

MAPS Flood Recovery and Reinstatement Project

A case study of effective emergency management

Vincent Kain

Project Director

epicenergy.com.au

Agenda

- The Event
- Containment and Mitigation
- The Impact
- Engineering Assessment
- Planning
- Execution
- Challenges
- Sustainability
- Conclusion



The Event

- Monsoon like weather hit inland Queensland during late March and into April 2025
- Epic commenced early monitoring of creek levels
- In late April 2025, the Strzelecki Creek burst its banks in the MAPS corridor ~100km south of Moomba
- Routine aerial surveillance commenced in late April 2025



Containment and Mitigation

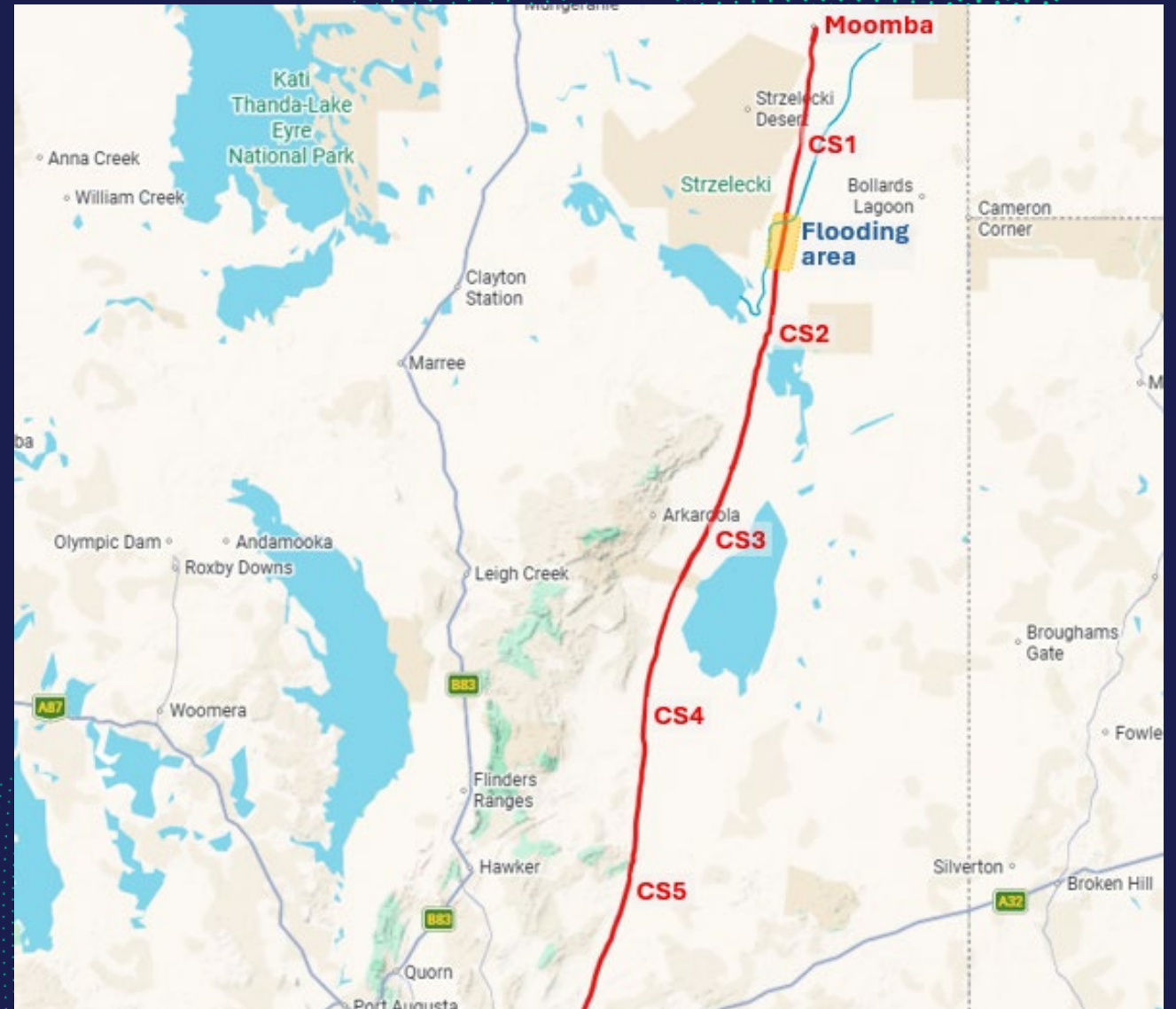
- Incident Management Team (IMT)
- Crisis Management Team (CMT)
- Temporary pressure restriction
- Daily aerial patrols to monitor pipeline
- Initial risk assessment on pipeline integrity
- Heightened 24/7 monitoring



The Impact

The flooding caused:

- Exposure of ~530 metres pipeline
- 6 separate locations exposed
- Potential pipeline floatation
- Extensive road damage and restricted site access
- Damage to cathodic protection
- Damage to SWER line infrastructure



Engineering Assessment

- Engagement of SME
- Change in Operations Safety Management Study
- Pipeline failure analysis
- Assessment of integrity threats
- Engineering span analysis of the pipeline
- Resourcing



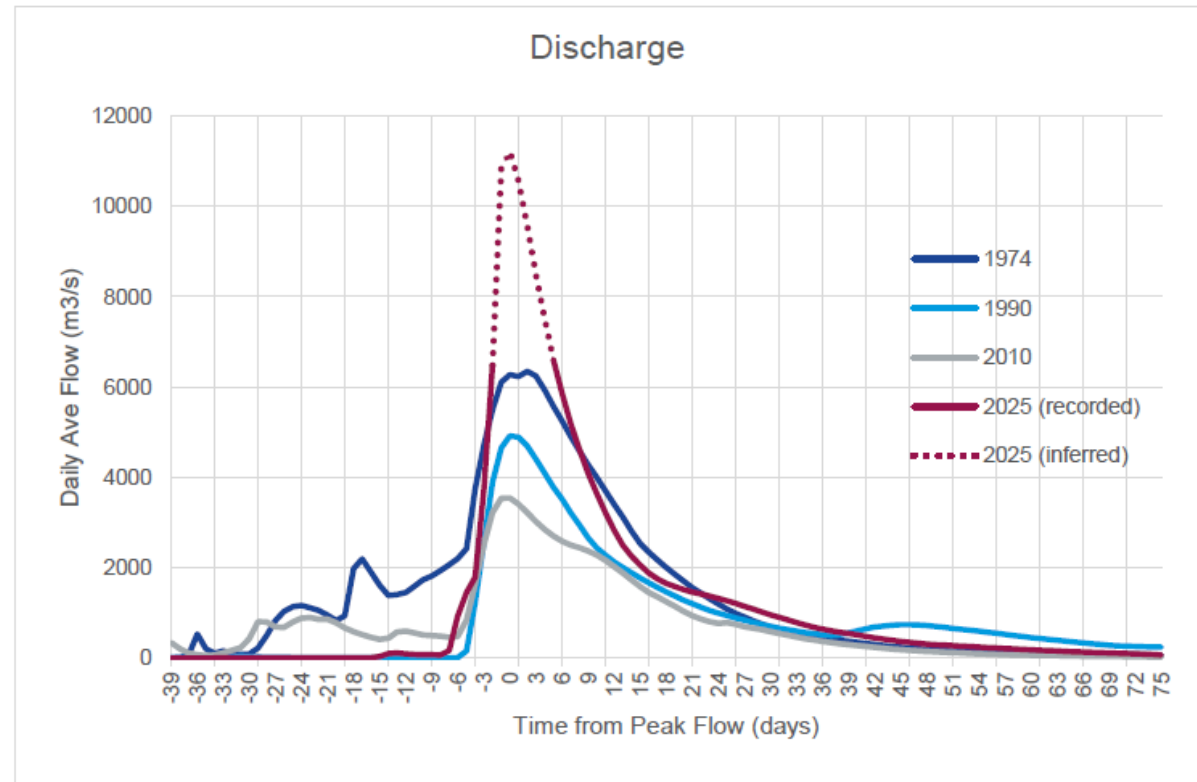
Engineering Assessment

- Engagement of SME
- Change in Operations Safety Management Study
- Pipeline failure analysis
- Assessment of integrity threats
- Engineering span analysis of the pipeline
- Resourcing



Engineering Assessment

- Strzelecki Creek Flood Modelling
- Multi-criteria analysis
- Evaluate reinstatement options
- Technical compliance
- Constructability

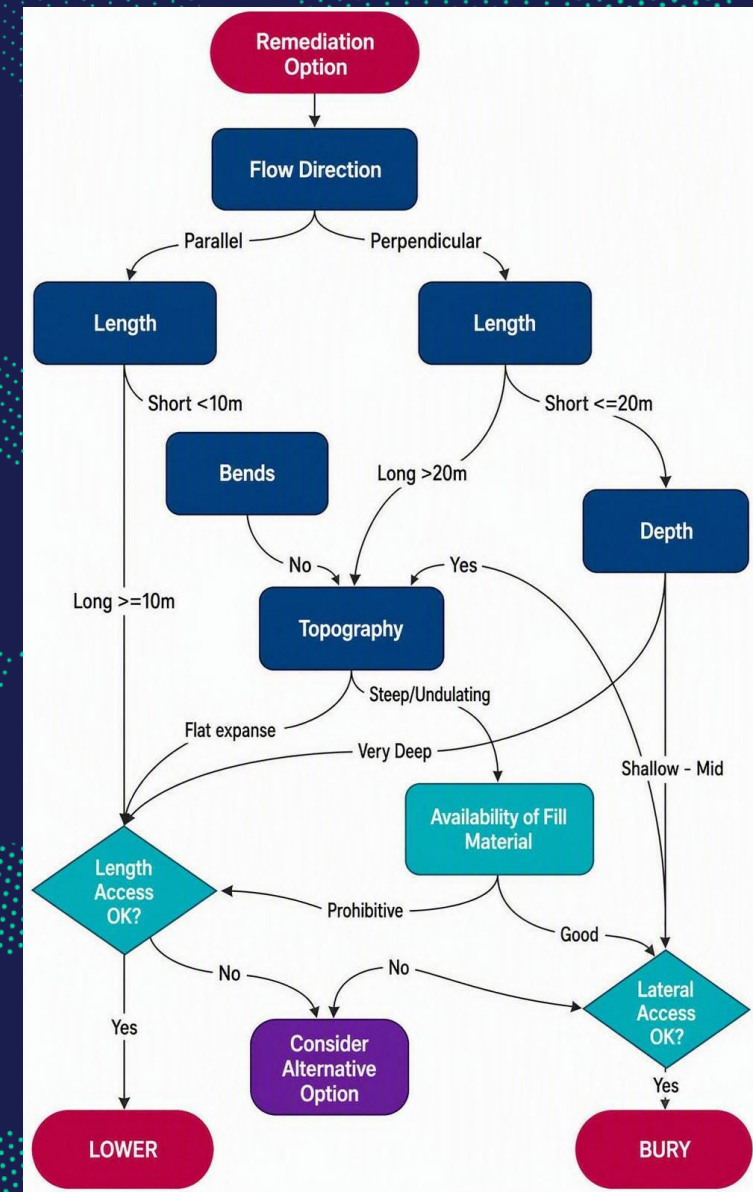


Note: data gap in 2025 between 8-15 April where streamflow gauge did not report. Flow estimated by Ricardo using flow to level relationship, refer Appendix A. Shown as '2025 (inferred)' on graph.

Figure 2: Cooper Creek Historical Event Hydrographs

Engineering Assessment

- Hydrology study
- Multi-criteria analysis
- Evaluate reinstatement options
- Technical compliance
- Constructability



Planning

- Access to site
- Cultural Heritage management
- Engagement with Stakeholders
- Pipeline stress management
- ROSEN RoGeo Pipeline Drift tool



Execution

- Establish access to site
- Mobilisation of equipment
- Site signage and demarcation of the affected area
- Additional accommodation
- Expose pipeline sections



Execution

- Establish access to site
- Mobilisation of equipment
- Site signage and demarcation of the affected area
- Additional accommodation
- Expose pipeline sections



Execution

- Visual inspection, coating and corrosion checks
- Ovality
- Weld profile and seam location confirmation
- Wall thickness verification



Execution

- 100% NDT for exposed lengths
- Circumferential welds (ext.): MPI
- Circumferential welds (int.): PAUT
- Corrosion Areas (ext.): MPI
- Longitudinal seam welds (ext.): Eddy Current Array (SPYNE)
- Full pipe body: ECA (SPYNE) and Creaform 3D laser scanning
- Wall thickness verification: UT thickness measurements



Challenges

- Remote location
- Working on a live Pipeline
- Extreme heat, temperature above 50°C, high winds
- Pipeline thermal expansion
- ROW access issues, sand drift and increased traffic
- Unexpected ground conditions slowed excavation



Challenges

- Additional rainfall delayed works
- New exposure was identified and incorporated into the work
- Updated survey measurements refined trench length and stress management
- Extended trench length for stress management



Challenges

Lower the live asset, but only within controlled limits

- Lowering in 100mm increments
- 1,250m of total exposed pipeline
- Pipeline to remain operational
- Pressure restrictions in place
- 10mm tolerance for final placement



Outcomes

- 20,000+ Hours worked
- 0 material safety issues
- 0 environmental incidents
- 0 material defects identified
- No interruption to MAPS gas supply
- Pipeline returned to MAOP following completion



Conclusion

- Early action and engineering discipline prevented emergency escalation
- Flood-exposed assets are not unique to one operator or one corridor
- The framework matters because similar events will happen again



Questions





**epic
energy**

epicenergy.com.au