

20.2 Outline Remediation Strategy

Whilst this report has identified and detailed potential outstanding concerns and impacts at the site which might have bearing upon a proposed development and associated remediation strategy, it is considered appropriate to consider the current outline development proposal which was undertaken for the previous site owners.

Earlier remediation strategy documents have been produced and have been included within the appraisal where relevant to identify possible design constraints (Ref 17), however it is anticipated that the proposed design will differ from that before.

The current outline development objectives are understood to be to develop the site out as a residential land use. The proposed development will look to increase land level closer to those of the surrounding land to the north, reversing the local land level reductions associated with industrial use of the site and in doing so, building in a capping system separating future residents from much of the industrial legacy present within the shallow made ground.

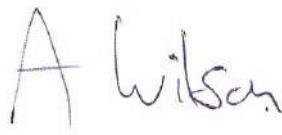
Any future further site assessment works should take into consideration the outline development masterplan in order to enable an appropriate assessment of the outstanding hazards detailed herein.

It should also be understood that due to the history of the site and the variable nature of the material deposited across it, that there is a limit to the value of further characterisation, as invariably discrete hotpots and diffuse impacts are likely to remain unidentified. Any remediation strategy should be sufficiently robust to ensure that it has the capability to characterise and remove or treat potential unexpected impacts which are certain to arise.

Considering this end use and likely level changes, consideration in any future remediation or development strategy must be given to the following items:

- Potential geotechnical stability of final land levels and imported materials.
- The suitability and depth of imported and shallow soil materials to act as an appropriate cap.
- Radon barriers in residential dwellings
- Consideration for aggressive ground conditions.
- Suitability and selection of potable water pipes.

This report was prepared by



Adam Wilson

25.10.2019

Date

This report was reviewed by



Mark Swindells

25.10.2019

Date

21.0 LIMITATIONS

Geo²s' conclusions, recommendations and opinions are based on information gathered at the time of the investigation from a variety of third party sources and from observations made during site reconnaissance and ground conditions encountered during the field work and on the results of laboratory and field tests performed during the investigation. However, there may be conditions at the site that have not been taken into account, such as unpredictable soil strata and water conditions between or below intrusive locations. It should also be noted that groundwater levels may vary due to seasonal or other effects and may at times differ to those measured during the investigation.

A portion of this report is based solely upon information provided by third parties. The information has not been independently verified by Geo². Whilst this report and the opinions given in it are accurate to the best knowledge of Geo², Geo² cannot guarantee the completeness or accuracy of any descriptions, opinions or conclusions based solely upon information that has not been independently verified.

The recommendations contained within this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted industry practices and hydrological and engineering practices at this time. As such they are not a guarantee that the site is free of hazardous materials or conditions.

Geo² prepared this report for our Client; any third parties using this report do so entirely at their risk. Geo² makes no warranty or representation whatsoever, express or implied, with respect to the use by a third party of any information contained in this report or its suitability for any purpose. Geo² assumes no responsibility for any costs, claims, damages or expenses (including any consequential damages) resulting from the use of this report or any information contained in this report by a third party.

22.0 REFERENCES

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Remediation Strategy G15009 2017

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WSP

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R&D Publication 95. Guidance on the Assessment and Monitoring of Natural Attenuation of Contaminants in Groundwater. M A Carey, J R Finnamore, M J Morrey & P A Marsland. 2000

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Definition of Waste Code of Practice Version 2, March 2011

CL:AIRE IN ASSOCIATION WITH AGS AND EIC. THE SOIL GENERIC ASSESSMENT
CRITERIA FOR HUMAN HEALTH RISK ASSESSMENT. JANUARY 2010.

DEFRA

DEFRA SP1010 CATEGORY 4 SCREENING LEVELS (C4SL) FOR ASSESSMENT OF LAND
AFFECTED BY CONTAMINATION 2014

LQM/ CIEH

LQM/CIEH Suitable 4 Use Levels Nathaniel, C.P; McCaffrey, C.; Gillett, A.G.; Ogden, R.C. &
Nathaniel, J.F. Land Quality Press, Nottingham 2015

Appendix A

Figures

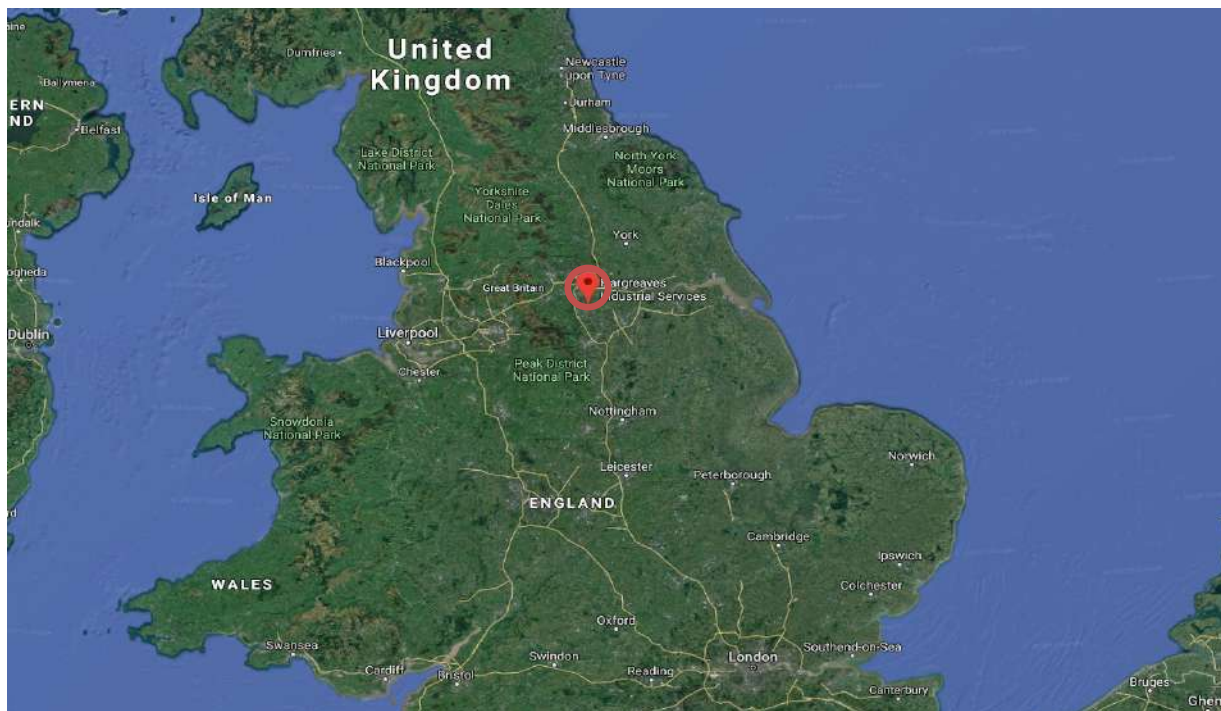


Figure 1 - Site Location

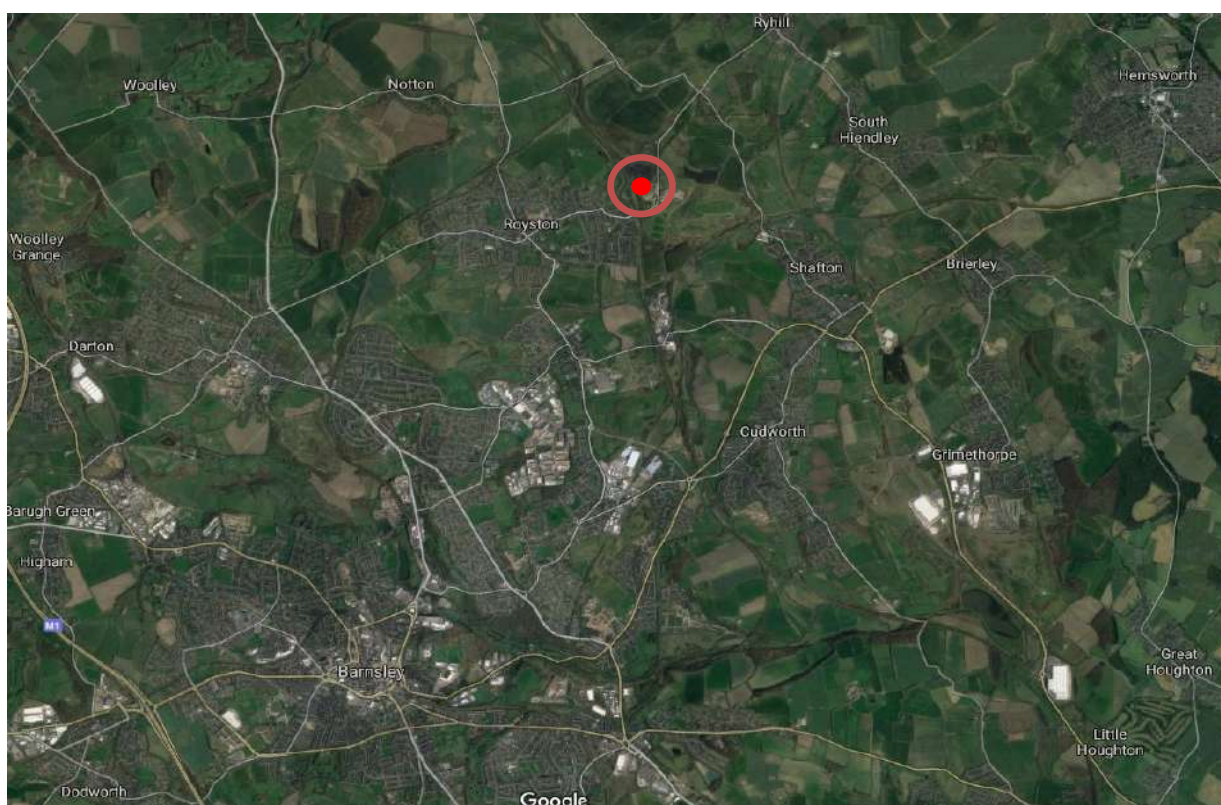


Figure 2 - Site Location

Ref: <http://www.google.com/maps>

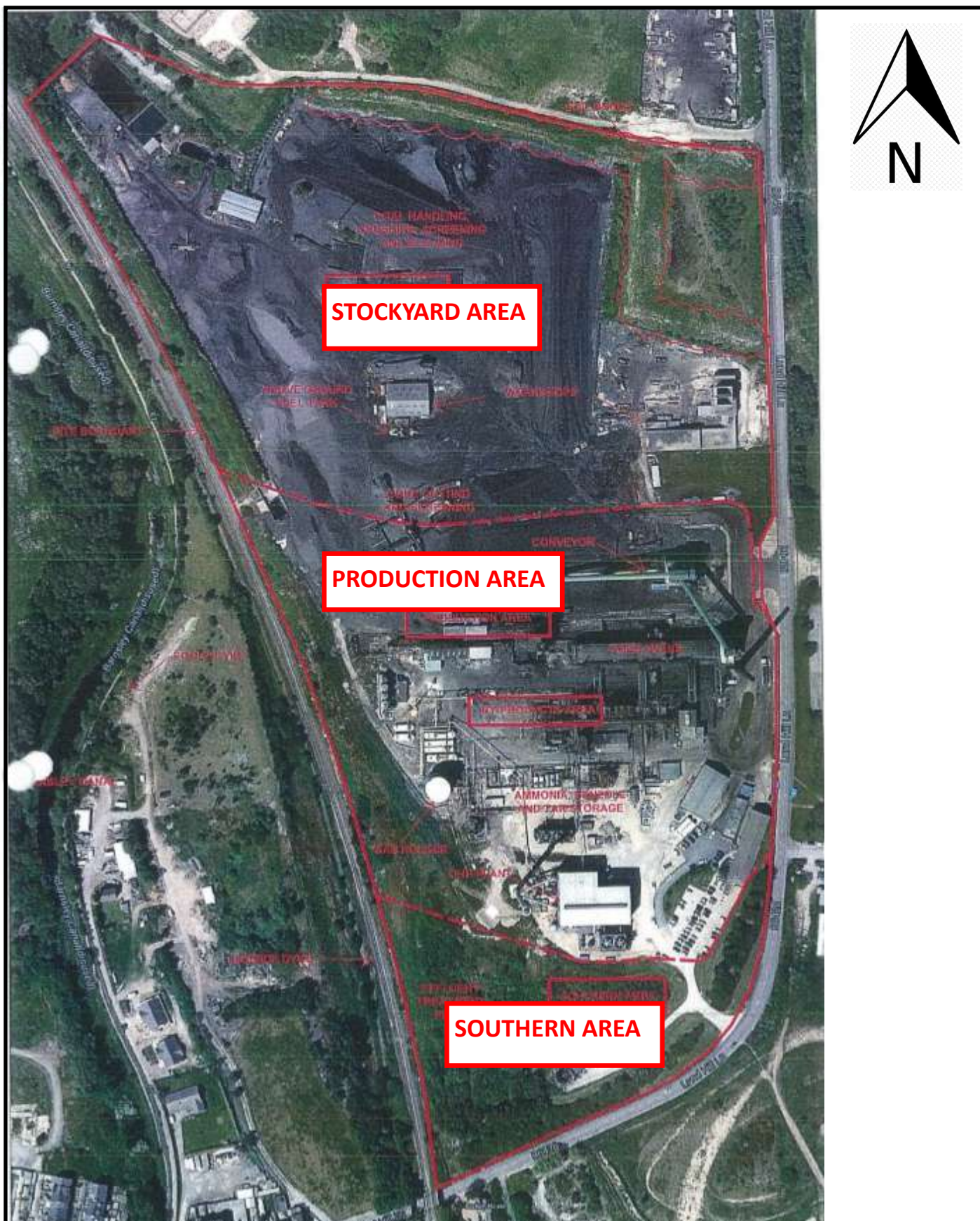


Figures 1 & 2 Site Location -
Former Monckton Coke and Colliery Works, Lund Hill Lane, Royston,
Barnsley, South Yorkshire, S71 4BD.

Geo² Remediation Limited, The Coniston, Louisa Street, Idle, West Yorkshire, BD10 8NE

Tel: (0113) 2575397

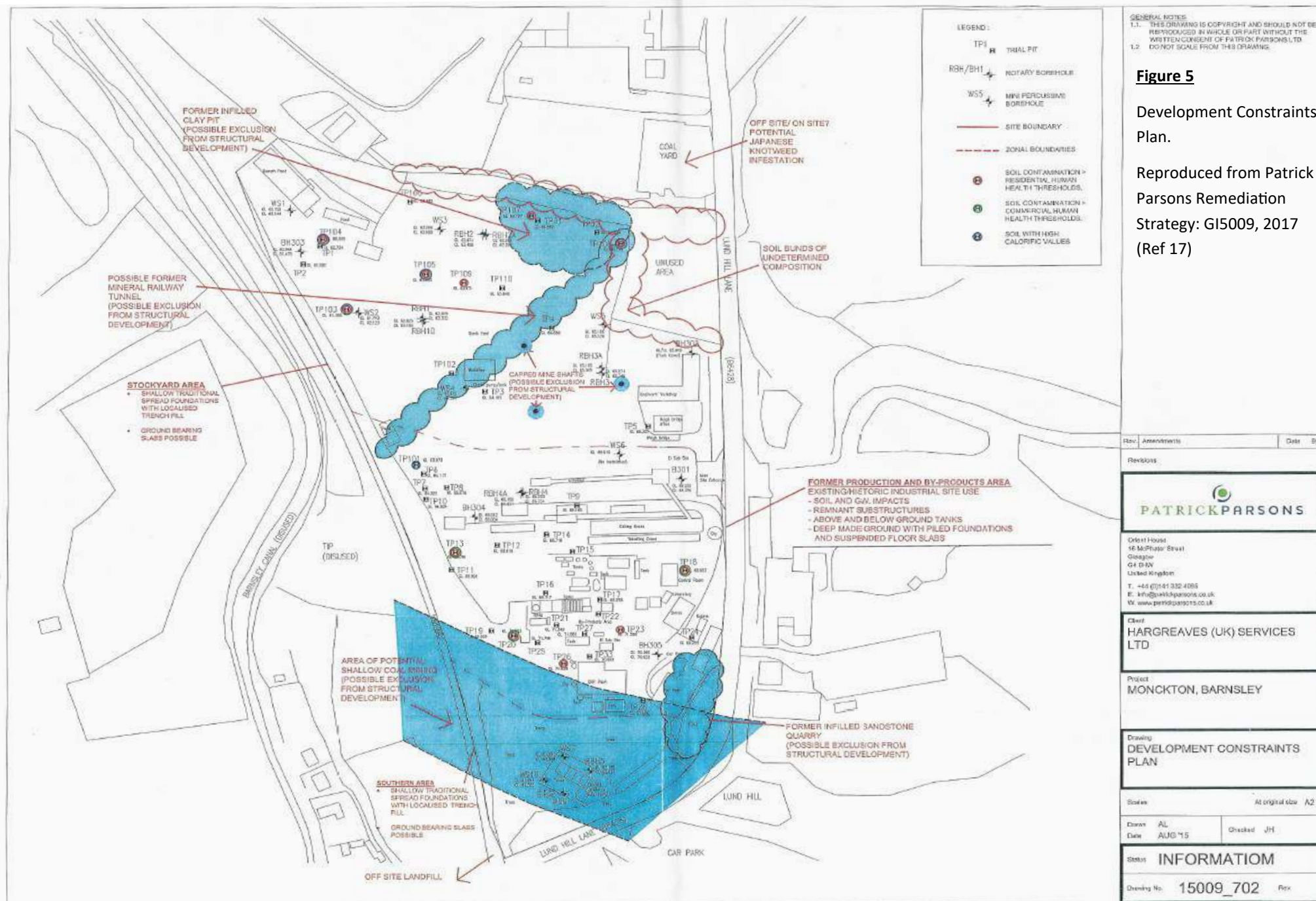
www.geo2.co.uk

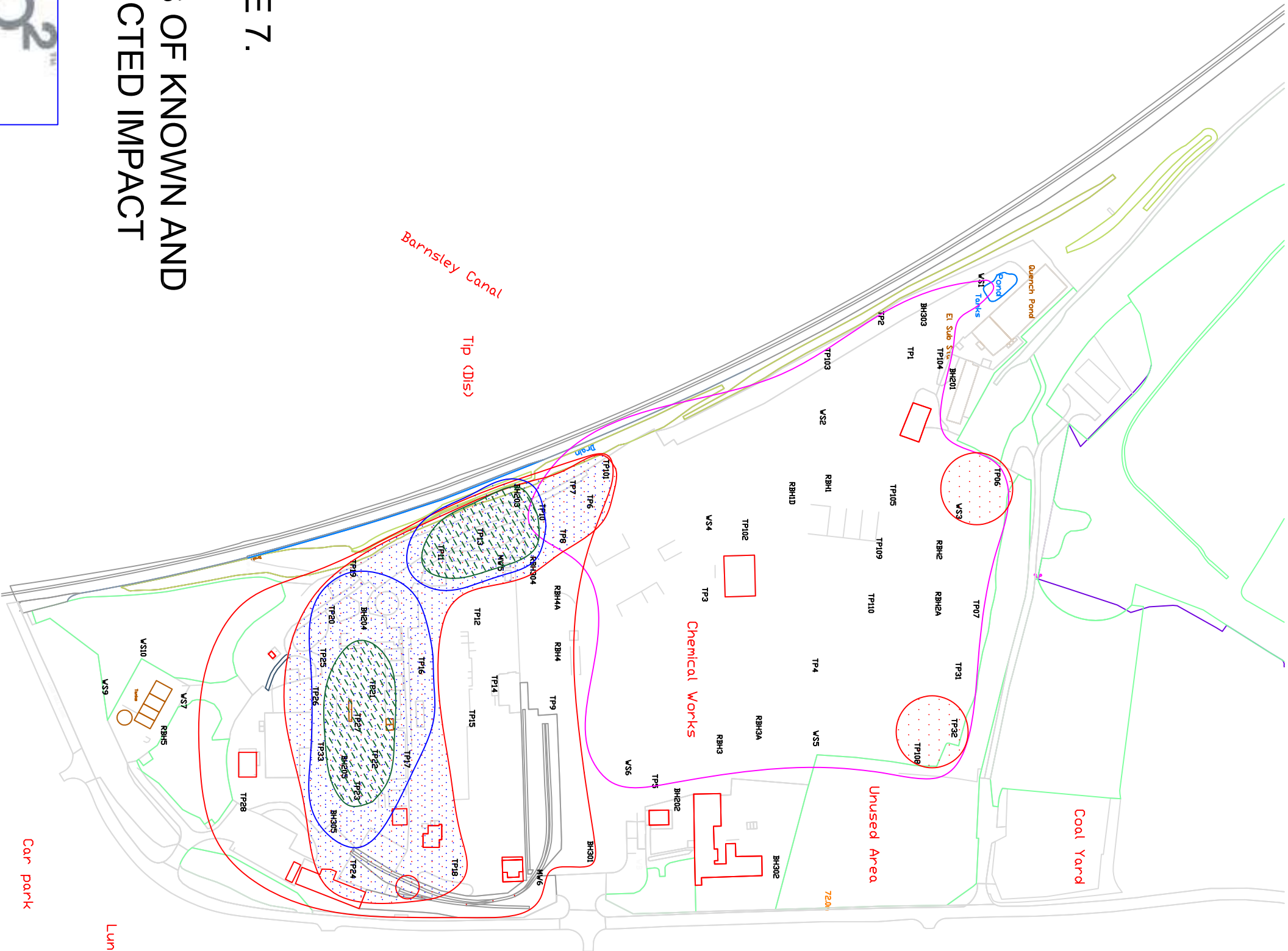


STOCKYARD AREA

PRODUCTION AREA

SOUTHERN AREA





- KNOWN PAH IMPACT
- KNOWN GROUNDWATER IMPACT
- KNOWN TAR / DILS IMPACT
- KNOWN AREA OF HIGH CALORIFIC SOILS
- POTENTIAL AREA OF FURTHER GASWORKS IMPACT

FIGURE 7.

AREAS OF KNOWN AND SUSPECTED IMPACT



Appendix B

Collated Borehole and Trial Pit Logs

	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH301							
	Contract Number: G151311	Date Started: 08/06/2015	Date Completed: 09/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 3							
	Easting: 437547.8	Northing: 412088.8	Ground Level: 68.25m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50								
Weather:		Rig Crew:		Termination:										
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/Installation					
			67.85	(0.40) 0.40		CONCRETE								
						SAND and GRAVEL.		1						
				(2.30)				2						
			65.55	2.70		Brown SANDSTONE.		3						
								4						
				(4.60)				5						
								6						
			60.95	7.30		Grey SANDSTONE.		7						
								8						
								9						
								10						
Continued next sheet														
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	21.00	PLAIN	50	21.00	3.00		0	0.00	
					21.00	25.00	SLOTTED	50						



Rig Crew:

Termination:

Strata Details

Groundwater

Depth

Sample ID

Test Result

Level
(=AOP)Depth (m)
(Thickness)

Legend

Strata

Description

Strike

Installation

- 11

12

13

- 14

LIFE

1

111

100

1

1

Continued next sheet

Start & End of Shift Observations

Borehole Diameter

Casing Diameter

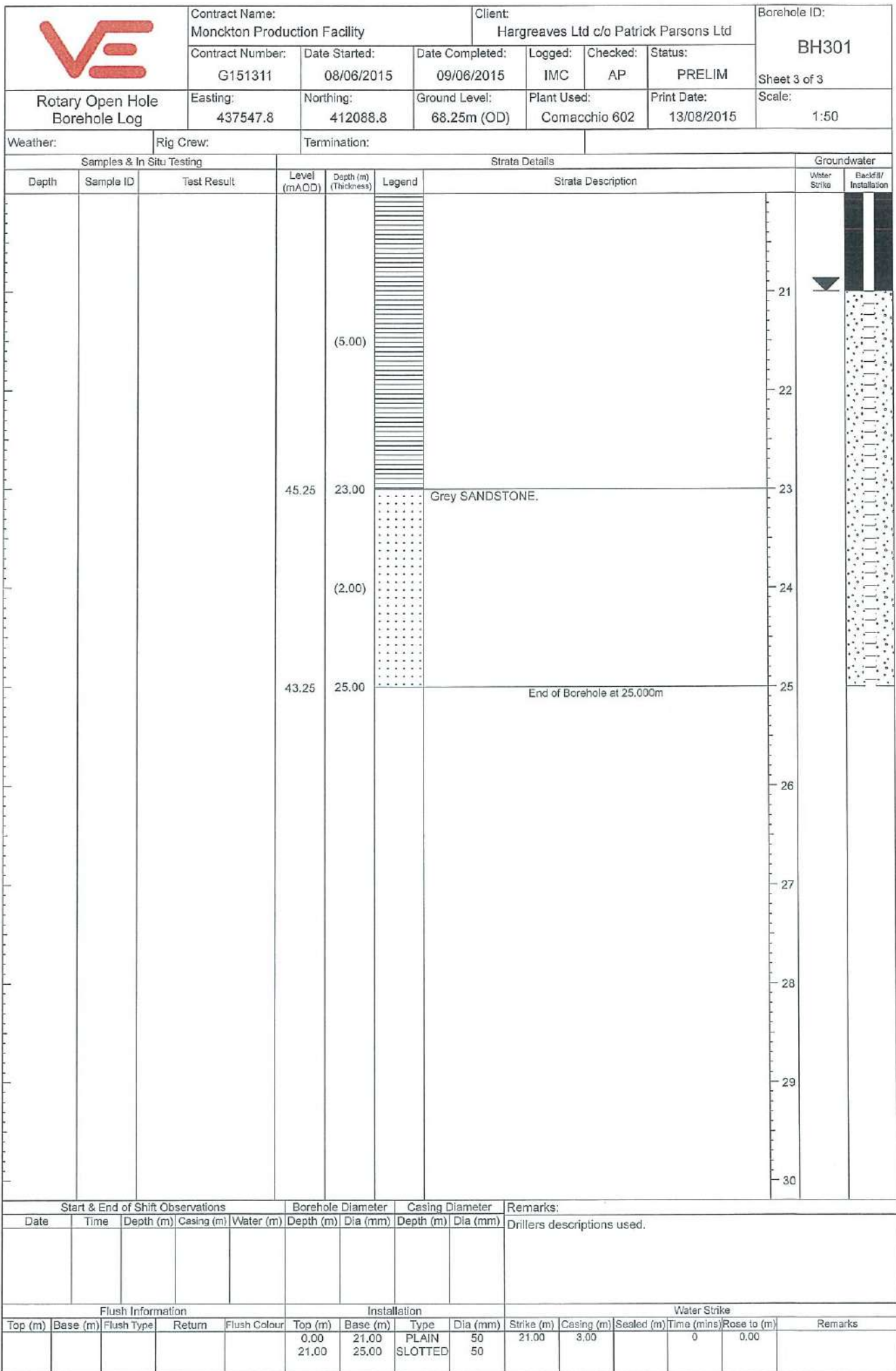
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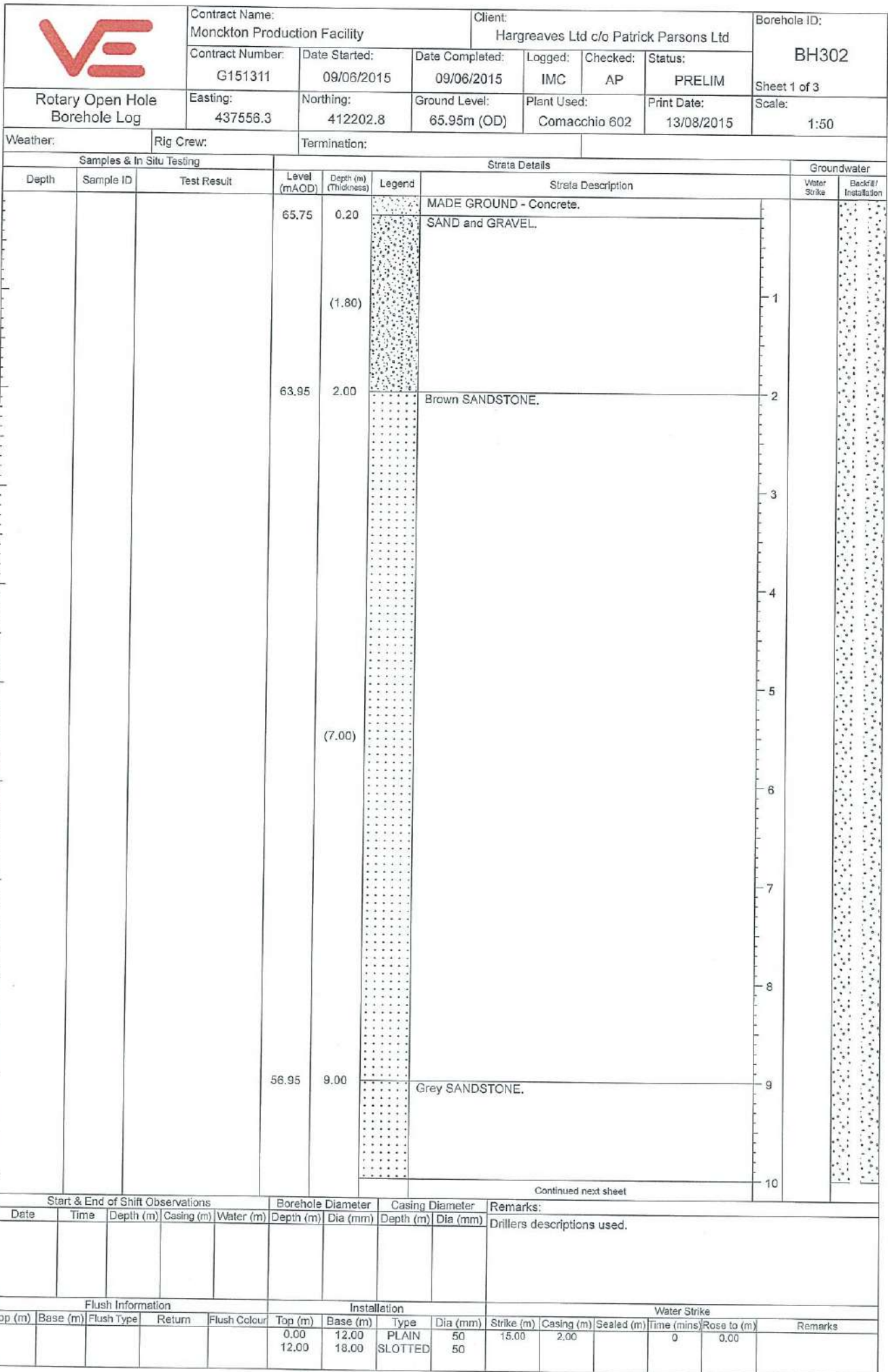
Drillers descriptions used.

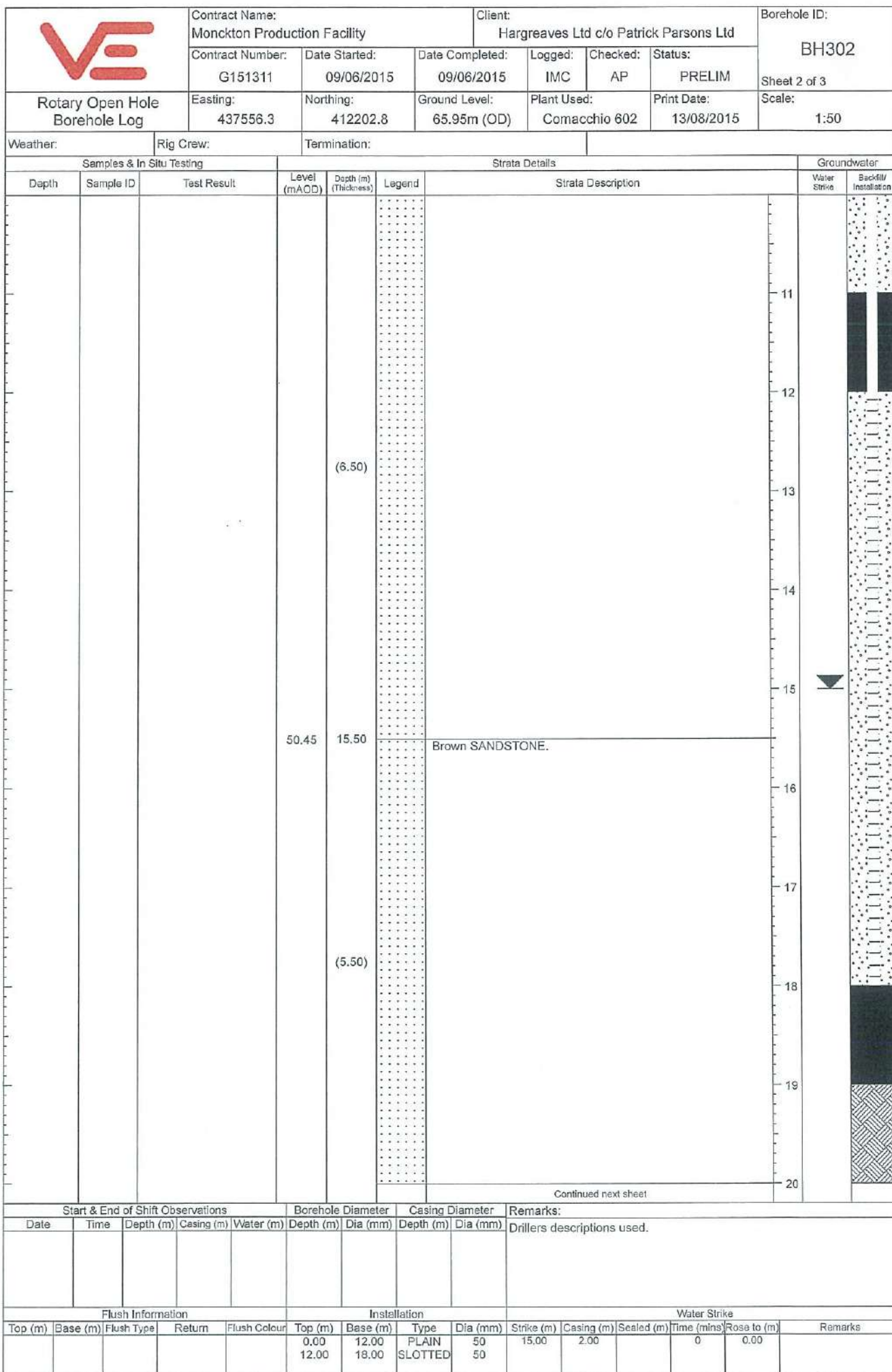
Flush Information		

Installation	

				Installation				Water Strike						
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	21.00	PLAIN	50	21.00	3.00		0	0.00	
					21.00	25.00	SLOTTED	50						







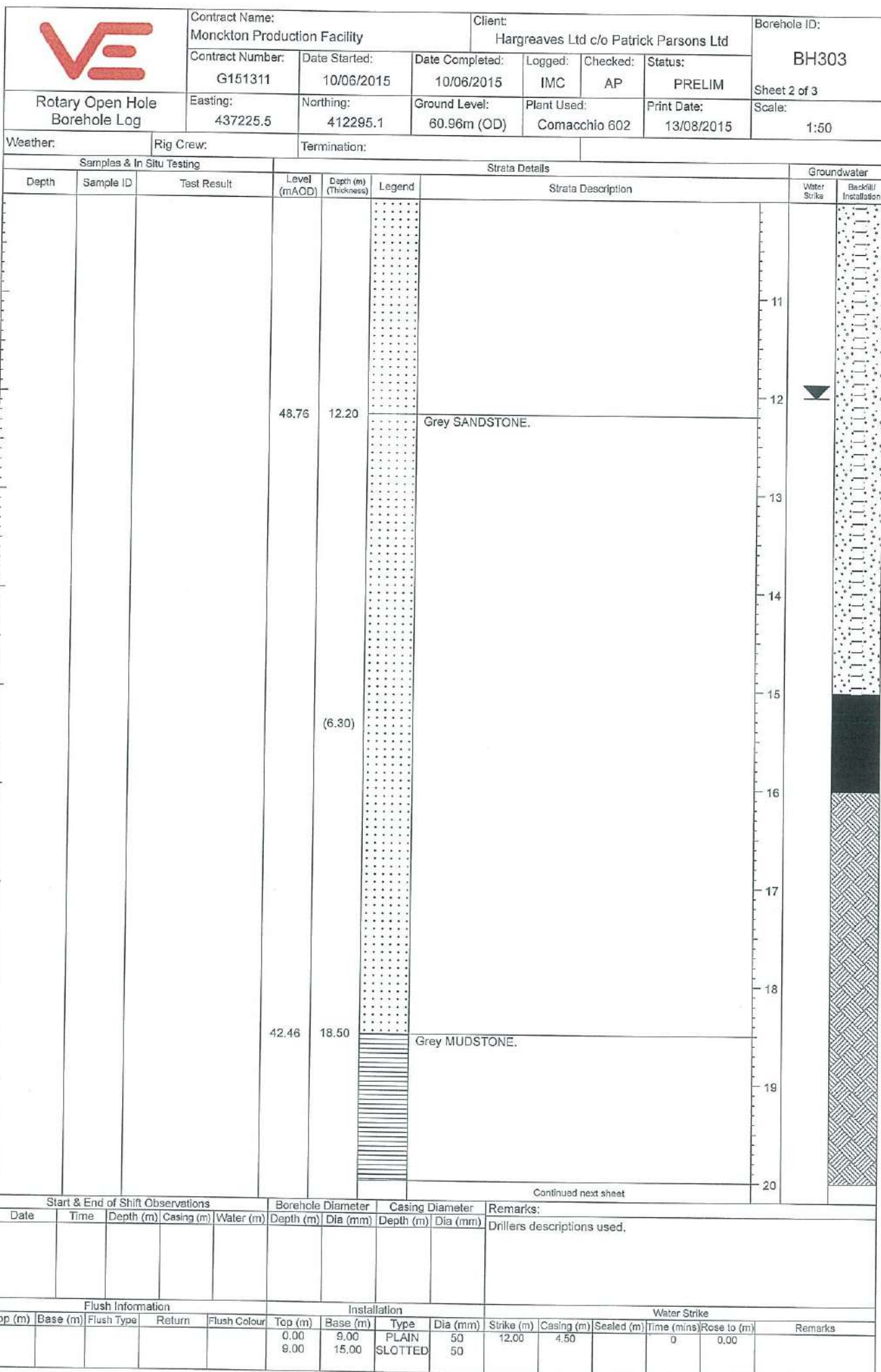
	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd				Borehole ID: BH302	
	Contract Number: G151311	Date Started: 09/06/2015	Date Completed: 09/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 3 of 3	
Rotary Open Hole Borehole Log	Easting: 437556.3	Northing: 412202.8	Ground Level: 65.95m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50		
	Weather:		Rig Crew:	Termination:				

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			44.95	21.00		Grey MUDSTONE.	21	
				(4.00)			22	
							23	
							24	
			40.95	25.00		End of Borehole at 25.000m	25	
							26	
							27	
							28	
							29	
							30	

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.	

Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	12.00	PLAIN	50	15.00	2.00		0	0.00	
					12.00	18.00	SLOTTED	50						

	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd		Borehole ID: BH303			
	Contract Number: G151311	Date Started: 10/06/2015	Date Completed: 10/06/2015	Logged: IMC	Checked: AP	Status: PRELIM		
Rotary Open Hole Borehole Log		Easting: 437225.5	Northing: 412295.1	Ground Level: 60.96m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015		
Weather:		Rig Crew:	Termination:					
Samples & In-Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
						MADE GROUND - Ash fill.		
			57.96	3.00		SAND and GRAVEL.		
			56.46	4.50		Brown SANDSTONE.		
				(7.70)				
						Continued next sheet		
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)
Flush Information			Installation		Water Strike			
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)
					0.00	9.00	PLAIN	50
					9.00	15.00	SLOTTED	50
					Strike (m)	Casing (m)	Sealed (m)	Time (mins)
					12.00	4.50		0
					Rose to (m)	Remarks		
					0.00			



	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH303						
	Contract Number: G151311	Date Started: 10/06/2015	Date Completed: 10/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 3 of 3							
	Easting: 437225.5	Northing: 412295.1	Ground Level: 60.96m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50								
Rotary Open Hole Borehole Log														
Weather:		Rig Crew:		Termination:										
Samples & In Situ Testing				Strata Details				Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation					
				(6.50)				21						
								22						
								23						
								24						
			35.96	25.00		End of Borehole at 25.000m		25						
								26						
								27						
								28						
								29						
								30						
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	9.00	PLAIN	50	12.00	4.50		0	0.00	
					9.00	15.00	SLOTTED	50						



Contract Name:
Monckton Production Facility

Client:
Hargreaves Ltd c/o Patrick Parsons Ltd

Borehole ID:
BH304

Contract Number:
G151311

Date Started:
11/06/2015

Date Completed:
11/06/2015

Logged:
IMC

Checked:
AP

Status:
PRELIM

Rotary Open Hole
Borehole Log

Easting:
437373.9

Northing:
412054.7

Ground Level:
65.51m (OD)

Plant Used:
Comacchio 602

Print Date:
13/08/2015

Sheet 1 of 2

Scale:
1:50

Weather:

Rig Crew:

Termination:

Samples & In Situ Testing					Strata Details					Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation	
				(1.50)		MADE GROUND - Ash fill.					
			64.01	1.50		Brown SANDSTONE.					
				(5.00)							
			59.01	6.50		Brown MUDSTONE.					
				(1.50)							
			57.51	8.00		Brown SANDSTONE.					
				(4.00)							

	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH304	
	Contract Number: G151311	Date Started: 11/06/2015	Date Completed: 11/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 2 of 2	
Rotary Open Hole Borehole Log	Easting: 437373.9	Northing: 412054.7	Ground Level: 65.51m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50		
	Weather:		Rig Crew:		Termination:			

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			53.51	12.00			11	
						End of Borehole at 12.000m	12	
							13	
							14	
							15	
							16	
							17	
							18	
							19	
							20	

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.	

Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	1.50	PLAIN	50	4.00	1.50		0	0.00	
					1.50	6.50	SLOTTED	50						

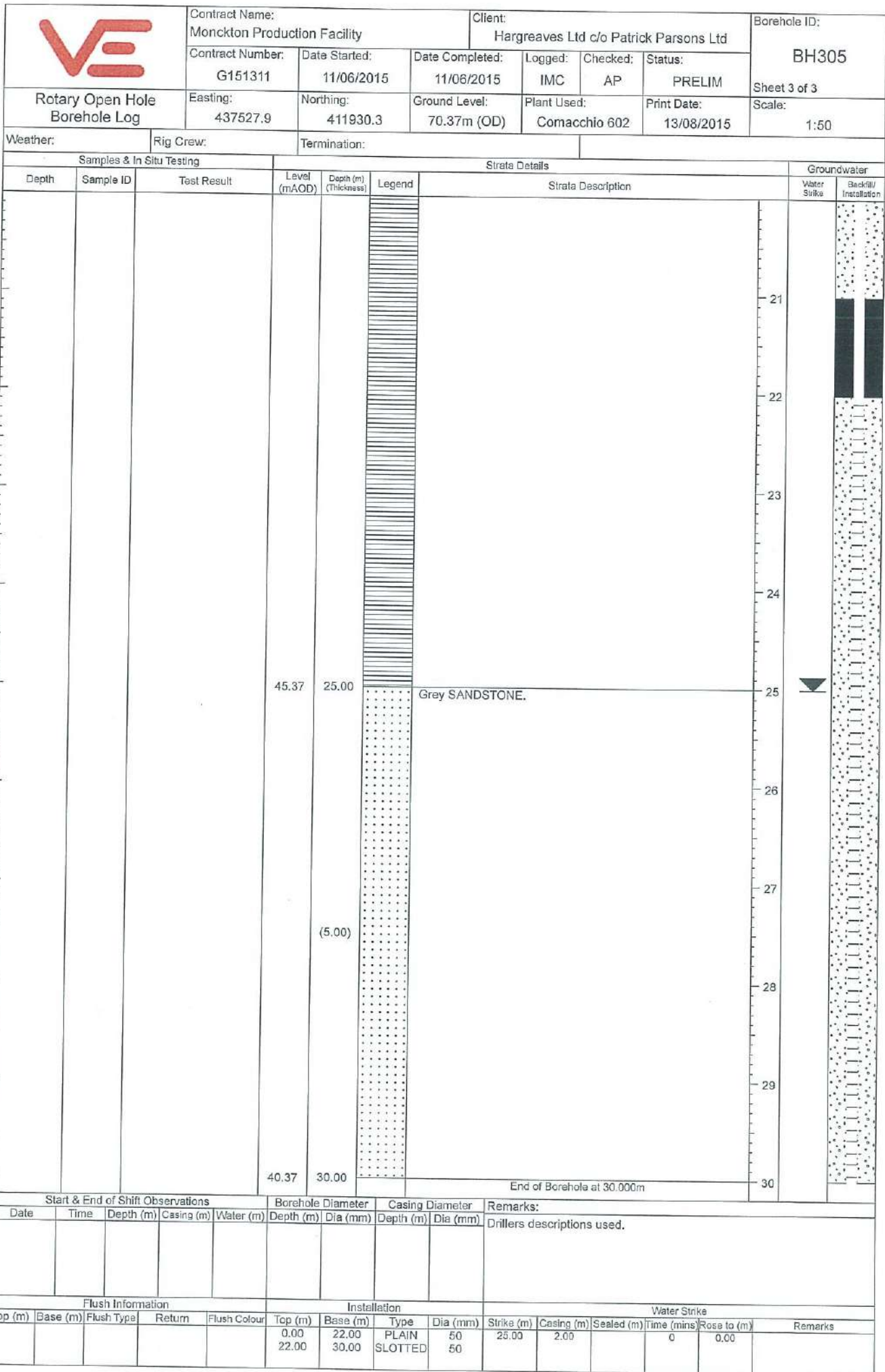
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	Contract Number: G151311		Date Started: 11/06/2015		Date Completed: 11/06/2015		Logged: IMC	Checked: AP	Status: PRELIM
	Easting: 437527.9		Northing: 411930.3		Ground Level: 70.37m (OD)		Plant Used: Comacchio 602		Print Date: 13/08/2015
Rotary Open Hole Borehole Log		Weather:		Rig Crew:		Termination:		Sheet 1 of 3 Scale: 1:50	

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			70.07	(0.30) 0.30		MADE GROUND - Concrete.		
				(1.70)		SAND and GRAVEL.	1	
			68.37	2.00		Brown SANDSTONE.	2	
				(7.00)			3	
							4	
							5	
							6	
							7	
							8	
			61.37	9.00		Grey MUDSTONE.	9	
				(1.30)			10	
Continued next sheet								

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.	

Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	22.00	PLAIN	50	25.00	2.00		0	0.00	
					22.00	30.00	SLOTTED	50						

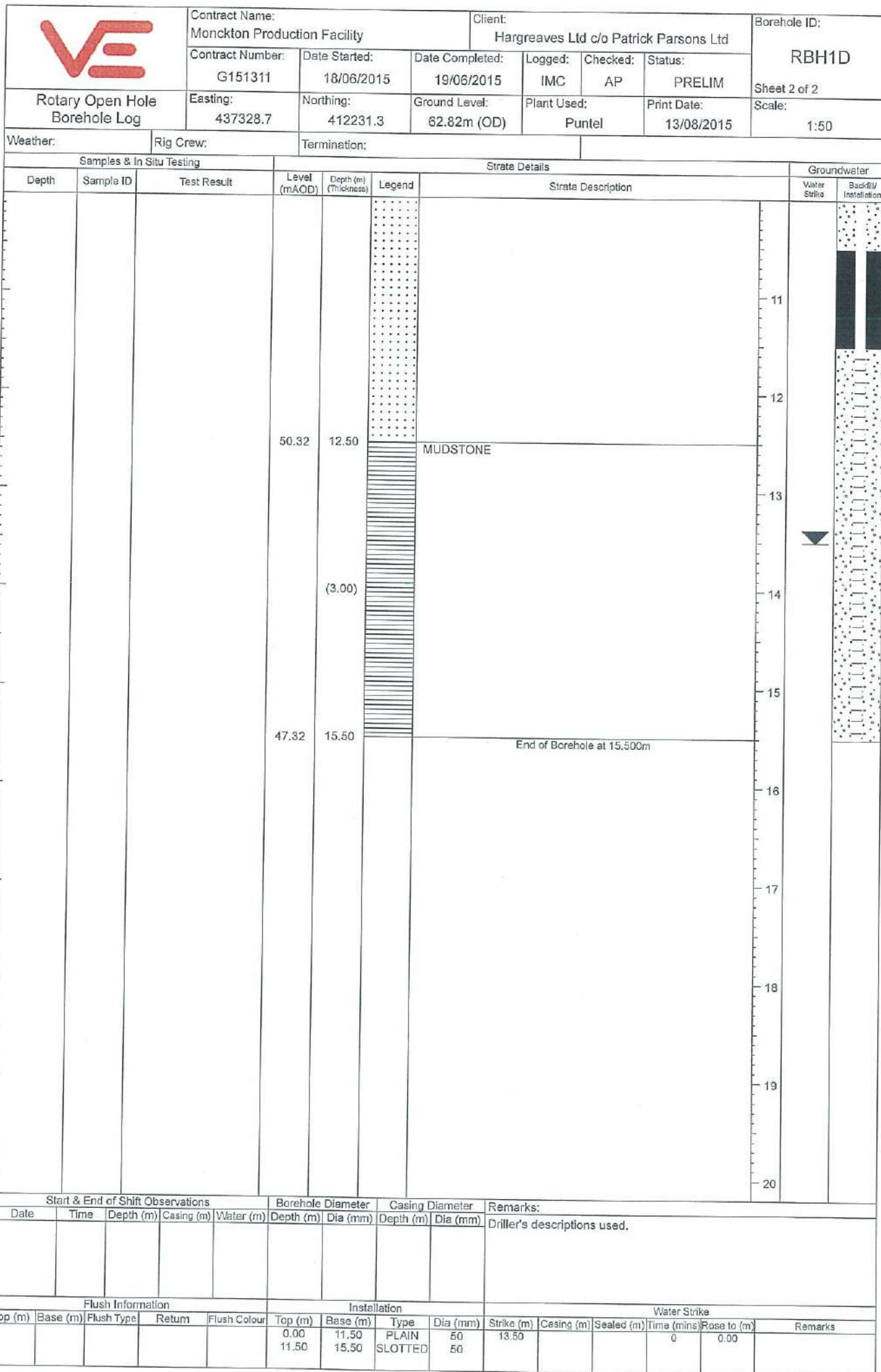
	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH305						
	Contract Number: G151311	Date Started: 11/06/2015	Date Completed: 11/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 2 of 3							
	Easting: 437527.9		Northing: 411930.3		Ground Level: 70.37m (OD)		Plant Used: Comacchio 602		Print Date: 13/08/2015					
Rotary Open Hole Borehole Log								Scale: 1:50						
Weather:		Rig Crew:		Termination:										
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike					
			60.07	10.30		Grey SANDSTONE.								
				(2.20)					11					
									12					
			57.87	12.50		Brown SANDSTONE.			13					
				(2.50)					14					
			55.37	15.00		Grey MUDSTONE.			15					
									16					
									17					
				(10.00)					18					
									19					
									20					
						Continued next sheet								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	22.00	PLAIN	50	25.00	2.00		0	0.00	
					22.00	30.00	SLOTTED	50						



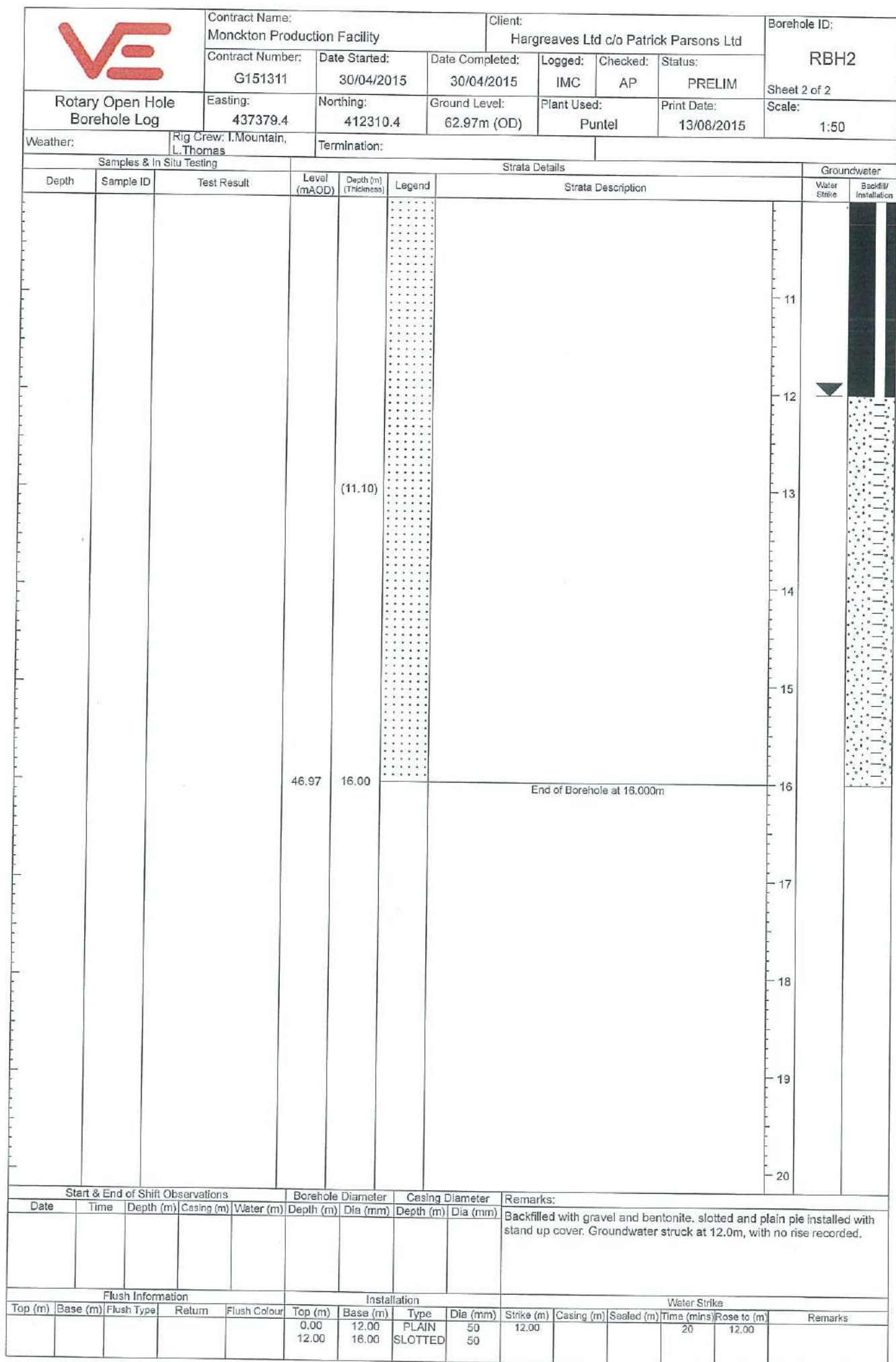
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	Contract Number: G151311	Date Started: 30/04/2015	Date Completed: 30/04/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 2							
	Rotary Open Hole Borehole Log		Easting: 437328.8	Northing: 412234.2	Ground Level: 62.90m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50						
Weather:		Rig Crew: I.Mountain, L.Thomas		Termination:										
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation					
			61.70	(1.20) 1.20		MADE GROUND (Drillers Description)								
						Brown weathered SANDSTONE (Drillers Description)								
				(4.00)										
			57.70	5.20		SANDSTONE (Drillers Description)								
						Continued next sheet								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	12.00	PLAIN	50						
					12.00	18.00	SLOTTED	50						

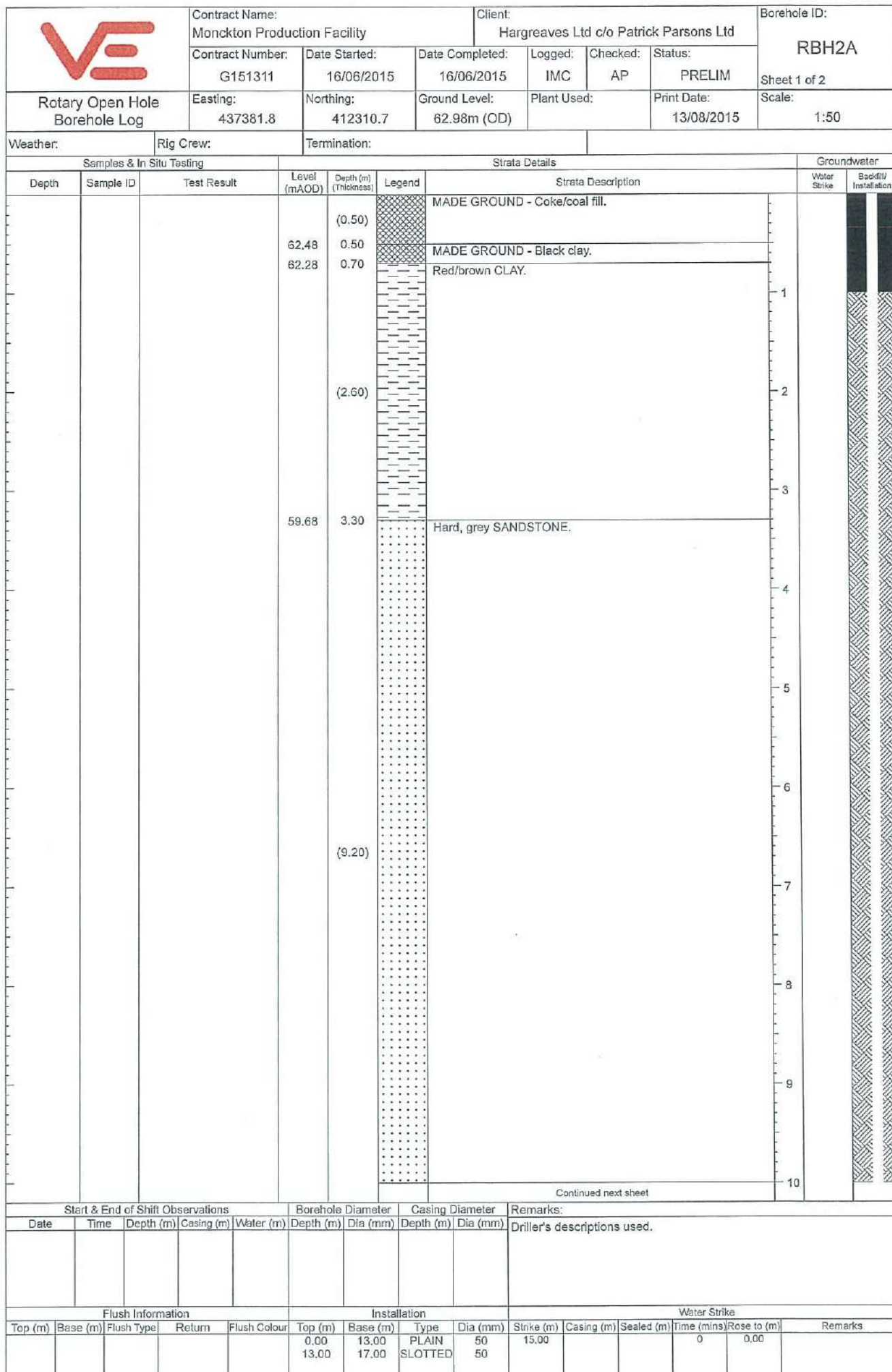
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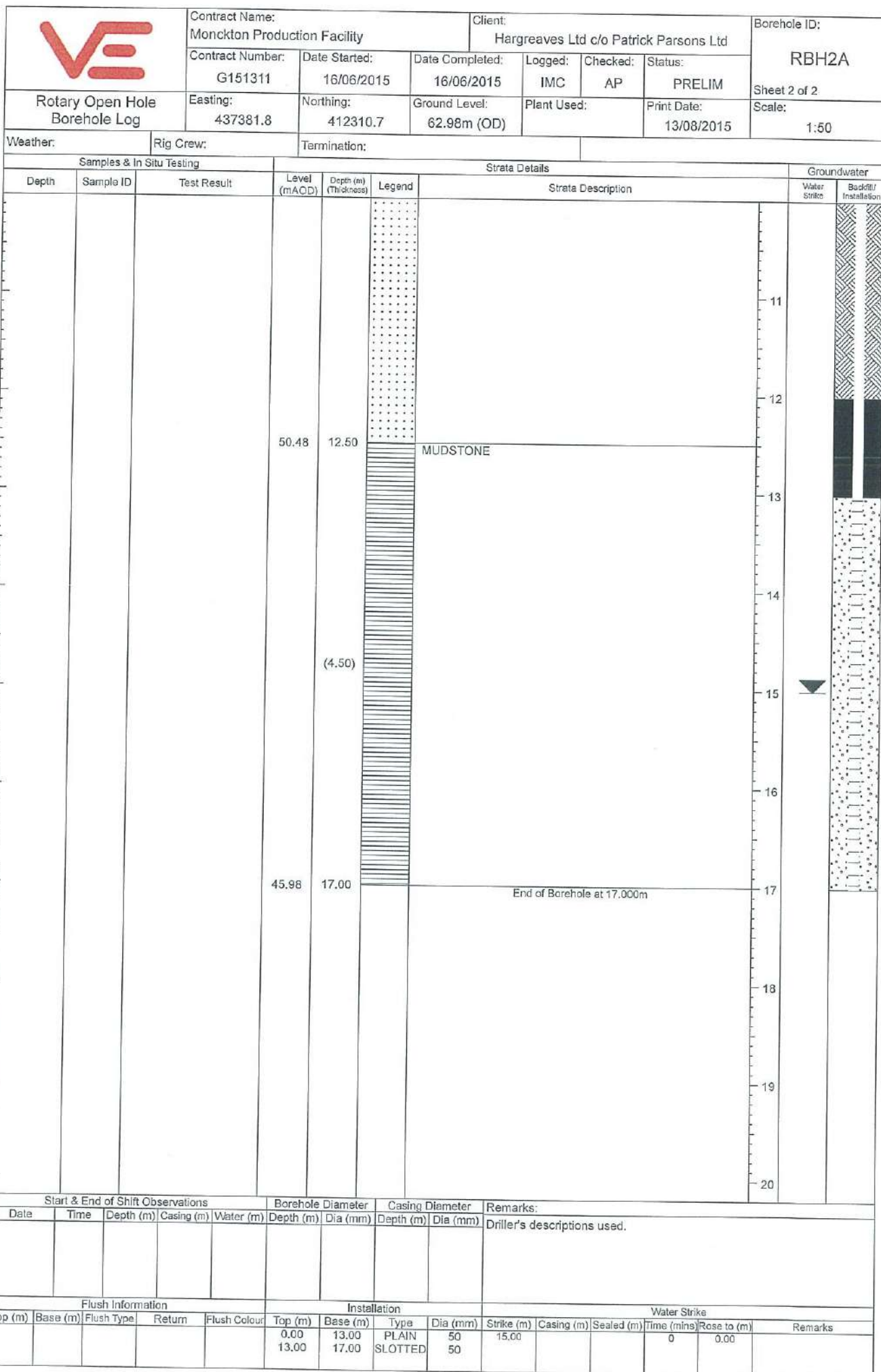
	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: RBH1D		
	Contract Number: G151311	Date Started: 18/06/2015	Date Completed: 19/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 2		
Rotary Open Hole Borehole Log		Easting: 437328.7	Northing: 412231.3	Ground Level: 62.82m (OD)	Plant Used: Puntel	Print Date: 13/08/2015	Scale: 1:50		
Weather:		Rig Crew:		Termination:					
Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation
				(0.50)		MADE GROUND - Coke/coal fill.			
			62.32	0.50		MADE GROUND - Concrete.			
			62.22	0.60		MADE GROUND			
				(0.50)					
			61.72	1.10		Brown CLAY.			
				(0.40)					
			61.32	1.50		Broken SANDSTONE.			
				(1.10)					
			60.22	2.60		NO RECOVERY.			
				(0.40)					
			59.82	3.00		Hard, red SANDSTONE.			
				(9.50)					
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									

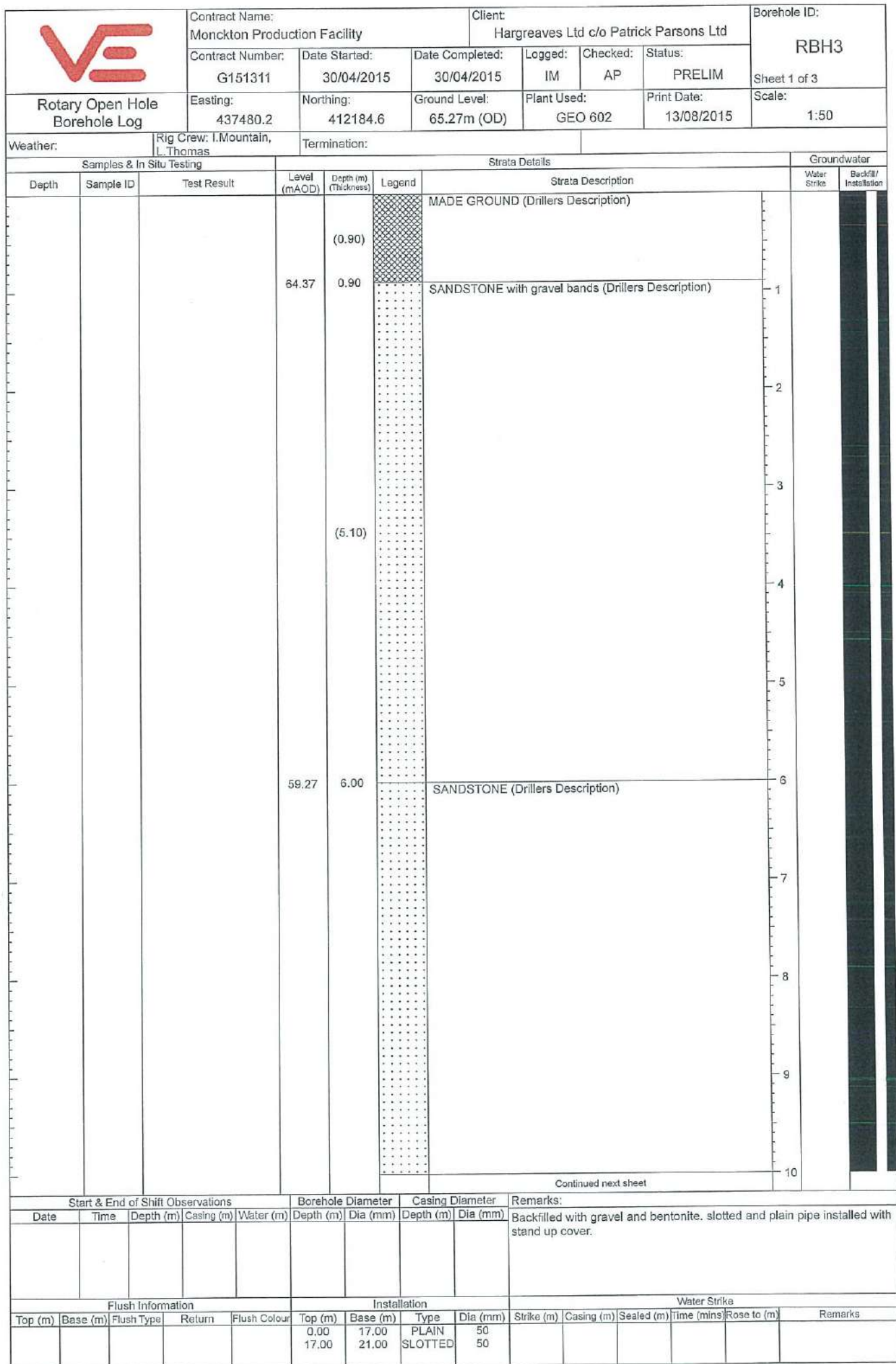


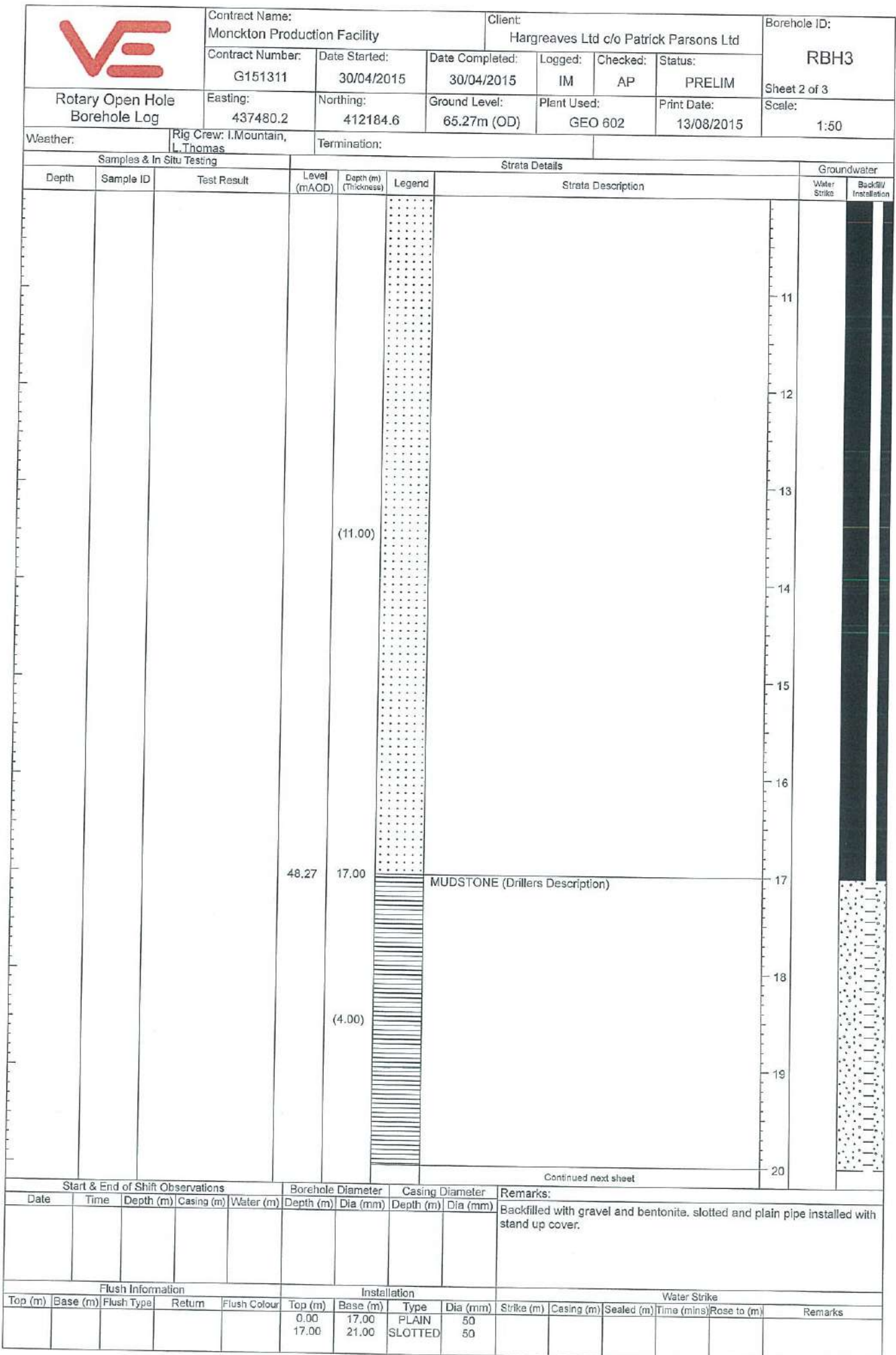
	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd		Borehole ID: RBH2		
	Contract Number: G151311	Date Started: 30/04/2015	Date Completed: 30/04/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 2
Rotary Open Hole Borehole Log		Easting: 437379.4	Northing: 412310.4	Ground Level: 62.97m (OD)	Plant Used: Puntel	Print Date: 13/08/2015	Scale: 1:50
Weather:		Rig Crew: I.Mountain, L.Thomas	Termination:				
Samples & In Situ Testing			Strata Details				Groundwater
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike / Backfill Installation
						MADE GROUND (Drillers Description)	
			61.87	1.10	[Pattern]	Brown weathered SANDSTONE	1
				(2.00)	[Pattern]		2
			59.87	3.10	[Pattern]	MUDSTONE (Drillers Description)	3
				(1.80)	[Pattern]		4
			58.07	4.90	[Pattern]	SANDSTONE (Drillers Description)	5
							6
							7
							8
							9
							10
Continued next sheet							
Start & End of Shift Observations			Borehole Diameter		Casing Diameter	Remarks:	
Date	Time	Depth (m) Casing (m) Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Backfilled with gravel and bentonite. slotted and plain pie installed with stand up cover. Groundwater struck at 12.0m, with no rise recorded.
Flush Information			Installation			Water Strike	
Top (m)	Base (m)	Flush Type Return Flush Colour	Top (m)	Base (m)	Type Dia (mm)	Strike (m) Casing (m) Sealed (m) Time (mins) Rose to (m)	Remarks
			0.00	12.00	PLAIN 50	12.00	
			12.00	16.00	SLOTTED 50		
						20	12.00











	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd				Borehole ID: RBH3							
	Contract Number: G151311	Date Started: 30/04/2015	Date Completed: 30/04/2015	Logged: IM	Checked: AP	Status: PRELIM	Sheet 3 of 3							
	Easting: 437480.2	Northing: 412184.6	Ground Level: 65.27m (OD)	Plant Used: GEO 602	Print Date: 13/08/2015	Scale: 1:50								
Rotary Open Hole Borehole Log														
Weather:		Rig Crew: I.Mountain, L.Thomas		Termination:										
Samples & In Situ Testing				Strata Details				Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation					
			44.27	21.00		End of Borehole at 21.000m		21						
								22						
								23						
								24						
								25						
								26						
								27						
								28						
								29						
								30						
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Backfilled with gravel and bentonite, slotted and plain pipe installed with stand up cover.					
Flush Information			Installation				Water Strike							
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	17.00	PLAIN	50						
					17.00	21.00	SLOTTED	50						



Contract Name:
Monckton Production Facility

Client:
Hargreaves Ltd c/o Patrick Parsons Ltd

Borehole ID:

RBH3A

Contract Number:
G151311

Date Started:
15/06/2015

Date Completed:
17/06/2015

Logged:
IMC

Checked:
AP

Status:
PRELIM

Sheet 1 of 2

Rotary Open Hole
Borehole Log

Easting:
437479.9

Northing:
412189.4

Ground Level:
65.18m (OD)

Plant Used:
Puntel

Print Date:
13/08/2015

Scale:
1:50

Weather:

Rig Crew:

Termination:

Samples & In Situ Testing

Strata Details

Groundwater

Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/Installation
			64.98	0.20		MADE GROUND - Coke fill.		
				(3.30)		MADE GROUND - Concrete.		
			61.68	3.50		MADE GROUND		
			61.18	4.00		Hard, broken SANDSTONE.		
				(11.00)				

Continued next sheet

Start & End of Shift Observations

Borehole Diameter

Casing Diameter

Remarks:

Date Time Depth (m) Casing (m) Water (m) Depth (m) Dia (mm) Depth (m) Dia (mm)

Driller's descriptions used

Flush Information

Installation

Water Strike

Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
	0.00				14.00	18.00	PLAIN	50	16.00			0	0.00	
	14.00						SLOTTED	50						

