

Prepared for
FCC ENVIRONMENT (UK) LIMITED



**CONSTRUCTION QUALITY ASSURANCE
2022 & 2023 SOILS BUTTRESS CONSTRUCTION WORKS
VALIDATION REPORT**

AT PWLLFAWATKIN LANDFILL SITE

CQA Validation Report Reference: WR7842/05/06
January 2024



**Project Quality Assurance
Information Sheet**

**CQA Validation Report 2022 & 2023 Soils Buttress Construction Works
PWLLFAWATKIN LANDFILL SITE**

**Report
Reference** : WR7842/05/06

Report Status : For Approval

Report Date : January 2024

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**PWLLFAWATKIN LANDFILL SITE
2022 & 2023 SOILS BUTTRESS CONSTRUCTION WORKS
CQA VALIDATION REPORT**

1. INTRODUCTION

- 1.1 FCC Environment (UK) Limited (FCC) have constructed the soils buttress at Pwllfawatkin Landfill Site , south of the Phase 4 sidewall.
- 1.2 The Soils Buttress Construction Works were carried out in accordance with the CQA Plan and Specification dated March 2022 prepared by Sirius, (Reference: CQA Plan and Specification WR7842/02).
- 1.3 The Principal Contractor was Jones Bros Ltd, who undertook the construction work between the 20th July 2022 and 7th July 2023. There was a break in the works due to inclement weather, the break was from 31st August 2022 to 29 June 2023.
- 1.4 The construction works incorporated the following elements:
 - (i) Removal of any unsuitable material
 - (ii) Preparation of the formation surface of the proposed soils buttress; and
 - (iii) Installation of engineered fill material to the required profile.
- 1.5 The Sirius Construction Quality Assurance (CQA) Engineers, Rob Sleeman and Stanley Ugohuckwu, provided the fulltime CQA supervision and quality assurance for the works throughout the duration of the construction period.
- 1.6 This CQA Validation Report represents a record of the site works undertaken during the installation of the soils buttress construction works at Pwllfawatkin Landfill Site and includes all in-situ and laboratory testing undertaken.

2. THE SITE

- 2.1 Pwllfawatkin Landfill Site is situated approximately 10km north of Swansea, West Glamorgan, at National Grid Reference **SN 698 089**.

3 PREPARATION OF FORMATION

- 3.1 The CQA Inspector ensured that any unsuitable or soft material was removed from the formation surface area.
- 3.2 The CQA Inspector completed hand shear vane, (HSV) measurements of the formation area and all were greater than the minimum requirement stated within the approved Engineering Specification document. HSV testing test results presented within **Appendix II**.

- 3.4 The CQA Inspector assessed the completed formation layer ensuring that it provided a firm foundation for the soil buttress installation and that it was free from standing water or areas of excessive moisture.

4. CONSTRUCTION OF SOILS BUTTRESS

- 4.1 The buttress material consisted of soil materials sourced from on-site stockpiles. The soil materials were inspected for any unsuitable materials.
- 4.2 Prior to the placement of the soil material the CQA Inspector inspected the subgrade for suitability; where any unsuitable areas were identified these were remediated to the satisfaction of the CQA Inspector.
- 4.3 The soils buttress construction works were undertaken by placing and compacting suitable material in a progressive manner. Successive strips of the buttress were then built up to final level.
- 4.4 Before placement of a subsequent layer, the CQA Inspector ensured the surface of the previous layer was suitably scarified as required to allow adequate interbonding between layers.
- 4.5 The soils buttress materials were classed as a 2A material, as detailed in section 5.3 below, and were placed in accordance with Volume 1 of the Specification for Highways Works (SHW) Section 612.
- 4.6 A Cat CS563 padfoot roller and a Hamm 311D were used as the compaction plant for the soils buttress material, 8 passes were completed. The specification for the rollers is presented in **Appendix III**.
- 4.7 The CQA Inspector ensured that all areas of non-compliance were removed in accordance with the Specification.

5 MONITORING, TESTING AND SAMPLING

- 5.1 Testing, and sampling were undertaken during the soils buttress construction period to check working procedures and to ensure compliance with the CQA Plan. Continuous monitoring ensured that the characteristics of the buttress material did not change.
- 5.2 A total 3,712m³ of material was used in the construction of the buttress.
- 5.3 4 Soils buttress Particle Size Distribution (PSD) samples were required Table 1 of the CQA Plan, 4 PSD samples were taken. The PSD results identify the material classification as a 2A.
- 5.3 Hand shear vane testing of the compacted soil buttress material gave results of between 54kPa and 85kPa. All the test results are greater than the specified minimum in-situ shear strength of 50kPa, and therefore were deemed acceptable. The hand shear vane measurements are presented in **Appendix III**.

6 SURVEYING

- 6.1. The CQA Inspector ensured that surveys were undertaken in accordance with the Specification to confirm that the requisite levels have been achieved.. The As-Built Drawings are presented within **Appendix I**.

7. PHOTOGRAPHIC AND DAILY RECORDS

- 7.1 As a visual record of the works, the CQA Inspector supervising the works kept an on-going photographic record. **Appendix V** constitutes a selection of photographs showing preparatory operations and capping system installation.
- 7.2 The CQA Inspector maintained daily records throughout the duration of the works. These daily records highlighted any problems encountered; solutions adopted and detailed the day-to-day site operations. The daily records are presented in **Appendix VI**.

8. CONCLUSIONS

- 8.1 The Soils Buttress Construction Works were carried out in accordance with the CQA Plan and Specification Documents dated March 2022 prepared by Sirius, (Reference: CQA Plan and Specification WR7842/02).

APPENDIX I
AS BUILT DRAWING





NOTES

ALL LEVELS—COORDINATES RELATE TO FCC PERMANENT SITE CONTROL STATIONS

LEGEND

Top of Batter

Bottom of Batter

+ 188.00 Spot Levels

FCC

Environment

FCC Environment (UK) Limited

Ground Floor West, 900 Pavilion Drive, Northampton Business Park, Northampton, NN4 7RG

JONES BROS

CIVIL ENGINEERING UK

Jones Bros Civil Engineering UK

Ty Clyn

Canol y Dre

Ruthin

Denbighshire LL15 1QA Email: mail@jones-bros.com Tel (01824) 703 661

Rev Description

Date

Initial

Client

FCC Environment

Site

Pwllfawatkin Landfill Site

Drawing

Top Of Buttress Survey 2022

Construction Works

Drawn By

GW

Date

27/09/22

Checked By

SR

Scale

1:1000 @ A2

Revision

Rev Checked By

Cad Plot Date

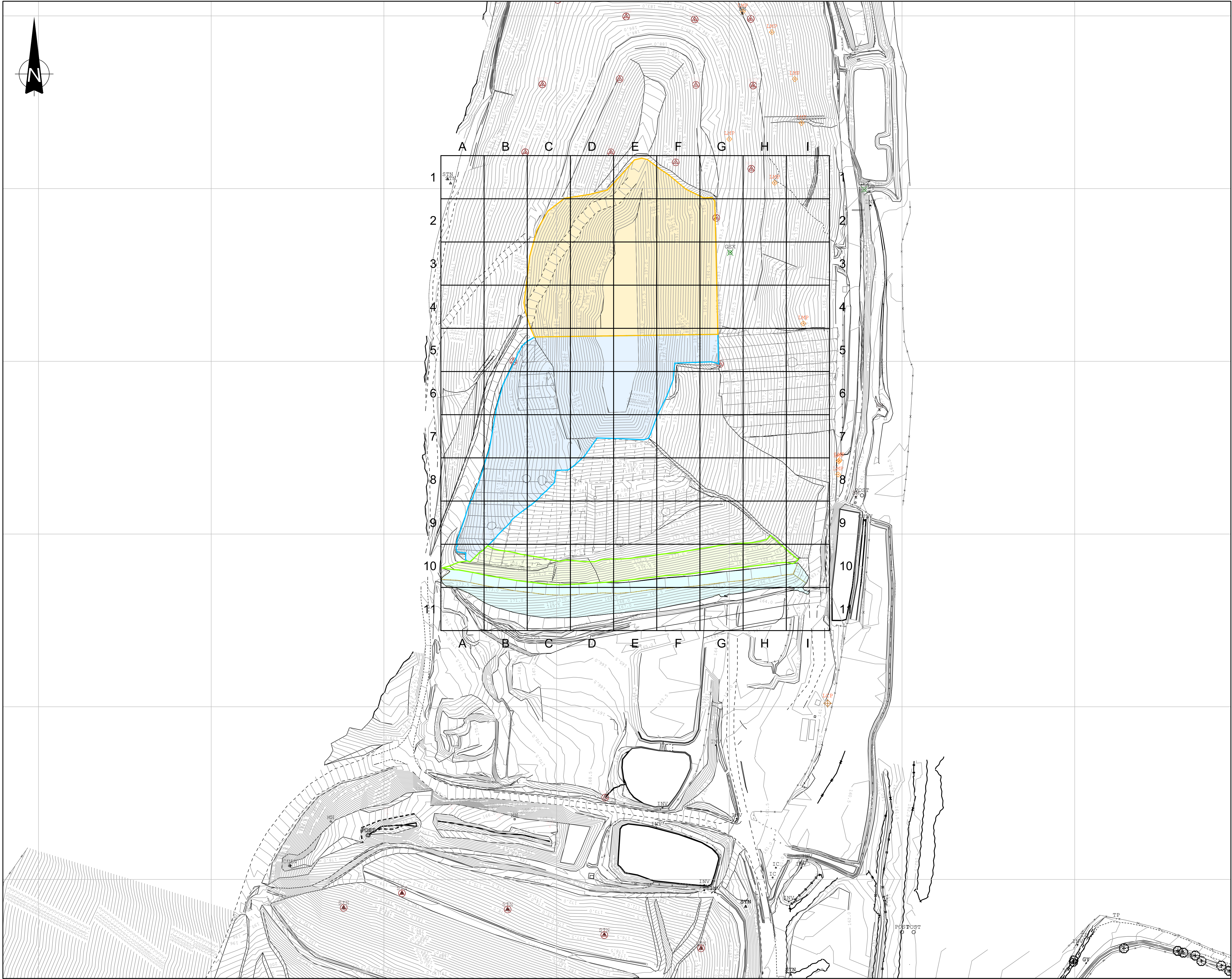
27/09/22

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APPENDIX II
FORMATION HAND SHEAR VANE RECORDS

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THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF SIRIUS. IT IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF SIRIUS.

- NOTES**
1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES ABOVE ORDNANCE DATUM.
 2. DO NOT SCALE FROM THIS DRAWING.
 3. ANY ANOMALIES IDENTIFIED WITH THE DETAILS SHOWN ON THIS DRAWING ARE TO BE BROUGHT TO THE ATTENTION OF SIRIUS ENVIRONMENTAL PRIOR TO CONSTRUCTION WORKS COMMENCING.
 4. THE CAPPING SYSTEM SHALL NOT BE PLACED ON ANY SLOPE STEPPER THAN 1(V):3(H).

- KEY**
- 18.5— SITE SURVEY
 - PROPOSED PERM CAPPING AREA (GDL, AND SOILS)
 - PROPOSED PERM CAPPING AREA PHASE 1 (LOWER GEOTEXTILE AND GEOMEMBRANE)
 - PROPOSED PERM CAPPING AREA PHASE 2 (LOWER GEOTEXTILE AND GEOMEMBRANE)
 - REMAINING SOILS BUTTRESS

1	PERM CAPPING AREA AMENDED	31.03.23	BY
REV	DESCRIPTION	DATE	BY

CLIENT



FCC Environment (UK) Limited
Ground Floor West, 900 Pavilion Drive, Northampton Business Park, Northampton, NN4 7HG



4245 Park Approach, Thorpe Park, Leeds. LS15 8GB. 0113 264 9960

JOB TITLE

PWLLFAWATKIN LFS
2022 Capping Works

DRAWING TITLE

25m Testing Grid

DRAWN	DATE	APPROVED	DATE
M.C	15/07/2022	A.K	15/07/2022
SCALE	SHEET	DRAWING NUMBER	REVISION
1:500	A1L	WR7957/01/04	1

CS-563D CP-563D

Vibratory Soil
Compactors



Cat® 3116T Turbo-charged Diesel Engine

Gross Power	114 kW	153 hp
Compaction Width	2134 mm	84"

Operating Weight

CS-563D	10 875 kg	23,975 lb
CP-563D	11 275 kg	24,856 lb

Centrifugal Force

High	266 kN	60,000 lb
Low	133 kN	30,000 lb

Reliability, Serviceability and Comfort in a Durable Package

The CS-563D and CP-563D Soil Compactors have been designed to offer enhanced production capabilities, simplified service and exceptional operator comfort.

Engine

Cat 3116T Turbo-charged Diesel Engine delivers 114 kW (153 hp) and is built for performance and reliability without sacrificing fuel economy.

Page 4

Dual Propel Pumps

The exclusive dual pump propel system provides a separate balanced flow to both the rear drive axle and the front drum drive motor. This system enables the operator to achieve superior gradeability and maintain machine control while compacting on a grade. Dual pumps also minimize drum and wheel spin-out in loose underfoot conditions.

Page 4

Setting industry standards... again.

Based upon the industry-proven reputation of the Caterpillar C-Series Soil Compactors, the new D-Series establishes new standards for productivity, comfort and serviceability in the soil compaction industry.





Vibratory System

Pod-style weight housings ensure peak vibratory performance and minimal service. Pods are replaceable and feature bearing lubrication change intervals of 3 years/3,000 hours.

Page 5

Serviceability

Simple ground level access to all daily maintenance points and the fuel fill through a convenient side access door. The new rearward tilting one-piece fiberglass hood allows complete engine access. The operator's station tilts forward to provide access to the hydraulic pumps.

Page 7

Operator's Station

Based on the successful Cat® G-Series Wheel Loader operator's station, the D-Series Soil Compactors feature excellent operator comfort and visibility. A tilting steering column, propel lever wrist rest, grouped control gauges and conveniently located control switches enhance operator productivity and reduce fatigue. Four heavy-duty isolation mounts provide a smooth ride.

Page 6

Cab

The cab option on the D-Series Soil Compactors is engineered to provide the operator unparalleled viewing area and comfort. Integrated, factory installed air conditioning is also an option.

Page 6

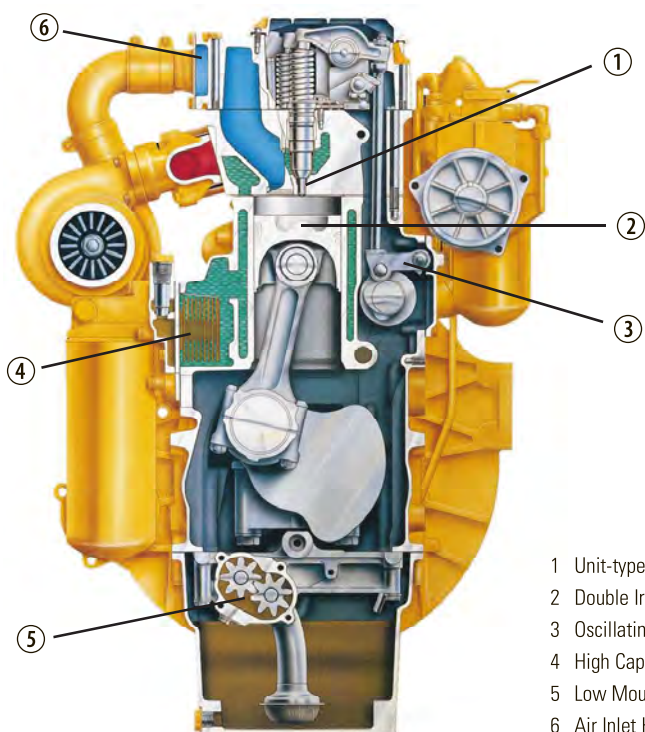
Leveling Blade

The optional leveling blade provides increased utilization opportunities to tackle numerous backfilling, leveling and light dozing applications. Available for the CS-563D and CP-563D.

Page 6

Caterpillar® 3116T Engine

Industry-proven Caterpillar technology designed to provide unmatched performance, reliability and fuel economy.



- 1 Unit-type Direct Injection Fuel System
- 2 Double Iron Ring Band Piston Design
- 3 Oscillating Roller Cam Follower
- 4 High Capacity Oil Cooler
- 5 Low Mounted Oil Pump
- 6 Air Inlet Heater

Turbocharged for top performance and efficiency especially at high altitudes—up to 2500 meters (8,200') without derating.

Unit injector system provides individually metered high-pressure, direct-injection of fuel for maximum efficiency.

High displacement-to-power ratio ensures long life and exceptional reliability.

Large oil cooler reduces oil deterioration and varnishing of internal parts.

Low-mounted oil pump for quicker start-up lubrication.

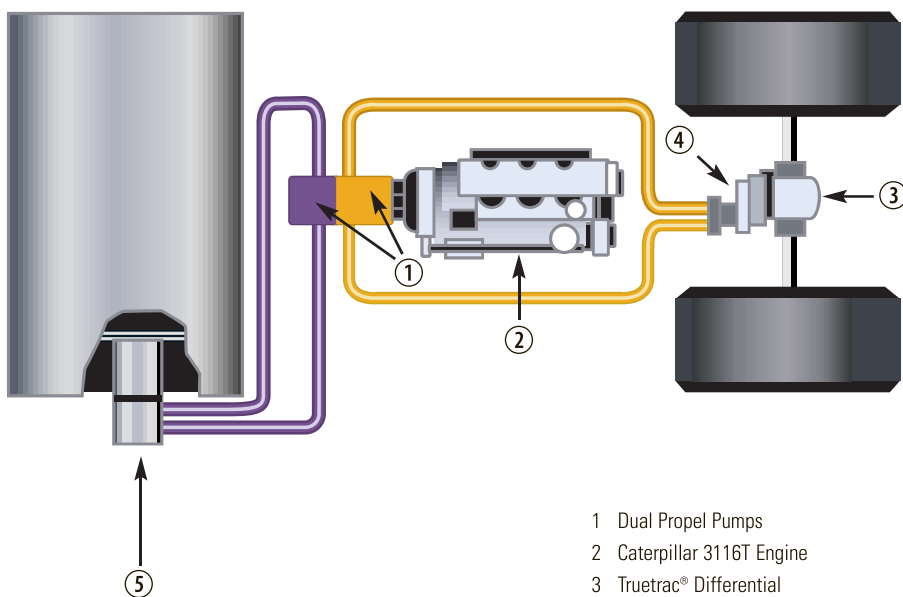
Dual fuel filters and water separator offer superior protection for the unit injection system.

Air inlet heater helps cold weather starting.

Meets U.S. EPA emissions standards.

Dual Pump Propel System

Superior tractive effort and gradeability for outstanding productivity in demanding environments.



- 1 Dual Propel Pumps
- 2 Caterpillar 3116T Engine
- 3 Truetrac® Differential
- 4 Rear Wheel Drive Motor
- 5 Drum Drive Motor

Dual propel pumps provide separate, balanced flow to the rear wheel axle and the drum drive motors to help prevent spin-out in soft material; improves gradeability.

Truetrac® limited slip differential provides balanced tractive effort to both rear wheels.

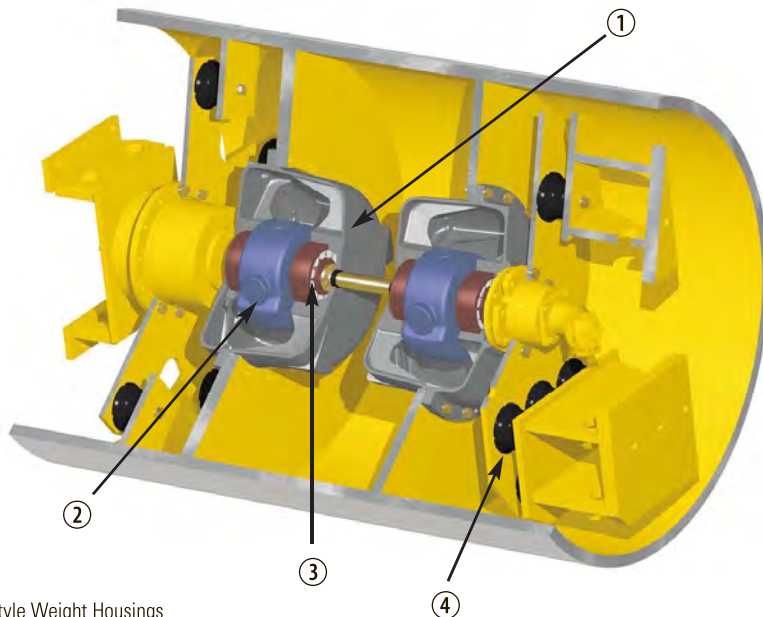
Two speed ranges for versatile operation. Low speed range for vibratory operation and maximum torque when grade climbing. High speed range moves machine quickly over longer distances.

Flushing valves in each propel circuit helps keep hydraulic oil cool and clean.

High travel speed up to 13,2 km/hr (8.1 mph).

Vibratory System

An advanced pod-style system delivers superior compactive force while offering serviceability advantages.



- 1 Pod-style Weight Housings
- 2 Patented Eccentric Weights
- 3 Heavy-duty Bearings
- 4 Isolation Mounts

Pod-style weight housings are assembled and sealed at the factory to ensure cleanliness, longer bearing life and easier field exchange or service with Cat reman components.

Dual amplitude works efficiently in a wider range of applications. Changeable from the operator's station.

Vibratory frequency of 31,9 Hz (1,914 vpm) for maximum compaction results.

Larger heavy-duty bearings for the eccentric weight shaft allow higher frequency for greater force.

3 year/3,000 hour vibratory bearing lube service interval for reduced maintenance.

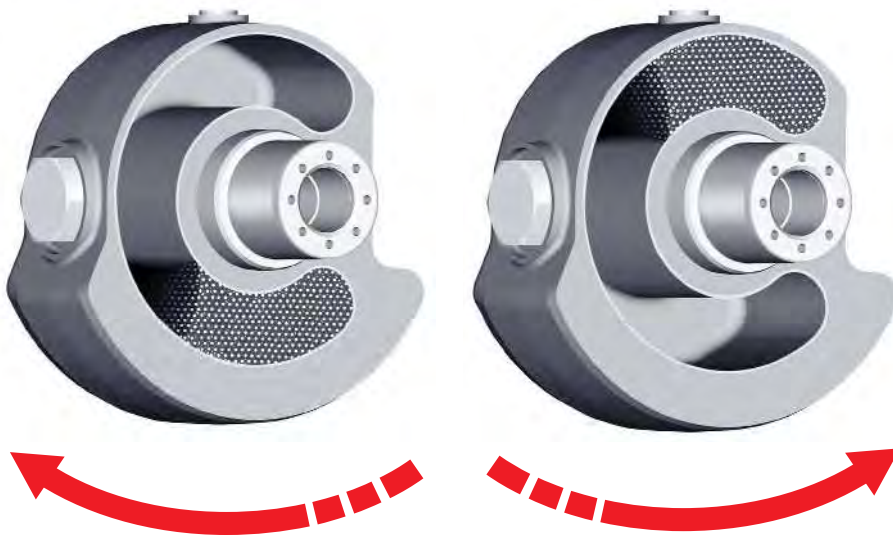
Improved isolation mounts allow more force to be transmitted to the ground and less vibration to the operator.

Patented Eccentric Weights

Reliable dual amplitude selection and innovative design ensure precise performance.

High Amplitude

Low Amplitude



Simplified control from the operator's station with a selection switch on the operator's console.

Positive amplitude selection is accomplished when the spherical steel shot is repositioned inside the hollow eccentric weight. Direction of weight shaft rotation determines amplitude.

Improved reliability no chance of shot wedging together. System reliability is superior to swinging mechanical weights.

Longer service life no heavy weights to slam together, no metal fragments to contaminate the bearing system.

Operator's Station

Ergonomically designed for maximum operator productivity. Optional cab offers excellent visibility and unmatched comfort.



Single lever control for propel and vibratory On/Off provides simple and low effort operation.

Padded adjustable wrist rest helps reduce operator fatigue.

Steering console and operational gauges are infinitely adjustable within the tilt range to the desired position of the operator. Entire console tilts for simple entrance and exit.

Exceptional visibility to the drum, rear tires and the rear of the machine due to the sloped engine hood.

Comfortable and durable seat fully adjustable with flip-up arm rests and 76 mm (3") wide retractable seat belt.

Isolated operator's station with four heavy-duty rubber mounts reduce machine vibration transmitted to the operator.



Padded Drum and Leveling Blade

Increased versatility and utilization can be achieved with the optional leveling blade or pad foot shell kit.



Tapered pad design reduces fluffing of soil at top of lift.

Pad face surface area and depth are calculated to provide optimum contact and compaction force.

Chevron pattern concentrates full compactive effort on two and a half pads at a time for maximum compaction.

Independently adjustable scraper teeth set for bi-directional operation. Can be positioned and replaced individually.

Single lever blade control provides simple operation for leveling, backfilling and light dozing applications.

Blade width of 2,43 m (8') provides simple transport with no need for special permits. Blade cut depth of 76 mm (3") combined with the high tractive effort increases blade usefulness.

Serviceability

Simplified service access, extended service intervals and convenient daily inspection area minimizes maintenance time and increases work time.



Convenient ground level service door allows access to all daily maintenance checks and fuel fill.

Visual indicators for the hydraulic oil tank and filter, air restriction indicator and radiator.

One piece fiberglass hood tilts rearward with an electronic actuator for complete access to the engine and cooling system.

Operator's station tilts forward to allow convenient access to the hydraulic pumps.

Sealed-for-life bearings in the articulation hitch never need to be greased.

3 year/3,000 hour vibratory bearing lube service interval for reduced maintenance.

Quick connect hydraulic test ports simplify system diagnostics.

Electrical wiring is color-coded and numbered to simplify troubleshooting.

Nylon braided wrap and all-weather connectors ensure electrical system integrity.

Maintenance-free Caterpillar batteries are protected by bolt-on covers in the rear of the machine on either side. Caterpillar batteries are specifically designed for maximum cranking power and protection against vibration.

Scheduled Oil Sampling (S•O•S) ports allow for simple fluid collection.

Factory Reman parts are a cost-effective and reliable solution to keep your machines productive. Caterpillar offers a large choice of Reman components, including vibratory drum pods.



The fuel fill, engine oil dip stick, hydraulic tank site gauge, air restriction indicator, radiator level site gauge and electrical disconnect are all accessible for easy daily service from the lockable ground level service door.

Engine

Four-stroke cycle, six cylinder Caterpillar® 3116T Turbo-charged Diesel Engine. Meets EPA and CARB emissions engine regulations.

Ratings at	RPM	kW	hp
Gross power	2200	114	153
Net power	2200	108	145

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 99 kPa (29.32" Hg) dry barometer. Power is based on using 35° API gravity fuel having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]. Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator. No derating required up to 2500 m (8,200') altitude.

The following ratings apply at 2200 RPM when tested under the specified standard conditions:

Net Power	kW	hp	Ps
Caterpillar	108	145	
EEC80/1269	108	145	
ISO 9249	108	145	
ISO 3046	108	145	
SAE J1349 JAN90	108	145	
DIN 70020			150

Gross Power

Caterpillar	114	153
-------------	-----	-----

Dimensions

Bore	105 mm	4.13"
Stroke	127 mm	5"
Displacement	6,6 L	403 cu. in.

Dual-element, dry-type air cleaner with visual restriction indicator.

Electrical

The 24-volt electrical system consists of two maintenance-free Cat batteries, color-coded and numbered wiring wrapped in nylon braid. The starting system provides 750 cold cranking amps (cca). The system includes a 55-amp alternator.

Service Refill Capacities

	Liters	U.S. Gallons
Fuel tank	300	79
Cooling system	30	8
Crankcase	20	5.3
Vibratory bearing lube	24	6.3
Differential & final drives	28	7.3
Hydraulic system	80	21
Filtration system (pressure type)		
Propel	15 micron absolute	
Vibratory	15 micron absolute	

Vibratory System Specifications

Drum diameter (over drum)		
CS-563D	1524 mm	60"
CP-563D	1295 mm	51"
Drum diameter (over pads) CP-563D	1549 mm	61"
Drum width	2134 mm	84"
Drum shell thickness		
CP-563D	25 mm	1"
CS-563D	30 mm	1.2"
Pads (CP-563D only)		
Number of pads		140
Pad height	127 mm	5"
Pad face area	8942 mm sq	13.86 in sq
Number of chevrons		14
Eccentric weight drive	Hydrostatic drive	
Frequency	31,9 Hz	1914 vpm

Nominal Amplitude

High	1,70 mm	.067"
Low	0,85 mm	.033"

Centrifugal Force @ 1914 vpm

Maximum	266 kN	60,000 lb
Minimum	133 kN	30,000 lb

Weight at Drum

CS-563D	5655 kg	12,470 lb
CP-563D	5840 kg	12,874 lb

	Static		Centrifugal	
PLI (CS-563D)	26.4 kg/cm	148 lb/in	127.5 kg/cm	714 lb/in
PSI (CP-563D)	26.1 kg/cm ²	372 lb/in ²	122.0 kg/cm ²	1732 lb/in ²

Instrumentation

Alternator Light, Hour Meter, Fuel Gauge, Horn, Audible Warning Horn for the: Engine Oil Pressure Light, Engine Water Temperature Light, Hydraulic Oil Temperature Light, Low Charge Pressure Light.

Operator and Machine Protective Equipment

Roll Over Protection Structure (ROPS)

is a two-post type that bolts onto flanges integral with the operator platform. The structure meets SAE recommended practice J1040 APR88 for roll over protection structure.

Backup Alarm—112 dB(A) alarm sounds whenever the machine is in reverse. The backup alarm has three sound levels that can be changed with a switch located on the alarm.

Seat Belt—76 mm (3") wide seat belt is standard.

Transmission

Two variable displacement piston pumps supply pressurized flow to two dual displacement piston motors. One pump and motor drives the drum propel system while the other pump and motor drives the rear wheels. The two-pump system ensures equal flow to the drive motors regardless of the operating conditions. In case the drum or wheels lose traction, the other motor can still build additional pressure to provide added torque.

The drive motors have two swashplate positions allowing operation at either maximum torque for compaction and gradeability or greater speed for moving around the job site. A toggle switch at the operators console triggers an electric over hydraulic control to change speed ranges.

Speeds (forward and reverse):

	CS-563D	CP-563D
Low Range	6,4 km/hr – 4.0 mph	6,5 km/hr – 4.0 mph
High Range	12,7 km/hr – 7.8 mph	13,2 km/hr – 8.1 mph

Steering

A priority-demand hydraulic power-assist steering system provides smooth low-effort steering. The system always receives the power it needs regardless of other hydraulic functions.

Minimum turning radius:

Inside	3,53 m (11' 7")
Outside	5,66 m (18' 7")

Steering angle:

(each direction) ± 35°

Oscillation angle:

(each direction) ± 15°

Hydraulic system:

Two 76 mm (3") bore, double-acting cylinders powered by a gear-type pump.

Final Drives and Axle

Final drive is hydrostatic with gear reducer to the drum and hydrostatic with differential and planetary gear reduction to each wheel.

Tires:

CS-563D:	587 mm (23.1") x 660 mm (26") 8-ply flotation
CP-563D:	587 mm (23.1") x 660 mm (26") 8-ply traction

Axle:

Heavy-duty fixed rear axle with a Truetrac® limited slip differential for smooth and quiet torque transfer.
Axle width 1,67 m (5' 6")

Brakes

Service brake features

- Closed-loop hydrostatic drive system provides dynamic braking during operation.

Secondary brake features

- Spring-applied/hydraulically-released multiple disc type brake mounted on the drum drive gear reducer. Secondary brakes are activated by: button on the operator's console; loss of hydraulic pressure in the brake circuit; or when the engine is shut down. A brake interlock system helps prevent driving through the secondary brake.

**Braking system meets SAE J1472 JUN87*

Frame

Fabricated from heavy gauge steel plate and rolled sections and joined to the drum yoke at the articulation pivot. Articulation area is structurally reinforced and joined by hardened steel pins. Two vertical pins provide a steering angle of ± 35° and a horizontal pin allows frame oscillation of ± 15°. Sealed-for-life hitch bearings never need greasing or shimming.

Total Customer Support System

Parts availability — most parts on dealer's shelf when you need them. Computer-controlled, emergency search system backup.

Parts stock lists — dealer helps you plan on-site parts stock to minimize your parts investment while maximizing machine availability.

Machine management services — effective preventive maintenance programs, cost-effective repair options, customer meetings, operator and mechanic training.

Remanufactured parts — vibratory pods, pumps and motors, engines, fuel system and charging system components available from dealer at 20-50% of new part cost.

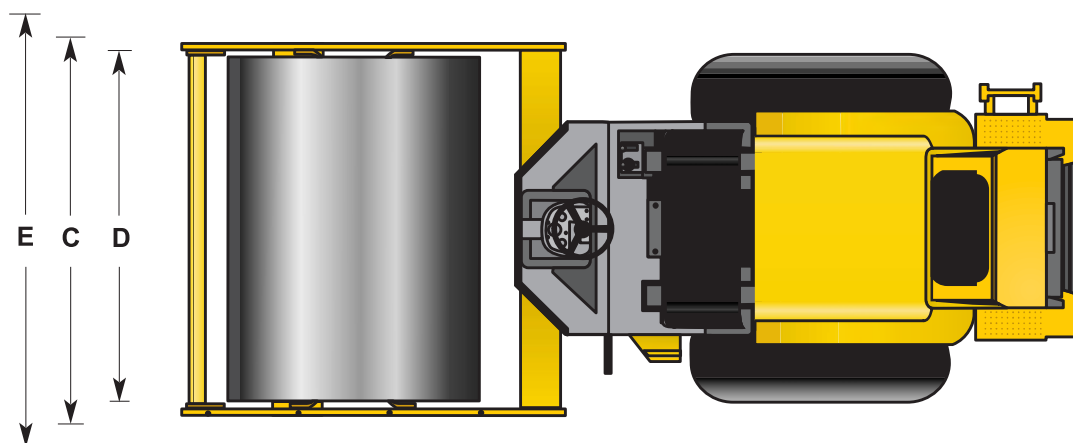
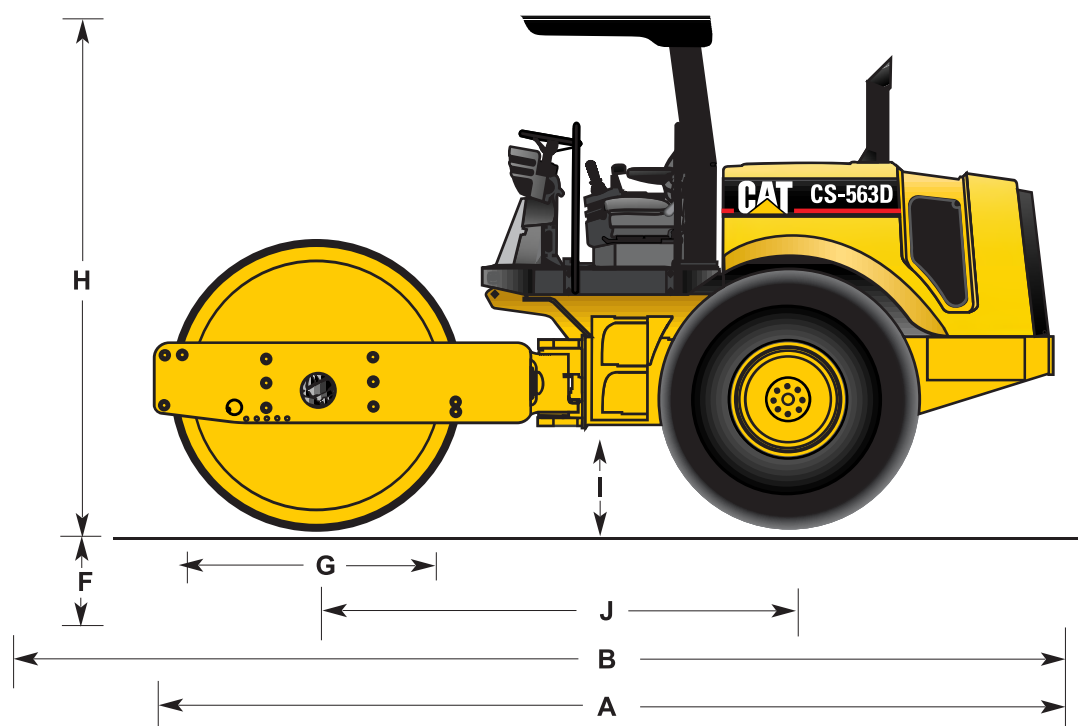
Service capability — dealer's shop or fast field service by trained technicians using latest tools and technology.

Literature support — easy-to-use parts books, operation and maintenance manuals, and service manuals help you get maximum value from equipment.

Flexible financing — your dealer can arrange attractive financing on the entire line of Caterpillar equipment. Terms structured to meet cash flow requirements. See how easy it is to own, lease or rent Cat equipment.

Dimensions

	CS-563D		CP-563D	
A Operating length	5,51m	(18' 1")	5,51m	(18' 1")
B Length with blade	6,04 m	(19' 10")	6,04 m	(19' 10")
C Max. machine width	2,29 m	(7' 6")	2,29 m	(7' 6")
Outside turning radius	5,66 m	(18' 7")	5,66 m	(18' 7")
Inside turning radius	3,53 m	(11' 7")	3,53 m	(11' 7")
D Compaction width	2,13 m	(7' 0")	2,13 m	(7' 0")
E Blade width	2,43 m	(8' 0")	2,43 m	(8' 0")
F Blade cutting depth	76 mm	(3")	76 mm	(3")
G Drum diameter	1524 mm	(60")	—	—
Drum diameter over pads	—	—	1549 mm	(61")
H Height at ROPS	3,02 m	(9' 11")	3,10 m	(10' 2")
I Ground clearance	483 mm	(19")	543 mm	(21")
J Wheelbase	2,90 m	(9' 6")	2,90 m	(9' 6")



Optional Equipment

Leveling Blade is designed to bolt onto the drum yoke. Complete unit includes heavy-duty blade, push arms, field removable bolt-on connectors, reversible/replaceable cutting edges, replaceable wear plates, a heavy-duty hydraulic lift cylinder and control valve. Moldboard is constructed of multiple box sections. Blade measures 2,43 m (8') wide and 660 mm (26") high. Maximum depth of cut is 76 mm (3")

ROPS Cab includes one access door, tinted safety glass windows, electric wipers front and rear, heater/defroster, two vertically sliding side windows for ventilation, two exterior rear view mirrors, front and rear working lights, cab lift cylinder, interior dome light, and coat hook.

Cab is fully EROPS rated and meets SAE standard. J1040 MAY94

Air Conditioning integral system provides operator comfort for cab configurations working in higher ambient temperatures.

Roll Over Protective Structure/Falling Object Protective Structure (ROPS/FOPS) is a two-post structure that bolts directly onto flanges welded to the operator platform. The ROPS/FOPS meets SAE standards.

Two-piece Pad Foot Shell Kit bolts onto the smooth drum CS-563D and features 90 mm (3.5") high pads. Includes special bumper

Operator Platform Lift Cylinder provides a hydraulic cylinder to raise and lower operator platform. Available as a Custom Shop Order (CSO).

Smooth Drum Conversion Kit (for CP-563D only) is interchangeable with the padded drum and includes all internal components plus external drum cleaner bars. It does not include hydraulic motors. Conversion time is approximately six hours. Drum dimensions and performance are the same as on the CS-563D.

Padded Drum Conversion Kit (for CS-563D only) is interchangeable with the smooth drum. Kit includes all internal components plus external drum cleaner teeth. It does not include hydraulic motors. Conversion time is approximately six hours. Padded drum dimensions and performance are the same as CP-563D.

Variable Frequency, Independent of Engine rpm electronic displacement control on vibratory pump is controlled by frequency dial on the operator's station. Engine rpm remain unchanged for maximum hydraulic pump flow and torque to drive motors. Frequency range from 23,3-31,9 Hz (1,400-1,914 vpm) makes it easier to match frequency, amplitude and working speed to job conditions.

Transmission Guard consists of a heavy plate which covers the rear axle, axle drive motor and input gearbox.

Vibratory Tachometer displays actual vibratory system frequency on console in front of the operator. Most useful when ordering variable frequency option.

Urethane Drum Scrapers for CS-563D provides front and rear scrapers for continuous contact with the drum surface and replaces the standard steel scraper.

Padded Drum Rear Scrapers help keep material from building up on the drum.

Working Light Package for ROPS or ROPS/FOPS machines. Illuminates immediate work area under dim or dark conditions. Four flood lights are positioned two forward and two back.

This system is intended for use under working conditions and not for highway transport purposes.

Rotating Beacon includes an amber beacon and mount that can be attached to machines with ROPS, ROPS/FOPS or cab.

Compaction Indicator provides a visual gauge for reading material density. Available as a Custom Shop Order (CSO).

Engine Tachometer displays engine speed (rpm) on an analog dial. Available as a Custom Shop Order (CSO).

QEHQ9609-01 (6/00)
QEHQ9609

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www.CAT.com.

Featured machines in photography may include optional equipment.
Materials and specifications are subject to change without notice.



311D

Soil compactor with smooth drum
Compactors Series 300 / Series H216



HIGHLIGHTS 300

- > 3-point articulation for outstanding traction and off-road mobility
- > Drum drive for high climbing ability
- > Simple, intuitive and language-neutral operation
- > Ergonomic driver platform
- > Excellent view of the machine and the construction site

Machine dimensions		
Total length (L)	mm	5698
Width (B)	mm	2262
Total height (H)	mm	3126
Drum width (X)	mm	2140
Height loading, min. (HI)	mm	2331



CEV III

TECHNICAL DATA		Unit	311D
	Weights		
	Operating weight with sunroof	kg	11220
	Operating weight, max.	kg	11440
	Axle load, front/rear	kg	6420/4800
	Static linear load, front	kg/cm	30,0
	French classific., data/class		40,6/VM3
	Machine dimensions		
	Total length	mm	5698
	Total height	mm	3126
	Height loading, min.	mm	2331
	Wheel base	mm	2995
	Total width	mm	2262
	Ground clearance, centre	mm	419
	Turning radius, inside	mm	3990
	Angle of driving slope, front/rear	°	29/26
	Drum dimensions		
	Drum width, front	mm	2140
	Drum diameter, front	mm	1504
	Drum thickness, front	mm	25
	Drum type, front		smooth
	Wheel dimensions		
	Size of tyres, rear		AW 23.1-26 8 PR
	Diesel engine		
	Manufacturer		CUMMINS
	Version		4BT AA 3.9
	Number of cylinders		4
	Power rat. ISO 14396, kW/PS/rpm		74/100/2200
	Power rating SAE J1349, kW/HP/rpm		74/99/2200
	Emission standard		CEV III
	Drive		
	Speed, working gear	km/h	0-5,5/0-7,0/0-8,5
	Speed, transportation gear	km/h	0-12,5
	Climbing ability, vibration on/off	%	48/53
	Vibration		
	Vibration frequency, front, I/II	Hz	32/40
	Amplitude, front, I/II	mm	1,83/0,77
	Centrifugal force, front, I/II	kN	240/158
	Steering		
	Oscillation angle +/-	°	10
	Steering, type		Articulated steering
	Tank capacity/Fill capacity		
	Fuel tank, capacity	L	290
	Sound level		
	Acoustic power LW(A), sticker	db(A)	
	Acoustic power LW(A), measured	db(A)	110

EQUIPMENT

Dashboard with displays, indicator lights and switches, Operator's platform with access on one side, Vibration-isolated operator's platform, Longitudinal adjustment, 1 drive lever, Tiltable bonnet, Hydrostatic steering, 3-point articulation, Adjustable scraper, Plastic protective roof, reinforced with fibre glass and foldable, Dashboard cover

OPTIONAL EQUIPMENT

HAMM Compaction Meter (HCM), Speedometer, Telematics interface, Working lights, Hose protection

HAMM AG
Hammstraße 1
D-95643 Tirschenreuth
Tel +49 9631 80-0
Fax +49 9631 80-111
www.hamm.eu



APPENDIX III
ENGINEERED FILL HAND SHEAR VANE RECORDS



Hand Shear Vane Compliance Testing

Site: Pwllfawatkin	Sheet 1 of 1
CQA Engineer: Rob Sleeman/Stanley Ugohuckwu	

Date	Location / Grid Ref.	Layer Tested	Hand Shear Vane Reading (kPa)	Pass/Fail
23/07/2022	10A	1	70	Pass
23/07/2022	11B	1	85	Pass
23/07/2022	11C	1	54	Pass
23/07/2022	11D	1	58	Pass
23/07/2022	11E	1	92	Pass
23/07/2022	11F	1	72	Pass
23/07/2022	10G	1	73	Pass
23/07/2022	10H	1	71	Pass
25/07/2022	11A	2	65	Pass
25/07/2022	10B	2	63	Pass
25/07/2022	11C	2	64	Pass
25/07/2022	11D	2	67	Pass
25/07/2022	11F	2	73	Pass
25/07/2022	11G	2	61	Pass
25/07/2022	11H	2	62	Pass
25/07/2022	10I	2	61	Pass
29/07/2022	10D	3	63	Pass
29/07/2022	11D	3	65	Pass
29/07/2022	10G	3	58	Pass
29/07/2022	11G	3	62	Pass
29/07/2022	10H	3	61	Pass
29/07/2022	11H	3	62	Pass
29/07/2022	10I	4	60	Pass
29/07/2022	11I	4	62	Pass
03/07/2023	11F	5	65	Pass
03/07/2023	11D	6	70	Pass
03/07/2023	11C	7	70	Pass
04/07/2023	11B	8	65	Pass
04/07/2023	10A	9	75	Pass
04/07/2023	11B	10	75	Pass
04/07/2023	10H	10	70	Pass
05/07/2023	10G	11	65	Pass
05/07/2023	11G	12	65	Pass
05/07/2023	10E	13	70	Pass
05/07/2023	11E	14	65	Pass
05/07/2023	10H	14	75	Pass
06/07/2023	11B	15	80	Pass

[illegible]

APPENDIX IV
LABORATORY TEST RESULTS

Jones Bros Ruthin Ltd.
Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW
Contract: Pwllfawatkin

Date: 30 September 2022
Test Report Ref: TR 911526

Page 1 of 2

LABORATORY TEST REPORT

TEST REQUIREMENTS:

To determine the Particle Size Distribution (PSD) of a soil sample-
washing and sieving method in accordance with **BS1377-Part2-1990 Clause 9.2**

SAMPLE DETAILS:

Certificate of sampling received:	No
Laboratory Ref. No:	S105737
Client Ref. No:	1
Date and Time of Sampling:	22/08/2022
Date of Receipt at Lab:	27/09/2022
Date of Start of Test:	28/09/2022
Sampling Location:	Buttress
Name of Source:	Site won
Method of Sampling:	Disturbed Bulk Sample
Sampled By:	Client (Test results apply to sample as received)
Tested By:	KH
Material Description:	Brown slightly gravelly slightly sandy silty CLAY
Target Specification:	N/A

RESULTS:

SEE ATTACHED

This test report shall not be reproduced, except in full, without the written approval of Celtest Company Limited.

These results relate only to the items tested.

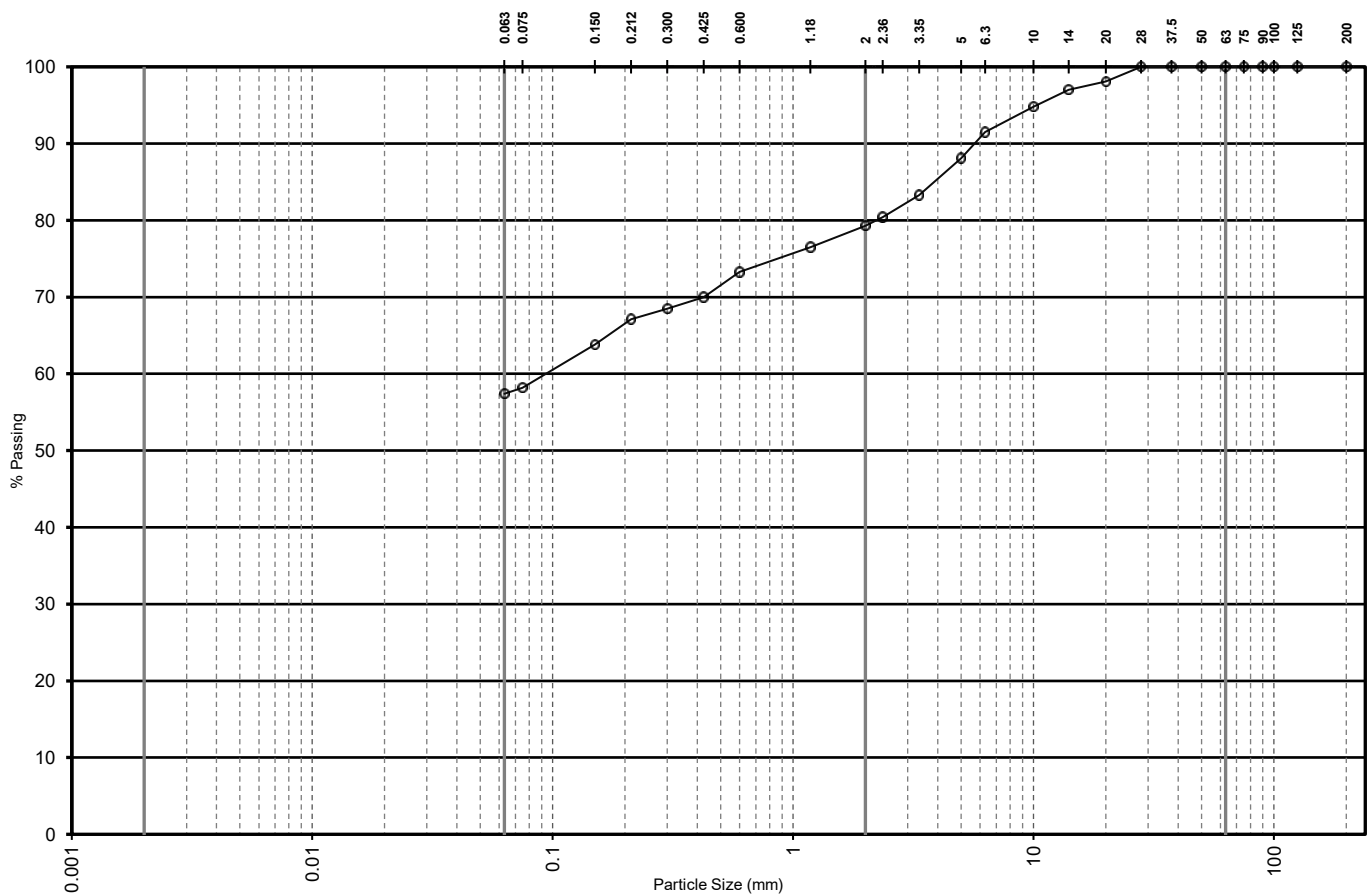
<u>Comments:</u> None	Report checked and approved by:  Euros Jones Soils Team Manager
---------------------------------	---

Test Report Ref: TR 911526: Page 2 of 2

MATERIAL DESCRIPTION

Brown slightly gravelly slightly sandy silty CLAY

Sieve Size mm	% Passing	Sieve Size mm	% Passing	Cobbles	0.0
				Gravel	20.7
				Sand	21.9
				Silt/Clay	57.4
200	100	3.35	83		
125	100	2.36	80		
100	100	2.0	79		
90	100	1.18	77		
75	100	0.600	73		
63	100	0.425	70		
50	100	0.300	69		
37.5	100	0.212	67		
28	100	0.150	64		
20	98	0.075	58		
14	97	0.063	57.4		
10	95				
6.3	92				
5.0	88				



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	0.002	0.006	0.02	0.063	0.2	0.63	2.0	6.3	20	63 200
	SILT			SAND			GRAVEL			

Jones Bros Ruthin Ltd.
Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW
Contract: Pwllfawatkin

Date: 30 September 2022
Test Report Ref: TR 911527

Page 1 of 2

LABORATORY TEST REPORT

TEST REQUIREMENTS:

To determine the Particle Size Distribution (PSD) of a soil sample-
washing and sieving method in accordance with **BS1377-Part2-1990 Clause 9.2**

SAMPLE DETAILS:

Certificate of sampling received:	No
Laboratory Ref. No:	S105737
Client Ref. No:	2
Date and Time of Sampling:	22/08/2022
Date of Receipt at Lab:	27/09/2022
Date of Start of Test:	28/09/2022
Sampling Location:	Buttress
Name of Source:	Site won
Method of Sampling:	Disturbed Bulk Sample
Sampled By:	Client (Test results apply to sample as received)
Tested By:	KH
Material Description:	Brown slightly gravelly slightly sandy silty CLAY
Target Specification:	N/A

RESULTS:

SEE ATTACHED

This test report shall not be reproduced, except in full, without the written approval of Celtest Company Limited.

These results relate only to the items tested.

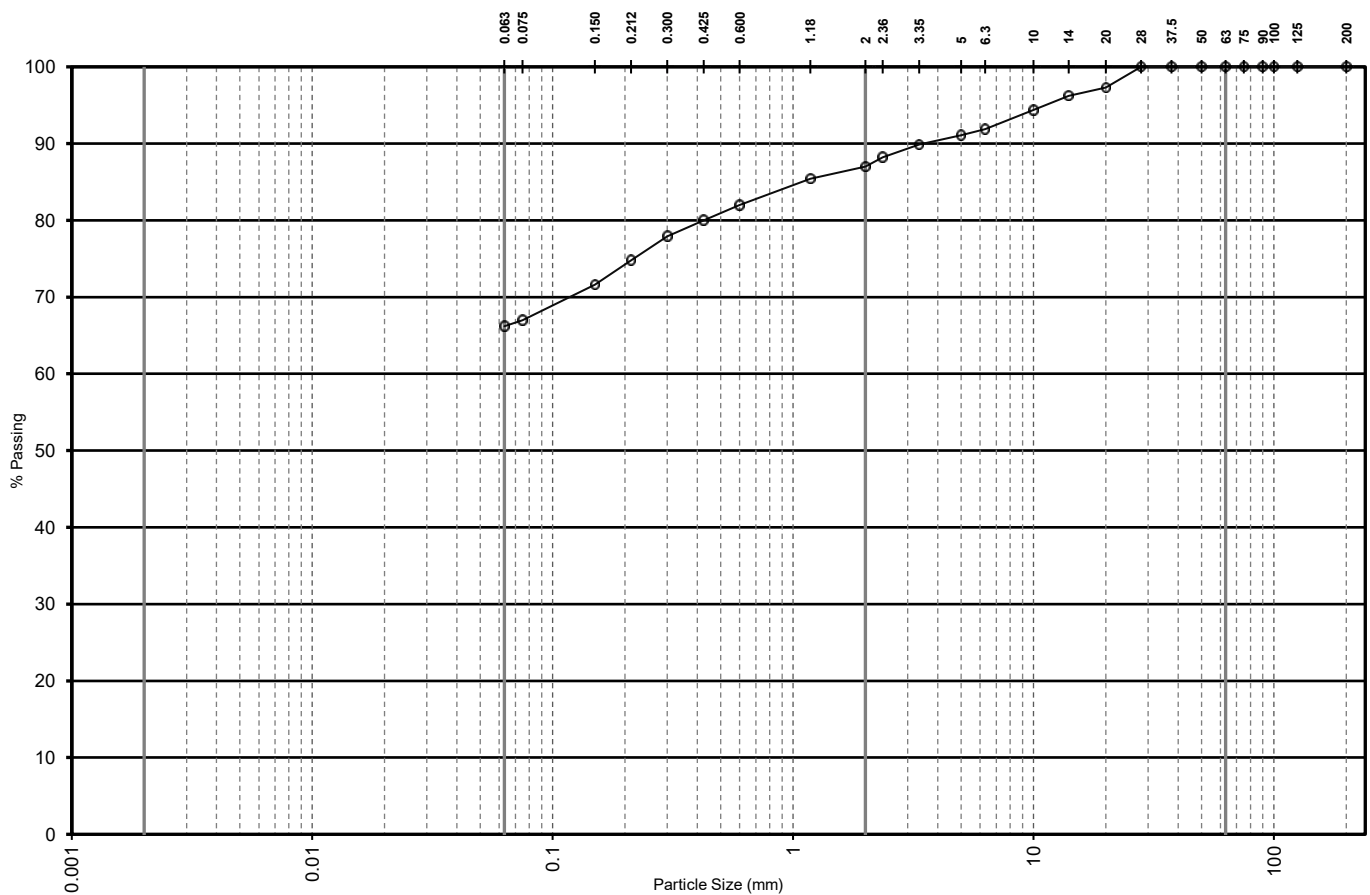
<u>Comments:</u> None	Report checked and approved by:  Euros Jones Soils Team Manager
---------------------------------	--

Test Report Ref: TR 911527: Page 2 of 2

MATERIAL DESCRIPTION

Brown slightly gravelly slightly sandy silty CLAY

Sieve Size mm	% Passing	Sieve Size mm	% Passing	Cobbles	0.0
				Gravel	13.0
				Sand	20.8
				Silt/Clay	66.2
200	100	3.35	90		
125	100	2.36	88		
100	100	2.0	87		
90	100	1.18	85		
75	100	0.600	82		
63	100	0.425	80		
50	100	0.300	78		
37.5	100	0.212	75		
28	100	0.150	72		
20	97	0.075	67		
14	96	0.063	66.2		
10	94				
6.3	92				
5.0	91				



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	0.002	0.006	0.02	0.063	0.2	0.63	2.0	6.3	20	63 200
	SILT			SAND			GRAVEL			

Jones Bros Ruthin Ltd.
Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW
Contract: Pwllfawatkin

Date: 19 February 2024
Test Report Ref: TR 1016738

Order No: M-C3246/00019

Page 1 of 2

LABORATORY TEST REPORT

TEST REQUIREMENTS:

To determine the Particle Size Distribution (PSD) of a soil sample-
washing and sieving method in accordance with **BS 1377-Part 2-1990 Clause 9.2**

SAMPLE DETAILS:

Certificate of sampling received:	No
Laboratory Ref. No:	S118622
Client Ref. No:	Bulk 3
Date and Time of Sampling:	22/08/2022
Date of Receipt at Lab:	15/02/2024
Date of Start of Test:	16/02/2024
Sampling Location:	Buttress
Name of Source:	Site Won
Method of Sampling:	Disturbed Bulk Sample
Sampled By:	Client (Test results apply to sample as received)
Tested By:	KH
Material Description:	Shales
Target Specification:	N/A

RESULTS:

SEE ATTACHED

This test report shall not be reproduced, except in full, without the written approval of Celtest Company Limited.

These results relate only to the items tested.

Comments:

None

Report checked and approved by:

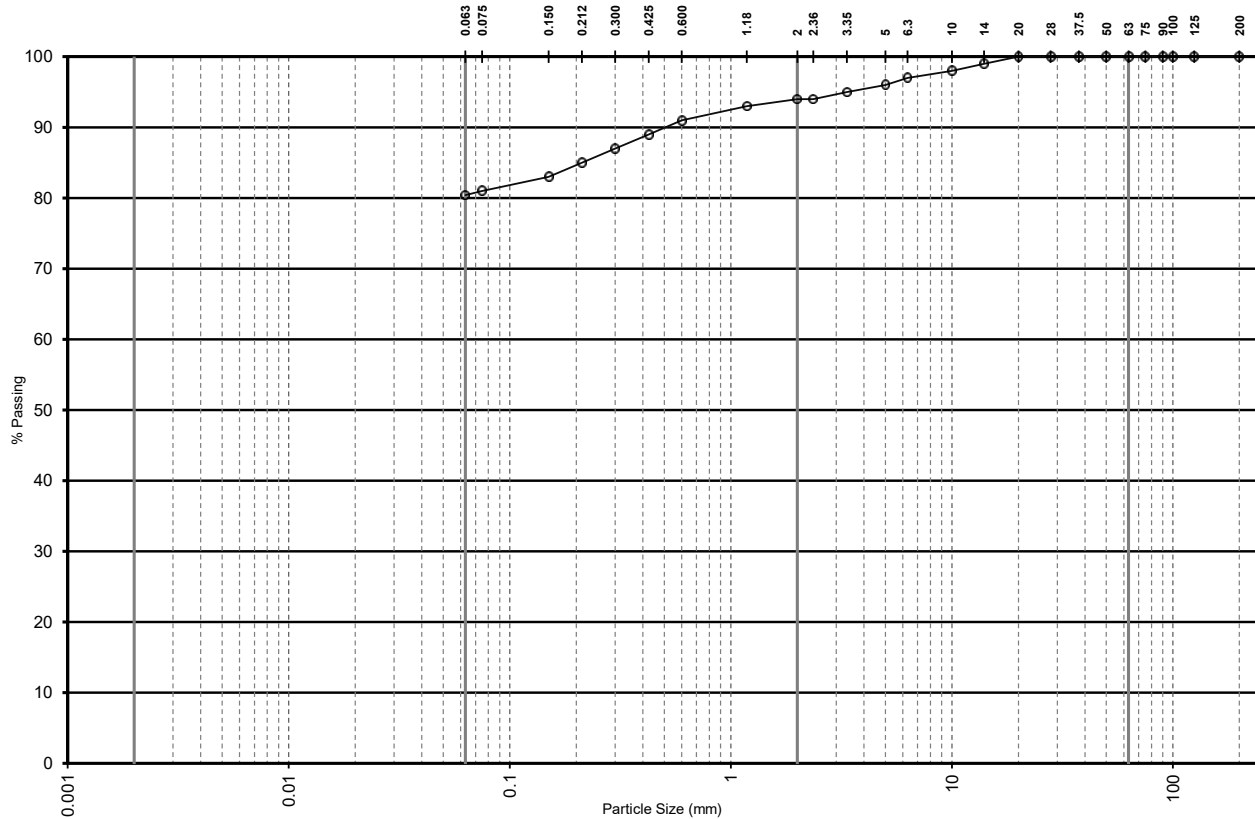


Meical Owen
CS Team

Test Report Ref: TR 1016738: Page 2 of 2

MATERIAL DESCRIPTION	
Shales	

Sieve Size mm	% Passing	Sieve Size mm	% Passing	Cobbles	0.0
				Gravel	6.0
				Sand	13.6
				Silt/Clay	80.4
200	100	3.35	95		
125	100	2.36	94		
100	100	2.0	94		
90	100	1.18	93		
75	100	0.600	91		
63	100	0.425	89		
50	100	0.300	87		
37.5	100	0.212	85		
28	100	0.150	83		
20	100	0.075	81		
14	99	0.063	80		
10	98				
6.3	97				
5.0	96				



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	0.002	0.006	0.02	0.063	0.2	0.63	2.0	6.3	20	
SILT				SAND			GRAVEL			

Jones Bros Ruthin Ltd.
Ty Glyn
Canol y Dre
Ruthin
Denbighshire
LL15 1QW
Contract: Pwllfawatkin

Date: 19 February 2024
Test Report Ref: TR 1016739

Order No: M-C3246/00019

Page 1 of 2

LABORATORY TEST REPORT

TEST REQUIREMENTS:

To determine the Particle Size Distribution (PSD) of a soil sample-
washing and sieving method in accordance with **BS 1377-Part 2-1990 Clause 9.2**

SAMPLE DETAILS:

Certificate of sampling received:	No
Laboratory Ref. No:	S118622
Client Ref. No:	Bulk 4
Date and Time of Sampling:	22/08/2022
Date of Receipt at Lab:	15/02/2024
Date of Start of Test:	16/02/2024
Sampling Location:	Buttress
Name of Source:	Site Won
Method of Sampling:	Disturbed Bulk Sample
Sampled By:	Client (Test results apply to sample as received)
Tested By:	KH
Material Description:	CLAY
Target Specification:	N/A

RESULTS:

SEE ATTACHED

This test report shall not be reproduced, except in full, without the written approval of Celtest Company Limited.

These results relate only to the items tested.

Comments:

None

Report checked and approved by:

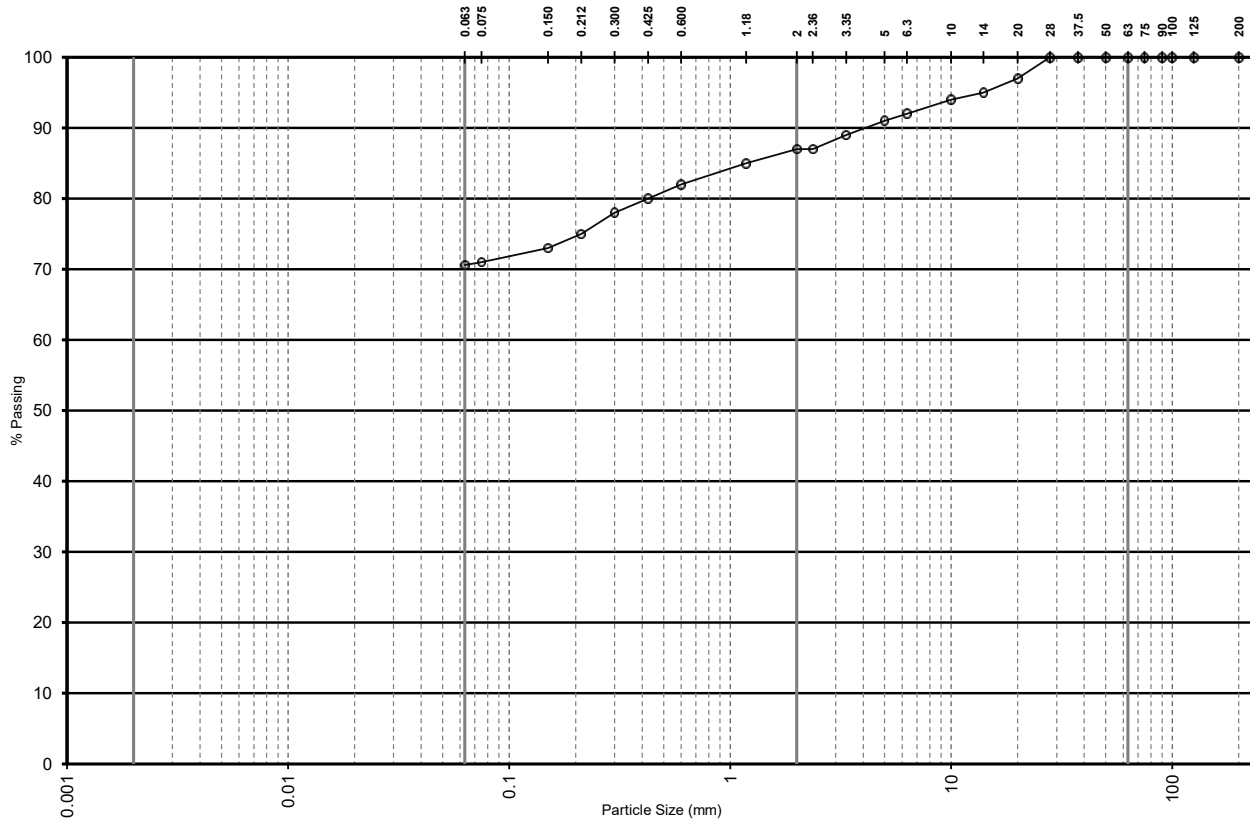


Meical Owen
CS Team

Test Report Ref: TR 1016739: Page 2 of 2

MATERIAL DESCRIPTION	
CLAY	

Sieve Size mm	% Passing	Sieve Size mm	% Passing	Cobbles	0.0
				Gravel	13.0
				Sand	16.4
				Silt/Clay	70.6
200	100	3.35	89		
125	100	2.36	87		
100	100	2.0	87		
90	100	1.18	85		
75	100	0.600	82		
63	100	0.425	80		
50	100	0.300	78		
37.5	100	0.212	75		
28	100	0.150	73		
20	97	0.075	71		
14	95	0.063	71		
10	94				
6.3	92				
5.0	91				



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES
	0.002	0.006	0.02	0.063	0.2	0.63	2.0	6.3	20	
SILT				SAND			GRAVEL			

APPENDIX V
PHOTOGRAPHIC RECORD

PHOTOGRAPHS

Plate:
1



Buttress Work Begins

Plate:
2



Clearing Vegetation For Buttress Works

	Job Title		
	Pwllfawatkin Buttress		
Approved ASC	Signature 	Client	FCC

PHOTOGRAPHS

Plate:
3



Overview Of Works

Plate:
4



Overview Of Works



Job Title

Pwllfawatkyn Buttress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
5



Placing Buttress Material

Plate:
6



Tipping Off Of Buttress Material



Job Title

Pwllfawatkin Buttress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
7



Overview Of Works

Plate:
8



Overview Of Works



Job Title

Pwllfawatkin Buttress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
9



Overview Of Works

Plate:
10



Overview Of Works

	Job Title		
	Pwllfawatkyn Capping		
Approved ASC	Signature 	Client FCC	

PHOTOGRAPHS

Plate:
11



Compaction Of Buttress Material

Plate:
12



Compacted Buttress Material



Job Title

Pwllfawatkyn Buttress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
13



Hand Shear Vane Reading Of Compacted Material

Plate:
14



Overview Of Works



Job Title

Pwllfawatkin Buttress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
15



Compacted Material And Continued Placement Of Material

Plate:
16



Overview Of Works

	Job Title		
	Pwllfawatkin Buttress		
Approved ASC	Signature 	Client	FCC

PHOTOGRAPHS

Plate:
17



Overview Of Works

Plate:
18



Overview Of Works

	Job Title		
	Pwllfawatkin Buttress		
Approved ASC	Signature 	Client	FCC

PHOTOGRAPHS

Plate:
19



Overview Of Works

Plate:
20



Overview Of Works



Job Title

Pwllfawatkin Buttrass

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
21



Continue to Install Buttress

Plate:
22



Loading Buttress Material



Job Title

Pwllfawatkin Buttress

Approved
ASC

Signature

A handwritten signature in black ink, appearing to be "J. Smith", is written over a white background.

Client

FCC

PHOTOGRAPHS

Plate:
23



Overview Of Works

Plate:
24



Overview Of Works



Job Title

Pwllfawtkin Butress

Approved
ASC

Signature

A handwritten signature in black ink.

Client

FCC

PHOTOGRAPHS

Plate:
25



Loading Away Cut Out Rain Flap

Plate:
26



Rain Flap Removed



Job Title

Pwllfawatkin Buttres

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
27



Diverting Rain Flap

Plate:
28



Extrusion Welding Diverted Rain Flap



Job Title

Pwllfawatkin Butress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
29



New Versus Old Rain Flap

Plate:
30



Rain Flap Complete



Job Title

Pwllfawatkin Butress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
31



Compaction in Progress

Plate:
32



Overview of the Works



Job Title

Pwllfawatkin Buttress

Approved
ASC

Signature

Client

FCC

PHOTOGRAPHS

Plate:
33



Completed Buttress

Plate:
34



Smooth Drum Rolling Completed Buttress



Job Title

Pwllfawtkin Buttress

Approved
ASC

Signature

Client

FCC

APPENDIX VI
DAILY RECORDS



Daily Site Record Sheet

Date:	Wed 20 th July 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 17* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	
-------------------	--

Assess the method statement for the buttress construction works.

De-Vegging of Proposed Buttress works area

Excavation of twin-wall surface water pipe from SE edge of site

Preparation works for Proposed Buttress, including finding firm base HSV's taken average 84.25 and placing material to SW creating a working area on edge of old lagoon

List of Plant	Hours of Operation	Comments
KOMATSU PC360LCi	12 Hrs.	
KOMATSU PC210Lc	12 Hrs.	
Cat D6 Dozer Gravelle CT39	12 hrs.	
Volvo A30G ADT Jones Bros.1489	12 Hrs.	
Volvo A30G ADT Jones Bros.1408	12 Hrs.	
CAT CS66B Padfoot Roller	0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
--------------	-------------	---------	--



Daily Site Record Sheet

Date:	Thurs 21 st July 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	
-------------------	--

Proposed Buttress, commenced placing layer 1, material initially looked competent however as excavation into stockpile continued it became apparent that the material was soft. Tested and found to be below 50Kpa. This was removed back to the stockpile for drying. E-mail discussion between Jones Bros., FCC and Sirius regarding on how to progress. Plant stood down for 1 ½ hours (bar 210 which continued to work)

700mm top layer of stockpile then bladed off to lower bench for use on 22nd July 2022

Kom 210 excavating temporary water control ditch east to west leading to lagoon

List of Plant	Hours of Operation	Comments
KOMATSU PC360LCi	8.5 Hrs.	
KOMATSU PC210Lc	8.5 Hrs.	
Cat D6 Dozer Gravelle CT39	8.5 Hrs.	
Volvo A30G ADT Jones Bros.1489	8.5 Hrs.	
Volvo A30G ADT Jones Bros.1408	8.5 Hrs.	
CAT CS66B Padfoot Roller	0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
--------------	-------------	---------	--



Daily Site Record Sheet

Date:	Fri 22 nd July 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Proposed Buttress completed placing first layer, HSV taken all above 50Kpa. A6 L1 70 Kpa B6 L1 85 Kpa C6 L1 54 Kpa D6 L1 58 Kpa E6 L1 92 Kpa F6 L1 72 Kpa Commenced placing second layer E6 L2 73 Kpa F6 L2 61.25 Kpa Sealed buttress for weekend Connected temporary water control ditch east to west leading to lagoon			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi	7 Hrs.		
KOMATSU PC210Lc	2 Hrs.		
Cat D6 Dozer Gravelle CT39	8.5 Hrs.		
Volvo A30G ADT Jones Bros.1489 (Parked)	0 Hrs.		
Volvo A30G ADT Jones Bros.1408	9 Hrs.		
CAT CS66B Padfoot Roller	2 Hrs.		

Prepared by:	Rob Sleeman	Signed:	
--------------	-------------	---------	--



Daily Site Record Sheet

Date:	Mon 25 th July 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Weekend had heavy rain and showers Monday am no plant working whilst waiting for site to dry			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi	0 Hrs.		
KOMATSU PC210Lc	8.5 Hrs.		
Cat D6 Dozer Gravelle CT39	0 Hrs.		
Volvo A30G ADT Jones Bros.1489 (Parked)	0 Hrs.		
Volvo A30G ADT Jones Bros.1408	0 Hrs.		
CAT CS66B Padfoot	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	
--------------	-------------	---------	--



Daily Site Record Sheet

Date:	Tue 26 th July 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	
-------------------	--

Layer 1 placed and tested, layer 2 started material not passing on layer 2 so removed back to stockpile

List of Plant	Hours of Operation	Comments
KOMATSU PC360LCi	7 Hrs.	
KOMATSU PC210Lc	2 Hrs.	
Cat D6 Dozer Gravelle CT39	8.5 Hrs.	
Volvo A30G ADT Jones Bros.1489 (Parked)	0 Hrs.	
Volvo A30G ADT Jones Bros.1408	9 Hrs.	
CAT CS66B Padfoot Roller	2 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
--------------	-------------	---------	--



Daily Site Record Sheet

Date:	Wed 27 th July 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	Ffion Thomas CFN
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Weekend had heavy rain and showers Monday slowing drying

Earthwork plant not working whilst waiting for stockpile and Layer 2 of Buttress to dry

17 Rolls of GDL delivered, unloaded by Komatsu PC210

EPS on site to disconnect/reconnect flowlines for lining

UKLT on site and 4 x geotextile and 3 x 1mm LLDPE installed

List of Plant	Hours of Operation	Comments
KOMATSU PC360LCi Excavator	0 Hrs.	
KOMATSU PC210Lc Excavator Cat D6	8 Hrs.	
Dozer Gravelle CT39	0 Hrs.	
Volvo A30G ADT Jones Bros.1489 (Parked)	0 Hrs.	
Volvo A30G ADT Jones Bros.1408	0 Hrs.	
CAT CS66B Padfoot Roller	0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Thurs 28 th July 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	Ffion Thomas CFN
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Excavation, loading, transporting and placing material from stockpile to buttress layer 3

EPS on site to disconnect/reconnect flowlines for lining

UKLT on site and 6 x geotextile and 6 x 1mm LLDPE installed

List of Plant	Hours of Operation	Comments
KOMATSU PC360LCi	4 Hrs.	
KOMATSU PC210Lc	11 Hrs.	
Cat D6 Dozer Gravelle CT39	4 Hrs.	
Volvo A30G ADT Jones Bros.1489 (Parked)	4 Hrs.	
Volvo A30G ADT Jones Bros.1408	4 Hrs.	
CAT CS66B Padfoot Roller	4 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Fri 29 th July 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 12* PM- Showers 19*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	Ffion Thomas CFN
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Preparing site for predicted wet weather. Forecast is for 4 days of wet weather. Sealing stockpiles, installing grips

EPS on site to reconnect flowlines for lining

Layer 3 tested improving whilst drying

List of Plant	Hours of Operation	Comments
KOMATSU PC360LCi	4 Hrs.	
KOMATSU PC210Lc	0 Hrs.	
Cat D6 Dozer Gravelle CT39	4 Hrs.	
Volvo A30G ADT Jones Bros.1489	0 Hrs.	
Volvo A30G ADT Jones Bros.1408	0 Hrs.	
CAT CS66B Padfoot Roller	0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Mon 1 st August 2022	Site:	Pwllfawatkin
Weather:	AM-Rain 12* PM- Rain 19*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
No works due to rain			
List of Plant		Hours of Operation	Comments
KOMATSU PC360LCi		0 Hrs.	
KOMATSU PC210Lc		0 Hrs.	
Cat D6 Dozer Gravelle CT39		0 Hrs.	
Volvo A30G ADT Jones Bros.1489		0 Hrs.	
Volvo A30G ADT Jones Bros.1408		0 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	<i>Rob Sleeman</i>
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Daily Site Record Sheet

Date:	Tue 2 nd August 2022	Site:	Pwllfawatkin
Weather:	AM-Rain 12* PM- Rain 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
No works due to rain			
List of Plant		Hours of Operation	Comments
KOMATSU PC360LCi		0 Hrs.	
KOMATSU PC210Lc		0 Hrs.	
Cat D6 Dozer Gravelle CT39		0 Hrs.	
Volvo A30G ADT Jones Bros.1489		0 Hrs.	
Volvo A30G ADT Jones Bros.1408		0 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Wed 3 rd August 2022	Site:	Pwllfawatkin
Weather:	AM-Rain 12* PM- Overcast 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Preparing stockpiles and access routes for works			
List of Plant		Hours of Operation	Comments
KOMATSU PC360LCi		4 Hrs.	
KOMATSU PC210Lc		0 Hrs.	
Cat D6 Dozer Gravelle CT39		4 Hrs.	
Volvo A30G ADT Jones Bros.1489		0 Hrs.	
Volvo A30G ADT Jones Bros.1408		0 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Thurs 4 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Fine 12* PM- Fine 22*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
GDL deployment x 6 panels approx. 860m2 installed Restoration soils placed over GDL approx. 400m3			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi	8 Hrs.		
KOMATSU PC210Lc	0 Hrs.		
Cat D6 Dozer Gravelle CT39	8 Hrs.		
Volvo A30G ADT Jones Bros.1489	6 Hrs.		
Volvo A30G ADT Jones Bros.1408	6 Hrs.		
CAT CS66B Padfoot Roller	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	<i>Rob Sleeman</i>
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Daily Site Record Sheet

Date:	Fri 5 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Cloudy 12* PM- Overcast 20*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
GDL deployment 10 x panels approx. 420m2 installed Restoration soils placed over GDL approx. 600m3			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi	8 Hrs.		
KOMATSU PC210Lc	8 Hrs.		
Cat D6 Dozer Gravelle CT39	8 Hrs.		
Volvo A30G ADT Jones Bros.1489	6 Hrs.		
Volvo A30G ADT Jones Bros.1408	6 Hrs.		
CAT CS66B Padfoot Roller	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	<i>R. J. Sleeman</i>
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Daily Site Record Sheet

Date:	Sat 6 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Overcast 12* PM- Overcast 19*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
GDL deployment 24 x panels approx. 2200m2 installed 16 x pipe boot installed 33m tie-in weld Started rain flap			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi	0 Hrs.		
KOMATSU PC210Lc	10 Hrs.		
Cat D6 Dozer Gravelle CT39	0 Hrs.		
Volvo A30G ADT Jones Bros.1489	0 Hrs.		
Volvo A30G ADT Jones Bros.1408	0 Hrs.		
CAT CS66B Padfoot Roller	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Sun 7 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Overcast 12* PM- Overcast 19*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Completed rain flaps			
List of Plant		Hours of Operation	Comments
KOMATSU PC360LCi		0 Hrs.	
KOMATSU PC210Lc		10 Hrs.	
Cat D6 Dozer Gravelle CT39		0 Hrs.	
Volvo A30G ADT Jones Bros.1489		0 Hrs.	
Volvo A30G ADT Jones Bros.1408		0 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	<i>Rob Sleeman</i>
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Daily Site Record Sheet

Date:	Mon 8 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 12* PM- Dry 23*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Loading, transporting and placing restoration soils to GDL			
List of Plant		Hours of Operation	Comments
KOMATSU PC360LCi Excavator		7 Hrs.	
KOMATSU PC210Lc		0 Hrs.	
Cat D6 Dozer Gravelle CT39		7 Hrs.	
Volvo A30G ADT Jones Bros.1489 (Parked)		0 Hrs.	
Volvo A30G ADT Jones Bros.1408		7 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Tue 9 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 14* PM- Dry 24*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Loading, transporting and placing soils onto GDL			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi	7 Hrs.		
KOMATSU PC210Lc	0 Hrs.		
Cat D6 Dozer Gravelle CT39	7 Hrs.		
Volvo A30G ADT Jones Bros.1489	0 Hrs.		
Volvo A30G ADT Jones Bros.1408	7 Hrs.		
CAT CS66B Padfoot Roller	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	<i>Rob Sleeman</i>
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Daily Site Record Sheet

Date:	Wed 10 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 14* PM- Dry 24*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Loading, transporting and placing soils onto GDL D4 shear vane average 76			
List of Plant	Hours of Operation	Comments	
KOMATSU PC360LCi VOLVO EC380L KOMATSU PC210Lc Cat D6 Dozer Gravelle CT39 Volvo A30G ADT Jones Bros.1489 Volvo A30G ADT Jones Bros.1408 CAT CS66B Padfoot Roller	3 Hrs. 6.5 Hrs. 11 Hrs. 11 Hrs. 7 Hrs. 0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Thurs 11 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 14* PM- Dry 24*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Loading, transporting and placing soils onto GDL C4 shear vane average 82			
List of Plant		Hours of Operation	Comments
VOLVO EC380L		11 Hrs.	
KOMATSU PC210Lc		11 Hrs.	
Cat D6 Dozer Gravelle CT39		11 Hrs.	
Volvo A30G ADT Jones Bros.1489		9 Hrs.	
Volvo A30G ADT Jones Bros.1408		9 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Fri 12 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 14* PM- Rain 17*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	
Sealing stockpiles due to rain	
List of Plant	Hours of Operation
VOLVO EC380L	4 Hrs.
KOMATSU PC210Lc	4 Hrs.
Cat D6 Dozer Gravelle CT39	4 Hrs.
Volvo A30G ADT Jones Bros.1489	0 Hrs.
Volvo A30G ADT Jones Bros.1408	0 Hrs.
CAT CS66B Padfoot Roller	0 Hrs.

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Mon 15 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 14* PM- Dry 24*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Loading, transporting and placing soils onto GDL Kom210 trimming restoration soils C3 shear vane average 68			
List of Plant	Hours of Operation	Comments	
VOLVO EC380L	11 Hrs.		
KOMATSU PC210Lc	11 Hrs.		
Cat D6 Dozer Gravelle CT39	11 Hrs.		
Volvo A30G ADT Jones Bros.1489	9 Hrs.		
Volvo A30G ADT Jones Bros.1408	9 Hrs.		
CAT CS66B Padfoot Roller	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Tue 16 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Dry 14* PM- Dry 24*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Loading, transporting and placing soils onto GDL Komatsu PC210 trimming restoration soils C2 shear vane average 80 C1 shear vane average 74.25			
List of Plant	Hours of Operation	Comments	
VOLVO EC380L	11 Hrs.		
KOMATSU PC210Lc	11 Hrs.		
Cat D6 Dozer Gravelle CT39	11 Hrs.		
Volvo A30G ADT Jones Bros.1489	11 Hrs.		
Volvo A30G ADT Jones Bros.1408	11 Hrs.		
CAT CS66B Padfoot Roller	0 Hrs.		

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Wed 17 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 14* Rain- Dry 24*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

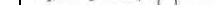
Visitors to Site:			
Sealing stockpiles and haul routes			



Daily Site Record Sheet

Date:	Thurs 18 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Rain 14* PM-Rain 18*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:																			
Sealing stockpiles and haul routes																			
<table border="1"> <thead> <tr> <th>List of Plant</th> <th>Hours of Operation</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>VOLVO EC380L</td> <td>0 Hrs.</td> <td rowspan="5"></td> </tr> <tr> <td>KOMATSU PC210Lc</td> <td>0 Hrs.</td> </tr> <tr> <td>Cat D6 Dozer Gravelle CT39</td> <td>0 Hrs.</td> </tr> <tr> <td>Volvo A30G ADT Jones Bros.1489</td> <td>0 Hrs.</td> </tr> <tr> <td>Volvo A30G ADT Jones Bros.1408</td> <td>0 Hrs.</td> </tr> <tr> <td>CAT CS66B Padfoot Roller</td> <td>0 Hrs.</td> <td></td> </tr> </tbody> </table>			List of Plant	Hours of Operation	Comments	VOLVO EC380L	0 Hrs.		KOMATSU PC210Lc	0 Hrs.	Cat D6 Dozer Gravelle CT39	0 Hrs.	Volvo A30G ADT Jones Bros.1489	0 Hrs.	Volvo A30G ADT Jones Bros.1408	0 Hrs.	CAT CS66B Padfoot Roller	0 Hrs.	
List of Plant	Hours of Operation	Comments																	
VOLVO EC380L	0 Hrs.																		
KOMATSU PC210Lc	0 Hrs.																		
Cat D6 Dozer Gravelle CT39	0 Hrs.																		
Volvo A30G ADT Jones Bros.1489	0 Hrs.																		
Volvo A30G ADT Jones Bros.1408	0 Hrs.																		
CAT CS66B Padfoot Roller	0 Hrs.																		

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Fri 19 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 14* PM-Overcast 18*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Progress meeting, snagging on capped area noted as edge tidy and final walkover for any oversize/organic materials			
List of Plant		Hours of Operation	Comments
VOLVO EC380L		0 Hrs.	
KOMATSU PC210Lc		0 Hrs.	
Cat D6 Dozer Gravelle CT39		0 Hrs.	
Volvo A30G ADT Jones Bros.1489		0 Hrs.	
Volvo A30G ADT Jones Bros.1408		0 Hrs.	
CAT CS66B Padfoot Roller		0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Mon 22 nd August 2022	Site:	Pwllfawatkin
Weather:	AM-Rain 12* PM-Rain 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:		
No works due to inclement weather		
List of Plant	Hours of Operation	Comments
VOLVO EC380L	0 Hrs.	
KOMATSU PC210Lc	0 Hrs.	
Cat D6 Dozer Gravelle CT39	0 Hrs.	
Volvo A30G ADT Jones Bros.1489	0 Hrs.	
Volvo A30G ADT Jones Bros.1408	0 Hrs.	
CAT CS66B Padfoot Roller	0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Tue 23 rd August 2022	Site:	Pwllfawatkin
Weather:	AM-Rain 12* PM-Rain 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:	
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No works due to inclement weather

List of Plant	Hours of Operation	Comments
VOLVO EC380L	0 Hrs.	
KOMATSU PC210Lc	0 Hrs.	
Cat D6 Dozer Gravelle CT39	0 Hrs.	
Volvo A30G ADT Jones Bros.1489	0 Hrs.	
CAT CS66B Padfoot Roller	0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Wed 24 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Showers 12* PM-Overcast 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:		
No works due to inclement weather		
List of Plant	Hours of Operation	Comments
VOLVO EC380L KOMATSU PC210Lc Excavator	0 Hrs. 0 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Thurs 25 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Overcast 12* PM-Fine 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:		
Trimming restoration soils and removal of any oversize		
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Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Fri 26 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Overcast 12* PM-Fine 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:			
Trimming restoration soils and removal of any oversize completed Installation of drainage channels			
List of Plant		Hours of Operation	Comments
VOLVO EC380L KOMATSU PC210Lc		0 Hrs. 11 Hrs.	

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Tue 30 th August 2022	Site:	Pwllfawatkin
Weather:	AM-Fine 12* PM-Fine 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

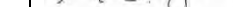
Visitors to Site:			
Installation of drainage to restoration soils completed			



Daily Site Record Sheet

Date:	Wed 31 st August 2022	Site:	Pwllfawatkin
Weather:	AM-Fine 12* PM-Fine 16*	CQA Plan Ref:	WR7842/FCC479-SW-2013-24&2016-07

Visitors to Site:		
Drainage channel for rain flap and removal of stone pile by site ops		
List of Plant	Hours of Operation	Comments

Prepared by:	Rob Sleeman	Signed:	
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Daily Site Record Sheet

Date:	Thursday 29/06/2023	Site:	Pwllfawatkin
Weather:	AM: Cloudy and Dry. PM: Intermittent light rain showers.	CQA Plan Ref:	WR7842/02 Rev 1

Visitors to Site:	None
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Soils Butress Along The Base Of The Southern Slope Of Landfill:

Assess the method statement for construction of the Butress.

- Engineered CLAY material excavated from the assigned stockpile and placed on butress area.
- Placed engineered CLAY material adequately compacted in accordance to spec.
- Ensured all non-compliant material areas were remediated prior to progressing with works.
- Photographs taken to capture works undertaken.
- All works conducted in accordance to specification.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 18:00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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Daily Site Record Sheet

Date:	Friday 30/06/2023	Site:	Pwllfawatkin
Weather:	AM: Heavy Rain Showers PM: Heavy Rain Showers.	CQA Plan Ref:	WR7842/02 Rev 1

Visitors to Site:	None
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Soils Buttress Along The Base Of The Southern Slope Of Landfill.

No works conducted due to persistent heavy rain showers.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 13.00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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Daily Site Record Sheet

Date:	Monday 03/06/2023	Site:	Pwllfawatkin
Weather:	AM: Cloudy and Dry. PM: Intermittent light rain showers.	CQA Plan Ref:	WR7842/02 Rev 1

Visitors to Site:	None
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Soils Buttress Along The Base Of The Southern Slope Of Landfill:

- Engineered CLAY material excavated from the assigned stockpile and placed on buttress area.
- Placed engineered CLAY material adequately compacted in accordance to spec.
- Ensured all non-compliant areas were adequately remediated and non-conformance materials /debris, (wood pieces, metal rods, cobble /boulder gravels) removed prior to progressing with works.
- Photographs taken to capture works undertaken.
- All works conducted in accordance to specification.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 18:00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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Daily Site Record Sheet

Date:	Tuesday 04/06/2023	Site:	Pwllfawatkin
Weather:	AM/PM: Intermittent rain showers.	CQA Plan Ref:	WR7842/02 Rev 1

Visitors to Site:	None
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Location: Buttress area along the southern toe section of existing landfill cap.

- The V380 excavator loaded the A30 dump trucks with clay material for the buttress.
- The A30 dump trucks then transported the clay material to the front of the D6 bulldozer.
- The D6 bulldozer spread the clay material in 300 mm layers.
- The sheepsfoot roller compacted the clay layers to spec.
- HSV (hand shear vane) test conducted on compacted CLAY liner.
- The PC210 excavator worked with the liners to remove and properly dispose of the cut-out existing geomembrane rain flaps.
- JB engineer worked with the D6 operator to give design levels.
- CQA engineer ensured all non-compliant areas were adequately remediated and non-conformance materials /debris (wood pieces, metal rods, cobble /boulder gravels) removed prior to progressing with works.
- Photographs taken to capture works undertaken.
- All works conducted in accordance to specification.

Location: Southern lower slope of landfill cap.

Assess and approve the method statements for the GDL installation works.

- Cut out rain flaps from existing geomembrane.
- Properly removed and disposed of cut-out rain flaps.
- Stripped off existing geomembrane liner at south and southwestern slope of landfill cap.
- The stripped off geomembrane liner was properly removed and disposed of in accordance to spec.

The cut-out rain flaps were properly removed and disposed of accordingly.

The removal of the rain flaps and the stripping off of the existing geomembrane liner are in the preparation for the installation of the GDL.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 18:00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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Daily Site Record Sheet

Date:	Wednesday 05/06/2023	Site:	Pwllfawatkin
Weather:	AM: Cloudy & Dry PM: Sunny	CQA Plan Ref:	WR7842/02 R1 & FCC479SW2016-07

Visitors to Site:	None
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Location: Buttress area along the southern toe section of existing landfill cap.

- The V380 excavator loaded the A30 dump trucks with clay material for the buttress.
- The A30 dump trucks then transported the clay material to the front of the D6 bulldozer.
- The D6 bulldozer spread the clay material in 300 mm layers.
- The sheepsfoot roller compacted the clay layers to spec.
- HSV (hand shear vane) test conducted on compacted CLAY liner.
- The PC210 excavator worked with the liners to remove and properly dispose of the cut-out existing geomembrane rain flats..
- JB engineer worked with the D6 operator to give design levels.
- CQA engineer ensured all non-compliant areas were adequately remediated and non-conformance materials /debris (wood pieces, metal rods, cobble /boulder gravels) removed prior to progressing with works.
- Photographs taken to capture works undertaken.
- All works conducted in accordance to specification.

Location: Southern slope of landfill cap.

- Cut out rain flap from existing geomembrane.
- Properly removed and disposed of cut-out rain flaps.
- Replace rain flap on southern slope to facilitate the diversion works.
- The stripped off geomembrane liner was properly removed and disposed of in accordance to spec.
- Liner technicians stone picked southeastern flank of cap in preparation of GDL Geomembrane installation works.

The cut-out rain flats were properly removed and disposed of accordingly.

The removal of the rain flaps and the stripping off of the existing geomembrane liner are in the preparation for the installation of the GDL.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 18:00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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Daily Site Record Sheet

Date:	Thursday 06/06/2023	Site:	Pwllfawatkin
Weather:	AM: Rain PM: Cloudy and dry	CQA Plan Ref:	WR7842/02 R1 & FCC479SW2016-07

Visitors to Site:	None
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Location: Buttress area along the southern toe section of existing landfill cap.

- The V380 excavator loaded the A30 dump trucks with clay material for the buttress.
- The A30 dump trucks then transported the clay material to the front of the D6 bulldozer.
- The D6 bulldozer spread the clay material in 300 mm layers.
- JB engineer worked with the D6 operator to give design levels.
- The sheepsfoot roller compacted the clay layers to spec.
- HSV (hand shear vane) test conducted on compacted CLAY liner.
- The PC210 excavator worked with the liners to remove and properly dispose of the cut-out existing geomembrane rain flats..
- Anchor trench dug in preparation for GDL and Geomembrane installation works
- CQA engineer ensured all non-compliant areas were adequately remediated and non-conformance materials /debris (wood pieces, metal rods, cobble /boulder gravels) removed prior to progressing with works.
- Photographs taken to capture works undertaken.
- All works conducted in accordance to specification.

Location: Southern slope of landfill cap.

- Cut out rain flaps from existing geomembrane.
- Properly removed and disposed of cut-out rain flaps.
- Southeastern flank stone picked by liner technicians in preparation for GDL Geomembrane installation works.
- Anchor trench dug in preparation for GDL and Geomembrane installation works.
- Extract 4 x redundant gas wells at the lower section of the southern slope.

The cut-out rain flaps were properly removed and disposed of accordingly.

Anchor trench dug along the southeastern flank of the cap in preparation for GDL & Geomembrane installation works.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 19:00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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Daily Site Record Sheet

Date:	Friday 07/06/2023	Site:	Pwllfawatkin
Weather:	AM: Cloudy and dry. PM: Sunny Intervals.	CQA Plan Ref:	WR7842/02 Rev 1 & FCC 479 SW 2016 - 07

Visitors to Site:	None
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Location: Buttress area along the southern toe section of existing landfill cap.

- The V380 excavator loaded the A30 dump trucks with clay material for the buttress.
- The A30 dump trucks then transported the clay material to the front of the D6 bulldozer.
- The D6 bulldozer spread the clay material in 300 mm layers.
- JB engineer worked with the D6 operator to give design levels.
- The sheepsfoot roller compacted the clay layers to spec.
- HSV (hand shear vane) test conducted on compacted CLAY liner.
- Regulating layer prepped on southeastern slope in preparation for GDL / Geomembrane installation works.
- The PC210 excavator worked with the liners to assist with the installation of GDL panels across the southern lower slope.
- Anchor trench excavated / dug along the toe of the south and southeastern flank of the cap area.
- 1m thick restoration layer cover placed over installed 10 x GDL panels.
- CQA engineer ensured all non-compliant areas were adequately remediated and non-conformance materials /debris (wood pieces, metal rods, cobble /boulder gravels) removed prior to progressing with works.
- Photographs taken to capture works undertaken.
- All works conducted in accordance to specification.

Location: Southern slope of landfill cap.

- Southeastern flank stone picked by liner technicians in preparation for GDL installation works.
- GDL installed across the southern lower slope. GDL panel's referenced P1 - P10.
- 1m thick restoration layer cover placed over installed 10 x GDL panels.

Installed GDL panels were heat bonded at 300mm overlap.

List of Plant	Hours of Operation	Comments
1 x 360 Volvo Digger 1 x CAT D6 Dozer 1 x Volvo A30 Dumper 1 x Bell 30 Dumper 1 x Hitachi 210 Excavator 1 x Smooth Roller 1 x Pad / Sheep foot Roller	07:00 – 17:00	

Prepared by:	Stanley Ugohuckwu	Signed:	
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