

Incident description:

On Monday 27 July, one of our colleagues, working for a subcontractor on the M3 smart motorway project in the UK, was killed whilst operating a vacuum excavator. The operator was trapped and crushed between the vacuum excavator suction pipe and the wall of a trench.

Valiant attempts by colleagues and the emergency services to free the operator were unsuccessful and the operator was pronounced dead at the scene.

Investigation/findings:

The energised boom of the vacuum excavator lowered into the trench trapping and crushing the operator. The operator was the only person at the location who was able to operate the machine in an emergency and the controls were beyond his reach.

Following a full internal investigation the recommendations and learning points set out in the actions have been identified to prevent recurrence and are for implementation across all Balfour Beatty businesses.

**Further Information:**

For more information about this incident please contact: GroupH&S@balfourbeatty.com

Actions:

Visual Standards identifying safe operating positions and exclusion zones for personnel working with vacuum excavators are to be created and shared with industry.

Two person operation (as a minimum) is to be mandated for all vacuum excavation operations.

The use of plastic nozzles and air lances is to be mandated for all vacuum excavations in utility exclusion zones.

Vacuum excavation training is to be modified to include the prohibition of using the nozzle for mechanical excavation, in addition to meeting the requirements of any relevant national guidance document.

Plant Specification, acceptance and pre-use inspection documents are to be produced and adopted across Balfour Beatty and shared across the wider industry.

Mobile Vehicles, Plant and Equipment Procedure is to be amended to include a requirement that any plant not covered by plant specification sheets must have its operational risks assessed by a competent plant specialist prior to use.

All future vacuum excavation use in the UK is to be procured or hired directly via Balfour Beatty Plant and Fleet to ensure equipment and operators are fully compliant with the correct specifications.

Balfour Beatty is to promote an industry-wide minimum standard for the use of vacuum excavation which will address the learning points above and investigate the following:

- I. Controlling the selection of powered or non-powered booms
- II. Limiting the hydraulic ram pressure to suit specific tasks
- III. Safety cut out device if the remote control is removed or dropped by the operator
- IV. Adjusting the orientation of the remote controls to suit operator positioning - facing towards the machine rather than away