



Esso - Bowling – Rest of Bowling Remediation Project	
Doc.nr: 5777-OP-MST-014	Construction Works Application Revetment Construction and OBB Removal
Rev. 1	Date: 2022-08-05

REST OF BOWLING REMEDIATION WORKS
MARINE SCOTLAND CONSTRUCTION WORKS APPLICATION
METHOD STATEMENT
Revetment Construction and OBB Removal

CLIENT	Esso Petroleum Company Limited - Ermyn Way, Leatherhead, Surrey, KT22 8UX, United Kingdom
CONTRACTOR	DEME Environmental NV - Haven 1025 - Scheldedijk 30 - 2070 Zwijndrecht - Belgium


REVIEW AND APPROVAL RECORD OF CURRENT REVISION

CONTRACTOR

Action	Name	Function	Signature	Date
Approved by	Hendrik Nollet	Project Manager		2022-08-05
Reviewed by	Valerio Finco	Site Manager		2022-08-05
Prepared by	Joachim Tullii	Project Engineer		2022-08-05

CLIENT

Action	Name	Function	Signature	Date
Approved by				

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1 SCOPE

The present document is prepared by *DEME Environmental NV Branch UK*, Principal Contractor for the “Rest of Bowling Remediation Project”, commissioned by *Esso Petroleum Company Ltd*. This document details the indicative methodology proposed for the replacement revetment works at the Former Esso Terminal in Bowling.

The method statement describes the replacement of the existing river revetment with a new rock armour revetment along the entire length of the river frontage (approximately 250m). The existing revetment was constructed from rock armour units over a length of 100m approx. and sheetpile wall with concrete relieving platform making up the remainder.

The proposed works will require the removal of the existing revetment structures, reinforced concrete quay and OBB (Oleophilic Bio Barrier) to enable installation of the new revetment.

2 SITE LAYOUT AND PICTURES

The site is located on the north bank of the River Clyde, approximately 0.3 km to the west of the village of Bowling and 4 km to the southeast of Dumbarton. The site location is shown in Figure 1 and the location of the existing revetment along the river frontage in Figure 2.

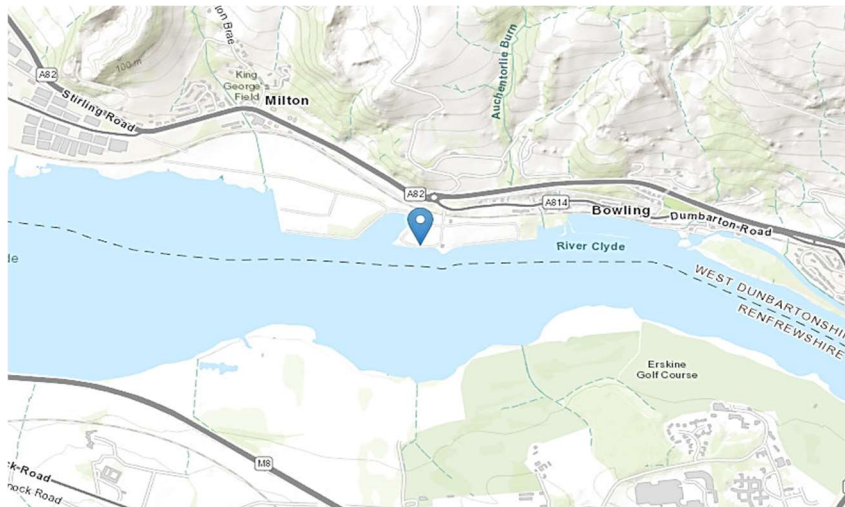


Figure 1 – Site location



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Figure 2 – Location of the existing coastal defence



Picture 1 – Aerial view of the existing revetment structures with highlight of the sheet piles area (orange) and rock armour section (embankment area & OBB) (blue)

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3 METHODOLOGY

Replacement of the existing coastal defence with a new rock armour revetment is detailed in **Project Drawings** (19203-SKE-101, 19203-SKE-102 and 19203-SKE-103).

The proposed works along the River Clyde include:

1. removal of contaminated soils and treatment or re-use of the material as part of the remediation works / remediation boundary extents behind the existing revetment as highlighted on the **Chart** (19203-SKE-001).
2. removal/excavation of the existing rock armour revetment (embankment area).
3. removal/demolition of the existing sheet pile wall (sheet pile area).
4. removal of the existing oleophilic bio barrier (OBB).
5. filling of resultant voids and tidal scour hole on the SW corner of the sheet pile wall to enable construction of the revetment toe.
6. installation of geotextile separation layers to prevent sands washing into the Clyde through the revetment core and to separate significantly different graded material layers.
7. construction of new revetment (composed of quarry run core materials, overlaid with rock armour units to form the under layers and cover layers) along the entire length of the river frontage (approximately 250m) - extending from the rock outcrop in the east to the basin in the west.
8. construction of precast concrete crown wall placed on top of revetment crest.
9. provision of suitable revetment crest pedestrian guard rail fencing.

The revetment removal works will be undertaken by means of earthworks moving mechanical plant working from the shore. Revetment material layers will be placed utilising a long-reach excavator located on terrestrial site.

All materials placed to the north of the revetment core (excluding the revetment core & rock armour) will be site-won and treated material complying with the defined site re-use criteria.

Revetment core & rock armour materials will be brought to site by lorry.

The revetment will be designed to provide protection for the terrestrial area, the remediated site, and a basis for the sites' future development.

4 SCHEDULE

	2022												2023														
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
Design Phase					█																						
Preliminary design								●																			
Detailed design										●																	
Permitting					█																						
Execution																											