



Briggs

Marine & Environmental Services

Salvage Operation at Portree

on behalf of The Scottish Salmon Company

Briggs Marine Reference: TEN0553

Agenda

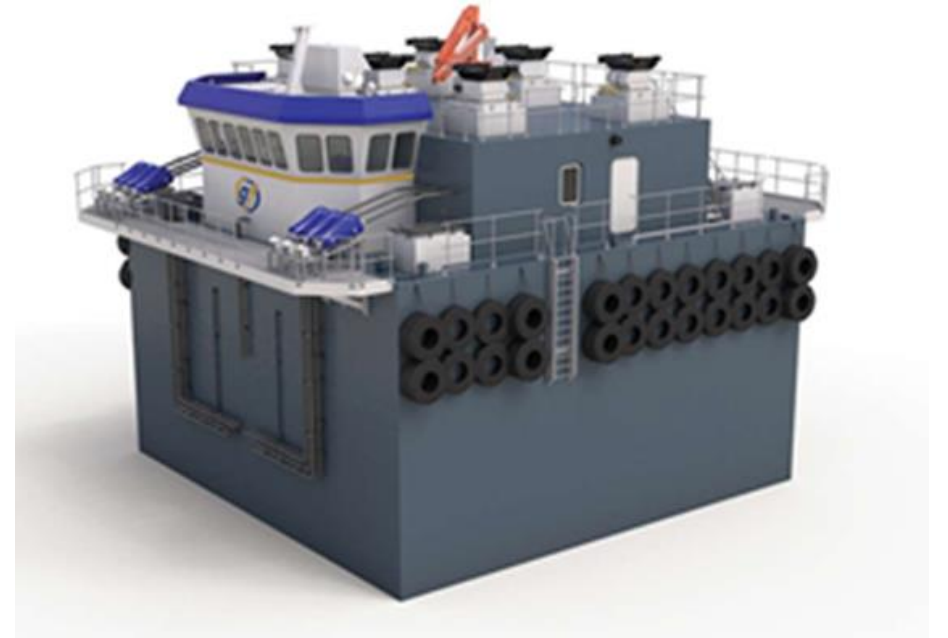
- Introductions



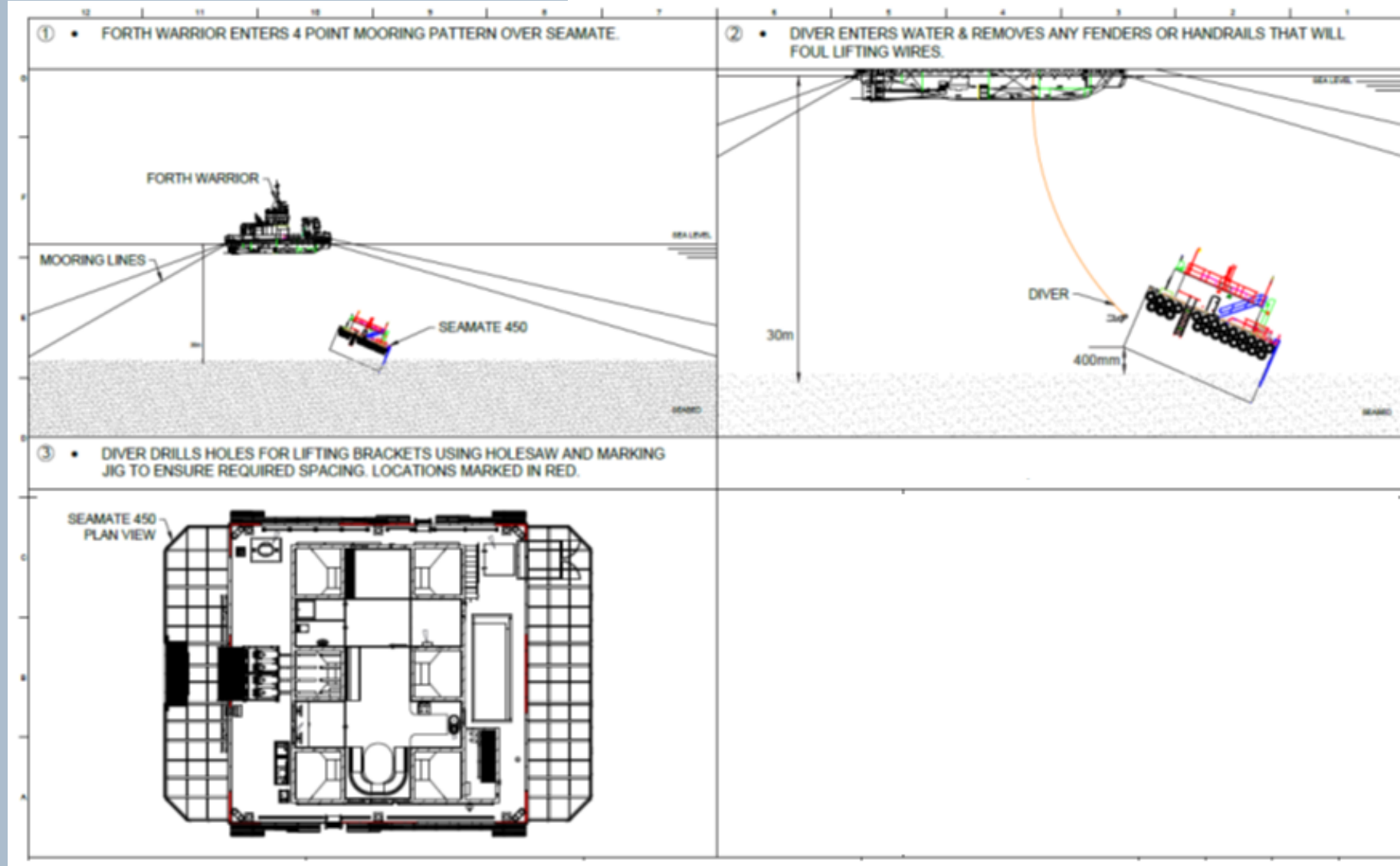
Briggs Marine Recovery Philosophy

Methodology Assessment Drivers:

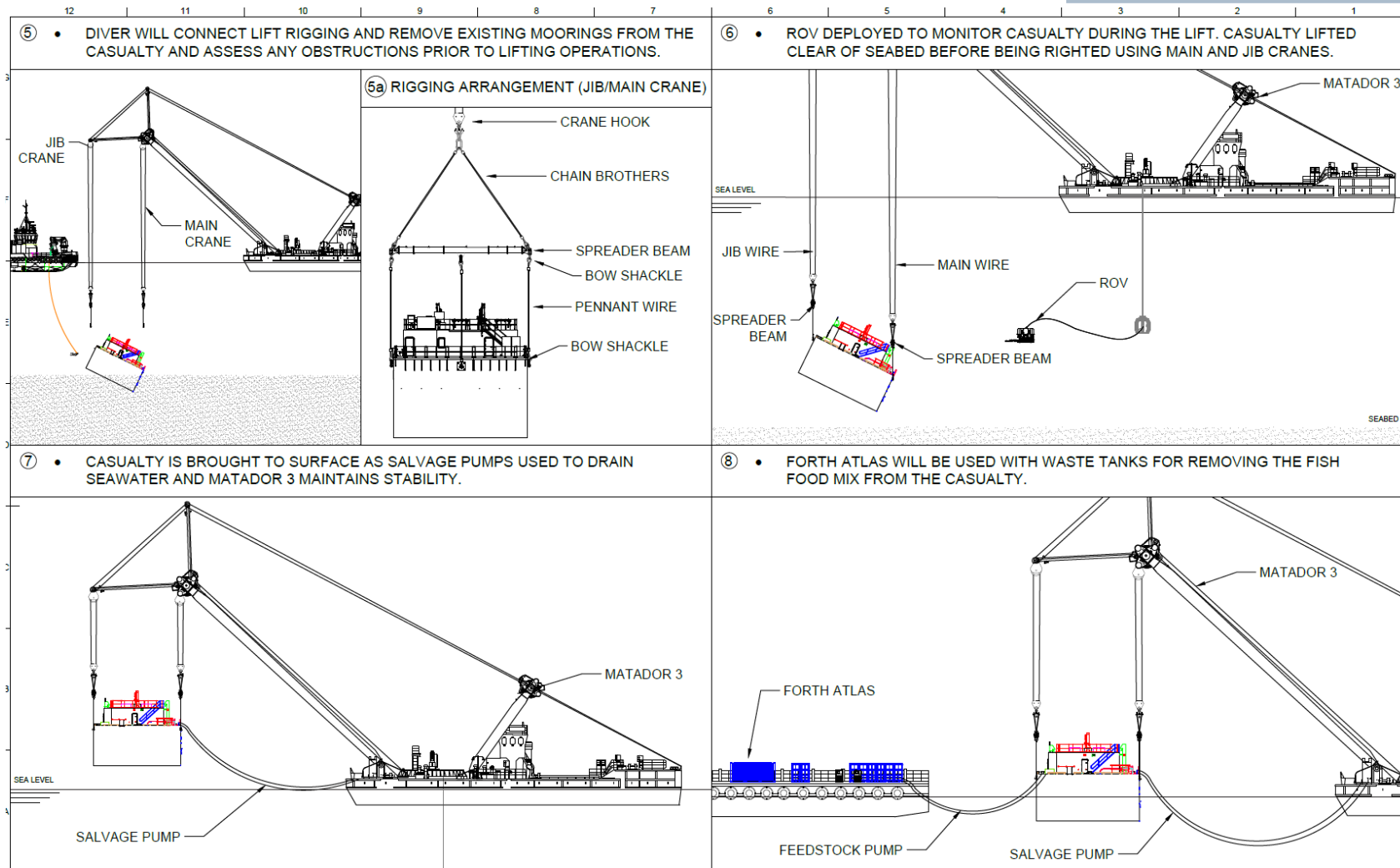
1. Certainty Of Outcome – Damage – Mud
 - Wreck Stability
1. Knowledge of immediate site and wider location including local suppliers
2. Predictable assessment of Success
3. Flexibility in Approach
4. Licence Sensitivity
5. Waste Disposal
 - **Stage 1 – Preparation**
 - **Stage 2 – Lift & Recovery**
 - **Stage 3 – Disposal & Delivery**



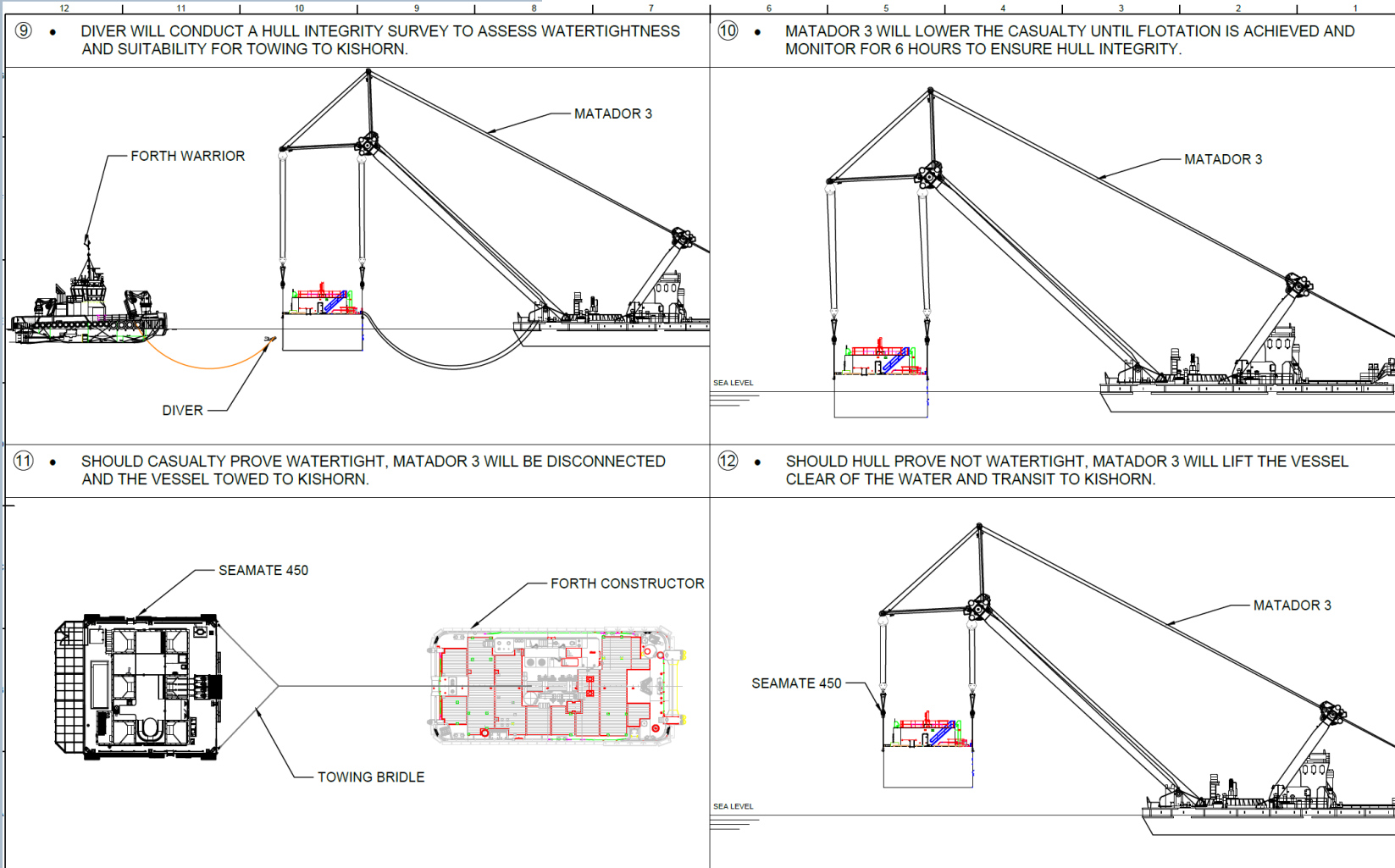
Methodology



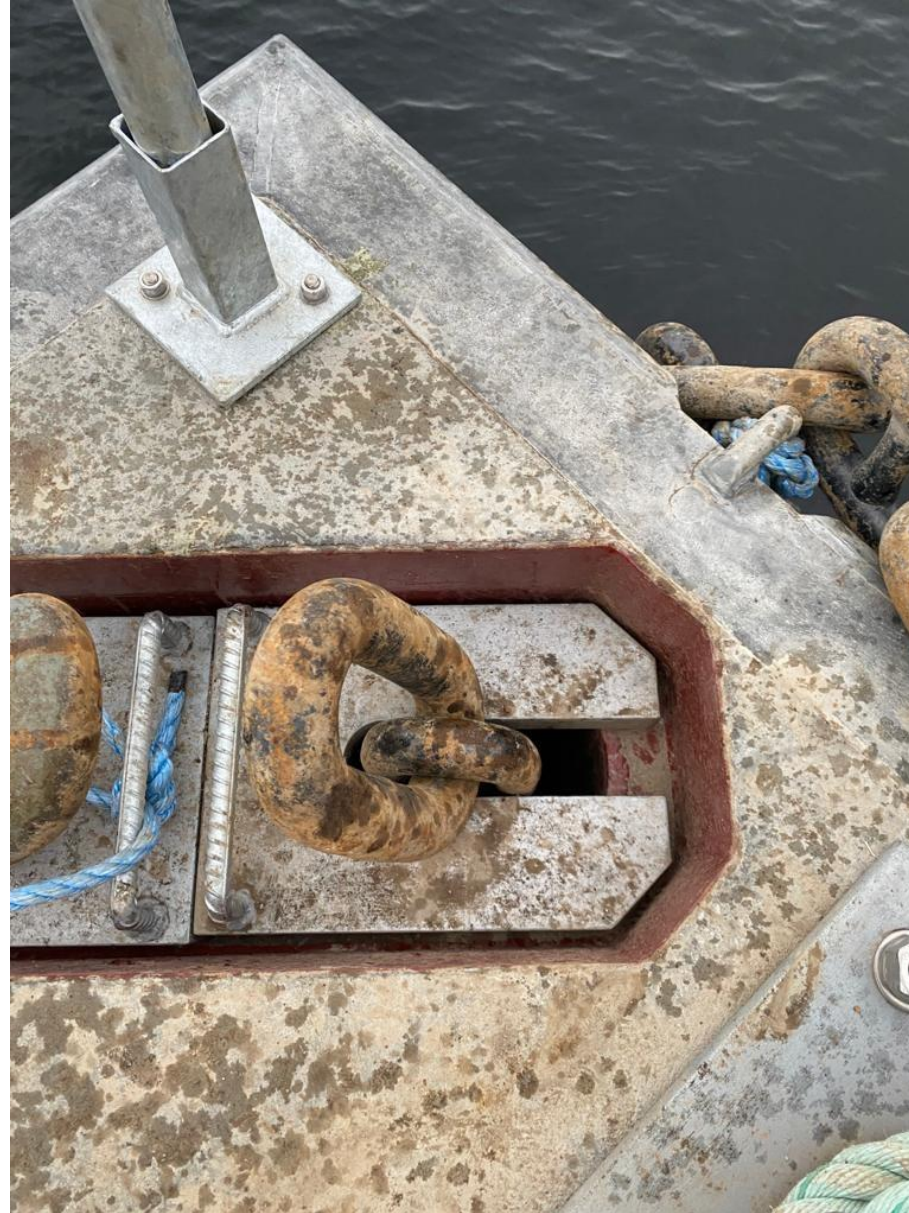
Methodology



Methodology



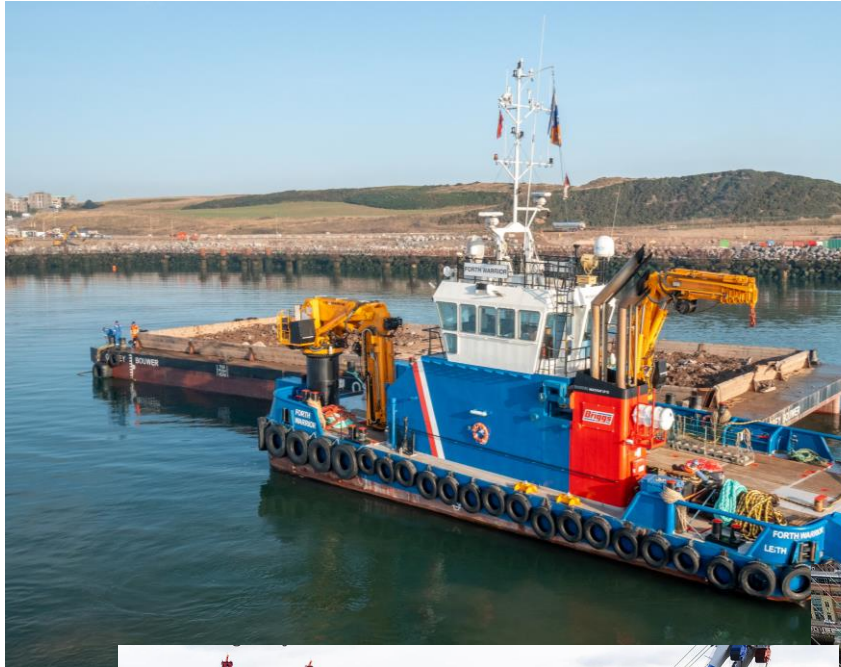
Chain Keeps



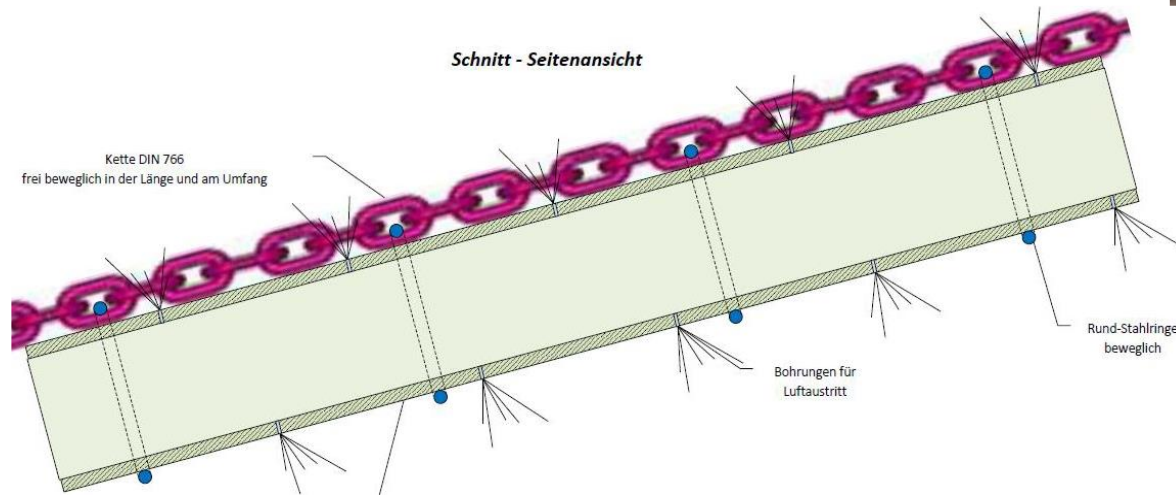
Anchor Hawes Pipes



Vessels & Equipment



Bubble Curtain



Counter Pollution Response

Primary response –

Deployment of the single ship system/sweep arm for pollutants/weathered oil/debris or contaminated debris (small to med spills) This has proven to be a swift and very effective method for collection and recovery of an uncontrolled release. The estimated time to be rigged and ready to recover pollutants is approximately 15 - 20 minutes from the time of notification. Capability of holding approx. 1 ton in the apex.

Secondary response –

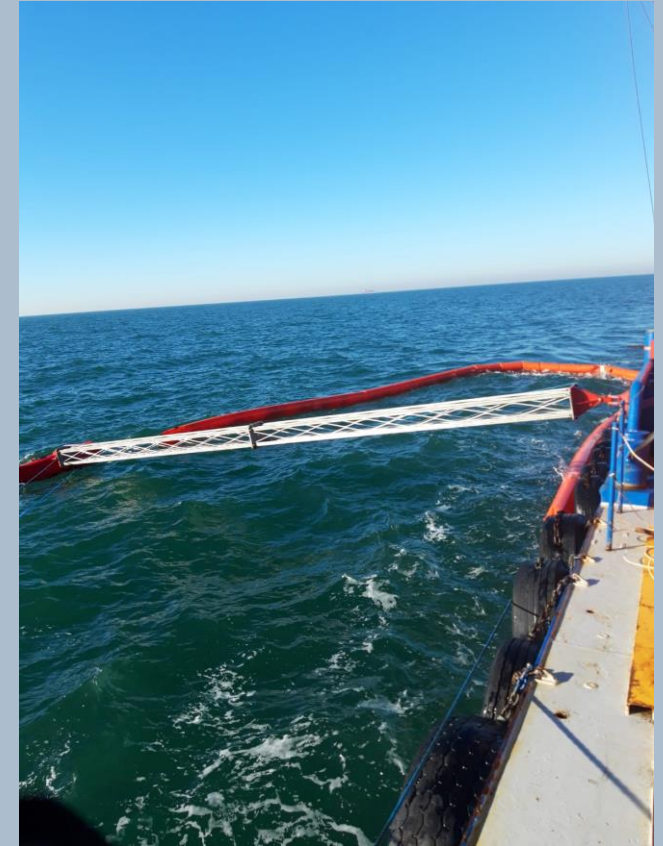
2-boat system. Briggs multi-cat will carry on deck, a RIB for use as tow vessel. The HI-SPRINT boom will be deployed for larger slicks. Two skimmers will be on board for primary and secondary response.



Counter Pollution Response

Single ship – Primary response

Primary spills will be dealt with utilizing a single sweep system installed on the Briggs multi-cat which can be deployed in less than 20 minutes from activation or pre-deployed during salvage operations.



Counter Pollution Response



2-ship system - secondary response

The FW will act as the deployment vessel when responding to major spills along with the FRC jet boat stored on deck acting as the tow vessel.

2-Ship system in “U” Formation

2-Ship system in “J” Formation

This system will be implemented only for greater spills out with the parameters of the primary response.

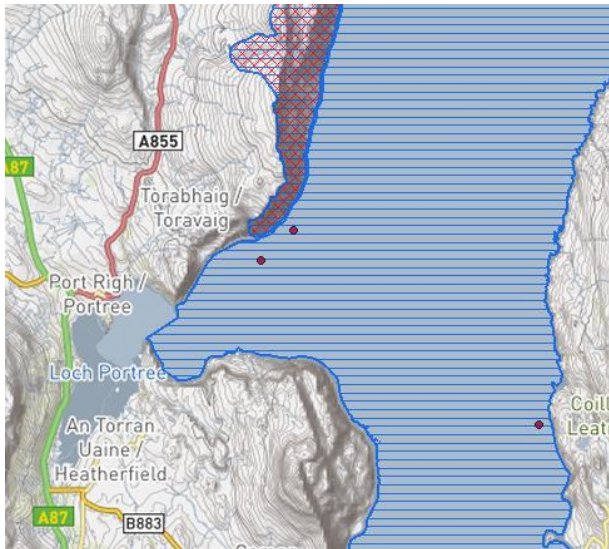
Once deployed, the boom is towed into position by both vessels. As the spilled pollutants are encountered it becomes concentrated at the apex of the boom. Skimming can commence once there is a suitable concentration at the apex.



Counter Pollution Response

Shoreline consideration

Oil spills from the sunken vessel can be a threat to nearby shorelines, potential oil slicks from the vessel could be moved by wind and currents towards Isle of Skye or mainland Scotland. Contamination of shorelines by oil can have a consequent impact on the various functions and services provided by those habitats and can also impact the populations of species associated with the affected shorelines. Preventative measures will be implemented at incident site to limit impact with sensitive areas. Areas below taken into consideration special areas of conservation, SSSI, fish farms



Counter Pollution Response

To further the containment measures once the casualty has been lifted to the point of breached surface a fence boom will be deployed around then seal to the hull of the lift barge creating a full containment zone.



Stage 3

Whilst the initial focus is to re-float the barge, BMC acknowledges the importance of removing the waste safely and disposing of it in an appropriate manner based on the composition of the feed.

- Water from voids pumped into boom containment area.
- Waste feed pumped direct from silos to Forth Atlas tanks using a 6" Hydrainer.
- Waste removed at the incident site to minimise the risk of pollution release during transit.
- Removal and transport of waste from Kishorn after casualty recovery discounted due to the road infrastructure, distance to the licensed disposal facility and amount of transport required making it unviable.
- BMC has engaged with multiple disposal centers throughout the UK regarding waste feed. It should be acknowledged that a degree of analysis remains to confirm composition, where the MSDS was unavailable and whether the feed is an animal by product, a route has been established to handle and dispose of the waste safely at a licensed facility.



Stage 3

Methodology for the transfer of approximately 690 tons of Fish Feed/seawater from holding vessel Forth Atlas to tankers at Fairlie quay.

- **4 vac tankers on site working in rotation drawing the material from the Atlas tanks.**
- **1 di-sab unit onsite to allow for suction at all tides and heavier material as the fish feed settles in the tanks thus ensuring a continuous operation.**
- **Each load will be accompanied by a Duty of Care Transfer note as a legal requirement.**
- **The tankers each have a 30-ton payload, so in total, there will be circa 23-25 loads to be drawn and transported.**
- **The disposal site selected is the Maltings organic treatment facility located in North Yorkshire with a travel time of approximately 6 hours, running 24hr a total of 2 loads per day can be achieved.**
- **Maltings organic treatment facility holds the permit number EPR/FP3090SZ with regards to disposing of the mixed fish feed/saltwater waste.**
- **Waste disposal at Fairlie quay is estimated to be completed in 7 working days or less.**





HSEQ Underpins our Solution

Briggs Marine complies with all the relevant standards and certifications and will provide certification certs from the following suit of examples in support of the submission.





Briggs



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