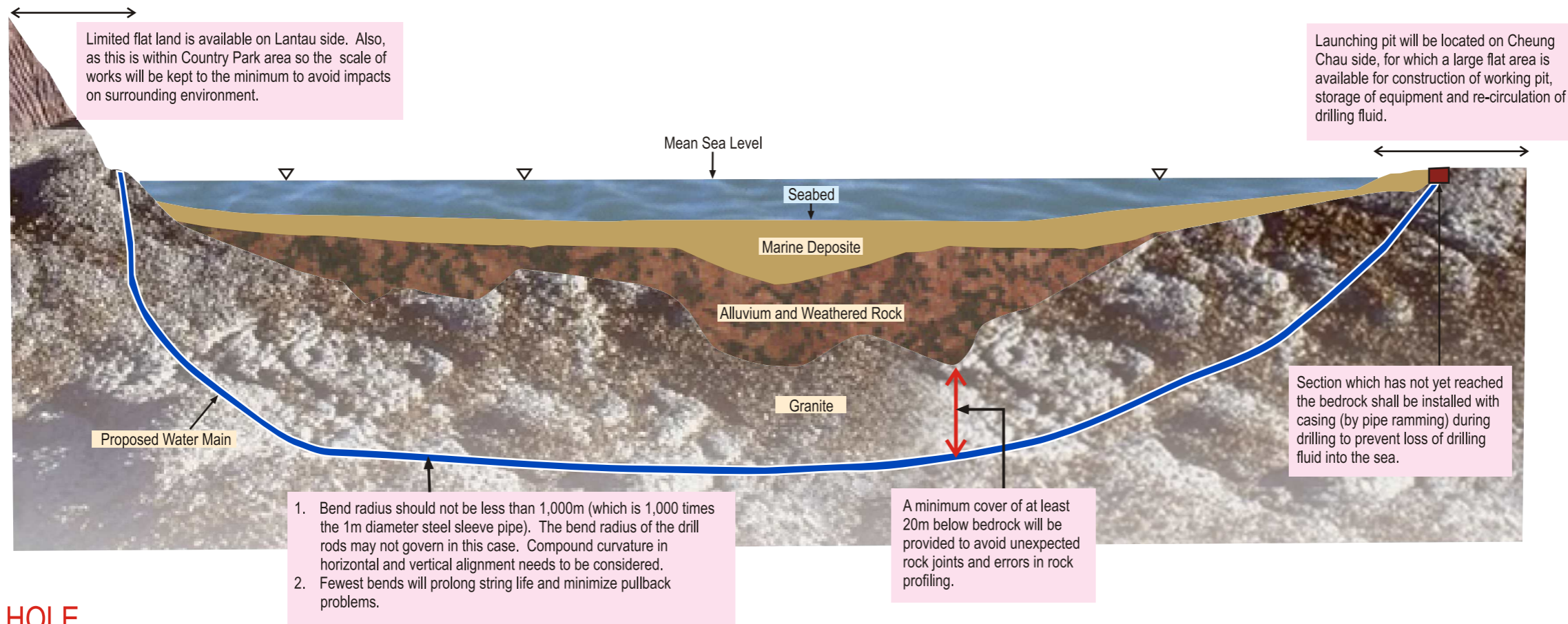
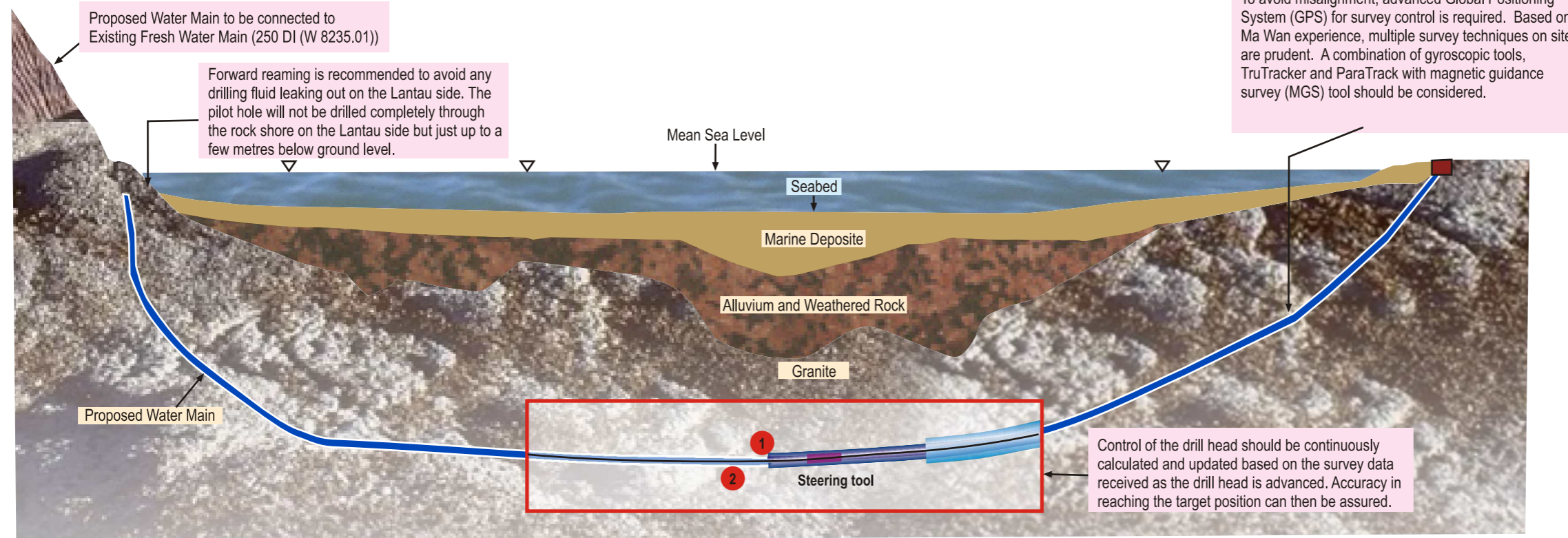


DRILL PATH DESIGN



PILOT HOLE



1. For drilling in hard rock for this submarine pipeline, mud motor bits (i.e. drag bits) should be considered. Output torque and drilling fluid volume and pressure requirements are most important.
2. Loss of circulation of drill fluiding - if voids or cavities are encountered, circulation can be lost very quickly. Drilling fluid tanks will be rapidly depleted and there is a high risk the drill string will become stuck. It is usually not possible to locate those cavities during site investigation but the possibility of encountering voids may be identified as a risk during the investigation. Grouting is necessary to overcome loss of drilling mud.

Revision	Date	Description			Initial
		Designed	Checked	Drawn	
Date					

Approved

Agreement No. CE 1/2008 (WS)

Contract Title
IMPROVEMENT OF FRESH WATER SUPPLY TO CHEUNG CHAU - INVESTIGATION

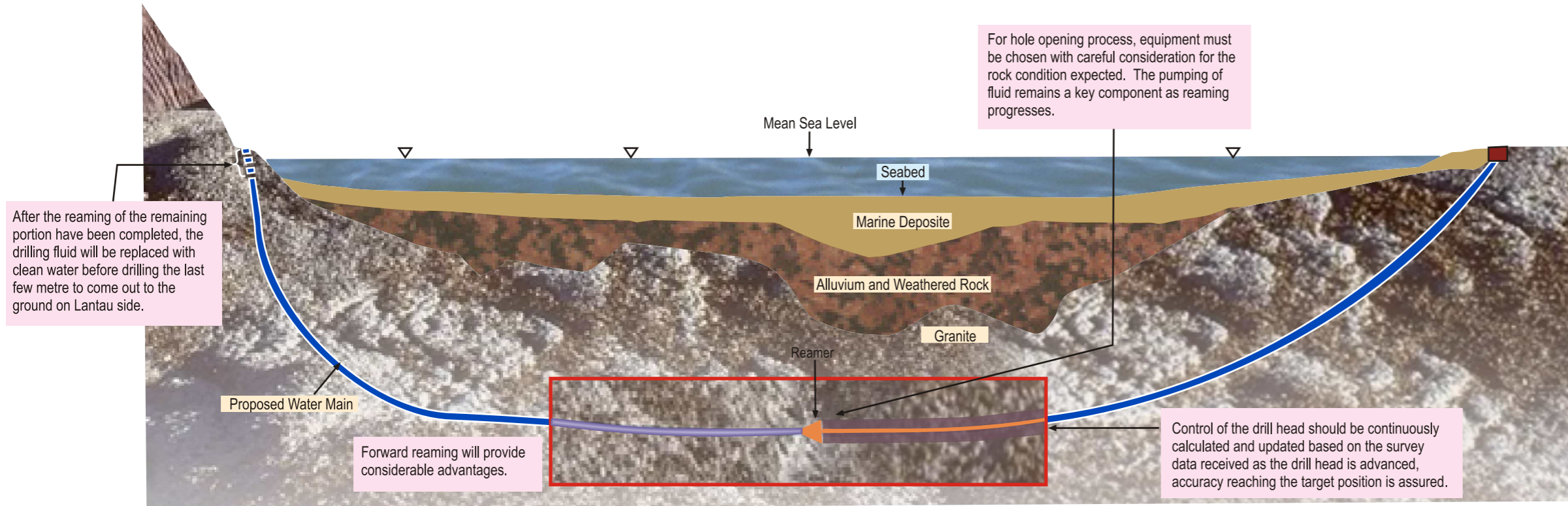
Drawing Title
TYPICAL HDD PROCEDURES FOR THIS PROJECT (SHEET 1 OF 2)

FIGURE 2.8

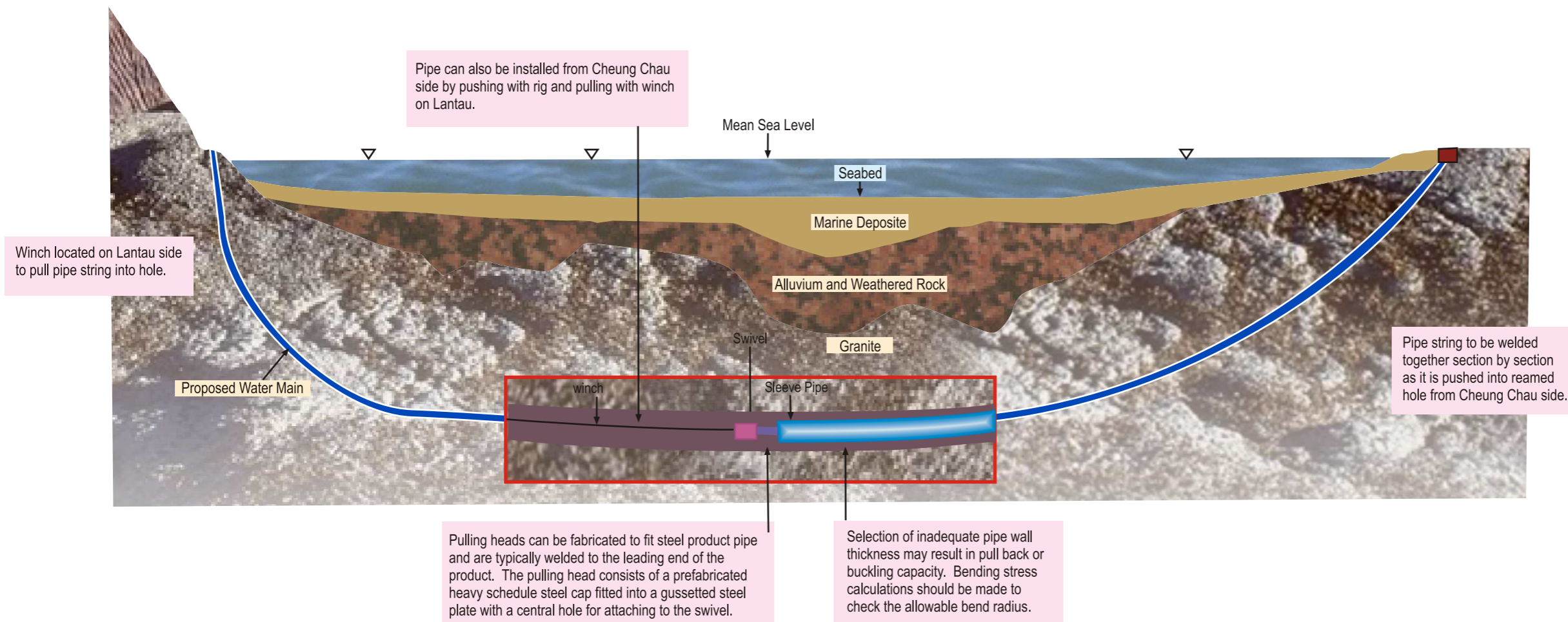


BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

REAMING



INSTALLATION OF STEEL SLEEVE PIPES



Revision	Date	Description			Initial
		Designed	Checked	Drawn	
Initial					
Date					

Approved

Agreement No. CE 1/2008 (WS)

Contract Title
IMPROVEMENT OF FRESH WATER SUPPLY TO CHEUNG CHAU - INVESTIGATION

Drawing Title
TYPICAL HDD PROCEDURES FOR THIS PROJECT (SHEET 2 OF 2)

FIGURE 2.8

Scale

