

**CLEAN
TEQ**

SUNRISE

Clean TeQ Sunrise

CCC Meeting – 27 August 2018

Summary

Project Update

Community Engagement

Optimisation Modification (MOD 4) Update

Environmental Management

May CCC Meeting Action Items

Project Update

Definitive Feasibility Study Complete

The completion of the Definitive Feasibility Study (DFS) in June 2018 was an important milestone in the development of Clean TeQ Sunrise.

Key findings

- The DFS models the first 25 years of production, with sufficient ore reserves to extend beyond 40 years
- Results confirm the Project's global importance as a sustainable, long-life, low-cost source of high purity cobalt and nickel sulphates for the battery revolution
- Clean TeQ Sunrise is forecast to produce high quality nickel sulphate and cobalt sulphate products in sufficient quantities to manufacture around 500,000 electric vehicles per annum.
- The Project delivery model will be determined in Q3 2018 with a final investment decision targeted for early 2019
- Completion of the DFS provides the platform to enable the acceleration of product offtake agreements and project financing

STRONG ANNUAL PRODUCTION

Nickel: **19,620** tonnes per annum
Cobalt: **4,420** tonnes per annum
Average over first 10 years



PRODUCTION OF HIGH PURITY BATTERY GRADE MATERIALS

- Nickel Sulphate
- Cobalt Sulphate

PLUS Scandium Oxide for
automotive & aerospace applications



SECURE SOURCE OF COBALT SUPPLY OUTSIDE OF AFRICA



Community & Social Benefits

Clean TeQ Sunrise has the potential to provide tremendous economic and social benefits to the local communities of Lachlan, Forbes, Parkes & surrounding areas.

In addition to employment opportunities, taxes and royalties, these benefits will come in the form of council rates, upgrades to local infrastructure, community enhancement contributions and other local community initiatives.

PEAK CONSTRUCTION WORKFORCE

1000 people



EMPLOYEE SALARIES AND WAGES

~A\$1.9 Billion
(including staff
and contractors)



STEADY STATE OPERATIONS WORKFORCE

300 people
(excluding mining
contractors and
ancillary services)



STATE ROYALTIES AND PAYROLL TAX

~A\$630 million
over life of mine

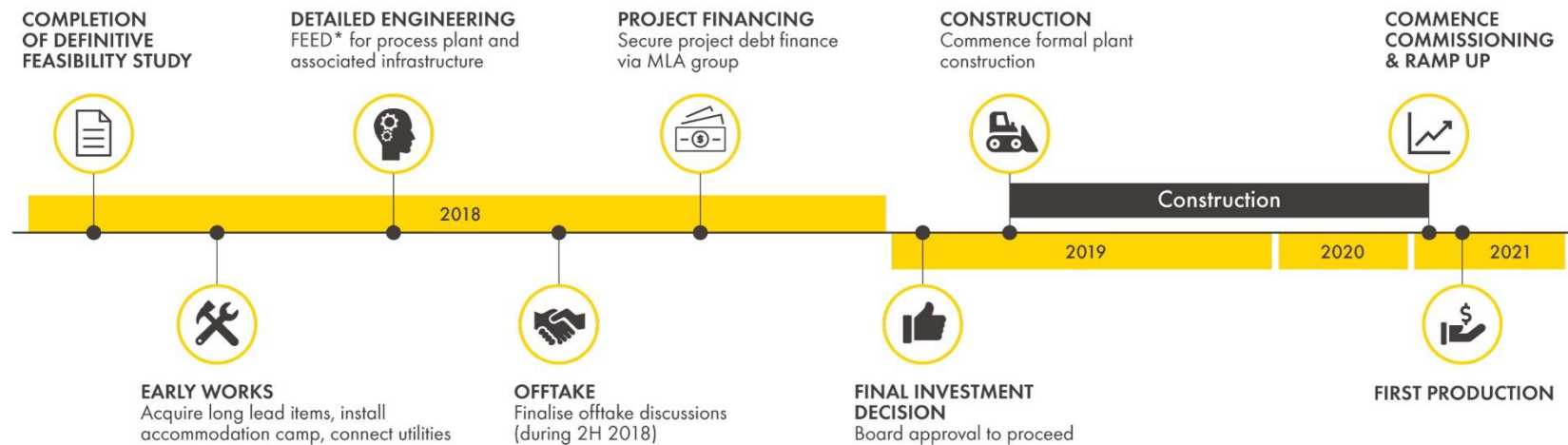


CORPORATE TAX

~A\$2.2 Billion
over life of mine



Indicative Project Timeline



Community Engagement

Community Information Sessions

Community Information Sessions

- Evening meetings held in Condobolin, Forbes, Trundle and Parkes 2-5 July
- Advertised in local newspapers, radio and online
- 320 people attended from across the region, including Orange and Dubbo
- Provided a Project update and outlined future employment and procurement opportunities



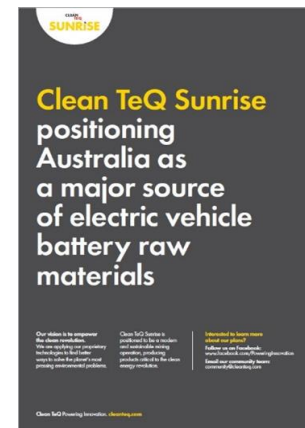
Community Engagement – June, July & August

- **1:1 Meetings** – near neighbours, local government, NGOs and community organisations
- **Local Chambers of Commerce** – presented at Parkes and Condobolin meetings, and the **Forbes Mens' Probus Group**
- **Community drop-in sessions** – advertised and held in Parkes and Forbes
- **Shop fronts** – continued to operate shop-fronts in Condobolin and Trundle
- **Site tour** – all near neighbours invited to attend a site visit on 16 August and BBQ
- **Supporting local events and fundraising efforts**
 - sponsoring Ag Shows in Tullamore, Trundle, Condobolin, Parkes and Forbes
 - assisted Trundle schools with fundraising efforts
 - contributed to Forbes Mega Farm Rescue
 - Supporting Trundle Bush Tucker Day 2018



Keeping People Informed

- **Newspaper advertisements**
 - Full-page ads placed in local media (Condobolin, Parkes and Forbes newspapers) over two weeks
- **Keeping our community updated**
 - August eNews
 - August Community newsletter
 - Facebook
 - Meetings / presentations
 - Shopfronts
 - Information stands at Ag shows



Mine of the future

By Melissa Blewitt

The Sunrise Project near Fifeield has the potential to put Australia at the heart of clean energy development, according to the Federal Government.

Deputy Prime Minister Michael McCormack and Resources Minister Matt Canavan joined local Federal Member Mark Coulton on site at the Clean TeQ Sunrise mine and processing project on Tuesday, 17 July.

The mine will produce cobalt and nickel sulphates which are critical in the production of lithium-ion batteries used in electric vehicles. It will be one of the largest and highest grade nickel and cobalt producers outside Africa and also be one of the world's largest producers of high-grade scandium. Scandium, when alloyed with aluminium, is used to create stronger and lighter metal products like bicycle frames and aircraft parts.

Mr McCormack said the project was of international significance.

"This project will finally establish Australia as a reliable and high grade supplier of materials that will help to drive the ever-increasing number of electric cars on roads around the world, helping lower vehicle emissions," he explained.

Mr Coulton said the project will also provide a jobs boost to the region.

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• Clean TeQ CEO Sam Riggall, Federal Government Resources Minister Senator Matthew Canavan, Lachlan Shire Mayor John Medcalf, Federal Member for Parkes Mark Coulton and Deputy Prime Minister and The Nationals leader Michael McCormack on site at the Clean TeQ Sunrise Project near Fifeield on Tuesday, 17 July. MB



Quarterly Stakeholder Engagement Summary

Face-to-Face	E-News	Facebook	Newsletter
645*	1,023	16,856	+ 6,100
<ul style="list-style-type: none">• 1:1• Drop-in sessions• Community Information sessions• Meetings• Presentations• Shop fronts	<ul style="list-style-type: none">• 542 distribution email• 481 Facebook link	<ul style="list-style-type: none">• 25 posts	<ul style="list-style-type: none">• 5,400 newspaper insert• 700 mailbox drop• Local shows• Local businesses

* Face-to-Face excludes engagement at local Ag shows

Optimisation Modification (MOD 4) Update

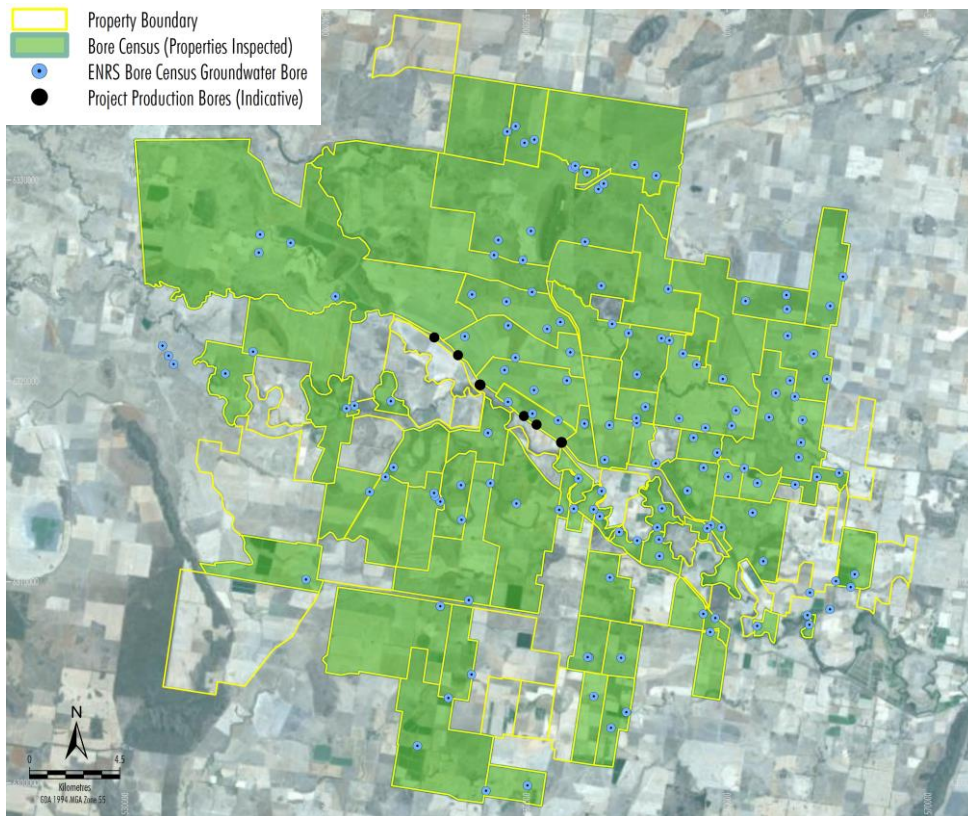
Optimisation Modification

- Road transport of construction water from the borefield to the mine site no longer proposed.
- Clean TeQ is finalising VPA negotiations with Councils – Clean TeQ to make \$400k payment shortly after VPA signed.
- DP&E preparing assessment report and draft modified Development Consent conditions.
- Independent Planning Commission process.

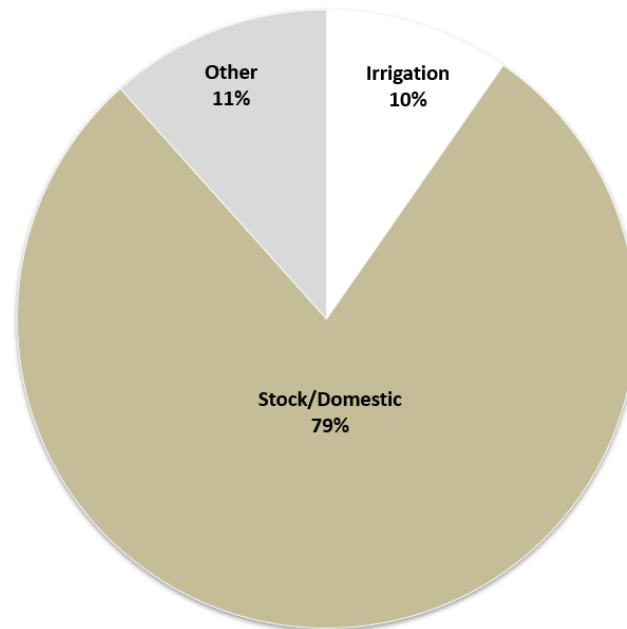


Environmental Management

Groundwater Works Program – Borefield



Bore Use Type



Groundwater Works Program – Borefield

ENRS has completed the field component of the **2018 Bore Census**.

Purpose:

- Identify existing groundwater users in the vicinity of the borefield.
- Update and/or add to the existing baseline information collected during the 2005 Bore Census.

Field investigations:

- Included visits to 155 groundwater bores across 73 properties.
- Recorded baseline information (e.g. location, water level & quality, usage).
- Groundwater level was the key measure recorded as it is considered the most useful for identifying any changes to groundwater conditions.
- Other relevant measures are less reliable for identifying any changes to groundwater conditions as they are subject to multiple influences.



Groundwater Works Program – Borefield

Next steps:

- Individual landholders reports are being prepared for provision to landholders.
- Data will be used to inform the Groundwater Management Plan for the operational phase.
- The Groundwater Management Plan must be prepared in consultation with DI-Water and the EPA, and must be approved by the Secretary of the DP&E prior to construction.

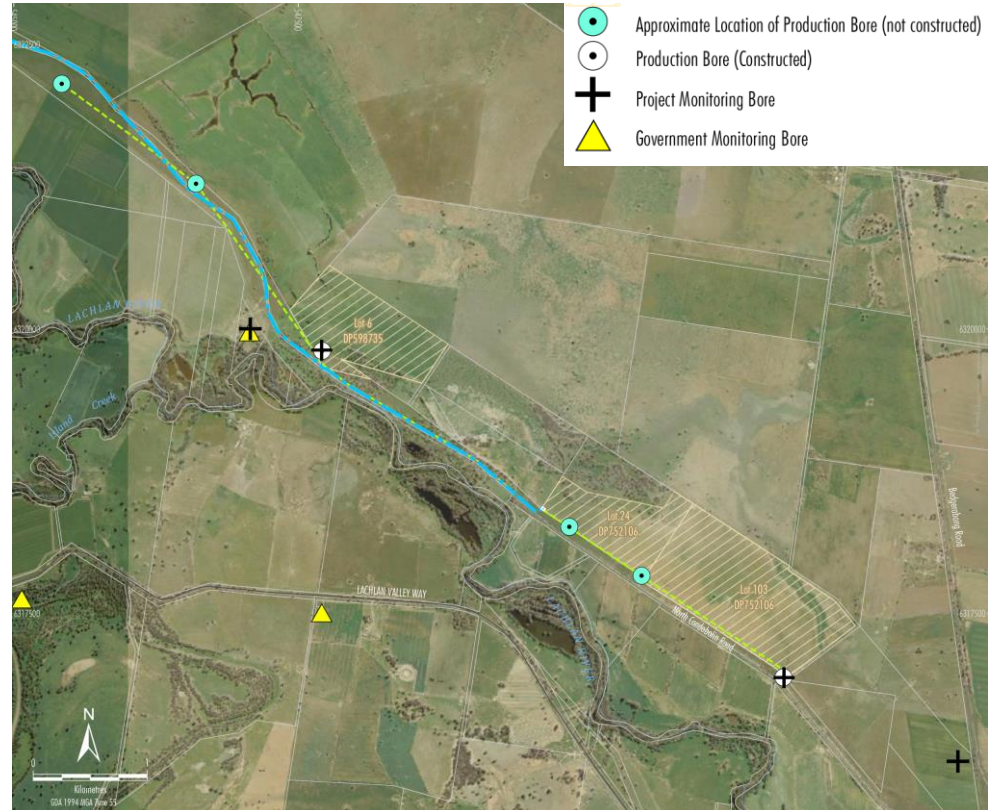


FIELD SURVEY FORM: GROUNDWATER BORE CENSUS	
SURVEY DATE:	SURVEY PERSONNEL: BORE ID:
PROPERTY DETAILS	
Property Name:	Property Address:
BORE DETAILS	
Local Bore Name:	License Number:
Easting (GD84):	Ref No/GW Number:
Northing:	GPS Elevation:
CONSTRUCTION SUMMARY	
Bore Depth (mBTOC):	Year Drilled:
Casing Stick Up (m):	Casing type ID:
Construction Summary (Driller, Drilled Depth, Diameter, Applier Intercept, Yield, Screen Interval, Seal/grout.....)	
WATER LEVEL INFORMATION	
Depth to Water (mBTOC):	Date / Time of Measurement:
Time Since Pump Ceased (in Days):	
WATER USAGE / PUMP DETAILS	
Bore-Well Status: In Use <input type="checkbox"/> Not in Use <input type="checkbox"/> Collapsed/tilled <input type="checkbox"/> Sealed/locked <input type="checkbox"/> Other: _____	
Purpose: Stock <input type="checkbox"/> Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Commercial/Industrial <input type="checkbox"/> Recreation <input type="checkbox"/> Mining <input type="checkbox"/> Town Water <input type="checkbox"/> Other: _____	
Equipment (Type Make Condition Power): _____ Metered: Y / N	
Pump Intake Depth:	Pump Regime (hrs per Day / Vol):
Pump Rate (L/s or GPH):	Flow Rate: _____ Measured: Y / N
Stick Type & No.:	Irrigation Crop / Area:
Lit. No. / Abstraction (ML/Yr):	Storage Type/Vol: Tanks Dams Other
SAMPLE DETAILS	
Well Head Gas Screening: CHL: _____ HLB: _____ CO: _____ O: _____	
Purged: Y / N	Vol. removed (min. 2): _____
Or duration for VIO to stabilise: _____	
E.C. Actual: _____ (mS or µS/cm)	Temp: _____ pH: _____ ORP: _____ DO: _____ mg/L
Specific: _____ (mS or µS/cm)	
COMMENTS	
SUPPORTING INFORMATION: Meeting with Land Manager <input type="checkbox"/> Government Log <input type="checkbox"/> Drillers Log <input type="checkbox"/> Water Sample <input type="checkbox"/> Photo <input type="checkbox"/>	
Bore Census Form v1.01_04 (02/2) PAGE _____ OF _____	

Groundwater Works Program – Borefield

Groundwater Monitoring:

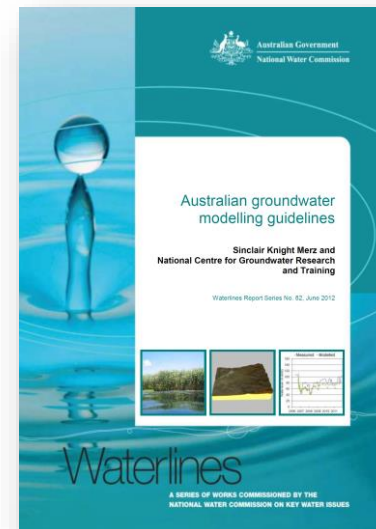
- Baseline work conducted in 1999 for the EIS included water level and quality and pumping tests.
- NSW Government monitoring bores – water level records from the mid-1970s.
- Project monitoring bores (ISMW01 & ISMW02) – water level records from 2005.
- 2005 Bore Census – water level and quality.
- Water level loggers installed in four Project monitoring bores in 2018.
- Monitoring results reported in the Annual Review.



Groundwater Works Program – Borefield

Groundwater Model:

- To be developed by HydroSimulations (Dr Noel Merrick).
- Developed in accordance with contemporary standards – e.g. the *Australian National Groundwater Modelling Guidelines*.
- The groundwater model will be used to inform the GWMP (e.g. pumping strategy to minimise impacts on other water users, establish trigger levels, develop response measures) for the operational phase.
- Groundwater model development in 2018.



Groundwater Works Program – Mine Site

ENRS has completed field component of the 2018 Bore Census.

Purpose:

- Identify existing groundwater users in the vicinity of the mine.
- Update and/or add to the existing baseline information.

Field investigations:

- Included visits to 7 groundwater bores across 5 properties
- Recorded baseline information (e.g. location, water level & quality).

Next steps:

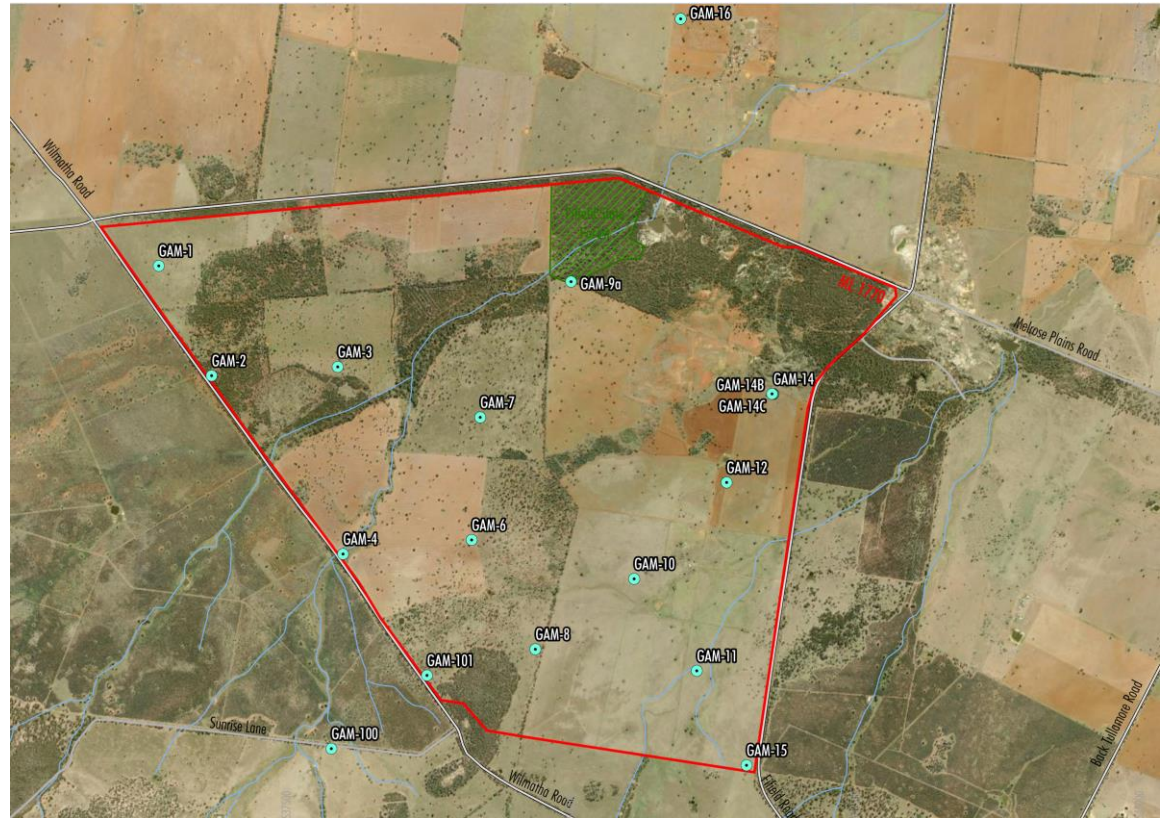
- Individual landholders reports are being prepared.
- Data will be used to inform Groundwater Management Plan for the operational phase.



Groundwater Works Program – Mine Site

Groundwater Monitoring:

- Baseline work conducted in 1999 for the EIS included a bore census, water level and quality monitoring and pumping tests.
- Water level loggers installed in 18 Project monitoring bores in 2018.



Project Traffic Generation

- Clean TeQ reviewed its traffic generation to consider the use of higher capacity vehicles (employee shuttle buses and AB-triples) to minimise movements.

Vehicle Type	Approved Project	MOD 4 Project	Revised MOD 4 Project (Higher Capacity Vehicles)
Light Vehicle	188	256	70
Heavy Vehicle	34	90	70
Shuttle Bus	0	0	6
Total	222	346	146

Road Network

- The Bogan Way in Trundle:
 - is part of existing arterial road network;
 - is approved to carry Project heavy vehicle types;
 - has adequate capacity to accommodate the Project heavy vehicles;
 - has suitable geometry – priority at intersections, avoids sharp turns.



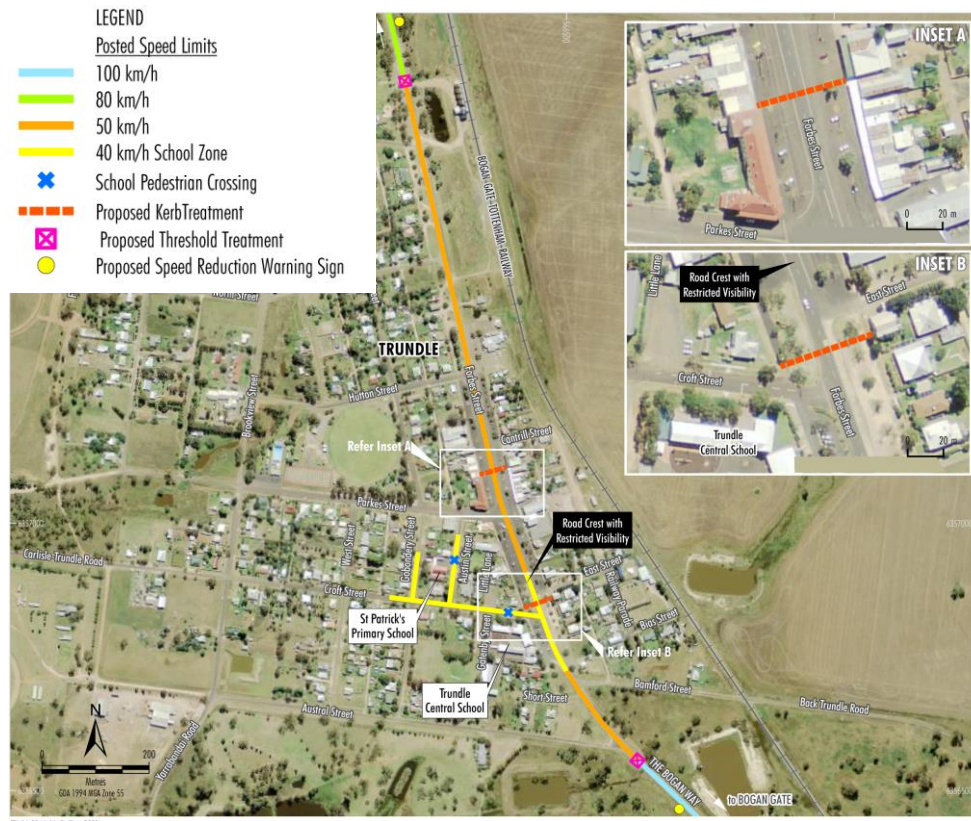
Road Transport – Trundle

Pedestrian Access Review

- Pedestrian Access Review concluded no significant deterioration to safety and no upgrades would be required.
- Improvements to be implemented – kerb treatments, threshold treatments and speed reduction signage.

Road Noise

- Road Noise Assessment predicted no exceedances of the relevant road noise criteria in Trundle.



Site Access

- Clean TeQ is required to secure the ML 1770 boundary for safety and security – public access to ML 1770 will therefore not be available.
- Clean TeQ will consult with community regarding opportunities to improve recreational facilities and emergency water supply options.

Rail Siding Access

- Access to via The Bogan Way and Scotson Lane.
- Clean TeQ will upgrade the The Bogan Way/Fifield Trundle Road/Scotson Lane intersection.

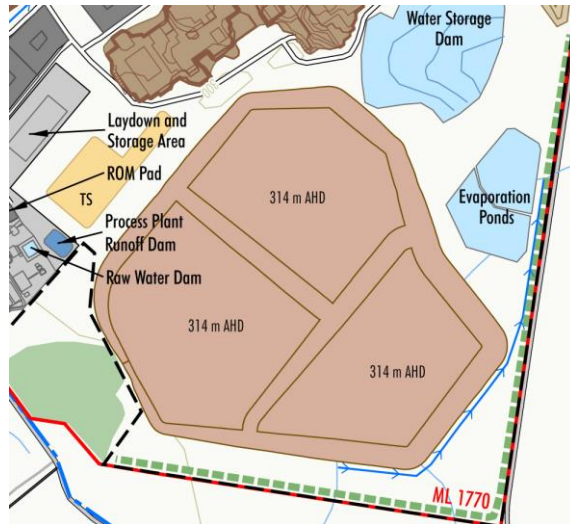
The McGrane Way (MR 354)

- The Optimisation Modification includes the proposed use of the McGrane Way.

May CCC Meeting Action Items

Tailings Storage Facility Height

- Maximum design elevation = 314 m AHD.
- Height will be 10 to 35 m above ground level depending on underlying topography.



Currajong Park Noise Criteria

- Noise criteria are outlined in the Development Consent and will also be in the EPL.

	Day (L_{Aeq} (15 min))	Evening (L_{Aeq} (15 min))	Night (L_{Aeq} (15 min))
Existing Development Consent	35	39	40
Proposed MOD 4	37	37	37



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