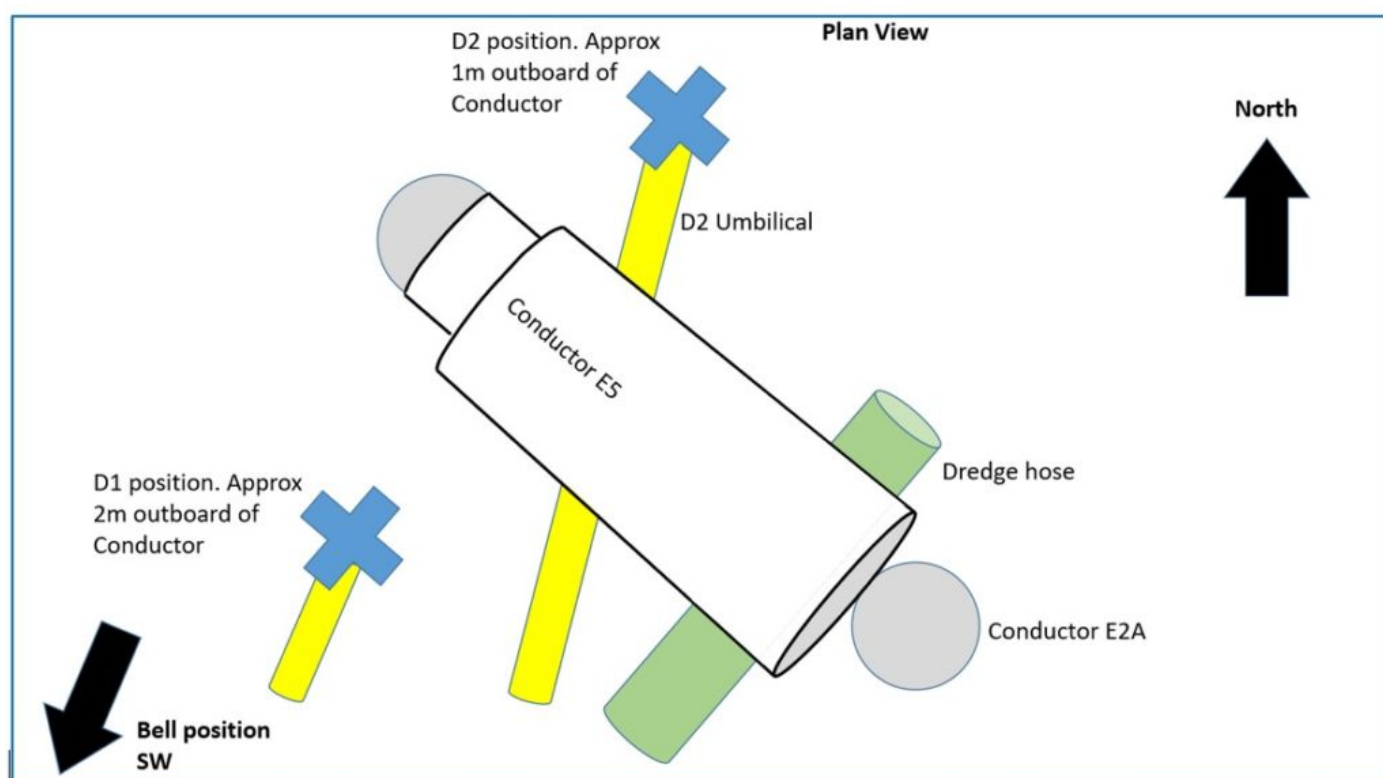


## Unexpected movement of conductor during diver dredging operations

### What happened

Divers were conducting dredging operations in preparation for an external cut of a conductor (E5 in the diagram below) using a diamond wire saw. Due to seabed conditions, this was one of a number of dives dedicated to making conditions suitable for the conductor cutting. As the divers continued dredging, the conductor moved unexpectedly and came to rest against an adjacent conductor (E2 in the diagram below).

Diver 2's umbilical was found to be in free span between the two conductors. As a precaution, the decision was made to secure the conductor to the vessel crane and manoeuvre the vessel to allow the umbilical to be released. This was conducted successfully, and the divers recovered to bell with no injury nor damage to umbilical.



## What were the causes?

Our member noted the following:

- **Immediate Cause** – Conductor toppled at a severance point due to displacement of surrounding seabed and grout during dredging operations;
- **Underlying Causes** – assumption that the conductor was stable, due to:
  - Information relating to the task (an incomplete sub-surface cut) had not been highlighted during client work pack compilation
  - Unclear datum measurement with respect to the as-found mudline and potential scouring.
- **Root Cause** – the vessel team did not have all the relevant information they needed, to complete a suitable Management of Change to move from internal to external cutting of the conductor.

## Actions

- Change to methodology for diver work around conductors, so that they are restrained with rigging prior to any dredging operations;
- Ensure suitable verification of data by client during onshore project preparation phase;
- Refine and update existing engineering best practice and risk assessment for cutting operations;
- Ensure management of change procedure provides suitable guidance on process for evaluating and approving change request in line with agreed risk level.