

Diver injured after being trapped underwater

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A member reported an incident which a diver became trapped underwater when the seabed gave way under him during a sheet pile cutting/removal operations.

What happened?

The incident occurred during the removal of an abandoned sheet pile quay. Two divers were in the water involved in cutting operations on underwater piles in very shallow (less than 10m) water. One of the divers was doing the horizontal cut to remove the piles when he reported to the supervisor that he could not move his legs as they were covered in sand to his calves and subsequently to his chest level.

The second diver working close by was directed to assist the first diver, and a third, rescue, diver was deployed. The crane, which was slung with piles, ready to be recovered from the seabed, was made ready to recover the trapped diver as he was situated too far from the recovery davit. The two divers attempted to aerate the seabed using a caviblaster to free the trapped diver but without success.

Attempts to use the crane to lift the trapped diver to safety by connecting the crane hook to his safety harness resulted in damage to his harness and loss of his surface air supply and bailout. As a matter of extreme urgency the diver was lifted clear using the crane and slings around his armpits. He lost consciousness; and sustained injuries. Once recovered from the sea, he was successfully resuscitated and subsequently transferred to hospital.

Our member's ongoing investigation noted the following initial conditional findings:

- Before this incident, over one hundred similar piles at this location had been safely dismantled by the contractor's divers.
- Instabilities and underwater anomalies in this area had occurred before, but at the time of the operation no one was aware of this.
- There had been a simulation or drill of unconscious diver recovery made before the job started.
- A minuted 'tool box' meeting had been held before the start of the job, attended by the crane operators, divers and vessel crew.
- Weather conditions were good, with no waves or current.
- Cutting operations were being conducted according to IMCA guidance and following the rules laid down by the client.
- Communication between the dive supervisor and the divers during the emergency proved difficult owing to the noise of the caviblaster.
- The crane hook was too large to pass through the diver's lifting harness 'D'

ring so the standby diver attempted to pass the hook through the harness directly below the 'D' ring resulting in damage to the harness.

- The diver was recovered and resuscitated efficiently and professionally, and the dive team were able to properly use the tools and techniques required.
- Vital medical information (blood group) for the injured diver was not immediately available and was only found with some difficulty.

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