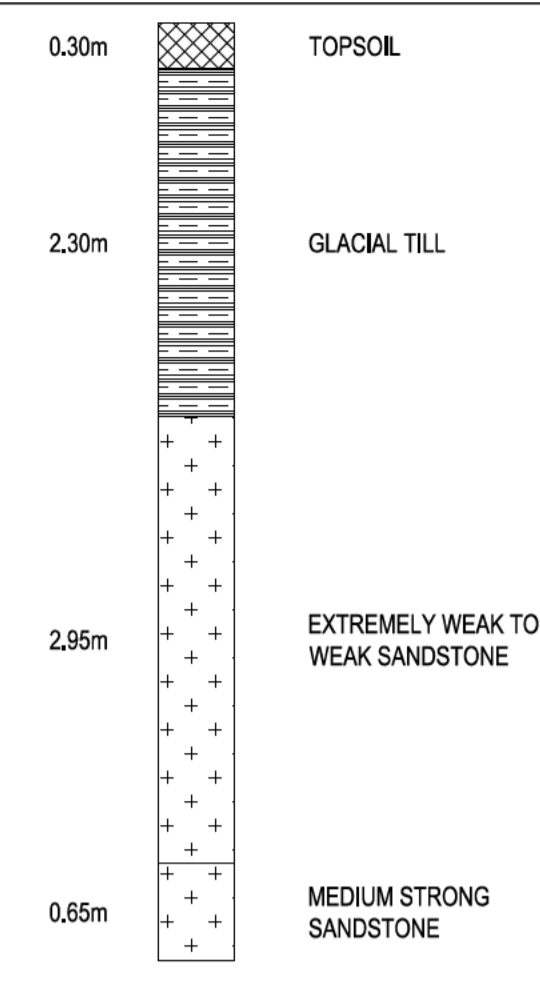
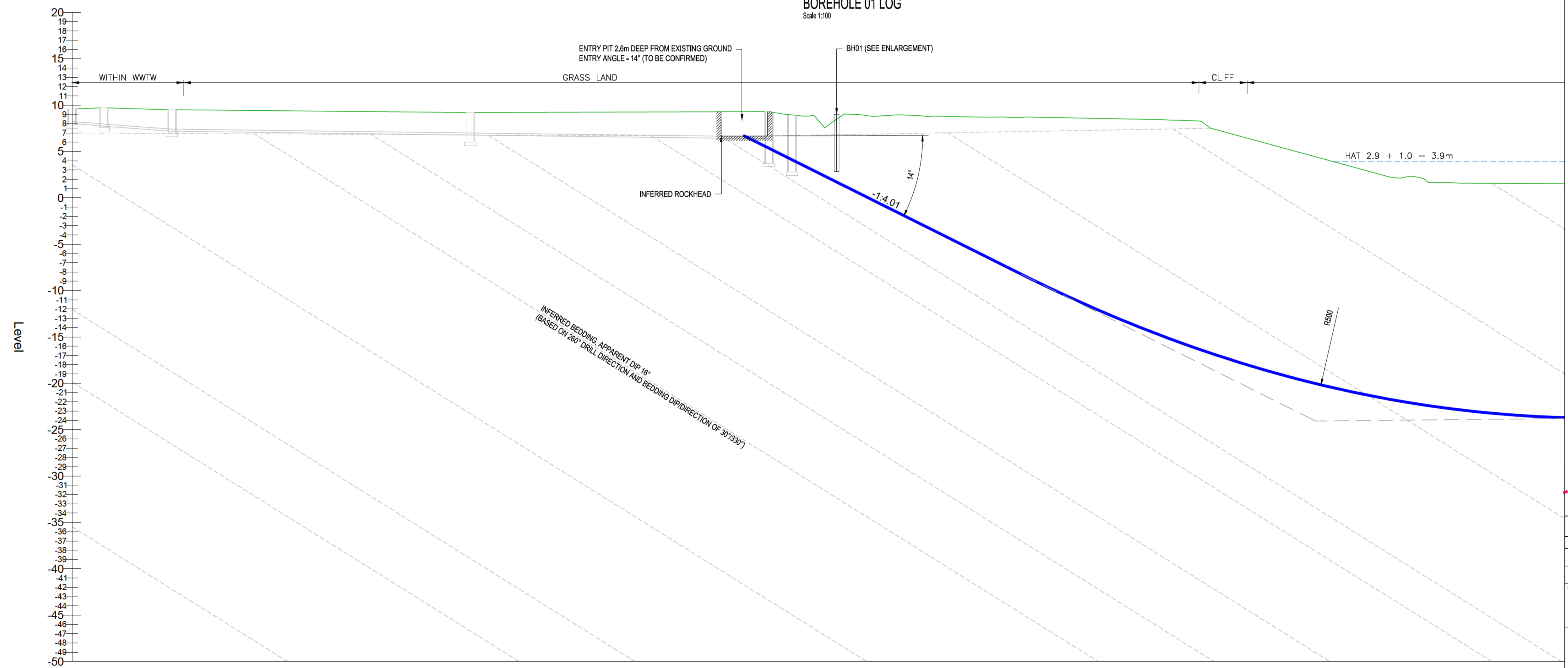


This drawing should not be scaled. Dimensions to be verified on site. Any discrepancies should be referred to the Engineer prior to work being put in hand.
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BOREHOLE 01 LOG
Scale 1:100



- GENERAL NOTES**
- ALL WORK IS TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES AND REGULATIONS.
 - AT THE REQUEST OF AMEY-BLACK & VETCH, THE PROFILE IS BASED ON A FULL LENGTH HDD AND WILL REQUIRE A CHECK AND POSSIBLE AMENDMENTS TO THE PROPOSED GRAVITY FED OUTFALL. IT IS POSSIBLE THAT A PUMPED SYSTEM MAY BE REQUIRED.
 - IF A GRAVITY FED SYSTEM IS TO BE MAINTAINED, IT IS UNDERSTOOD THAT A MAXIMUM 1 IN 300 FALL IS PERMISSIBLE. IN THIS INSTANCE, IT WOULD BE RECOMMENDED THAT THE HDD TERMINATES AT CH700 AT A TARGET DEPTH OF 1.5 TO 2.0m BELOW SEA BED LEVEL. THE REMAINDER OF THE PIPELINE SHOULD THEN BE INSTALLED IN A SEA BED TRENCH. THIS IS DUE TO THE RISK OF FRAC-OUT OF DRILL FLUIDS TO THE MARINE ENVIRONMENT AND COLLAPSE OF THE HDD BORE DUE TO LIMITED DEPTH OF COVER.
 - THE BORE PROFILE IS AN OUTLINE DESIGN ONLY, BASED ON AN ENTRY ANGLE OF 14 DEGREES AND MINIMUM RADIUS R500m FOR BEDDED SANDSTONES.
 - PRIOR TO CONSTRUCTION, DETAILED DESIGN WILL REQUIRE TO BE UNDERTAKEN TO CONFIRM THE SUITABILITY OF THE PROPOSED DRILL PROFILE. THIS MUST INCLUDE PUSHING CALCULATIONS TO CONFIRM THAT FORCES REMAIN WITHIN THE YIELD / COMPRESSION STRENGTH OF THE PRODUCT PIPE, AND HYDRO-FRACTURE CALCULATIONS TO CONFIRM SUFFICIENT DEPTH OF COVER TO PREVENT FRAC-OUT OF DRILL FLUIDS TO THE MARINE ENVIRONMENT. FURTHER CONSIDERATION SHOULD ALSO BE GIVEN TO THE INFLUENCE OF BEDDING AND JOINT SETS ON THE DRILL STEERING, TO CONFIRM THE SUITABILITY OF THE PROPOSED MINIMUM RADIUS R500m.
 - THE INFERRED GEOLOGY HAS BEEN BASED ON INFORMATION PROVIDED BY AMEY-BLACK & VETCH.
 - DEPTH TO ROCK AT THE PROPOSED ENTRY POINT IS CIRCA 2.6m BGL (BH01). A REINFORCED CONCRETE ANCHOR BLOCK MAY THEREFORE BE REQUIRED TO PROVIDE SUPPORT TO THE HDD RIG DURING DRILLING OPERATIONS, AS THE DEPTH OF COVER IS INSUFFICIENT FOR SHEET PILES BUT TOO GREAT FOR ANCHORING DIRECTLY TO ROCK.

NOT FOR CONSTRUCTION

PO2	23.11.18	HDD PROFILE AMENDED TO SHOW 1:200 RISING GRADIENT, ISSUED FOR DISCUSSION	Redacted
PO1	14.09.18	ISSUED FOR DISCUSSION	Redacted
Rev	Date	Description	By

Project		DUNNET
Title		LONGITUDINAL SECTIONS MH01 TO 300m CHAINAGE SHEET 1 OF 3
Client		STOCKTON DRILLING LTD



Chainage	00.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000
Proposed Levels HDD											6.670	6.460	2.966	0.473	-2.020	-4.513	-7.007	-8.218	-9.474	-11.764	-13.854	-15.745	-17.435	-18.926	-20.028	-20.216	-21.306	-22.197	-22.887	-23.378	-23.668		
Vertical Geometry HDD																G=-24.933% (-1.4) L=59.710					K=5.000 L=127.164 R=500m												

Status		PRELIMINARY
Designed By	Designer	Waterman Ref
Checked By	Date	WIE12731
Date	12.09.18	H 1:500, V 1:250
Project - Originator - Volume - Level - Type - Role - Number	Revision	
12731-WIE-ZZ-XX-DR-C-90101	P02	

SHEET 2 OF 3