

FORMER CLUN PRIMARY SCHOOL, CLYNE, NEATH, SA11 4BW

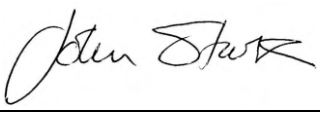
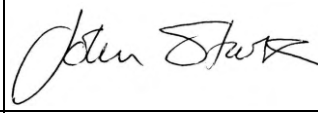
Verification Report

Report No. Q0320-12/VR

May 2025

DOCUMENT CONTROL

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1.0 INTRODUCTION

1.1 Development Proposals & Background

Sterling UK Construction have developed the site of the former Clun Primary School, Clyne, Neath, on behalf of their client Mr. Jim Slater, for residential purposes under Planning Application reference P2018/0301.

The layout of the site is presented in the designers Engineering Site Plan included in Appendix 1 at a reduced size for ease of presentation. A copy of the pre-construction topographic plan of the site is also presented in Appendix 2 for reference.

The development plan shows that the site will be predominantly covered by structures, driveways and hard surfacing. Areas of grassed gardens are located south-east of Plots 1 to 15, at an elevated level atop the retaining wall: and to the north-west of Plots 18 to 26, as shown in the annotated plan included in Appendix 1 based on the Engineers drawing No.19787/04.

Two ground investigation reports have been prepared for the development by Terra Firma (Wales) Ltd:

1. Geotechnical & Geoenvironmental Site Investigation Report: Proposed Residential Development at Former Clyne Primary School, Clyne. ReportNo.14242, August 2017. *NB. Abbreviated to 'TF1' for purpose of this Verification Report.*
2. Additional Geoenvironmental Investigation: Former Clyne Primary School, Clyne, Neath. Report Ref. 14242/Geoenvironmental, December 2020. *NB. Abbreviated to 'TF2' for purpose of this Verification Report.*

Report 'TF1' was carried out on the available site area prior to demolition of the former school buildings. Report 'TF2' was carried out post-demolition of the former buildings, with investigation in areas previously unavailable. In the interests of brevity, copies of these reports can be viewed on the Neath Port Talbot County Borough Council Planning Portal. Where relevant sections of these reports are re-presented in this document.

1.2 Commission

Spencer Quantum Ltd (SQL) was commissioned by Sterling UK Construction Ltd (SUKCL) review the ground investigation data and collate all information of mitigation and remediation measures that have been adopted as part of the development of the site by way of validation, to provide a Verification Report in support of the development.

A summary of the Terra Firma investigation conclusions and recommendations are presented in Section 2 herein, along with a discussion of their conclusions in the light of the actual development undertaken.

Whilst no formal Remediation Strategy Report is available for the development, the two Terra Firma reports presented remediation options which were acted upon by SUKCL during development of the site. The remediation requirements stated therein have therefore been adopted as the remediation and practicable mitigation measures required as feasible solutions for development of the site by SUKCL.

1.3 Objectives

In order to break pollutant linkages and thus eliminate the potential risk to future site residents, it is necessary to prevent harmful exposure to localised elevated levels of potential contaminants. Pollutant linkages can be broken by removal or treatment of the contaminant source, or by preventing the intake/uptake of contaminants by removing or blocking viable migration pathways.

The objective of this Verification Report is as follows:

- Summarise the identified areas of contamination on site and recommended remediation requirements
- Detail the mitigation measures incorporated into the construction and any remediation undertaken, to demonstrate the effectiveness of any measures
- Satisfy the requirements to discharge remaining Planning Conditions set by Neath Port Talbot County Borough Council for the proposed development

This report is written in line with the requirements stipulated in current Government advice in relation to Land Contamination Risk Management: <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm/lcrm-stage-3-remediation-and-verification>.

1.4 Limitations

The recommendations and opinions expressed in this report are based on the data contained in the two Terra Firma reports and site observations and from records during the construction phase.

Whilst every effort has been made to interpret the conditions between investigation locations, such information is only indicative and liability cannot be accepted for its accuracy. Information provided from other sources is taken in good faith and SQL cannot guarantee its accuracy.

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2.0 PREVIOUS INVESTIGATIONS AND RECOMMENDATIONS

2.1 Conceptual Site Model Summary of 'TF1' 2017 Report

Terra Firma (TF) conducted a ground investigation for the end client in 2017. That report addressed the risks to the site from potential contamination, as well as presenting advice on geotechnical matters.

The report included an illustrative Site Conceptual Model (as Figure 6.1 in TF1) as below.

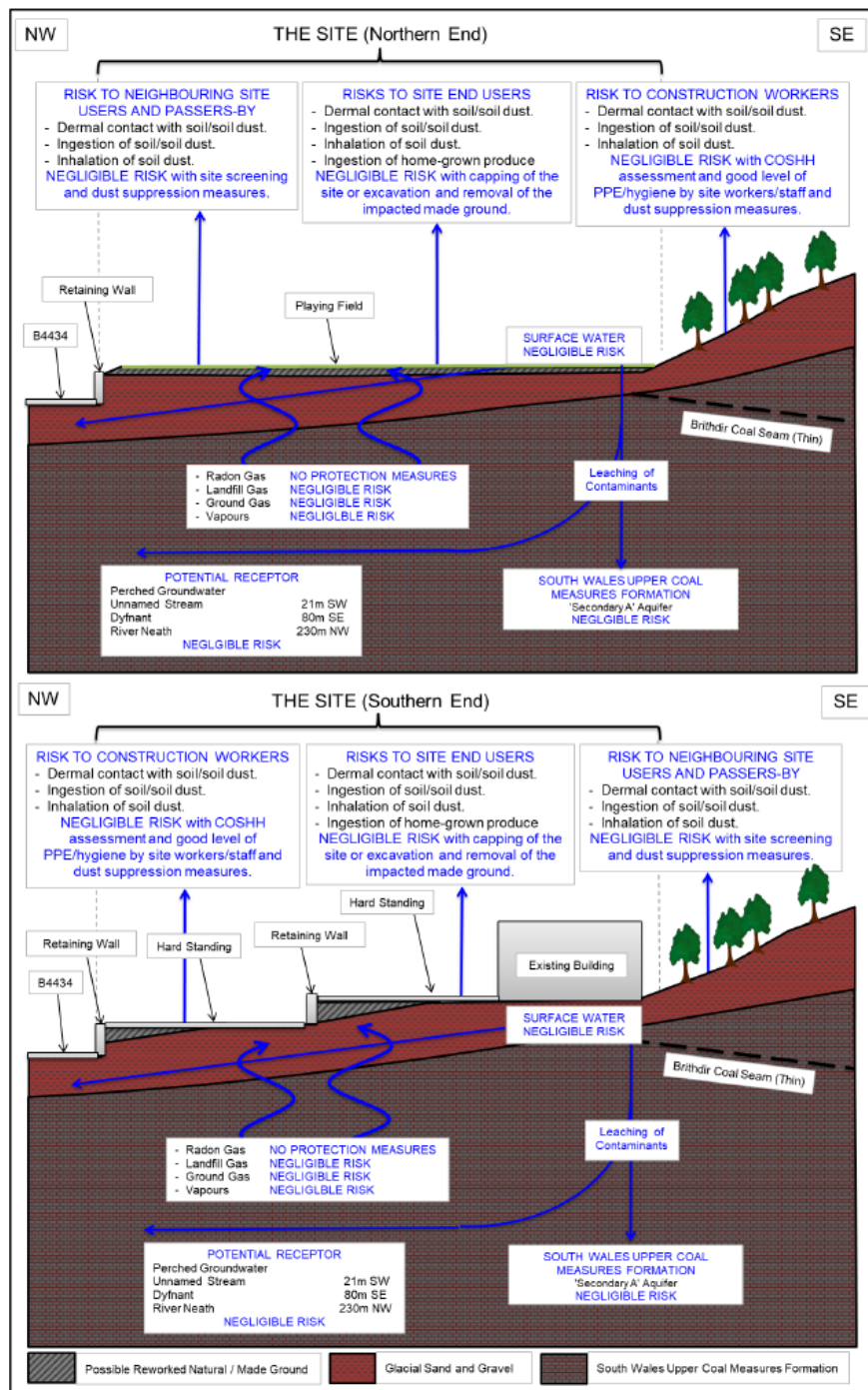


Figure 6.1: Refined Illustrative Site Conceptual Model (not to scale)

2.2 Summary Remedial & Mitigation Measures of 'TF1' 2017 Report

The conclusions drawn were:

Receptor	Assessed Risk / Mitigation
Northern Area	
Neighbouring Site Users & Passers-by	Negligible Risk with site screening and dust suppression measures
Site Users	Negligible Risk with capping of the site or excavation and removal of impacted made ground
Construction Workers	Negligible Risk with COSHH assessment and good level of PPE/hygiene and dust suppression measures
Surface Water	Negligible Risk
Groundwater/Streams/Rivers	Negligible Risk
Coal Measures	Negligible Risk
Southern Area	
Neighbouring Site Users & Passers-by	Negligible Risk with site screening and dust suppression measures
Site Users	Negligible Risk with capping of the site or excavation and removal of impacted made ground
Construction Workers	Negligible Risk with COSHH assessment and good level of PPE/hygiene and dust suppression measures
Surface Water	Negligible Risk
Groundwater/Streams/Rivers	Negligible Risk
Coal Measures	Negligible Risk

In addition to this, the report stated the following in respect of Human Health Risk:

"At present it is not clear what the proposed levels of the final site are to be, and two remedial options are therefore presented.

If site levels are to remain close to the existing levels and where made ground remains after the site strip a capping system should be utilised. The capping system should comprise of the proposed buildings and roads. Under hard standings such as driveways, paths and patios 600mm of inert suitable granular material should be used. In garden and soft landscaped areas 600mm of suitable inert topsoil /subsoil material should be used. The capping layer under hard standings and in garden and landscaped area should be placed over a geotextile no dig barrier to prevent the mixing of soils.

At present the recommendations are made for the whole site however with additional testing on a suitable grid spacing it may be possible to reduce the areas which require capping.

Alternatively if levels are to be reduced the impacted made ground can be excavated and removed from site. Once removed from site and the underlying soils validated there will be no risk to site end users."

The scheme levels as designed incorporated the advice as regards site levels to facilitate the removal of any made ground to allow capping of 600mm in areas of landscaping or gardens.

2.3 Terra Firma 2020 Investigation (TF2)

In December 2020, Terra Firma were commissioned to carry out a supplementary investigation on the site in the area where buildings were present during the 2017 investigation.

The report's introduction stated:

“The original site investigation was undertaken while the school buildings were present on site. They have now been demolished and supplementary testing has therefore been undertaken to determine if contamination is present in these areas.”

A refined Conceptual Site Model was included in TF2 as Table 4.5 and is re-presented below.

Table 4.5 Refined Conceptual Site Model

Source	Pathway	Receptor
<i>Contaminated Soil</i>	<i>Dermal contact with made ground/dust</i>	<i>Human Health: Construction Workers Neighbouring Site Users Site End Users (Residents and Visitors)</i>
	<i>Ingestion of soil and/or soil attached to home-grown produce</i>	
	<i>Ingestion of home grown produce</i>	
<i>Contaminated Soils</i>	<i>Inhalation of dust</i>	<i>Site End Users (Residents and Visitors)</i>
	<i>Inhalation of Volatiles (Naphthalene)</i>	

2.4 Summary Remedial & Mitigation Measures of ‘TF2’ 2020 Report

The following risk assessment and remedial options were presented following identification of an elevated concentration of the PAH, Naphthalene, at one location:

“To protect site end users from the previously identified contamination the site will need to be capped. The capping system should comprise of the proposed buildings and roads. Under hard standings such as driveways, paths and patios 600mm of inert suitable granular material should be used. In garden and soft landscaped areas 600mm of suitable inert topsoil/subsoil material should be used. The capping layer under hard standings and in garden and landscaped area should be placed over a geotextile no dig barrier to prevent the mixing of soils.

In addition to the capping as outlined in the Remediation Strategy and to protect future site users from volatile contamination, the impacted soils encountered in TP-A at 1.50m should be excavated and removed for off-site disposal.

Additional soils samples should then be taken and tested to confirm the contamination has been suitably removed. Once removed there is negligible risk to site end users from volatile contamination.”

3.0 REMEDIATION & MITIGATION

3.1 Remediation Works

The objectives for the remediation scheme at the site were as follows:

- Fulfil regulatory requirements in order to satisfy Planning Conditions.
- To ensure the site condition is suitable for the proposed future use, in this case to comprise residential housing.
- To highlight and thus ensure that any remediation works are addressed and then managed such that operational risks are controlled to protect 3rd parties and the wider environment.
- To highlight and ensure that post-remediation there are no residual unacceptable contaminated land risks associated with the site.

3.2 Remediation Options

The two phases of ground investigation works identified potential and actual pollutant linkages that can affect the development of the site.

These were limited to raised heavy metal contamination (as reported in TF1) and raised Naphthalene concentration at one location, in TF2.

The table below summarises the risks highlighted by the investigation works and details the mitigation adopted during construction of the works.

Remedial Actions Summary

Risk	Proposed Action / Mitigation / Strategy
Raised Arsenic concentrations in soils which could pose an unacceptable risk to human health.	The remedial option presented in TF1 to address this was: • Provide 600mm of suitable inert cover in gardens or landscaped areas • There is minimal suitable soil present on the site and all residential garden areas required 600mm capping of clean subsoil/topsoil with a separating marker membrane. • Site levels were designed to ensure that 600mm of cover was provided.
One hotspots of PAH contamination at a depth close to finished site level which could pose an unacceptable risk to human health.	The remedial options presented in TF2 to address this was: • The impacted soils encountered in TP-A at 1.50m should be excavated and removed for off-site disposal. • Additional soil samples should then be taken and tested to confirm the contamination has been suitable removed.

4.0 VALIDATION AND VERIFICATION

4.1 General

Site records have been reviewed and verified by Spencer Quantum to demonstrate that the Remediation Criteria highlighted in Section 3 herein has been achieved as appropriate. Dialogue has also been undertaken with the site management to provide confidence that correct procedures have been followed throughout.

4.2 Provision of Suitable Soil Cover

The design premise of the development of the site was for the reduced level of the site accommodate the requirement for 600mm of clean imported soil cover to the site in gardens or soft landscaped areas, that would then provide adequate remediation for the strategy given in the two Terra Firma reports.

The scheme drawings with pre-development and post development levels are presented in Appendix 2. These are included at a reduced scale for ease of reporting/presentation. These demonstrate the difference in original ground level and developed ground level.

Two series of photographs taken during development are presented in Appendix 3.

A series of site photographs showing the reduced level excavation situation. A second series of photographs show the capping cover in various stages of placement, with the separating membrane in place.

Also within Appendix 3 are a series of test results certificates validating the quality of imported materials to site.

These are:

1. Certificate of compliance of imported 6F5 capping (CJA Laboratory)
2. Certificates of compliance for Aggregate; Type 1 / 6F4 (Tarmac Quarry)
3. Topsoil Certificate

The records include in Appendix 3 demonstrate the adequacy and suitability of the earthworks preparation and validation of the remediation carried out to satisfactorily protect the site end users from any potential contaminants of concern.

4.3 Remediation of Hotspot

In order to satisfactorily carry out the necessary remediation of the PAH hotspot (at TP-A identified in Report TF2) Sterling UK Construction initially delineated the area of the hotspot, as shown in the following site photograph.



The area of impacted contaminated soil was transported by a licenced waste transfer contractor from site. Copies of the waste transfer note are included in Appendix 3.

The soil was transported and disposed of at a suitably licenced waste disposal site. A copy of the Waste Transfer Note showing successful disposal is presented in Appendix 3.

As required by the remediation strategy detailed in TF2, two soil samples were taken from the excavation sides in the in the impacted area. The soil samples were tested for the suite of PAH to determine concentrations particularly of Naphthalene. The test results certificates are presented in Appendix 4.

The test results show all concentrations of PAH's to be below detectable limits.

This demonstrates adequately that the impacted soils have been removed, thus severing any pollutant link between source and receptor.

5.0 REFERENCES

- WLGA/NRA, 2017. Development of land affected by contamination: a guide for developers.
- The Control of Asbestos Regulations, (CAR 2012).
- Joint Industry Working Group (JIWG) 'Industry Guidance on the Control of Asbestos Regulations 2012 - Interpretation for Managing and Working with Asbestos in Soil and Construction & Demolition Materials' (2016).
- Environment Agency (SEPA, WRW, NIEA) Guidance on the classification and assessment of waste (2015) Technical Guidance WM3.
- LQM, 2015, The LQM/CIEH S4UL for Human Health Risk Assessment, Land Quality Management.
- NHBC. Technical Extra. Issue 08. November 2012. Verification of Cover Systems – testing criteria for subsoil and topsoil. Guidance and Good Practice.
- BSI. BS3882:2015. Specification for topsoil and requirements for use. BSI, London.
- BSI. BS8601:2013. Specification for subsoil and requirements for use. BSI, London.
- CL:AIRE. 2011. Definition of Waste: Development Industry Code of Practice.
- HSE. 2015. The Construction (Design and Management) Regulations.
- Terra Firma Report 14242, 2017, Geotechnical & Geoenvironmental Site Investigation Report: Proposed Residential Development at Former Clyne Primary School, Clyne.
- Terra Firma Report 14242, 2020, Additional Geoenvironmental Investigation: Former Clyne Primary School, Clyne, Neath.

APPENDIX 1 – PROPOSED DEVELOPMENT LAYOUT

Reptilian and Amphibian mitigation measures:

(Full mitigation and site clearance measures are set out by I&G ecology and should be closely followed pre-construction)

- All potential refugia must be removed, and grassland reduced to ground level, prior to commencement of any demolition or ground works (including investigative bore holes). Reduction in ground level must be gradual and stepwise to encourage natural reptile dispersion from the site.
- Once removal of refugia and reduction of grassland is complete, and prior to construction works commencing, a suitably-qualified ecologist must visit the site in order to establish whether the mitigation was successful, and that no reptiles will be at risk from the subsequent construction works.
- If the ecologist is dissatisfied, further mitigation methods will be enforced before construction can commence. Such methods may include erection of temporary exclusion fencing and use of artificial refugia to clear the site of potential resident reptiles.
- Post construction enhancement measures for the site will include;
 - Creation of reptile and amphibian refugia and hibernacula (i.e log, rock, and turf pile).*
 - 2m buffer zone around the site of unmanaged grasslands and suitable amphibian and reptile refugia and hibernacula.*

CONSTRUCTION CLIENTS HAVE LEGAL DUTIES UNDER THE CDM REGULATIONS 2015. PLEASE CHECK YOUR DUTIES ON THE HSE WEBSITE OR CONSULT A COMPETENT HEALTH & SAFETY PROFESSIONAL.

TIMBER FRAMES POSE AN ADDITIONAL FIRE RISK UNTIL THE PANELS ARE COMPLETE & PROTECTED BY INTERNAL FIRE RESISTANT PLASTERBOARD & EXTERNAL CLADDING. CONTRACTORS / PRINCIPAL CONTRACTORS SHOULD ENSURE THEIR CONSTRUCTION PHASE PLAN INCLUDES MEASURES TO CONTROL THE ADDITIONAL FIRE RISKS TO THEIR WORKERS & TO OTHERS, INCLUDING NEIGHBOURING PROPERTIES, DURING THE CONSTRUCTION PHASE.

Regulation 14, Section 42 of the Flood & Water Management Act 2010 - Transfer of private sewer and lateral drainage to Welsh Water - Scheme proposals may be subject to Welsh Water agreements / legislation, it is the responsibility of the client/contractor to ensure Welsh Water are consulted prior to commencement of works.

Further information is available at www.dwrwmru.com or mbsfaq@dwrcymru.com

The components of the automatic fire suppression system should be in accordance with BS 9252: 2011 or an equivalent technical standard.

Confirmation of consultation with Dwr Cymru/Welsh Water to be provided confirming:

b) Where town mains are to be used restrictions such as water meters shall not reduce the pressure and flow available below the performance specification detailed in the relevant technical standard.

DR
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*Proposed development at:
Former Clun Primary
School,
Clyne,
Neath.*

Original paper size - A1

SCALE : 1:250

PLAN No <i>1470-01</i>	REVISION <i>F</i>
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DO NOT USE FOR CONVEYANCING PURPOSES

House types,

Type 1 = 2 Bed semi-detached - 79m².

Type 2 = 2 Bed detached - 91m².

Type 3 = 2 Bed semi-detached - 73m².

Type 4 = 2 Bed detached bungalow- 80m².

Type 5 = 2 Bed semi-detached bungalow- 80m².

26no. Total units.

DO NOT SCALE



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WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALING.

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KEY

- tp - CURVE TANGENT POINT
- DK - DROP KERBS TO FRONT & BACK FOOTPATH KERBLINES
- DKT - DROP KERB CROSSING POINT WITH 6 WHOLE TACTILE PAVING SLABS TO EACH SIDE OF ROAD - TO BE MARSHALLS TACTILE BLISTER PAVING 400x400x65mm DP BUFF COLOURED OR SIMILAR APPROVED Laid ON 25mm DP CLASS 1 MORTAR (PAVING IN LIEU OF BASE AND WEARING COURSE TO FOOTPATH AREA) CROSSING POINT TO HAVE FLUSH BULLNOSED KERBS MAXIMUM STEP TO CARRIAGEWAY 6mm
- - FOUL WATER SEWER
- - SURFACE WATER SEWER
- - PUMPED RISING MAIN
- F1 - FOUL WATER MANHOLE AND REFERENCE
- S1 - SURFACE WATER MANHOLE AND REFERENCE
- YG - PLASTIC CONCRETE ENCASED YARD GULLY
- G - PLASTIC CONCRETE ENCASED ROAD GULLY
- L1 - LAND DRAINAGE MANHOLE AND REFERENCE
- - LAND DRAINAGE CARRIER PIPELINE
- - PERFORATED LAND DRAINAGE PIPELINE
- SL - STREET LIGHTING COLUMN
- SP - STREET LIGHTING FEED PILLAR
- SE - STREET LIGHTING EARTH ROD AND PIT
- AC - STREET LIGHTING DUCT ACCESS CHAMBER

REV	DESCRIPTION	DATE	BY	CHECKED	DATE
E	UPDATED ARCHITECTURAL LAYOUT INSERTED LAND DRAINAGE PROPOSALS REVISED	17/08/17	PWJL	RSC	17/08/17
D	UPDATED ARCHITECTURAL LAYOUT INSERTED TRAFFIC CALMING FEATURE NOTED	11/08/17	PWJL	RSC	11/08/17
C	TREE PROTECTION NOTE ADDED	09/03/17	PWJL	RSC	09/03/17
B	JUNCTION VISIBILITY SPREAD INCREASED FOR 30 mph SPEED LIMIT REINSTATEMENT ALLOWANCE	16/01/17	PWJL	RSC	16/01/17
A	PLOTS 9 TO 14 REAR GARDEN RETAINING WALL REVISED	20/11/17	PWJL	RSC	20/11/17

DRAWING STATUS: **PLANNING**

Roger Casey Associates
Consulting Civil & Structural Engineers

CLIENT: **Mr J SLATER**

ARCHITECTURAL CONSULTANT: **DR DESIGN LLANDEILO**

PROJECT: **RESIDENTIAL DEVELOPMENT AT FORMER CLUN PRIMARY SCHOOL, CLYNE, NEATH SA11 4BW**

DRAWING TITLE: **ENGINEERING SITE PLAN (LEVELS)**

FILE NAME: Slater, Clun Primary School, Clyne.dwg
DATE RECEIVED: 22/03/2019
INSERTED BY: PWJL

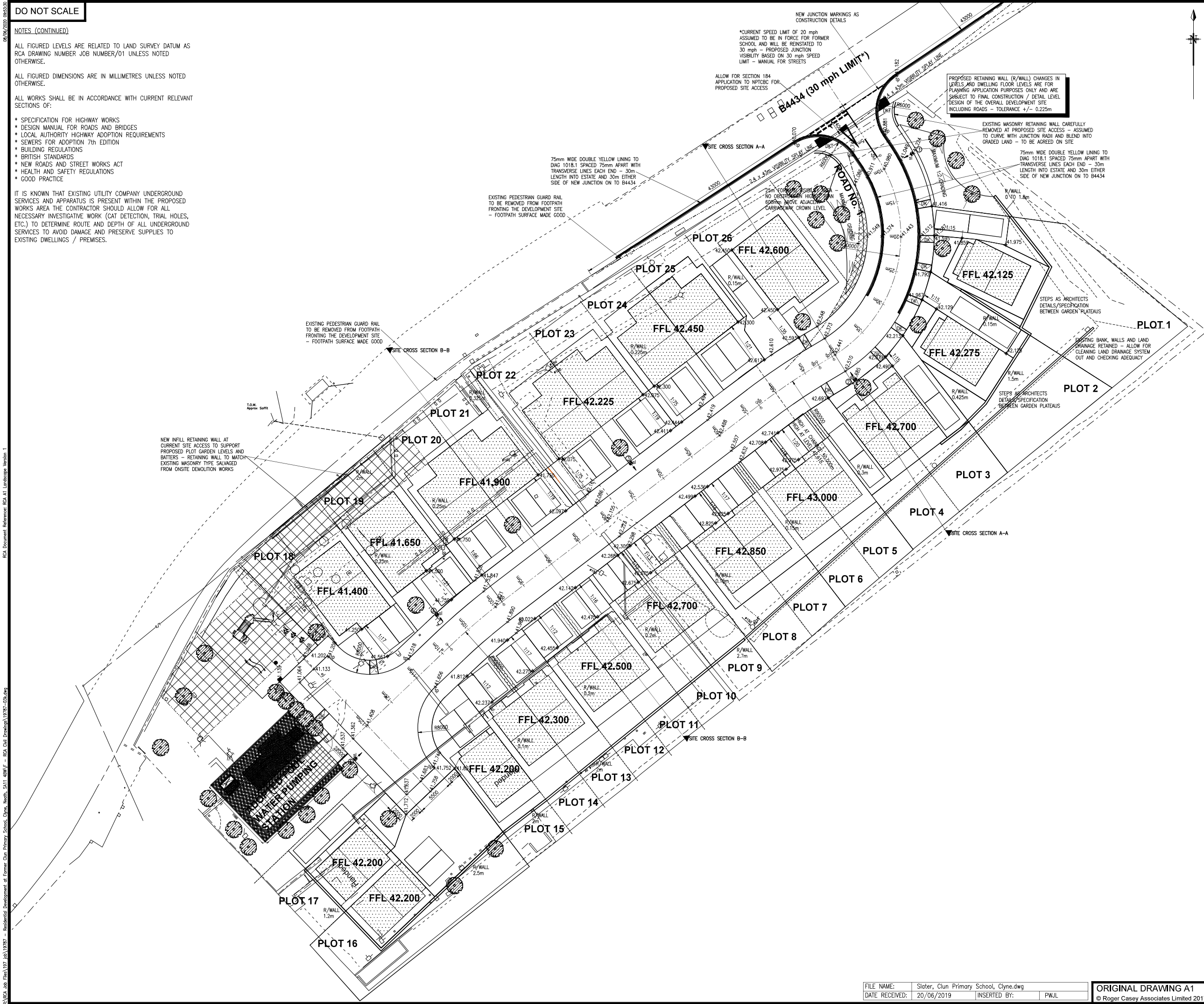
ORIGINAL DRAWING A1
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SCALES: 1:250
DRAWING NO: 19787/04
REVISION: E

DATE: 17/08/17

APPENDIX 2 – ENGINEERING DRAWINGS

IT IS KNOWN THAT EXISTING UTILITY COMPANY UNDERGROUND SERVICES AND APPARATUS IS PRESENT WITHIN THE PROPOSED WORKS AREA THE CONTRACTOR SHOULD ALLOW FOR ALL NECESSARY INVESTIGATIVE WORK (CAT DETECTION, TRIAL HOLES, ETC.) TO DETERMINE ROUTE AND DEPTH OF ALL UNDERGROUND SERVICES TO AVOID DAMAGE AND PRESERVE SUPPLIES TO EXISTING DWELLINGS / PREMISES.



CLIENT:			
Mr J SLATER			
ARCHITECTURAL CONSULTANT:			
DR DESIGN LLANDEILO			
PROJECT:			
RESIDENTIAL DEVELOPMENT AT FORMER CLUN PRIMARY SCHOOL, CLYNE, NEATH SA11 4BW			
DRAWING TITLE:			
ENGINEERING SITE PLAN (LEVELS)			
DRAWN BY:	DESIGN BY:	CHECKED BY:	DATE:
PWJL	PWJL	RSC	17/08/17
SCALE:	DRAWING NO.:	REVISION:	
1:250	19787/04	K	

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RCA Document Reference: RCA A1 Landscape Version 1
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DO NOT SCALE



MIKE WILLIAMS SURVEYS
LAND ENGINEERING SURVEYORS
Rainbow Business Centre
Phoenix Way
Enterprise Park
Swansea SA7 8EH
Tel: 07859 203085

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LINE TYPES

Buildings
Kerbs, Walls
Fences
Top of banks
Bottom of banks
Hedges
Overhead Wires
Surface Change



AV - Air Valve
B - Ballast
BB - Ballast Beacon
BH - Bore Hole
BL - Basement Level
BM - Site Bench Mark
BT - British Telecom
B/W - Barbed Wire Fence
CB - Cell Box
CL - Cover Level
C/B - Closed Board Fence
C/T - Corrugated Fence

DP - Down Pipe
DK - Drop Kerb
EL - Eave Level
EP - Electricity Pole
ER - Earthing Rod
FJ - Fire Hydrant
FL - Floor Level
FM - Flag Pole
G - 12-
GV - Gas Valve
IC - Inspection Cover

ABBREVIATIONS

IL - Insert Level
IR - Iron Railings
JB - Junction Box
KB - Kerb Outlet
LB - Letter Box
LP - Lamp Post
M - Mile Post
OSM - Ordnance Survey
p - Post
PS - Paving
P/R - Post/Rail Fence

P/W - Post/Wire Fence
RE - Road Eye
RS - Ridge Level
S/W - Siding Wall
SC - Stop Cock
SL - Step Level
SP - Sign Post
SV - Stop Valve
TAC - Tarmac Paving
T1 - Tril Hole
T.M. - Top of Wall

TP - Telegraph Pole
TS - Traffic Signal
TV - Cable Television
UP - Vent Pipe
WL - Water Level
WM - Water Meter
WS - Water Station
P - Pipe Diameter(m)

NOTES
1. Survey Site Shows is Referenced to Ordnance Datum (AOD) by means of a Bench Mark (BM) located at the site.
2. North arrow indicates OS Grid North.
3. All levels are given in metres above sea level.
4. The site is situated at the junction of the A114 and the A115.
5. The site is situated at the junction of the A114 and the A115.
6. The site is situated at the junction of the A114 and the A115.

CLIENT

Mr J. Slater
49 Bryn Eglwys Gardens
Newton
Porthcawl
CF36 5PR

SHEET DIAGRAM

SCALE: 1:250 at A1
JOB No. J1605A
DRAWING No. J1605A/250A1/1-2
DRAWN: RSL
CHECKED: MW
APPROVED: MW
DATE: Oct 2017

**CLYNE PRIMARY SCHOOL,
CLYNE, NEATH.**
Topographic Survey

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B	EXISTING DRAINAGE INFORMATION ADDED	PWJL	RSC	20/09/18
A	SECTION A-A & B-B LINES ADDED	PWJL	RSC	15/02/18
REV	DESCRIPTION	DRAWN	CHECK	DATE

DRAWING STATUS:
SURVEY



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Mr J SLATER

ARCHITECTURAL CONSULTANT:

DR DESIGN
LLANDEILO

PROJECT:

RESIDENTIAL DEVELOPMENT AT
FORMER CLUN PRIMARY SCHOOL,
CLYNE, NEATH SA11 4BW

DRAWING TITLE:

EXISTING SITE SURVEY PLAN

DRAWN BY: PWJL	DESIGN BY: -	CHECKED BY: RSC	DATE: 17/08/17
SCALES: 1:300	DRAWING No. 19787/01	REVISION: B	

ORIGINAL DRAWING A1
© Roger Casey Associates Limited 2017

APPENDIX 3 – SITE RECORDS/PHOTOGRAPHS

Record Photographs of Reduced Level Dig







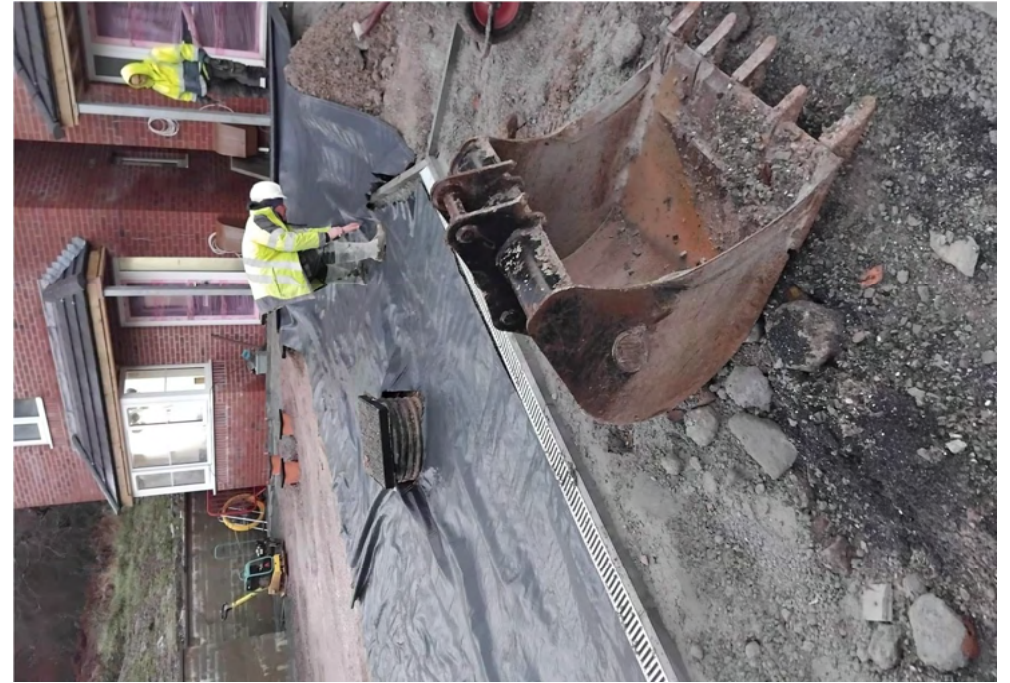


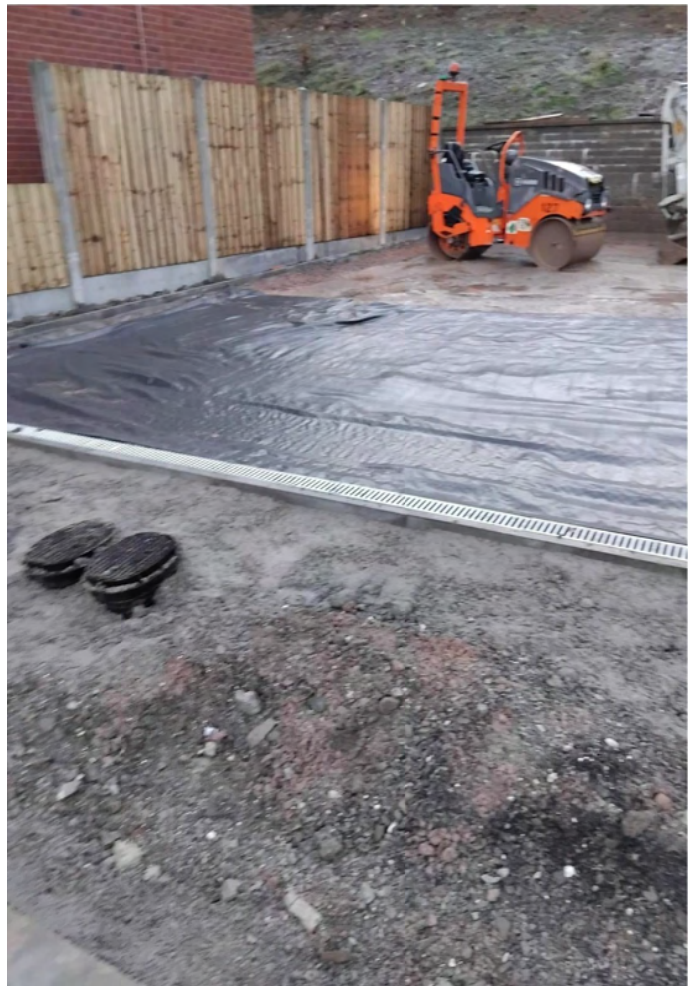
Record Photographs of Cover/Capping

















Record Certificates of Imported Fill

Laboratory Test Certificate

Site Pyle
Client Shillibiers Ltd

CJAssociates

F.A.O. Leyton Shillibier
Address 43 Village Farm Industrial Estate
Pyle
Bridgend
CF33 6NU

Order Number Leyton
Job Number 2440183
Lab Number L15340

Number of samples submitted for testing:	_____	1	sample (s)
--	-------	---	------------

Aggregate PSD to show compliance with 6F5	_____	1	per test
Asbestos Screen	_____	1	per test

Results apply to the sample(s) as received.

* Non UKAS accredited test

Date (s) sample (s) received at laboratory:	_____	15	Nov-24
Date of receipt of testing instructions	_____	15	Nov-24
Date testing started:	_____	18	Nov-24
Date of issue:	_____	26	Nov-24

Please note that we will keep the sample (s) for one month after submission of our report and will then dispose of them without notice unless you ask us to store them. We will then make a separate charge for this.



Approved by :
Lisa Maiden

L Maiden

1429

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TEST REPORT
WATER CONTENT AND PARTICLE SIZE DISTRIBUTION
BS EN 1097-5:2008 & BS EN 933-1:2012

Project No.:	2440183	Client:	Shillibiers
Project Name:	Pyle	Address:	43 Village Farm Rd, Village Farm Industrial Estate, Pyle, Bridgend CF33 6BN
Sample No.:	10873		

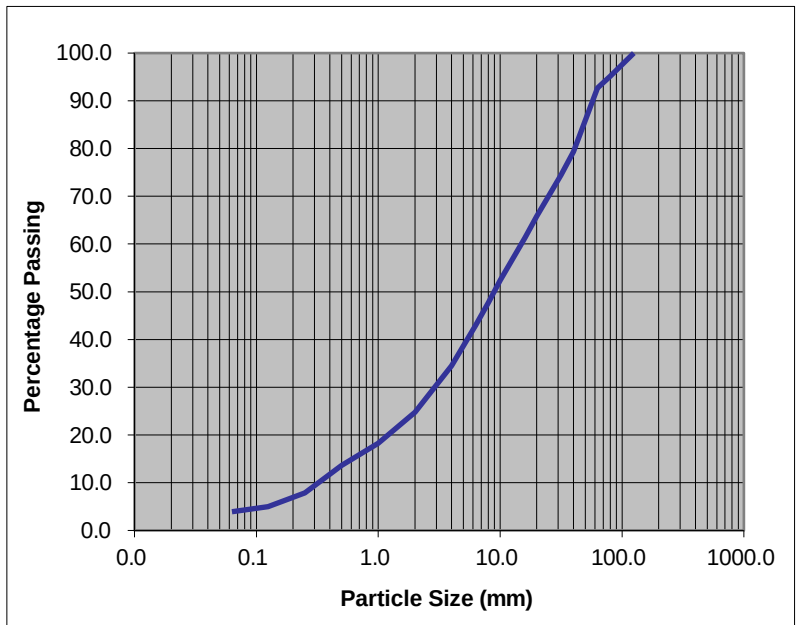
Site Reference:	6F5	Sample Type:	Bulk
Location in works:	Unknown	Material Description:	Multicoloured slightly silty very sandy GRAVEL with low cobble content
Date Sampled:	Unknown	Material Source:	Unknown
Sampled By:	Client	Material Supplier:	Unknown
Sampling Certificate	No	Specification:	SHW Series 600
Received:			
Date Received:	15 November 2024	Date Tested:	26 November 2024

TEST RESULTS

Particle Size (mm)	Percentage Passing	Specification
125.0	100	100
80.0	95	75 - 99
63.0	93	
40.0	79	50 - 90
31.5	74	
20.0	66	30 - 75
16.0	61	
10.0	52	15 - 60
8.0	48	
6.3	43	
4.0	34	
2.0	25	0 - 35
1.0	18	
0.5	14	
0.250	8	
0.125	5	
0.063	3.9	0 - 12

Water Content (%)	9.0	* Non UKAS Accredited Test
-------------------	-----	----------------------------

Dry mass of sample, kg	67.8
Method of Analysis	Washing & Sieving



Remarks: Material complies with 6F5 grading requirements.

N.B. Testing is carried out in accordance with documented British Standard so measurement of uncertainty has not been applied to the statement of conformity

QA Ref.	CJAssociates	Approver	Date	Fig.
EN 933-1 Rev. 3.0	Unit 3, Block 6 Newlands Ave, Brackla Industrial Estate, Bridgend, CF31 2DA. Tel: 01656 657710	<i>R. Anstee</i>	26/11/2024	
		R Anstee, Materials and Field Testing Director		

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/12501
Issue Number: 1

Date: 19 November, 2024

Client: CJ Associates (Bridgend)
Unit 1-3, Block 6, Newlands Avenue
Brackla Industrial Estate
Bridgend
Mid Glamorgan
CF31 2DA

Project Manager: Admin/Lisa Maiden
Project Name: Pyle
Project Ref: 2440183 (L15340-S8906)
Order No: N/A
Date Samples Received: 18/11/24
Date Instructions Received: 18/11/24
Date Analysis Completed: 19/11/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/12501

Client Project Name: Pyle

Client Project Ref: 2440183 (L15340-S8906)

Lab Sample ID	24/12501/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	6F5									
Depth to Top										
Depth To Bottom										
Date Sampled	15-Nov-24									
Sample Type	Soil - ES									
Sample Matrix Code	4AB									
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD									A-T-045
Asbestos Matrix (visual) ₀	-									A-T-045
Asbestos Matrix (microscope) ₀	-									A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ₀	N/A									A-T-045

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4924 email. ask@envlab.co.uk

Client: CJ Associates (Bridgend), Unit 1-3, Block 6, Newlands Avenue, Brackla
Industrial Estate, Bridgend, Mid Glamorgan, CF31 2DA

Project: Pyle

Clients Project No: 2440183 (L15340-S8906)

Project No: 24/12501

Date Received: 18/11/2024 (am)

Cool Box Temperatures (°C): 11.6

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/12501/1
Client Sample No	
Client Sample ID/Depth	6F5
Date Sampled	15/11/24
A-T-045	19/11/2024

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

AGGREGATE PROPERTIES DATA SHEET

Unit :-	Cornelly Quarry
Address :-	Hoel Y Splott Road
	Cornelly
	Bridgend, Mid Glamorgan
	CF33 4RD
Tel :-	



South West & South Wales Region
Stancombe Lane
Flax Bourton
Bristol, BS48 3QD
Tel: 01275 464441
Type of deposit / Rock Type
Carboniferous Limestone
Aggregate Colour :- Light Grey

				Type 1 / 6F4 / 6N / 6i	0/40 UltiFlow X / Type 1X / 6A	6F5 / 0/80mm Crusher Run / 1A
Los Angeles Coefficient	fromType 1 test data	EN 1097-2	LA	36		
Micro-Deval		EN 1097-1	MDe	23		n/a
Magnesium Sulphate Soundness Value		EN 1367-2	MSSV	18		n/a
Total Sulfur Content	CI 601 (16 & 17): ≤1%	EN 1744-1 Cl. 11	S %	<0.1	<0.1	<0.1
Water Soluble Sulfate	CI 601 (16 & 17): ≤1500 mg/L (cementitious) or ≤300 mg/L (metallic) 6i ≤300 mg/L (Galv) or ≤600 mg/L (St Steel) SHW 600 TAB 6/3	BS EN 1744 - 1 Cl. 10	SO3 %	<0.01	<0.01	<0.01
			SO4 %	<0.01	<0.01	<0.01
			SO4 mg/L	4	10	10
Apparent Particle Density		BS EN 1097-6	Mg/m³	2.75	2.75	n/a
S. S. D. Density		BS EN 1097-6	Mg/m³	2.70	2.72	n/a
Oven Dry Density (Pp)		BS EN 1097-6	Mg/m³	2.68	2.70	n/a
Water Absorption		BS EN 1097-6	WA24 %	1.0	0.7	n/a
Plasticity Index		EN 1377-2: 1990 Clause 5.3	Plastic or Non Plastic?	NON-PLASTIC	NON-PLASTIC	n/a
Optimum Moisture Content (included in Frost Heave)		BS 812 pt 124: 2009 - Annex B	%	5.0	n/a	n/a
Maximum Dry Density (included in Frost Heave)			Mg/m³	2.28	n/a	n/a
Frost Heave			15 or < = Non-Frost Susceptible	NON-FROST SUSCEPTIBLE	n/a	n/a
pH Value	6i: 5 - 10 (SHW 600 Tab 6/3)	BS EN 1377: Part 3	pH	8.9	n/a	8.9
Effective Angle of Internal Friction		SHW Volume 1 Series 600; Clause 636 & BS 1377: Pt 7: 1990	Angle of Friction°	49	n/a	42
Effective Cohesion		SHW Volume 1 Series 600; Clause 636 & BS 1377: Pt 7: 1990	kPa	37	n/a	13
Bulk Density - Loose (Pb)		BS EN 1097-3	Mg/m³	1.38	1.50	n/a
Bulk Density - Compacted (Pb)		BS EN 1097-3	Mg/m³	1.61	1.80	n/a
Voids - Loose	$V = \frac{(Pp - Pb)}{Pp} \times 100$	Calculated from LBD (Pb) & Oven Dry Density (Pp); EN 1097-3	%	49	44	n/a
Voids - Compacted	$V = \frac{(Pp - Pb)}{Pp} \times 100$	Calculated from LBD (Pb) & Oven Dry Density (Pp); EN 1097-3	%	40	33	n/a
Organic Content of Soil	6i: ≤0.2% SHW 600 TAB 6/3	BS 1377: pt 3: 1990 Clause 3	%	0.2	n/a	n/a
Microbial Activity Index	6i: <5 SHW 600 TAB 6/3	TRRL Contractor Report 54	Active or Inactive?	3 - INACTIVE	n/a	3 - INACTIVE
Redox Potential	6i: ≥0.40 Volts (Galv) or ≥0.35 Volts (St Steel) SHW 600 TAB 6/3	BS 1377-3	mV (div. 1000 = V)	540 (0.54)	n/a	n/a
			pH value of Soil Suspension	4.1	n/a	n/a
Electrical Resistivity	6i: ≥5000 Ω cm (Galv) or ≥3000 Ω cm (St Steel) SHW 600 TAB 6/3	BS 1377: pt 3: Clause 10: Sub-Clause 4	Initial Resistivity Ω m (x100 = cm)	140 (14,000)	n/a	n/a
			Saturated Resistivity Ω m (x100 = cm)	140 (14,000)	n/a	n/a
Moisture Condition Value		BS 1377-4	MCV	14.5	n/a	16.8
			MC %	6.4	n/a	6.0
Horizontal Permeability		Dtp HA 41/90	m/sec	1.194 x 10 ⁻²	6.4 x 10 ⁻²	n/a
Acid Soluble Sulfate		BS EN 1744-1 Cl. 12	SO3 %	<0.1	n/a	0.1
			SO4 %	<0.1	n/a	0.1
Acid Soluble Sulfide	6i: ≤0.06% SO ₄ (Galv) or ≤0.12% SO ₄ (St Steel) SHW 600 TAB 6/3	BS EN 1744-1 Cl. 13	S %	0.04	n/a	n/a
			SO4 %	0.11	n/a	n/a
Determination of Oxidisable Sulfides		Calculated from BSEN 1744-1 2009 + A1 2012 Cl. 11 & Cl. 12	SO4 %	0.10	n/a	n/a
Undrained Shear Strength in Triaxial Compression		BS 1377-7	Shear Strength kPa	658	n/a	n/a
Water Soluble Chloride (ION) Content	6i: ≤0.02% (Galv) or ≤0.025% (St Steel) SHW 600 TAB 6/3	BS EN 1744-1 (Volthard Method)	SO4 %	0.001	n/a	n/a
		BS 1377-3 Cl. 9.2	Chloride ION %	<0.01		
			Chloride ION PPM	<100		
Sulfate Content (Gravimetric Method)		BS 1377-3 Cl. 7.6.5.2	% Passing 2mm Sieve	96		
			WSS SO4 mg/L	7		
			WSS SO4 PPM	7		
Optimum Moisture Content		BS EN 13285 Cl. 5.3	%	5.0	n/a	5.0
Maximum Dry Density			Mg/m³	2.28	n/a	2.2
CBR - Dry - Top		BS EN 1377-4	%	n/a	91	n/a
CBR - Dry - Bottom			%	n/a	110	n/a
Total Sulfur Content (TRL)		BS 1377: ICP-AES Method 17 (TRL report 447 Test # 4)	%	0.03	n/a	0.001
Total Potential Sulfur (TRL)			SO ₄ %	0.1	n/a	0.003
Acid Soluble Sulfur (TRL)		BS 1377: ICP-AES Method 4 (TRL report 447 Test # 2)	SO ₄ %	<0.01	n/a	<0.01
Water Soluble Sulfide (TRL)		ICP-AES Method 2 (TRL report 447 Method # 1)	SO ₄ mg/L	5.86	n/a	2.54
Oxidisable Sulfides (TRL)		TRL report 447 Test # 2 & Test # 4	SO ₄ %	0.012	n/a	0.022

Approved UKAS Laboratories	All tests carried out by UKAS approved Laboratories	For Tarmac Quarry Materials
Test Houses Accreditation No. 0989		Kevin Cox
Celtest Accreditation No. 0494		Technical Systems Manager
Corus Accreditation No. 2007		07872 672913

The above data is provided in good faith as a guide to typical values and does not constitute a specification. The company reserves the right to revise the data at any time. Individual certification available on request..	VALIDATION PERIOD
	April 2024 - March 2025

Material Type: Limestone
 Product: TYPE 1 SUB-BASE CL803.
 Material Code: 110A801

Quarry: CORNELLY QUARRY
 Site: all
 Size/Specs: 0/63 Type 1 evaluated against SHW 803

8 samples from 08/07/24 to 28/08/24 starting with sample no. 1

Seq. No.	Sample No.	Sample date	Percentage Passing Sieves (mm)																	Retained on d/D (mm)		Moisture %	Flakiness FI	Complies
			80	63	40	31.5	20	16	14	10	8	6.3	4	2	1	0.5	0.25	0.125	0.063	4/8	8/16			
1	73	28/08/24		100	100	96	72	62	58	46	39	33	23	17	13	10	8	7	5.6	16	23	3.2		yes
2	72	20/08/24		100	100	99	77	66	58	43	37	31	23	17	13	11	9	7	6.2	14	29	2.1		yes
3	70	13/08/24		100	100	99	76	58	50	34	28	23	17	12	9	8	6	5	4.4	11	30	1.3		yes
4	68	05/08/24		100	100	96	79	69	60	48	39	29	22	16	11	9	8	8	7.4	17	30	0.6		yes
5	67	29/07/24		100	100	98	76	63	57	43	38	32	24	17	13	10	8	7	6.1	14	25	1.1		yes
6	65	22/07/24		100	100	96	81	62	55	43	35	27	17	12	9	7	6	5	4.5	18	27	1.7		yes
7	62	16/07/24		100	100	98	70	52	47	37	33	29	24	19	15	13	10	9	7.4	9	19	2.7		yes
8	61	08/07/24		100	98	97	85	73	66	55	46	36	25	18	13	11	9	8	6.6	21	27	2.9		yes
Target				100	99	97	73	63	58	44	38	31	22	17	13	10	8	7	6.0					
Specified min				100		75		48			23		12	6	3				0.0	7	7			
Specified max				100		99		78			53		37	30	23				9.0	30	30			
Average				100.0	99.8	97.4	77.0	63.1	56.4	43.6	36.9	30.0	21.9	16.0	12.0	9.9	8.0	7.0	6.0	15	26	1.9		
Standard Deviation					0.7	1.3	4.8	6.5	5.9	6.5	5.2	4.0	3.1	2.6	2.1	1.9	1.4	1.4	1.2	4	4	0.9		
Minimum Value				100	98	96	70	52	47	34	28	23	17	12	9	7	6	5	4.4	9	19	0.6		
Maximum Value				100	100	99	85	73	66	55	46	36	25	19	15	13	10	9	7.4	21	30	3.2		

Freeland Horticulture Ltd
Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Attention: Philippa Lambourne

Our Ref: 1336-SA

1 November 2024

Dear Philippa

Topsoil Analysis Report: Forest Wood, Cardiff Topsoil – October 2024

We have completed the analysis of the topsoil sample recently taken from the above site and it has been forwarded to an approved laboratory for analysis and have the pleasure of reporting our findings. The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes and its compliance with the current British Standard for topsoil (BS3882).

SOIL SAMPLING & EXAMINATION

At the time of our sampling visit the topsoil was stored in a stockpile. A series of 10 hand augered trial holes were constructed across the stockpile for the purpose of soil examination and sample collection. As the soil examination confirmed a consistent topsoil composition, the ten samples were combined together to form one composite sample for analysis purposes. The soil was described as dark brown, slightly moist and friable with a well-developed, fine to medium granular structure. The soil contained a low fraction of small stones and no deleterious materials (eg. building waste materials, glass, roots or rhizomes of pernicious weeds) or unusual odours (eg. hydrocarbons) were recorded.

LABORATORY ANALYSIS

The topsoil sample was submitted to a UKAS and MCERTS accredited laboratory for routine physical and chemical parameters to confirm the composition and fertility of the soil. The following parameters were determined:

- ⊕ pH & electrical conductivity values;
- ⊕ major plant nutrients (N, P, K, Mg) & organic matter content;
- ⊕ particle size distribution and stone content;
- ⊕ heavy metals & potentially toxic elements (As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn, B);
- ⊕ sulphate, sulphur, sulphide;
- ⊕ total cyanide and total (mono) phenols;
- ⊕ speciated PAHs (US EPA16)
- ⊕ banded aromatic and aliphatic petroleum hydrocarbons (C₅-C₃₅).
- ⊕ Asbestos

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

Phone: 01322 619161

COMMENTS

pH & Electrical Conductivity (salinity) Values

The sample was alkaline in nature (pH 8.5) with a pH value that would be considered suitable for general landscaping purposes.

The electrical conductivity (salinity) value using the soil:water extract was (1178 μ S/cm) indicating that soluble salts are not present at levels that would be harmful to plants.

The electrical conductivity values by CaSO₄ extract (BS3882 requirement) fell below the maximum specified value (3300 μ S/cm) given in BS3882:2015.

Organic Matter & Nutrient Status

The sample was rich in organic matter and all major plant nutrients. No further additions of compost or fertiliser are required, or indeed recommended, for at least the first growing season.

The C:N ratio of the sample was acceptable for general landscape purposes.

Particle Size Distribution & Stone Content

The sample contained 72% sand and fell into the sandy loam texture class. This particle size distribution is considered suitable for a broad range of landscape applications, including tree and shrub planting, turfing and seeding.

The sample was Virtually free from stones of 50 mm and upwards in diameter and only contained a slight fraction of smaller stones (0.0%). As such, stones will not restrict the use of the soil for landscaping purposes.

Potential Contaminants

We are not aware of any specified contaminant levels set for the proposed end-use of this topsoil. This includes human health, environmental protection and metals considered toxic to plants. In the absence of any site-specific assessment criteria, the concentrations that affect human health have been compared with the 'residential with homegrown produce' land use in the Suitable For Use Levels presented in 'The LQM/CIEH S4UIs' for Human Health Risk Assessment (2015) and DEFRA SP1010: 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document (2014)'.
Freeland 01322619161

Of the potential contaminants determined, none was found at levels that would exceed their respective guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil for general landscaping purposes. From the soil examination and laboratory analysis, the soil is described as an alkaline, non-saline, sandy loam. The organic matter and nutrient levels are acceptable, and no significant contamination was found with respect to the parameters determined. This soil would adhere to the current BS3882 specification for 'multipurpose grade'.

To conclude, based on our findings, the topsoil would be considered well-suited to general landscaping purposes provided the physical condition of the soil is maintained.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if you have any queries or comments.

George Longmuir MSc Soil Sci. M.I Soil Sci.

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Forest Wood, Cardiff
Month/Year	October 24
Our Ref	1336-SA
Date	01 November 2024

pH Value & Salinity

pH value (1:2.5 soil/water ext)	units
Electrical Conductivity (1:2.5 soil/water ext)	µS/cm
Electrical Conductivity (1:2.5 soil/CaSO ₄ ext)	µS/cm

Composite sample

8.5
1178
3148

Organic Matter & Nutrient Status

Organic Matter (LOI)	%
Organic Carbon (Derived)	%
Total Nitrogen	%
Carbon:Nitrogen Ratio	:1
Available Phosphorus	mg/l
Available Potassium	mg/l
Available Magnesium	mg/l

7.1
4.1
0.252
16.4
59.2
1414
213

Particle Size Analysis & Stones

Clay (<0.002mm)	%
Silt (0.063-0.002mm)	%
Sand (2.0-0.063mm)	%
Texture Class	UK Class

11
17
72
SandyLoam

Stones 2-20mm	% by DW
Stones 20-50mm	% by DW
Stones >50mm	% by DW

27.0
6.0
3.0

Potential Contaminants

Total Arsenic (As)	mg/kg	10.2
Total Cadmium (Cd)	mg/kg	0.36
Total Chromium (Cr)	mg/kg	88.0
Hexavalent Chromium (Cr ^{VI})	mg/kg	0.4
Total Copper (Cu)	mg/kg	17.7
Total Lead (Pb)	mg/kg	20.0
Total Mercury (Hg)	mg/kg	<0.2
Total Nickel (Ni)	mg/kg	69.1
Total Selenium (Se)	mg/kg	0.12
Total Zinc (Zn)	mg/kg	118
Total Beryllium (Be)	mg/kg	<1
Total Barium (Ba)	mg/kg	64.1
Total Vanadium (V)	mg/kg	13.7
Hot Water Soluble Boron (B)	mg/kg	1.6
Total Cyanide (CN)	mg/kg	<1
Elemental Sulphur (S)	mg/kg	<5
Easily Liberated Sulphide (S ⁻²)	mg/kg	1.0
Water Soluble Sulphate (SO ₄ ²⁻)	mg/l	136
Total Phenols (mex)	mg/kg	<1
Asbestos Screen	-	N.D.

Chain of Custody requires a Freeland Ticket: 01322 619161

Client	Freeland Horticulture Ltd
Job Name	Topsoil Analysis
Site	Forest Wood, Cardiff
Month/Year	October 24
Our Ref	1336-SA
Date	01 November 2024

Polyaromatic Hydrocarbons

Naphthalene	mg/kg	0.1
Acenaphthylene	mg/kg	<0.05
Acenaphthene	mg/kg	<0.05
Fluorene	mg/kg	<0.05
Phenanthrene	mg/kg	0.2
Anthracene	mg/kg	<0.05
Fluoranthene	mg/kg	0.1
Pyrene	mg/kg	<0.1
Benzofluoranthene	mg/kg	<0.1
Chrysene	mg/kg	0.1
Benzokfluoranthene	mg/kg	<0.1
Benzokfluoranthene	mg/kg	<0.1
Benzofluoranthene	mg/kg	<0.1
Indeno[1,2,3-cd]pyrene	mg/kg	<0.1
Dibenzofluoranthene	mg/kg	<0.1
Benzofluoranthene	mg/kg	<0.1
Total PAHs sum US EPA 16	mg/kg	<1

Banded Petroleum Hydrocarbons

Aliphatic TPH >C ₆ -C ₈	mg/kg	<0.05
Aliphatic TPH >C ₈ -C ₁₀	mg/kg	0.12
Aliphatic TPH >C ₁₀ -C ₁₂	mg/kg	<0.05
Aliphatic TPH >C ₁₂ -C ₁₆	mg/kg	<10
Aliphatic TPH >C ₁₆ -C ₂₁	mg/kg	<10
Aliphatic TPH >C ₂₁ -C ₃₅	mg/kg	60.0
Aliphatic TPH >C ₃₅ -C ₄₄	mg/kg	16.0

Aromatic TPH >C ₅ -C ₇	mg/kg	<0.05
Aromatic TPH >C ₇ -C ₈	mg/kg	<0.05
Aromatic TPH >C ₈ -C ₁₀	mg/kg	<0.05
Aromatic TPH >C ₁₀ -C ₁₂	mg/kg	<10
Aromatic TPH >C ₁₂ -C ₁₆	mg/kg	<10
Aromatic TPH >C ₁₆ -C ₂₁	mg/kg	<10
Aromatic TPH >C ₂₁ -C ₃₅	mg/kg	160
Aromatic TPH >C ₃₅ -C ₄₄	mg/kg	32.0

Total Petroleum Hydrocarbons (mg/kg)	mg/kg	298
--------------------------------------	-------	-----

BTEX

Benzene	mg/kg	<0.02
Toluene	mg/kg	<0.2
Ethyl Benzene	mg/kg	<0.04
m- & p- Xylene	mg/kg	<0.2
o-Xylene	mg/kg	<0.1

APPENDIX 4 – SITE RECORDS OF HOTSPOT REMEDIATION

Duty of Care Waste Transfer Note

JOHN JONES & SON LTD

HAULAGE CONTRACTORS

Tycroes Farm, Llandello Road, Gorslas, Nr. Llanelli, Carmarthenshire SA14 7LW
Tel: 01269 845106 Fax: 01269 832855 Mobile: 07836 375174

WASTE CARRIER - John Jones & Son Ltd

Tycroes Farm, Llandello Road, Gorslas, Llanelli, Carmarthenshire SA14 7LW
Waste Carrier's Reg. No: CBDU13021

WASTE PRODUCER - Name of Company:

Address: STERLING

FIRST TRANSFER POINT (Address where waste is generated) -

CLYNE PRIMARY SCHOOL

TIPPING DESTINATION - Name of Site:

Address: NEAL SOILS CARDIFF

Tip organised by customer? ☐ Y ☒ N

DESCRIPTION OF WASTE - (Material carried loose)

Waste Code	Waste Description	Quantity
17-05-04	Construction of Buildings	41-20
17-01-07	Road Construction & Repair	42-11
17-01-01	Excavation	45-11
17-03-02	Foundations (Construction)	45-25
Other: <u>Non Hazardous Soil</u>		

TRANSFER OF WASTE - By signing below I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England & Wales) Regulations 2011.

Date: 25.1.24 Multiple Transfer From _____ To _____

Name & Company: _____ Signature: _____

Name & Company: _____ Signature: _____

Name & Company: _____ Signature: _____

JOHN JONES & SON LTD

HAULAGE CONTRACTORS

Waste Carrier No. CBDU13021
Tycroes Farm, Llandello Road, Gorslas, Nr. Llanelli, Carmarthenshire SA14 7LW
T: 01269 845106 F: 01269 832855 M: 07836 375174 / 07800 965058
E: info@haulage-plant-hire.co.uk

DELIVERY NOTE DUTY OF CARE TRANSFER NOTE

Nº. 72098

Date: 25.1.24

Driver: Robinson Reg. No. CJ23BJF

Customer: STERLING

Collect Site: CLYNE PRIMARY SCHOOL

Delivery Site: NEALS SOILS

TOP SOIL	TIME START
RECYCLED AGGREGATE	BREAK
OTHER	TIME FINISH
	TRAVELLING TIME
	TOTAL TIME

No. of Loads: 1x8 Material: NON HAZ SOIL/STONES

Signature: [Signature] Print Name: _____

Standing Time: _____

Waste Transfer Note

NEAL
SOIL SUPPLIERS LTD

Advice/Transfer Note/Waste Description
NEAL SOIL SUPPLIERS LIMITED
Neal Soil Suppliers Limited, Atlantic Ecopark,
Newton Road Rumney
Cardiff
CF3 2EJ
Site Licence : EPR/VP3095F5
Phone : 02920 797635
Web : WWW.NEAL-SOILS.CO.UK
SIC Code 2007 : 38110

VAT Reg No. : 661906106
Ticket No: 386387
In / Out: In
Ticket Date: 25/01/2024 14:45:48
Vehicle Reg: CU23BNF
Vehicle Type:
Haulier Name: OWN
Carrier Reg: CBDU
Container:
Account Addr: NS-JOHNJ
John Jones & Son Ltd
SPERLING
NE PRIMARY SCHOOL, CLYNE
SA114BW

2007):
Contact Name:
Contact Tel:
Order No:
Transfer No: 72098
Skip Ticket:
Area: Neath Port Talbot
Products : Unit Qty
NON-HAZARDOUS SOIL AND KG 16.1
STONE
17.05.04

	Weight	Seq. No.	Date	Time
Gross	29320		25/01/2024	14:45
Tare	13203		25/01/2024	14:45
Net	16120			

I confirm that I have fulfilled my duty to apply the
waste hierarchy as required by Regulation 12 of
the waste regulations 2011

Driver Name

Weightbridge Operator JohnH

APPENDIX C - Soil Sample Test completed by Decus Research Limited



Jac Cullen
Sterling Construction Ltd
Llys y Barcud
Heol Parc Mawr
Crosshands Business Park
Carmarthen

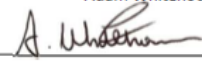
Decus Research Limited
ExCAL House
Capel Hendre Industrial Estate
Ammanford
Carmarthenshire
SA18 3SJ

Tel: 01269 844558
Fax: 01269 841867
Email: info@decusuk.co.uk

Certificate Number: 8025

Project/Site name:	Sterling Construction Ltd	Sampling Date(s):	18/07/2024
Quotation Number:	-	Samples Received:	18/07/2024
Order Number:		Date Instructed:	18/07/2024
Number of Samples:	2	Sampled By:	Client
Number of Tests:	1		
Sample Matrix:	Soil	Analysis Commenced:	18/07/2024
		Analysis Completed:	31/07/2024
		Report Issued:	31/07/2024

Amendment Records:
None

Approved by: Adam Whitehouse
Signature: 
Title: Laboratory Manager

Sample 1 of 2						
Laboratory Sample Number:		180724007				
Client Sample Reference:		Sample 01				
Deviation Codes:						
Sample Matrix:		Soil				
Specific Matrix:		Soil				
Sample Date & Time:		18/07/2024				
Sample Received:		18/07/2024				
Method Code	Determinand	Units	Accreditation Status	Testing Commenced	Testing Completed	Result
ORG-S02	Polycyclic Aromatic Hydrocarbon (Total)	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<2.0
ORG-S02	Naphthalene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Acenaphthylene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Acenaphthene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Fluorene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Phenanthrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Anthracene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Fluoranthene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Pyrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(a)anthracene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Chrysene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(b)fluoranthene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(e)pyrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Indeno(1,2,3-cd)pyrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(ghi)perylene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Dibenzo(ah)anthracene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10

Sample 2 of 2						
Laboratory Sample Number:		180724008				
Client Sample Reference:		Sample 02				
Deviation Codes:						
Sample Matrix:		Soil				
Specific Matrix:		Soil				
Sample Date & Time:		18/07/2024				
Sample Received:		18/07/2024				
Method Code	Determinand	Units	Accreditation Status	Testing Commenced	Testing Completed	Result
ORG-S02	Polycyclic Aromatic Hydrocarbon (Total)	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<2.0
ORG-S02	Naphthalene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Acenaphthylene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Acenaphthene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Fluorene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Phenanthrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Anthracene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Fluoranthene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Pyrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(a)anthracene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Chrysene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(b)fluoranthene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(e)pyrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Indeno(1,2,3-cd)pyrene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Benzo(ghi)perylene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10
ORG-S02	Dibenzo(ah)anthracene	µg.kg ⁻¹	N	18/07/2024	31/07/2024	<0.10

* Accreditation Status

Tests marked 'A' hold UKAS accreditation

Tests marked 'N' do not hold UKAS accreditation

Tests marked 'S - A' were sub-contracted to an approved laboratory with accreditation on the specific method

Tests marked 'S - N' were sub-contracted to an approved laboratory without accreditation on the specific method

Any comments or interpretations are beyond the scope of UKAS accreditation

Sample ID	Decus Sample ID	Deviation Codes	Summary
No Compliance Deviations for any samples have occurred			

Analytical Method	Method Code	Accreditation Status
Determination of PAHs in soilby GC-MS (In-house method)	ORG-502	None

Key and Comments:

Any comments or interpretations made by Decus Research Ltd are beyond the scope of UKAS accreditation.

Microbiological water samples will be disposed of upon completion of testing.

Chemistry water samples will be retained for a period of two weeks following the date of the issued certificate.

Chemistry soil samples will be retained for a period of one month following the date of the issued certificate.

All results only relate to the items tested as received.

This report supersedes any previous versions issued by the laboratory.

A full list of determinents relating to abbreviations such as PAHs, VOCs, SVOCs, PCBs etc. is available upon request.

Where results have been labelled as deviating for any reason, the data may not be representative of the sample at the point of sampling:

 /JA/: Date of Sampling not supplied, results may be compromised.

 /JB/: Sample tested outside the recommended stability times, results may be compromised.

 /JC/: Samples not received in appropriate containers, results may be compromised.

 /JD/: Broken Container, results may be compromised.

 /EE/: Transportation of storage temperature is outside the recommended range, results may be compromised.

 /FF/: Time of sample taken not recorded, microbiological results may be compromised.

 /JG/: High levels of non-target bacterial growth present which could have suppressed the growth of the target species.

 /JH/: Correct incubation conditions not achieved, results may be compromised.

 /JM/: High levels of non-target bacterial growth present which could have suppressed the growth of the target species.

 /TT/: Transportation storage temperature is outside the recommended range, results maybe compromised.

 /JG/: Insufficient Sample.

 /JU/S/: Unsuitable Sample.

< "Less Than"

> "Greater Than"

cfu "colony forming units"

Where any sub-contracted results have been noted as deviating by the laboratory in question, their deviation codes will be applied and detailed.

Accreditation statements are correct at the time of issue.

This report shall not be reproduced in part without the approval of Decus Research Ltd, nor used in any way as to lead to misrepresentation of the results or their implications.

Uncertainties of measurement values are available upon request.

***** END OF REPORT*****

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