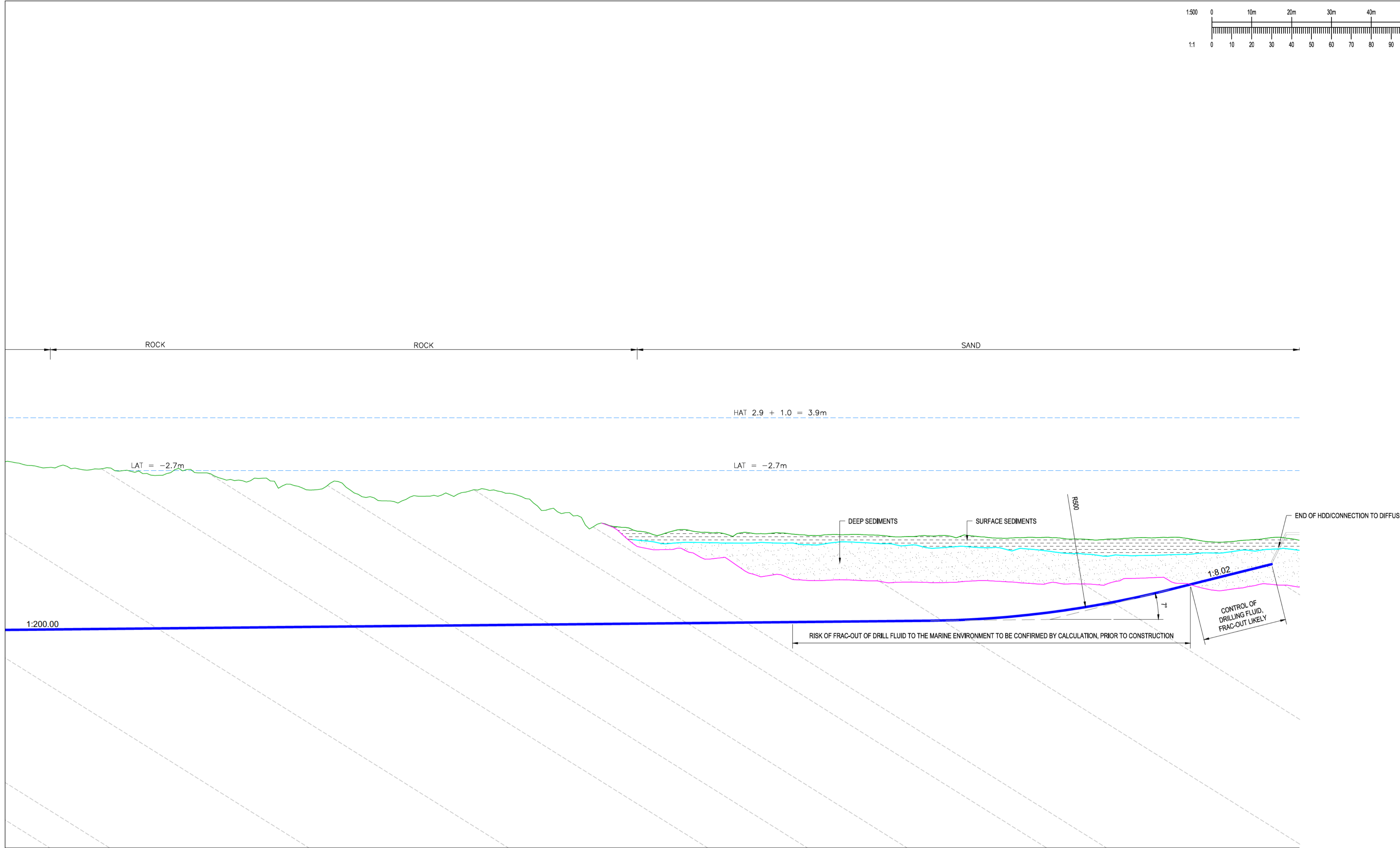


This drawing should not be scaled. Dimensions to be verified on site. Any discrepancies should be referred to the Engineer prior to work being put in hand.
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GENERAL NOTES

- 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 SEABED 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

550.000	560.000	570.000	580.000	590.000	600.000	610.000	620.000	630.000	640.000	650.000	660.000	670.000	680.000	690.000	700.000	710.000	720.000	730.000	740.000	750.000	760.000	770.000	780.000	790.000	800.000	810.000	820.000	830.000	840.000	850.000	860.000	870.000			
-22.682	-22.612	-22.582	-22.512	-22.462	-22.412	-22.382	-22.312	-22.282	-22.212	-22.162	-22.112	-22.062	-22.012	-21.962	-21.912	-21.862	-21.812	-21.762	-21.712	-21.662	-21.612	-21.562	-21.525	-21.506	-21.504	-20.502	-20.481	-20.301	-19.689	-18.497	-17.646	-17.203	-16.096	-14.810	-14.445

SHEET 2 OF 3

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

Project	DUNNET
Title	LONGITUDINAL SECTIONS 600m CHAINAGE TO DISCHARGE POINT SHEET 3 OF 3
Client	STOCKTON DRILLING LTD

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Status	PRELIMINARY				
Designed By	Designer	Checked By	Re	Waterman Ref	WIE12731
Drawn By	R	Date	12.09.18	Scales @ A1	H 1:500, V 1:250
Project - Originator - Volume - Level - Type - Role - Number	12731-WIE-ZZ-XX-DR-C-90103	Revision	P02		