

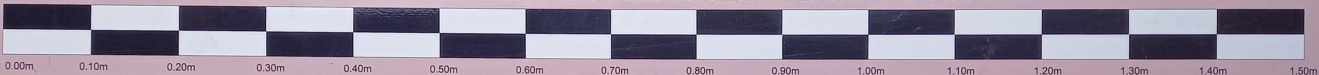
		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m depth. Dynamic sampling from 1.20m to 7.00m depth. Rotary coring from 7.00m to 30.00m depth.		Exploratory Hole S1-BH102
Project	Global Centre of Rail Excellence	Easting	284544.49	Equipment	Insulated Hand Tools/Beretta T44	Sheet 7 of 11
Client	Walters UK Limited	Northing	210695.40	Method	IP/RC/WLS	
Project No	G22069	Level	230.73 mAOD	Termination Reason	Scheduled depth	

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	17 NOV' 2022
Exploratory Hole Number	SI-BH102	Box / Face Number	
Depth (m) from	17.50 to 18.00	Engineer	AF





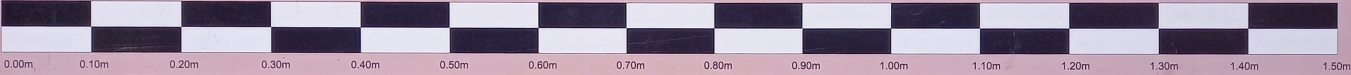
S1-BH102 17.50 m to 18.00 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	17 NOV' 2022
Exploratory Hole Number	SI-BH102	Box / Face Number	
Depth (m) from	18.00 to 19.00	Engineer	AF





S1-BH102 18.00 m to 19.00 m

		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m depth. Dynamic sampling from 1.20m to 7.00m depth. Rotary coring from 7.00m to 30.00m depth.		Exploratory Hole S1-BH102
Project	Global Centre of Rail Excellence	Easting	284544.49	Equipment	Insulated Hand Tools/Beretta T44	Sheet 9 of 11
Client	Walters UK Limited	Northing	210695.40	Method	IP/RC/WLS	
Project No	G22069	Level	230.73 mAOD	Termination Reason	Scheduled depth	

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	17 NOV' 2022
Exploratory Hole Number	SI-BH102	Box / Face Number	
Depth (m) from	22.00 to 23.00	Engineer	AF

0.00m

0.10m

0.20m

0.30m

0.40m

0.50m

0.60m

0.70m

0.80m

0.90m

1.00m

1.10m

1.20m

1.30m

1.40m

1.50m

20.50m

22.00m

23.00m



22.00m

S1-BH102 22.00 m to 23.00 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	17 NOV' 2022
Exploratory Hole Number	SI-BH102	Box / Face Number	
Depth (m) from	23.00 to 24.50	Engineer	AF

0.00m

0.20m

0.30m

0.40m

0.50m

0.60m

0.70m

0.80m

0.90m

1.00m

1.10m

1.20m

1.30m

1.40m

1.50m

23.00m

24.50m



24.50m

S1-BH102 23.00 m to 24.50 m

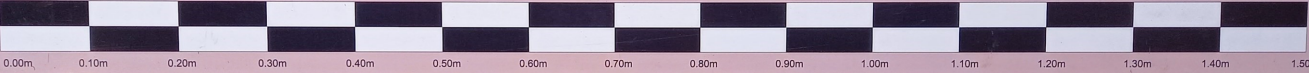
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Project	Global Centre of Rail Excellence	Easting	284544.49	Equipment	Insulated Hand Tools/Beretta T44	Sheet 10 of 11
Client	Walters UK Limited	Northing	210695.40	Method	IP/RC/WLS	
Project No	G22069	Level	230.73 mAOD	Termination Reason	Scheduled depth	

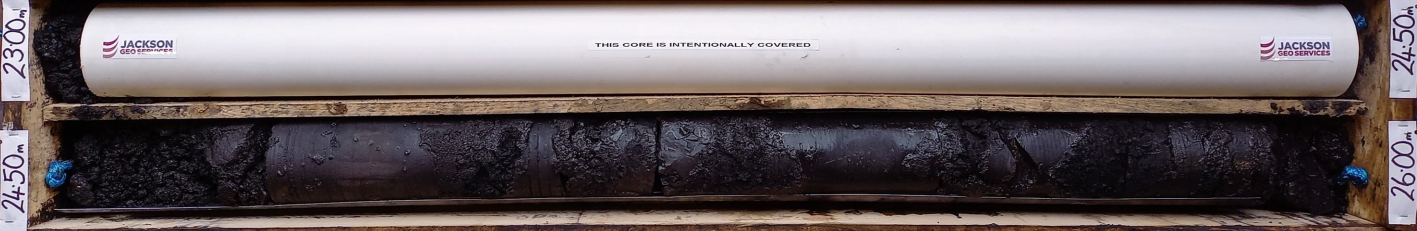
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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	17 NOV' 2022
Exploratory Hole Number	S1-BH102	Box / Face Number	
Depth (m) from	24.50 to 26.00	Engineer	AF





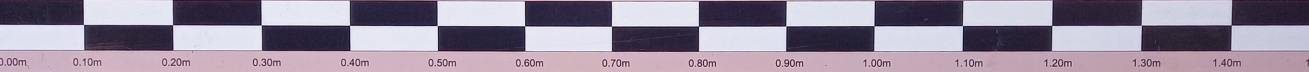
S1-BH102 24.50 m to 26.00 m

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Project Name	GCRE	Project Number	G22069
Client	WALTERS GROUP	Date	17 NOV' 2022
Exploratory Hole Number	S1-BH102	Box / Face Number	
Depth (m) from	26.00 to 27.50	Engineer	AF





S1-BH102 26.00 m to 27.50 m

		EXPLORATORY HOLE PHOTOGRAPHS		Remarks Hand excavated inspection pit from GL to 1.20m depth. Dynamic sampling from 1.20m to 7.00m depth. Rotary coring from 7.00m to 30.00m depth.		Exploratory Hole S1-BH102
Project	Global Centre of Rail Excellence	Easting	284544.49	Equipment	Insulated Hand Tools/Beretta T44	Sheet 11 of 11
Client	Walters UK Limited	Northing	210695.40	Method	IP/RC/WLS	
Project No	G22069	Level	230.73 mAOD	Termination Reason	Scheduled depth	



S1-BH102 27.50 m to 28.50 m



S1-BH102 28.50 m to 30.00 m

Exploratory Hole Progress by Time				Exploratory Hole	
Date and Time	Depth	Casing Depth	Water Depth	S1-BH103	
22/11/2022 14:00	0.00				
22/11/2022 16:30	1.20	0.00	Dry	Sheet 1 of 7	
23/11/2022 08:30	1.20	0.00	Dry	Scale	1:25
23/11/2022 16:00	7.20	6.00	3.14	Drilled	TP
24/11/2022 08:00	7.20	6.00	2.94	Logged	JJ/AF
24/11/2022 16:30	15.80	15.80	3.74	Checked	
25/11/2022 08:00	15.80	15.80	4.41		
25/11/2022 15:30	20.30	20.30	3.35		

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
11.30	30.80	Air/Mist	Grey	100%	7.50 30.80	200mm 146mm	7.50 30.80	200mm 146mm			23/11/2022 11:50	3.00	4.00		3.12	20mins	
Drill Bit Type		PCD			Drill Bit Condition		Good		Core Barrel Type		Wireline Triple Tube		Core Barrel Length			1.50	

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Exploratory Hole Progress by Time				Exploratory Hole	
Date and Time	Depth	Casing Depth	Water Depth	S1-BH103	
28/11/2022 08:15	20.30	20.30	3.35		
28/11/2022 16:30	24.80	24.80	15.70	Sheet 2 of 7	
29/11/2022 08:30	24.80	24.80	4.07	Scale	1:25
29/11/2022 16:30	30.80	30.80	4.47	Drilled	TP
				Logged	JJ/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
11.30	30.80	Air/Mist	Grey	100%	7.50 30.80	200mm 146mm	7.50 30.80	200mm 146mm			23/11/2022 11:50	3.00	4.00		3.12	20mins	
Drill Bit Type		PCD		Drill Bit Condition		Good		Core Barrel Type		Wireline Triple Tube		Core Barrel Length		1.50			

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Samples	Sampling and Testing Depths	Insitu Testing and Depth Related Remarks	Drill Runs	TCR SCR RQD	Depth (Thickness)	Level (mAOD)	Legend
11 D	11.30 - 11.75 11.30 11.30	PID: 0.0ppmv <					

Description	If (min ave max)	Scale	Backfill
NO RECOVERY. (Possible DEVENSIAN GLACIAL TILL) Geology Code: GT			
		10.50	
Brownish grey clayey gravelly fine to coarse SAND. Gravel is very angular to subrounded fine to coarse of grey sandstone and occasional siltstone. (DEVENSIAN GLACIAL TILL) Geology Code: GT 2nd Geology Code: SD		11.00	
Brownish grey thinly laminated very silty fine SAND. (DEVENSIAN GLACIAL TILL) Geology Code: GT 2nd Geology Code: SD 11.20m - 11.25m Well rounded sandstone cobble.		11.50	
Brownish grey to grey clayey very sandy angular to well rounded fine to coarse GRAVEL of predominantly sandstone. (DEVENSIAN GLACIAL TILL) Geology Code: GT 2nd Geology Code: GR			
Grey slightly sandy clayey very angular to subangular fine to medium GRAVEL of extremely weak to very weak mudstone. Sand is fine to coarse. (Possible Residual Soil SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: GR		12.00	
NO RECOVERY. (Possible Weathered LOWER SOUTH WALES COAL MEASURES FORMATION) Geology Code: SWCM		12.50	
Very weak dark grey MUDSTONE. NI, recovered as angular fine to medium gravel. Orientated extremely to very closely spaced randomly orientated discontinuities. (LOWER SOUTH WALES COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: MST 13.40m - 13.65m NI, recovered as angular fine to medium gravel.		13.00	
Weak very thinly and thinly bedded grey to dark grey SILTSTONE with some thin and thick light grey fine sandstone laminae. Discontinuities: sub-horizontal to 10 degree very closely to closely spaced planar rough tight and incipient infilled with <1-2mm silt. (SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: SZT 13.95m - 14.05m 30 to 40 degree very closely spaced planar rough tight joints.	Set 1 NI NI Set 1	13.50	
Medium strong to strong medium bedded light grey fine grained SANDSTONE with occasional thin grey siltstone laminae. No weathering noted. Discontinuities: sub-horizontal to 10 degree medium spaced planar rough tight bedding fractures, locally infilled with <5mm silty fine sand. (SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: SST	<10 60 130	14.00	
Very weak locally weak very thinly to thinly bedded grey to dark grey SILTSTONE locally grading to MUDSTONE. Weathering: Some localised loss of strength to extremely weak and increased fracture spacing to extremely closely spaced (10-50mm thickness). Discontinuities: sub-horizontal to 20 degree very closely and closely spaced undulating smooth tight and incipient bedding fractures. Joints are 60-70 degree locally randomly orientated undulating rough tight, infilled with <1mm silt infill. (SOUTH WALES LOWER COAL MEASURES FORMATION) Geology Code: SWCM 2nd Geology Code: SZT	Set 1 360 360 360 Set 1 <20 70 140	14.50	
		15.00	

Continued on next Sheet

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
11.30	30.80	Air/Mist	Grey	100%	7.50 30.80	200mm 146mm	7.50 30.80	200mm 146mm			23/11/2022 11:50	3.00	4.00		3.12	20mins	
Drill Bit Type		PCD			Drill Bit Condition		Good		Core Barrel Type		Wireline Triple Tube		Core Barrel Length			1.50	

Remarks	Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.30m. Rotary coring from 11.30m to 30.80m.
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DYNAMIC SAMPLING AND ROTARY DRILLING EXPLORATORY HOLE LOG

Project	Global Centre of Rail Excellence			Equipment	Insulated Digging Tools/Comacchio 305
Client	Walters UK Limited			Method	IP/DS/RC
Project No	G22069	Level	234.33 mAOD	Inclination	
Easting	284603.15	Northing	210646.48	SPT Hammer Serial Number	AR2724
Termination Reason	Scheduled depth			SPT Hammer Energy Ratio	69 %

Exploratory Hole Progress by Time				Exploratory Hole
Date and Time	Depth	Casing Depth	Water Depth	S1-BH103 Sheet 4 of 7 Scale 1:25 Drilled TP Logged JJ/AF Checked

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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
11.30	30.80	Air/Mist	Grey	100%	7.50 30.80	200mm 146mm	7.50 30.80	200mm 146mm			23/11/2022 11:50	3.00	4.00		3.12	20mins	
Drill Bit Type		PCD			Drill Bit Condition		Good		Core Barrel Type		Wireline Triple Tube		Core Barrel Length		1.50		

Remarks									
Hand excavated inspection pit from GL to 1.20m. Dynamic sampling from 1.20m to 11.30m. Rotary coring from 11.30m to 30.80m.									



Exploratory Hole Progress by Time				Exploratory Hole	
Date and Time	Depth	Casing Depth	Water Depth		
				S1-BH103	
				Sheet 5 of 7	
				Scale	1:25
				Drilled	TP
				Logged	JJ/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
11.30	30.80	Air/Mist	Grey	100%	7.50 30.80	200mm 146mm	7.50 30.80	200mm 146mm			23/11/2022 11:50	3.00	4.00		3.12	20mins	
Drill Bit Type		PCD		Drill Bit Condition		Good		Core Barrel Type		Wireline Triple Tube		Core Barrel Length		1.50			

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