

# Safety Alert

## RIDDOR Injury - Drainage Pressure Testing

24 October 2022

The following pages of this safety alert were issued by:

**Balfour Beatty**

NHa306

If you have any queries about this safety alert information announcement or any other safety announcement then please contact [HealthSafety&Wellbeingteam@nationalhighways.co.uk](mailto:HealthSafety&Wellbeingteam@nationalhighways.co.uk)

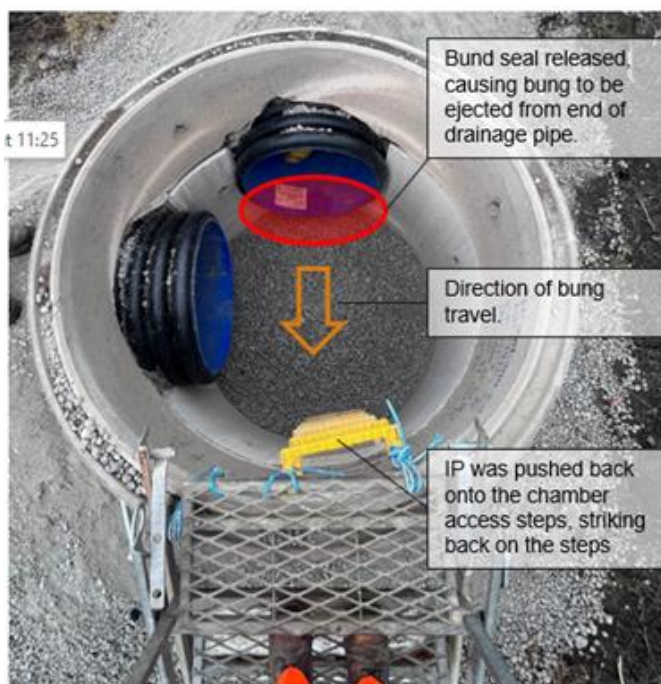
home **safe**  
and **well**

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24 September 2022

## RIDDOR Injury - Drainage Pressure Testing

During the air-testing of a drainage installation operation, an operative released the pressure in the installed bung seal prior to releasing the pressure in the pipe run. The bung was ejected from the pipe knocking the operative off balance where his back impacted against the access step rungs in the chamber resulting in a fracture to his T12 vertebrae.



### Background Information

- Equipment being used – VP pressure testing kit
- Location - Ebbsfleet roundabout
- Work activity – Gang were installing a 750mm surface water drainage pipe
- The excavation work was stopped due finding an uncharted pipe crossing the drainage alignment.
- Foreman decided to pressure test a previously laid section of pipe.
- Foreman gave gang a second briefing
- Whilst pressurising the pipeline it was noted that there was no reading on the pressure gauge.
- The air pressure from the bung seal was released before the pressure in the pipeline.



Gauges & Compressor supplied

**Investigation Findings**

- The gang consisted of Foreman, Ganger, Operative and Excavator operator
- The gang had received a start of shift briefing.
- The WPP, PVPMP, permit to dig and an ITP were in place
- No formal training had been received for this equipment
- Insufficient detail in the Works Package plan to cover pressure testing
- Pipe bung seals were inflated to the correct pressure of 1.5 bar
- There was no reading on the pressure gauge, so an assumption was made that there was no pressure in the pipeline.
- The IP was stood in a place of danger
- The bung was ejected striking the IP and pushing him back against the steps built into the chamber wall
- IP was taken to Medway Maritime Hospital and kept in overnight, he was diagnosed with a stable fracture to the T12 vertebrae and given a body brace to wear. He was released from hospital the following afternoon.



Pipe Bung/stopper

**Actions to Prevent Reoccurrence**

- Equipment to be inspected and tested
- WPP to be amended to include details of pressure testing
- [no further air-testing to be completed until WPP updated]
- Organise training for this equipment
- Review of BMS and make recommendations for this activity
- Review of design recommendations for BS EN 1610 and pressure test requirements for a gravity fed drainage system
- Safety Alert to be produced, approved and issued to NH
- Just Culture Review if deemed applicable
- Review ways to undertake on-site pre-use testing & calibration frequency of equipment