

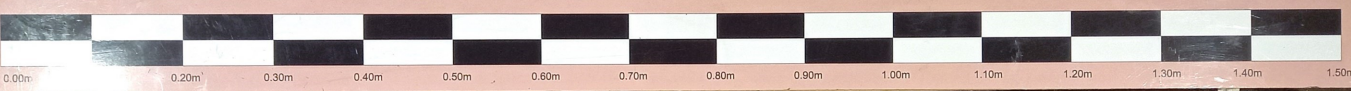
		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m depth. Dynamic sampling from 1.20m to 9.80m depth. Rotary coring from 9.80m to 30.80m depth.		Exploratory Hole S1-BH105
Project	Global Centre of Rail Excellence	Easting	284718.99	Equipment	Commachio 305/Insulated Digging Tools	Sheet 10 of 11
Client	Walters UK Limited	Northing	210649.88	Method	RC/IP/DS	
Project No	G22069	Level	236.49 mAOD	Termination Reason	Scheduled depth	

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	6 DEC' 2022
Exploratory Hole Number	S1-BH105	Box / Face Number	
Depth (m) from	24.80 to 26.30	Engineer	A



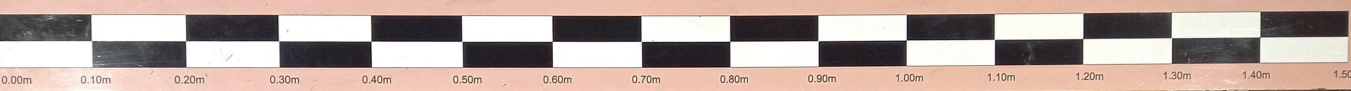
S1-BH105 24.80 m to 26.30 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	6 DEC' 2022
Exploratory Hole Number	S1-BH105	Box / Face Number	
Depth (m) from	26.30 to 27.80	Engineer	A



S1-BH105 26.30 m to 27.80 m

		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

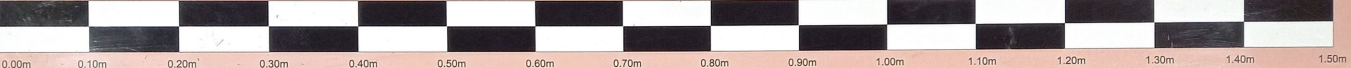
Sheet 11 of 11

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	6 DEC' 2022
Exploratory Hole Number	S1-BH105	Box / Face Number	
Depth (m) from	27.80 to 29.30	Engineer	A



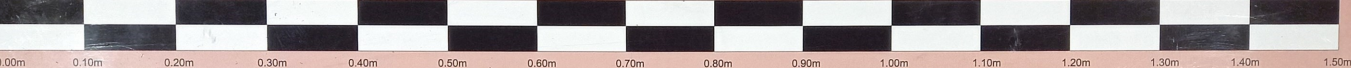

S1-BH105 27.80 m to 29.30 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	6 DEC' 2022
Exploratory Hole Number	S1-BH105	Box / Face Number	
Depth (m) from	29.30 to 30.80	Engineer	A



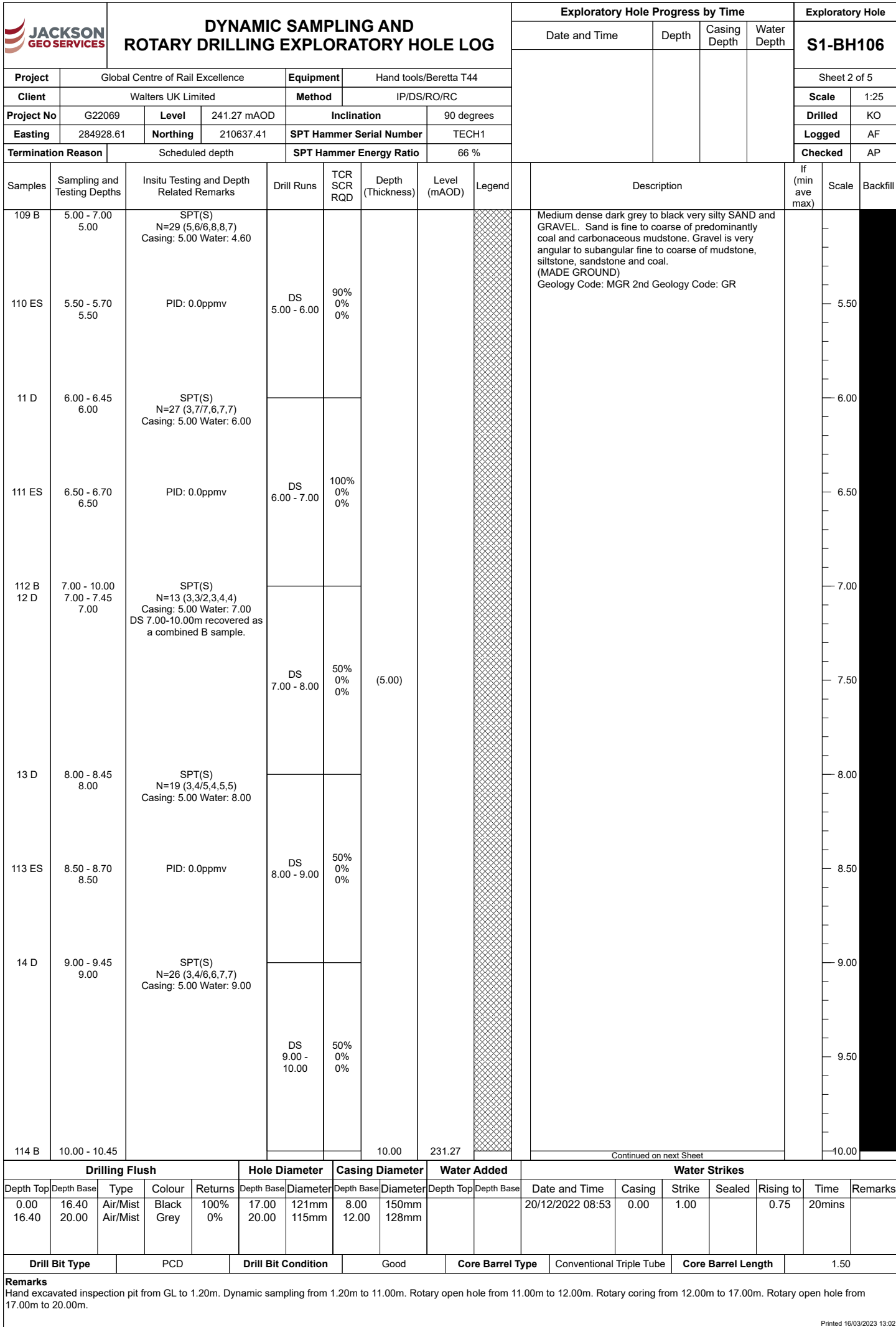

S1-BH105 29.30 m to 30.80 m



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

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

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 Scale1:25 DrilledKO LoggedAF CheckedAP	

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	
								NO RECOVERY. Mudstone (Driller's description) (Possible Weathered SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: MST		11.00	
								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	
			RC 12.00 - 12.50	0% 0% 0%	12.00 (0.50)	229.27		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.		12.00	
					12.50 (0.80)	228.77		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 50 80	12.50	
117 C	12.90 - 12.98		RC 12.50 - 14.00	93% 47% 0%	13.30	227.97		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.	Set 1 NI 40 70	13.50	
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	
								14.00m - 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.		14.50	
								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.		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	

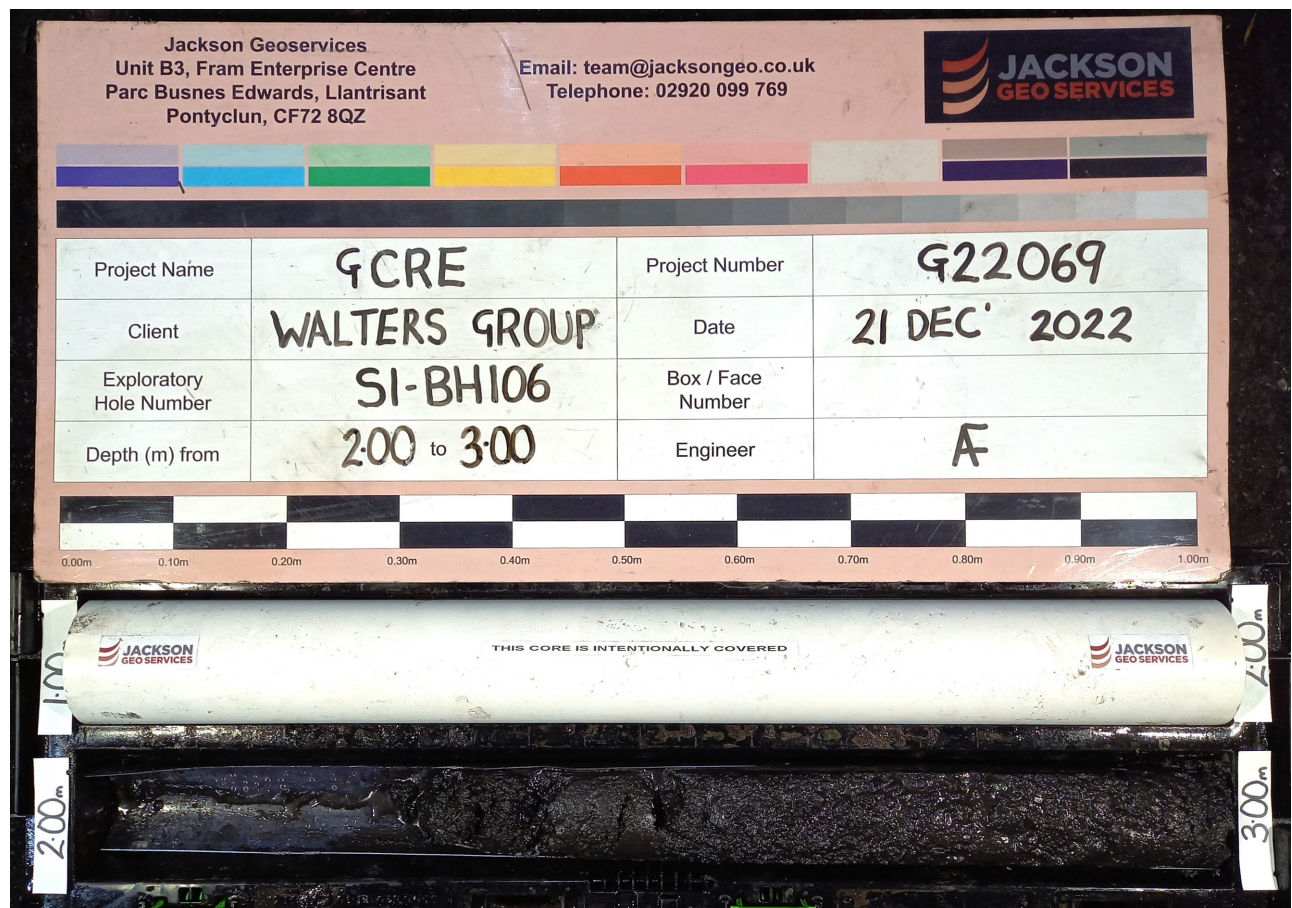
Remarks
Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.



		EXPLORATORY HOLE 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	

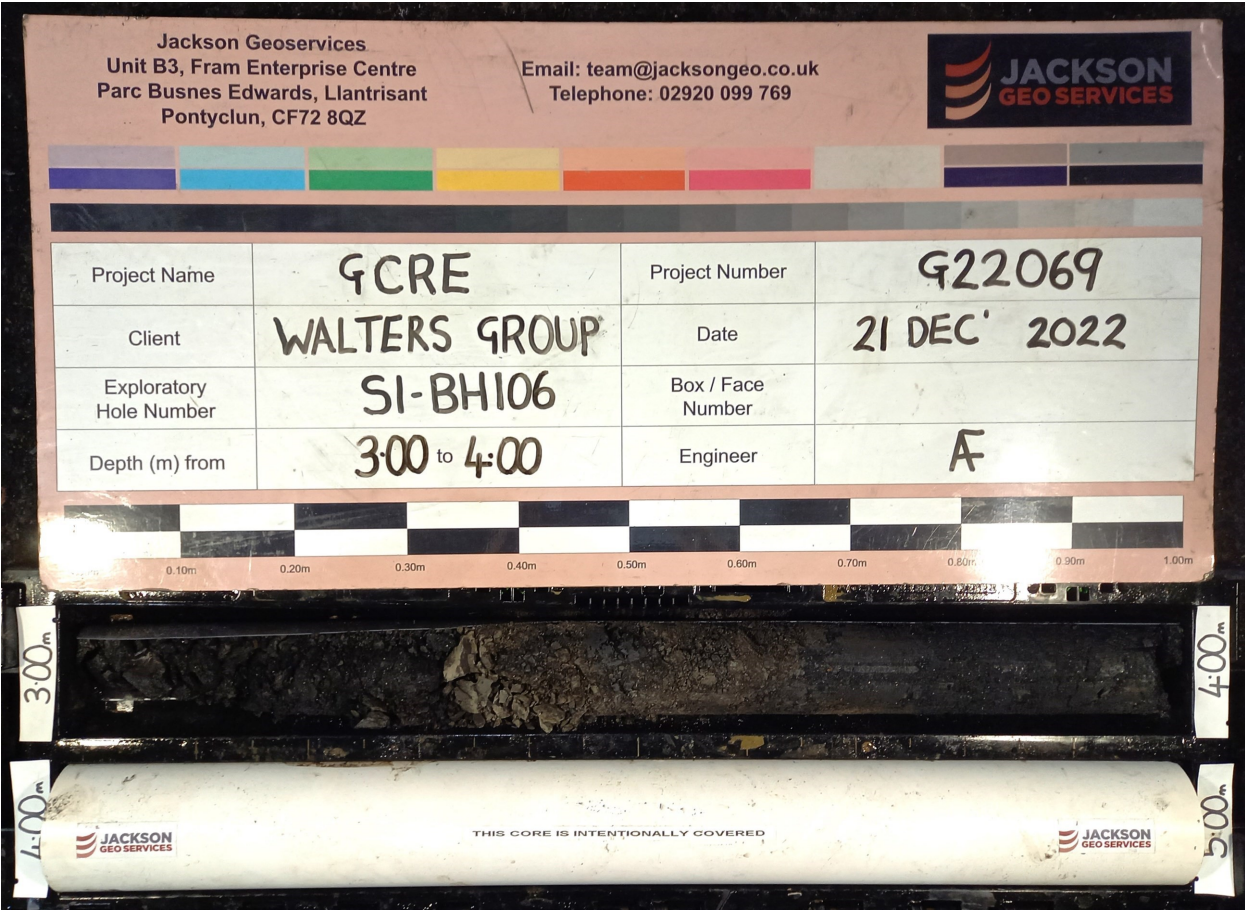


S1-BH106 1.00 m to 2.00 m

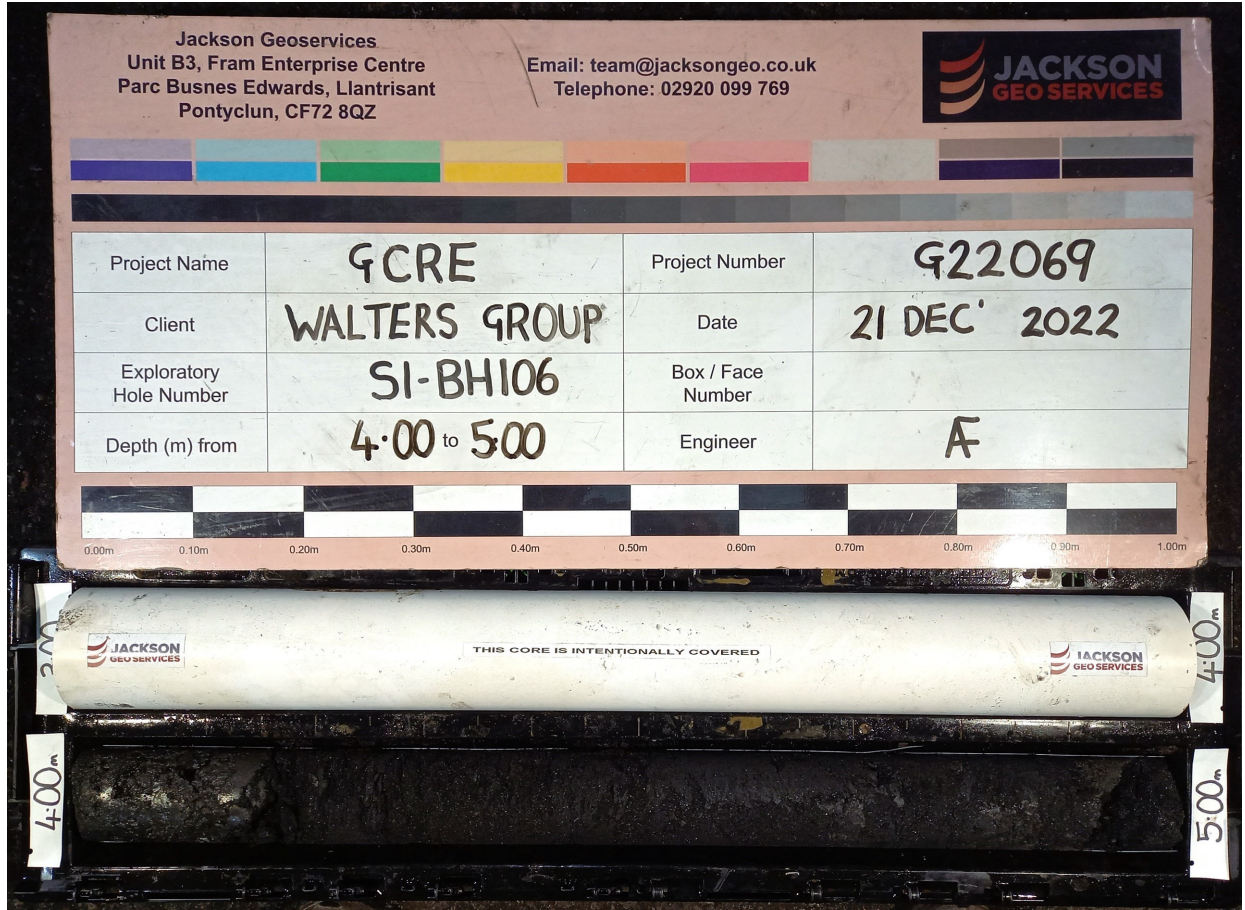


S1-BH106 2.00 m to 3.00 m

		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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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

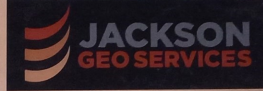




S1-BH106 5.00 m to 6.00 m

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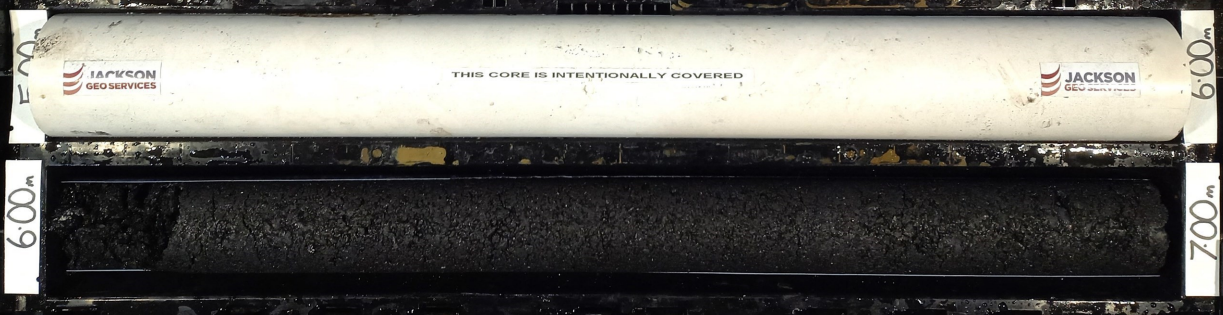
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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	21 DEC' 2022
Exploratory Hole Number	SI-BH106	Box / Face Number	
Depth (m) from	6.00 to 7.00	Engineer	A





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

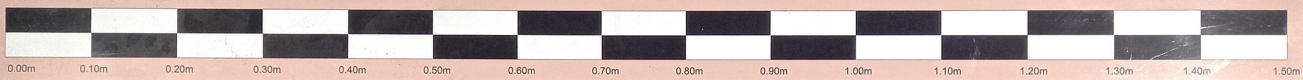
		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.00m. Rotary open hole from 11.00m to 12.00m. Rotary coring from 12.00m to 17.00m. Rotary open hole from 17.00m to 20.00m.		Exploratory Hole S1-BH106
Project	Global Centre of Rail Excellence	Easting	284928.61	Equipment	Hand tools/Beretta T44	Sheet 5 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	

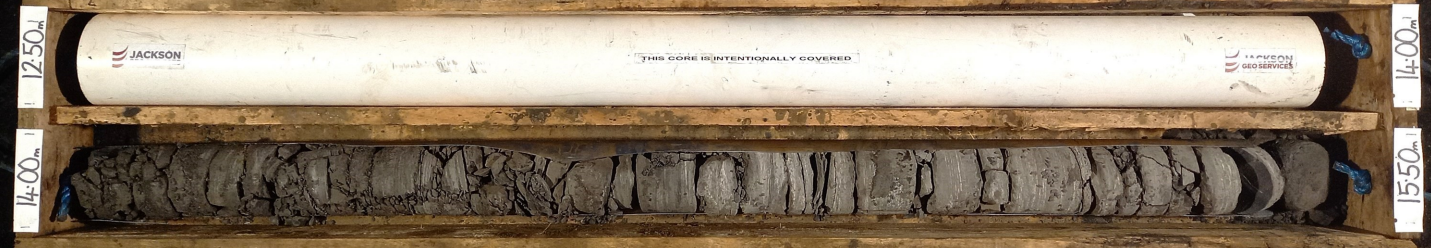
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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	22 DEC' 2022
Exploratory Hole Number	S1-BH106	Box / Face Number	
Depth (m) from	14.00 to 15.50	Engineer	AF



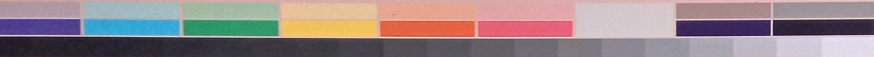
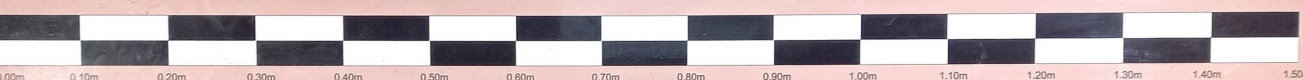
S1-BH106 14.00 m to 15.50 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	22 DEC' 2022
Exploratory Hole Number	S1-BH106	Box / Face Number	
Depth (m) from	15.50 to 17.00	Engineer	AF



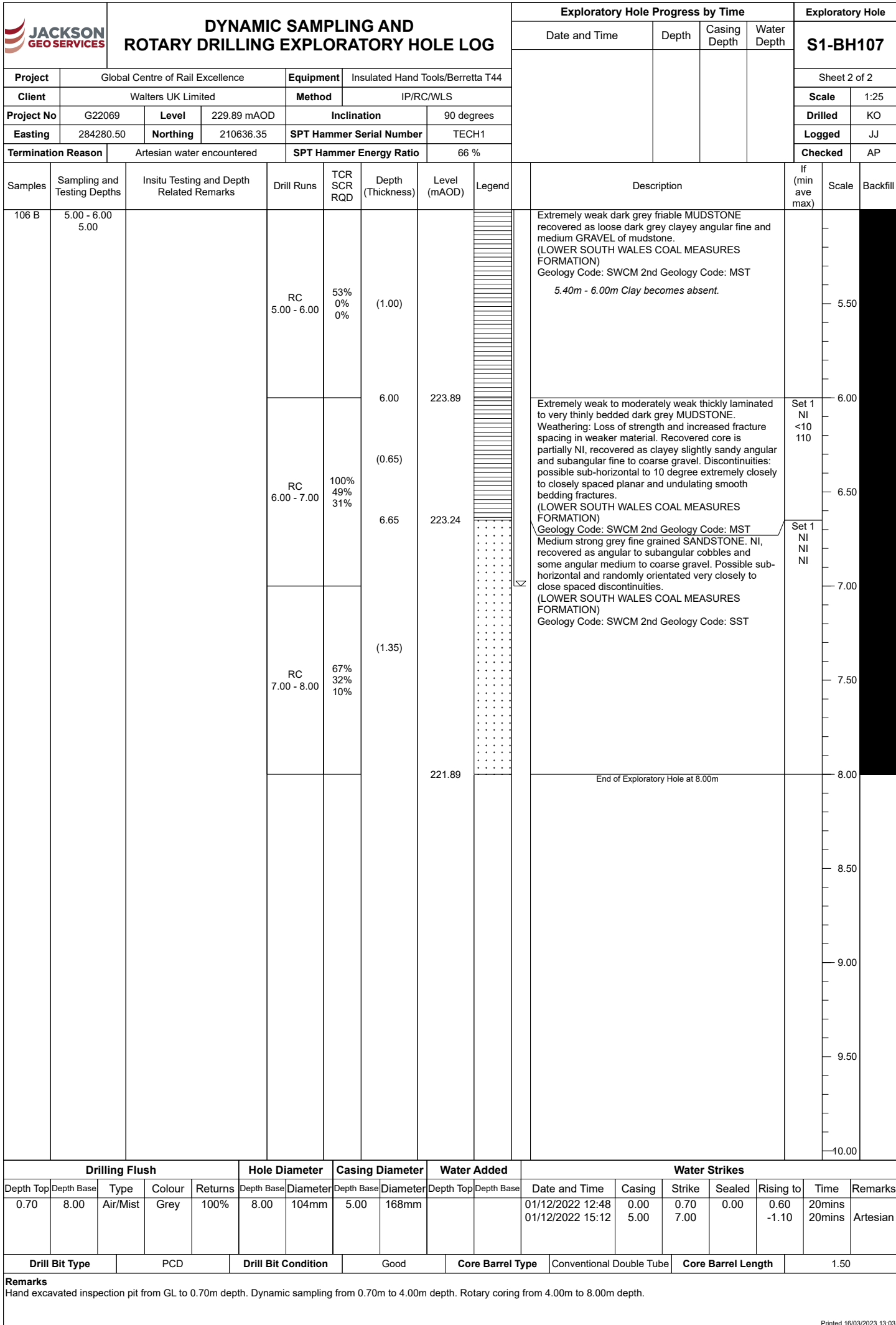
S1-BH106 15.50 m to 17.00 m



Exploratory Hole Progress by Time				Exploratory Hole	
Date and Time	Depth	Casing Depth	Water Depth	S1-BH107	
01/12/2022 08:00	0.00				
01/12/2022 16:00	8.00	5.00	-1.10	Sheet 1 of 2	
02/12/2022 07:30	8.00	5.00	0.00	Scale	1:25
02/12/2022 09:00	8.00	5.00	0.00	Drilled	KO
				Logged	JJ
				Checked	AP

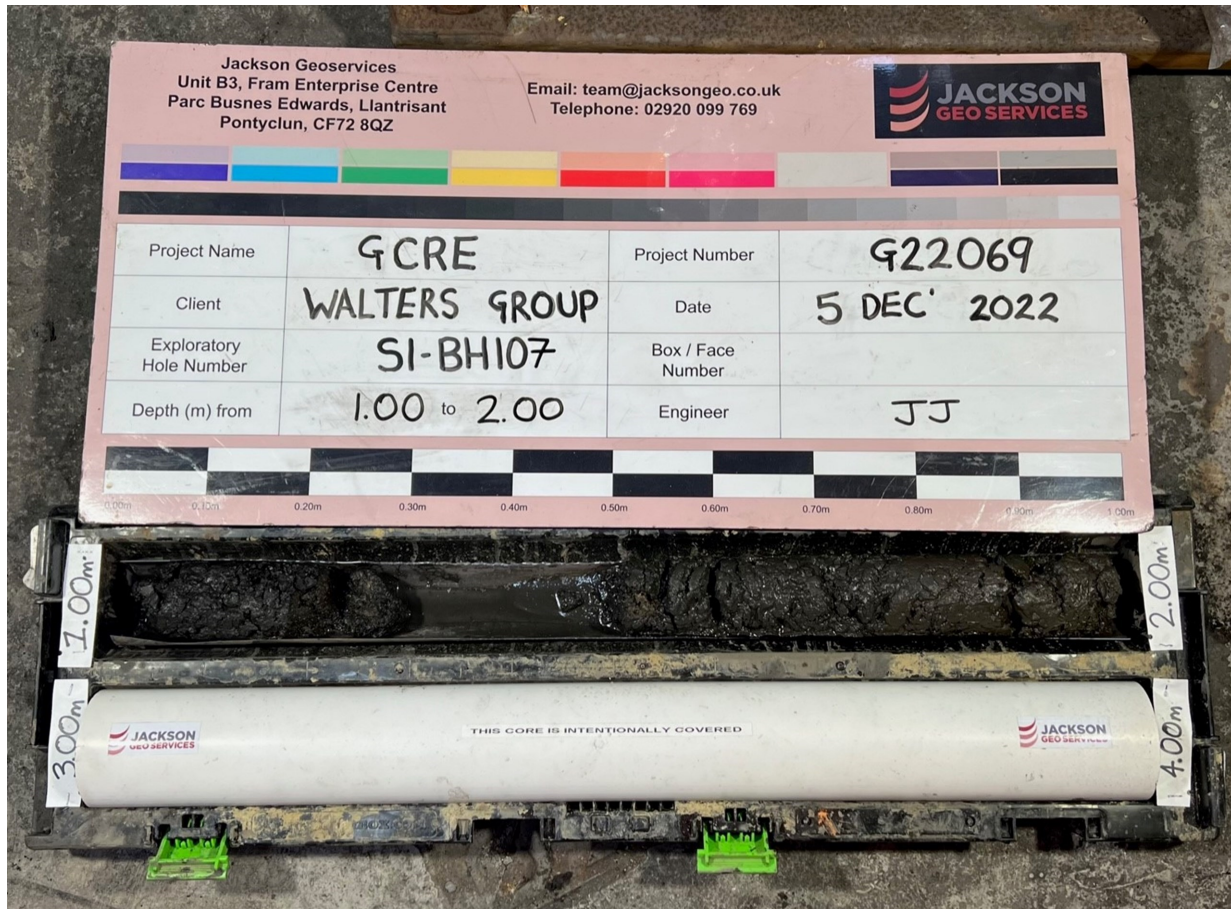
Drilling Flush					Hole Diameter		Casing Diameter		Water Added		Water Strikes						
Depth Top	Depth Base	Type	Colour	Returns	Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Date and Time	Casing	Strike	Sealed	Rising to	Time	Remarks
0.70	8.00	Air/Mist	Grey	100%	8.00	104mm	5.00	168mm			01/12/2022 12:48 01/12/2022 15:12	0.00 5.00	0.70 7.00	0.00	0.60 -1.10	20mins 20mins	Artesian
Drill Bit Type		PCD			Drill Bit Condition		Good		Core Barrel Type		Conventional Double Tube		Core Barrel Length			1.50	

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		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 0.70m depth. Dynamic sampling from 0.70m to 4.00m depth. Rotary coring from 4.00m to 8.00m depth.		Exploratory Hole S1-BH107
Project	Global Centre of Rail Excellence	Easting	284280.50	Equipment	Insulated Hand Tools/Berretta T44	
Client	Walters UK Limited	Northing	210636.35	Method	IP/RC/WLS	
Project No	G22069	Level	229.89 mAOD	Termination Reason	Artesian water encountered	

Sheet 1 of 4



S1-BH107 1.00 m to 2.00 m



S1-BH107 2.00 m to 3.00 m