

Water Pipe Evaluation Platform Workshop

CRC-p project 2A

Monash University

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Pipe Evaluation Platform

Website link:

<https://pipes.monash.edu>



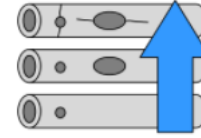
PIPE EVALUATION
PLATFORM

Files link:

Download files from the link in chat for use in the tool

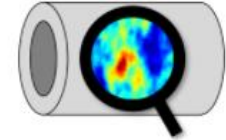
Introduction to the Pipe Evaluation Platform

- The platform is broken down into 4 modules:
 - Pipe ranking
 - Pipe failure analysis
 - Liner selection
 - Lined pipe analysis
- Workshop will examine 4 scenarios



PIPE RANKING

Rank and prioritise pipes based on the Monash pipe ranking model, or input your utility specific ranking method results



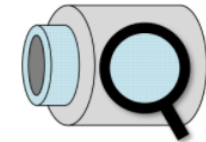
PIPE FAILURE ANALYSIS

Conduct failure assessment of deteriorated cast iron pipes



LINER SELECTION

Select pipe liner based on Individual or Zone assessment



LINED PIPE ANALYSIS

Evaluate long-term performance and service life of a lined pipe

Scenario 1 – Leaking zone

Water Authority identifies a zone that is leaking and wants to improve performance by spray lining.

The contractor uses the decision tools to:

- Upload the pipe data for the renewals program to the tool
- Runs the pipe ranking module
 - Note: the utility may also provide this data.
- Run the liner selection module to identify which pipes are suitable for spray linings
- Finds that 75% of the pipes can be spray lined and 25% are likely too degraded



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Scenario 2 – Detailed condition assessment

Water Authority identifies a specific pipe for which detailed condition assessment data is available for analysis.

The contractor uses the decision tools to:

- Locate the pipe from the library and pre-fill available information
- Import a wall-thickness map into the platform
- Runs several advanced calculations to determine the time to failure, probability of failure etc.



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Scenario 3 – Standalone zone level analysis

Water Authority wants to run a quick zone level estimate of possible lining methods for a set of pipes, *without the use of the pipe library*.

- Format utility failure data to required format
- Import formatted data into liner selection module
- Runs the module to get quick recommendations on liners



ZONE LEVEL ANALYSIS

Analyse liner requirements at the
Zone level



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Scenario 4 – Lined pipe analysis

Water Authority wants to estimate the service life of a liner in a deteriorated host pipe.

The contractor uses the decision tools to:

- Gather host pipe data from pipe library (cohort)
- Use spray or CIPP liner to estimate service life
- Alternatively, check thickness design
- Perform a net present value (NPV) cost analysis



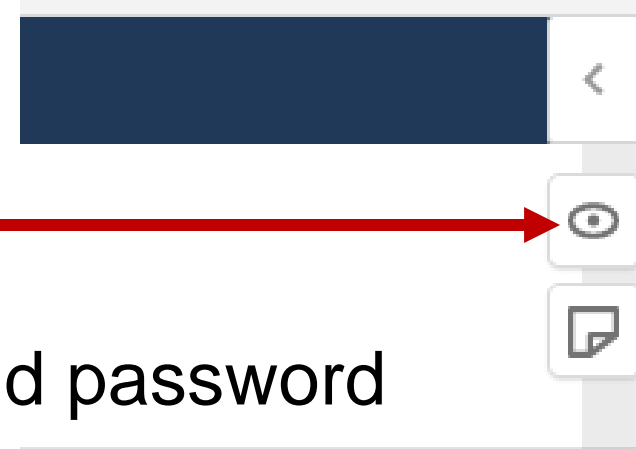
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Pipe Evaluation Platform Feedback



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For feedback, please select this option



- Login with the following username and password
 - Username: pipesfeedback
 - Password: FEEDBACK
- You can highlight and/or annotate any items that require changing/editing. etc.