

APPENDIX E: CONSTRUCTION METHOD STATEMENT

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1 Introduction

The aim of this document is to show the high-level procedures to install the mooring system and umbilical cable.

The marine operations will be led by Leask Marine using the MV C-Odyssey, although it may be necessary to utilise support vessels for some tasks during offshore operations.



Figure 1. Leask Marine vessel: MV C-Odyssey

2 Operations

The marine operations are planned to be as per table below.

Table 1. Operations Schedule - Installation

No.	Operations	Days Estimate
1	Mobilisation	1
2	C-Odyssey Mooring Installation	1
3	Mobilisation	2
4	ATIR Moorings Installation	1
5	Mobilisation	1
6	ATIR Hook up	1
7	Mobilisation	2
8	Umbilical Installation	1
9	Demobilisation	1
Total Days		11 approx.

It has to be considered that all schedules might vary since, among other factors, they are subject to suitable environmental and tidal conditions and, therefore, adverse weather may increase the forecasted duration of operations.

2.1 Stages of deployment

Below presents two installation options, the first being the dynamic umbilical installed first and the other being the dynamic cable installed after the mooring system.

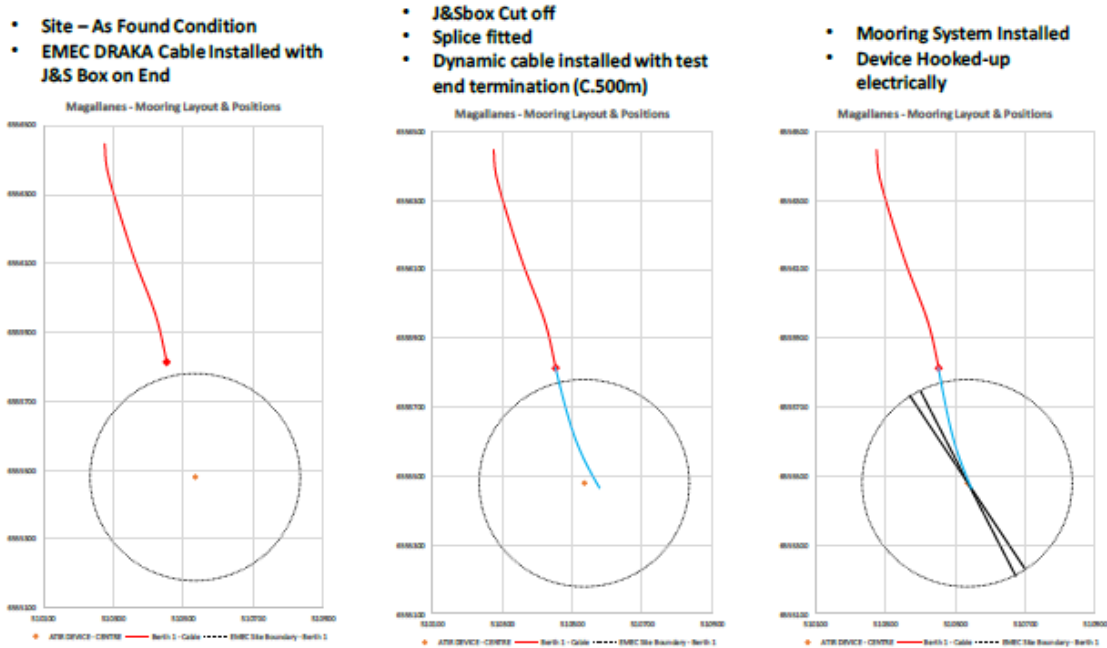


Figure 2. Installation Option 1 – Dynamic cable installed before mooring system

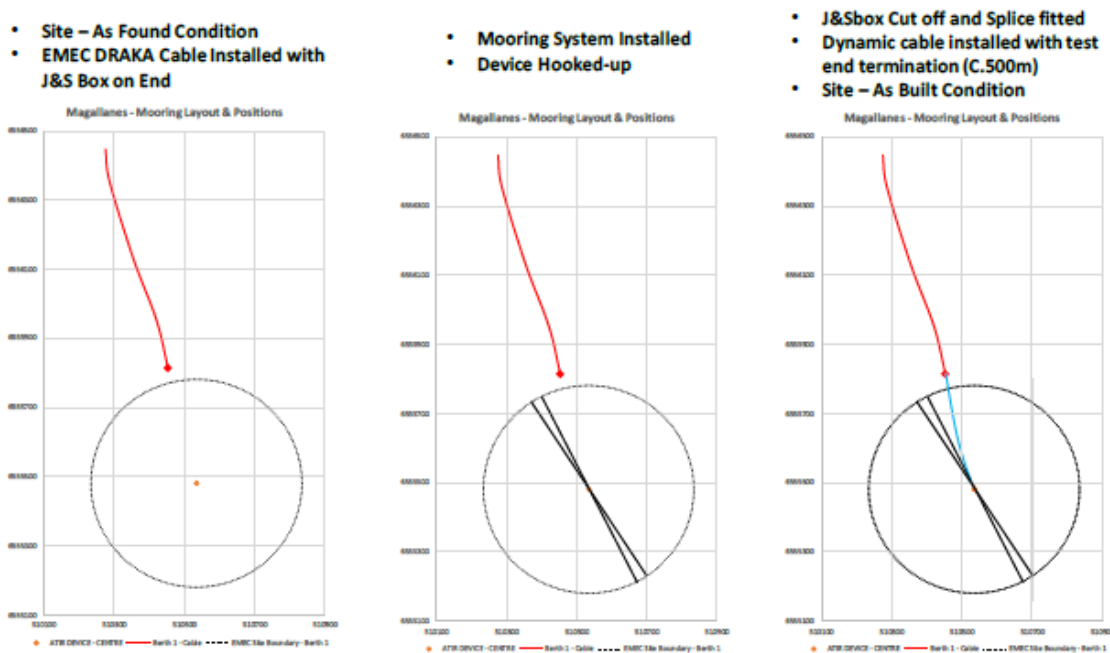


Figure 3. Installation Option 2 – Dynamic cable installed after mooring system

2.2 Mooring installation

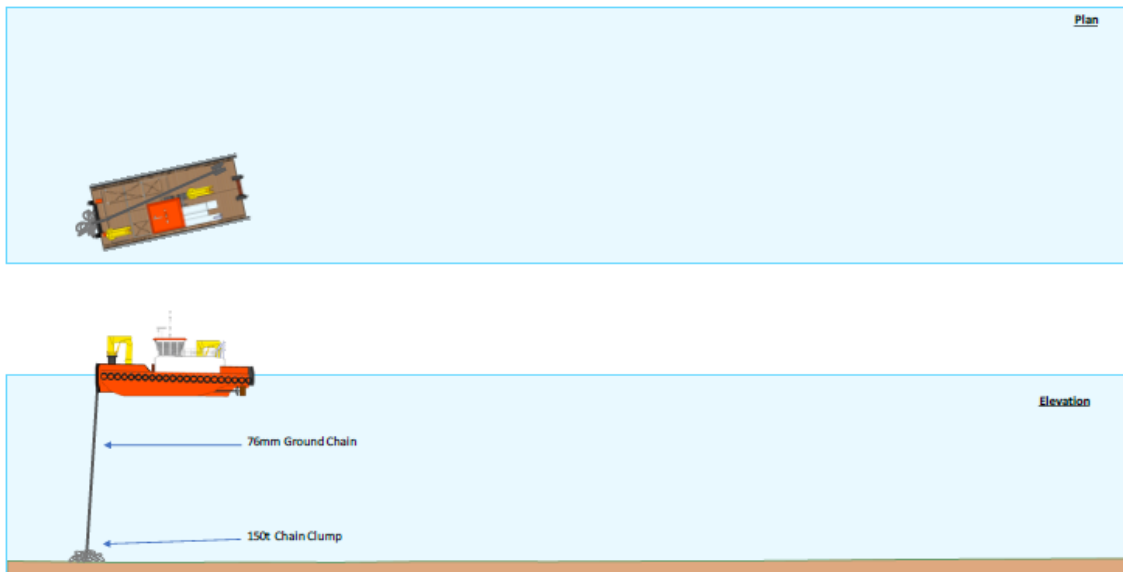
This section highlights the main steps during the marine operations. The marine operations might be divided into two main operations:

- Installation of the mooring anchors and catenary buoyed off;
- Device hook-up to the mooring systems.

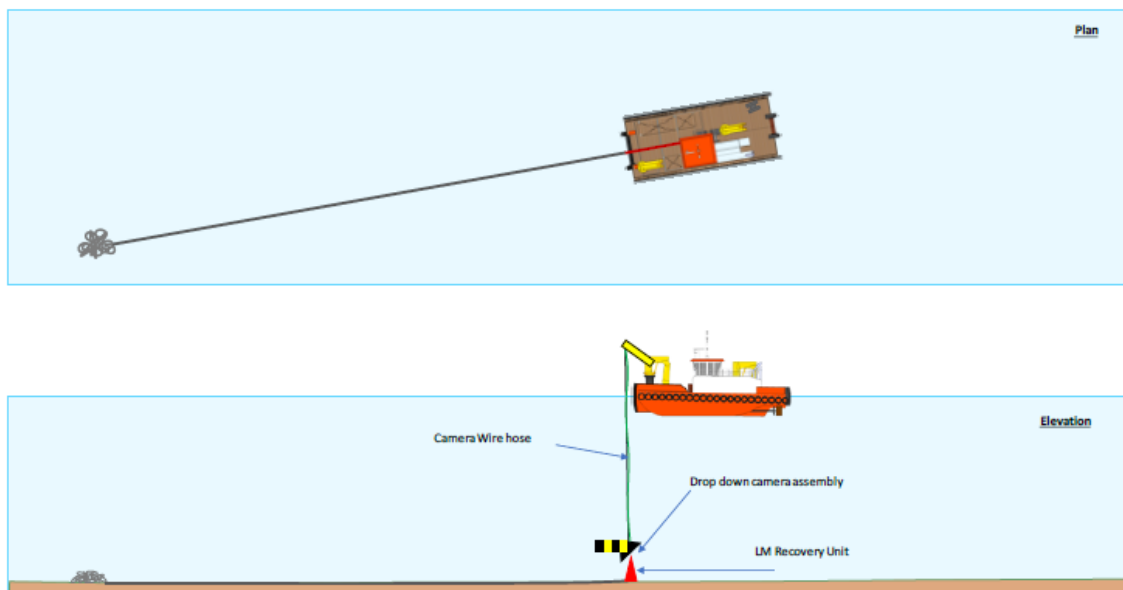
2.3 Installation – High-level procedures – Moorings

The following section highlights the main steps of the methodology to install the moorings.

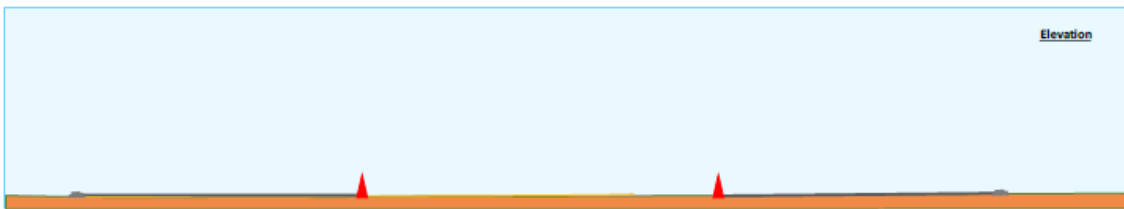
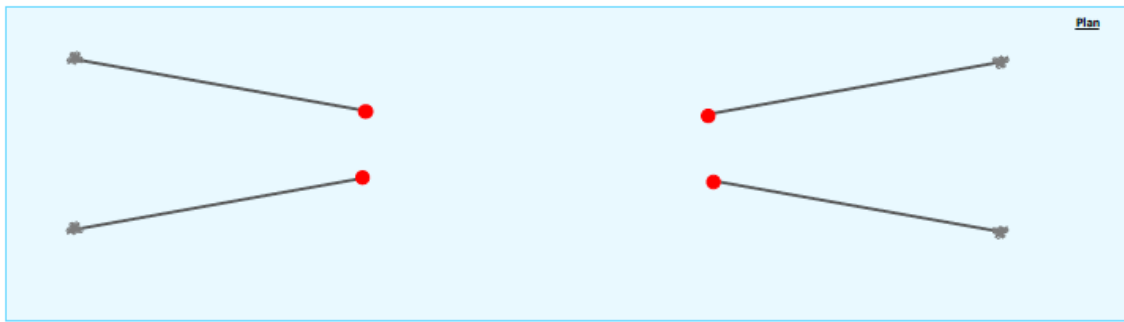
2.3.1 Clump Weight and Ground Chain Deployment



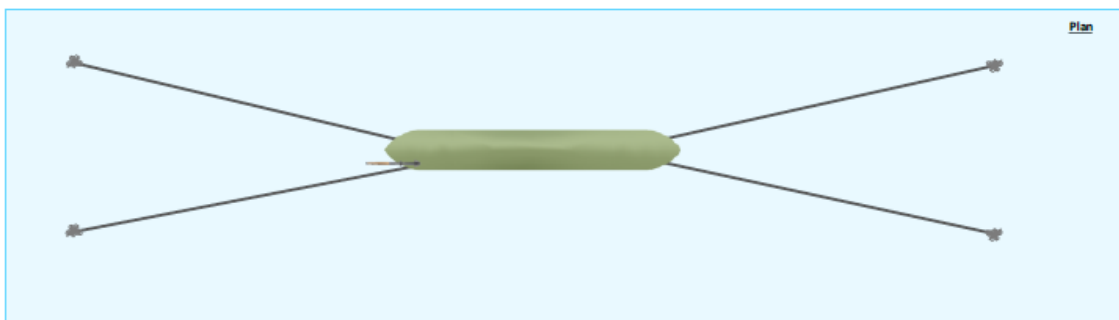
2.3.2 Leask Marine Recovery Cone Deployment



2.3.3 Overall Mooring Installation



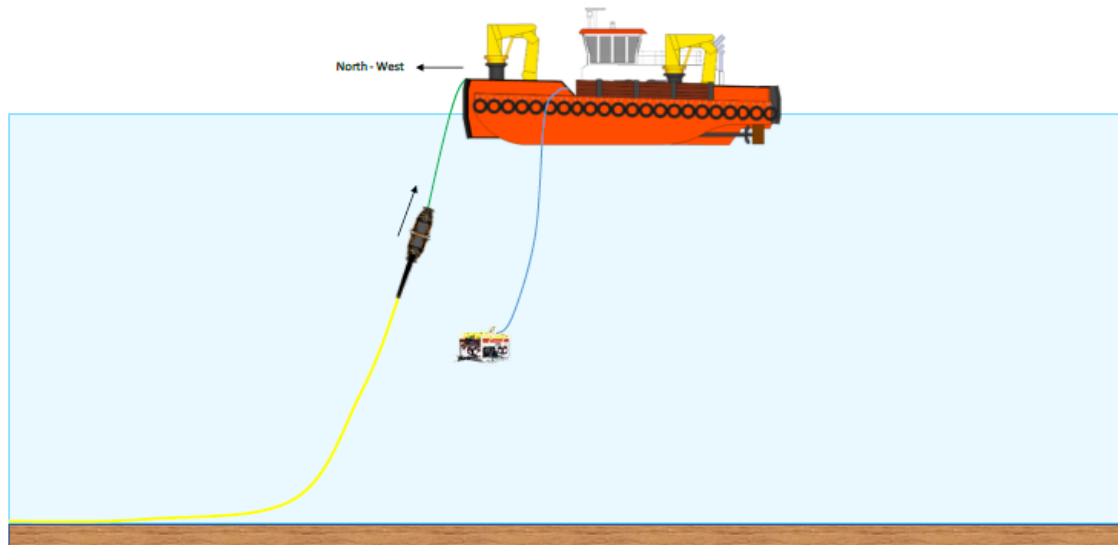
2.3.4 Device Hook up



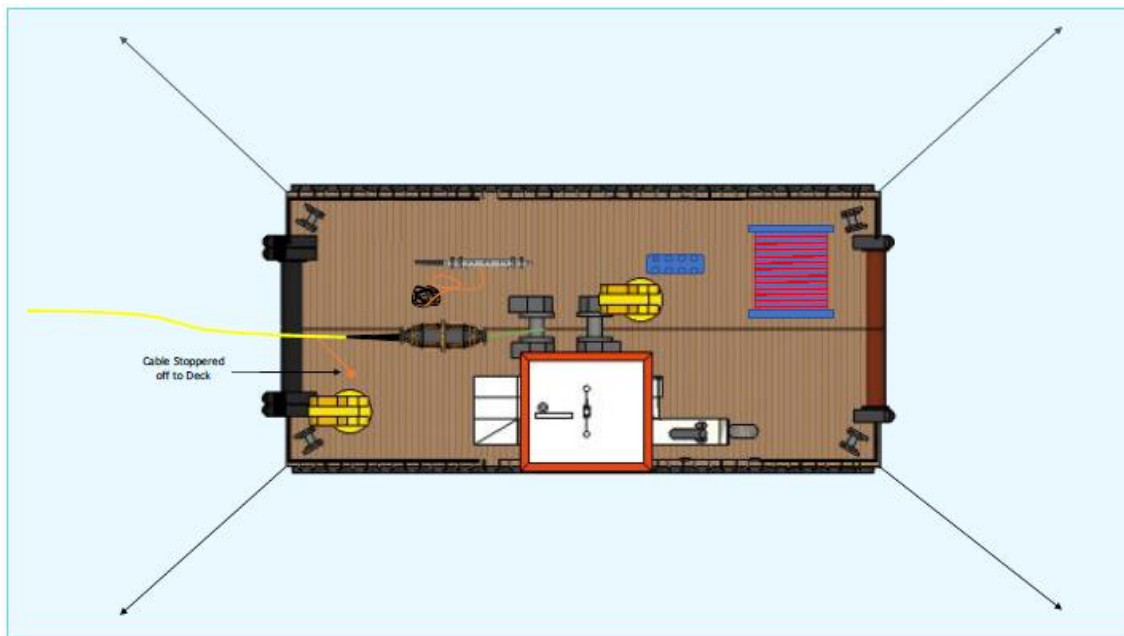
2.4 Installation – High-level procedures – Cable

The main steps of the methodology to install the umbilical, are outlined below.

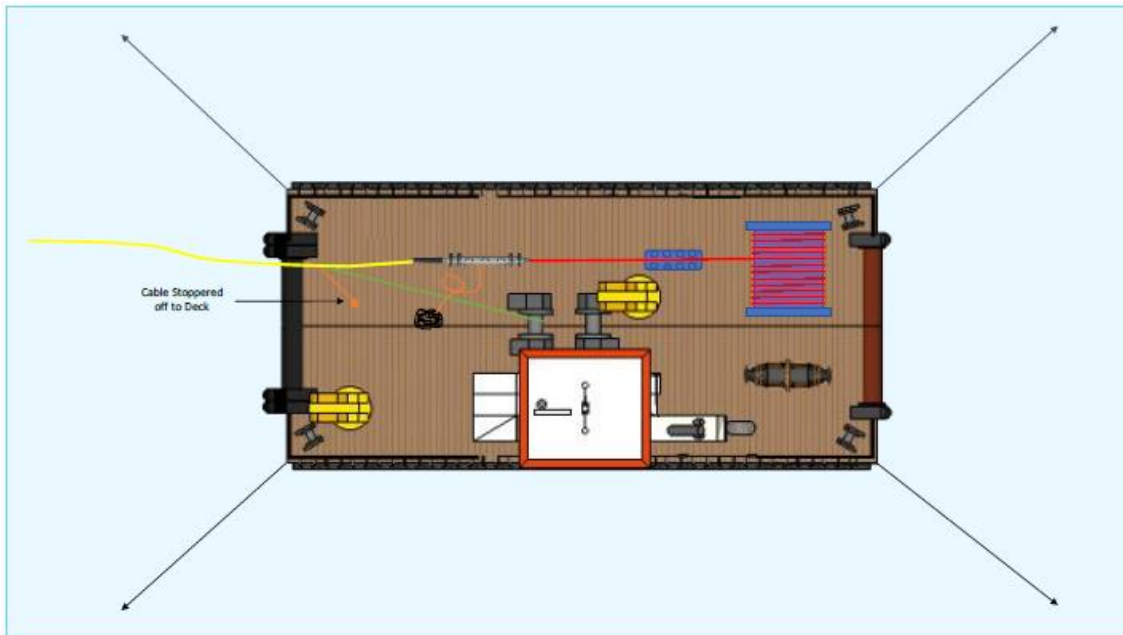
2.4.1 EMEC DRAKA Cable and J&S Box Recovery on Deck



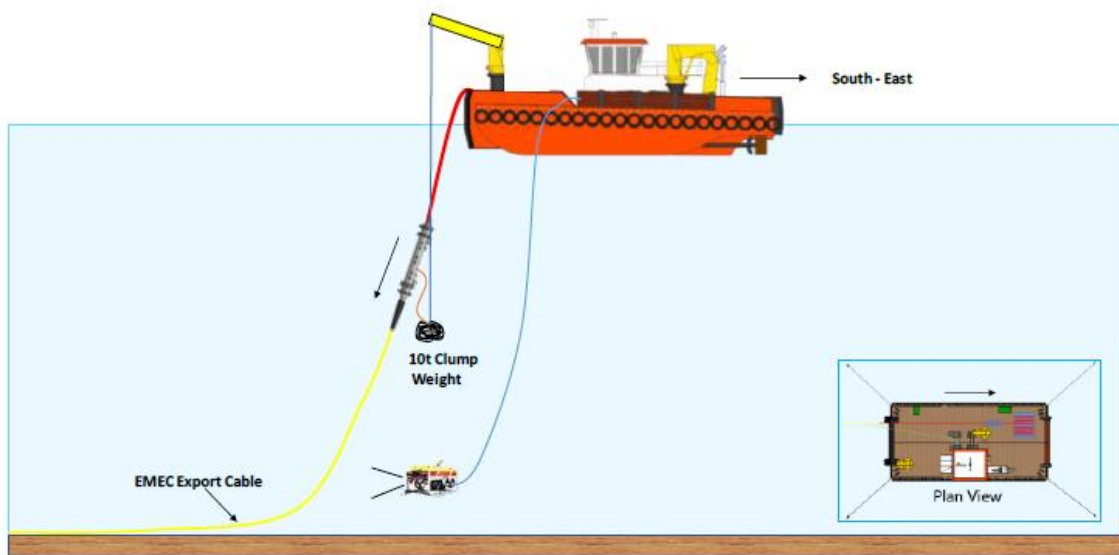
2.4.2 J&S Box Cut-off



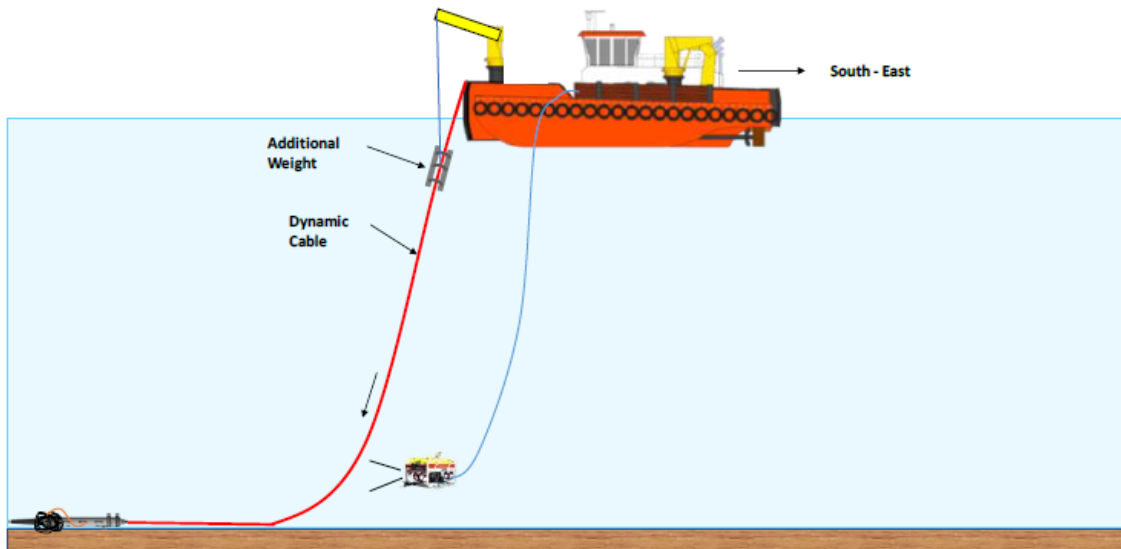
2.4.3 Fit Splice or Dry-mate to EMEC Cable



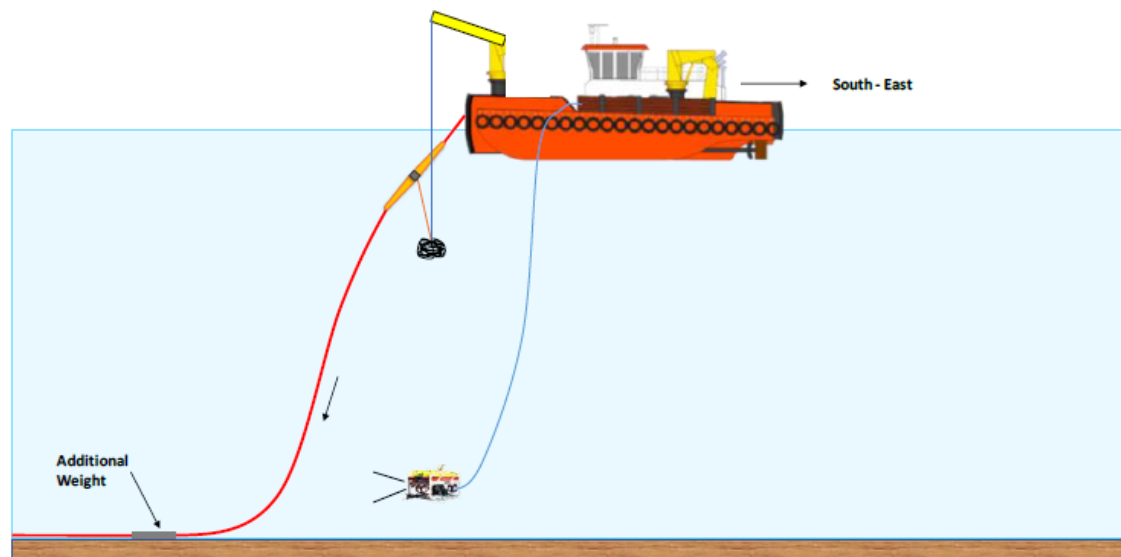
2.4.4 Splice and Clump Weight Deployment



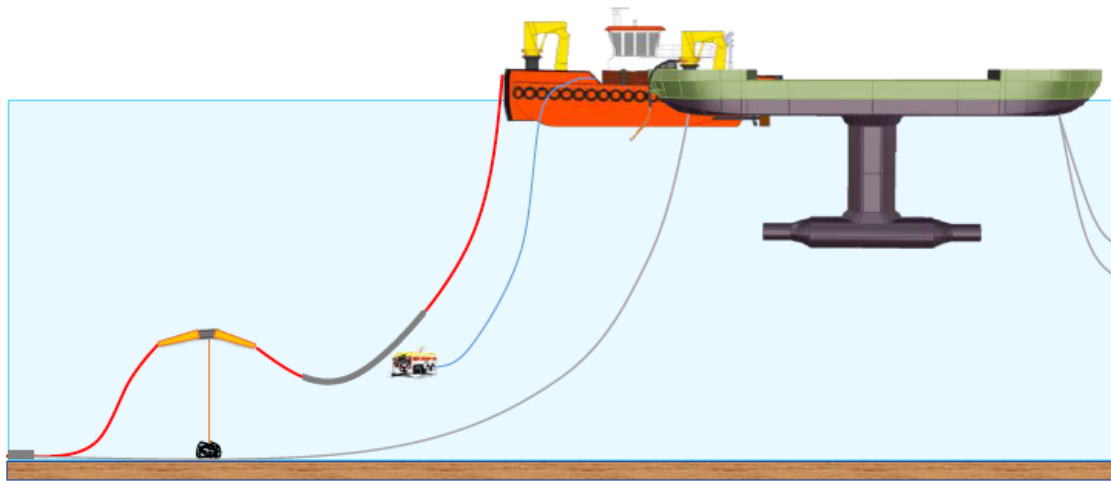
2.4.5 Weighted Touch-Down Clump Deployment



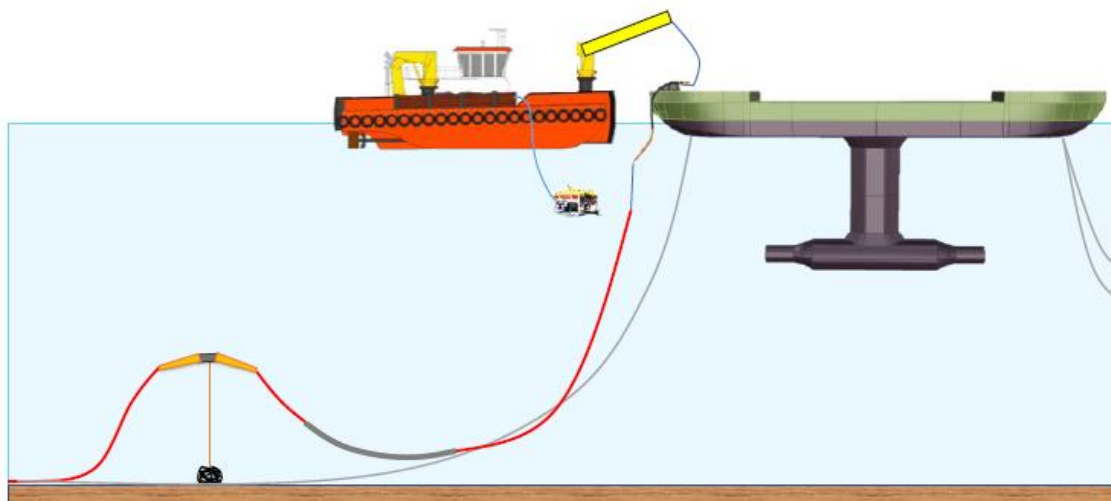
2.4.6 Weighted Touch-Down Clump Deployment



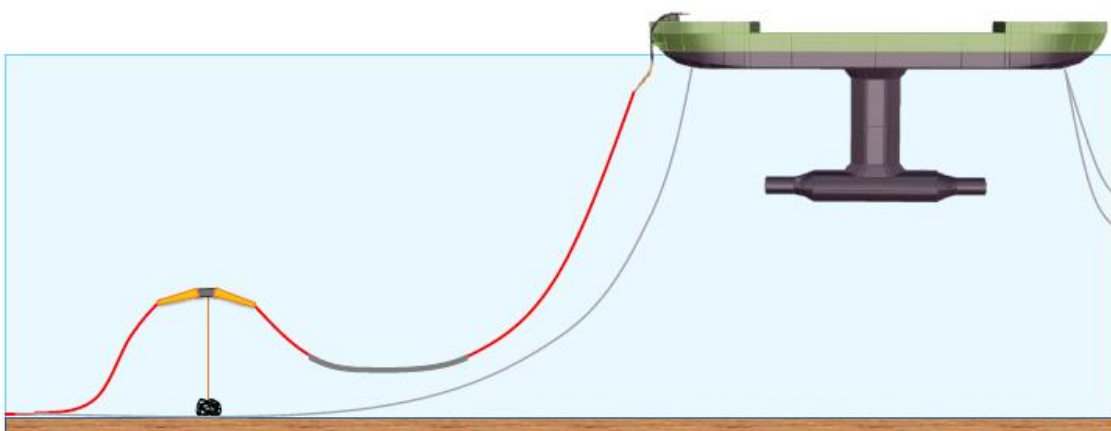
2.4.7 Dynamic Cable Laying toward ATIR and Weighted Section of Cable Deployment



2.4.8 Messenger Line into J-Tube



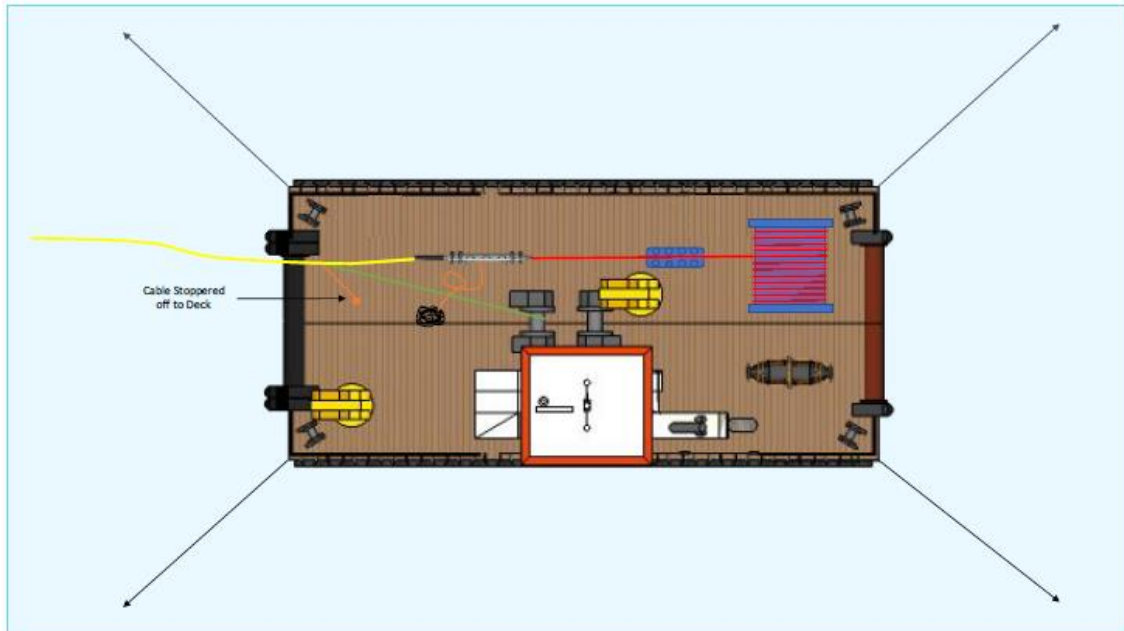
2.4.9 Dynamic Cable fitted into the J-Tube



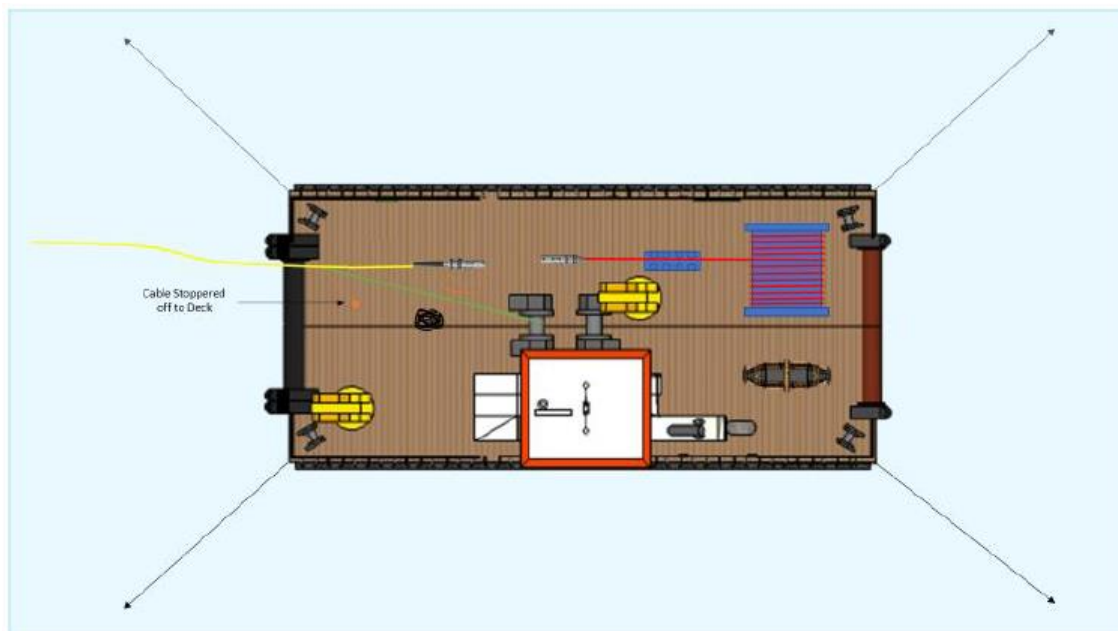
2.5 Decommissioning – High-level procedures

The following highlights the main steps of the decommissioning.

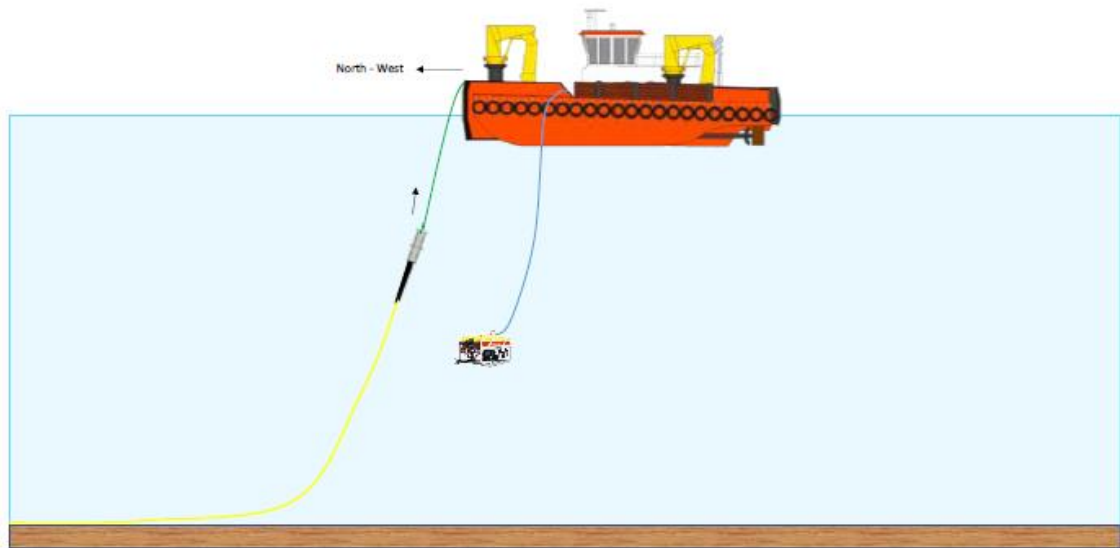
2.5.1 Dynamic cable / EMEC DRAKA Cable and Dry-Mate Recovery to Deck



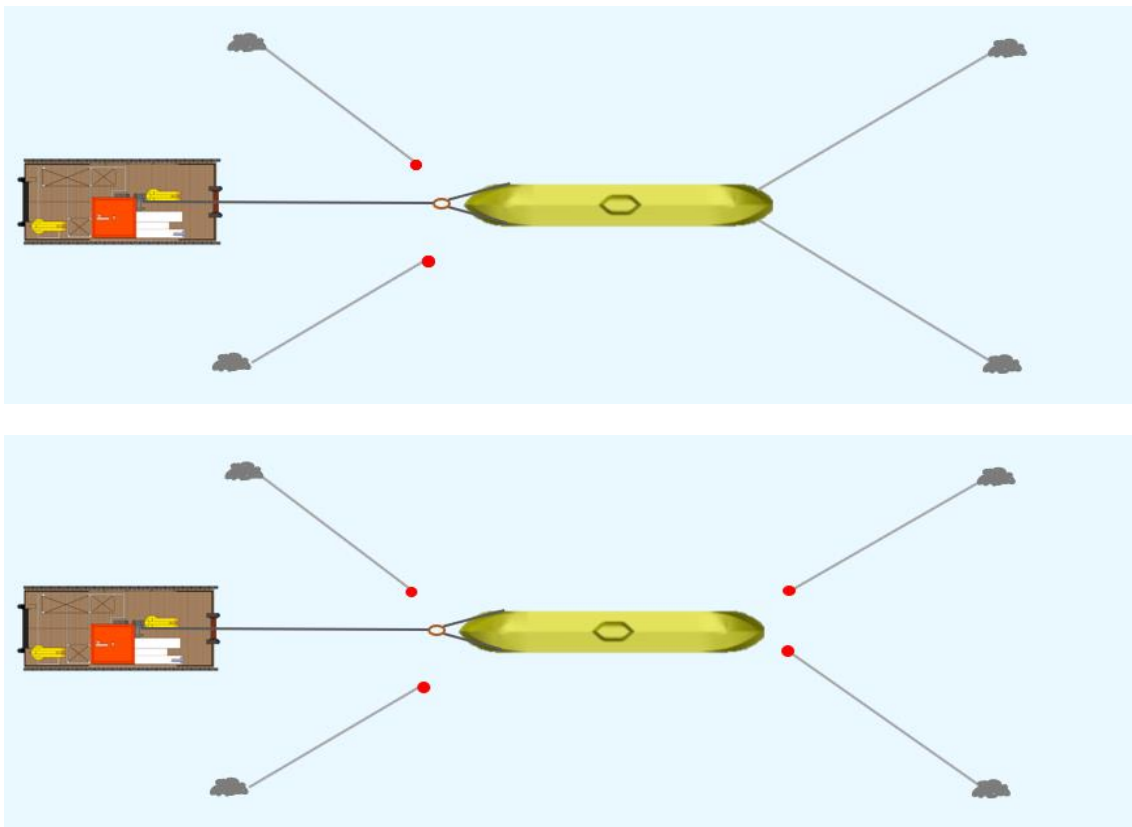
2.5.2 Dry-Mate Disconnected and dummy test caps fitted to cable end



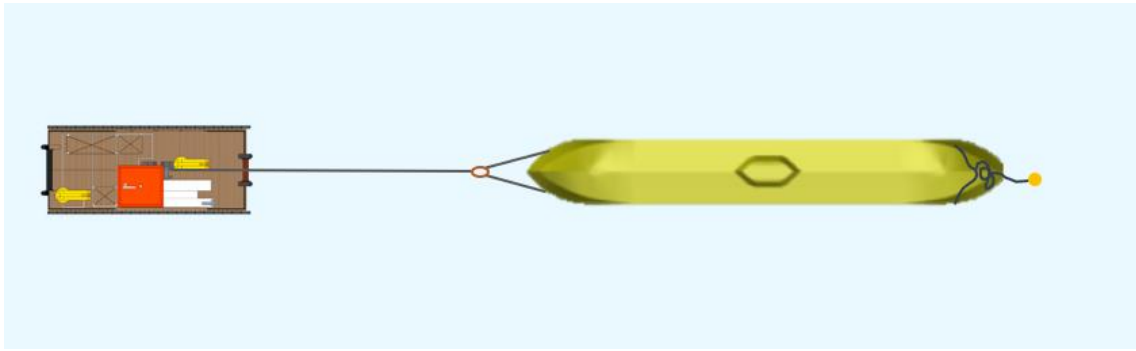
2.5.3 Dry-mate half end with dummy test caps re-deployed to seabed (dry-mate on dynamic cable removed)



2.5.4 Disconnect device from moorings and connect towing line.



2.5.5 Tow device to storage location



2.5.6 Mooring Recovery

