



**EnergyAustralia**  
*LIGHT THE WAY*

# **Mt Piper Power Station**



# Mt Piper Ash Placement Areas

## Dry Landfill Repositories

### Mt Piper Ash Repository MPAR

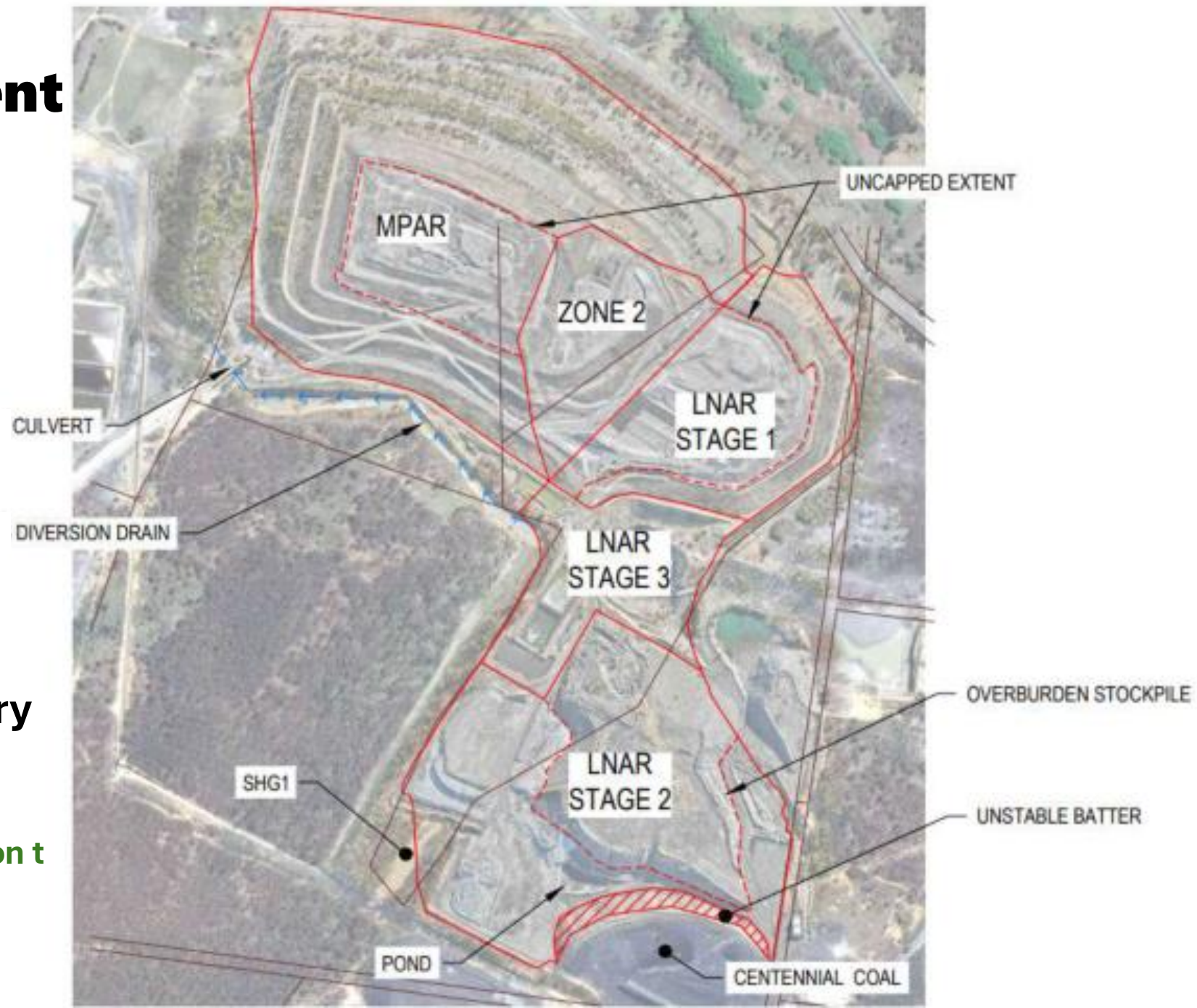
Footprint: 92 acres

Total Ash Placement Capability:  
>22 million t + Zone2 623 thousand t

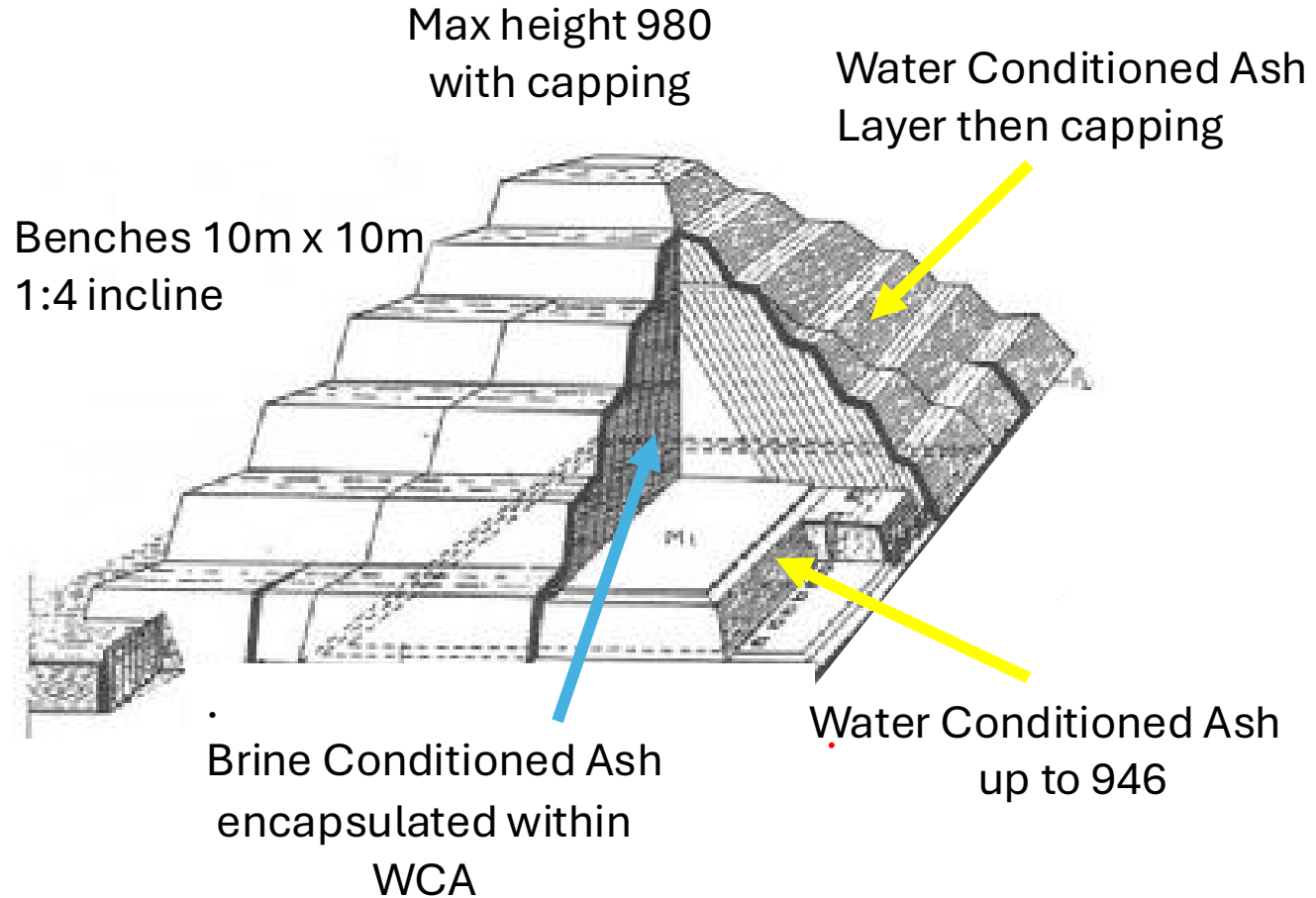
### Lamberts North Ash Repository LNAR

Footprint: 114 acres

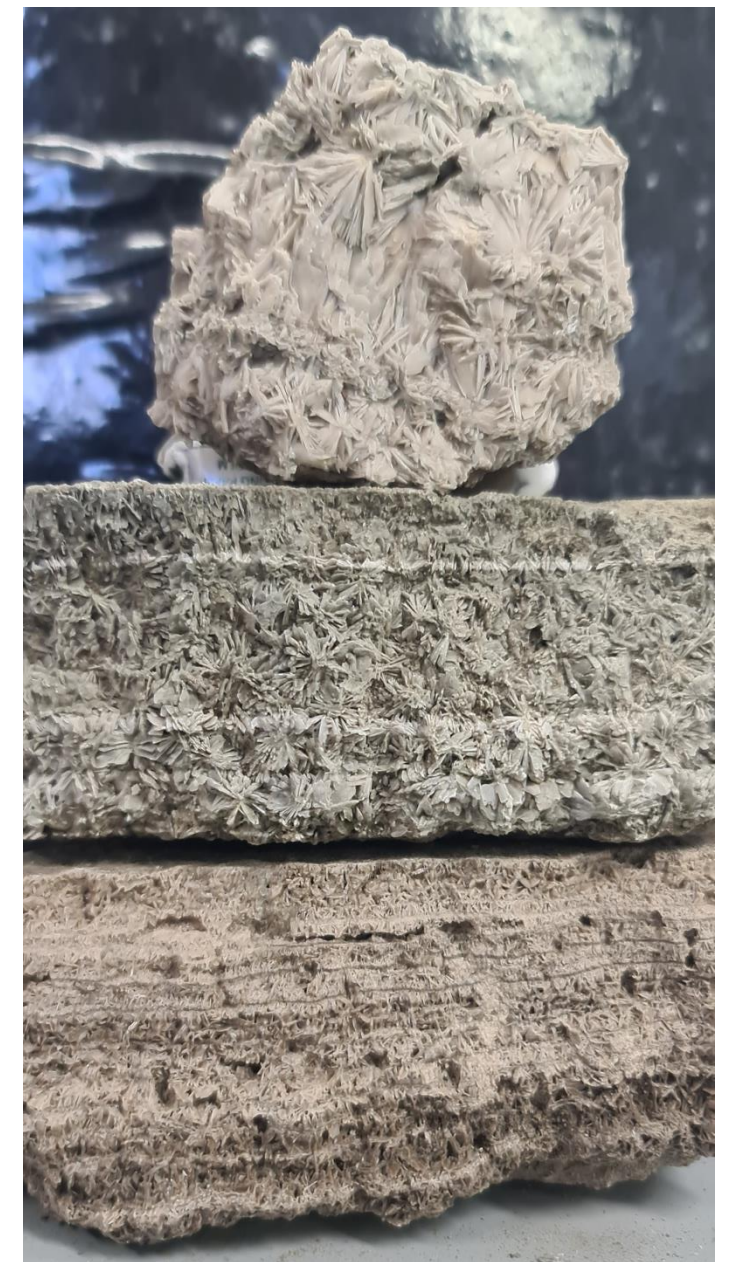
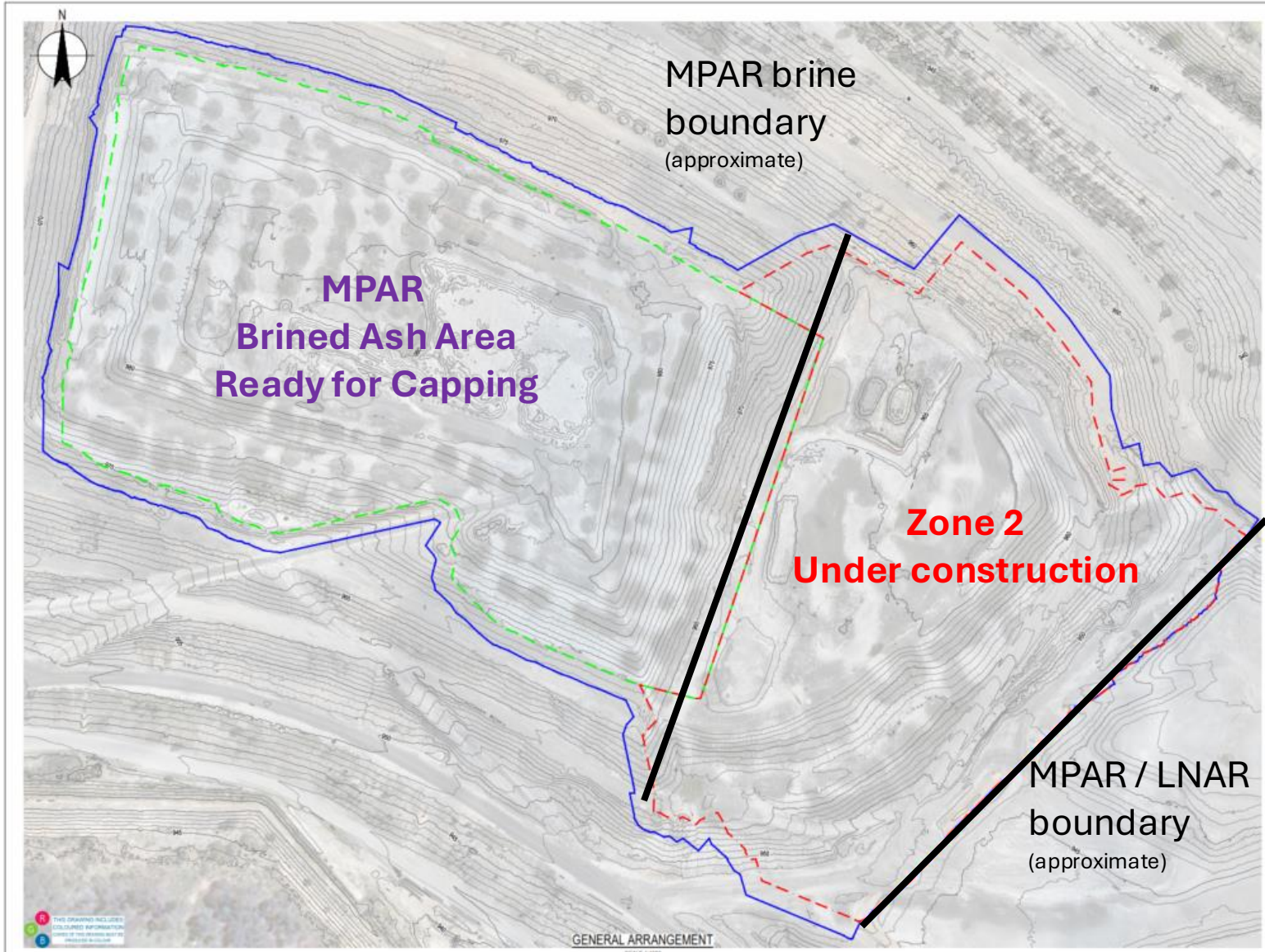
Current Ash Placement Area: 5.5 million t  
under construction, total capacity is  
under design review



# Mt Piper Ash Repository MPAR

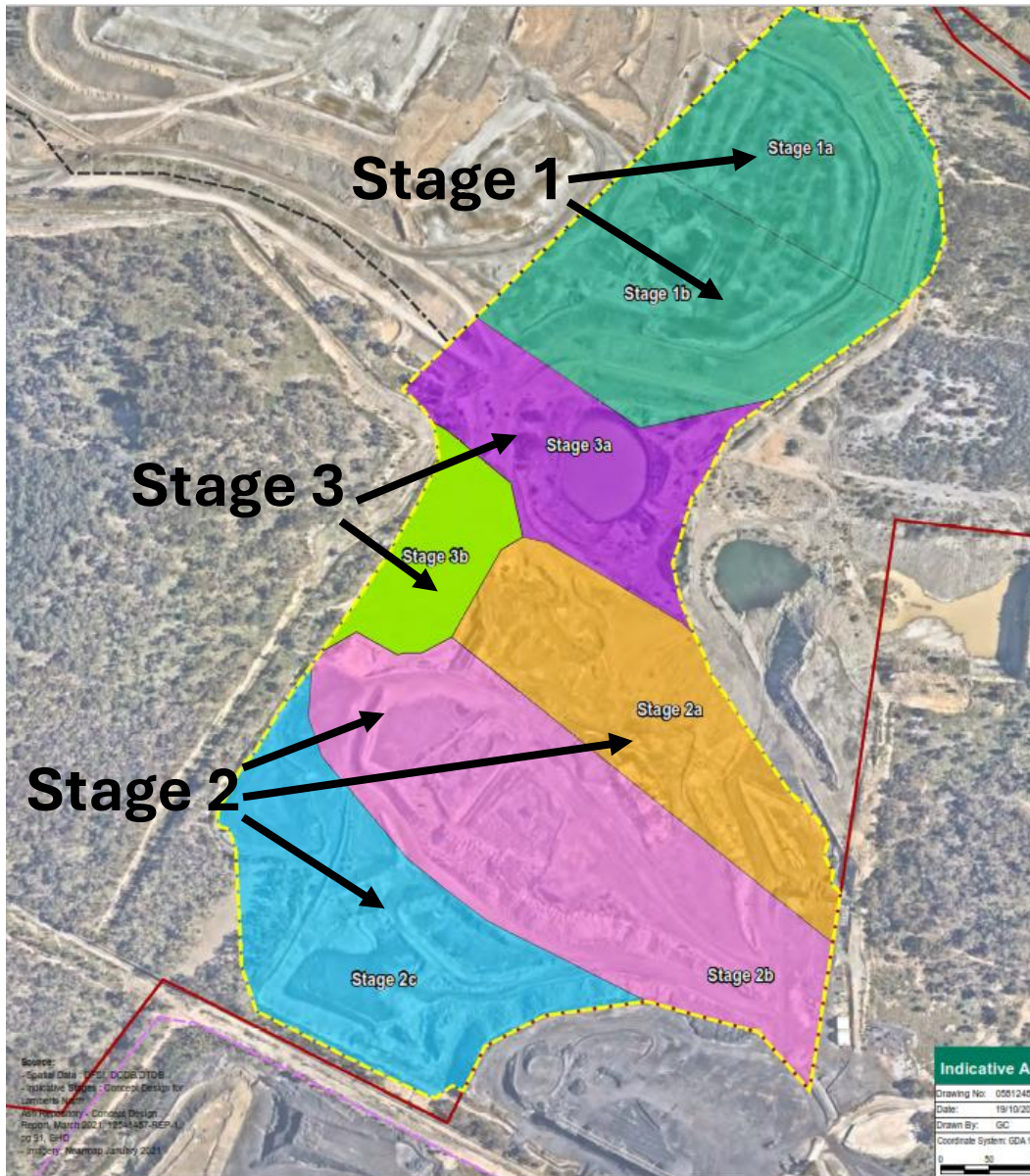


# Mt Piper Ash Repository MPAR



**Compacted repository  
Brine Conditioned Ash**

# Lamberts North Ash Repository LNAR



Solid Salts received via  
Water Treatment Facility  
Crystalliser

Mixed Salt  
~ 9 t/day

to be blended with  
Brine Conditioned Ash

Lime Salt  
~ 37t/day

# Lamberts North Ash Repository LNAR

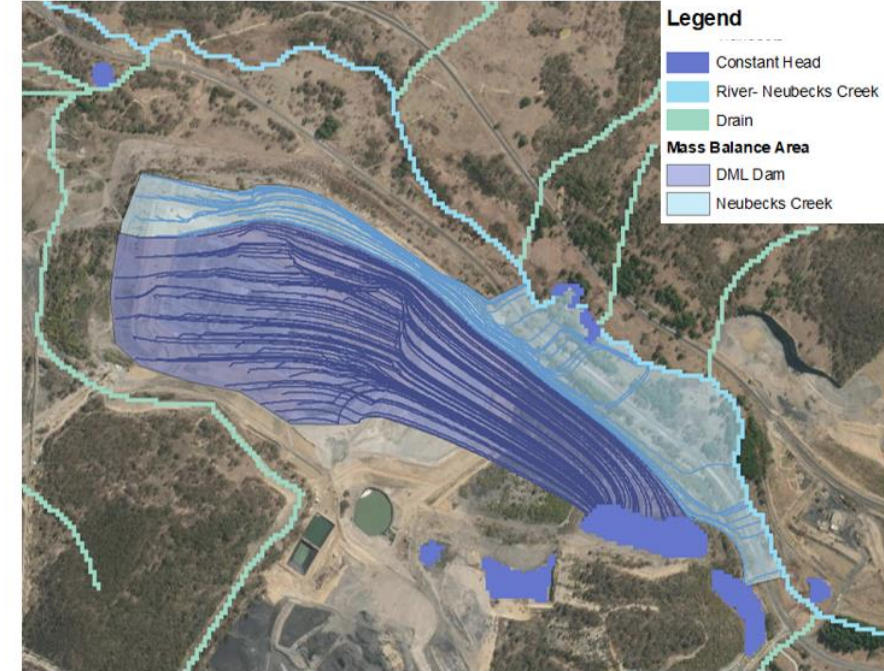


# Leachate Management

Repository leachate is captured and averages 1.8 to 2ML/month

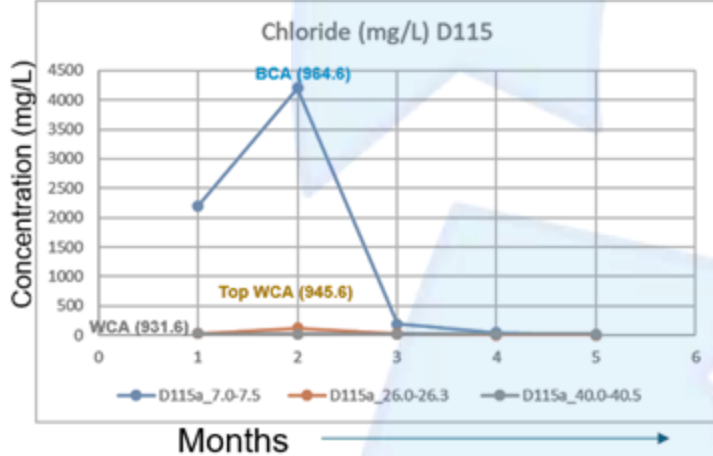
Leachates transfer to 60ML pond and reused via sprinklers on BCA as dust suppression and/or transferred back to the Station for treatment

## Numerical Groundwater Model – Particle Path Assessment



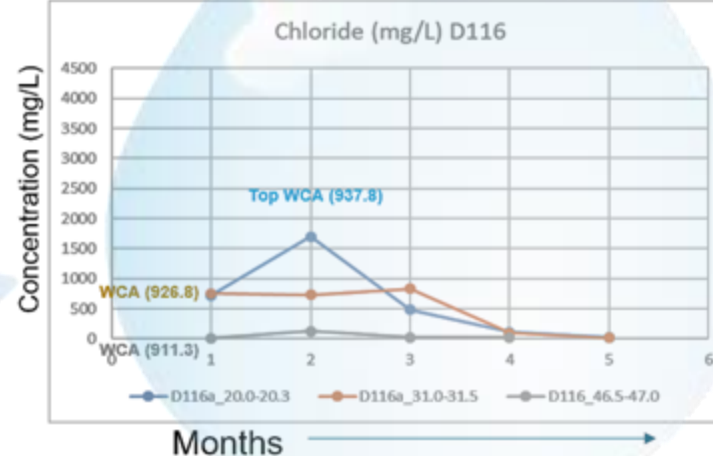
## Summary of Analytical Results – long term leach tests

Active BCA placement area (D115)



“Rapid” leaching of chloride from BCA  
Consistent with migration of profile vertically through ash

Covered BCA placement area (D116)



Limited solute detections in samples collected from  
Month 4 to Month 6 (end of analysis period)

# Challenges as an Operator

## Brine Conditioned Ash beneficiation

- No “washing” at Mt Piper, additional wastewater
- Alternate option needed

Except in cement, use of ash in Australia is in early stages

- Incentivize alternate markets to invest
- Research & Development costs
- Manufacturing Plant build or adaptation costs

Logistics of supply: No rail, trucks travelling thru Blue Mtns

Repository harvesting costs impacting ash sale price

## Coal Ash Order

- excludes Brine Conditioned Ash
- extensive testing cost for ash in Agriculture

Daily management of excess water

# Opportunities

Alternative cements, higher ash content, ability to utilize Brine Conditioned Ash

Concretes utilizing alternative activation methods, Geopolymers

Unreinforced concrete applications enabling Brined Ash usage

Carbon Fiber or alternate material Mesh use in reinforced applications

Increased ash sale queries based on Station 2042 closure data

Alternate uses: Engineered Decking, Flooring and Cladding, Gyprock, Plaster Molding, Tiles including Roof, Polyurethane products

The biggest opportunity is



Coal Ash Pathways Research Partnership



# Back Cullen Road 2012



**2 km  
Road base trial**



# Furnace Bottom Ash Classification Aggregate Trial

