, NG11PH

Contact: James Elliott  
Site Address: Co-op Academy Smithles Moor

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 601124  
Job Number: 25-034472-2  
Date Sampled: 28/05 - 04/06/2025  
Date Received: 30/06/2025  
Date Tested: 09/07 - 29/07/2025  
Sampled By: Not Given

### Test results

| Laboratory Reference | Hole No. | Sample    |                |                 |      | Description                                     | Remarks<br>(including water content if measured) | Specimen Reference | Test Type<br>see ISRM |                          | Failure Valid<br>(Y/N) | Dimensions |         |           |            | Force P<br>kN | Equivalent diameter, De<br>mm | Point Load Strength Index |               |
|----------------------|----------|-----------|----------------|-----------------|------|-------------------------------------------------|--------------------------------------------------|--------------------|-----------------------|--------------------------|------------------------|------------|---------|-----------|------------|---------------|-------------------------------|---------------------------|---------------|
|                      |          | Reference | Depth Top<br>m | Depth Base<br>m | Type |                                                 |                                                  |                    | Type<br>(D, A, I, B)  | Direction<br>(L, P or U) |                        | Lne<br>mm  | W<br>mm | Dps<br>mm | Dps'<br>mm |               |                               | Is<br>MPa                 | Is(50)<br>MPa |
| 598727               | RC04     | 2         | 7.25           | 7.45            | C    | Light grey mottled dark grey SILTSTONE          | WC = 3.4%                                        | 1                  | A                     | P                        | YES                    | -          | 102.3   | 82.0      | 36.0       | 12.3          | 68.5                          | 2.61                      | 3.01          |
| 598728               | RC04     | 3         | 10.15          | 10.30           | C    | Grey SILTSTONE                                  | WC = 2.7%                                        | 1                  | A                     | U                        | YES                    | -          | 101.5   | 65.0      | 55.0       | 9.1           | 84.3                          | 1.27                      | 1.61          |
| 598729               | RC04     | 4         | 11.10          | 11.21           | C    | Light grey mottled dark brownish grey SANDSTONE | WC = 2.6%                                        | 1                  | A                     | P                        | YES                    | -          | 101.7   | 62.0      | 53.0       | 22.1          | 82.9                          | 3.21                      | 4.03          |
| 598730               | RC06     | 1         | 4.73           | 4.82            | C    | Light grey SILTSTONE                            | WC = 2.7%                                        | 1                  | A                     | U                        | YES                    | -          | 101.7   | 78.0      | 61.0       | 7.6           | 88.9                          | 0.96                      | 1.25          |
| 598731               | RC06     | 2         | 7.43           | 7.60            | C    | Light grey mottled dark grey SILTSTONE          | WC = 3.1%                                        | 1                  | D                     | L                        | YES                    | 58.5       | 101.5   | 101.0     | 98.0       | 6.4           | 99.7                          | 0.64                      | 0.87          |
| 598732               | RC06     | 3         | 8.77           | 8.97            | C    | Grey SILTSTONE                                  | WC = 3.2%                                        | 1                  | D                     | U                        | YES                    | 64.8       | 101.7   | 101.0     | 99.0       | 1.8           | 100.3                         | 0.18                      | 0.24          |
| 598733               | RC06     | 4         | 10.43          | 10.58           | C    | Light grey mottled dark grey SILTSTONE          | WC = 1.5%                                        | 1                  | D                     | P                        | YES                    | 73.1       | 101.7   | 101.0     | 99.0       | 8.9           | 100.3                         | 0.88                      | 1.21          |
| 598734               | RC06     | 5         | 13.40          | 13.60           | C    | Light grey mottled light brown SANDSTONE        | WC = 5.0%                                        | 1                  | D                     | U                        | YES                    | 63.4       | 101.7   | 101.0     | 95.0       | 20.4          | 98.3                          | 2.11                      | 2.85          |
|                      |          |           |                |                 |      |                                                 |                                                  |                    |                       |                          |                        |            |         |           |            |               |                               |                           |               |
|                      |          |           |                |                 |      |                                                 |                                                  |                    |                       |                          |                        |            |         |           |            |               |                               |                           |               |

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;  
Dimensions: Dps - Distance between platens ( platen separation ), Dps' - at failure ( see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;  
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Equipment No.: i2 4341 Calibration Date: 10/03/2025 - 10/03/2026

Comments: Replaces Analytical Report Number 25-034472, issue no 1; Additional results of samples: 598728, 598733

Signed:

Katarzyna Koziel  
Geotechnical Reporting Team Leader  
for and on behalf of i2 Analytical Ltd

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Hexa Consulting Ltd  
4 St Mary's Place  
NG11PH

i2 Analytical Ltd.  
7 Woodshots Meadow,  
Croxley Green  
Business Park,  
Watford,  
Herts,  
WD18 8YS  
**t:** 01923 225404  
**f:** 01923 237404  
**e:** reception@i2analytical.com

## **Analytical Report Number : 25-034519**

|                             |                             |                                                        |            |
|-----------------------------|-----------------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Co-op Academy Smithles Moor | <b>Samples received on:</b>                            | 30/05/2025 |
| <b>Your job number:</b>     | 601124                      | <b>Samples instructed on/<br/>Analysis started on:</b> | 30/06/2025 |
| <b>Your order number:</b>   | HEX601124                   | <b>Analysis completed by:</b>                          | 11/07/2025 |
| <b>Report Issue Number:</b> | 1                           | <b>Report issued on:</b>                               | 11/07/2025 |
| <b>Samples Analysed:</b>    | 5 soil samples              |                                                        |            |

### **Signed:**

Anna Goc  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

|                                                                                    |           |                                 |
|------------------------------------------------------------------------------------|-----------|---------------------------------|
| Standard sample disposal times, unless otherwise agreed with the laboratory, are : | soils     | - 4 weeks from reporting        |
|                                                                                    | leachates | - 2 weeks from reporting        |
|                                                                                    | waters    | - 2 weeks from reporting        |
|                                                                                    | asbestos  | - 6 months from reporting       |
|                                                                                    | air       | - once the analysis is complete |

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Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-034519  
 Project / Site name: Co-op Academy Smithles Moor  
 Your Order No: HEX601124

|                                         |               |                            |                              |               |               |
|-----------------------------------------|---------------|----------------------------|------------------------------|---------------|---------------|
| Lab Sample Number                       | 598814        | 598815                     | 598816                       | 598817        | 598818        |
| Sample Reference                        | RC04          | RC04                       | RC06                         | RC06          | RC06          |
| Sample Number                           | 1             | 4                          | 5                            | 6             | 7             |
| Water Matrix                            | N/A           | N/A                        | N/A                          | N/A           | N/A           |
| Depth (m)                               | 5.70-5.90     | 11.10-11.21                | 13.40-13.60                  | 16.5          | 17.45         |
| Date Sampled                            | 28/05/2025    | 28/05/2025                 | 04/06/2025                   | 04/06/2025    | 04/06/2025    |
| Time Taken                              | None Supplied | None Supplied              | None Supplied                | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |               |               |

|                               |    |      |      |       |       |       |       |       |
|-------------------------------|----|------|------|-------|-------|-------|-------|-------|
| Stone Content                 | %  | 0.1  | NONE | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Moisture Content              | %  | 0.01 | NONE | 4.1   | 2.2   | 4.8   | 0.89  | 4.7   |
| Total mass of sample received | kg | 0.1  | NONE | 1.4   | 1     | 2     | 1.2   | 1.1   |

#### General Inorganics

|                                                                         |          |       |        |       |       |       |       |       |
|-------------------------------------------------------------------------|----------|-------|--------|-------|-------|-------|-------|-------|
| pH (L099)                                                               | pH Units | N/A   | MCERTS | 8.8   | 8.3   | 9.1   | 8.7   | 5.8   |
| Total Sulphate as SO <sub>4</sub>                                       | %        | 0.005 | MCERTS | 0.023 | 0.017 | 0.017 | 0.019 | 0.109 |
| Water Soluble Sulphate as SO <sub>4</sub> 16hr extraction (2:1)         | mg/kg    | 2.5   | MCERTS | 190   | 31    | 40    | 180   | 950   |
| Water Soluble SO <sub>4</sub> 16hr extraction (2:1 Leachate Equivalent) | mg/l     | 1.25  | MCERTS | 94.9  | 15.6  | 20.2  | 90.3  | 474   |
| Water Soluble Chloride (2:1) (leachate equivalent)                      | mg/l     | 0.5   | MCERTS | 3.8   | 2.8   | 1.9   | 33    | 14    |
| Total Sulphur                                                           | mg/kg    | 50    | MCERTS | 500   | 180   | 100   | 7800  | 28000 |
| Total Sulphur                                                           | %        | 0.005 | MCERTS | 0.05  | 0.018 | 0.01  | 0.781 | 2.77  |
| Water Soluble Nitrate (2:1) as NO <sub>3</sub>                          | mg/kg    | 2     | NONE   | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| Water Soluble Nitrate (2:1) as NO <sub>3</sub> (leachate equivalent)    | mg/l     | 5     | NONE   | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

#### Heavy Metals / Metalloids

|                                 |       |     |      |    |     |     |    |     |
|---------------------------------|-------|-----|------|----|-----|-----|----|-----|
| Magnesium (leachate equivalent) | mg/l  | 2.5 | NONE | 10 | 8.4 | 4.5 | 19 | 52  |
| Magnesium (water soluble)       | mg/kg | 5   | NONE | 21 | 17  | 9   | 39 | 100 |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

**Analytical Report Number : 25-034519**

**Project / Site name: Co-op Academy Smithles Moor**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

| Lab Sample Number | Sample Reference | Sample Number | Depth (m)   | Sample Description * |
|-------------------|------------------|---------------|-------------|----------------------|
| 598814            | RC04             | 1             | 5.70-5.90   | Brown clay and sand  |
| 598815            | RC04             | 4             | 11.10-11.21 | Brown clay and sand  |
| 598816            | RC06             | 5             | 13.40-13.60 | Brown sand           |
| 598817            | RC06             | 6             | 16.5        | Brown clay and sand  |
| 598818            | RC06             | 7             | 17.45       | Brown clay and sand  |

**Analytical Report Number : 25-034519**  
**Project / Site name: Co-op Academy Smithles Moor**

**Water matrix abbreviations:**  
**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)**  
**Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                               | Analytical Method Description                                                                                              | Analytical Method Reference                                                                                            | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Moisture Content                                   | Moisture content, determined gravimetrically (up to 30°C)                                                                  | In-house method                                                                                                        | L019B         | W                  | NONE                 |
| Stones content of soil                             | Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight | In-house method based on British Standard Methods and MCERTS requirements.                                             | L019B         | D                  | NONE                 |
| Magnesium, water soluble, in soil                  | Determination of water soluble magnesium by extraction with water followed by ICP-OES                                      | In-house method based on TRL 447                                                                                       | L038B         | D                  | NONE                 |
| Total sulphate (as SO <sub>4</sub> in soil)        | Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES                                     | In-house method                                                                                                        | L038B         | D                  | MCERTS               |
| Sulphate, water soluble, in soil (16hr extraction) | Sulphate, water soluble, in soil (16hr extraction)                                                                         | In-house method                                                                                                        | L038B         | D                  | MCERTS               |
| Total Sulphur in soil                              | Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES        | In-house method                                                                                                        | L038B         | D                  | MCERTS               |
| Water Soluble Nitrate (leachate equivalent)        | Determination of nitrate by reaction with sodium salicylate and colorimetry                                                | In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction | L078-PL       | W                  | NONE                 |
| Nitrate, water soluble, in soil                    | Determination of nitrate by reaction with sodium salicylate and colorimetry                                                | In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction | L078-PL       | W                  | NONE                 |
| Chloride, water soluble, in soil                   | Determination of Chloride colorimetrically by discrete analyser                                                            | In-house method                                                                                                        | L082B         | D                  | MCERTS               |
| pH in soil (automated)                             | Determination of pH in soil by addition of water followed by automated electrometric measurement                           | In-house method                                                                                                        | L099-PL       | D                  | MCERTS               |
| Soil Descriptions                                  | Textural classification                                                                                                    | In-house method                                                                                                        | L019B         | W                  | NONE                 |

**For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).**

**For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).**

**For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution



4041



## Sample Deviation Report



Analytical Report Number : 25-034519

Project / Site name: Co-op Academy Smithles Moor

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

| Sample ID | Other ID | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                          | Test Ref | Test Deviation |
|-----------|----------|-------------|-------------------|------------------|----------------------------------------------------|----------|----------------|
| RC04      | 1        | S           | 598814            | c                | Chloride, water soluble, in soil                   | L082B    | c              |
| RC04      | 1        | S           | 598814            | c                | Nitrate, water soluble, in soil                    | L078-PL  | c              |
| RC04      | 1        | S           | 598814            | c                | Sulphate, water soluble, in soil (16hr extraction) | L038B    | c              |
| RC04      | 1        | S           | 598814            | c                | Total Sulphur in soil                              | L038B    | c              |
| RC04      | 1        | S           | 598814            | c                | Total sulphate (as SO <sub>4</sub> in soil)        | L038B    | c              |
| RC04      | 1        | S           | 598814            | c                | Water Soluble Nitrate (leachate equivalent)        | L078-PL  | c              |
| RC04      | 1        | S           | 598814            | c                | pH in soil (automated)                             | L099-PL  | c              |
| RC04      | 4        | S           | 598815            | c                | Chloride, water soluble, in soil                   | L082B    | c              |
| RC04      | 4        | S           | 598815            | c                | Nitrate, water soluble, in soil                    | L078-PL  | c              |
| RC04      | 4        | S           | 598815            | c                | Sulphate, water soluble, in soil (16hr extraction) | L038B    | c              |
| RC04      | 4        | S           | 598815            | c                | Total Sulphur in soil                              | L038B    | c              |
| RC04      | 4        | S           | 598815            | c                | Total sulphate (as SO <sub>4</sub> in soil)        | L038B    | c              |
| RC04      | 4        | S           | 598815            | c                | Water Soluble Nitrate (leachate equivalent)        | L078-PL  | c              |
| RC04      | 4        | S           | 598815            | c                | pH in soil (automated)                             | L099-PL  | c              |
| RC06      | 5        | S           | 598816            | c                | Chloride, water soluble, in soil                   | L082B    | c              |
| RC06      | 5        | S           | 598816            | c                | Sulphate, water soluble, in soil (16hr extraction) | L038B    | c              |
| RC06      | 5        | S           | 598816            | c                | Total Sulphur in soil                              | L038B    | c              |
| RC06      | 5        | S           | 598816            | c                | Total sulphate (as SO <sub>4</sub> in soil)        | L038B    | c              |
| RC06      | 5        | S           | 598816            | c                | pH in soil (automated)                             | L099-PL  | c              |
| RC06      | 6        | S           | 598817            | c                | Chloride, water soluble, in soil                   | L082B    | c              |
| RC06      | 6        | S           | 598817            | c                | Sulphate, water soluble, in soil (16hr extraction) | L038B    | c              |
| RC06      | 6        | S           | 598817            | c                | Total Sulphur in soil                              | L038B    | c              |
| RC06      | 6        | S           | 598817            | c                | Total sulphate (as SO <sub>4</sub> in soil)        | L038B    | c              |
| RC06      | 6        | S           | 598817            | c                | pH in soil (automated)                             | L099-PL  | c              |
| RC06      | 7        | S           | 598818            | c                | Chloride, water soluble, in soil                   | L082B    | c              |
| RC06      | 7        | S           | 598818            | c                | Sulphate, water soluble, in soil (16hr extraction) | L038B    | c              |
| RC06      | 7        | S           | 598818            | c                | Total Sulphur in soil                              | L038B    | c              |
| RC06      | 7        | S           | 598818            | c                | Total sulphate (as SO <sub>4</sub> in soil)        | L038B    | c              |
| RC06      | 7        | S           | 598818            | c                | pH in soil (automated)                             | L099-PL  | c              |

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## **Analytical Report Number : 25-030673**

|                             |                             |                                                        |            |
|-----------------------------|-----------------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Co-op Academy Smithies Moor | <b>Samples received on:</b>                            | 30/05/2025 |
| <b>Your job number:</b>     | 601124                      | <b>Samples instructed on/<br/>Analysis started on:</b> | 11/06/2025 |
| <b>Your order number:</b>   | HEX601124                   | <b>Analysis completed by:</b>                          | 23/06/2025 |
| <b>Report Issue Number:</b> | 1                           | <b>Report issued on:</b>                               | 23/06/2025 |
| <b>Samples Analysed:</b>    | 11 soil samples             |                                                        |            |

### **Signed:**

Anna Goc  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

|                                                                                    |           |                                 |
|------------------------------------------------------------------------------------|-----------|---------------------------------|
| Standard sample disposal times, unless otherwise agreed with the laboratory, are : | soils     | - 4 weeks from reporting        |
|                                                                                    | leachates | - 2 weeks from reporting        |
|                                                                                    | waters    | - 2 weeks from reporting        |
|                                                                                    | asbestos  | - 6 months from reporting       |
|                                                                                    | air       | - once the analysis is complete |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.  
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-030673  
Project / Site name: Co-op Academy Smithies Moor  
Your Order No: HEX601124

|                                         |               |                            |                              |               |               |
|-----------------------------------------|---------------|----------------------------|------------------------------|---------------|---------------|
| Lab Sample Number                       | 578154        | 578155                     | 578156                       | 578157        | 578158        |
| Sample Reference                        | RC01          | RC01                       | RC02                         | RS04          | RS04          |
| Sample Number                           | ES1           | ES2                        | ES1                          | ES1           | ES2           |
| Water Matrix                            | N/A           | N/A                        | N/A                          | N/A           | N/A           |
| Depth (m)                               | 0.5           | 0.1                        | 0.05                         | 0.05          | 1             |
| Date Sampled                            | 27/05/2025    | 27/05/2026                 | 27/05/2027                   | 28/05/2025    | 28/05/2025    |
| Time Taken                              | None Supplied | None Supplied              | None Supplied                | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |               |               |

|                               |    |      |      |       |       |       |       |      |
|-------------------------------|----|------|------|-------|-------|-------|-------|------|
| Stone Content                 | %  | 0.1  | NONE | < 0.1 | < 0.1 | < 0.1 | < 0.1 | 45.1 |
| Moisture Content              | %  | 0.01 | NONE | 16    | 0.31  | 0.15  | 0.23  | 16   |
| Total mass of sample received | kg | 0.1  | NONE | 1.9   | 0.6   | 0.6   | 1.1   | 1.9  |

#### Asbestos

|                                        |      |     |           |              |   |   |   |              |
|----------------------------------------|------|-----|-----------|--------------|---|---|---|--------------|
| Asbestos in Soil Detected/Not Detected | Type | N/A | ISO 17025 | Not-detected | - | - | - | Not-detected |
| Asbestos Analyst ID                    | N/A  | N/A | N/A       | WIK          | - | - | - | WIK          |
| Analysis completed                     | N/A  | N/A | N/A       | 23/06/2025   | - | - | - | 23/06/2025   |

#### General Inorganics

|                                                                 |          |      |        |      |   |   |   |      |
|-----------------------------------------------------------------|----------|------|--------|------|---|---|---|------|
| pH (L099)                                                       | pH Units | N/A  | MCERTS | 9.3  | - | - | - | 12.1 |
| Water Soluble Sulphate as SO <sub>4</sub> 16hr extraction (2:1) | mg/kg    | 2.5  | MCERTS | 140  | - | - | - | 86   |
| Water Soluble SO <sub>4</sub> 16hr extraction (2:1)             | mg/l     | 1.25 | MCERTS | 69.8 | - | - | - | 43   |
| Organic Matter (automated)                                      | %        | 0.1  | MCERTS | 2.3  | - | - | - | 1.4  |

#### Speciated PAHs

|                        |       |      |           |        |                   |        |        |        |
|------------------------|-------|------|-----------|--------|-------------------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS    | 0.84   | 27                | < 0.05 | < 0.05 | 0.38   |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS    | < 0.05 | 7.8               | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS    | 0.09   | 480               | < 0.05 | < 0.05 | 0.1    |
| Fluorene               | mg/kg | 0.05 | MCERTS    | 0.07   | 420               | < 0.05 | < 0.05 | 0.13   |
| Phenanthrene           | mg/kg | 0.05 | MCERTS    | 0.83   | 2500 <sup>§</sup> | 0.31   | < 0.05 | 0.98   |
| Anthracene             | mg/kg | 0.05 | MCERTS    | 0.14   | 990               | 0.14   | < 0.05 | 0.2    |
| Fluoranthene           | mg/kg | 0.05 | MCERTS    | 1.6    | 2400 <sup>§</sup> | 0.73   | 0.22   | 1.1    |
| Pyrene                 | mg/kg | 0.05 | MCERTS    | 1.5    | 2300 <sup>§</sup> | 0.67   | 0.25   | 1      |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS    | 0.66   | 930               | 0.17   | 0.08   | 0.6    |
| Chrysene               | mg/kg | 0.05 | MCERTS    | 0.8    | 820               | 0.63   | 0.46   | 0.57   |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.78   | 740               | < 0.05 | < 0.05 | 0.56   |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.3    | 370               | < 0.05 | < 0.05 | 0.26   |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS    | 0.62   | 720               | < 0.05 | < 0.05 | 0.56   |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS    | 0.28   | 310               | < 0.05 | < 0.05 | 0.23   |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS    | 0.07   | 58                | < 0.05 | < 0.05 | 0.07   |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS    | 0.36   | 310               | < 0.05 | < 0.05 | 0.32   |

#### Total PAH

|                             |       |     |           |      |       |      |      |      |
|-----------------------------|-------|-----|-----------|------|-------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | ISO 17025 | 8.89 | 13400 | 2.65 | 1.02 | 7.08 |
|-----------------------------|-------|-----|-----------|------|-------|------|------|------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |   |   |   |       |
|-----------------------------------|-------|-----|--------|-------|---|---|---|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 24    | - | - | - | 6.1   |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | 0.6   | - | - | - | 2.5   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | < 0.2 | - | - | - | 0.5   |
| Chromium (hexavalent)             | mg/kg | 1.8 | MCERTS | < 1.8 | - | - | - | < 1.8 |
| Chromium (aqua regia extractable) | mg/kg | 1   | MCERTS | 20    | - | - | - | 32    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 57    | - | - | - | 26    |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 430   | - | - | - | 32    |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | < 0.3 | - | - | - | < 0.3 |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 18    | - | - | - | 25    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 | - | - | - | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 65    | - | - | - | 88    |

Analytical Report Number: 25-030673  
Project / Site name: Co-op Academy Smithies Moor  
Your Order No: HEX601124

|                                         |               |                            |                              |               |               |
|-----------------------------------------|---------------|----------------------------|------------------------------|---------------|---------------|
| Lab Sample Number                       | 578154        | 578155                     | 578156                       | 578157        | 578158        |
| Sample Reference                        | RC01          | RC01                       | RC02                         | RS04          | RS04          |
| Sample Number                           | ES1           | ES2                        | ES1                          | ES1           | ES2           |
| Water Matrix                            | N/A           | N/A                        | N/A                          | N/A           | N/A           |
| Depth (m)                               | 0.5           | 0.1                        | 0.05                         | 0.05          | 1             |
| Date Sampled                            | 27/05/2025    | 27/05/2026                 | 27/05/2027                   | 28/05/2025    | 28/05/2025    |
| Time Taken                              | None Supplied | None Supplied              | None Supplied                | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |               |               |

#### Petroleum Hydrocarbons

|                                                          |       |      |        |         |   |   |   |         |
|----------------------------------------------------------|-------|------|--------|---------|---|---|---|---------|
| TPHCWG - Aliphatic >EC5 - EC6 <sub>HS_1D_AL</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 | - | - | - | < 0.010 |
| TPHCWG - Aliphatic >EC6 - EC8 <sub>HS_1D_AL</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 | - | - | - | < 0.010 |
| TPHCWG - Aliphatic >EC8 - EC10 <sub>HS_1D_AL</sub>       | mg/kg | 0.01 | MCERTS | < 0.010 | - | - | - | < 0.010 |
| TPHCWG - Aliphatic >EC10 - EC12 <sub>EH_CU_1D_AL</sub>   | mg/kg | 1    | MCERTS | < 1.0   | - | - | - | 1.8     |
| TPHCWG - Aliphatic >EC12 - EC16 <sub>EH_CU_1D_AL</sub>   | mg/kg | 2    | MCERTS | < 2.0   | - | - | - | 5.4     |
| TPHCWG - Aliphatic >EC16 - EC21 <sub>EH_CU_1D_AL</sub>   | mg/kg | 8    | MCERTS | < 8.0   | - | - | - | < 8.0   |
| TPHCWG - Aliphatic >EC21 - EC35 <sub>EH_CU_1D_AL</sub>   | mg/kg | 8    | MCERTS | 49      | - | - | - | 27      |
| TPHCWG - Aliphatic >EC5 - EC35 <sub>EH_CU+HS_1D_AL</sub> | mg/kg | 10   | NONE   | 49      | - | - | - | 35      |

|                                                         |       |      |        |         |   |   |   |         |
|---------------------------------------------------------|-------|------|--------|---------|---|---|---|---------|
| TPHCWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 | - | - | - | < 0.010 |
| TPHCWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 | - | - | - | < 0.010 |
| TPHCWG - Aromatic >EC8 - EC10 <sub>HS_1D_AR</sub>       | mg/kg | 0.02 | MCERTS | < 0.020 | - | - | - | < 0.020 |
| TPHCWG - Aromatic >EC10 - EC12 <sub>EH_CU_1D_AR</sub>   | mg/kg | 1    | MCERTS | < 1.0   | - | - | - | < 1.0   |
| TPHCWG - Aromatic >EC12 - EC16 <sub>EH_CU_1D_AR</sub>   | mg/kg | 2    | MCERTS | < 2.0   | - | - | - | < 2.0   |
| TPHCWG - Aromatic >EC16 - EC21 <sub>EH_CU_1D_AR</sub>   | mg/kg | 10   | MCERTS | < 10    | - | - | - | < 10    |
| TPHCWG - Aromatic >EC21 - EC35 <sub>EH_CU_1D_AR</sub>   | mg/kg | 10   | MCERTS | < 10    | - | - | - | 17      |
| TPHCWG - Aromatic >EC5 - EC35 <sub>EH_CU+HS_1D_AR</sub> | mg/kg | 10   | NONE   | < 10    | - | - | - | 17      |

#### VOCs

|                                    |       |   |        |       |   |   |   |       |
|------------------------------------|-------|---|--------|-------|---|---|---|-------|
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 5 | MCERTS | < 5.0 | - | - | - | < 5.0 |
| Benzene                            | µg/kg | 5 | MCERTS | < 5.0 | - | - | - | < 5.0 |
| Toluene                            | µg/kg | 5 | MCERTS | < 5.0 | - | - | - | < 5.0 |
| Ethylbenzene                       | µg/kg | 5 | MCERTS | < 5.0 | - | - | - | < 5.0 |
| p & m-Xylene                       | µg/kg | 8 | MCERTS | < 8.0 | - | - | - | < 8.0 |
| o-Xylene                           | µg/kg | 5 | MCERTS | < 5.0 | - | - | - | < 5.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-030673  
Project / Site name: Co-op Academy Smithies Moor  
Your Order No: HEX601124

|                                      |               |                         |                           |               |               |
|--------------------------------------|---------------|-------------------------|---------------------------|---------------|---------------|
| Lab Sample Number                    | 578159        | 578160                  | 578161                    | 578162        | 578163        |
| Sample Reference                     | RC05          | RC07                    | SA201                     | SA201         | SA202         |
| Sample Number                        | ES1           | ES1                     | ES1                       | ES1           | ES1           |
| Water Matrix                         | N/A           | N/A                     | N/A                       | N/A           | N/A           |
| Depth (m)                            | 0.05          | 0.1                     | 0.5                       | 0.1           | 0.1           |
| Date Sampled                         | 29/05/2025    | 29/05/2025              | 27/05/2025                | 27/05/2025    | 28/05/2025    |
| Time Taken                           | None Supplied | None Supplied           | None Supplied             | None Supplied | None Supplied |
| Analytical Parameter (Soil Analysis) | Units         | Test Limit of detection | Test Accreditation Status |               |               |

|                               |    |      |      |       |       |       |      |     |
|-------------------------------|----|------|------|-------|-------|-------|------|-----|
| Stone Content                 | %  | 0.1  | NONE | < 0.1 | < 0.1 | < 0.1 | 16.9 | 6.8 |
| Moisture Content              | %  | 0.01 | NONE | 0.05  | 19    | 12    | 13   | 19  |
| Total mass of sample received | kg | 0.1  | NONE | 1.1   | 1.1   | 1.3   | 1.2  | 2   |

#### Asbestos

|                                        |      |     |           |   |              |              |              |              |
|----------------------------------------|------|-----|-----------|---|--------------|--------------|--------------|--------------|
| Asbestos in Soil Detected/Not Detected | Type | N/A | ISO 17025 | - | Not-detected | Not-detected | Not-detected | Not-detected |
| Asbestos Analyst ID                    | N/A  | N/A | N/A       | - | WIK          | WIK          | WIK          | WIK          |
| Analysis completed                     | N/A  | N/A | N/A       | - | 23/06/2025   | 23/06/2025   | 23/06/2025   | 23/06/2025   |

#### General Inorganics

|                                                                 |          |      |        |   |      |      |      |      |
|-----------------------------------------------------------------|----------|------|--------|---|------|------|------|------|
| pH (L099)                                                       | pH Units | N/A  | MCERTS | - | 7.1  | 7.8  | 7.5  | 7.3  |
| Water Soluble Sulphate as SO <sub>4</sub> 16hr extraction (2:1) | mg/kg    | 2.5  | MCERTS | - | 87   | 80   | 110  | 58   |
| Water Soluble SO <sub>4</sub> 16hr extraction (2:1)             | mg/l     | 1.25 | MCERTS | - | 43.4 | 39.9 | 54.2 | 29.1 |
| Organic Matter (automated)                                      | %        | 0.1  | MCERTS | - | 12   | 4.6  | 7.6  | 11   |

#### Speciated PAHs

|                        |       |      |           |        |        |        |      |        |
|------------------------|-------|------|-----------|--------|--------|--------|------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS    | < 0.05 | 0.26   | 0.46   | 0.63 | 0.23   |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | 0.07 | < 0.05 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS    | 0.88   | 0.26   | 0.22   | 0.57 | 0.5    |
| Fluorene               | mg/kg | 0.05 | MCERTS    | 1.2    | 0.21   | 0.2    | 0.47 | 0.44   |
| Phenanthrene           | mg/kg | 0.05 | MCERTS    | 7.9    | 2.6    | 2.2    | 5    | 4.5    |
| Anthracene             | mg/kg | 0.05 | MCERTS    | 3.5    | 0.44   | 0.38   | 0.86 | 0.89   |
| Fluoranthene           | mg/kg | 0.05 | MCERTS    | 5.3    | 3.4    | 3      | 7.1  | 5.8    |
| Pyrene                 | mg/kg | 0.05 | MCERTS    | 4.6    | 3      | 2.8    | 6.5  | 5.5    |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS    | 1.9    | 1.7    | 1.4    | 3.7  | 2.8    |
| Chrysene               | mg/kg | 0.05 | MCERTS    | 2.2    | 2.2    | 1.9    | 4.5  | 3.2    |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 1.4    | 1.9    | 2.1    | 4.6  | 3.4    |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.76   | 1      | 0.64   | 1.7  | 1.1    |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS    | 1.4    | 1.7    | 1.6    | 3.8  | 2.6    |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS    | 0.63   | 0.81   | 0.76   | 1.8  | 1.1    |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS    | 0.17   | 0.21   | 0.26   | 0.54 | 0.29   |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS    | 0.77   | 0.96   | 1      | 2.2  | 1.3    |

#### Total PAH

|                             |       |     |           |      |      |    |    |      |
|-----------------------------|-------|-----|-----------|------|------|----|----|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | ISO 17025 | 32.7 | 20.4 | 19 | 44 | 33.7 |
|-----------------------------|-------|-----|-----------|------|------|----|----|------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |   |       |       |       |       |
|-----------------------------------|-------|-----|--------|---|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | - | 27    | 35    | 33    | 26    |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | - | 1.9   | 0.4   | 0.8   | 1.8   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | - | 0.4   | 0.4   | 0.5   | 0.4   |
| Chromium (hexavalent)             | mg/kg | 1.8 | MCERTS | - | < 1.8 | < 1.8 | < 1.8 | < 1.8 |
| Chromium (aqua regia extractable) | mg/kg | 1   | MCERTS | - | 52    | 32    | 35    | 40    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | - | 150   | 84    | 90    | 260   |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | - | 100   | 120   | 90    | 100   |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | - | 0.4   | < 0.3 | 0.3   | 0.7   |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | - | 32    | 37    | 30    | 30    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | - | 1.4   | < 1.0 | < 1.0 | 1.3   |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | - | 290   | 120   | 160   | 330   |

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|                                         |               |                            |                              |               |               |
|-----------------------------------------|---------------|----------------------------|------------------------------|---------------|---------------|
| Lab Sample Number                       | 578159        | 578160                     | 578161                       | 578162        | 578163        |
| Sample Reference                        | RC05          | RC07                       | SA201                        | SA201         | SA202         |
| Sample Number                           | ES1           | ES1                        | ES1                          | ES1           | ES1           |
| Water Matrix                            | N/A           | N/A                        | N/A                          | N/A           | N/A           |
| Depth (m)                               | 0.05          | 0.1                        | 0.5                          | 0.1           | 0.1           |
| Date Sampled                            | 29/05/2025    | 29/05/2025                 | 27/05/2025                   | 27/05/2025    | 28/05/2025    |
| Time Taken                              | None Supplied | None Supplied              | None Supplied                | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |               |               |

#### Petroleum Hydrocarbons

|                                                          |       |      |        |   |         |         |         |         |
|----------------------------------------------------------|-------|------|--------|---|---------|---------|---------|---------|
| TPHCWG - Aliphatic >EC5 - EC6 <sub>HS_1D_AL</sub>        | mg/kg | 0.01 | MCERTS | - | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| TPHCWG - Aliphatic >EC6 - EC8 <sub>HS_1D_AL</sub>        | mg/kg | 0.01 | MCERTS | - | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| TPHCWG - Aliphatic >EC8 - EC10 <sub>HS_1D_AL</sub>       | mg/kg | 0.01 | MCERTS | - | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| TPHCWG - Aliphatic >EC10 - EC12 <sub>EH_CU_1D_AL</sub>   | mg/kg | 1    | MCERTS | - | < 1.0   | < 1.0   | < 1.0   | < 1.0   |
| TPHCWG - Aliphatic >EC12 - EC16 <sub>EH_CU_1D_AL</sub>   | mg/kg | 2    | MCERTS | - | < 2.0   | 3.4     | < 2.0   | < 2.0   |
| TPHCWG - Aliphatic >EC16 - EC21 <sub>EH_CU_1D_AL</sub>   | mg/kg | 8    | MCERTS | - | < 8.0   | < 8.0   | < 8.0   | < 8.0   |
| TPHCWG - Aliphatic >EC21 - EC35 <sub>EH_CU_1D_AL</sub>   | mg/kg | 8    | MCERTS | - | < 8.0   | 29      | 11      | 9.1     |
| TPHCWG - Aliphatic >EC5 - EC35 <sub>EH_CU+HS_1D_AL</sub> | mg/kg | 10   | NONE   | - | < 10    | 33      | 11      | < 10    |

|                                                         |       |      |        |   |         |         |         |         |
|---------------------------------------------------------|-------|------|--------|---|---------|---------|---------|---------|
| TPHCWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub>        | mg/kg | 0.01 | MCERTS | - | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| TPHCWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub>        | mg/kg | 0.01 | MCERTS | - | < 0.010 | < 0.010 | < 0.010 | < 0.010 |
| TPHCWG - Aromatic >EC8 - EC10 <sub>HS_1D_AR</sub>       | mg/kg | 0.02 | MCERTS | - | < 0.020 | < 0.020 | < 0.020 | < 0.020 |
| TPHCWG - Aromatic >EC10 - EC12 <sub>EH_CU_1D_AR</sub>   | mg/kg | 1    | MCERTS | - | < 1.0   | < 1.0   | < 1.0   | < 1.0   |
| TPHCWG - Aromatic >EC12 - EC16 <sub>EH_CU_1D_AR</sub>   | mg/kg | 2    | MCERTS | - | < 2.0   | < 2.0   | < 2.0   | 4.5     |
| TPHCWG - Aromatic >EC16 - EC21 <sub>EH_CU_1D_AR</sub>   | mg/kg | 10   | MCERTS | - | 10      | 11      | 22      | 15      |
| TPHCWG - Aromatic >EC21 - EC35 <sub>EH_CU_1D_AR</sub>   | mg/kg | 10   | MCERTS | - | 26      | 27      | 47      | 23      |
| TPHCWG - Aromatic >EC5 - EC35 <sub>EH_CU+HS_1D_AR</sub> | mg/kg | 10   | NONE   | - | 36      | 38      | 68      | 42      |

#### VOCs

|                                    |       |   |        |   |       |       |       |       |
|------------------------------------|-------|---|--------|---|-------|-------|-------|-------|
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 5 | MCERTS | - | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Benzene                            | µg/kg | 5 | MCERTS | - | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Toluene                            | µg/kg | 5 | MCERTS | - | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ethylbenzene                       | µg/kg | 5 | MCERTS | - | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| p & m-Xylene                       | µg/kg | 8 | MCERTS | - | < 8.0 | < 8.0 | < 8.0 | < 8.0 |
| o-Xylene                           | µg/kg | 5 | MCERTS | - | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-030673  
 Project / Site name: Co-op Academy Smithies Moor  
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|                                         |               |                            |                              |  |
|-----------------------------------------|---------------|----------------------------|------------------------------|--|
| Lab Sample Number                       | 578164        |                            |                              |  |
| Sample Reference                        | SA203         |                            |                              |  |
| Sample Number                           | ES1           |                            |                              |  |
| Water Matrix                            | N/A           |                            |                              |  |
| Depth (m)                               | 0.15          |                            |                              |  |
| Date Sampled                            | 29/05/2025    |                            |                              |  |
| Time Taken                              | None Supplied |                            |                              |  |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |  |

|                               |    |      |      |      |
|-------------------------------|----|------|------|------|
| Stone Content                 | %  | 0.1  | NONE | 35.5 |
| Moisture Content              | %  | 0.01 | NONE | 16   |
| Total mass of sample received | kg | 0.1  | NONE | 1.9  |

#### Asbestos

|                                        |      |     |           |              |
|----------------------------------------|------|-----|-----------|--------------|
| Asbestos in Soil Detected/Not Detected | Type | N/A | ISO 17025 | Not-detected |
| Asbestos Analyst ID                    | N/A  | N/A | N/A       | WIK          |
| Analysis completed                     | N/A  | N/A | N/A       | 23/06/2025   |

#### General Inorganics

|                                                                 |          |      |        |     |
|-----------------------------------------------------------------|----------|------|--------|-----|
| pH (L099)                                                       | pH Units | N/A  | MCERTS | 7.6 |
| Water Soluble Sulphate as SO <sub>4</sub> 16hr extraction (2:1) | mg/kg    | 2.5  | MCERTS | 210 |
| Water Soluble SO <sub>4</sub> 16hr extraction (2:1)             | mg/l     | 1.25 | MCERTS | 104 |
| Organic Matter (automated)                                      | %        | 0.1  | MCERTS | 11  |

#### Speciated PAHs

|                        |       |      |           |      |
|------------------------|-------|------|-----------|------|
| Naphthalene            | mg/kg | 0.05 | MCERTS    | 0.62 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS    | 0.09 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS    | 0.86 |
| Fluorene               | mg/kg | 0.05 | MCERTS    | 0.66 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS    | 7.4  |
| Anthracene             | mg/kg | 0.05 | MCERTS    | 1.3  |
| Fluoranthene           | mg/kg | 0.05 | MCERTS    | 12   |
| Pyrene                 | mg/kg | 0.05 | MCERTS    | 11   |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS    | 5.5  |
| Chrysene               | mg/kg | 0.05 | MCERTS    | 6.8  |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 7.2  |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 2.7  |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS    | 5.6  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS    | 2.3  |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS    | 0.75 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS    | 2.7  |

#### Total PAH

|                             |       |     |           |      |
|-----------------------------|-------|-----|-----------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 0.8 | ISO 17025 | 67.1 |
|-----------------------------|-------|-----|-----------|------|

#### Heavy Metals / Metalloids

|                                   |       |     |        |       |
|-----------------------------------|-------|-----|--------|-------|
| Arsenic (aqua regia extractable)  | mg/kg | 1   | MCERTS | 34    |
| Boron (water soluble)             | mg/kg | 0.2 | MCERTS | 1.2   |
| Cadmium (aqua regia extractable)  | mg/kg | 0.2 | MCERTS | 0.4   |
| Chromium (hexavalent)             | mg/kg | 1.8 | MCERTS | < 1.8 |
| Chromium (aqua regia extractable) | mg/kg | 1   | MCERTS | 32    |
| Copper (aqua regia extractable)   | mg/kg | 1   | MCERTS | 94    |
| Lead (aqua regia extractable)     | mg/kg | 1   | MCERTS | 85    |
| Mercury (aqua regia extractable)  | mg/kg | 0.3 | MCERTS | 0.8   |
| Nickel (aqua regia extractable)   | mg/kg | 1   | MCERTS | 28    |
| Selenium (aqua regia extractable) | mg/kg | 1   | MCERTS | < 1.0 |
| Zinc (aqua regia extractable)     | mg/kg | 1   | MCERTS | 170   |

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|                                         |       |                            |                              |               |
|-----------------------------------------|-------|----------------------------|------------------------------|---------------|
| Lab Sample Number                       |       |                            |                              | 578164        |
| Sample Reference                        |       |                            |                              | SA203         |
| Sample Number                           |       |                            |                              | ES1           |
| Water Matrix                            |       |                            |                              | N/A           |
| Depth (m)                               |       |                            |                              | 0.15          |
| Date Sampled                            |       |                            |                              | 29/05/2025    |
| Time Taken                              |       |                            |                              | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Test Limit of<br>detection | Test Accreditation<br>Status |               |
|                                         |       |                            |                              |               |
|                                         |       |                            |                              |               |
|                                         |       |                            |                              |               |
|                                         |       |                            |                              |               |

#### Petroleum Hydrocarbons

|                                                          |       |      |        |         |
|----------------------------------------------------------|-------|------|--------|---------|
| TPHCWG - Aliphatic >EC5 - EC6 <sub>HS_1D_AL</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 |
| TPHCWG - Aliphatic >EC6 - EC8 <sub>HS_1D_AL</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 |
| TPHCWG - Aliphatic >EC8 - EC10 <sub>HS_1D_AL</sub>       | mg/kg | 0.01 | MCERTS | < 0.010 |
| TPHCWG - Aliphatic >EC10 - EC12 <sub>EH_CU_1D_AL</sub>   | mg/kg | 1    | MCERTS | < 1.0   |
| TPHCWG - Aliphatic >EC12 - EC16 <sub>EH_CU_1D_AL</sub>   | mg/kg | 2    | MCERTS | < 2.0   |
| TPHCWG - Aliphatic >EC16 - EC21 <sub>EH_CU_1D_AL</sub>   | mg/kg | 8    | MCERTS | < 8.0   |
| TPHCWG - Aliphatic >EC21 - EC35 <sub>EH_CU_1D_AL</sub>   | mg/kg | 8    | MCERTS | 10      |
| TPHCWG - Aliphatic >EC5 - EC35 <sub>EH_CU+HS_1D_AL</sub> | mg/kg | 10   | NONE   | 10      |

|                                                         |       |      |        |         |
|---------------------------------------------------------|-------|------|--------|---------|
| TPHCWG - Aromatic >EC5 - EC7 <sub>HS_1D_AR</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 |
| TPHCWG - Aromatic >EC7 - EC8 <sub>HS_1D_AR</sub>        | mg/kg | 0.01 | MCERTS | < 0.010 |
| TPHCWG - Aromatic >EC8 - EC10 <sub>HS_1D_AR</sub>       | mg/kg | 0.02 | MCERTS | < 0.020 |
| TPHCWG - Aromatic >EC10 - EC12 <sub>EH_CU_1D_AR</sub>   | mg/kg | 1    | MCERTS | < 1.0   |
| TPHCWG - Aromatic >EC12 - EC16 <sub>EH_CU_1D_AR</sub>   | mg/kg | 2    | MCERTS | 4.7     |
| TPHCWG - Aromatic >EC16 - EC21 <sub>EH_CU_1D_AR</sub>   | mg/kg | 10   | MCERTS | 34      |
| TPHCWG - Aromatic >EC21 - EC35 <sub>EH_CU_1D_AR</sub>   | mg/kg | 10   | MCERTS | 47      |
| TPHCWG - Aromatic >EC5 - EC35 <sub>EH_CU+HS_1D_AR</sub> | mg/kg | 10   | NONE   | 86      |

#### VOCs

|                                    |       |   |        |       |
|------------------------------------|-------|---|--------|-------|
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 5 | MCERTS | < 5.0 |
| Benzene                            | µg/kg | 5 | MCERTS | < 5.0 |
| Toluene                            | µg/kg | 5 | MCERTS | < 5.0 |
| Ethylbenzene                       | µg/kg | 5 | MCERTS | < 5.0 |
| p & m-Xylene                       | µg/kg | 8 | MCERTS | < 8.0 |
| o-Xylene                           | µg/kg | 5 | MCERTS | < 5.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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**Project / Site name: Co-op Academy Smithies Moor**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

| Lab Sample Number | Sample Reference | Sample Number | Depth (m) | Sample Description *                           |
|-------------------|------------------|---------------|-----------|------------------------------------------------|
| 578154            | RC01             | ES1           | 0.5       | Brown sand with gravel                         |
| 578155            | RC01             | ES2           | 0.1       | Non Soil. <sup>9</sup>                         |
| 578156            | RC02             | ES1           | 0.05      | Non Soil. <sup>9</sup>                         |
| 578157            | RS04             | ES1           | 0.05      | Non Soil. <sup>9</sup>                         |
| 578158            | RS04             | ES2           | 1         | Grey clay and sand with stones                 |
| 578159            | RC05             | ES1           | 0.05      | Non Soil. <sup>9</sup>                         |
| 578160            | RC07             | ES1           | 0.1       | Brown clay and loam with gravel and vegetation |
| 578161            | SA201            | ES1           | 0.5       | Brown clay and loam with gravel                |
| 578162            | SA201            | ES1           | 0.1       | Brown loam with stones and vegetation          |
| 578163            | SA202            | ES1           | 0.1       | Brown loam with stones and vegetation          |
| 578164            | SA203            | ES1           | 0.15      | Brown loam with stones and vegetation          |

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**Project / Site name: Co-op Academy Smithies Moor**

**Water matrix abbreviations:**  
**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)**  
**Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                                                        | Analytical Method Description                                                                                                                       | Analytical Method Reference                                                         | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Asbestos identification in Soil                                             | Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques                               | In-house method based on HSG 248, 2021                                              | A001B         | D                  | ISO 17025            |
| Organic matter (Automated) in soil                                          | Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method) | In-house method                                                                     | L009B         | D                  | MCERTS               |
| Moisture Content                                                            | Moisture content, determined gravimetrically (up to 30°C)                                                                                           | In-house method                                                                     | L019B         | W                  | NONE                 |
| Stones content of soil                                                      | Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight                          | In-house method based on British Standard Methods and MCERTS requirements.          | L019B         | D                  | NONE                 |
| Metals in soil by ICP-OES                                                   | Determination of metals in soil by aqua-regia digestion followed by ICP-OES                                                                         | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil | L038B         | D                  | MCERTS               |
| Boron, water soluble, in soil                                               | Determination of water soluble boron in soil by hot water extract followed by ICP-OES                                                               | In-house method based on Second Site Properties version 3                           | L038B         | D                  | MCERTS               |
| Sulphate, water soluble, in soil (16hr extraction)                          | Sulphate, water soluble, in soil (16hr extraction)                                                                                                  | In-house method                                                                     | L038B         | D                  | MCERTS               |
| Speciated PAHs and/or Semi-volatile organic compounds in soil               | Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS              | In-house method based on USEPA 8270                                                 | L064B         | D                  | MCERTS               |
| BTEX and/or Volatile organic compounds in soil                              | Determination of volatile organic compounds in soil by headspace GC-MS                                                                              | In-house method based on USEPA 8260                                                 | L073B         | W                  | MCERTS               |
| Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic                                 | In-house method                                                                     | L076B/L088-PL | D/W                | MCERTS               |
| Hexavalent chromium in soil                                                 | Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry                    | In-house method                                                                     | L080-PL       | W                  | MCERTS               |
| pH in soil (automated)                                                      | Determination of pH in soil by addition of water followed by automated electrometric measurement                                                    | In-house method                                                                     | L099-PL       | D                  | MCERTS               |
| Soil Descriptions                                                           | Textural classification                                                                                                                             | In-house method                                                                     | L019B         | W                  | NONE                 |

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).  
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).  
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.  
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.  
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.  
The result for sum should be interpreted with caution

**Analytical Report Number : 25-030673**

**Project / Site name: Co-op Academy Smithies Moor**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)**

**Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

\$- Concentration has been determined by extrapolated calibration as analyte concentration is above the concentration range for the procedure after dilution. The result should be considered as deviating and should be interpreted with caution. The result is not accredited.

\*g - Unaccredited sample matrix.

**Analytical Report Number : 25-030673**

**Project / Site name: Co-op Academy Smithies Moor**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

| Sample ID | Other ID | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                                                   | Test Ref      | Test Deviation |
|-----------|----------|-------------|-------------------|------------------|-----------------------------------------------------------------------------|---------------|----------------|
| RC01      | ES1      | S           | 578154            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| RC01      | ES1      | S           | 578154            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| RC01      | ES1      | S           | 578154            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| RC01      | ES1      | S           | 578154            | c                | pH in soil (automated)                                                      | L099-PL       | c              |
| RC05      | ES1      | S           | 578159            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| RC07      | ES1      | S           | 578160            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| RC07      | ES1      | S           | 578160            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| RC07      | ES1      | S           | 578160            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| RC07      | ES1      | S           | 578160            | c                | pH in soil (automated)                                                      | L099-PL       | c              |
| RS04      | ES1      | S           | 578157            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| RS04      | ES2      | S           | 578158            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| RS04      | ES2      | S           | 578158            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| RS04      | ES2      | S           | 578158            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| RS04      | ES2      | S           | 578158            | c                | pH in soil (automated)                                                      | L099-PL       | c              |
| SA201     | ES1      | S           | 578161            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| SA201     | ES1      | S           | 578161            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| SA201     | ES1      | S           | 578161            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| SA201     | ES1      | S           | 578161            | c                | pH in soil (automated)                                                      | L099-PL       | c              |
| SA201     | ES1      | S           | 578162            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| SA201     | ES1      | S           | 578162            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| SA201     | ES1      | S           | 578162            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| SA201     | ES1      | S           | 578162            | c                | pH in soil (automated)                                                      | L099-PL       | c              |
| SA202     | ES1      | S           | 578163            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| SA202     | ES1      | S           | 578163            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| SA202     | ES1      | S           | 578163            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| SA202     | ES1      | S           | 578163            | c                | pH in soil (automated)                                                      | L099-PL       | c              |
| SA203     | ES1      | S           | 578164            | c                | BTEX and/or Volatile organic compounds in soil                              | L073B         | c              |
| SA203     | ES1      | S           | 578164            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil               | L064B         | c              |
| SA203     | ES1      | S           | 578164            | c                | Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil | L076B/L088-PL | c              |
| SA203     | ES1      | S           | 578164            | c                | pH in soil (automated)                                                      | L099-PL       | c              |

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## **Analytical Report Number : 25-030679**

|                             |                             |                                                        |            |
|-----------------------------|-----------------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Co-op Academy Smithies Moor | <b>Samples received on:</b>                            | 30/05/2025 |
| <b>Your job number:</b>     | 601124                      | <b>Samples instructed on/<br/>Analysis started on:</b> | 11/06/2025 |
| <b>Your order number:</b>   | HEX601124                   | <b>Analysis completed by:</b>                          | 23/06/2025 |
| <b>Report Issue Number:</b> | 1                           | <b>Report issued on:</b>                               | 23/06/2025 |
| <b>Samples Analysed:</b>    | 7 10:1 WAC samples          |                                                        |            |

**Signed:** \_\_\_\_\_

Anna Goc  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

|                                                                                    |           |                                 |
|------------------------------------------------------------------------------------|-----------|---------------------------------|
| Standard sample disposal times, unless otherwise agreed with the laboratory, are : | soils     | - 4 weeks from reporting        |
|                                                                                    | leachates | - 2 weeks from reporting        |
|                                                                                    | waters    | - 2 weeks from reporting        |
|                                                                                    | asbestos  | - 6 months from reporting       |
|                                                                                    | air       | - once the analysis is complete |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.  
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-030679  
 Project / Site name: Co-op Academy Smithies Moor  
 Your Order No: HEX601124

|                                         |               |                            |                              |               |               |
|-----------------------------------------|---------------|----------------------------|------------------------------|---------------|---------------|
| Lab Sample Number                       | 578183        | 578184                     | 578185                       | 578186        | 578187        |
| Sample Reference                        | RC01          | RS04                       | RC07                         | SA201         | SA201         |
| Sample Number                           | ES1           | ES2                        | ES1                          | ES1           | ES1           |
| Water Matrix                            | N/A           | N/A                        | N/A                          | N/A           | N/A           |
| Depth (m)                               | 0.5           | 1                          | 0.1                          | 0.5           | 0.1           |
| Date Sampled                            | 27/05/2025    | 28/05/2025                 | 29/05/2025                   | 27/05/2025    | 27/05/2025    |
| Time Taken                              | None Supplied | None Supplied              | None Supplied                | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |               |               |

|                               |    |      |      |       |      |       |       |      |
|-------------------------------|----|------|------|-------|------|-------|-------|------|
| Stone Content                 | %  | 0.1  | NONE | < 0.1 | 45.1 | < 0.1 | < 0.1 | 16.9 |
| Moisture Content              | %  | 0.01 | NONE | 16    | 16   | 19    | 12    | 13   |
| Total mass of sample received | kg | 0.1  | NONE | 1.9   | 1.9  | 1.1   | 1.3   | 1.2  |

#### General Inorganics

|                                        |          |       |        |     |     |    |     |      |
|----------------------------------------|----------|-------|--------|-----|-----|----|-----|------|
| pH (L005B)                             | pH Units | N/A   | MCERTS | 8.6 | 7.7 | 7  | 8.1 | 7.4  |
| Total Organic Carbon (TOC) - Automated | %        | 0.1   | MCERTS | 1.3 | 0.8 | 7  | 2.7 | 4.4  |
| Loss on Ignition @ 450°C               | %        | 0.2   | MCERTS | 3.4 | 3.8 | 16 | 6.7 | 11   |
| Acid Neutralisation Capacity           | mmol/kg  | -9999 | NONE   | 28  | 3.9 | 0  | 11  | 0.89 |

#### Speciated PAHs

|                        |       |      |           |        |        |        |        |      |
|------------------------|-------|------|-----------|--------|--------|--------|--------|------|
| Naphthalene            | mg/kg | 0.05 | MCERTS    | 0.84   | 0.38   | 0.26   | 0.46   | 0.63 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS    | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.07 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS    | 0.09   | 0.1    | 0.26   | 0.22   | 0.57 |
| Fluorene               | mg/kg | 0.05 | MCERTS    | 0.07   | 0.13   | 0.21   | 0.2    | 0.47 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS    | 0.83   | 0.98   | 2.6    | 2.2    | 5    |
| Anthracene             | mg/kg | 0.05 | MCERTS    | 0.14   | 0.2    | 0.44   | 0.38   | 0.86 |
| Fluoranthene           | mg/kg | 0.05 | MCERTS    | 1.6    | 1.1    | 3.4    | 3      | 7.1  |
| Pyrene                 | mg/kg | 0.05 | MCERTS    | 1.5    | 1      | 3      | 2.8    | 6.5  |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS    | 0.66   | 0.6    | 1.7    | 1.4    | 3.7  |
| Chrysene               | mg/kg | 0.05 | MCERTS    | 0.8    | 0.57   | 2.2    | 1.9    | 4.5  |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.78   | 0.56   | 1.9    | 2.1    | 4.6  |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 0.3    | 0.26   | 1      | 0.64   | 1.7  |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS    | 0.62   | 0.56   | 1.7    | 1.6    | 3.8  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS    | 0.28   | 0.23   | 0.81   | 0.76   | 1.8  |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS    | 0.07   | 0.07   | 0.21   | 0.26   | 0.54 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS    | 0.36   | 0.32   | 0.96   | 1      | 2.2  |
| Coronene               | mg/kg | 0.05 | NONE      | < 0.05 | 0.15   | < 0.05 | 0.37   | 0.71 |

#### Total PAH

|                   |       |      |      |      |      |      |      |      |
|-------------------|-------|------|------|------|------|------|------|------|
| Total WAC-17 PAHs | mg/kg | 0.85 | NONE | 8.89 | 7.24 | 20.4 | 19.4 | 44.7 |
|-------------------|-------|------|------|------|------|------|------|------|

#### Petroleum Hydrocarbons

|                                                      |       |    |      |    |    |      |    |    |
|------------------------------------------------------|-------|----|------|----|----|------|----|----|
| Mineral Oil (EC10 - EC40) <small>EH_CU_ID_AL</small> | mg/kg | 10 | NONE | 60 | 48 | < 10 | 47 | 15 |
|------------------------------------------------------|-------|----|------|----|----|------|----|----|

#### VOCs

|              |       |   |        |       |       |       |       |       |
|--------------|-------|---|--------|-------|-------|-------|-------|-------|
| Benzene      | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Toluene      | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ethylbenzene | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| p & m-Xylene | µg/kg | 8 | MCERTS | < 8.0 | < 8.0 | < 8.0 | < 8.0 | < 8.0 |
| o-Xylene     | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|            |       |    |        |      |      |      |      |      |
|------------|-------|----|--------|------|------|------|------|------|
| Total BTEX | µg/kg | 10 | MCERTS | < 10 | < 10 | < 10 | < 10 | < 10 |
|------------|-------|----|--------|------|------|------|------|------|

Analytical Report Number: 25-030679  
 Project / Site name: Co-op Academy Smithies Moor  
 Your Order No: HEX601124

|                                         |               |                            |                              |               |               |
|-----------------------------------------|---------------|----------------------------|------------------------------|---------------|---------------|
| Lab Sample Number                       | 578183        | 578184                     | 578185                       | 578186        | 578187        |
| Sample Reference                        | RC01          | RS04                       | RC07                         | SA201         | SA201         |
| Sample Number                           | ES1           | ES2                        | ES1                          | ES1           | ES1           |
| Water Matrix                            | N/A           | N/A                        | N/A                          | N/A           | N/A           |
| Depth (m)                               | 0.5           | 1                          | 0.1                          | 0.5           | 0.1           |
| Date Sampled                            | 27/05/2025    | 28/05/2025                 | 29/05/2025                   | 27/05/2025    | 27/05/2025    |
| Time Taken                              | None Supplied | None Supplied              | None Supplied                | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection | Test Accreditation<br>Status |               |               |

#### PCBs by GC-MS

|                  |       |       |        |         |         |         |         |         |
|------------------|-------|-------|--------|---------|---------|---------|---------|---------|
| PCB Congener 28  | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| PCB Congener 52  | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.001   |
| PCB Congener 101 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.006   |
| PCB Congener 118 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.005   |
| PCB Congener 138 | mg/kg | 0.001 | MCERTS | < 0.001 | 0.001   | < 0.001 | 0.001   | 0.006   |
| PCB Congener 153 | mg/kg | 0.001 | MCERTS | < 0.001 | 0.001   | < 0.001 | < 0.001 | 0.005   |
| PCB Congener 180 | mg/kg | 0.001 | MCERTS | < 0.001 | 0.001   | < 0.001 | 0.001   | < 0.001 |
| Total PCBs       | mg/kg | 0.007 | MCERTS | < 0.007 | < 0.007 | < 0.007 | < 0.007 | 0.023   |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-030679  
Project / Site name: Co-op Academy Smithies Moor  
Your Order No: HEX601124

|                                         |  |       |                            |                              |               |
|-----------------------------------------|--|-------|----------------------------|------------------------------|---------------|
| Lab Sample Number                       |  |       |                            | 578188                       | 578189        |
| Sample Reference                        |  |       |                            | SA202                        | SA203         |
| Sample Number                           |  |       |                            | ES1                          | ES1           |
| Water Matrix                            |  |       |                            | N/A                          | N/A           |
| Depth (m)                               |  |       |                            | 0.1                          | 0.15          |
| Date Sampled                            |  |       |                            | 28/05/2025                   | 29/05/2025    |
| Time Taken                              |  |       |                            | None Supplied                | None Supplied |
| Analytical Parameter<br>(Soil Analysis) |  | Units | Test Limit of<br>detection | Test Accreditation<br>Status |               |
|                                         |  |       |                            |                              |               |
|                                         |  |       |                            |                              |               |
|                                         |  |       |                            |                              |               |
|                                         |  |       |                            |                              |               |

|                               |    |      |      |     |      |
|-------------------------------|----|------|------|-----|------|
| Stone Content                 | %  | 0.1  | NONE | 6.8 | 35.5 |
| Moisture Content              | %  | 0.01 | NONE | 19  | 16   |
| Total mass of sample received | kg | 0.1  | NONE | 2   | 1.9  |

#### General Inorganics

|                                        |          |       |        |     |     |
|----------------------------------------|----------|-------|--------|-----|-----|
| pH (L005B)                             | pH Units | N/A   | MCERTS | 7   | 7.9 |
| Total Organic Carbon (TOC) - Automated | %        | 0.1   | MCERTS | 5.9 | 6.2 |
| Loss on Ignition @ 450°C               | %        | 0.2   | MCERTS | 14  | 15  |
| Acid Neutralisation Capacity           | mmol/kg  | -9999 | NONE   | 0   | 3.5 |

#### Speciated PAHs

|                        |       |      |           |        |      |
|------------------------|-------|------|-----------|--------|------|
| Naphthalene            | mg/kg | 0.05 | MCERTS    | 0.23   | 0.62 |
| Acenaphthylene         | mg/kg | 0.05 | MCERTS    | < 0.05 | 0.09 |
| Acenaphthene           | mg/kg | 0.05 | MCERTS    | 0.5    | 0.86 |
| Fluorene               | mg/kg | 0.05 | MCERTS    | 0.44   | 0.66 |
| Phenanthrene           | mg/kg | 0.05 | MCERTS    | 4.5    | 7.4  |
| Anthracene             | mg/kg | 0.05 | MCERTS    | 0.89   | 1.3  |
| Fluoranthene           | mg/kg | 0.05 | MCERTS    | 5.8    | 12   |
| Pyrene                 | mg/kg | 0.05 | MCERTS    | 5.5    | 11   |
| Benzo(a)anthracene     | mg/kg | 0.05 | MCERTS    | 2.8    | 5.5  |
| Chrysene               | mg/kg | 0.05 | MCERTS    | 3.2    | 6.8  |
| Benzo(b)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 3.4    | 7.2  |
| Benzo(k)fluoranthene   | mg/kg | 0.05 | ISO 17025 | 1.1    | 2.7  |
| Benzo(a)pyrene         | mg/kg | 0.05 | MCERTS    | 2.6    | 5.6  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.05 | MCERTS    | 1.1    | 2.3  |
| Dibenz(a,h)anthracene  | mg/kg | 0.05 | MCERTS    | 0.29   | 0.75 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS    | 1.3    | 2.7  |
| Coronene               | mg/kg | 0.05 | NONE      | < 0.05 | 0.54 |

#### Total PAH

|                   |       |      |      |      |      |
|-------------------|-------|------|------|------|------|
| Total WAC-17 PAHs | mg/kg | 0.85 | NONE | 33.7 | 67.6 |
|-------------------|-------|------|------|------|------|

#### Petroleum Hydrocarbons

|                                                      |       |    |      |    |    |
|------------------------------------------------------|-------|----|------|----|----|
| Mineral Oil (EC10 - EC40) <small>EH_CU_ID_AL</small> | mg/kg | 10 | NONE | 11 | 15 |
|------------------------------------------------------|-------|----|------|----|----|

#### VOCs

|              |       |   |        |       |       |
|--------------|-------|---|--------|-------|-------|
| Benzene      | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 |
| Toluene      | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 |
| Ethylbenzene | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 |
| p & m-Xylene | µg/kg | 8 | MCERTS | < 8.0 | < 8.0 |
| o-Xylene     | µg/kg | 5 | MCERTS | < 5.0 | < 5.0 |

|            |       |    |        |      |      |
|------------|-------|----|--------|------|------|
| Total BTEX | µg/kg | 10 | MCERTS | < 10 | < 10 |
|------------|-------|----|--------|------|------|

Analytical Report Number: 25-030679  
 Project / Site name: Co-op Academy Smithies Moor  
 Your Order No: HEX601124

|                                         |               |                              |
|-----------------------------------------|---------------|------------------------------|
| Lab Sample Number                       | 578188        | 578189                       |
| Sample Reference                        | SA202         | SA203                        |
| Sample Number                           | ES1           | ES1                          |
| Water Matrix                            | N/A           | N/A                          |
| Depth (m)                               | 0.1           | 0.15                         |
| Date Sampled                            | 28/05/2025    | 29/05/2025                   |
| Time Taken                              | None Supplied | None Supplied                |
| Analytical Parameter<br>(Soil Analysis) | Units         | Test Limit of<br>detection   |
|                                         |               | Test Accreditation<br>Status |

#### PCBs by GC-MS

|                  |       |       |        |         |         |
|------------------|-------|-------|--------|---------|---------|
| PCB Congener 28  | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| PCB Congener 52  | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| PCB Congener 101 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| PCB Congener 118 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| PCB Congener 138 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| PCB Congener 153 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| PCB Congener 180 | mg/kg | 0.001 | MCERTS | < 0.001 | < 0.001 |
| Total PCBs       | mg/kg | 0.007 | MCERTS | < 0.007 | < 0.007 |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



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| Waste Acceptance Criteria Analytical Results                                                                         |                             |  |  |           |                                            |                                                               |                          |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|--|--|-----------|--------------------------------------------|---------------------------------------------------------------|--------------------------|
| Report No:                                                                                                           | 25-030679                   |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           | Client: Hexa Consulting Ltd                |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Location                                                                                                             | Co-op Academy Smithies Moor |  |  |           |                                            |                                                               |                          |
| Lab Reference (Sample Number)                                                                                        | 578183                      |  |  |           | Landfill Waste Acceptance Criteria         |                                                               |                          |
|                                                                                                                      |                             |  |  |           | Limits                                     |                                                               |                          |
| Sampling Date                                                                                                        | 27/05/2025                  |  |  |           | Inert Waste Landfill                       | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |
| Sample ID                                                                                                            | RC01 ES1                    |  |  |           |                                            |                                                               |                          |
| Depth (m)                                                                                                            | 0.50                        |  |  |           |                                            |                                                               |                          |
| Solid Waste Analysis                                                                                                 |                             |  |  |           |                                            |                                                               |                          |
| TOC (%)**                                                                                                            | 1.3                         |  |  |           | 3%                                         | 5%                                                            | 6%                       |
| Loss on Ignition (%) **                                                                                              | 3.4                         |  |  |           | --                                         | --                                                            | 10%                      |
| BTEX (µg/kg) **                                                                                                      | < 10                        |  |  |           | 6000                                       | --                                                            | --                       |
| Sum of PCBs (mg/kg) **                                                                                               | < 0.007                     |  |  |           | 1                                          | --                                                            | --                       |
| Mineral Oil (mg/kg) <small>EH, ID, CU, AL</small>                                                                    | 60                          |  |  |           | 500                                        | --                                                            | --                       |
| Total PAH (WAC-17) (mg/kg)                                                                                           | 8.89                        |  |  |           | 100                                        | --                                                            | --                       |
| pH (units)**                                                                                                         | 8.6                         |  |  |           | --                                         | >6                                                            | --                       |
| Acid Neutralisation Capacity (mmol / kg)                                                                             | 28                          |  |  |           | --                                         | To be evaluated                                               | To be evaluated          |
| Eluate Analysis                                                                                                      | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test  |                                                               |                          |
|                                                                                                                      | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg) |                                                               |                          |
| (BS EN 12457 - 2 preparation utilising end over end leaching procedure)                                              |                             |  |  |           |                                            |                                                               |                          |
| Arsenic *                                                                                                            | 0.0126                      |  |  | 0.126     | 0.5                                        | 2                                                             | 25                       |
| Barium *                                                                                                             | 0.026                       |  |  | 0.26      | 20                                         | 100                                                           | 300                      |
| Cadmium *                                                                                                            | < 0.000100                  |  |  | < 0.00100 | 0.04                                       | 1                                                             | 5                        |
| Chromium *                                                                                                           | 0.0043                      |  |  | 0.043     | 0.5                                        | 10                                                            | 70                       |
| Copper *                                                                                                             | 0.011                       |  |  | 0.11      | 2                                          | 50                                                            | 100                      |
| Mercury *                                                                                                            | < 0.000500                  |  |  | < 0.00500 | 0.01                                       | 0.2                                                           | 2                        |
| Molybdenum *                                                                                                         | 0.000456                    |  |  | 0.00456   | 0.5                                        | 10                                                            | 30                       |
| Nickel *                                                                                                             | 0.0016                      |  |  | 0.016     | 0.4                                        | 10                                                            | 40                       |
| Lead *                                                                                                               | 0.054                       |  |  | 0.54      | 0.5                                        | 10                                                            | 50                       |
| Antimony *                                                                                                           | < 0.0017                    |  |  | < 0.017   | 0.06                                       | 0.7                                                           | 5                        |
| Selenium *                                                                                                           | < 0.0040                    |  |  | < 0.040   | 0.1                                        | 0.5                                                           | 7                        |
| Zinc *                                                                                                               | 0.004                       |  |  | 0.04      | 4                                          | 50                                                            | 200                      |
| Chloride *                                                                                                           | 0.63                        |  |  | 6.3       | 800                                        | 15000                                                         | 25000                    |
| Fluoride*                                                                                                            | 0.8                         |  |  | 8         | 10                                         | 150                                                           | 500                      |
| Sulphate *                                                                                                           | 4.9                         |  |  | 49        | 1000                                       | 20000                                                         | 50000                    |
| TDS*                                                                                                                 | 50                          |  |  | 500       | 4000                                       | 60000                                                         | 100000                   |
| Phenol Index (Monohydric Phenols) *                                                                                  | < 0.010                     |  |  | < 0.10    | 1                                          | -                                                             | -                        |
| DOC                                                                                                                  | 4.1                         |  |  | 41        | 500                                        | 800                                                           | 1000                     |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Leach Test Information                                                                                               |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Stone Content (%)                                                                                                    | < 0.1                       |  |  |           |                                            |                                                               |                          |
| Sample Mass (kg)                                                                                                     | 1.9                         |  |  |           |                                            |                                                               |                          |
| Dry Matter (%)                                                                                                       | 84                          |  |  |           |                                            |                                                               |                          |
| Moisture (%)                                                                                                         | 16                          |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |                             |  |  |           |                                            |                                                               |                          |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |                             |  |  |           |                                            |                                                               |                          |
| ** = UKAS accredited (liquid eluate analysis only)                                                                   |                             |  |  |           |                                            |                                                               |                          |
| ** = MCERTS accredited                                                                                               |                             |  |  |           |                                            |                                                               |                          |

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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| Waste Acceptance Criteria Analytical Results                                                                         |                             |  |  |           |                                            |                                                               |                          |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|--|--|-----------|--------------------------------------------|---------------------------------------------------------------|--------------------------|
| Report No:                                                                                                           | 25-030679                   |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           | Client: Hexa Consulting Ltd                |                                                               |                          |
| Location                                                                                                             | Co-op Academy Smithies Moor |  |  |           |                                            |                                                               |                          |
| Lab Reference (Sample Number)                                                                                        | 578184                      |  |  |           | Landfill Waste Acceptance Criteria         |                                                               |                          |
| Sampling Date                                                                                                        | 28/05/2025                  |  |  |           | Inert Waste Landfill                       | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |
| Sample ID                                                                                                            | RS04 ES2                    |  |  |           |                                            |                                                               |                          |
| Depth (m)                                                                                                            | 1.00                        |  |  |           |                                            |                                                               |                          |
| Solid Waste Analysis                                                                                                 |                             |  |  |           |                                            |                                                               |                          |
| TOC (%)**                                                                                                            | 0.8                         |  |  |           | 3%                                         | 5%                                                            | 6%                       |
| Loss on Ignition (%) **                                                                                              | 3.8                         |  |  |           | --                                         | --                                                            | 10%                      |
| BTEX (µg/kg) **                                                                                                      | < 10                        |  |  |           | 6000                                       | --                                                            | --                       |
| Sum of PCBs (mg/kg) **                                                                                               | < 0.007                     |  |  |           | 1                                          | --                                                            | --                       |
| Mineral Oil (mg/kg) <small>EH, LD, CU, AL</small>                                                                    | 48                          |  |  |           | 500                                        | --                                                            | --                       |
| Total PAH (WAC-17) (mg/kg)                                                                                           | 7.24                        |  |  |           | 100                                        | --                                                            | --                       |
| pH (units)**                                                                                                         | 7.7                         |  |  |           | --                                         | >6                                                            | --                       |
| Acid Neutralisation Capacity (mmol / kg)                                                                             | 3.9                         |  |  |           | --                                         | To be evaluated                                               | To be evaluated          |
| Eluate Analysis                                                                                                      | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test  |                                                               |                          |
|                                                                                                                      | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg) |                                                               |                          |
| (BS EN 12457 - 2 preparation utilising end over end leaching procedure)                                              |                             |  |  |           |                                            |                                                               |                          |
| Arsenic *                                                                                                            | 0.00122                     |  |  | 0.0122    | 0.5                                        | 2                                                             | 25                       |
| Barium *                                                                                                             | 0.0125                      |  |  | 0.125     | 20                                         | 100                                                           | 300                      |
| Cadmium *                                                                                                            | 0.00011                     |  |  | 0.0011    | 0.04                                       | 1                                                             | 5                        |
| Chromium *                                                                                                           | 0.0028                      |  |  | 0.028     | 0.5                                        | 10                                                            | 70                       |
| Copper *                                                                                                             | 0.01                        |  |  | 0.1       | 2                                          | 50                                                            | 100                      |
| Mercury *                                                                                                            | < 0.000500                  |  |  | < 0.00500 | 0.01                                       | 0.2                                                           | 2                        |
| Molybdenum *                                                                                                         | 0.00263                     |  |  | 0.0263    | 0.5                                        | 10                                                            | 30                       |
| Nickel *                                                                                                             | 0.0029                      |  |  | 0.029     | 0.4                                        | 10                                                            | 40                       |
| Lead *                                                                                                               | 0.0023                      |  |  | 0.023     | 0.5                                        | 10                                                            | 50                       |
| Antimony *                                                                                                           | < 0.0017                    |  |  | < 0.017   | 0.06                                       | 0.7                                                           | 5                        |
| Selenium *                                                                                                           | < 0.0040                    |  |  | < 0.040   | 0.1                                        | 0.5                                                           | 7                        |
| Zinc *                                                                                                               | < 0.00040                   |  |  | < 0.0040  | 4                                          | 50                                                            | 200                      |
| Chloride *                                                                                                           | 0.6                         |  |  | 6         | 800                                        | 15000                                                         | 25000                    |
| Fluoride*                                                                                                            | 0.91                        |  |  | 9.1       | 10                                         | 150                                                           | 500                      |
| Sulphate *                                                                                                           | 23                          |  |  | 230       | 1000                                       | 20000                                                         | 50000                    |
| TDS*                                                                                                                 | 54                          |  |  | 540       | 4000                                       | 60000                                                         | 100000                   |
| Phenol Index (Monohydric Phenols) *                                                                                  | < 0.010                     |  |  | < 0.10    | 1                                          | -                                                             | -                        |
| DOC                                                                                                                  | 7.21                        |  |  | 72.1      | 500                                        | 800                                                           | 1000                     |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Leach Test Information                                                                                               |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Stone Content (%)                                                                                                    | 45.1                        |  |  |           |                                            |                                                               |                          |
| Sample Mass (kg)                                                                                                     | 1.9                         |  |  |           |                                            |                                                               |                          |
| Dry Matter (%)                                                                                                       | 84                          |  |  |           |                                            |                                                               |                          |
| Moisture (%)                                                                                                         | 16                          |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |                             |  |  |           |                                            |                                                               |                          |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |                             |  |  |           |                                            |                                                               |                          |
| ** = UKAS accredited (liquid eluate analysis only)                                                                   |                             |  |  |           |                                            |                                                               |                          |
| ** = MCERTS accredited                                                                                               |                             |  |  |           |                                            |                                                               |                          |

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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| Waste Acceptance Criteria Analytical Results                                                                         |                             |  |  |           |                                            |                                                               |                          |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|--|--|-----------|--------------------------------------------|---------------------------------------------------------------|--------------------------|
| Report No:                                                                                                           | 25-030679                   |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           | Client: Hexa Consulting Ltd                |                                                               |                          |
| Location                                                                                                             | Co-op Academy Smithies Moor |  |  |           |                                            |                                                               |                          |
| Lab Reference (Sample Number)                                                                                        | 578185                      |  |  |           | Landfill Waste Acceptance Criteria         |                                                               |                          |
| Sampling Date                                                                                                        | 29/05/2025                  |  |  |           | Inert Waste Landfill                       | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |
| Sample ID                                                                                                            | RC07 ES1                    |  |  |           |                                            |                                                               |                          |
| Depth (m)                                                                                                            | 0.10                        |  |  |           |                                            |                                                               |                          |
| Solid Waste Analysis                                                                                                 |                             |  |  |           |                                            |                                                               |                          |
| TOC (%)**                                                                                                            | 7                           |  |  |           | 3%                                         | 5%                                                            | 6%                       |
| Loss on Ignition (%) **                                                                                              | 16                          |  |  |           | --                                         | --                                                            | 10%                      |
| BTEX (µg/kg) **                                                                                                      | < 10                        |  |  |           | 6000                                       | --                                                            | --                       |
| Sum of PCBs (mg/kg) **                                                                                               | < 0.007                     |  |  |           | 1                                          | --                                                            | --                       |
| Mineral Oil (mg/kg) <small>EH, 1D, CU, AL</small>                                                                    | < 10                        |  |  |           | 500                                        | --                                                            | --                       |
| Total PAH (WAC-17) (mg/kg)                                                                                           | 20.4                        |  |  |           | 100                                        | --                                                            | --                       |
| pH (units)**                                                                                                         | 7                           |  |  |           | --                                         | >6                                                            | --                       |
| Acid Neutralisation Capacity (mmol / kg)                                                                             | 0                           |  |  |           | --                                         | To be evaluated                                               | To be evaluated          |
| Eluate Analysis                                                                                                      | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test  |                                                               |                          |
|                                                                                                                      | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg) |                                                               |                          |
| (BS EN 12457 - 2 preparation utilising end over end leaching procedure)                                              |                             |  |  |           |                                            |                                                               |                          |
| Arsenic *                                                                                                            | 0.00584                     |  |  | 0.0584    | 0.5                                        | 2                                                             | 25                       |
| Barium *                                                                                                             | 0.0131                      |  |  | 0.131     | 20                                         | 100                                                           | 300                      |
| Cadmium *                                                                                                            | < 0.000100                  |  |  | < 0.00100 | 0.04                                       | 1                                                             | 5                        |
| Chromium *                                                                                                           | 0.0035                      |  |  | 0.035     | 0.5                                        | 10                                                            | 70                       |
| Copper *                                                                                                             | 0.067                       |  |  | 0.67      | 2                                          | 50                                                            | 100                      |
| Mercury *                                                                                                            | 0.000754                    |  |  | 0.00754   | 0.01                                       | 0.2                                                           | 2                        |
| Molybdenum *                                                                                                         | 0.00091                     |  |  | 0.0091    | 0.5                                        | 10                                                            | 30                       |
| Nickel *                                                                                                             | 0.0041                      |  |  | 0.041     | 0.4                                        | 10                                                            | 40                       |
| Lead *                                                                                                               | 0.0021                      |  |  | 0.021     | 0.5                                        | 10                                                            | 50                       |
| Antimony *                                                                                                           | < 0.0017                    |  |  | < 0.017   | 0.06                                       | 0.7                                                           | 5                        |
| Selenium *                                                                                                           | < 0.0040                    |  |  | < 0.040   | 0.1                                        | 0.5                                                           | 7                        |
| Zinc *                                                                                                               | 0.026                       |  |  | 0.26      | 4                                          | 50                                                            | 200                      |
| Chloride *                                                                                                           | 0.41                        |  |  | 4.1       | 800                                        | 15000                                                         | 25000                    |
| Fluoride*                                                                                                            | 0.42                        |  |  | 4.2       | 10                                         | 150                                                           | 500                      |
| Sulphate *                                                                                                           | 1.6                         |  |  | 16        | 1000                                       | 20000                                                         | 50000                    |
| TDS*                                                                                                                 | 21                          |  |  | 210       | 4000                                       | 60000                                                         | 100000                   |
| Phenol Index (Monohydric Phenols) *                                                                                  | < 0.010                     |  |  | < 0.10    | 1                                          | -                                                             | -                        |
| DOC                                                                                                                  | 4.1                         |  |  | 41        | 500                                        | 800                                                           | 1000                     |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Leach Test Information                                                                                               |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Stone Content (%)                                                                                                    | < 0.1                       |  |  |           |                                            |                                                               |                          |
| Sample Mass (kg)                                                                                                     | 1.1                         |  |  |           |                                            |                                                               |                          |
| Dry Matter (%)                                                                                                       | 81                          |  |  |           |                                            |                                                               |                          |
| Moisture (%)                                                                                                         | 19                          |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |                             |  |  |           |                                            |                                                               |                          |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |                             |  |  |           |                                            |                                                               |                          |
| ** = UKAS accredited (liquid eluate analysis only)                                                                   |                             |  |  |           |                                            |                                                               |                          |
| ** = MCFRTS accredited                                                                                               |                             |  |  |           |                                            |                                                               |                          |

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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| Waste Acceptance Criteria Analytical Results                                                                         |                             |  |  |           |                                            |                                                               |                          |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|--|--|-----------|--------------------------------------------|---------------------------------------------------------------|--------------------------|
| Report No:                                                                                                           | 25-030679                   |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           | Client: Hexa Consulting Ltd                |                                                               |                          |
| Location                                                                                                             | Co-op Academy Smithies Moor |  |  |           | Landfill Waste Acceptance Criteria Limits  |                                                               |                          |
| Lab Reference (Sample Number)                                                                                        | 578186                      |  |  |           |                                            |                                                               |                          |
| Sampling Date                                                                                                        | 27/05/2025                  |  |  |           | Inert Waste Landfill                       | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |
| Sample ID                                                                                                            | SA201 ES1                   |  |  |           |                                            |                                                               |                          |
| Depth (m)                                                                                                            | 0.50                        |  |  |           |                                            |                                                               |                          |
| Solid Waste Analysis                                                                                                 |                             |  |  |           |                                            |                                                               |                          |
| TOC (%)**                                                                                                            | 2.7                         |  |  |           | 3%                                         | 5%                                                            | 6%                       |
| Loss on Ignition (%) **                                                                                              | 6.7                         |  |  |           | --                                         | --                                                            | 10%                      |
| BTEX (µg/kg) **                                                                                                      | < 10                        |  |  |           | 6000                                       | --                                                            | --                       |
| Sum of PCBs (mg/kg) **                                                                                               | < 0.007                     |  |  |           | 1                                          | --                                                            | --                       |
| Mineral Oil (mg/kg) <small>EH, LD, CU, AL</small>                                                                    | 47                          |  |  |           | 500                                        | --                                                            | --                       |
| Total PAH (WAC-17) (mg/kg)                                                                                           | 19.4                        |  |  |           | 100                                        | --                                                            | --                       |
| pH (units)**                                                                                                         | 8.1                         |  |  |           | --                                         | >6                                                            | --                       |
| Acid Neutralisation Capacity (mmol / kg)                                                                             | 11                          |  |  |           | --                                         | To be evaluated                                               | To be evaluated          |
| Eluate Analysis                                                                                                      | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test  |                                                               |                          |
|                                                                                                                      | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg) |                                                               |                          |
| Arsenic *                                                                                                            | 0.00537                     |  |  | 0.0537    | 0.5                                        | 2                                                             | 25                       |
| Barium *                                                                                                             | 0.0265                      |  |  | 0.265     | 20                                         | 100                                                           | 300                      |
| Cadmium *                                                                                                            | < 0.000100                  |  |  | < 0.00100 | 0.04                                       | 1                                                             | 5                        |
| Chromium *                                                                                                           | 0.0051                      |  |  | 0.051     | 0.5                                        | 10                                                            | 70                       |
| Copper *                                                                                                             | 0.026                       |  |  | 0.26      | 2                                          | 50                                                            | 100                      |
| Mercury *                                                                                                            | < 0.000500                  |  |  | < 0.00500 | 0.01                                       | 0.2                                                           | 2                        |
| Molybdenum *                                                                                                         | 0.00351                     |  |  | 0.0351    | 0.5                                        | 10                                                            | 30                       |
| Nickel *                                                                                                             | 0.0028                      |  |  | 0.028     | 0.4                                        | 10                                                            | 40                       |
| Lead *                                                                                                               | 0.0044                      |  |  | 0.044     | 0.5                                        | 10                                                            | 50                       |
| Antimony *                                                                                                           | < 0.0017                    |  |  | < 0.017   | 0.06                                       | 0.7                                                           | 5                        |
| Selenium *                                                                                                           | < 0.0040                    |  |  | < 0.040   | 0.1                                        | 0.5                                                           | 7                        |
| Zinc *                                                                                                               | 0.016                       |  |  | 0.16      | 4                                          | 50                                                            | 200                      |
| Chloride *                                                                                                           | < 0.15                      |  |  | < 1.5     | 800                                        | 15000                                                         | 25000                    |
| Fluoride*                                                                                                            | 2.1                         |  |  | 21        | 10                                         | 150                                                           | 500                      |
| Sulphate *                                                                                                           | 3.7                         |  |  | 37        | 1000                                       | 20000                                                         | 50000                    |
| TDS*                                                                                                                 | 54                          |  |  | 540       | 4000                                       | 60000                                                         | 100000                   |
| Phenol Index (Monohydric Phenols) *                                                                                  | < 0.010                     |  |  | < 0.10    | 1                                          | -                                                             | -                        |
| DOC                                                                                                                  | 6.86                        |  |  | 68.6      | 500                                        | 800                                                           | 1000                     |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Leach Test Information                                                                                               |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Stone Content (%)                                                                                                    | < 0.1                       |  |  |           |                                            |                                                               |                          |
| Sample Mass (kg)                                                                                                     | 1.3                         |  |  |           |                                            |                                                               |                          |
| Dry Matter (%)                                                                                                       | 88                          |  |  |           |                                            |                                                               |                          |
| Moisture (%)                                                                                                         | 12                          |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                            |                                                               |                          |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |                             |  |  |           |                                            |                                                               |                          |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |                             |  |  |           |                                            |                                                               |                          |
| ** = UKAS accredited (liquid eluate analysis only)                                                                   |                             |  |  |           |                                            |                                                               |                          |
| ** = MCERTS accredited                                                                                               |                             |  |  |           |                                            |                                                               |                          |

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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| Waste Acceptance Criteria Analytical Results                                                                         |  |                             |  |  |           |                                            |                                                               |                          |  |
|----------------------------------------------------------------------------------------------------------------------|--|-----------------------------|--|--|-----------|--------------------------------------------|---------------------------------------------------------------|--------------------------|--|
| Report No:                                                                                                           |  | 25-030679                   |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           | Client: Hexa Consulting Ltd                |                                                               |                          |  |
| Location                                                                                                             |  | Co-op Academy Smithies Moor |  |  |           | Landfill Waste Acceptance Criteria Limits  |                                                               |                          |  |
| Lab Reference (Sample Number)                                                                                        |  | 578187                      |  |  |           |                                            |                                                               |                          |  |
| Sampling Date                                                                                                        |  | 27/05/2025                  |  |  |           | Inert Waste Landfill                       | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |  |
| Sample ID                                                                                                            |  | SA201 ES1                   |  |  |           |                                            |                                                               |                          |  |
| Depth (m)                                                                                                            |  | 0.10                        |  |  |           |                                            |                                                               |                          |  |
| Solid Waste Analysis                                                                                                 |  |                             |  |  |           |                                            |                                                               |                          |  |
| TOC (%)**                                                                                                            |  | 4.4                         |  |  |           | 3%                                         | 5%                                                            | 6%                       |  |
| Loss on Ignition (%) **                                                                                              |  | 11                          |  |  |           | --                                         | --                                                            | 10%                      |  |
| BTEX (µg/kg) **                                                                                                      |  | < 10                        |  |  |           | 6000                                       | --                                                            | --                       |  |
| Sum of PCBs (mg/kg) **                                                                                               |  | 0.023                       |  |  |           | 1                                          | --                                                            | --                       |  |
| Mineral Oil (mg/kg) <small>EH, LD, CU, AL</small>                                                                    |  | 15                          |  |  |           | 500                                        | --                                                            | --                       |  |
| Total PAH (WAC-17) (mg/kg)                                                                                           |  | 44.7                        |  |  |           | 100                                        | --                                                            | --                       |  |
| pH (units)**                                                                                                         |  | 7.4                         |  |  |           | --                                         | >6                                                            | --                       |  |
| Acid Neutralisation Capacity (mmol / kg)                                                                             |  | 0.89                        |  |  |           | --                                         | To be evaluated                                               | To be evaluated          |  |
| Eluate Analysis                                                                                                      |  | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test  |                                                               |                          |  |
| (BS EN 12457 - 2 preparation utilising end over end leaching procedure)                                              |  | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg) |                                                               |                          |  |
| Arsenic *                                                                                                            |  | 0.00196                     |  |  | 0.0196    | 0.5                                        | 2                                                             | 25                       |  |
| Barium *                                                                                                             |  | 0.0259                      |  |  | 0.259     | 20                                         | 100                                                           | 300                      |  |
| Cadmium *                                                                                                            |  | < 0.000100                  |  |  | < 0.00100 | 0.04                                       | 1                                                             | 5                        |  |
| Chromium *                                                                                                           |  | 0.0042                      |  |  | 0.042     | 0.5                                        | 10                                                            | 70                       |  |
| Copper *                                                                                                             |  | 0.031                       |  |  | 0.31      | 2                                          | 50                                                            | 100                      |  |
| Mercury *                                                                                                            |  | < 0.000500                  |  |  | < 0.00500 | 0.01                                       | 0.2                                                           | 2                        |  |
| Molybdenum *                                                                                                         |  | 0.00202                     |  |  | 0.0202    | 0.5                                        | 10                                                            | 30                       |  |
| Nickel *                                                                                                             |  | 0.0023                      |  |  | 0.023     | 0.4                                        | 10                                                            | 40                       |  |
| Lead *                                                                                                               |  | 0.0054                      |  |  | 0.054     | 0.5                                        | 10                                                            | 50                       |  |
| Antimony *                                                                                                           |  | < 0.0017                    |  |  | < 0.017   | 0.06                                       | 0.7                                                           | 5                        |  |
| Selenium *                                                                                                           |  | < 0.0040                    |  |  | < 0.040   | 0.1                                        | 0.5                                                           | 7                        |  |
| Zinc *                                                                                                               |  | 0.014                       |  |  | 0.14      | 4                                          | 50                                                            | 200                      |  |
| Chloride *                                                                                                           |  | 0.17                        |  |  | 1.7       | 800                                        | 15000                                                         | 25000                    |  |
| Fluoride*                                                                                                            |  | 1.2                         |  |  | 12        | 10                                         | 150                                                           | 500                      |  |
| Sulphate *                                                                                                           |  | 1.9                         |  |  | 19        | 1000                                       | 20000                                                         | 50000                    |  |
| TDS*                                                                                                                 |  | 58                          |  |  | 580       | 4000                                       | 60000                                                         | 100000                   |  |
| Phenol Index (Monohydric Phenols) *                                                                                  |  | < 0.010                     |  |  | < 0.10    | 1                                          | -                                                             | -                        |  |
| DOC                                                                                                                  |  | 7.34                        |  |  | 73.4      | 500                                        | 800                                                           | 1000                     |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
| Leach Test Information                                                                                               |  |                             |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
| Stone Content (%)                                                                                                    |  | 16.9                        |  |  |           |                                            |                                                               |                          |  |
| Sample Mass (kg)                                                                                                     |  | 1.2                         |  |  |           |                                            |                                                               |                          |  |
| Dry Matter (%)                                                                                                       |  | 87                          |  |  |           |                                            |                                                               |                          |  |
| Moisture (%)                                                                                                         |  | 13                          |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |  |                             |  |  |           |                                            |                                                               |                          |  |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |  |                             |  |  |           |                                            |                                                               |                          |  |
| ** = UKAS accredited (liquid eluate analysis only)                                                                   |  |                             |  |  |           |                                            |                                                               |                          |  |
| ** = MCERTS accredited                                                                                               |  |                             |  |  |           |                                            |                                                               |                          |  |

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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| Waste Acceptance Criteria Analytical Results                                                                         |  |                             |  |  |           |                                            |                                                               |                          |  |
|----------------------------------------------------------------------------------------------------------------------|--|-----------------------------|--|--|-----------|--------------------------------------------|---------------------------------------------------------------|--------------------------|--|
| Report No:                                                                                                           |  | 25-030679                   |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           | Client: Hexa Consulting Ltd                |                                                               |                          |  |
| Location                                                                                                             |  | Co-op Academy Smithies Moor |  |  |           | Landfill Waste Acceptance Criteria         |                                                               |                          |  |
| Lab Reference (Sample Number)                                                                                        |  | 578188                      |  |  |           |                                            |                                                               |                          |  |
| Sampling Date                                                                                                        |  | 28/05/2025                  |  |  |           | Inert Waste Landfill                       | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |  |
| Sample ID                                                                                                            |  | SA202 ES1                   |  |  |           |                                            |                                                               |                          |  |
| Depth (m)                                                                                                            |  | 0.10                        |  |  |           |                                            |                                                               |                          |  |
| Solid Waste Analysis                                                                                                 |  |                             |  |  |           |                                            |                                                               |                          |  |
| TOC (%)**                                                                                                            |  | 5.9                         |  |  |           | 3%                                         | 5%                                                            | 6%                       |  |
| Loss on Ignition (%) **                                                                                              |  | 14                          |  |  |           | --                                         | --                                                            | 10%                      |  |
| BTEX (µg/kg) **                                                                                                      |  | < 10                        |  |  |           | 6000                                       | --                                                            | --                       |  |
| Sum of PCBs (mg/kg) **                                                                                               |  | < 0.007                     |  |  |           | 1                                          | --                                                            | --                       |  |
| Mineral Oil (mg/kg) <small>EH, LD, CU, AL</small>                                                                    |  | 11                          |  |  |           | 500                                        | --                                                            | --                       |  |
| Total PAH (WAC-17) (mg/kg)                                                                                           |  | 33.7                        |  |  |           | 100                                        | --                                                            | --                       |  |
| pH (units)**                                                                                                         |  | 7                           |  |  |           | --                                         | >6                                                            | --                       |  |
| Acid Neutralisation Capacity (mmol / kg)                                                                             |  | 0                           |  |  |           | --                                         | To be evaluated                                               | To be evaluated          |  |
| Eluate Analysis                                                                                                      |  | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test  |                                                               |                          |  |
| (BS EN 12457 - 2 preparation utilising end over end leaching procedure)                                              |  | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg) |                                                               |                          |  |
| Arsenic *                                                                                                            |  | 0.00314                     |  |  | 0.0314    | 0.5                                        | 2                                                             | 25                       |  |
| Barium *                                                                                                             |  | 0.0257                      |  |  | 0.257     | 20                                         | 100                                                           | 300                      |  |
| Cadmium *                                                                                                            |  | 0.000168                    |  |  | 0.00168   | 0.04                                       | 1                                                             | 5                        |  |
| Chromium *                                                                                                           |  | 0.0067                      |  |  | 0.067     | 0.5                                        | 10                                                            | 70                       |  |
| Copper *                                                                                                             |  | 0.13                        |  |  | 1.3       | 2                                          | 50                                                            | 100                      |  |
| Mercury *                                                                                                            |  | < 0.000500                  |  |  | < 0.00500 | 0.01                                       | 0.2                                                           | 2                        |  |
| Molybdenum *                                                                                                         |  | 0.00083                     |  |  | 0.0083    | 0.5                                        | 10                                                            | 30                       |  |
| Nickel *                                                                                                             |  | 0.0056                      |  |  | 0.056     | 0.4                                        | 10                                                            | 40                       |  |
| Lead *                                                                                                               |  | 0.0042                      |  |  | 0.042     | 0.5                                        | 10                                                            | 50                       |  |
| Antimony *                                                                                                           |  | < 0.0017                    |  |  | < 0.017   | 0.06                                       | 0.7                                                           | 5                        |  |
| Selenium *                                                                                                           |  | < 0.0040                    |  |  | < 0.040   | 0.1                                        | 0.5                                                           | 7                        |  |
| Zinc *                                                                                                               |  | 0.032                       |  |  | 0.32      | 4                                          | 50                                                            | 200                      |  |
| Chloride *                                                                                                           |  | 0.86                        |  |  | 8.6       | 800                                        | 15000                                                         | 25000                    |  |
| Fluoride*                                                                                                            |  | 0.63                        |  |  | 6.3       | 10                                         | 150                                                           | 500                      |  |
| Sulphate *                                                                                                           |  | 1.3                         |  |  | 13        | 1000                                       | 20000                                                         | 50000                    |  |
| TDS*                                                                                                                 |  | 26                          |  |  | 260       | 4000                                       | 60000                                                         | 100000                   |  |
| Phenol Index (Monohydric Phenols) *                                                                                  |  | < 0.010                     |  |  | < 0.10    | 1                                          | -                                                             | -                        |  |
| DOC                                                                                                                  |  | 12.6                        |  |  | 126       | 500                                        | 800                                                           | 1000                     |  |
| Leach Test Information                                                                                               |  |                             |  |  |           |                                            |                                                               |                          |  |
| Stone Content (%)                                                                                                    |  | 6.8                         |  |  |           |                                            |                                                               |                          |  |
| Sample Mass (kg)                                                                                                     |  | 2                           |  |  |           |                                            |                                                               |                          |  |
| Dry Matter (%)                                                                                                       |  | 81                          |  |  |           |                                            |                                                               |                          |  |
| Moisture (%)                                                                                                         |  | 19                          |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
|                                                                                                                      |  |                             |  |  |           |                                            |                                                               |                          |  |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |  |                             |  |  |           |                                            |                                                               |                          |  |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |  |                             |  |  |           |                                            |                                                               |                          |  |
| ** = UKAS accredited (liquid eluate analysis only)                                                                   |  |                             |  |  |           |                                            |                                                               |                          |  |
| ** = MCFBTS accredited                                                                                               |  |                             |  |  |           |                                            |                                                               |                          |  |

\* = UKAS accredited (liquid eluate analysis only)

\*\* = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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| Waste Acceptance Criteria Analytical Results                                                                         |                             |  |  |           |                                                   |                                                               |                          |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|--|--|-----------|---------------------------------------------------|---------------------------------------------------------------|--------------------------|
| Report No:                                                                                                           | 25-030679                   |  |  |           |                                                   |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                                   |                                                               |                          |
|                                                                                                                      |                             |  |  |           | Client: Hexa Consulting Ltd                       |                                                               |                          |
| Location                                                                                                             | Co-op Academy Smithies Moor |  |  |           | Landfill Waste Acceptance Criteria Limits         |                                                               |                          |
| Lab Reference (Sample Number)                                                                                        | 578189                      |  |  |           |                                                   |                                                               |                          |
| Sampling Date                                                                                                        | 29/05/2025                  |  |  |           | Inert Waste Landfill                              | Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill | Hazardous Waste Landfill |
| Sample ID                                                                                                            | SA203 ES1                   |  |  |           |                                                   |                                                               |                          |
| Depth (m)                                                                                                            | 0.15                        |  |  |           |                                                   |                                                               |                          |
| Solid Waste Analysis                                                                                                 |                             |  |  |           |                                                   |                                                               |                          |
| TOC (%)**                                                                                                            | 6.2                         |  |  |           | 3%                                                | 5%                                                            | 6%                       |
| Loss on Ignition (%) **                                                                                              | 15                          |  |  |           | --                                                | --                                                            | 10%                      |
| BTEX (µg/kg) **                                                                                                      | < 10                        |  |  |           | 6000                                              | --                                                            | --                       |
| Sum of PCBs (mg/kg) **                                                                                               | < 0.007                     |  |  |           | 1                                                 | --                                                            | --                       |
| Mineral Oil (mg/kg) <small>EH, LD, CU, AL</small>                                                                    | 15                          |  |  |           | 500                                               | --                                                            | --                       |
| Total PAH (WAC-17) (mg/kg)                                                                                           | 67.6                        |  |  |           | 100                                               | --                                                            | --                       |
| pH (units)**                                                                                                         | 7.9                         |  |  |           | --                                                | >6                                                            | --                       |
| Acid Neutralisation Capacity (mmol / kg)                                                                             | 3.5                         |  |  |           | --                                                | To be evaluated                                               | To be evaluated          |
| Eluate Analysis                                                                                                      | 10:1                        |  |  | 10:1      | Limit values for compliance leaching test         |                                                               |                          |
|                                                                                                                      | mg/l                        |  |  | mg/kg     | using BS EN 12457-2 at L/S 10 l/kg (mg/kg)        |                                                               |                          |
| Arsenic *                                                                                                            | 0.00438                     |  |  | 0.0438    | 0.5                                               | 2                                                             | 25                       |
| Barium *                                                                                                             | 0.0188                      |  |  | 0.188     | 20                                                | 100                                                           | 300                      |
| Cadmium *                                                                                                            | < 0.000100                  |  |  | < 0.00100 | 0.04                                              | 1                                                             | 5                        |
| Chromium *                                                                                                           | 0.0033                      |  |  | 0.033     | 0.5                                               | 10                                                            | 70                       |
| Copper *                                                                                                             | 0.024                       |  |  | 0.24      | 2                                                 | 50                                                            | 100                      |
| Mercury *                                                                                                            | < 0.000500                  |  |  | < 0.00500 | 0.01                                              | 0.2                                                           | 2                        |
| Molybdenum *                                                                                                         | 0.00219                     |  |  | 0.0219    | 0.5                                               | 10                                                            | 30                       |
| Nickel *                                                                                                             | 0.0019                      |  |  | 0.019     | 0.4                                               | 10                                                            | 40                       |
| Lead *                                                                                                               | 0.004                       |  |  | 0.04      | 0.5                                               | 10                                                            | 50                       |
| Antimony *                                                                                                           | < 0.0017                    |  |  | < 0.017   | 0.06                                              | 0.7                                                           | 5                        |
| Selenium *                                                                                                           | < 0.0040                    |  |  | < 0.040   | 0.1                                               | 0.5                                                           | 7                        |
| Zinc *                                                                                                               | 0.012                       |  |  | 0.12      | 4                                                 | 50                                                            | 200                      |
| Chloride *                                                                                                           | 0.16                        |  |  | 1.6       | 800                                               | 15000                                                         | 25000                    |
| Fluoride*                                                                                                            | 1.5                         |  |  | 15        | 10                                                | 150                                                           | 500                      |
| Sulphate *                                                                                                           | 0.85                        |  |  | 8.5       | 1000                                              | 20000                                                         | 50000                    |
| TDS*                                                                                                                 | 31                          |  |  | 310       | 4000                                              | 60000                                                         | 100000                   |
| Phenol Index (Monohydric Phenols) *                                                                                  | < 0.010                     |  |  | < 0.10    | 1                                                 | -                                                             | -                        |
| DOC                                                                                                                  | 6.39                        |  |  | 63.9      | 500                                               | 800                                                           | 1000                     |
|                                                                                                                      |                             |  |  |           |                                                   |                                                               |                          |
| Leach Test Information                                                                                               |                             |  |  |           |                                                   |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                                   |                                                               |                          |
| Stone Content (%)                                                                                                    | 35.5                        |  |  |           |                                                   |                                                               |                          |
| Sample Mass (kg)                                                                                                     | 1.9                         |  |  |           |                                                   |                                                               |                          |
| Dry Matter (%)                                                                                                       | 84                          |  |  |           |                                                   |                                                               |                          |
| Moisture (%)                                                                                                         | 16                          |  |  |           |                                                   |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                                   |                                                               |                          |
|                                                                                                                      |                             |  |  |           |                                                   |                                                               |                          |
| Results are expressed on a dry weight basis, after correction for moisture content where applicable.                 |                             |  |  |           | * = UKAS accredited (liquid eluate analysis only) |                                                               |                          |
| Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation |                             |  |  |           | ** = MCERTS accredited                            |                                                               |                          |

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.  
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

**Analytical Report Number : 25-030679**

**Project / Site name: Co-op Academy Smithies Moor**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

| Lab Sample Number | Sample Reference | Sample Number | Depth (m) | Sample Description *                           |
|-------------------|------------------|---------------|-----------|------------------------------------------------|
| 578183            | RC01             | ES1           | 0.5       | Brown sand with gravel                         |
| 578184            | RS04             | ES2           | 1         | Grey clay and sand with stones                 |
| 578185            | RC07             | ES1           | 0.1       | Brown clay and loam with gravel and vegetation |
| 578186            | SA201            | ES1           | 0.5       | Brown clay and loam with gravel                |
| 578187            | SA201            | ES1           | 0.1       | Brown loam with stones and vegetation          |
| 578188            | SA202            | ES1           | 0.1       | Brown loam with stones and vegetation          |
| 578189            | SA203            | ES1           | 0.15      | Brown loam with stones and vegetation          |

**Analytical Report Number : 25-030679**

**Project / Site name: Co-op Academy Smithies Moor**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)**

**Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                                          | Analytical Method Description                                                                                                                       | Analytical Method Reference                                                                            | Method number | Wet / Dry Analysis | Accreditation Status |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| pH at 20°C in soil                                            | Determination of pH in soil by addition of water followed by electrometric measurement                                                              | In-house method                                                                                        | L005B         | W                  | MCERTS               |
| Total organic carbon (Automated) in soil                      | Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method) | In-house method                                                                                        | L009B         | D                  | MCERTS               |
| Moisture Content                                              | Moisture content, determined gravimetrically (up to 30°C)                                                                                           | In-house method                                                                                        | L019B         | W                  | NONE                 |
| Stones content of soil                                        | Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight                          | In-house method based on British Standard Methods and MCERTS requirements.                             | L019B         | D                  | NONE                 |
| PCB's By GC-MS in soil                                        | Determination of PCB by extraction with hexane followed by GC-MS                                                                                    | In-house method based on USEPA 8082                                                                    | L027B         | D                  | MCERTS               |
| Total dissolved solids 10:1 WAC                               | Determination of total dissolved solids in water by electrometric measurement                                                                       | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton | L031B         | W                  | ISO 17025            |
| Fluoride 10:1 WAC                                             | Determination of fluoride in leachate by 1:1 ratio with a buffer solution followed by Ion Selective Electrode                                       | In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination     | L033B         | W                  | ISO 17025            |
| Dissolved organic carbon 10:1 WAC                             | Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton | L037B         | W                  | NONE                 |
| Metals in leachate by ICP-OES                                 | Determination of metals in leachate by acidification followed by ICP-OES                                                                            | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil                    | L039B         | W                  | ISO 17025            |
| One stage WAC 10:1 leachate preparation                       | One stage batch test at a liquid to solid ratio of 10 L/kg                                                                                          | BS EN 12457-2-2002                                                                                     | L043B         | W                  | ISO 17025            |
| Acid neutralisation capacity of soil                          | Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe                                            | In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance  | L046B         | W                  | NONE                 |
| Loss on ignition of soil @ 450°C                              | Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace                                      | In-house method                                                                                        | L047-PL       | D                  | MCERTS               |
| Speciated PAHs and/or Semi-volatile organic compounds in soil | Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS              | In-house method based on USEPA 8270                                                                    | L064B         | D                  | MCERTS               |
| BTEX and/or Volatile organic compounds in soil                | Determination of volatile organic compounds in soil by headspace GC-MS                                                                              | In-house method based on USEPA 8260                                                                    | L073B         | W                  | MCERTS               |
| Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS                                                                            | In-house method                                                                                        | L076B/L088-PL | D/W                | NONE                 |
| Monohydric phenols 10:1 WAC                                   | Determination of phenols in leachate by distillation followed by colorimetry                                                                        | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton | L080-PL       | W                  | ISO 17025            |

Analytical Report Number : 25-030679

Project / Site name: Co-op Academy Smithies Moor

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name | Analytical Method Description                                   | Analytical Method Reference                    | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-----------------------------------------------------------------|------------------------------------------------|---------------|--------------------|----------------------|
| Chloride 10:1 WAC    | Determination of Chloride colorimetrically by discrete analyser | In-house based on MEWAM Method ISBN 0117516260 | L082B         | W                  | ISO 17025            |
| Soil Descriptions    | Textural classification                                         | In-house method                                | L019B         | W                  | NONE                 |

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

**Analytical Report Number : 25-030679**

**Project / Site name: Co-op Academy Smithies Moor**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

| Sample ID | Other ID | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                                     | Test Ref      | Test Deviation |
|-----------|----------|-------------|-------------------|------------------|---------------------------------------------------------------|---------------|----------------|
| RC01      | ES1      | L           | 578183            | bc               | One stage WAC 10:1 leachate preparation                       | L043B         | b              |
| RC01      | ES1      | S           | 578183            | bc               | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| RC01      | ES1      | S           | 578183            | bc               | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| RC01      | ES1      | S           | 578183            | bc               | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| RC01      | ES1      | S           | 578183            | bc               | pH at 20°C in soil                                            | L005B         | c              |
| RC07      | ES1      | L           | 578185            | bc               | One stage WAC 10:1 leachate preparation                       | L043B         | b              |
| RC07      | ES1      | S           | 578185            | bc               | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| RC07      | ES1      | S           | 578185            | bc               | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| RC07      | ES1      | S           | 578185            | bc               | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| RC07      | ES1      | S           | 578185            | bc               | pH at 20°C in soil                                            | L005B         | c              |
| RS04      | ES2      | S           | 578184            | c                | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| RS04      | ES2      | S           | 578184            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| RS04      | ES2      | S           | 578184            | c                | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| RS04      | ES2      | S           | 578184            | c                | pH at 20°C in soil                                            | L005B         | c              |
| SA201     | ES1      | L           | 578186            | bc               | One stage WAC 10:1 leachate preparation                       | L043B         | b              |
| SA201     | ES1      | L           | 578187            | bc               | One stage WAC 10:1 leachate preparation                       | L043B         | b              |
| SA201     | ES1      | S           | 578186            | bc               | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| SA201     | ES1      | S           | 578186            | bc               | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| SA201     | ES1      | S           | 578186            | bc               | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| SA201     | ES1      | S           | 578186            | bc               | pH at 20°C in soil                                            | L005B         | c              |
| SA201     | ES1      | S           | 578187            | bc               | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| SA201     | ES1      | S           | 578187            | bc               | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| SA201     | ES1      | S           | 578187            | bc               | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| SA201     | ES1      | S           | 578187            | bc               | pH at 20°C in soil                                            | L005B         | c              |
| SA201     | ES1      | S           | 578188            | c                | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| SA202     | ES1      | S           | 578188            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| SA202     | ES1      | S           | 578188            | c                | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| SA202     | ES1      | S           | 578188            | c                | pH at 20°C in soil                                            | L005B         | c              |
| SA203     | ES1      | S           | 578189            | c                | BTEX and/or Volatile organic compounds in soil                | L073B         | c              |
| SA203     | ES1      | S           | 578189            | c                | Speciated PAHs and/or Semi-volatile organic compounds in soil | L064B         | c              |
| SA203     | ES1      | S           | 578189            | c                | Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil       | L076B/L088-PL | c              |
| SA203     | ES1      | S           | 578189            | c                | pH at 20°C in soil                                            | L005B         | c              |

## Appendix D – Dynamic Cone Penetrometer Testing

# RESULTS OF DYNAMIC CONE PENETROMETER (DCP) TESTING

|             |                             |
|-------------|-----------------------------|
| Project:    | Co-op Academy, Heckmondwike |
| Project No. | 601124                      |
| Test No.    | DCP201                      |

|               |           |
|---------------|-----------|
| Date of Test: | 09-Jul-25 |
| Operator:     | PS        |

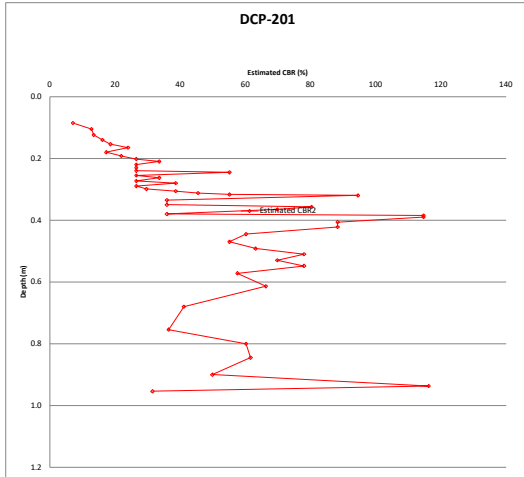
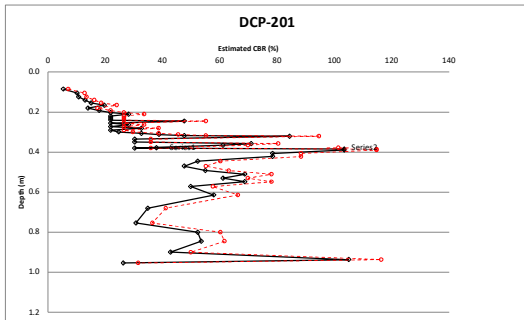
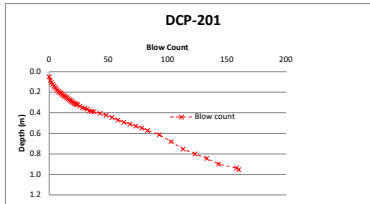
| Blow count | Penetration (mm) | Penetration (m) | Penetration Index (DPI) mm/blow | log DPI | log CBR | Estimated CBR1 (%) <sup>1</sup> | log CBR | Estimated CBR2 (%) <sup>2</sup> |
|------------|------------------|-----------------|---------------------------------|---------|---------|---------------------------------|---------|---------------------------------|
| 0          | 50               | 0.050           |                                 |         |         |                                 |         |                                 |
| 1          | 85               | 0.085           | 35.0                            | 1.544   | 0.731   | 5                               | 0.848   | 7                               |
| 2          | 105              | 0.105           | 20.0                            | 1.301   | 1.003   | 10                              | 1.105   | 13                              |
| 3          | 124              | 0.124           | 19.0                            | 1.279   | 1.028   | 11                              | 1.128   | 13                              |
| 4          | 140              | 0.140           | 16.0                            | 1.204   | 1.111   | 13                              | 1.207   | 16                              |
| 5          | 154              | 0.154           | 14.0                            | 1.146   | 1.176   | 15                              | 1.269   | 19                              |
| 6          | 165              | 0.165           | 11.0                            | 1.041   | 1.294   | 20                              | 1.379   | 24                              |
| 7          | 180              | 0.180           | 15.0                            | 1.176   | 1.143   | 14                              | 1.237   | 17                              |
| 8          | 192              | 0.192           | 12.0                            | 1.079   | 1.291   | 18                              | 1.339   | 22                              |
| 9          | 202              | 0.202           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 10         | 210              | 0.210           | 8.0                             | 0.903   | 1.449   | 28                              | 1.525   | 34                              |
| 11         | 220              | 0.220           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 12         | 230              | 0.230           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 13         | 240              | 0.240           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 14         | 245              | 0.245           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 15         | 255              | 0.255           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 16         | 263              | 0.263           | 8.0                             | 0.903   | 1.449   | 28                              | 1.525   | 34                              |
| 17         | 273              | 0.273           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 18         | 280              | 0.280           | 7.0                             | 0.845   | 1.513   | 33                              | 1.587   | 39                              |
| 19         | 290              | 0.290           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 20         | 299              | 0.299           | 10.0                            | 0.954   | 1.391   | 25                              | 1.471   | 30                              |
| 21         | 306              | 0.306           | 7.0                             | 0.845   | 1.513   | 33                              | 1.587   | 39                              |
| 22         | 312              | 0.312           | 6.0                             | 0.778   | 1.588   | 39                              | 1.657   | 45                              |
| 23         | 317              | 0.317           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 24         | 320              | 0.320           | 3.0                             | 0.477   | 1.926   | 84                              | 1.976   | 95                              |
| 26         | 335              | 0.335           | 7.5                             | 0.875   | 1.480   | 30                              | 1.555   | 36                              |
| 28         | 350              | 0.350           | 7.5                             | 0.875   | 1.480   | 30                              | 1.555   | 36                              |
| 30         | 357              | 0.357           | 3.5                             | 0.544   | 1.851   | 71                              | 1.905   | 80                              |
| 32         | 365              | 0.365           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 34         | 380              | 0.380           | 7.5                             | 0.875   | 1.480   | 30                              | 1.555   | 36                              |
| 36         | 385              | 0.385           | 2.5                             | 0.398   | 2.014   | 103                             | 2.059   | 115                             |
| 38         | 390              | 0.390           | 2.5                             | 0.398   | 2.014   | 103                             | 2.059   | 115                             |
| 43         | 406              | 0.406           | 3.2                             | 0.505   | 1.894   | 78                              | 1.946   | 88                              |
| 48         | 422              | 0.422           | 3.2                             | 0.505   | 1.894   | 78                              | 1.946   | 88                              |
| 53         | 445              | 0.445           | 4.6                             | 0.663   | 1.718   | 52                              | 1.779   | 60                              |
| 58         | 470              | 0.470           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 63         | 492              | 0.492           | 4.4                             | 0.643   | 1.739   | 55                              | 1.800   | 63                              |
| 68         | 510              | 0.510           | 3.6                             | 0.556   | 1.837   | 69                              | 1.892   | 78                              |
| 73         | 530              | 0.530           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 78         | 548              | 0.548           | 3.6                             | 0.556   | 1.837   | 69                              | 1.892   | 78                              |
| 83         | 572              | 0.572           | 4.8                             | 0.681   | 1.697   | 50                              | 1.760   | 58                              |
| 93         | 614              | 0.614           | 4.2                             | 0.623   | 1.762   | 58                              | 1.821   | 66                              |
| 103        | 680              | 0.680           | 6.6                             | 0.820   | 1.542   | 35                              | 1.614   | 41                              |
| 113        | 754              | 0.754           | 7.4                             | 0.869   | 1.486   | 31                              | 1.561   | 36                              |
| 123        | 800              | 0.800           | 4.6                             | 0.663   | 1.718   | 52                              | 1.779   | 60                              |
| 133        | 845              | 0.845           | 4.5                             | 0.653   | 1.728   | 54                              | 1.790   | 62                              |
| 143        | 900              | 0.9             | 5.5                             | 0.740   | 1.631   | 43                              | 1.697   | 50                              |
| 158        | 937              | 0.937           | 2.5                             | 0.392   | 2.021   | 105                             | 2.066   | 118                             |
| 160        | 954              | 0.954           | 8.5                             | 0.929   | 1.419   | 26                              | 1.498   | 31                              |

## Notes

1. CBR calculated based on Webster et al. 1992.
2. CBR calculated based on DMRB, 2008.
3. CBR values less than 2.5% highlighted in red.

## Reference

Webster S, Grau R and Williams T. 1992. Description and Application of Dual Mass Dynamic Cone Penetrometer.  
Dept of Army Waterways Equipment Station, Instruction rpt GL-92-3.  
Highways Agency. 2008. Design Manual for Roads and Bridges (DMRB), Data for Pavement Assessment. HD29/08.



## RESULTS OF DYNAMIC CONE PENETROMETER (DCP) TESTING

|                    |                             |  |  |
|--------------------|-----------------------------|--|--|
| <b>Project:</b>    | Co-op Academy, Heckmondwike |  |  |
| <b>Project No.</b> | 601124                      |  |  |
| <b>Test No.</b>    | DCP202                      |  |  |

|                      |           |
|----------------------|-----------|
| <b>Date of Test:</b> | 09-Jul-25 |
| <b>Operator:</b>     | PS        |

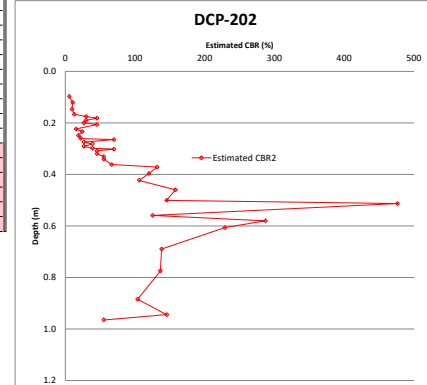
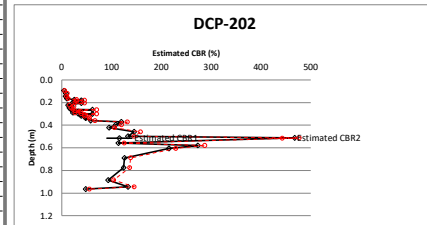
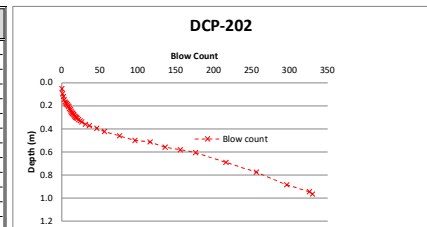
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**Notes:**

1. CBR calculated based on Webster et al, 1992.
2. CBR calculated based on DMRB, 2008.
3. CBR values less than 2.5% highlighted in red.

**Reference:**

- Webster S, Grau R and Williams T. 1992. Description and Application of Dual Mass Dynamic Cone Penetrometer. Dept of Army Waterways Equipment Station, Instruction rpt GL-92-3.
- Highways Agency, 2008. Design Manual for Roads and Bridges (DMRB), Data for Pavement Assessment. HD29/08.



## RESULTS OF DYNAMIC CONE PENETROMETER (DCP) TESTING

|                    |                             |  |  |
|--------------------|-----------------------------|--|--|
| <b>Project:</b>    | Co-op Academy, Heckmondwike |  |  |
| <b>Project No.</b> | 601124                      |  |  |
| <b>Test No.</b>    | DCP203                      |  |  |

|                      |           |
|----------------------|-----------|
| <b>Date of Test:</b> | 09-Jul-25 |
| <b>Operator:</b>     | PS        |

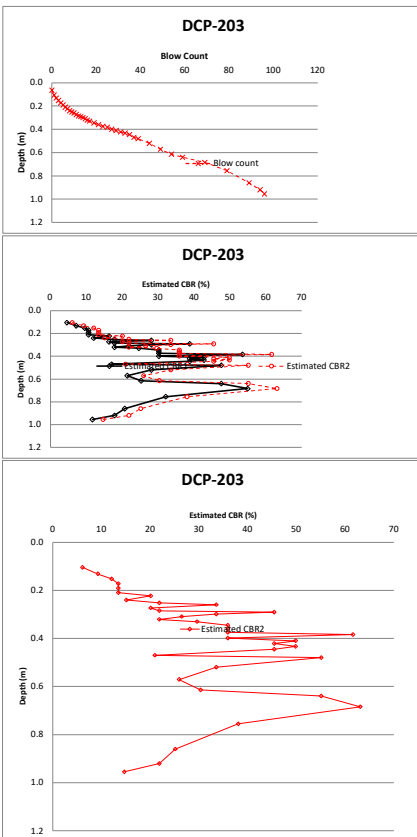
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**Notes:**

1. CBR calculated based on Webster et al, 1992.
2. CBR calculated based on DMRB, 2008.
3. CBR values less than 2.5% highlighted in red.

**Reference:**

- Webster S, Grau R and Williams T. 1992. Description and Application of Dual Mass Dynamic Cone Penetrometer. Dept of Army Waterways Equipment Station, Instruction rpt GL-92-3.
- Highways Agency, 2008. Design Manual for Roads and Bridges (DMRB), Data for Pavement Assessment. HD29/08.



## RESULTS OF DYNAMIC CONE PENETROMETER (DCP) TESTING

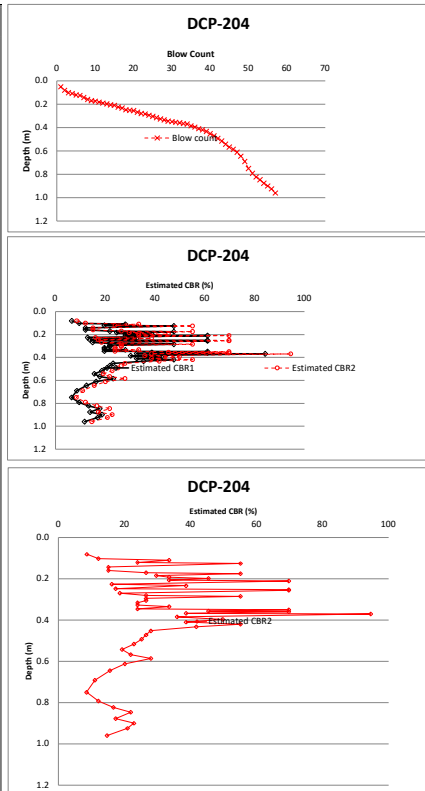
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|--------------------|-----------------------------|--|
| <b>Project:</b>    | Co-op Academy, Heckmondwike |  |
| <b>Project No.</b> | 601124                      |  |
| <b>Test No.</b>    | DCP204                      |  |

|                      |           |
|----------------------|-----------|
| <b>Date of Test:</b> | 09-Jul-25 |
| <b>Operator:</b>     | PS        |

| Blow count | Penetration (mm) | Penetration (m) | Penetration Index (DPI) mm/blow | log DPI | log CBR | Estimated CBR1 (%) <sup>1</sup> | log CBR | Estimated CBR2 (%) <sup>2</sup> |
|------------|------------------|-----------------|---------------------------------|---------|---------|---------------------------------|---------|---------------------------------|
| 0          | 52               | 0.052           |                                 |         |         |                                 |         |                                 |
| 1          | 81               | 0.081           | 29.0                            | 1.462   | 0.822   | 7                               | 0.934   | 9                               |
| 2          | 102              | 0.102           | 21.0                            | 1.322   | 0.979   | 10                              | 1.082   | 12                              |
| 3          | 110              | 0.110           | 8.0                             | 0.903   | 1.449   | 28                              | 1.525   | 34                              |
| 4          | 121              | 0.121           | 11.0                            | 1.041   | 1.294   | 20                              | 1.379   | 24                              |
| 5          | 126              | 0.126           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 6          | 143              | 0.143           | 17.0                            | 1.230   | 1.082   | 12                              | 1.179   | 15                              |
| 7          | 160              | 0.160           | 17.0                            | 1.230   | 1.082   | 12                              | 1.179   | 15                              |
| 8          | 170              | 0.170           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 9          | 175              | 0.175           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 10         | 184              | 0.184           | 9.0                             | 0.954   | 1.391   | 25                              | 1.471   | 30                              |
| 11         | 192              | 0.192           | 8.0                             | 0.903   | 1.449   | 28                              | 1.525   | 34                              |
| 12         | 198              | 0.198           | 6.0                             | 0.778   | 1.588   | 39                              | 1.657   | 45                              |
| 13         | 206              | 0.206           | 8.0                             | 0.903   | 1.449   | 28                              | 1.525   | 34                              |
| 14         | 210              | 0.210           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 15         | 226              | 0.226           | 16.0                            | 1.204   | 1.111   | 13                              | 1.207   | 16                              |
| 16         | 233              | 0.233           | 7.0                             | 0.845   | 1.513   | 33                              | 1.587   | 39                              |
| 17         | 248              | 0.248           | 15.0                            | 1.176   | 1.143   | 14                              | 1.237   | 17                              |
| 18         | 252              | 0.252           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 19         | 256              | 0.256           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 20         | 270              | 0.270           | 14.0                            | 1.146   | 1.176   | 15                              | 1.269   | 19                              |
| 21         | 280              | 0.280           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 22         | 285              | 0.285           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 23         | 295              | 0.295           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 24         | 305              | 0.305           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 25         | 316              | 0.316           | 11.0                            | 1.041   | 1.294   | 20                              | 1.379   | 24                              |
| 26         | 327              | 0.327           | 11.0                            | 1.041   | 1.294   | 20                              | 1.379   | 24                              |
| 27         | 335              | 0.335           | 8.0                             | 0.903   | 1.449   | 28                              | 1.525   | 34                              |
| 28         | 346              | 0.346           | 11.0                            | 1.041   | 1.294   | 20                              | 1.379   | 24                              |
| 29         | 350              | 0.350           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 30         | 356              | 0.356           | 6.0                             | 0.778   | 1.588   | 39                              | 1.657   | 45                              |
| 31         | 360              | 0.360           | 4.0                             | 0.602   | 1.786   | 61                              | 1.844   | 70                              |
| 32         | 367              | 0.367           | 7.0                             | 0.845   | 1.513   | 33                              | 1.587   | 39                              |
| 33         | 370              | 0.370           | 3.0                             | 0.477   | 1.926   | 84                              | 1.976   | 95                              |
| 35         | 385              | 0.385           | 7.5                             | 0.875   | 1.480   | 30                              | 1.555   | 36                              |
| 37         | 396              | 0.396           | 5.5                             | 0.740   | 1.631   | 43                              | 1.697   | 50                              |
| 39         | 410              | 0.410           | 7.0                             | 0.845   | 1.513   | 33                              | 1.587   | 39                              |
| 41         | 420              | 0.420           | 5.0                             | 0.699   | 1.677   | 48                              | 1.741   | 55                              |
| 43         | 433              | 0.433           | 6.5                             | 0.813   | 1.550   | 35                              | 1.621   | 42                              |
| 45         | 452              | 0.452           | 9.5                             | 0.978   | 1.365   | 23                              | 1.447   | 28                              |
| 47         | 472              | 0.472           | 10.0                            | 1.000   | 1.340   | 22                              | 1.423   | 26                              |
| 49         | 493              | 0.493           | 10.5                            | 1.021   | 1.316   | 21                              | 1.401   | 25                              |
| 51         | 516              | 0.516           | 11.5                            | 1.061   | 1.272   | 19                              | 1.359   | 23                              |
| 53         | 543              | 0.543           | 13.5                            | 1.130   | 1.194   | 16                              | 1.285   | 19                              |
| 55         | 567              | 0.567           | 12.0                            | 1.079   | 1.251   | 18                              | 1.339   | 22                              |
| 57         | 586              | 0.586           | 9.5                             | 0.978   | 1.365   | 23                              | 1.447   | 28                              |
| 59         | 612              | 0.612           | 13.0                            | 1.114   | 1.212   | 16                              | 1.303   | 20                              |
| 61         | 645              | 0.645           | 16.5                            | 1.217   | 1.096   | 12                              | 1.193   | 16                              |
| 63         | 691              | 0.691           | 23.0                            | 1.362   | 0.935   | 9                               | 1.041   | 11                              |
| 65         | 750              | 0.750           | 29.5                            | 1.470   | 0.814   | 7                               | 0.926   | 8                               |
| 67         | 792              | 0.792           | 21.0                            | 1.322   | 0.979   | 10                              | 1.082   | 12                              |
| 69         | 823              | 0.823           | 15.5                            | 1.190   | 1.127   | 13                              | 1.222   | 17                              |
| 71         | 847              | 0.847           | 12.0                            | 1.079   | 1.251   | 18                              | 1.339   | 22                              |
| 73         | 877              | 0.877           | 15.0                            | 1.176   | 1.143   | 14                              | 1.237   | 17                              |
| 75         | 900              | 0.900           | 11.5                            | 1.061   | 1.272   | 19                              | 1.359   | 23                              |
| 77         | 925              | 0.925           | 12.5                            | 1.097   | 1.231   | 17                              | 1.321   | 21                              |
| 79         | 960              | 0.960           | 17.5                            | 1.243   | 1.068   | 12                              | 1.166   | 15                              |

**Notes:**  
1. CBR calculated based on Webster et al, 1992.  
2. CBR calculated based on DMRB, 2008.  
3. CBR values less than 2.5% highlighted in red.

**Reference:** 792  
Dept of Army Waterways Equipment Station, Instruction rpt GL-92-3.  
- Highways Agency, 2008. Design Manual for Roads and Bridges (DMRB), Data for Pavement Assessment. HD29/08.



## RESULTS OF DYNAMIC CONE PENETROMETER (DCP) TESTING

|                    |                             |  |  |
|--------------------|-----------------------------|--|--|
| <b>Project:</b>    | Co-op Academy, Heckmondwike |  |  |
| <b>Project No.</b> | 601124                      |  |  |
| <b>Test No.</b>    | DCP205                      |  |  |

|                      |           |
|----------------------|-----------|
| <b>Date of Test:</b> | 09-Jul-25 |
| <b>Operator:</b>     | PS        |

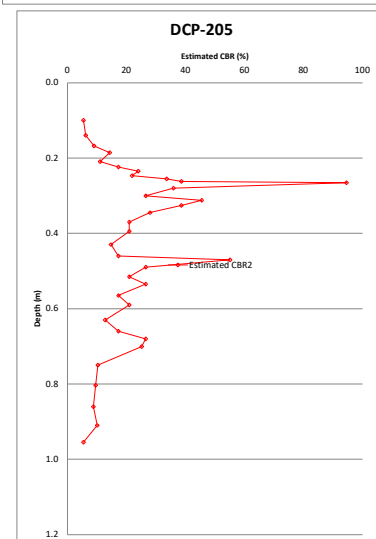
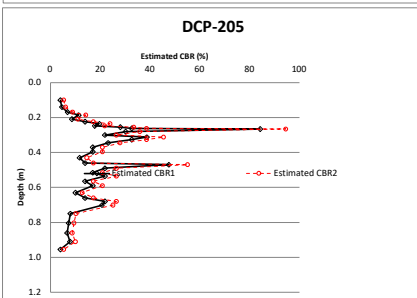
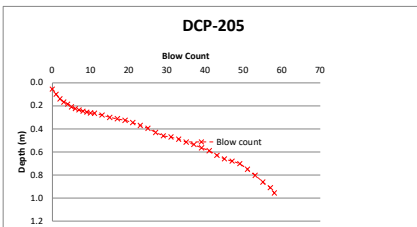
[illegible]

**Notes:**

1. CBR calculated based on Webster et al, 1992.
2. CBR calculated based on DMRB, 2008.
3. CBR values less than 2.5% highlighted in red.

**Reference:**

- Webster S, Grau R and Williams T. 1992. Description and Application of Dual Mass Dynamic Cone Penetrometer. Dept of Army Waterways Equipment Station, Instruction rpt GL-92-3.
- Highways Agency, 2008. Design Manual for Roads and Bridges (DMRB), Data for Pavement Assessment. HD29/08.



## RESULTS OF DYNAMIC CONE PENETROMETER (DCP) TESTING

|                    |                             |  |  |
|--------------------|-----------------------------|--|--|
| <b>Project:</b>    | Co-op Academy, Heckmondwike |  |  |
| <b>Project No.</b> | 601124                      |  |  |
| <b>Test No.</b>    | DCP206                      |  |  |

|                      |           |
|----------------------|-----------|
| <b>Date of Test:</b> | 09-Jul-25 |
| <b>Operator:</b>     | PS        |

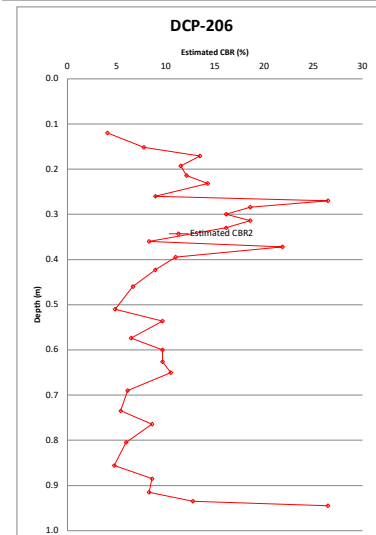
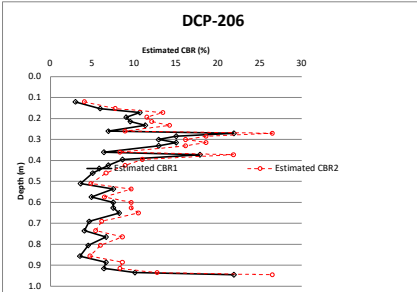
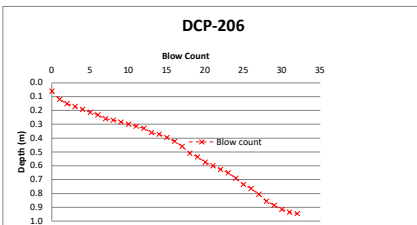
[illegible]

**Notes:**

1. CBR calculated based on Webster et al, 1992.
2. CBR calculated based on DMRB, 2008.
3. CBR values less than 2.5% highlighted in red.

**Reference:**

- Webster S, Grau R and Williams T. 1992. Description and Application of Dual Mass Dynamic Cone Penetrometer. Dept of Army Waterways Equipment Station, Instruction rpt GL-92-3.
- Highways Agency, 2008. Design Manual for Roads and Bridges (DMRB), Data for Pavement Assessment. HD29/08.



## Appendix E – Soakaway Testing

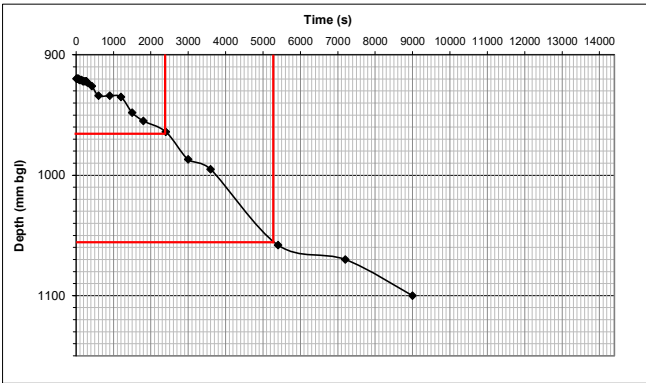
# CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
 Job Number: 601124  
 Author: JE

Hole Ref.: SA201  
 Test Date: 26/05/2025  
 Test No.: 1

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.00 m               | Length of trial pit                                                   |
| 0.60 m               | Width of trial pit                                                    |
| 1.80 m               | Depth (total) of trial pit                                            |
| 1.20 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.920 m bgl          | Water level at start of test (approximate invert level)               |
| 1.100 m bgl          | Water level at end of test                                            |
| 0.180 m              | Effective storage depth                                               |
| 0.965 m bgl          | Effective storage depth (75% full)                                    |
| 1.055 m bgl          | Effective storage depth (25% full)                                    |
| 0.108 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 1.668 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 2800 s               | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

2.31E-05 m/s Soil infiltration rate (f)



Note 1: No gravel backfill

# RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
 Job Number: 601124  
 Author: JE

Hole Ref.: SA201  
 Test Date: 26/05/2025  
 Test No.: 1

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                         |
|------------|----------|----------------|-----------------------------------------------------------------|
| 0          | 0        | 920            | Grey mottled brown orange slightly sandy slightly gravelly CLAY |
| 0          | 15       | 920            |                                                                 |
| 0          | 30       | 920            |                                                                 |
| 0          | 45       | 920            |                                                                 |
| 1          | 60       | 920            |                                                                 |
| 1.5        | 90       | 921            |                                                                 |
| 2          | 120      | 921            |                                                                 |
| 2.5        | 150      | 921            |                                                                 |
| 3          | 180      | 922            |                                                                 |
| 3.5        | 210      | 922            |                                                                 |
| 4          | 240      | 922            |                                                                 |
| 4.5        | 270      | 922            |                                                                 |
| 5          | 300      | 923            |                                                                 |
| 7          | 420      | 926            |                                                                 |
| 10         | 600      | 934            |                                                                 |
| 15         | 900      | 934            |                                                                 |
| 20         | 1200     | 935            |                                                                 |
| 25         | 1500     | 948            |                                                                 |
| 30         | 1800     | 955            |                                                                 |
| 40         | 2400     | 964            |                                                                 |
| 50         | 3000     | 987            |                                                                 |
| 60         | 3600     | 995            |                                                                 |
| 90         | 5400     | 1058           |                                                                 |
| 120        | 7200     | 1070           |                                                                 |
| 150        | 9000     | 1100           |                                                                 |

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

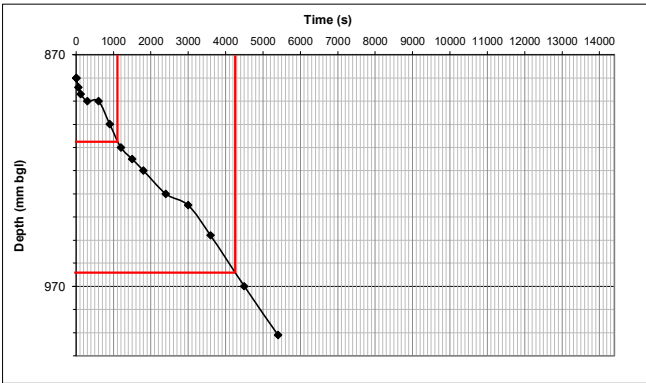
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: JE

Hole Ref.: SA201  
Test Date: 26/05/2025  
Test No.: 2

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.00 m               | Length of trial pit                                                   |
| 0.60 m               | Width of trial pit                                                    |
| 1.80 m               | Depth (total) of trial pit                                            |
| 1.20 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.880 m bgl          | Water level at start of test (approximate invert level)               |
| 0.991 m bgl          | Water level at end of test                                            |
| 0.111 m              | Effective storage depth                                               |
| 0.908 m bgl          | Effective storage depth (75% full)                                    |
| 0.963 m bgl          | Effective storage depth (25% full)                                    |
| 0.067 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 1.489 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 3150 s               | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

1.42E-05 m/s Soil infiltration rate (f)



Note 1: No gravel backfill

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: JE

Hole Ref.: SA201  
Test Date: 26/05/2025  
Test No.: 2

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                         |
|------------|----------|----------------|-----------------------------------------------------------------|
| 0          | 0        | 880            | Grey mottled brown orange slightly sandy slightly gravelly CLAY |
| 0          | 5        | 880            |                                                                 |
| 0          | 10       | 880            |                                                                 |
| 1          | 60       | 884            |                                                                 |
| 2          | 120      | 887            |                                                                 |
| 5          | 300      | 890            |                                                                 |
| 10         | 600      | 890            |                                                                 |
| 15         | 900      | 900            |                                                                 |
| 20         | 1200     | 910            |                                                                 |
| 25         | 1500     | 915            |                                                                 |
| 30         | 1800     | 920            |                                                                 |
| 40         | 2400     | 930            |                                                                 |
| 50         | 3000     | 935            |                                                                 |
| 60         | 3600     | 948            |                                                                 |
| 75         | 4500     | 970            |                                                                 |
| 90         | 5400     | 991            |                                                                 |

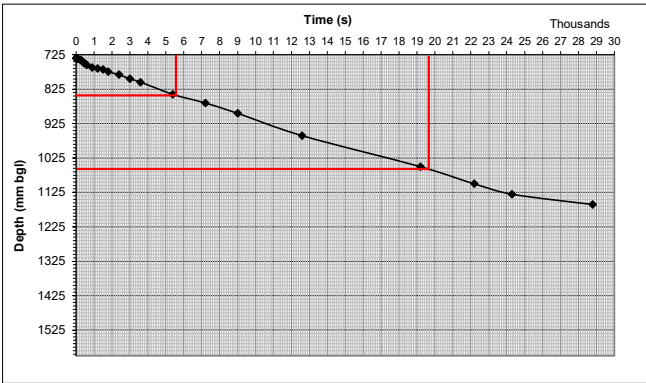
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA201  
Test Date: 26/05/2025  
Test No.: JE

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.00 m               | Length of trial pit                                                   |
| 0.60 m               | Width of trial pit                                                    |
| 1.80 m               | Depth (total) of trial pit                                            |
| 1.20 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.735 m bgl          | Water level at start of test (approximate invert level)               |
| 1.160 m bgl          | Water level at end of test                                            |
| 0.425 m              | Effective storage depth                                               |
| 0.841 m bgl          | Effective storage depth (75% full)                                    |
| 1.054 m bgl          | Effective storage depth (25% full)                                    |
| 0.255 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 2.305 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 14000 s              | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

7.90E-06 m/s Soil infiltration rate (f)



Note 1: No gravel backfill.

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA201  
Test Date: 26/05/2025  
Test No.: JE

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                         |
|------------|----------|----------------|-----------------------------------------------------------------|
| 0          | 0        | 735            | Grey mottled brown orange slightly sandy slightly gravelly CLAY |
| 0          | 5        | 735            |                                                                 |
| 0          | 10       | 735            |                                                                 |
| 1          | 60       | 736            |                                                                 |
| 2          | 120      | 737            |                                                                 |
| 4          | 240      | 740            |                                                                 |
| 5          | 300      | 742            |                                                                 |
| 7          | 420      | 749            |                                                                 |
| 9          | 540      | 752            |                                                                 |
| 10         | 600      | 755            |                                                                 |
| 15         | 900      | 762            |                                                                 |
| 20         | 1200     | 765            |                                                                 |
| 25         | 1500     | 768            |                                                                 |
| 30         | 1800     | 774            |                                                                 |
| 40         | 2400     | 783            |                                                                 |
| 50         | 3000     | 795            |                                                                 |
| 60         | 3600     | 805            |                                                                 |
| 90         | 5400     | 840            |                                                                 |
| 120        | 7200     | 865            |                                                                 |
| 150        | 9000     | 895            |                                                                 |
| 210        | 12600    | 960            |                                                                 |
| 320        | 19200    | 1050           |                                                                 |
| 370        | 22200    | 1100           |                                                                 |
| 405        | 24300    | 1130           |                                                                 |
| 480        | 28800    | 1160           |                                                                 |

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;  
 $a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;  
 $t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

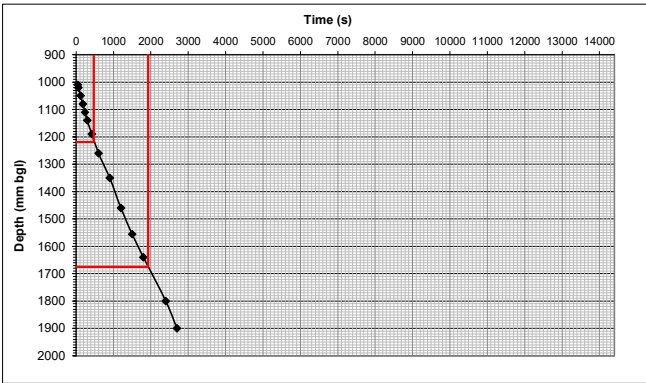
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA202  
Test Date: 27/05/2025  
Test No.: 1

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.00 m               | Length of trial pit                                                   |
| 0.67 m               | Width of trial pit                                                    |
| 1.90 m               | Depth (total) of trial pit                                            |
| 1.34 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.990 m bgl          | Water level at start of test (approximate invert level)               |
| 1.900 m bgl          | Water level at end of test                                            |
| 0.910 m              | Effective storage depth                                               |
| 1.218 m bgl          | Effective storage depth (75% full)                                    |
| 1.673 m bgl          | Effective storage depth (25% full)                                    |
| 0.610 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 3.770 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 1450 s               | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

1.12E-04 m/s Soil infiltration rate (f)



Note 1: No gravel backfill

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA202  
Test Date: 27/05/2025  
Test No.: 1

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                                  |
|------------|----------|----------------|--------------------------------------------------------------------------|
| 0          | 0        | 990            | Light black highly weathered MUDSTONE recovered as a very clayey gravel. |
| 0          | 45       | 1010           |                                                                          |
| 1          | 60       | 1020           |                                                                          |
| 2          | 120      | 1050           |                                                                          |
| 3          | 180      | 1080           |                                                                          |
| 4          | 240      | 1110           |                                                                          |
| 5          | 300      | 1140           |                                                                          |
| 7          | 420      | 1190           |                                                                          |
| 10         | 600      | 1260           |                                                                          |
| 15         | 900      | 1350           |                                                                          |
| 20         | 1200     | 1460           |                                                                          |
| 25         | 1500     | 1555           |                                                                          |
| 30         | 1800     | 1640           |                                                                          |
| 40         | 2400     | 1800           |                                                                          |
| 45         | 2700     | 1900           |                                                                          |

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

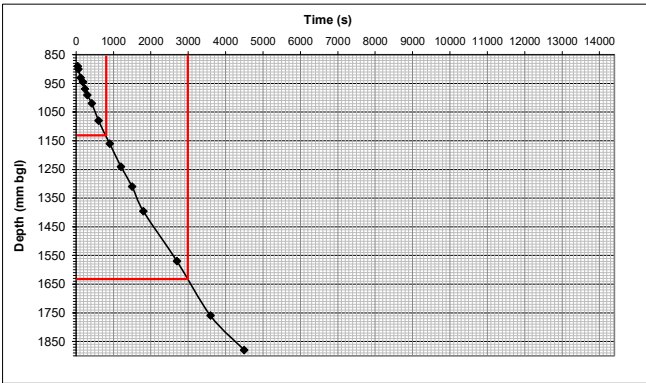
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA202  
Test Date: 27/05/2025  
Test No.: 2

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.00 m               | Length of trial pit                                                   |
| 0.67 m               | Width of trial pit                                                    |
| 1.90 m               | Depth (total) of trial pit                                            |
| 1.34 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.880 m bgl          | Water level at start of test (approximate invert level)               |
| 1.880 m bgl          | Water level at end of test                                            |
| 1.000 m              | Effective storage depth                                               |
| 1.130 m bgl          | Effective storage depth (75% full)                                    |
| 1.630 m bgl          | Effective storage depth (25% full)                                    |
| 0.670 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 4.010 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 2200 s               | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

7.59E-05 m/s Soil infiltration rate (f)



Note 1: No gravel backfill

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA202  
Test Date: 27/05/2025  
Test No.: 2

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                                  |
|------------|----------|----------------|--------------------------------------------------------------------------|
| 0          | 0        | 880            | Light black highly weathered MUDSTONE recovered as a very clayey gravel. |
| 0          | 45       | 890            |                                                                          |
| 1          | 60       | 900            |                                                                          |
| 2          | 120      | 930            |                                                                          |
| 3          | 180      | 945            |                                                                          |
| 4          | 240      | 970            |                                                                          |
| 5          | 300      | 990            |                                                                          |
| 7          | 420      | 1020           |                                                                          |
| 10         | 600      | 1080           |                                                                          |
| 15         | 900      | 1160           |                                                                          |
| 20         | 1200     | 1240           |                                                                          |
| 25         | 1500     | 1310           |                                                                          |
| 30         | 1800     | 1395           |                                                                          |
| 45         | 2700     | 1570           |                                                                          |
| 60         | 3600     | 1760           |                                                                          |
| 75         | 4500     | 1880           |                                                                          |

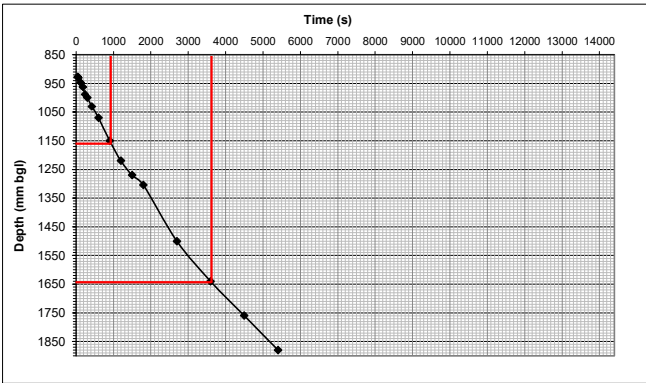
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA202  
Test Date: 27/05/2025  
Test No.: 3

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.00 m               | Length of trial pit                                                   |
| 0.67 m               | Width of trial pit                                                    |
| 1.90 m               | Depth (total) of trial pit                                            |
| 1.34 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.920 m bgl          | Water level at start of test (approximate invert level)               |
| 1.880 m bgl          | Water level at end of test                                            |
| 0.960 m              | Effective storage depth                                               |
| 1.160 m bgl          | Effective storage depth (75% full)                                    |
| 1.640 m bgl          | Effective storage depth (25% full)                                    |
| 0.643 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 3.903 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 2750 s               | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

5.99E-05 m/s Soil infiltration rate (f)



Note 1: No gravel backfill

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA202  
Test Date: 27/05/2025  
Test No.: 3

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                                  |
|------------|----------|----------------|--------------------------------------------------------------------------|
| 0          | 0        | 920            | Light black highly weathered MUDSTONE recovered as a very clayey gravel. |
| 0          | 45       | 927            |                                                                          |
| 1          | 60       | 930            |                                                                          |
| 2          | 120      | 947            |                                                                          |
| 3          | 180      | 962            |                                                                          |
| 4          | 240      | 989            |                                                                          |
| 5          | 300      | 999            |                                                                          |
| 7          | 420      | 1030           |                                                                          |
| 10         | 600      | 1070           |                                                                          |
| 15         | 900      | 1150           |                                                                          |
| 20         | 1200     | 1220           |                                                                          |
| 25         | 1500     | 1270           |                                                                          |
| 30         | 1800     | 1304           |                                                                          |
| 45         | 2700     | 1500           |                                                                          |
| 60         | 3600     | 1640           |                                                                          |
| 75         | 4500     | 1760           |                                                                          |
| 90         | 5400     | 1880           |                                                                          |

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

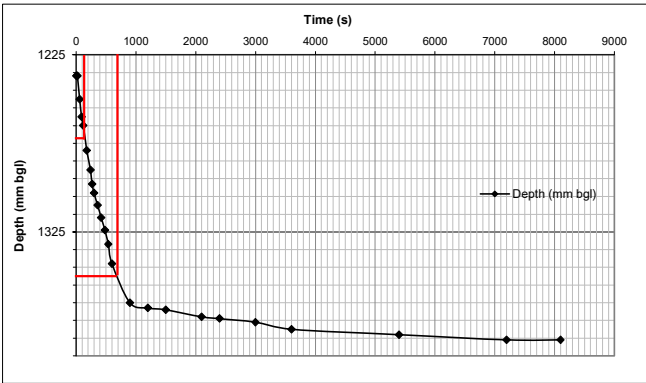
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA203  
Test Date: 28/05/2025  
Test No.: 1

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.20 m               | Length of trial pit                                                   |
| 0.60 m               | Width of trial pit                                                    |
| 1.70 m               | Depth (total) of trial pit                                            |
| 1.32 m <sup>2</sup>  | Area of trial pit base                                                |
| 1.235 m bgl          | Water level at start of test (approximate invert level)               |
| 1.386 m bgl          | Water level at end of test                                            |
| 0.151 m              | Effective storage depth                                               |
| 1.273 m bgl          | Effective storage depth (75% full)                                    |
| 1.348 m bgl          | Effective storage depth (25% full)                                    |
| 0.100 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 1.743 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 550 s                | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

1.04E-04 m/s Soil infiltration rate (f)



Note 1: No gravel backfill , infiltration rate significant decreases once it interacts solely with the clay.

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA203  
Test Date: 28/05/2025  
Test No.: 1

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                        |
|------------|----------|----------------|----------------------------------------------------------------|
| 0          | 0        | 1235           | Very weak black vitreous COAL                                  |
| 0          | 5        | 1237           |                                                                |
| 0          | 10       | 1237           |                                                                |
| 0          | 15       | 1237           |                                                                |
| 0          | 20       | 1237           |                                                                |
| 1          | 60       | 1250           |                                                                |
| 1.5        | 90       | 1260           |                                                                |
| 2          | 120      | 1265           |                                                                |
| 3          | 180      | 1279           |                                                                |
| 4          | 240      | 1290           |                                                                |
| 4.5        | 270      | 1298           |                                                                |
| 5          | 300      | 1303           |                                                                |
| 6          | 360      | 1310           |                                                                |
| 7          | 420      | 1317           |                                                                |
| 8          | 480      | 1324           |                                                                |
| 9          | 540      | 1332           |                                                                |
| 10         | 600      | 1343           | Firm yellowish grey mottled grey black slightly gravelly CLAY. |
| 15         | 900      | 1365           |                                                                |
| 20         | 1200     | 1368           |                                                                |
| 25         | 1500     | 1369           |                                                                |
| 35         | 2100     | 1373           |                                                                |
| 40         | 2400     | 1374           |                                                                |
| 50         | 3000     | 1376           |                                                                |
| 60         | 3600     | 1380           |                                                                |
| 90         | 5400     | 1383           |                                                                |
| 120        | 7200     | 1386           |                                                                |
| 135        | 8100     | 1386           |                                                                |

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

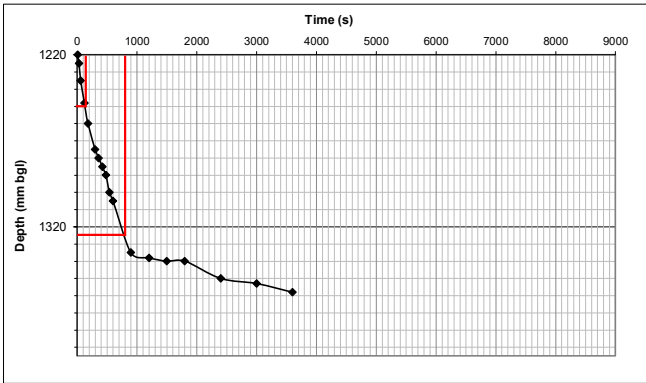
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA203  
Test Date: 28/05/2025  
Test No.: 2

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.20 m               | Length of trial pit                                                   |
| 0.60 m               | Width of trial pit                                                    |
| 1.70 m               | Depth (total) of trial pit                                            |
| 1.32 m <sup>2</sup>  | Area of trial pit base                                                |
| 1.220 m bgl          | Water level at start of test (approximate invert level)               |
| 1.358 m bgl          | Water level at end of test                                            |
| 0.138 m              | Effective storage depth                                               |
| 1.255 m bgl          | Effective storage depth (75% full)                                    |
| 1.324 m bgl          | Effective storage depth (25% full)                                    |
| 0.091 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 1.706 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 650 s                | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

8.21E-05 m/s Soil infiltration rate (f)



Note 1: No gravel backfill , infiltration rate significant decreases when it can only flow into the clay.

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA203  
Test Date: 28/05/2025  
Test No.: 2

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                        |
|------------|----------|----------------|----------------------------------------------------------------|
| 0          | 0        | 1220           | Very weak black vitrous COAL                                   |
| 0          | 10       | 1220           |                                                                |
| 0          | 30       | 1225           |                                                                |
| 1          | 60       | 1235           |                                                                |
| 2          | 120      | 1248           |                                                                |
| 3          | 180      | 1260           |                                                                |
| 5          | 300      | 1275           |                                                                |
| 6          | 360      | 1280           |                                                                |
| 7          | 420      | 1285           |                                                                |
| 8          | 480      | 1290           |                                                                |
| 9          | 540      | 1300           | Firm yellowish grey mottled grey black slightly gravelly CLAY. |
| 10         | 600      | 1305           |                                                                |
| 15         | 900      | 1335           |                                                                |
| 20         | 1200     | 1338           |                                                                |
| 25         | 1500     | 1340           |                                                                |
| 30         | 1800     | 1340           |                                                                |
| 40         | 2400     | 1350           |                                                                |
| 50         | 3000     | 1353           |                                                                |
| 60         | 3600     | 1358           |                                                                |

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:

$V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

$a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;

$t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

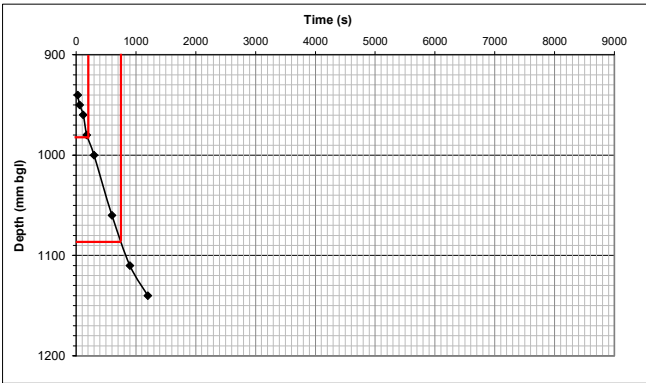
CALCULATION SHEET - SOIL INFILTRATION RATE

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA203  
Test Date: 28/05/2025  
Test No.: 3

|                      |                                                                       |
|----------------------|-----------------------------------------------------------------------|
| 2.20 m               | Length of trial pit                                                   |
| 0.60 m               | Width of trial pit                                                    |
| 1.70 m               | Depth (total) of trial pit                                            |
| 1.32 m <sup>2</sup>  | Area of trial pit base                                                |
| 0.930 m bgl          | Water level at start of test (approximate invert level)               |
| 1.140 m bgl          | Water level at end of test                                            |
| 0.210 m              | Effective storage depth                                               |
| 0.983 m bgl          | Effective storage depth (75% full)                                    |
| 1.088 m bgl          | Effective storage depth (25% full)                                    |
| 0.139 m <sup>3</sup> | Effective storage volume ( $V_{75-25}$ )                              |
| 1.908 m <sup>2</sup> | Internal surface area (50% effective depth) ( $a_{50}$ )              |
| 550 s                | Time for head to fall from 75% to 25% effective depth ( $t_{75-25}$ ) |

1.32E-04 m/s Soil infiltration rate (f)



Note 1: No gravel backfill

Soil infiltration rate,  $f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$

where:  
 $V_{p75-25}$  = the effective storage volume of water in the trial pit between 75% and 25% effective depth;  
 $a_{p50}$  = the internal surface area of the trial pit up to 50% effective depth and including the base area;  
 $t_{p75-25}$  = the time for the water level to fall from 75% to 25% effective depth.

RAW DATA

Project: Co-op Academy Smithies Moor - Soakaway Testing  
Job Number: 601124  
Author: PS

Hole Ref.: SA203  
Test Date: 28/05/2025  
Test No.: 3

| Time (min) | Time (s) | Depth (mm bgl) | Stratum                                                        |
|------------|----------|----------------|----------------------------------------------------------------|
| 0          | 0        | 930            | Very weak black vitreous COAL                                  |
| 0          | 30       | 940            |                                                                |
| 1          | 60       | 950            |                                                                |
| 2          | 120      | 960            |                                                                |
| 3          | 180      | 980            |                                                                |
| 5          | 300      | 1000           |                                                                |
| 10         | 600      | 1060           |                                                                |
| 15         | 900      | 1110           | Firm yellowish grey mottled grey black slightly gravelly CLAY. |
| 20         | 1200     | 1140           |                                                                |
|            |          |                |                                                                |
|            |          |                |                                                                |
|            |          |                |                                                                |

## Appendix F – Groundwater and Gas Monitoring Data

GAS MONITORING RECORD SHEET

HEXA

|                                   |                             |                                     |                         |                                     |                                 |                                 |                        |                          |           |                             |                      |
|-----------------------------------|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|---------------------------------|---------------------------------|------------------------|--------------------------|-----------|-----------------------------|----------------------|
| JOB DETAILS                       |                             |                                     |                         |                                     |                                 |                                 |                        |                          |           |                             |                      |
| Site:                             | Co-op Academy, Heckmondwike |                                     |                         |                                     |                                 |                                 | Job No:                | 601124                   |           |                             |                      |
| Date:                             | 16/07/2025                  |                                     |                         |                                     |                                 |                                 | Engineer:              | AH                       |           |                             |                      |
| Time:                             | 15:30                       |                                     |                         |                                     |                                 |                                 | Client:                | Bowmer & Kirkland        |           |                             |                      |
| METEOROLOGICAL & SITE INFORMATION |                             |                                     |                         |                                     |                                 |                                 |                        |                          |           |                             |                      |
| State of ground:                  | Dry                         | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/>            | Wet                             | <input type="checkbox"/>        |                        |                          |           |                             |                      |
| Wind:                             | Calm                        | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/>            | Moderate                        | <input type="checkbox"/>        | Strong                 | <input type="checkbox"/> |           |                             |                      |
| Cloud cover:                      | None                        | <input type="checkbox"/>            | Slight                  | <input checked="" type="checkbox"/> | Cloudy                          | <input type="checkbox"/>        | Overcast               | <input type="checkbox"/> |           |                             |                      |
| Precipitation:                    | None                        | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/>            | Moderate                        | <input type="checkbox"/>        | Heavy                  | <input type="checkbox"/> |           |                             |                      |
| Barometric pressure (hPa):        | 992.27                      |                                     | Local pressure system*: | Rising                              |                                 | Air temperature (°C):           | 22                     |                          |           |                             |                      |
| Well No.                          | Time (s)                    | Flow (l/hr)                         | dA (PA)                 | O <sub>2</sub> (% vol. in air)      | CO <sub>2</sub> (% vol. in air) | CH <sub>4</sub> (% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm)                 | PID (ppm) | Depth to Groundwater (mbgl) | Depth to base (mbgl) |
| RO1 (RSK)                         | 0                           | -3.0                                | 1002                    | 14.0                                | 1.2                             | 0.0                             | 0                      | 0                        | 0         | 10.35                       | 13.63                |
|                                   | 15                          | -2.6                                | 1002                    | 10.0                                | 2.4                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 30                          | -2.3                                | 1002                    | 5.2                                 | 3.5                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 45                          | -1.8                                | 1002                    | 2.6                                 | 4.0                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 60                          | -1.2                                | 1002                    | 1.1                                 | 4.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 90                          | -0.8                                | 1002                    | 0.0                                 | 4.4                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 120                         | -0.5                                | 1002                    | 0.0                                 | 4.5                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 150                         | -0.3                                | 1002                    | 0.0                                 | 4.5                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 180                         | -0.1                                | 1002                    | 0.0                                 | 4.5                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 240                         | 0.0                                 | 1002                    | 0.0                                 | 4.5                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
| 300                               | 0.0                         | 1002                                | 0.0                     | 4.5                                 | 0.0                             | 0                               | 0                      | 0                        |           |                             |                      |
| RO3 (RSK)                         | 0                           | 0.0                                 | 1001                    | 20.0                                | 0.1                             | 0.0                             | 0                      | 0                        | 0         | 6.30                        | 6.40                 |
|                                   | 15                          | 0.0                                 | 1001                    | 1.3                                 | 6.0                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 30                          | 0.0                                 | 1001                    | 0.6                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 45                          | 0.0                                 | 1001                    | 0.6                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 60                          | 0.0                                 | 1001                    | 0.5                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 90                          | 0.0                                 | 1001                    | 0.5                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 120                         | 0.0                                 | 1001                    | 0.5                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 150                         | 0.0                                 | 1001                    | 0.5                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 180                         | 0.0                                 | 1001                    | 0.5                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 240                         | 0.0                                 | 1001                    | 0.5                                 | 6.2                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
| 300                               | 0.0                         | 1001                                | 0.5                     | 6.2                                 | 0.0                             | 0                               | 0                      | 0                        |           |                             |                      |
| WS01 (RSK)                        | 0                           | 0.0                                 | 1002                    | 17.0                                | 0.2                             | 0.0                             | 0                      | 0                        | 0         | Dry                         | 1.10                 |
|                                   | 15                          | 0.0                                 | 1002                    | 19.4                                | 1.6                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 30                          | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 45                          | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 60                          | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 90                          | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 120                         | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 150                         | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 180                         | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 240                         | 0.0                                 | 1002                    | 19.5                                | 1.7                             | 0.0                             | 0                      | 0                        | 0         |                             |                      |
| 300                               | 0.0                         | 1002                                | 19.5                    | 1.7                                 | 0.0                             | 0                               | 0                      | 0                        |           |                             |                      |
| WS02 (RSK)                        | 0                           | 0.0                                 | 1000                    | 20.2                                | 0.5                             | 0.0                             | 0                      | 0                        | 0         | 2.27                        | 3.91                 |
|                                   | 15                          | 0.0                                 | 1000                    | 2.0                                 | 10.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 30                          | 0.0                                 | 1000                    | 0.0                                 | 14.1                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 45                          | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 60                          | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 90                          | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 120                         | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 150                         | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 180                         | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
|                                   | 240                         | 0.0                                 | 1000                    | 0.0                                 | 14.4                            | 0.0                             | 0                      | 0                        | 0         |                             |                      |
| 300                               | 0.0                         | 1000                                | 0.0                     | 14.4                                | 0.0                             | 0                               | 0                      | 0                        |           |                             |                      |
| Notes:                            |                             |                                     |                         |                                     |                                 |                                 |                        |                          |           |                             |                      |
| NR= Not recorded                  |                             |                                     |                         |                                     |                                 |                                 |                        |                          |           |                             |                      |

# GAS MONITORING RECORD SHEET

# HEXA

| JOB DETAILS |                             |           |                   |
|-------------|-----------------------------|-----------|-------------------|
| Site:       | Co-op Academy, Heckmondwike | Job No:   | 601124            |
| Date:       | 16/07/2025                  | Engineer: | AH                |
| Time:       | 15:30                       | Client:   | Bowmer & Kirkland |

| METEOROLOGICAL & SITE INFORMATION |      |                                     |        |                                     |          |                          |          |                          |  |
|-----------------------------------|------|-------------------------------------|--------|-------------------------------------|----------|--------------------------|----------|--------------------------|--|
| State of ground:                  | Dry  | <input checked="" type="checkbox"/> | Moist  | <input type="checkbox"/>            | Wet      | <input type="checkbox"/> |          |                          |  |
| Wind:                             | Calm | <input checked="" type="checkbox"/> | Light  | <input type="checkbox"/>            | Moderate | <input type="checkbox"/> | Strong   | <input type="checkbox"/> |  |
| Cloud cover:                      | None | <input type="checkbox"/>            | Slight | <input checked="" type="checkbox"/> | Cloudy   | <input type="checkbox"/> | Overcast | <input type="checkbox"/> |  |
| Precipitation:                    | None | <input checked="" type="checkbox"/> | Slight | <input type="checkbox"/>            | Moderate | <input type="checkbox"/> | Heavy    | <input type="checkbox"/> |  |
| Barometric pressure (hPa):        |      | 992.27                              |        | Local pressure system*:             |          | Rising                   |          | Air temperature (°C): 22 |  |

| Well No.        | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm) | PID<br>(ppm) | Depth to<br>Groundwater<br>(mbgl) | Depth to base<br>(mbgl) |
|-----------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|------------------------|----------|--------------|-----------------------------------|-------------------------|
| WS04 (RSK)      | 0        | 0.0         | 1000.0  | 18.3                              | 0.2                                | 0.0                                | 0.0                    | 0.0      | 0.0          | 1.50                              | 1.58                    |
|                 | 15       | 0.0         | 1000.0  | 18.7                              | 2.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1000.0  | 18.5                              | 2.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1000.0  | 18.5                              | 2.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
| WS05 (RSK)      | 0        | 0.0         | 1001.0  | 20.1                              | 0.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          | 1.95                              | 2.13                    |
|                 | 15       | 0.0         | 1001.0  | 16.1                              | 5.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1001.0  | 15.4                              | 6.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1001.0  | 15.3                              | 6.6                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
| RH201<br>(HEXA) | 0        | 0.0         | 1002.0  | 19.7                              | 0.4                                | 0.0                                | 0.0                    | 0.0      | 0.0          | 14.30                             | 15.52                   |
|                 | 15       | 0.0         | 1002.0  | 20.2                              | 0.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1002.0  | 20.1                              | 0.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1002.0  | 20.1                              | 0.2                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1002.0  | 20.2                              | 0.2                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1002.0  | 20.2                              | 0.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1002.0  | 20.2                              | 0.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1002.0  | 20.2                              | 0.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1002.0  | 20.2                              | 0.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1002.0  | 20.2                              | 0.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1002.0  | 20.2                              | 0.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
| RH203<br>(HEXA) | 0        | 0.0         | 1001.0  | 20.2                              | 0.4                                | 0.0                                | 0.0                    | 0.0      | 0.0          | 4.10                              | 4.12                    |
|                 | 15       | 0.0         | 1001.0  | 20.3                              | 0.7                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1001.0  | 20.0                              | 0.9                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1001.0  | 19.6                              | 1.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1001.0  | 19.6                              | 1.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1001.0  | 18.8                              | 2.2                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1001.0  | 17.6                              | 3.5                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1001.0  | 16.9                              | 4.1                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1001.0  | 16.6                              | 4.3                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1001.0  | 16.6                              | 4.4                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1001.0  | 16.6                              | 4.4                                | 0.0                                | 0.0                    | 0.0      | 0.0          |                                   |                         |

Notes:

NR= Not recorded

GAS MONITORING RECORD SHEET

HEXA

|             |                             |
|-------------|-----------------------------|
| JOB DETAILS |                             |
| Site:       | Co-op Academy, Heckmondwike |
| Date:       | 16/07/2025                  |
| Time:       | 15:30                       |
| Job No:     | 601124                      |
| Engineer:   | AH                          |
| Client:     | Bowmer & Kirkland           |

|                                   |        |                                     |                         |                                     |          |                          |    |
|-----------------------------------|--------|-------------------------------------|-------------------------|-------------------------------------|----------|--------------------------|----|
| METEOROLOGICAL & SITE INFORMATION |        |                                     |                         |                                     |          |                          |    |
| State of ground:                  | Dry    | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/>            | Wet      | <input type="checkbox"/> |    |
| Wind:                             | Calm   | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/>            | Moderate | <input type="checkbox"/> |    |
| Cloud cover:                      | None   | <input type="checkbox"/>            | Slight                  | <input checked="" type="checkbox"/> | Cloudy   | <input type="checkbox"/> |    |
| Precipitation:                    | None   | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/>            | Moderate | <input type="checkbox"/> |    |
| Barometric pressure (hPa):        | 992.27 |                                     | Local pressure system*: | Rising                              |          | Air temperature (°C):    | 22 |

| Well No.        | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H2S (ppm) | CO (ppm) | PID<br>(ppm) | Depth to<br>Groundwater<br>(mbgl) | Depth to base<br>(mbgl) |
|-----------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|-----------|----------|--------------|-----------------------------------|-------------------------|
| RH205<br>(HEXA) | 0        | 0.0         | 1000.0  | 17.9                              | 0.6                                | 0.0                                | 0.0       | 0.0      | 0.0          | 12.00                             | 19.00                   |
|                 | 15       | 0.0         | 1000.0  | 20.7                              | 0.1                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
| RH206<br>(HEXA) | 0        | 0.0         | 1000.0  | 20.5                              | 0.1                                | 0.0                                | 0.0       | 0.0      | 0.0          | 15.77                             | 23.10                   |
|                 | 15       | 0.0         | 1000.0  | 20.9                              | 0.1                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1000.0  | 20.8                              | 0.0                                | 0.0                                | 0.0       | 0.0      | 0.0          |                                   |                         |
|                 | 0        |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 15       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 30       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 0        |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 15       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 30       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |

|                  |
|------------------|
| Notes:           |
| NR= Not recorded |

## GAS MONITORING RECORD SHEET

HEXA

| JOB DETAILS |                             |           |                   |
|-------------|-----------------------------|-----------|-------------------|
| Site:       | Co-op Academy, Heckmondwike | Job No:   | 601124            |
| Date:       | 30/07/2025                  | Engineer: | AH                |
| Time:       | 15:30                       | Client:   | Bowmer & Kirkland |

| METEOROLOGICAL & SITE INFORMATION |      |                                     |                         |                                     |          |                          |          |                          |    |  |  |
|-----------------------------------|------|-------------------------------------|-------------------------|-------------------------------------|----------|--------------------------|----------|--------------------------|----|--|--|
| State of ground:                  | Dry  | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/>            | Wet      | <input type="checkbox"/> |          |                          |    |  |  |
| Wind:                             | Calm | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/>            | Moderate | <input type="checkbox"/> | Strong   | <input type="checkbox"/> |    |  |  |
| Cloud cover:                      | None | <input type="checkbox"/>            | Slight                  | <input checked="" type="checkbox"/> | Cloudy   | <input type="checkbox"/> | Overcast | <input type="checkbox"/> |    |  |  |
| Precipitation:                    | None | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/>            | Moderate | <input type="checkbox"/> | Heavy    | <input type="checkbox"/> |    |  |  |
| Barometric pressure (mb):         | 1003 |                                     | Local pressure system*: | Stable                              |          | Air temperature (°C):    |          |                          | 19 |  |  |

| Well No.   | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm) | PID (ppm) | Depth to Groundwater (mbgl) | Depth to base (mbgl) |
|------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|------------------------|----------|-----------|-----------------------------|----------------------|
| RO1 (RSK)  | 0        | 0.0         | 1002    | 19.0                              | 0.5                                | 0.0                                | 0                      | 0        | 0.0       | 13.12                       | 13.63                |
|            | 15       | 0.0         | 1002    | 8.0                               | 4.0                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 1002    | 1.3                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 1002    | 0.6                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 1002    | 0.5                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 1002    | 0.4                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 1002    | 0.3                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 1002    | 0.3                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 1002    | 0.3                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 1002    | 0.3                               | 4.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 1002    | 8.0                               | 4.0                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
| RO3 (RSK)  | 0        | 0.0         | 1003    | 0.2                               | 0.4                                | 0.0                                | 0                      | 0        | 0.0       | 6.21                        | 6.40                 |
|            | 15       | 0.0         | 1003    | 20.4                              | 2.2                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 1003    | 15.5                              | 3.0                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 1003    | 11.7                              | 2.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 1003    | 12.5                              | 2.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 1003    | 13.4                              | 1.4                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 1003    | 16.0                              | 0.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 1003    | 17.5                              | 0.8                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 1003    | 18.1                              | 0.6                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 1003    | 19.2                              | 0.5                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 1003    | 20.0                              | 0.5                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
| WS01 (RSK) | 0        | 0.0         | 1003    | 15.9                              | 0.8                                | 0.0                                | 0                      | 0        | 0.0       | Dry                         | 1.10                 |
|            | 15       | 0.0         | 1003    | 18.8                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 1003    | 19.2                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 1003    | 19.3                              | 1.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
| WS02 (RSK) | 0        | 0.0         | 1002    | 20.2                              | 0.7                                | 0.0                                | 0                      | 0        | 0.0       | 2.26                        | 3.91                 |
|            | 15       | 0.0         | 1002    | 2.0                               | 13.2                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 1002    | 0.0                               | 14.8                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 1002    | 0.0                               | 15.0                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 1002    | 0.0                               | 15.0                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 1002    | 0.0                               | 15.1                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 1002    | 0.0                               | 15.1                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 1002    | 0.0                               | 15.1                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 1002    | 0.0                               | 15.1                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 1002    | 0.0                               | 15.1                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 1002    | 0.0                               | 15.1                               | 0.0                                | 0                      | 0        | 0.0       |                             |                      |

|                  |
|------------------|
| Notes:           |
| NR= Not recorded |

GAS MONITORING RECORD SHEET



|                                                         |                             |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|---------------------------------------------------------|-----------------------------|-------------------------------------|-------------------------|-------------------------------------|---------------------------------|---------------------------------|-----------|--------------------------|-----------|-----------------------------|----------------------|
| JOB DETAILS                                             |                             |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
| Site:                                                   | Co-op Academy, Heckmondwike |                                     |                         |                                     |                                 |                                 | Job No:   | 601124                   |           |                             |                      |
| Date:                                                   | 30/07/2025                  |                                     |                         |                                     |                                 |                                 | Engineer: | AH                       |           |                             |                      |
| Time:                                                   | 15:30                       |                                     |                         |                                     |                                 |                                 | Client:   | Bowmer & Kirkland        |           |                             |                      |
| METEOROLOGICAL & SITE INFORMATION                       |                             |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
| State of ground:                                        | Dry                         | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/>            | Wet                             | <input type="checkbox"/>        |           |                          |           |                             |                      |
| Wind:                                                   | Calm                        | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/>            | Moderate                        | <input type="checkbox"/>        | Strong    | <input type="checkbox"/> |           |                             |                      |
| Cloud cover:                                            | None                        | <input type="checkbox"/>            | Slight                  | <input checked="" type="checkbox"/> | Cloudy                          | <input type="checkbox"/>        | Overcast  | <input type="checkbox"/> |           |                             |                      |
| Precipitation:                                          | None                        | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/>            | Moderate                        | <input type="checkbox"/>        | Heavy     | <input type="checkbox"/> |           |                             |                      |
| Barometric pressure (mb):                               | 1003                        |                                     | Local pressure system*: | Stable                              |                                 | Air temperature (°C):           | 19        |                          |           |                             |                      |
| Well No.                                                | Time (s)                    | Flow (l/hr)                         | dA (PA)                 | O <sub>2</sub> (% vol. in air)      | CO <sub>2</sub> (% vol. in air) | CH <sub>4</sub> (% vol. in air) | H2S (ppm) | CO (ppm)                 | PID (ppm) | Depth to Groundwater (mbgl) | Depth to base (mbgl) |
| WS04 (RSK)                                              | 0                           | 0.0                                 | 1002                    | 18.1                                | 0.2                             | 0.0                             | 0         | 0                        | 0.0       | 1.50                        | 1.58                 |
|                                                         | 15                          | 0.0                                 | 1002                    | 18.6                                | 2.2                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 30                          | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 45                          | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 60                          | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 90                          | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 120                         | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 150                         | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 180                         | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 240                         | 0.0                                 | 1002                    | 18.5                                | 2.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
| 300                                                     | 0.0                         | 1002                                | 18.5                    | 2.5                                 | 0.0                             | 0                               | 0         | 0.0                      |           |                             |                      |
| WS05 (RSK)                                              | 0                           | 0.0                                 | 1002                    | 20.1                                | 2.6                             | 0.0                             | 0         | 0                        | 0.0       | 1.94                        | 2.13                 |
|                                                         | 15                          | 0.0                                 | 1002                    | 16.3                                | 5.2                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 30                          | 0.0                                 | 1002                    | 15.4                                | 6.4                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 45                          | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 60                          | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 90                          | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 120                         | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 150                         | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 180                         | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 240                         | 0.0                                 | 1002                    | 15.3                                | 6.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
| 300                                                     | 0.0                         | 1002                                | 15.3                    | 6.6                                 | 0.0                             | 0                               | 0         | 0.0                      |           |                             |                      |
| RH201 (HEXA)                                            | 0                           | NR                                  | NR                      | NR                                  | NR                              | NR                              | NR        | NR                       | NR        | NR                          | NR                   |
|                                                         | 15                          |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 30                          |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 45                          |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 60                          |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 90                          |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 120                         |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 150                         |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 180                         |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
|                                                         | 240                         |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
| 300                                                     |                             |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
| RH203 (HEXA)                                            | 0                           | 0.0                                 | 1002.0                  | 20.2                                | 0.5                             | 0.0                             | 0         | 0                        | 0.0       | 4.10                        | 4.12                 |
|                                                         | 15                          | 0.0                                 | 1002.0                  | 17.6                                | 4.0                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 30                          | 0.0                                 | 1002.0                  | 16.9                                | 4.4                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 45                          | 0.0                                 | 1002.0                  | 16.5                                | 4.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 60                          | 0.0                                 | 1002.0                  | 16.4                                | 4.6                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 90                          | 0.0                                 | 1002.0                  | 16.3                                | 4.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 120                         | 0.0                                 | 1002.0                  | 16.3                                | 4.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 150                         | 0.0                                 | 1002.0                  | 16.3                                | 4.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 180                         | 0.0                                 | 1002.0                  | 16.3                                | 4.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
|                                                         | 240                         | 0.0                                 | 1002.0                  | 16.3                                | 4.5                             | 0.0                             | 0         | 0                        | 0.0       |                             |                      |
| 300                                                     | 0.0                         | 1002.0                              | 16.3                    | 4.5                                 | 0.0                             | 0                               | 0         | 0.0                      |           |                             |                      |
| Notes: RH201 could not be opened- skip over BH position |                             |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |
| NR= Not recorded                                        |                             |                                     |                         |                                     |                                 |                                 |           |                          |           |                             |                      |

GAS MONITORING RECORD SHEET



|                    |                             |           |                   |
|--------------------|-----------------------------|-----------|-------------------|
| <b>JOB DETAILS</b> |                             |           |                   |
| Site:              | Co-op Academy, Heckmondwike | Job No:   | 601124            |
| Date:              | 30/07/2025                  | Engineer: | AH                |
| Time:              | 15:30                       | Client:   | Bowmer & Kirkland |

|                                              |                                          |                                            |                                   |
|----------------------------------------------|------------------------------------------|--------------------------------------------|-----------------------------------|
| <b>METEOROLOGICAL &amp; SITE INFORMATION</b> |                                          |                                            |                                   |
| State of ground:                             | Dry <input checked="" type="checkbox"/>  | Moist <input type="checkbox"/>             | Wet <input type="checkbox"/>      |
| Wind:                                        | Calm <input checked="" type="checkbox"/> | Light <input type="checkbox"/>             | Moderate <input type="checkbox"/> |
| Cloud cover:                                 | None <input type="checkbox"/>            | Slight <input checked="" type="checkbox"/> | Cloudy <input type="checkbox"/>   |
| Precipitation:                               | None <input checked="" type="checkbox"/> | Slight <input type="checkbox"/>            | Moderate <input type="checkbox"/> |
|                                              |                                          |                                            | Strong <input type="checkbox"/>   |
|                                              |                                          |                                            | Overcast <input type="checkbox"/> |
|                                              |                                          |                                            | Heavy <input type="checkbox"/>    |
| Barometric pressure (mb):                    | 1003                                     | Local pressure system*:                    | Stable                            |
|                                              |                                          |                                            | Air temperature (°C): 19          |

| Well No.        | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H2S (ppm) | CO (ppm) | PID<br>(ppm) | Depth to<br>Groundwater<br>(mbgl) | Depth to base<br>(mbgl) |
|-----------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|-----------|----------|--------------|-----------------------------------|-------------------------|
| RH205<br>(HEXA) | 0        | 0.0         | 1002    | 17.6                              | 0.6                                | 0.0                                | 0         | 0        | 0.0          | 11.13                             | 19.00                   |
|                 | 15       | 0.0         | 1002    | 17.5                              | 1.3                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1002    | 17.9                              | 1.1                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1002    | 18.2                              | 1.9                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1002    | 18.6                              | 0.8                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1002    | 19.4                              | 0.6                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1002    | 19.8                              | 0.4                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1002    | 20.0                              | 0.3                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1002    | 20.1                              | 0.3                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1002    | 20.1                              | 0.3                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1002    | 20.1                              | 0.3                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
| RH206<br>(HEXA) | 0        | 0.0         | 1002    | 20.6                              | 0.3                                | 0.0                                | 0         | 0        | 0.0          | 16.75                             | 23.10                   |
|                 | 15       | 0.0         | 1002    | 20.6                              | 0.3                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1002    | 20.6                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1002    | 20.5                              | 0.2                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 0        |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 15       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 30       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 0        |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 15       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 30       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      |             |         |                                   |                                    |                                    |           |          |              |                                   |                         |

|                  |
|------------------|
| Notes:           |
| NR= Not recorded |

GAS MONITORING RECORD SHEET



JOB DETAILS

Site:Co-op Academy, Heckmondwike

Job No:601124

Date:04/08/2025

Engineer:PS

Time:

Client: Bowmer & Kirkland

METEOROLOGICAL & SITE INFORMATION

State of ground: Dry☐ Moist☒ Wet☐

Wind: Calm☐ Light☐ Moderate☐

Cloud cover: None☐ Slight☐ Cloudy☒ Strong Overcast☐

Precipitation: None☐ Slight☒ Moderate☐ Heavy☐

Barometric pressure (mb):992Local pressure system\*:Rapid FallingAir temperature (°C):20

| Well No.   | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm) | PID (ppm) | Depth to Groundwater (mbgl) | Depth to base (mbgl) |
|------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|------------------------|----------|-----------|-----------------------------|----------------------|
| RO1 (RSK)  | 0        | 0.0         | 992     | 19.2                              | 0.1                                | 0.0                                | 0                      | 0        | 0.0       | 10.72                       | 13.68                |
|            | 15       | 0.0         | 992     | 4.2                               | 3.8                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 992     | 2.5                               | 4.2                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 992     | 2.3                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 992     | 2.2                               | 4.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
| RO3 (RSK)  | 0        | 0.0         | 991     | 20.2                              | 0.1                                | 0.0                                | 0                      | 0        | 0.0       | Dry                         | 6.40                 |
|            | 15       | 0.0         | 991     | 15.2                              | 2.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 991     | 13.8                              | 2.3                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 991     | 14.2                              | 2.2                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 991     | 14.0                              | 2.0                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 991     | 15.2                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 991     | 17.0                              | 1.1                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 991     | 17.4                              | 1.0                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 991     | 17.7                              | 0.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 991     | 17.7                              | 0.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 991     | 17.7                              | 0.9                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
| WS01 (RSK) | 0        | 0.0         | 992     | 18.5                              | 0.2                                | 0.0                                | 0                      | 0        | 0.0       | Dry                         | 1.10                 |
|            | 15       | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 30       | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 45       | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 60       | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 90       | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 120      | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 150      | 0.0         | 992     | 19.6                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 180      | 0.0         | 992     | 19.6                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 240      | 0.0         | 992     | 19.6                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
|            | 300      | 0.0         | 992     | 19.6                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0       |                             |                      |
| WS02 (RSK) | 0        | 0.0         | 991     | 20.2                              | 0.1                                | 0.0                                | 0                      | 0        | 0         | 2.20                        | 3.90                 |
|            | 15       | 0.0         | 991     | 2.3                               | 7.0                                | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 30       | 0.0         | 991     | 0.9                               | 14.7                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 45       | 0.0         | 991     | 0.4                               | 15.0                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 60       | 0.0         | 991     | 0.3                               | 15.0                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 90       | 0.0         | 991     | 0.3                               | 15.1                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 120      | 0.0         | 991     | 0.2                               | 15.1                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 150      | 0.0         | 991     | 0.2                               | 15.1                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 180      | 0.0         | 991     | 0.2                               | 15.1                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 240      | 0.0         | 991     | 0.2                               | 15.1                               | 0.0                                | 0                      | 0        | 0         |                             |                      |
|            | 300      | 0.0         | 991     | 0.2                               | 15.1                               | 0.0                                | 0                      | 0        | 0         |                             |                      |

GAS MONITORING RECORD SHEET



|                                                                                                                                                          |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------|---------|--------------------------------|---------------------------------|---------------------------------|------------------------|----------|-----------|-----------------------------|----------------------|
| JOB DETAILS                                                                                                                                              |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| Site: Co-op Academy, Heckmondwike                                                                                                                        |          |             |         | Job No: 601124                 |                                 |                                 |                        |          |           |                             |                      |
| Date: 04/08/2025                                                                                                                                         |          |             |         | Engineer: PS                   |                                 |                                 |                        |          |           |                             |                      |
| Time:                                                                                                                                                    |          |             |         | Client: Bowmer & Kirkland      |                                 |                                 |                        |          |           |                             |                      |
| METEOROLOGICAL & SITE INFORMATION                                                                                                                        |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| State of ground: Dry <input type="checkbox"/> Moist <input checked="" type="checkbox"/> Wet <input type="checkbox"/>                                     |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| Wind: Calm <input type="checkbox"/> Light <input type="checkbox"/> Moderate <input type="checkbox"/> Strong <input checked="" type="checkbox"/>          |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| Cloud cover: None <input type="checkbox"/> Slight <input type="checkbox"/> Cloudy <input checked="" type="checkbox"/> Overcast <input type="checkbox"/>  |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| Precipitation: None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy <input type="checkbox"/> |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| Barometric pressure (mb): 992 Local pressure system*: Rapid Falling Air temperature (°C): 20                                                             |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| Well No.                                                                                                                                                 | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub> (% vol. in air) | CO <sub>2</sub> (% vol. in air) | CH <sub>4</sub> (% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm) | PID (ppm) | Depth to Groundwater (mbgl) | Depth to base (mbgl) |
| WS04 (RSK)                                                                                                                                               | 0        | 0.0         | 991     | 19.0                           | 0.1                             | 0.0                             | 0                      | 0        | 0.0       | 1.54                        | 1.58                 |
|                                                                                                                                                          | 15       | 0.0         | 991     | 18.9                           | 2.3                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 30       | 0.0         | 991     | 18.7                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 45       | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 60       | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 90       | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 120      | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 150      | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 180      | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 240      | 0.0         | 991     | 18.6                           | 2.4                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
| 300                                                                                                                                                      | 0.0      | 991         | 18.6    | 2.4                            | 0.0                             | 0                               | 0                      | 0.0      |           |                             |                      |
| WS05 (RSK)                                                                                                                                               | 0        | 0.0         | 991     | 20.2                           | 0.1                             | 0.0                             | 0                      | 0        | 0.0       | 2.00                        | 2.10                 |
|                                                                                                                                                          | 15       | 0.0         | 991     | 16.4                           | 5.8                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 30       | 0.0         | 991     | 15.6                           | 6.8                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 45       | 0.0         | 991     | 15.5                           | 6.9                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 60       | 0.0         | 991     | 15.5                           | 6.9                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 90       | 0.0         | 991     | 15.4                           | 7.1                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 120      | 0.0         | 991     | 15.4                           | 7.1                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 150      | 0.0         | 991     | 15.4                           | 7.1                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 180      | 0.0         | 991     | 15.4                           | 7.1                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 240      | 0.0         | 991     | 15.4                           | 7.1                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
| 300                                                                                                                                                      | 0.0      | 991         | 15.4    | 7.1                            | 0.0                             | 0                               | 0                      | 0.0      |           |                             |                      |
| RH201 (HEXA)                                                                                                                                             | 0        | NR          | NR      | NR                             | NR                              | NR                              | NR                     | NR       | NR        | NR                          | NR                   |
|                                                                                                                                                          | 15       |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 30       |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 45       |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 60       |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 90       |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 120      |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 150      |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 180      |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
|                                                                                                                                                          | 240      |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| 300                                                                                                                                                      |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| RH203 (HEXA)                                                                                                                                             | 0        | 0.0         | 992     | 20.1                           | 0.1                             | 0.0                             | 0                      | 0        | 0.0       | 4.08                        | 4.14                 |
|                                                                                                                                                          | 15       | 0.0         | 992     | 17.3                           | 3.0                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 30       | 0.0         | 992     | 16.4                           | 4.5                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 45       | 0.0         | 992     | 16.3                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 60       | 0.0         | 991     | 16.3                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 90       | 0.0         | 991     | 16.2                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 120      | 0.0         | 991     | 16.2                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 150      | 0.0         | 991     | 16.2                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 180      | 0.0         | 991     | 16.2                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
|                                                                                                                                                          | 240      | 0.0         | 991     | 16.2                           | 4.6                             | 0.0                             | 0                      | 0        | 0.0       |                             |                      |
| 300                                                                                                                                                      | 0.0      | 991         | 16.2    | 4.6                            | 0.0                             | 0                               | 0                      | 0.0      |           |                             |                      |
| Notes: RH201 could not be opened- skip over 8H position                                                                                                  |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |
| NR= Not recorded                                                                                                                                         |          |             |         |                                |                                 |                                 |                        |          |           |                             |                      |

GAS MONITORING RECORD SHEET



| JOB DETAILS |                             |           |                   |
|-------------|-----------------------------|-----------|-------------------|
| Site:       | Co-op Academy, Heckmondwike | Job No:   | 601124            |
| Date:       | 04/08/2025                  | Engineer: | PS                |
| Time:       |                             | Client:   | Bowmer & Kirkland |

| METEOROLOGICAL & SITE INFORMATION |      |                          |                         |                                     |          |                                     |          |                                     |  |
|-----------------------------------|------|--------------------------|-------------------------|-------------------------------------|----------|-------------------------------------|----------|-------------------------------------|--|
| State of ground:                  | Dry  | <input type="checkbox"/> | Moist                   | <input checked="" type="checkbox"/> | Wet      | <input type="checkbox"/>            |          |                                     |  |
| Wind:                             | Calm | <input type="checkbox"/> | Light                   | <input type="checkbox"/>            | Moderate | <input type="checkbox"/>            | Strong   | <input checked="" type="checkbox"/> |  |
| Cloud cover:                      | None | <input type="checkbox"/> | Slight                  | <input type="checkbox"/>            | Cloudy   | <input checked="" type="checkbox"/> | Overcast | <input type="checkbox"/>            |  |
| Precipitation:                    | None | <input type="checkbox"/> | Slight                  | <input checked="" type="checkbox"/> | Moderate | <input type="checkbox"/>            | Heavy    | <input type="checkbox"/>            |  |
| Barometric pressure (mb):         | 992  |                          | Local pressure system*: | Rapid Falling                       |          | Air temperature (°C):               |          | 20                                  |  |

| Well No.        | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm) | PID<br>(ppm) | Depth to<br>Groundwater<br>(mbgl) | Depth to base<br>(mbgl) |
|-----------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|------------------------|----------|--------------|-----------------------------------|-------------------------|
| RH205<br>(HEXA) | 0        | 0.0         | 991     | 19.4                              | 0.2                                | 0.0                                | 0                      | 0        | 0.0          | 10.55                             | 19.20                   |
|                 | 15       | 0.0         | 991     | 19.2                              | 0.4                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 991     | 20.2                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
| RH206<br>(HEXA) | 0        | 0.0         | 991     | 20.2                              | 0.1                                | 0.0                                | 0                      | 0        | 0.0          | 17.00                             | 23.20                   |
|                 | 15       | 0.0         | 991     | 10.4                              | 4.0                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 991     | 11.8                              | 4.1                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 991     | 12.2                              | 3.9                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 991     | 12.3                              | 4.5                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 991     | 11.2                              | 4.5                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 991     | 11.1                              | 4.5                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 991     | 10.9                              | 4.6                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 991     | 10.1                              | 4.9                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 991     | 7.5                               | 5.3                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 991     | 6.4                               | 6.9                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|                 | 0        |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 15       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 30       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 45       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 60       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 90       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 120      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 150      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 180      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 240      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 300      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 0        |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 15       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 30       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 45       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 60       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 90       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 120      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 150      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 180      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 240      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|                 | 300      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |

|                  |
|------------------|
| Notes:           |
| NR= Not recorded |

## GAS MONITORING RECORD SHEET

HEXA

## JOB DETAILS

|       |                             |           |                   |
|-------|-----------------------------|-----------|-------------------|
| Site: | Co-op Academy, Heckmondwike | Job No:   | 601124            |
| Date: | 09/07/2025                  | Engineer: | PS                |
| Time: | 16:00                       | Client:   | Bowmer & Kirkland |

## METEOROLOGICAL &amp; SITE INFORMATION

|                           |      |                                     |                         |                          |          |                          |          |                          |
|---------------------------|------|-------------------------------------|-------------------------|--------------------------|----------|--------------------------|----------|--------------------------|
| State of ground:          | Dry  | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/> | Wet      | <input type="checkbox"/> |          |                          |
| Wind:                     | Calm | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/> | Moderate | <input type="checkbox"/> | Strong   | <input type="checkbox"/> |
| Cloud cover:              | None | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/> | Cloudy   | <input type="checkbox"/> | Overcast | <input type="checkbox"/> |
| Precipitation:            | None | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/> | Moderate | <input type="checkbox"/> | Heavy    | <input type="checkbox"/> |
| Barometric pressure (mb): | 1006 |                                     | Local pressure system*: | Rising                   |          | Air temperature (°C): 22 |          |                          |

| Well No.   | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air) | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm) | PID<br>(ppm) | Depth to<br>Groundwater<br>(mbgl) | Depth to base<br>(mbgl) |
|------------|----------|-------------|---------|-----------------------------------|------------------------------------|------------------------------------|------------------------|----------|--------------|-----------------------------------|-------------------------|
| RO1 (RSK)  | 0        | NR          | NR      | NR                                | NR                                 | NR                                 | NR                     | NR       | NR           | NR                                | NR                      |
|            | 15       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 30       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 45       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 60       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 90       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 120      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 150      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 180      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 240      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 300      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
| RO3 (RSK)  | 0        | NR          | NR      | NR                                | NR                                 | NR                                 | NR                     | NR       | NR           | NR                                | NR                      |
|            | 15       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 30       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 45       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 60       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 90       |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 120      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 150      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 180      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 240      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
|            | 300      |             |         |                                   |                                    |                                    |                        |          |              |                                   |                         |
| WS01 (RSK) | 0        | 0.0         | 1005.0  | 20.5                              | 0.1                                | 0.0                                | 0                      | 0        | 0.0          | Dry                               | 1.10                    |
|            | 15       | 0.0         | 1005    | 20.2                              | 1.6                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 30       | 0.0         | 1005    | 19.8                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 45       | 0.0         | 1005    | 19.8                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 60       | 0.0         | 1005    | 19.8                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 90       | 0.0         | 1005    | 19.8                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 120      | 0.0         | 1005    | 19.8                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 150      | 0.0         | 1005    | 19.8                              | 1.7                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 180      | 0.0         | 1005    | 19.8                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 240      | 0.0         | 1005    | 19.8                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 300      | 0.0         | 1005    | 19.8                              | 1.8                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
| WS02 (RSK) | 0        | 0.0         | 1005    | 19.0                              | 0.3                                | 0.0                                | 0                      | 0        | 0.0          | 2.20                              | 3.91                    |
|            | 15       | 0.0         | 1005    | 7.0                               | 4.2                                | 0.0                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 30       | 0.0         | 1005    | 1.4                               | 12.8                               | 0.1                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 45       | 0.0         | 1005    | 0.5                               | 13.3                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 60       | 0.0         | 1005    | 0.1                               | 13.6                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 90       | 0.0         | 1005    | 0.0                               | 13.8                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 120      | 0.0         | 1005    | 0.0                               | 13.9                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 150      | 0.0         | 1005    | 0.0                               | 13.9                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 180      | 0.0         | 1005    | 0.0                               | 13.9                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 240      | 0.0         | 1005    | 0.0                               | 13.9                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |
|            | 300      | 0.0         | 1005    | 0.0                               | 13.9                               | 0.2                                | 0                      | 0        | 0.0          |                                   |                         |

Notes: No Access to R01 (RSK) &amp; R03 (RSK)

NR= Not recorded

GAS MONITORING RECORD SHEET



|                                   |                             |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|-----------------------------------|-----------------------------|-------------------------------------|-------------------------|--------------------------------|---------------------------------|---------------------------------|------------------------|--------------------------|-------------------|-----------------------------|----------------------|
| JOB DETAILS                       |                             |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
| Site:                             | Co-op Academy, Heckmondwike |                                     |                         |                                |                                 |                                 |                        | Job No:                  | 601124            |                             |                      |
| Date:                             | 09/07/2025                  |                                     |                         |                                |                                 |                                 |                        | Engineer:                | PS                |                             |                      |
| Time:                             | 16:00                       |                                     |                         |                                |                                 |                                 |                        | Client:                  | Bowmer & Kirkland |                             |                      |
| METEOROLOGICAL & SITE INFORMATION |                             |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
| State of ground:                  | Dry                         | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/>       | Wet                             | <input type="checkbox"/>        |                        |                          |                   |                             |                      |
| Wind:                             | Calm                        | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/>       | Moderate                        | <input type="checkbox"/>        | Strong                 | <input type="checkbox"/> |                   |                             |                      |
| Cloud cover:                      | None                        | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/>       | Cloudy                          | <input type="checkbox"/>        | Overcast               | <input type="checkbox"/> |                   |                             |                      |
| Precipitation:                    | None                        | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/>       | Moderate                        | <input type="checkbox"/>        | Heavy                  | <input type="checkbox"/> |                   |                             |                      |
| Barometric pressure (mb):         | 1006                        |                                     | Local pressure system*: | Rising                         |                                 | Air temperature (°C):           | 22                     |                          |                   |                             |                      |
| Well No.                          | Time (s)                    | Flow (l/hr)                         | dA (PA)                 | O <sub>2</sub> (% vol. in air) | CO <sub>2</sub> (% vol. in air) | CH <sub>4</sub> (% vol. in air) | H <sub>2</sub> S (ppm) | CO (ppm)                 | PID (ppm)         | Depth to Groundwater (mbgl) | Depth to base (mbgl) |
| WS04 (RSK)                        | 0                           | 0.0                                 | 1005                    | 20.1                           | 0.0                             | 0.0                             | 0                      | 0                        | 0.0               | 1.50                        | 1.60                 |
|                                   | 15                          | 0.0                                 | 1005                    | 19.6                           | 2.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 30                          | 0.0                                 | 1005                    | 19.3                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 45                          | 0.0                                 | 1005                    | 19.3                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 60                          | 0.0                                 | 1005                    | 19.3                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 90                          | 0.0                                 | 1005                    | 19.2                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 120                         | 0.0                                 | 1005                    | 19.2                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 150                         | 0.0                                 | 1005                    | 19.2                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 180                         | 0.0                                 | 1005                    | 19.2                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 240                         | 0.0                                 | 1005                    | 19.2                           | 2.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
| 300                               | 0.0                         | 1005                                | 19.2                    | 2.4                            | 0.0                             | 0                               | 0                      | 0.0                      |                   |                             |                      |
| WS05 (RSK)                        | 0                           | NR                                  | NR                      | NR                             | NR                              | NR                              | NR                     | NR                       | NR                | NR                          | NR                   |
|                                   | 15                          |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 30                          |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 45                          |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 60                          |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 90                          |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 120                         |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 150                         |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 180                         |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
|                                   | 240                         |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
| 300                               |                             |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
| RH201 (HEXA)                      | 0                           | 0.0                                 | 1006                    | 20.6                           | 0.2                             | 0.0                             | 0                      | 0                        | 0.0               | 10.80                       | 15.70                |
|                                   | 15                          | 0.0                                 | 1006                    | 20.6                           | 0.3                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 30                          | 0.0                                 | 1006                    | 20.5                           | 0.3                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 45                          | 0.0                                 | 1006                    | 20.6                           | 0.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 60                          | 0.0                                 | 1006                    | 20.7                           | 0.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 90                          | 0.0                                 | 1006                    | 20.7                           | 0.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 120                         | 0.0                                 | 1006                    | 20.7                           | 0.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 150                         | 0.0                                 | 1006                    | 20.7                           | 0.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 180                         | 0.0                                 | 1006                    | 20.7                           | 0.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 240                         | 0.0                                 | 1006                    | 20.7                           | 0.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
| 300                               | 0.0                         | 1006                                | 20.7                    | 0.1                            | 0.0                             | 0                               | 0                      | 0.0                      |                   |                             |                      |
| RH203 (HEXA)                      | 0                           | 0.0                                 | 1005                    | 20.5                           | 0.1                             | 0.0                             | 0                      | 0                        | 0.0               | 4.00                        | 4.12                 |
|                                   | 15                          | 0.0                                 | 1005                    | 18.4                           | 3.4                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 30                          | 0.0                                 | 1005                    | 17.7                           | 4.0                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 45                          | 0.0                                 | 1005                    | 17.5                           | 4.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 60                          | 0.0                                 | 1005                    | 17.4                           | 4.1                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 90                          | 0.0                                 | 1005                    | 17.3                           | 4.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 120                         | 0.0                                 | 1005                    | 17.3                           | 4.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 150                         | 0.0                                 | 1005                    | 17.3                           | 4.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 180                         | 0.0                                 | 1005                    | 17.3                           | 4.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
|                                   | 240                         | 0.0                                 | 1005                    | 17.3                           | 4.2                             | 0.0                             | 0                      | 0                        | 0.0               |                             |                      |
| 300                               | 0.0                         | 1005                                | 17.3                    | 4.2                            | 0.0                             | 0                               | 0                      | 0.0                      |                   |                             |                      |
| Notes: No Access to WS05 (RSK)    |                             |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |
| NR= Not recorded                  |                             |                                     |                         |                                |                                 |                                 |                        |                          |                   |                             |                      |

GAS MONITORING RECORD SHEET



| JOB DETAILS |                             |           |                   |
|-------------|-----------------------------|-----------|-------------------|
| Site:       | Co-op Academy, Heckmondwike | Job No:   | 601124            |
| Date:       | 09/07/2025                  | Engineer: | PS                |
| Time:       | 16:00                       | Client:   | Bowmer & Kirkland |

| METEOROLOGICAL & SITE INFORMATION |      |                                     |                         |                          |          |                          |          |                          |  |
|-----------------------------------|------|-------------------------------------|-------------------------|--------------------------|----------|--------------------------|----------|--------------------------|--|
| State of ground:                  | Dry  | <input checked="" type="checkbox"/> | Moist                   | <input type="checkbox"/> | Wet      | <input type="checkbox"/> |          |                          |  |
| Wind:                             | Calm | <input checked="" type="checkbox"/> | Light                   | <input type="checkbox"/> | Moderate | <input type="checkbox"/> | Strong   | <input type="checkbox"/> |  |
| Cloud cover:                      | None | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/> | Cloudy   | <input type="checkbox"/> | Overcast | <input type="checkbox"/> |  |
| Precipitation:                    | None | <input checked="" type="checkbox"/> | Slight                  | <input type="checkbox"/> | Moderate | <input type="checkbox"/> | Heavy    | <input type="checkbox"/> |  |
| Barometric pressure (mb):         | 1006 |                                     | Local pressure system*: | Rising                   |          | Air temperature (°C): 22 |          |                          |  |

| Well No.        | Time (s) | Flow (l/hr) | dA (PA) | O <sub>2</sub><br>(% vol. in air)       | CO <sub>2</sub><br>(% vol. in air) | CH <sub>4</sub><br>(% vol. in air) | H2S (ppm) | CO (ppm) | PID<br>(ppm) | Depth to<br>Groundwater<br>(mbgl) | Depth to base<br>(mbgl) |
|-----------------|----------|-------------|---------|-----------------------------------------|------------------------------------|------------------------------------|-----------|----------|--------------|-----------------------------------|-------------------------|
| RH205<br>(HEXA) | 0        | 0.0         | 1004    | 17.7                                    | 0.3                                | 0.0                                | 0         | 0        | 0.0          | 12.20                             | 19.00                   |
|                 | 15       | 0.0         | 1004    | 19.1                                    | 0.4                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1004    | Stopped due to water in monitoring tube |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      | 0.0         | 1004    |                                         |                                    |                                    |           |          |              |                                   |                         |
| RH206<br>(HEXA) | 0        | 0.0         | 1005    | 19.1                                    | 0.1                                | 0.0                                | 0         | 0        | 0.0          | 17.00                             | 23.10                   |
|                 | 15       | 0.0         | 1005    | 20.8                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 30       | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 45       | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 60       | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 90       | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 120      | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 150      | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 180      | 0.0         | 1005    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 240      | 0.0         | 1004    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 300      | 0.0         | 1004    | 20.9                                    | 0.0                                | 0.0                                | 0         | 0        | 0.0          |                                   |                         |
|                 | 0        |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 15       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 30       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 0        |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 15       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 30       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 45       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 60       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 90       |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 120      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 150      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 180      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 240      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |
|                 | 300      |             |         |                                         |                                    |                                    |           |          |              |                                   |                         |

|                  |
|------------------|
| Notes:           |
| NR= Not recorded |

## Appendix G – Strategy for Unexpected Contamination

Based on the findings of the Phase 2 Ground Investigation, the likelihood of unexpected contamination existing on site is considered to be low. The following example of what would be considered unexpected contamination in soils are provided:

|                         |                                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Odours                  | Fuels (petrol/diesel odours)<br>Solvent odours<br>Decaying or strong organic odours                                              |
| Colouration             | Marked colour differences to those described in Section 5 particularly blue, green or purple colouration of the soils            |
| Staining                | Chemical or iridescent sheens on soils or perched water                                                                          |
| Anthropogenic materials | Landfill type material/ household waste<br>Bulk potential ACM material (e.g., cement sheets, insulating boards, fibrous bundles) |

Although considered unlikely the following procedure is to be complied with in the event that material is revealed on site of a nature that does not accord with the previously observed and recorded descriptions (Section 5):

- Cease and make safe all excavations in this location and report observations to the Site Manager.
- The Site Manager is to notify the Engineer.
- Under guidance of the Engineer take representative samples of the suspect materials and forward to a suitably accredited laboratory for analysis.
- Engineer to inform Local Authority and if relevant the Environment Agency.
- Await Engineers instructions with respect to re-commencement of the works and or removal from of suspect material to a suitably licensed disposal facility.
- Removal of material will be verified through appropriate testing and photographic evidence.