ENVIROARM LIMITED

H. EVASON & CO.

DORRINGTON QUARRY LANDFILL SITE

Construction Quality Assurance Validation Report
Installation of Groundwater and Gas Monitoring Boreholes

May 2020

Ref: ARM/CHE/CQAVR/BHDQ/1.00/2020

DORRINGTON QUARRY LANDFILL SITE

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1.1 General

Enviroarm Limited were requested by H Evason & Co Limited to carry out Construction Quality Assurance monitoring services during the installation of the gas monitoring boreholes and the dual gas and groundwater monitoring borehole around the Dorrington Quarry landfill site to update the existing monitoring arrangements and to take account of the future variation to expand the permit boundary to allow for the reworking of historically deposited inert wastes and revised new landfilling extension area, and the works were carried out under full time Construction Quality Assurance supervision.

A detailed drilling log records were taken during the works.

The gas monitoring boreholes and the dual gas and groundwater monitoring bore were drilled and installed by Hughes Drilling as per the instructions issued by H Evasion & Co and in accordance with the approved CQA Plan Ref EL/DQ/BHCQAP3.00/2019.

The boreholes had detailed drilling and installation logs completed by the engineer.

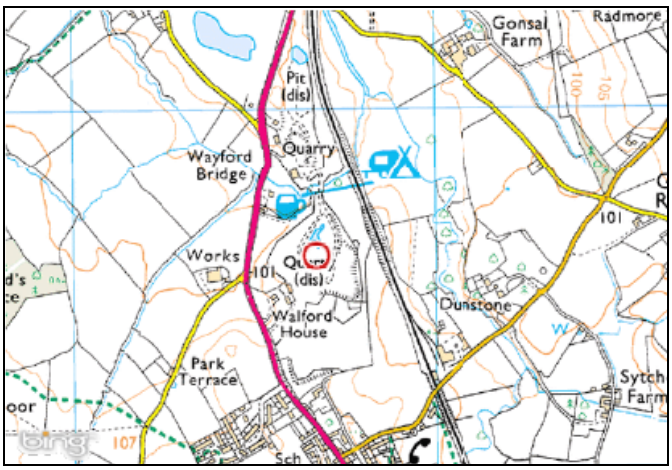
The drilling, inspection and sealing works were undertaken on the 22nd October and 28th October 2019. This report documents all CQA activities implemented during the drilling and construction works.

1.2 Site Setting and Location

The currently permitted landfill and quarry comprises an area some 14,100m^2 (1.4 hectares), which is being worked as a quarry for the final sand deposits and also operated as an inert recycling facility. The site has a current capacity of 9,858m^3 but there is a large amount of recycled and processable material within the current void. The site is engineering of Phase 1 was completed in September 2009 and became operational during 2010 following approval for Phase 1 by the Environment Agency.

Dorrington Quarry Landfill was first permitted to landfill under a Waste Management Licence issued by Shropshire County Council in 1998, Reference A25/30/SL/248.

Figure 1: Site Location



The quarry is located in glaciofluvial sands lying above the bedrock Halesowen Formation clays of the Westphalian D from the upper coal measures of Carboniferous Period.

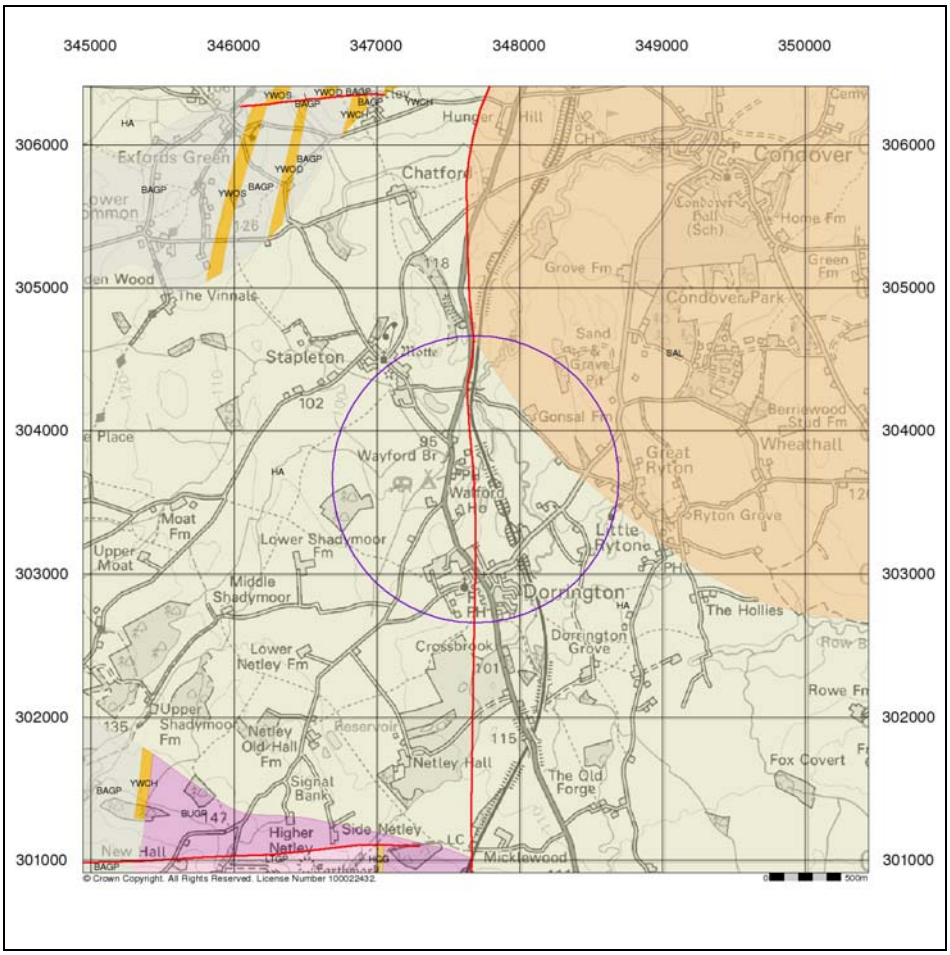
Figure 2 shows and exposure of the glaciofluvial sands exposed around the site.

Figure 3 shows the bedrock geology. The nearest fault is the Church Stretton Fault which runs through the middle of the site.

Resting on the Halesowen Formation is a glaciofluvial sand deposit which varies in depth. Thickness of the glacial sand increases to the south. The glacial sand and gravel of the Devensian period is shown on the Superficial Map as Figure 4.

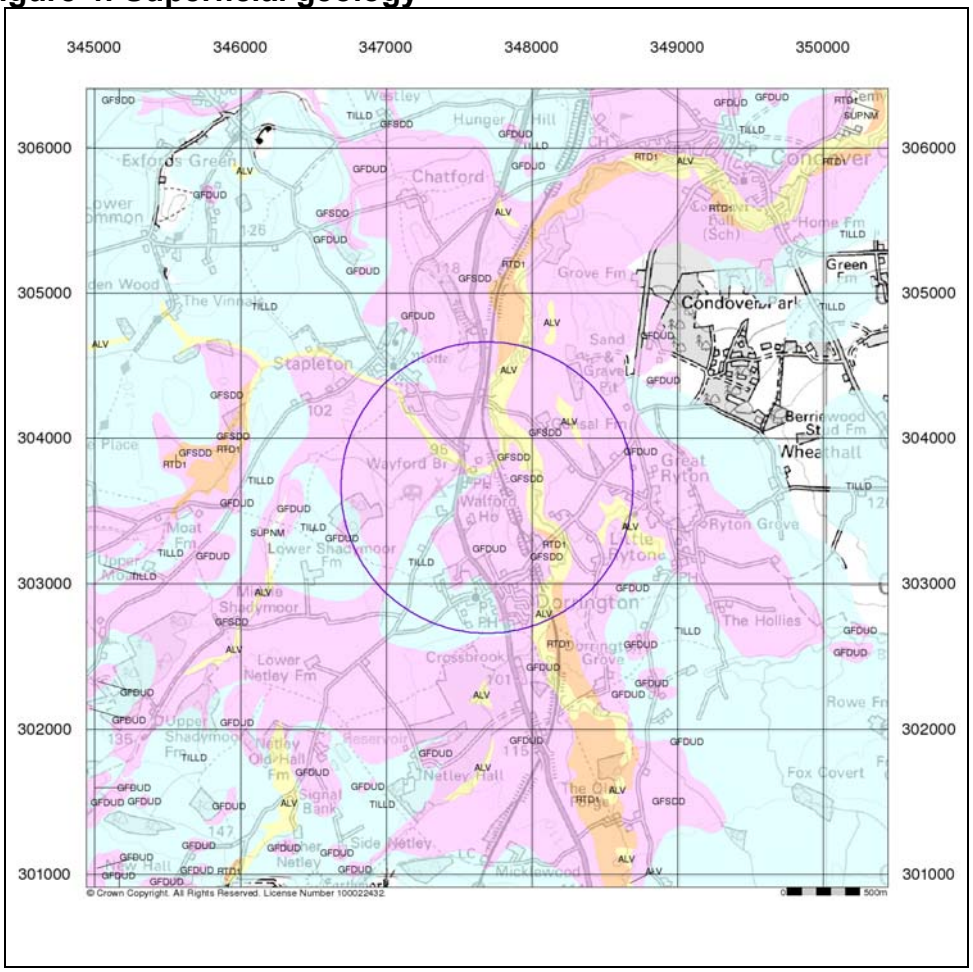
Figure 2: View of exposed glaciofluvial deposits on edge of site

Figure 3: Bedrock geology



Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	SAL	Salop Formation	Mudstone, Sandstone and Conglomerate	Early Permian - Westphalian D
	HA	Halesowen Formation	Mudstone, Siltstone and Sandstone	Westphalian D - Westphalian D
	BAGP	Bayston-Oakswood Formation	Conglomerate and [Subequal/Subordinate] Sandstone, Interbedded	Neoproterozoic III - Neoproterozoic III
	HCG	Huckster Conglomerate Member	Conglomerate	Neoproterozoic III - Neoproterozoic III
	BUGP	Burway Formation	Sandstone and Mudstone	Neoproterozoic III - Neoproterozoic III
	YWOD	Darnford Conglomerate Member	Conglomerate	Neoproterozoic III - Neoproterozoic III
	YWOS	Stanbatch Conglomerate Member	Conglomerate	Neoproterozoic III - Neoproterozoic III
	YWCH	Haughmond Conglomerate Member	Conglomerate	Neoproterozoic III - Neoproterozoic III

Figure 4: Superficial geology



Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Flandrian
	GFSDD	Glaciofluvial Sheet Deposits, Devensian	Sand and Gravel	Devensian - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Devensian - Devensian
	TILLD	Till, Devensian	Diamicton	Devensian - Devensian
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Quaternary - Quaternary
	SUPNM	Superficial Theme Not Mapped [For Digital Map Use Only]	Unknown/Unclassified Entry	Not Applicable - Not Applicable

The site has been worked for the sand to a depth of 95-96m AOD. The sand is excavated by use of hydraulic excavators and wheeled loading shovels.

1.3 Project Team

The project team comprised of:

- H Evason & Co. Ltd — Client/Operator
- Enviroarm Limited — CQA Engineer
- Hughes Drilling — Specialist Drilling Contractor

1.4 Ground Conditions

The groundwater and gas monitoring boreholes are located around the site and have been drilled in open fields around the perimeter of the landfill.

1.5 Groundwater Borehole Installations

The new groundwater monitoring boreholes were drilled in the position identified as per the location plan DQBH1.

1.6 Sealing Works

The material used for the sealing works was a bentonite grout mix, which was wetted up in the hole to ensure full hydration of the bentonite.

Sealing works were carried out in accordance with the CQA Plan procedures prior to commencement of the works.

Figure 5: View of bentonite pellets used for sealing works

1.7 Observations

The replacement groundwater monitoring boreholes had 60mm O/D perforated screen installed and the borehole was drilled 5 metres into the groundwater. At the casing joint 60mm O/D solid pipe installed and brought to a point above ground level with a valve fitted in each borehole for gas monitoring.

Figure 6: View of MGS 60mm O/D screen casing

Figure 7:60mm O/D plain casing

The screen response zone was filled with a clean 10mm clean washed aggregate annulus, see Figure 8 and a filter media was then used as backfill up to the bentonite seal level as shown at Figure 9 and then backfilled with arisings above the bentonite seal.

Figure 8: View of gravel annulus

The drilling of the boreholes was carried out using a Soilmec SM8G rotary drilling rig, see Figure 10. Details of the drill rig are presented at Appendix A.

Figure 9: Backfill filter media placed above gravel

Figure 10: Soilmec SM-8G drilling and returns visible

Daily log sheets were completed by the engineer and are presented at Appendix B.

Appendix C includes the drillers installation log and Appendix D is the CQA Engineers logs.

The actual drill depths and installations were as those set out in the CQA Plan and slight location alterations as summarised in Table 1 below.

Table 1: Actual drill depths

BH No	BH Elevation (m AOD)	Easting	Northing	Ground Level (m AOD)	Actual Basal Level of BH (m)	Actual Drill Depth (m)	Actual Screened Casing (m)	Actual Solid Casing including stick up	Depth of gravel pack(m)	Depth of Bentonite Seal(m)
PMP4	107.33	347796.45	303466.95	107.33	93	15.33	13	3	13	2
PMP5	101.38	347698.61	303472.93	101.38	87	14.38	12	3	12	10
PMP6	112.78	347592.07	303519.56	112.78	93	19.78	18	3	18	2
PMP7	104.66	347560.42	303625.81	104.66	93	12.66	10	3	10	2

1.8 CONCLUSIONS

The new gas monitoring boreholes PMP4, PMP6, and PMP7 and the dual groundwater and gas monitoring borehole, PMP5, have been installed at the location shown on Drawing DQBH1. The gas and dual gas and groundwater monitoring boreholes have been constructed in accordance with the Construction Quality Assurance Plan prepared by Enviroarm Limited and has been drilled top the depths set out in the Plan.

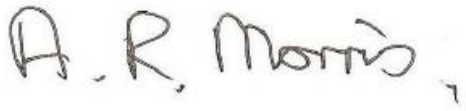
The new monitoring boreholes have been installed as per the requirements of the Permit.

The new groundwater monitoring borehole is fit for purpose and the well has been sealed in accordance with the Construction Quality Assurance Plan.

The activities of the Enviroarm CQA Engineer ensured that the boreholes were installed to the required depth and specification.

The well was drilled and installed with the correct seal to ensure that the well does not allow for surface water to enter or to act as a potential leachate migration pathway.

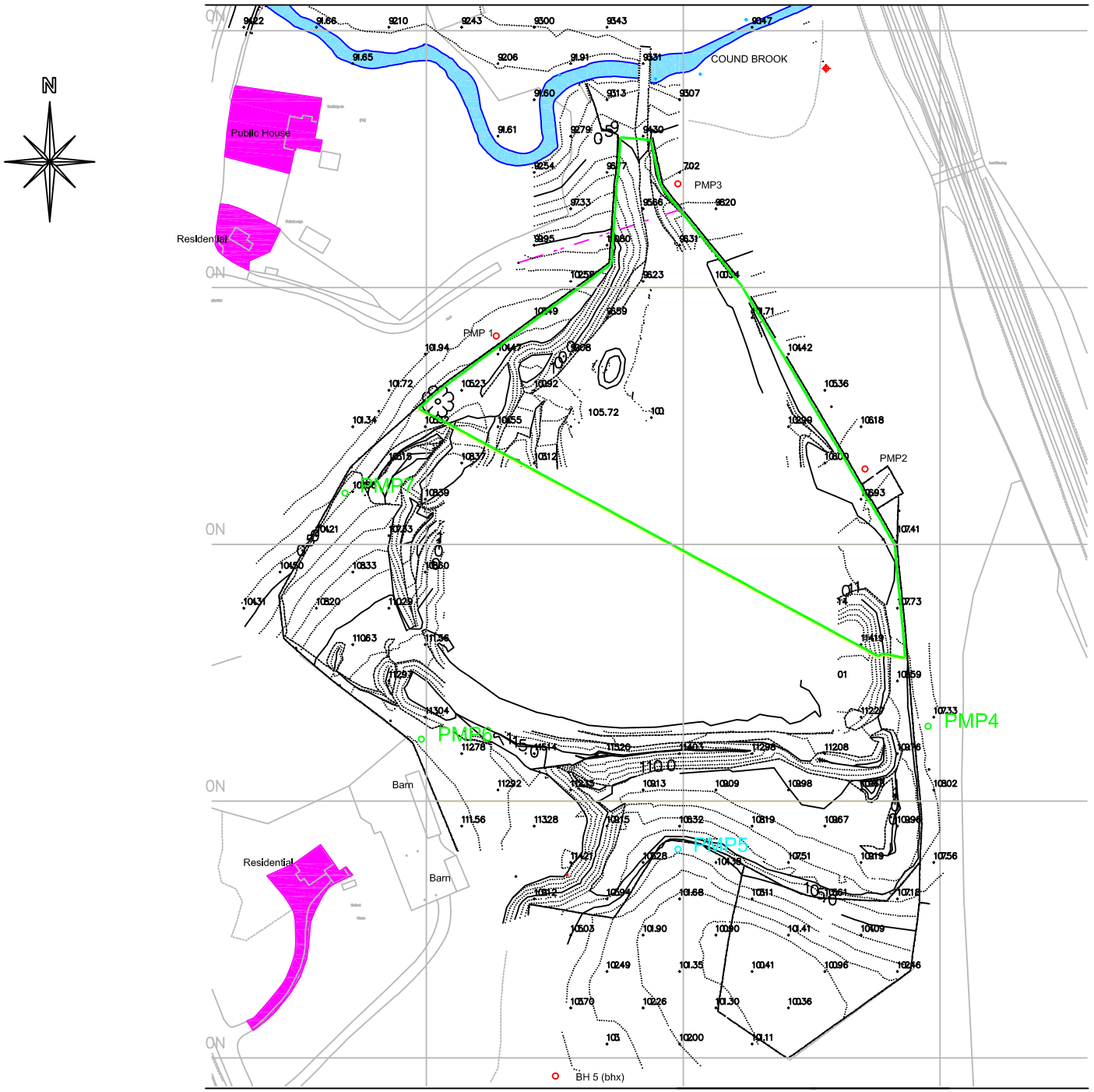
For ENVIROARM LIMITED



A.R.Morris BSc, MSc, CGeol,FGS, CEnv, MCIWM

Date: *07th May 2020*

DRAWING



The Contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points prior to the commencement of works.

This drawing must be read with and checked against any structural or other specialist drawings provided by the client.

The Contractor is to comply in all respects with the current Building Regulations and CDM regulations whether or not specifically stated on these drawings.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support the proposed works, including drainage, depicted must be investigated by the contractor, suitable methods of foundation be provided and any suspect contaminants on or within the ground covered by the works be further investigated by a suitable expert.

Notes

- EXISTING GAS MONITORING BOREHOLES
- PROPOSED NEW GAS MONITORING BOREHOLE LOCATIONS
- PROPOSED NEW GROUNDWATER MONITORING BOREHOLE

ENVIROARM LIMITED

Enviroarm Ltd.
597, Walsall Road, Great Wyrley, Walsall. WS6 6AE.
Tel: 01922-412209 Mobile 07801980984
email: enviroarm@btconnect.com

Client: CH EVASON

Project: DORRINGTON QUARRY

Title: NEW BOREHOLE LOCATION PLAN

Date : JANUARY 2019 | Scales:

Drawn: ARH | Drg No. DQBH 1 | Rev. 1

Checked: ARH

APPENDIX A:

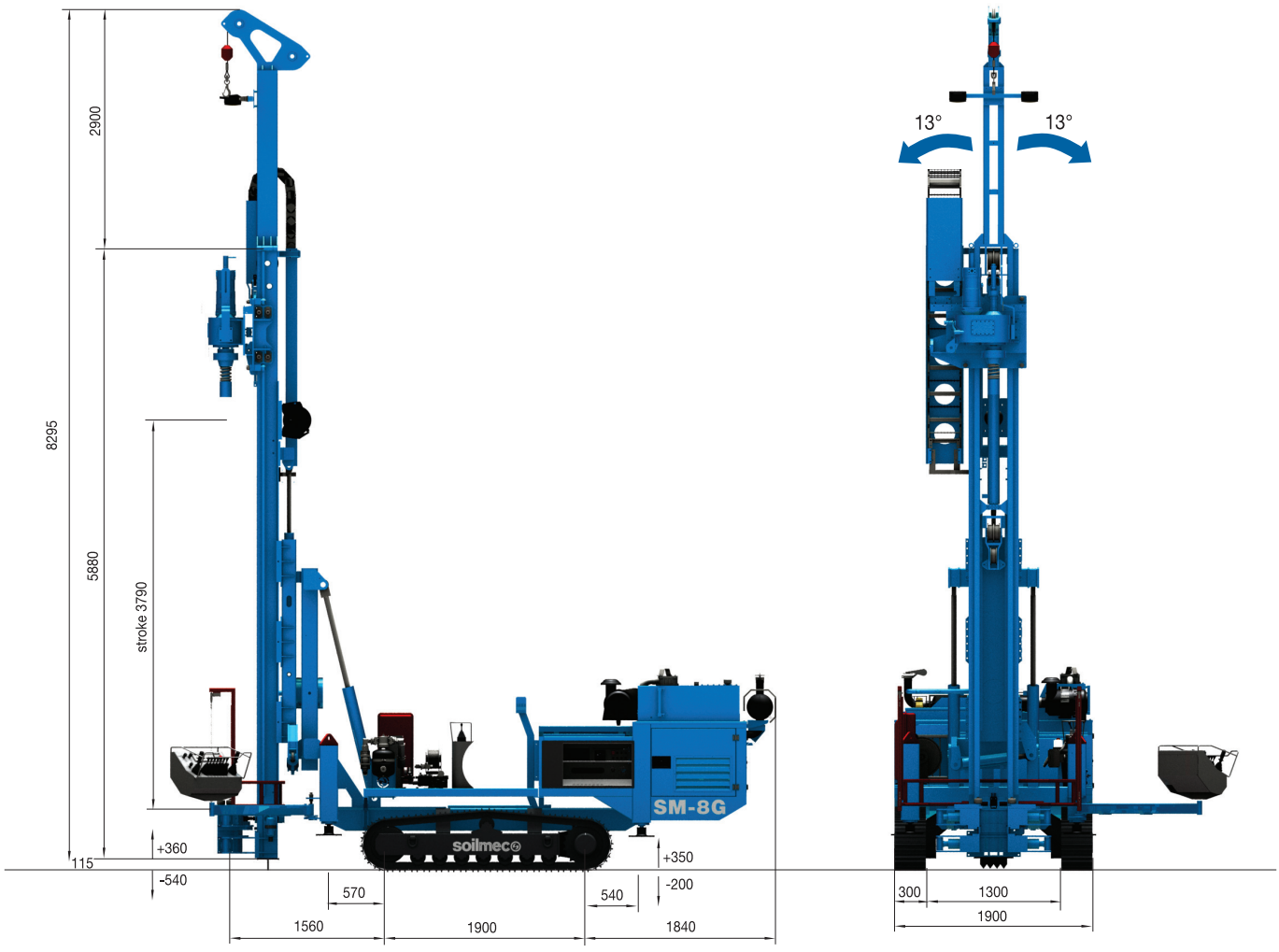
Drill Rig Specification

Hydraulic Microdrilling Rig

SM-8G

soilmec
Drilling and Foundation Equipment

SM-8G APPLICATIONS



Hoist & Feed system	Cylinder	
- Feed stroke	**3750 mm**	*149.6 in*
- Rod lenght type (c/w one rotary head)	**3 m**	*9.8 ft*
- Max hoist pull/feed force	**73 / 100 kN**	*16411 / 22481 lbf*

Rotary head range	HR9G	*HR9G*
- Gear box type	**6 gears**	*6 gears*
- Max torque	**820 daNm**	*6048 lbf*ft*
- Max drilling speed	**926 rpm**	*926 rpm*
- Inner passage	**90 mm**	*3.5 in*

SM-8G TECHNICAL DATA SHEET

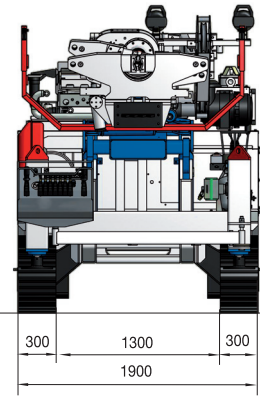
Operating weight (approx.)	**8900 kg**	*19621 lb*
Undercarriage		
- Track shoe width	**300 mm**	*11.8 in*
- Wheel base (centre idler to centre sprocket)	**1900 mm**	*74.8 in*
- Overall length	**2424 mm**	*95.4 in*
- Overall width (not extendable crawler)	**1900 mm**	*74.8 in*
- Travelling speed	**1,3 km/h**	*0.81 mph*
- Max climbing capacity (gradeability)	**66 % (30°)**	*66 % (30°)*
- Average ground pressure	**0,070 MPa**	*11.3 psi*
- Ground stabilizers	**n° 2 fixed with inclined arm on front + n° 2 fixed on rear**	*n° 2 fixed with inclined arm on front + n° 2 fixed on rear*
Power pack		
- Diesel Engine make and model	**DEUTZ TCD 2012 L04**	*DEUTZ TCD 2012 L04*
- Emission certification	**EU 97/68 - 2004/06 Step IIIA**	*EU 97/68 - 2004/06 Step IIIA*
- Diesel Engine power rating	**85 kW @ 2400 rpm**	*114 HP @ 2400 rpm*
- Fuel tank capacity	**140 l**	*37 US gal*
- Sound power level and sound pressure level	**LwA 105 - LpA 74 dB(A)**	*LwA 105 - LpA 74 dB(A)*
Hydraulic system		
- Main pumps: variable axial pumps	**150 l/min**	*39.6 US gal/min*
- Set pressure main pumps	**28 MPa**	*4061 psi*
- Auxiliary pumps: gear pumps	**86 + 44+ 28 + 22 l/min**	*22.7 + 11.6 + 7.4 + 5.8 US gal/min*
- Hydraulic oil tank capacity	**270 l**	*71.3 US gal*
Clamp & hydraulic joint breaker		
- Nominal size	**60 - 260 mm**	*2.4 - 10.2 in*
- Maximum clamping force	**125 kN**	*28101 lbf*
- Maximum breaking torque	**4100 daNm**	*30240 lbf*ft*
Service winch		
- Type	**controlled descent**	*controlled descent*
- 1st layer line pull	**20 kN**	*4496 lbf*
- 1st layer nominal rope speed	**46 m/min**	*151 ft/min*
- Rope diameter	**10 mm**	*0.39 in*
Jet Grouting Version		
- Rod diameter	**90 mm**	*12 m*
- Max treatment depthin single passage	**12 m**	*472.4 in*
Mast side tilting by cylinder on mast	**3000 mm**	*118.1 in*
	13°	*13°*

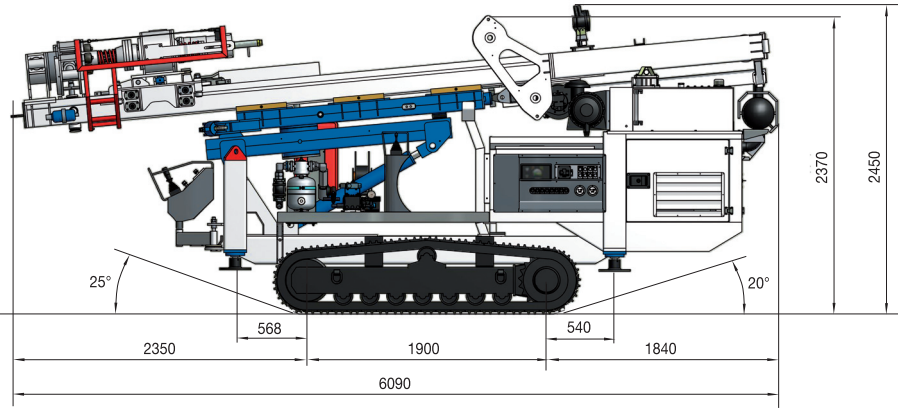
STANDARD EQUIPMENT

- Modular mast for 3800 mm stroke
- Fixed kinematic mechanism c/w side tilting
- Clamp and breaker 60-260 mm
- Prearrangement for mud pump
- Inline DTH lubricator
- Hydraulic control board for drilling operations
- Hydraulic control board for tramming
- Rotary cradle side shifting
- Service winch
- Triplex pump for foam

OPTIONAL EQUIPMENT

- Wire line winch on board
- Triplex pump for mud and water on board
- SPT device
- Wide range of rotary heads
- Top hammer kit





Transport configuration		
Transport width	**1900 mm**	*75 in*
Transport height	**2450 mm**	*96.5 in*
Transport length	**6090 mm**	*239.8 in*
Transport weight	**8900 kg**	*19621 lb*

APPENDIX B:

CQA Engineers Daily Logs

ENVIROARM LTD

DAILY SITE RECORD

Site: Dorrington Quarry Phase or Cell:	Date of Visit: Tuesday 22nd October 2019	Time on Site: 07:00 Rain off: Yes/**No**	Time Off Site: 17:00
Personnel/Staff: A Morris M Evason Hughes Drillers	Site Conditions/Weather: Sun, 10C Previous Night: Dry	Equipment: Soilmec SM8G Drill Rig Dumper Bowser	
Operations Inspected: Installation of PMP4, PMP5, PMP6, PMP7	Action: All borehole locations agreed with slight variations to original coordinates on map but within 10 metres of original locations. Variations due to ground conditions or vegetative and tree cover		
Comments on Workmanship: All monitoring points drilled using hollow stem augers to agreed depths			
Instructions/Information Issued or Required: as per CQA Plan			
Progress Report *(use additional sheets if necessary)* All boreholes drilled and installed with bentonite. Awaiting to wet up bentonite and install metal headworks.			

Signature: A R Morris

ENVIROARM LTD

DAILY SITE RECORD

Site: Dorrington Quarry Phase or Cell:	Date of Visit: Monday 28th October 2019	Time on Site: 10:00 Rain off: Yes/**No**	Time Off Site: 12:30
Personnel/Staff: A Morris M Evason Hughes Drillers	Site Conditions/Weather: Sun, 9C Previous Night: Dry	Equipment: Pickup	
Operations Inspected: Installation of PMP4, PMP5, PMP6, PMP7	Action: Completion of four boreholes		
Comments on Workmanship: Bentonite pellets wetted up and then cement installed with metal headwork gear and valve fitted on each borehole			
Instructions/Information Issued or Required: as per CQA Plan			
Progress Report *(use additional sheets if necessary)* All boreholes had wetted up bentonite seal and headworks completed as per specification set out in CQA Plan.			

Signature: A R Morris

APPENDIX C:

Contractors Drill Logs

BORE HOLE LOG

Client: Evanson

Site/Location: Dorrington, Shropshire

B.H. No.(s): DMP5 Sheet No: 1 of 4

HUGHES DRILLING

Church Stretton, Shropshire, SY6 6LU.
Tel / Fax. 01694 751251
Email: office@hughesdrilling.co.uk

B.H. Co-ordinates: 347692.61E, 307472.93N

Date Started: 22/10/19 Completed: 28/10/19 Drillers: R. Sanders, M. Hughes

Rig Type: Soilmec PSM 8GT Flush/Additives: N/A

Drill Method: Hollow-Stem Augers Casing Detail/Depth: N/A

In-hole Equip: Augers Others:

SAMPLE INTERVAL

RUN / SAMPLE No.	FROM: O mts	TO:	Mts Drilled	Recovery Mts. Good / Poor etc.

DESCRIPTION OF STRATA/SAMPLE

DRILLERS OBSERVATIONS
Re: Rock Type, B.H. Conditions, Water Strikes etc.

Gas & Water monitoring borehole installed into Devensian Glacial Sands, gravels and clays.

Key:

From:	To:	
0m	15m	Soil
6m	9m	Soil Fine-M Red
9m	10m	Sand Fine-M W/Cobbles Red.
		Clay W/Silt & Gravel Red
10m		Clay W/Angular Pebbles Grey/Blue

Installation details:
12m of Screen
3m of Solid including Sump
12m of gravel pack
0.5m of Sand pack
2m of bentonite Seal
30cm of Concrete.

INSTALLATION DETAILS

TYPE: Piezometer Pipe
SIZE: 50mm
HEADWORKS: Steel Cap

From:	To:	
0m	15m	Soil
6m	9m	Water-Strikes @ 8m
	15m	End of Borehole

BORE HOLE LOG

Client: Evanson

Site/Location: Dorrington, Shropshire

B.H. No.(s): DMP4 Sheet No: 2 of 4

HUGHES DRILLING

Church Stretton, Shropshire, SY6 6LU.
Tel / Fax. 01694 751251
Email: office@hughesdrilling.co.uk

B.H. Co-ordinates: 347996.45E, 303466.96N

Date Started: 22/10/19 Completed: 28/10/19 Drillers: R. Sanders, M Hughes

Rig Type: Seimec PSM SGT Flush/Additives: N/A

Drill Method: Hollow-Stem Augers Casing Detail/Depth: N/A

In-hole Equip: Augers Others:

SAMPLE INTERVAL					DESCRIPTION OF STRATA/SAMPLE	INSTALLATION DETAILS		
RUN / SAMPLE No.	FROM: O mts	TO:	Mts Drilled	Recovery Mts. Good / Poor etc.	DRILLERS OBSERVATIONS Re: Rock Type, B.H. Conditions, Water Strikes etc.	TYPE: Piezometer Pipe SIZE: 4cm HEADWORKS: Steel Cap		
						From:		To:
					Gas Monitoring borehole installed into Devonian Glacial Sands and gravels	0	Soil	30cm
						30cm		
					Key: Soil			8m
					Sand			
					Sand & gravel	8m		11m
					Installation details	11m		
					13m of Screen			
					3m of solid including sheeve up			
					13m of gravel pack			16m
					0.5m of Sand pack		End of borehole	
					2m of bentonite seal			
					30cm of Concrete.			

BORE HOLE LOG

Client: Evanson

Site/Location: Dorrington, Shropshire

B.H. No.(s): PM16 Sheet No: 3 of 4

HUGHES DRILLING

Church Stretton, Shropshire, SY6 6LU.
Tel / Fax. 01694 751251
Email: office@hughesdrilling.co.uk

B.H. Co-ordinates: 347578.07E, 305519.56N

Date Started: 22/10/19 Completed: 28/10/19 Drillers: R. Saunders, M. Hughes.

Rig Type: Solnec PSM 8GT Flush/Additives: N/A

Drill Method: Hollow Stem Augers Casing Detail/Depth: N/A

In-hole Equip: Augers Others:

SAMPLE INTERVAL					DESCRIPTION OF STRATA/SAMPLE	INSTALLATION DETAILS		
RUN / SAMPLE No.	FROM: O mts	TO:	Mts Drilled	Recovery Mts. Good / Poor etc.	DRILLERS OBSERVATIONS Re: Rock Type, B.H. Conditions, Water Strikes etc.	TYPE: Piezometer Pipe SIZE: 40mm HEADWORKS: Steel Cap From:		To:
					Gas Monitoring borehole installed into Devensian Glacial Sands and gravels	0	Soil	40cm
						40cm		
					Key: ☒ Soil ☒ Sand			6m
					☒ Sand + gravel	6m		
					Installation details: 1.5m of Screen 2m of Sand including Stickup. 12m of gravel pack. 0.5m of Sand pack 2m of Bentonite Seal 30cm of Concrete			20m
							End of borehole	

BORE HOLE LOG

Client: Evanson

Site/Location: Dorrington, Shropshire

B.H. No.(s): BH7 Sheet No: 4 of 4

HUGHES DRILLING

Church Stretton, Shropshire, SY6 6LU.
Tel / Fax. 01694 751251
Email: office@hughesdrilling.co.uk

B.H. Co-ordinates: 347360.48E, 305625.21N

Date Started: 22/10/19 Completed: 28/10/19 Drillers: R. Saunders, M. Hughes

Rig Type: Solmec PSM 80T Flush/Additives: N/A

Drill Method: Hollow-Stem Augers Casing Detail/Depth: N/A

In-hole Equip: Augers Others:

SAMPLE INTERVAL					DESCRIPTION OF STRATA/SAMPLE	INSTALLATION DETAILS		
RUN / SAMPLE No.	FROM: O mts	TO:	Mts Drilled	Recovery Mts. Good / Poor etc.	DRILLERS OBSERVATIONS Re: Rock Type, B.H. Conditions, Water Strikes etc.	TYPE: Piezometer Pipe SIZE: 4 mm HEADWORKS: Steel Cap		
						From:		To:
					Gas monitoring borehole installed into Devensian Glacial Sands and gravels	0	Soil	60cm
						60cm		6m
					Key: Soil Sand Sand + gravel	6m		
					Installation details: 10m of Screen			13m
					3m of Solid including Stick up. 10m of gravel pack. 0.5m of sand pack. 2m of bentonite seal. 30cm of Concrete.		End of borehole	

APPENDIX D:

CQA Drill Logs

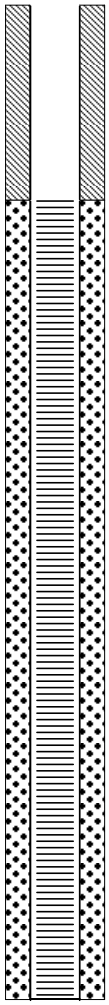
ENVIROARM LIMITED

Log of Borehole: PMP4

Project No.: 0010
Project: Dorrington Quarry
X Coordinate: 347698.61
Y Coordinate: 303472.93
Status: Gas Monitoring Borehole

Elevation: 107.33
Total Depth: 15.3
Project Manager: A R Morris

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Depth/Elev.	Number	Type	Recovery	Vapour	Well Completion Details
		Ground Surface	107.3					
0		Brown soft gravelly sandy Top Soil	0.0					
1		Red orange fine to coarse sand						
2								
3								
4								
5								
6								
7								
8			99.3					
		Soft red orange sand with rounded gravels	8.0					
9								
10								
11			96.3					
		Red orange fine sand	11.0					
12								
13								
14								
15			92.0					
			15.3					
16								
17								
18								
19								
20								



Drilled By: Hughes Drilling
Drill Method: Hollow Stem Auger
Drill Date: 22/10/2019

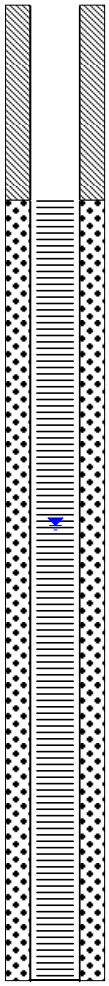
Hole Size:
Datum: 107.33
Sheet: 1 of 1

ENVIROARM LIMITED

Log of Borehole: PMP5

Project No.: 0010
Project: Dorrington Quarry
X Coordinate: 347592.07 **Elevation:** 101.38
Y Coordinate: 303519.56 **Total Depth:** 15
Status: Gas-Groundwater Monitoring Borehole **Project Manager: A R Morris**

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Depth/Elev.	Number	Type	Recovery	Vapour	Well Completion Details
		Ground Surface	101.4					
0		Brown soft gravelly sandy Top Soil	0.0					
1		Red orange fine to coarse sand						
2								
3								
4								
5								
6			95.4					
		Soft red orange sand with rounded cobbles	6.0					
7								
8								
9			92.4					
		Red orange fine sand	9.0					
10			91.4					
		Boulder type CLAY with rounded gravels	10.0					
11								
12								
13								
14								
15			86.4					
			15.0					
16								
17								
18								
19								
20								



Drilled By: Hughes Drilling
Drill Method: Hollow Stem Auger
Drill Date: 22/10/2019

Hole Size:
Datum: 101.38
Sheet: 1 of 1

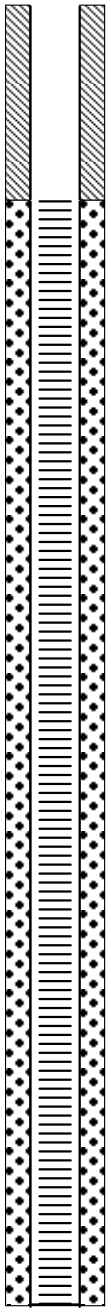
ENVIROARM LIMITED

Log of Borehole: PMP6

Project No.: 0010
Project: Dorrington Quarry
X Coordinate: 347560.42
Y Coordinate: 303625.21
Status: Gas Monitoring Borehole

Elevation: 112.78
Total Depth: 20
Project Manager: A R Morris

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Depth/Elev.	Number	Type	Recovery	Vapour	Well Completion Details
0		**Ground Surface**	112.8					
		Brown soft gravelly sandy Top Soil	0.0					
1		Red orange fine to coarse sand						
2								
3								
4								
5								
6			106.8					
		Soft red orange sand with rounded gravels	6.0					
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20			92.8					
			20.0					



Drilled By: Hughes Drilling
Drill Method: Hollow Stem Auger
Drill Date: 22/10/2019

Hole Size:
Datum: 112.78
Sheet: 1 of 1

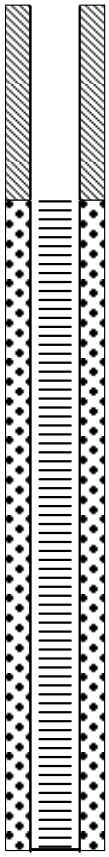
ENVIROARM LIMITED

Log of Borehole: PMP7

Project No.: 0010
Project: Dorrington Quarry
X Coordinate: 347560.42
Y Coordinate: 303625.21
Status: Gas Monitoring Borehole

Elevation: 104.66
Total Depth: 13
Project Manager: A R Morris

SUBSURFACE PROFILE				SAMPLE				
Depth (m)	Symbol	Description	Depth/Elev.	Number	Type	Recovery	Vapour	Well Completion Details
0		**Ground Surface**	104.7					
		Brown soft gravelly sandy Top Soil	0.0					
1		Red orange fine to coarse sand						
2								
3								
4								
5								
6			98.7					
		Soft red orange sand with rounded gravels	6.0					
7								
8								
9								
10								
11								
12								
13			91.7					
			13.0					
14								
15								
16								
17								
18								
19								
20								



Drilled By: Hughes Drilling
Drill Method: Hollow Stem Auger
Drill Date: 22/10/2019

Hole Size:
Datum: 104.66
Sheet: 1 of 1