



# Damage to Culvert – Failure to Identify Underground Assets

WLD.024

## Description of Event

*Existing culvert was damaged due to failure to check records and communicate to the construction team.*

### Population at Risk

Construction and Maintenance Workers, Inspectors and Members of Public (MoP).

### Hazardous Activity and Residual Risk Description

- Damage to an existing culvert exposed workers and MoP to the potential of a structural failure with an assessed residual risk of an almost certain likelihood of serious harm being incurred.
- Failure to review as-built information and carry out on-site survey work, prior to undertaking VCB excavation works in the hard shoulder, resulted in the soffit of a reinforced concrete culvert being extensively damaged.
- The incident was also not reported on HART.

### Consequences of this event

- The culvert's structural integrity was affected with the hard shoulder and adjacent running lane closed for many months leading to extended traffic constraints, delayed works completion and additional costs.
- The lane closures resulted in loss of a haul road and WHS impacts to MoP's due to the extended requirements for TM.

### Safety Hub Alert Database

- Sub-category 2 Service Strike and filtering Subject Description by contains "excavation" has 15 alters including 2 fatalities.



Photo of damaged Culvert soffit

### Potential Mitigation Measures

#### Design

- PD to ensure a PCI gap analysis is undertaken with the client.
- A thorough site inspection and GPR survey should be carried out to PAS 128 A-D.
- Ensure inter-discipline design coordination identifies assets to all disciplines.

#### Construction

- Permit to dig system to be followed at all times.
- Always follow the requirements of GG128 when reporting incidents.
- Contractor to create a digital health and safety file for unusual assets

#### Maintenance / Operations

- Ensure accurate H&S File records are maintained for all buried infrastructure so that there is a clear understanding of where all buried assets are located.



Photo of temporary barriers around the damaged Culvert.

### Further Guidance and Reading

- [RtB 9 – Utility Avoidance](#)
- [GG 128 - Requirements for reporting incidents, events and undesirable circumstances: health, safety, wellbeing, structural and environmental](#)
- [RtB 26](#) – Safety by Design
- [Highway Act 1980](#) – Part V Section 100 (Drainage of highways)
- [CD 529](#) – Design of outfall and culvert details
- [PAS 128:2022](#)



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