

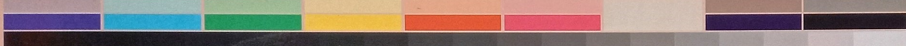
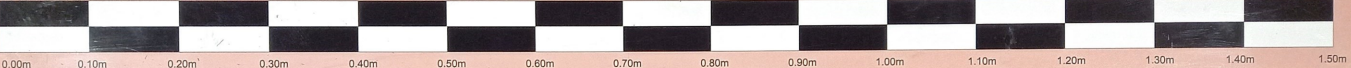
		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m depth. Dynamic sampling from 1.20m to 9.80m depth. Rotary coring from 9.80m to 30.80m depth.	Exploratory Hole S1-BH105
Project	Global Centre of Rail Excellence	Easting	284718.99	Equipment	Commachio 305/Insulated Digging Tools
Client	Walters UK Limited	Northing	210649.88	Method	RC/IP/DS
Project No	G22069	Level	236.49 mAOD	Termination Reason	Scheduled depth

Sheet 11 of 11

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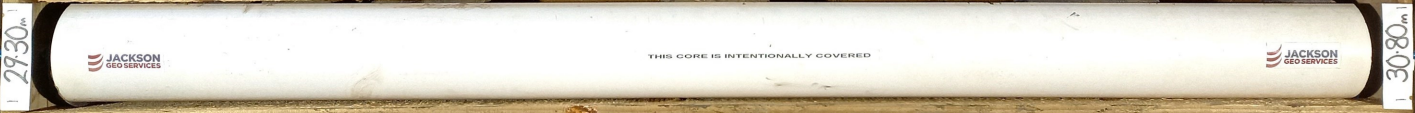



Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	6 DEC' 2022
Exploratory Hole Number	SI-BH105	Box / Face Number	
Depth (m) from	27.80 to 29.30	Engineer	A



27.80m

29.30m



29.30m

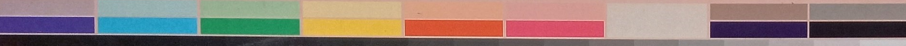
30.80m

S1-BH105 27.80 m to 29.30 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	6 DEC' 2022
Exploratory Hole Number	SI-BH105	Box / Face Number	
Depth (m) from	29.30 to 30.80	Engineer	A



29.30m

30.80m



29.30m

30.80m

S1-BH105 29.30 m to 30.80 m



Exploratory Hole Progress by Time				Exploratory Hole	
Date and Time	Depth	Casing Depth	Water Depth	S1-BH106	
20/12/2022 07:30	0.00		Dry Dry 16.40	Sheet 1 of 5	
20/12/2022 16:00	11.00	4.50		Scale	1:25
21/12/2022 07:30	11.00	4.50		Drilled	KO
21/12/2022 16:42	20.00	12.00		Logged	AF
				Checked	

Drilling Flush					Hole Diameter		Casing Diameter		Water Added		Water Strikes						
Depth Top	Depth Base	Type	Colour	Returns	Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Date and Time	Casing	Strike	Sealed	Rising to	Time	Remarks
0.00	16.40	Air/Mist	Black	100%	17.00	121mm	8.00	150mm			20/12/2022 08:53	0.00	1.00		0.75	20mins	
16.40	20.00	Air/Mist	Grey	0%	20.00	115mm	12.00	128mm									
Drill Bit Type		PCD			Drill Bit Condition		Good		Core Barrel Type		Conventional Triple Tube			Core Barrel Length		1.50	

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		DYNAMIC SAMPLING AND ROTARY DRILLING EXPLORATORY HOLE LOG						Exploratory Hole Progress by Time				Exploratory Hole						
								Date and Time		Depth	Casing Depth	Water Depth	S1-BH106					
Project		Global Centre of Rail Excellence			Equipment		Hand tools/Beretta T44			Sheet 2 of 5								
Client		Walters UK Limited			Method		IP/DS/RO/RC			Scale		1:25						
Project No		G22069		Level		241.27 mAOD		Inclination		90 degrees		Drilled		KO				
Easting		284928.61		Northing		210637.41		SPT Hammer Serial Number		TECH1		Logged		AF				
Termination Reason		Scheduled depth			SPT Hammer Energy Ratio		66 %			Checked								
Samples	Sampling and Testing Depths		Insitu Testing and Depth Related Remarks			Drill Runs		TCR SCR RQD	Depth (Thickness)	Level (mAOD)	Legend	Description			If (min ave max)	Scale	Backfill	
109 B	5.00 - 7.00 5.00		SPT(S) N=29 (5,6/6,8,8,7) Casing: 5.00 Water: 4.60									Medium dense dark grey to black very silty SAND and GRAVEL. Sand is fine to coarse of predominantly coal and carbonaceous mudstone. Gravel is very angular to subangular fine to coarse of mudstone, siltstone, sandstone and coal. (MADE GROUND) Geology Code: MGR 2nd Geology Code: GR						
110 ES	5.50 - 5.70 5.50		PID: 0.0ppmv			DS 5.00 - 6.00		90% 0% 0%								5.50		
11 D	6.00 - 6.45 6.00		SPT(S) N=27 (3,7/7,6,7,7) Casing: 5.00 Water: 6.00													6.00		
111 ES	6.50 - 6.70 6.50		PID: 0.0ppmv			DS 6.00 - 7.00		100% 0% 0%								6.50		
112 B 12 D	7.00 - 10.00 7.00 - 7.45 7.00		SPT(S) N=13 (3,3/2,3,4,4) Casing: 5.00 Water: 7.00 DS 7.00-10.00m recovered as a combined B sample.													7.00		
						DS 7.00 - 8.00		50% 0% 0%	(5.00)							7.50		
13 D	8.00 - 8.45 8.00		SPT(S) N=19 (3,4/5,4,5,5) Casing: 5.00 Water: 8.00													8.00		
113 ES	8.50 - 8.70 8.50		PID: 0.0ppmv			DS 8.00 - 9.00		50% 0% 0%								8.50		
14 D	9.00 - 9.45 9.00		SPT(S) N=26 (3,4/6,6,7,7) Casing: 5.00 Water: 9.00													9.00		
						DS 9.00 - 10.00		50% 0% 0%								9.50		
114 B	10.00 - 10.45								10.00	231.27		Continued on next Sheet			10.00			
Drilling Flush					Hole Diameter		Casing Diameter		Water Added		Water Strikes							
Depth Top	Depth Base	Type	Colour	Returns	Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Date and Time	Casing	Strike	Sealed	Rising to	Time	Remarks	
0.00	16.40	Air/Mist	Black	100%	17.00	121mm	8.00	150mm			20/12/2022 08:53	0.00	1.00		0.75	20mins		
16.40	20.00	Air/Mist	Grey	0%	20.00	115mm	12.00	128mm										
Drill Bit Type		PCD		Drill Bit Condition		Good		Core Barrel Type		Conventional Triple Tube		Core Barrel Length		1.50				
Remarks																		
Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.																		
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DYNAMIC SAMPLING AND ROTARY DRILLING EXPLORATORY HOLE LOG

Project	Global Centre of Rail Excellence			Equipment	Hand tools/Beretta T44
Client	Walters UK Limited			Method	IP/DS/RO/RC
Project No	G22069	Level	241.27 mAOD	Inclination	
Easting	284928.61	Northing	210637.41	SPT Hammer Serial Number	TECH1
Termination Reason	Scheduled depth			SPT Hammer Energy Ratio	66 %

Exploratory Hole Progress by Time				Exploratory Hole
Date and Time	Depth	Casing Depth	Water Depth	S1-BH106 Sheet 3 of 5 Scale 1:25 Drilled KO Logged AF Checked

Samples	Sampling and Testing Depths	Insitu Testing and Depth Related Remarks	Drill Runs	TCR SCR RQD	Depth (Thickness)	Level (mAOD)	Legend	Description	If (min ave max)	Scale	Backfill
15 D	10.00 - 11.00 10.00 10.00	SPT(S) N=26 (6.5/7.7,5.7) Casing: 5.00 Water: 9.80 PID: 0.0ppmv	DS 10.00 - 11.00	100% 0% 0%	(1.00)			Black slightly sandy gravelly clayey SILT. Sand is fine to coarse. Gravel is very angular to subangular fine to medium locally coarse of mudstone, siltstone, sandstone and some coal. (MADE GROUND) Geology Code: MGR 2nd Geology Code: SL			
16 D	11.00 - 11.45 11.00	SPT(S) N=50 (5.7/9.15,12.14) Casing: 5.00 Water: 9.40	RO 11.00 - 12.00	0% 0% 0%	11.00 (0.30) 11.30 (0.70)	230.27 229.97		NO RECOVERY. Colliery Spoil (Driller's description) (MADE GROUND) Geology Code: MGR		10.50	
			RC 12.00 - 12.50	0% 0% 0%	12.00 (0.50)	229.27		NO RECOVERY. Mudstone (Driller's description) (Possible Weathered SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: MST		11.00	
					12.50 (0.80)	228.77		Very weak locally extremely weak very thinly to thinly bedded grey MUDSTONE. Occasional light grey fine sandstone and siltstone laminae. Weathering: orangish brown staining and loss of strength on fractures penetrating <2-5mm. Occasional zones with increased fracture spacing and loss of strength (40-70mm). Discontinuities: sub-horizontal to 20 degree very closely and closely spaced locally extremely closely spaced undulating smooth and rough tight and incipient bedding, locally infilled with <1-2mm clay. (SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: MST		11.50	
					12.50 (0.80)			12.50m - 12.70m NI, recovered as very clayey angular to subangular fine to coarse gravel of mudstone. 12.83m - 12.90m NI, recovered as very angular fine to coarse tabular gravel. Possible extremely closely to very closely spaced fractures. 13.02m - 13.05m Extremely weak with heavy orangish brown staining. 13.05m - 13.09m NI, recovered as very angular fine to coarse tabular gravel. Possible extremely closely to very closely spaced fractures.	Set 1 NI 50 80	12.50	
117 C	12.90 - 12.98		RC 12.50 - 14.00	93% 47% 0%	13.30 (0.80)	227.97		Weak to moderately weak very thinly bedded light grey to grey slightly sandy SILTSTONE. With many locally some thin and thick light grey fine sandstone laminae and occasional sub-ordinate very thin beds of medium strong fine grained SANDSTONE. Occasional zones with increased fracture spacing and loss of strength due to conjugate joints. Discontinuities: sub-horizontal to 15 degree very closely spaced locally closely and extremely closely spaced planar and undulating rough tight bedding, locally infilled with <1-3mm silty fine sand. Joints are sub-vertical to 70 degree conjugate stepped rough tight and open infilled with 1-3mm fine to coarse sand. (SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: SZT	Set 1 NI 40 70	13.00	
115 C	13.60 - 13.80		RC 14.00 - 15.50	100% 28% 0%	(2.15)			14.00m - 14.10m NI, recovered as very angular to subangular fine to coarse gravel. Possible sub-horizontal and sub-vertical conjugated extremely closely to very closely spaced fractures. 14.21m - 14.23m NI, recovered as very angular to subangular fine to coarse gravel. Possible sub-horizontal and sub-vertical conjugated extremely closely to very closely spaced fractures. 14.38m - 14.55m NI, recovered as very angular to subangular fine to coarse gravel. Possible sub-horizontal and sub-vertical conjugated extremely closely to very closely spaced fractures. 14.85m - 14.90m NI, recovered as very angular to subangular fine to coarse gravel. Possible sub-horizontal and sub-vertical conjugated extremely closely to very closely spaced fractures.		14.00	
								14.85m - 14.90m NI, recovered as very angular to subangular fine to coarse gravel. Possible sub-horizontal and sub-vertical conjugated extremely closely to very closely spaced fractures.		14.50	
								14.85m - 14.90m NI, recovered as very angular to subangular fine to coarse gravel. Possible sub-horizontal and sub-vertical conjugated extremely closely to very closely spaced fractures.		15.00	

Drilling Flush					Hole Diameter		Casing Diameter		Water Added		Water Strikes						
Depth Top	Depth Base	Type	Colour	Returns	Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Date and Time	Casing	Strike	Sealed	Rising to	Time	Remarks
0.00	16.40	Air/Mist	Black	100%	17.00	121mm	8.00	150mm			20/12/2022 08:53	0.00	1.00		0.75	20mins	
16.40	20.00	Air/Mist	Grey	0%	20.00	115mm	12.00	128mm									

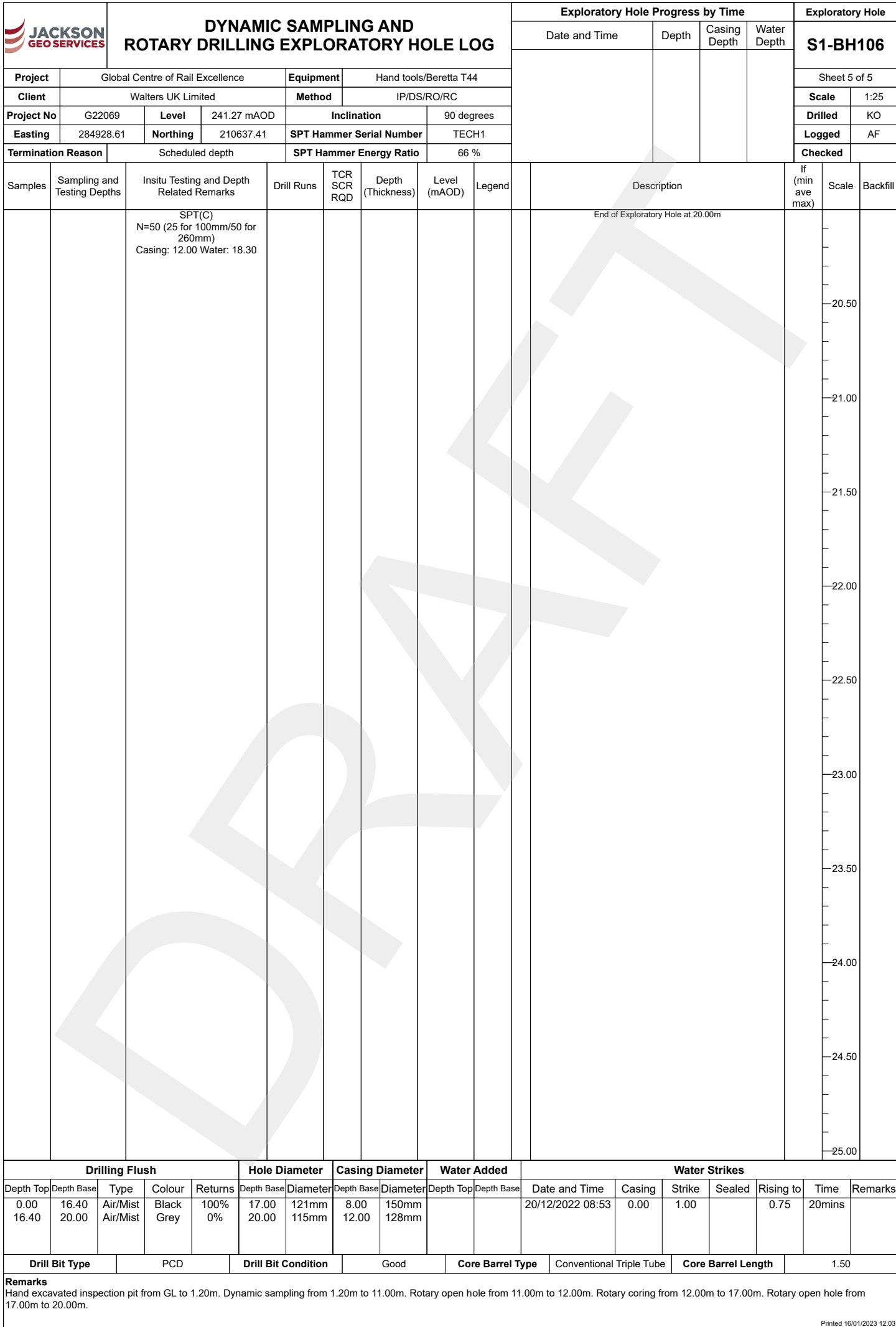
Drill Bit Type	PCD	Drill Bit Condition	Good	Core Barrel Type	Conventional Triple Tube	Core Barrel Length	1.50
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Remarks
Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.

Continued on next Sheet

Drill Bit Type	PCD	Drill Bit Condition	Good	Core Barrel Type	Conventional Triple Tube	Core Barrel Length	1.50
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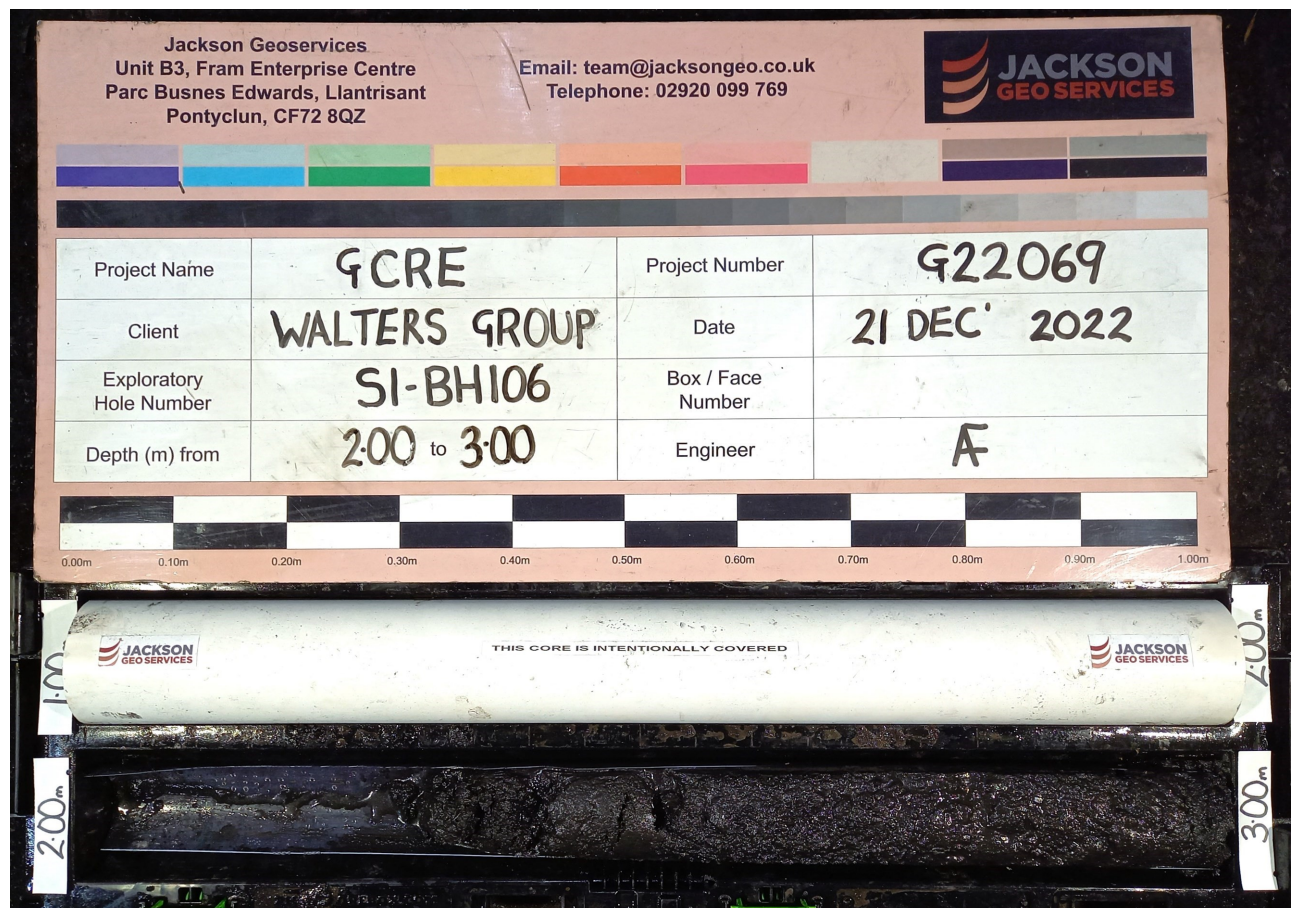
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		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.		Exploratory Hole
S1-BH106						
Project	Global Centre of Rail Excellence	Easting	284928.61	Equipment	Hand tools/Beretta T44	Sheet 1 of 5
Client	Walters UK Limited	Northing	210637.41	Method	IP/DS/RO/RC	
Project No	G22069	Level	241.27 mAOD	Termination Reason	Scheduled depth	

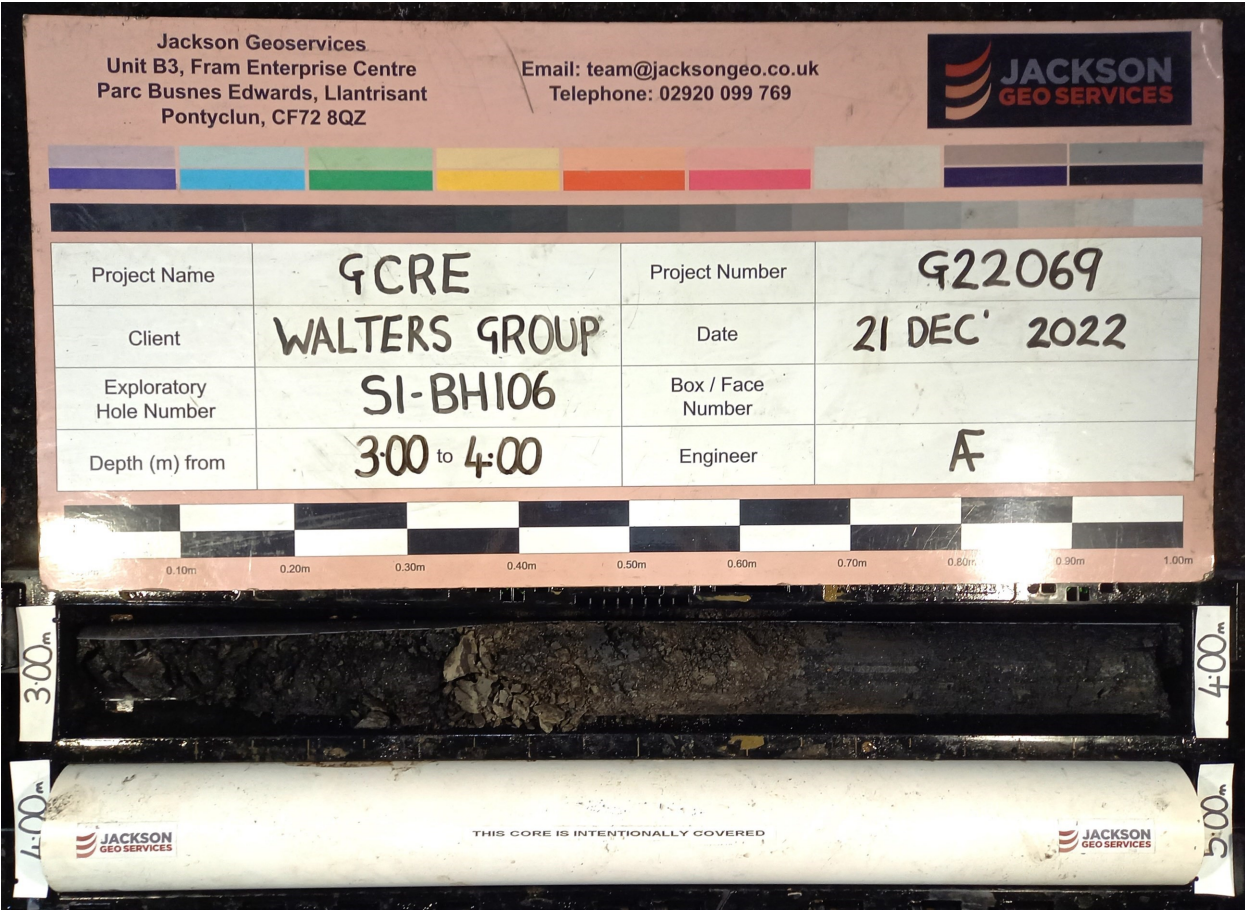


S1-BH106 1.00 m to 2.00 m

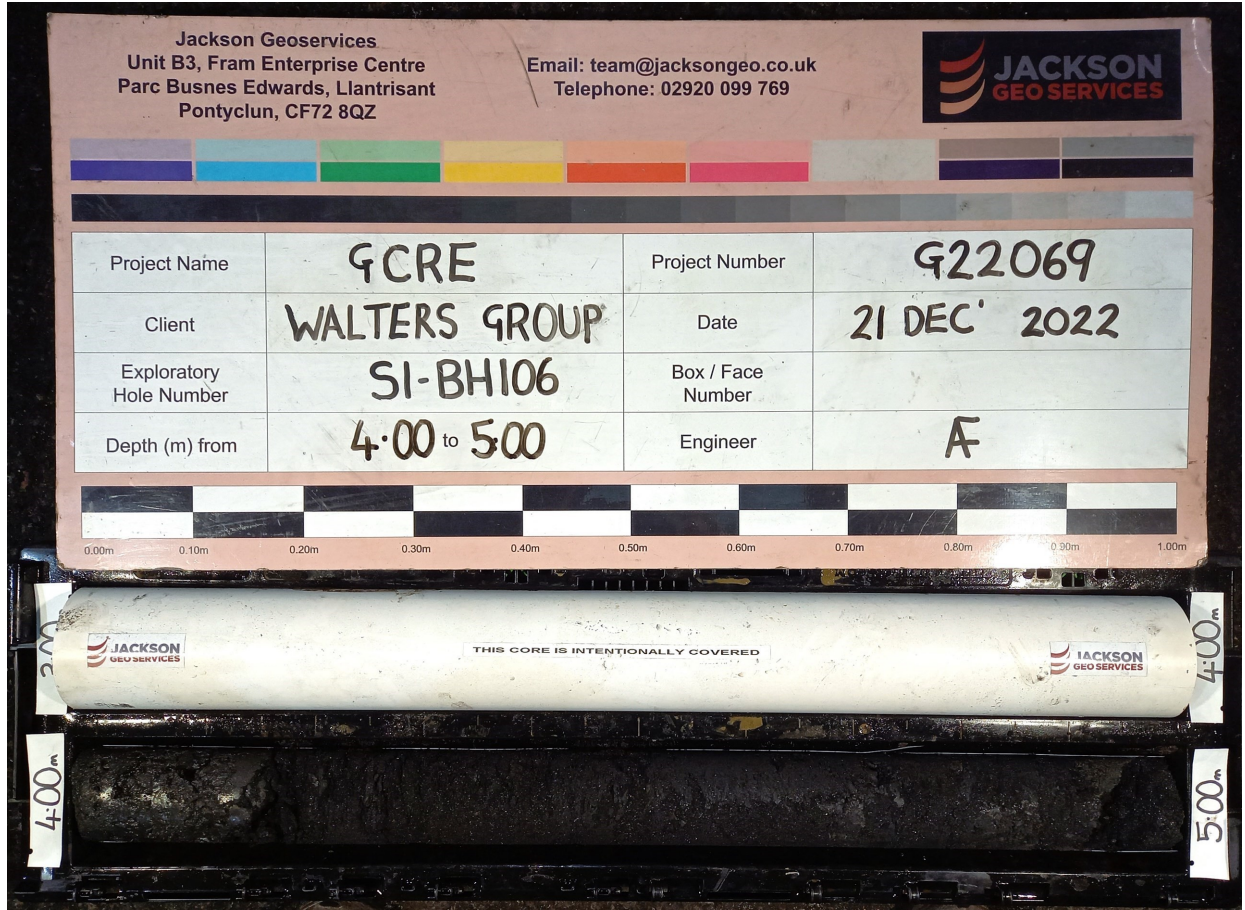


S1-BH106 2.00 m to 3.00 m

		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.		Exploratory Hole S1-BH106
Project	Global Centre of Rail Excellence	Easting	284928.61	Equipment	Hand tools/Beretta T44	Sheet 2 of 5
Client	Walters UK Limited	Northing	210637.41	Method	IP/DS/RO/RC	
Project No	G22069	Level	241.27 mAOD	Termination Reason	Scheduled depth	



S1-BH106 3.00 m to 4.00 m



S1-BH106 4.00 m to 5.00 m

		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.		Exploratory Hole S1-BH106
Project	Global Centre of Rail Excellence	Easting	284928.61	Equipment	Hand tools/Beretta T44	Sheet 3 of 5
Client	Walters UK Limited	Northing	210637.41	Method	IP/DS/RO/RC	
Project No	G22069	Level	241.27 mAOD	Termination Reason	Scheduled depth	

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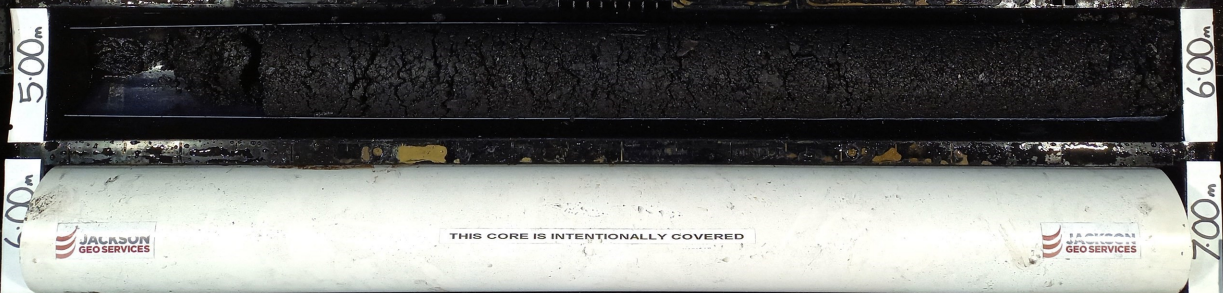
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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	21 DEC' 2022
Exploratory Hole Number	SI-BH106	Box / Face Number	
Depth (m) from	5.00 to 6.00	Engineer	A





S1-BH106 5.00 m to 6.00 m

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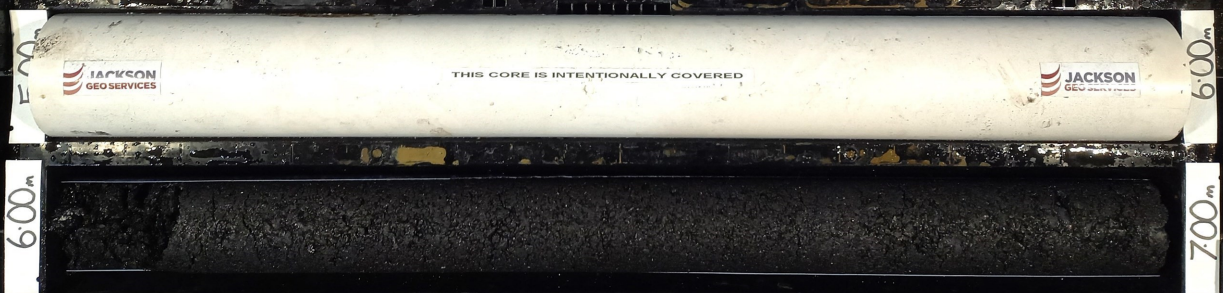
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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	21 DEC' 2022
Exploratory Hole Number	SI-BH106	Box / Face Number	
Depth (m) from	6.00 to 7.00	Engineer	A





S1-BH106 6.00 m to 7.00 m

		EXPLORATORY HOLE PHOTOGRAPHS			Remarks Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.	Exploratory Hole S1-BH106
Project	Global Centre of Rail Excellence	Easting	284928.61	Equipment	Hand tools/Beretta T44	Sheet 4 of 5
Client	Walters UK Limited	Northing	210637.41	Method	IP/DS/RO/RC	
Project No	G22069	Level	241.27 mAOD	Termination Reason	Scheduled depth	



S1-BH106 10.00 m to 11.00 m



S1-BH106 12.50 m to 14.00 m