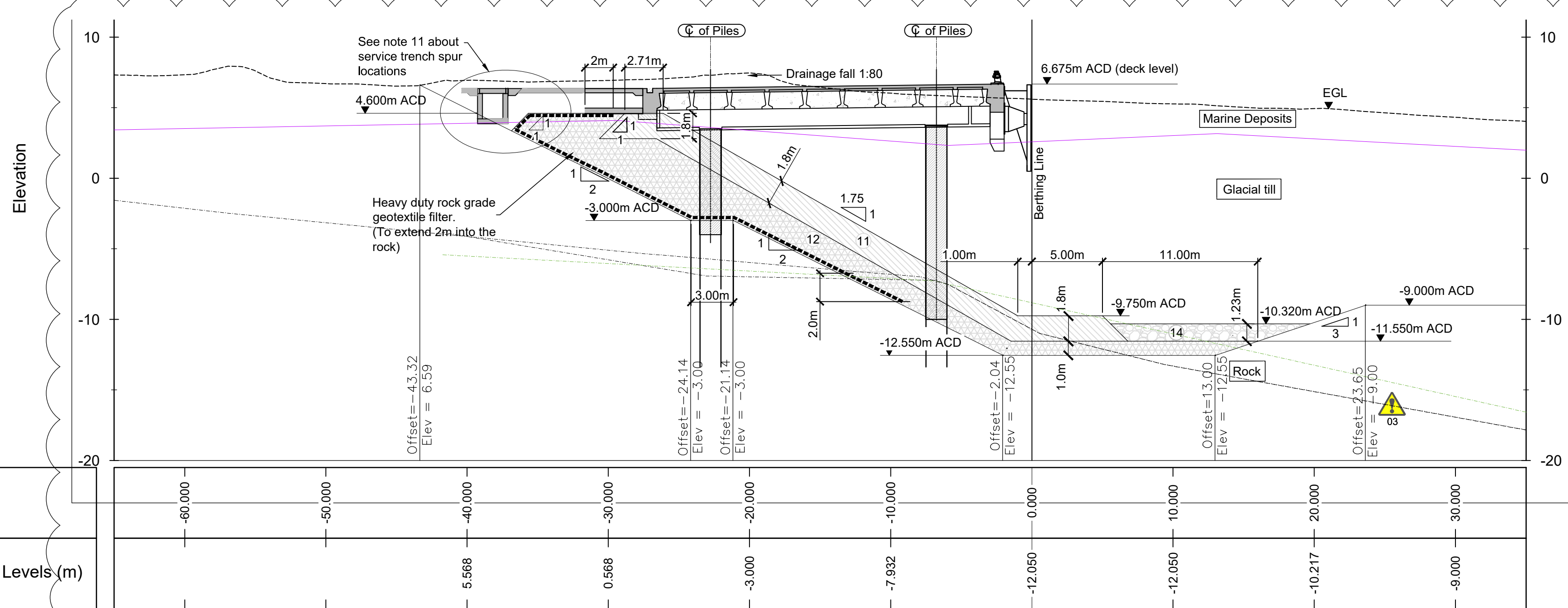
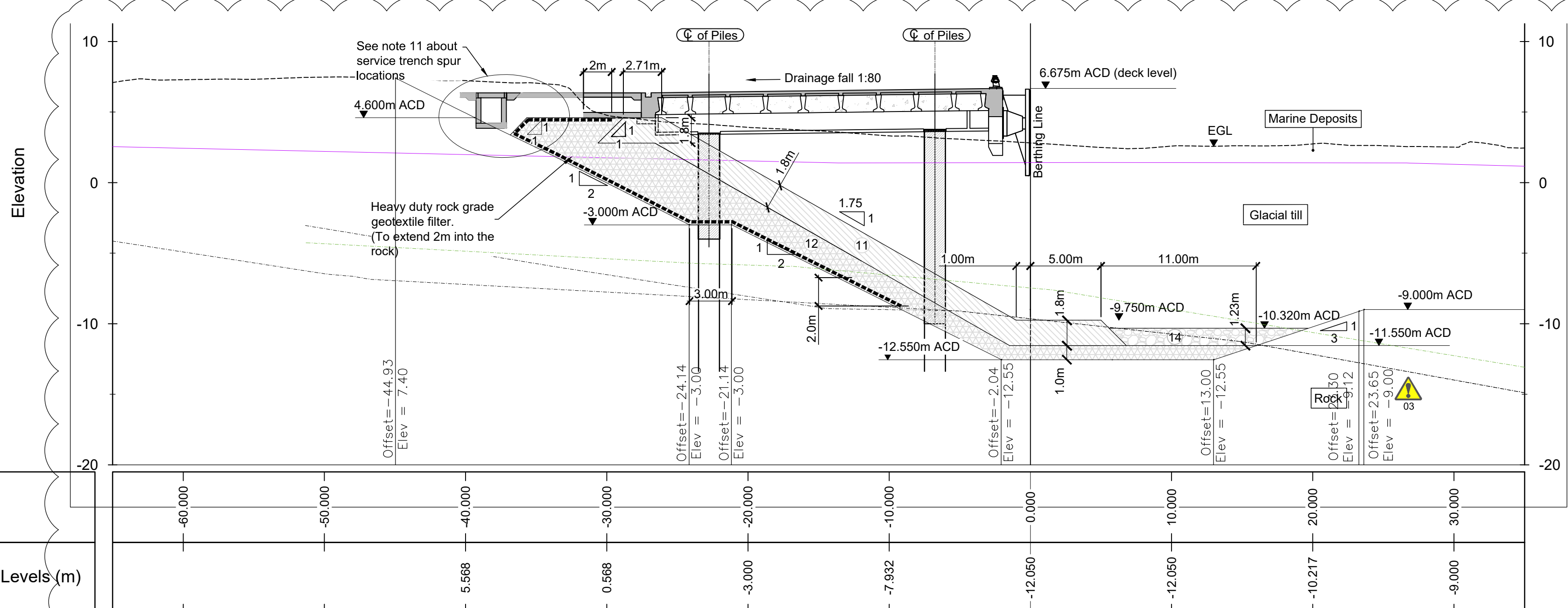


Chainage 1632.365m



Chainage 1652.365m



Chainage 1682.365

**Legend:**

- EGL profile
- Glacial till level profile
- Rock level profile
- 1-3 tonnes Rock armour
- Core material
- Rock bedding layer: weight 300-1000kg
- Geotextile filter layer
- Temporary slopes shown indicatively only. These will be subject to natural material properties.
- Dredge line
- NOQ North Open Quay Dredge setting out point
- SOP North Open Quay Alignment setting out point

**Tidal level (m A.C.D.)**

HAT	4.80
MHWS	4.30
MHWN	3.40
MSL	2.56
MLWN	1.60
MLWS	0.60
LAT	0.00

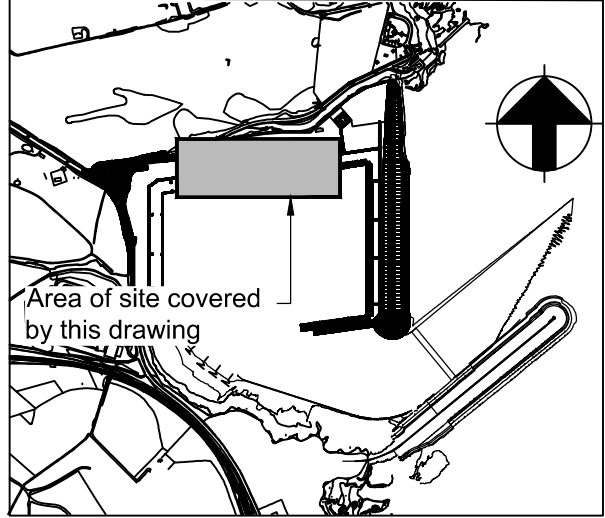
**HEALTH AND SAFETY INFORMATION**

SIGNIFICANT OR EXCEPTIONAL RISKS ARE IDENTIFIED BELOW

- The potential risk of alternative ground conditions or less favourable slope angles should be noted. The corresponding potential to create an interaction between dredge slopes to the back of the east quay and the north breakwater should be considered and monitored during the works.
- Preparation of bed for revetment construction may require divers working on temporary seabed profile. Stability of seabed should be verified by the contractor.
- There is the potential for boulders within the glacial till deposits which could cause dredging equipment to become caught.

**Notes:**

- All dimensions are in meters (m) unless noted otherwise.
- All levels are given in meters above admiralty chart datum (A.C.D.) unless noted otherwise.
- Seabed, soil and rock levels have been interpreted from ground investigation information and will vary.
- Level control for both vertical and horizontal directions in accordance with Materials and Workmanship Specification.
- The slope angles shown assume permanent conditions only. The risk to fine erodible silts and clays in the cut face during temporary conditions is highlighted. Crest loading of up to 20KPa allowed for in the temporary case.
- The pipework that is running from bunkering pits and underslung below the deck and through into service trench branch will be positioned lower than the current geotextile layer shown in the section. In these areas the geotextile will be cut back, the earthworks excavated locally and the geotextile repositioned to provide the required depth for the structure.
- Position of Glacial till to rock transition based on interpretation of existing information. Location shown is indicative only and may vary based on findings of dredge operations.
- This drawing is to be printed in colour.
- For superstructure details please refer to drawing set DRA-P-NOQ-NOQ003-DWG-180200 series
- For piling details, please refer to drawing set DRA-P-NOQ-NOQ001-DWG-180200 series.
- In areas where there is a service trench spur, the back beam of the suspended deck will be locally deepened. The rockfill that has been placed previously will be removed and the heavy duty geotextile will be cut and placed below the spur.



**Key Plan**

4	27/02/2019	PC	LG	NL
Issue for Approval				
3	12/10/2018	PC	LG	NL
Issue for Approval				
2	01/02/2018	MKH	LG	JPS
Issue for Approval				
Issue	Date	By	Chkd	Appd

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Job Title  
**Aberdeen Harbour Expansion Project**

Drawing Title  
**North Open Quay Scour and Revetment Cross Sections Sheet 1**

Arup Job No	253300-00	Scale at A1	H & V 1:250
Discipline	Civil Geotechnical		
Drawing Status	IFA	Rev	4
Drawing No	DRA-P-NOQ-NOQ002-DWG-800001-001		

**Notes:**

For details of general dredging to this area, refer to drawings:

- DRA-P-DRE-D00001-DWG-800001-000 General Dredging Key Plan
- DRA-P-DRE-D00001-DWG-800001-001 to 008 General Dredging Typical Cross Sections
- DRA-P-DRE-D00001-DWG-800002-000 Setting out overall layout

For details of North Closed Quay, refer to drawings:

- DRA-P-NCQ-NCQ002-DWG-800001-000 Dredging Detailed Plan and Setting out
- DRA-P-NCQ-NCQ002-DWG-800001-001 to 003 Dredging Cross Sections

For details of West Quay, refer to drawings:

- DRA-P-WEQ-WQ0002-DWG-800001-000 Scour and Revetment Detailed Plan and Setting out
- DRA-P-WEQ-WQ0002-DWG-800001-001 to 004 Scour and Revetment Cross Sections

For North Open Quay, refer to drawing:

- DRA-P-NOQ-NOQ002-DWG-800001-000 Scour and Revetment Detailed Plan and Setting out

**Core Grading Limits By Mass**

Cumulative Percentage	Lower Limit	Upper Limit
M5%	1 kg	16 kg
M15%	1 kg	16 kg
M50%	11 kg	900 kg
M85%	38 kg	1000 kg

\*DUK to resolve core material grading query as per AHEP-ARP-PRW-TQY-0017.

