

Meeting notes

EnergyAustralia

Project	EnergyAustralia Lithgow CCC	Date	28 March 2022
Chair	Brendan Blakeley	Recorder	Jacinta Spies
Attendees	Julie Favell, CCC member Jim Whitty, CCC member Aunty Helen Riley, CCC member Michelle Blackley, EnergyAustralia Steve Marshall, EnergyAustralia Ben Eastwood, EnergyAustralia Kane Hoskins, EnergyAustralia Stuart Hillen, Energy Australia Mick Hanly, EnergyAustralia	Apologies	Rob Cluff, CCC member Alex Preema, CCC member Clr Cass Coleman, CCC member Clr Maree Statham, CCC member

Item	Discussion Point	Actions
1.	<p>Welcome and introductions</p> <ul style="list-style-type: none"> - All attending members completed their induction course and took a RAT prior to entering the meeting room. - The meeting began at 5.22pm. - The Chair welcomed all members and acknowledged Country. - The Chair ran through the agenda for the meeting and noted apologies. 	
2.	<p>Review of previous meeting minutes</p> <ul style="list-style-type: none"> - The Chair called for comments on the previous meeting minutes. <ul style="list-style-type: none"> - No comments were noted, the meeting minutes were adopted. <p>Actions from the last meeting</p> <p>Steve provided an overview of the Willowstick Method used to detect water seepage from dams.</p> <p><i>Julie asked if this is method was only for the dam?</i></p> <ul style="list-style-type: none"> - Steve noted it is used as part of dam monitoring and works to a depth of up to 25m below the base of the dam. - Steve noted there are usually three visual dam inspections a week and other tests are conducted on a regular rotation. - Lake Lyell has seen three flood events recently, noting every time Lake Lyell rises higher than it has been previously, it is classified as a white alert and all agencies are notified. This initiates daily inspections until the water recedes. <p><i>Julie asked if the white alert is basically the consequence of a lot of rain?</i></p>	

Item	Discussion Point	Actions
	<ul style="list-style-type: none"> - Steve said this was correct. - Steve noted the Thompson Creek dam is classified as Extreme Consequence category due to neighbours in close proximity. - Steve provided an overview on survey markers to monitor the dams, noting the survey pegs are connected to GPS and can be reviewed in real time. <p><i>Julie asked if there is an alert if the water rises?</i></p> <ul style="list-style-type: none"> - Steve responded that there is no direct alert. A wide alert is provided to the relevant agencies to take action. This follows with a yellow alert and finally a red alert requiring the people downstream to respond. <p>Steve gave an overview of the membrane lining at Lamberts North, noting it is double lined.</p> <p><i>Julie asked how would EnergyAustralia know there has not been some kind of penetration to the membrane lining in five to ten years' time?</i></p> <ul style="list-style-type: none"> - Ben confirmed this will be discussed further in the LNAR presentation. <p>Michelle provided an overview of the definition of community leave as seen on slide 8.</p> <ul style="list-style-type: none"> - Steve added community nursery was not on the list of volunteer work leave, however was requested from the community and granted. <p><i>Julie noted she was unaware of this as she thought the work at the nursery was completed in the worker's own time.</i></p> <ul style="list-style-type: none"> - Michelle added EnergyAustralia kept a track of staff volunteerism. <p><i>Jim asked what happens if jury duty exceeds ten days?</i></p> <ul style="list-style-type: none"> - Michelle clarified if jury duty takes longer, they should be reimbursed by either EnergyAustralia or the court depending on each circumstance. 	
3.	<p>Site safety</p> <p>Steve noted:</p> <ul style="list-style-type: none"> - Safety since the start of the year has been limited to first aid treatment including foreign objects in eyes, cut fingers and dust. There was also one minor injury recorded. - The Total Injury Frequency Rate results are looking good with the plan to keep results as close to zero. 	
4.	<p>Water update</p> <p>Ben gave an update on water management.</p> <ul style="list-style-type: none"> - Oberon Dam is at 100% capacity. - Total active storage is at 98.3% <ul style="list-style-type: none"> - Lake Lyell is at 100% - Lake Wallace is at 106.5% - Thompsons Creek Dam is at 97.2% - There is an amber algae alert for Lake Lyell, with potential for it to move into a red alert, which will close the lake to recreational activities. - Currently there are controlled releases from Thompson Creek Reservoir to ensure the dam operates safely. 	
5.	<p>Market update</p>	

Item	Discussion Point	Actions
	<p>Steve gave an overview of the market update</p> <ul style="list-style-type: none"> - No notes were taken due to commercial sensitivity. 	
6.	<p>Operations site update</p> <p>Steve gave an overview of the operations update.</p> <ul style="list-style-type: none"> - No notes were taken due to commercial sensitivity. 	
7.	<p>Pine Dale Mine and Enhance Place</p> <p>Ben gave an update on Pine Dale and Enhance Place.</p> <ul style="list-style-type: none"> - There are no non compliances at the Pine Dale Mine. - Future mining activities continue to be evaluated and are in a holding pattern. - Energy Australia's intention is to submit an application to relinquish Mining Leases associated with the former Enhance Place Mine in Q2 2022. <p><i>Julie asked if the Enhance Place Mine will affect Area A?</i></p> <ul style="list-style-type: none"> - Ben stated Area A will not be affected as the relinquishment only relates to property on the Southern side of the Castlereagh Highway. - The Pine Dale Rehabilitation Management Plan is being revised and updated in accordance with the requirements under the Mining Act and Regulations. - Higher rainfall has had a positive effect on growth on the visual bund over the period. <p><i>Julie asked about the butterflies on that site?</i></p> <ul style="list-style-type: none"> - Ben noted that Energy Australia was no longer required to monitor the site. <p><i>Julie asked why monitoring had stopped? Is anyone from the Department coming to check the site?</i></p> <ul style="list-style-type: none"> - Ben added monitoring has stopped because mining has stopped, noting EnergyAustralia is not aware of anyone from any agency checking the site recently. 	
8.	<p>Community update</p> <p>Michelle gave a community update.</p> <ul style="list-style-type: none"> - Round 1 of the Community Grants close on Thursday 31 March. - There are currently nine applications, with the expectation of a few more in the last couple of days. - Energy Australia attended the Portland Art Show at the beginning of this month and selected several paintings as depicted in slide 22. <p><i>Jim asked where are the paintings hung?</i></p> <ul style="list-style-type: none"> - Michelle said all around the station. Paintings with a glass covering can be further in site, while paintings without no covering will be kept in the admin building. - Michelle added the number of paintings at the Show were down from previous years due to difficulty getting artists involved from Sydney due to Covid. - Dignity Drives are held every March and August. Mt Piper is supporting this initiative with a collection box in the foyer for staff to drop off products. - Upcoming events include the Lithgow Show and Lithglow. - Three new apprentices have started with Energy Australia. - An Ash and Dust Engineer, External Plant Engineer and a Planner and Scheduler have been appointed. - Currently there is an Electrical Engineering student undertaking his work placement with Energy Australia. 	
9.	<p>Lamberts North Ash Placement project</p> <p>Ben gave an overview of the Lamberts North Ash Placement project.</p> <ul style="list-style-type: none"> - The Leachate Management System Water Balance Assessment for Modification 1 is pending approval from DPE. 	

Item	Discussion Point	Actions
	<ul style="list-style-type: none"> - High rainfall has created an emergency situation that required further action by Energy Australia. - Energy Australia has extended its operating hours of the LNAR as provided for under emergency provisions of the Project Approval, to 2x 10-hour shifts, 6 days a week to avoid any potential threat to materials such as loss of containment of brine in the ponds. There are provisions to operate 24/7 from now until 1 May. - No uncontrolled releases of water have occurred due to the current emergency situation. <p><i>Julie asked for the timing of 24 hour operations?</i></p> <ul style="list-style-type: none"> - Ben confirmed 24-hour operation should finish in May. This will be revised and if the timeframe is required to be extended under the emergency provisions, then EA will notify the regulators accordingly. - See slide 29 for the layout of the repositories. - There are several reasons for the emergency situation and need to extend operating hours. <ul style="list-style-type: none"> - Heavy rainfall received causing delays to installation of the leachate barrier system - Limited capacity remaining in the Mt Piper Ash Repository to store brine conditioned ash <p><i>Julie questioned what does limited capacity mean; how long does it have left?</i></p> <ul style="list-style-type: none"> - Ben said less than approximately 50 days. <p><i>Julie asked why capacity wasn't increased?</i></p> <ul style="list-style-type: none"> - Steve responded some water conditioned ash is required to be reserved to blend with the brine from the water treatment plant. <p><i>Julie asked why all the ash can't be sold.</i></p> <ul style="list-style-type: none"> - While there is a strong market for ash, some needs to be kept to blend with the brine. <p><i>Julie asked whether this reduces the height of the Mt Piper Ash Repository and what would happen if it exceeded the maximum height? Is it possible it will be moved to the south?</i></p> <ul style="list-style-type: none"> - Steve said the repository is as high as it can be. If it exceeds the height it will move down the blue line on slide 29. - See slide 30 for images showing the effects of high intensity rainfall. <p><i>The Chair asked how much rainfall was received during the big rain period?</i></p> <ul style="list-style-type: none"> - Ben said 80mms in quite a short period of time. - Steve added the liner was about to be placed just before the rain hit and the area being prepared was washed out and saturated. - The decision was made not to put any brine in Lamberts North until the liner and pipe system is in place. 	
10.	<p>Particulate Matter Continuous Emissions Monitoring System (PM-CEMS)</p> <p>Ben gave an overview of the PM-CEMS.</p> <ul style="list-style-type: none"> - There are a number of reports required by EPA to install the PM-CEMS. - The feasibility report for installing a PM-CEMS was prepared and submitted to the EPA in March 2021. The report found it was not feasible to install a PM-CEMS for compliance monitoring against USA standards with the current configuration of Mt Piper Power Station. - Energy Australia purchased QAL260 monitors that have been installed on the four ducts at Mt Piper. These monitors use a laser beam of light across the duct, which reflects back to a sensor. The amount of light returned to the sensor compared to the intensity emitted from the monitor indicates the concentration of particles in the duct. 	

Item	Discussion Point	Actions
	<ul style="list-style-type: none"> - The monitors are connected to the Digital Control Screen that can provide shift leaders real time information on the particle concentration and performance of the fabric filter baghouse plant. - The readings provided by the monitors need to be calibrated in situ to ensure they accurately reflect the true concentration of particulate matter in each duct. Energy Australia is in the process of preparing to do this calibration testing. - Energy Australia submitted a licence variation to the EPA for an exemption while completing the PM-CEMS correlation testing. The calibration testing requires the intentional increase of particulate matter which Mt Piper Power Station is not designed to do. There is a possibility that particulate concentrations will go above the current licence limit for short periods during the calibration process. <p><i>The Chair asked whether calibration testing would be for a short period?</i></p> <ul style="list-style-type: none"> - Ben confirmed it would be a undertaken over a two week period. - The variation seeks to include a condition that the air concentration limit for solid particles contained in condition L3.2 may be temporarily exceeded during commissioning or calibration of the PM-CEMS, noting there is still a max limit that cannot be exceeded under the POEO Act. <p><i>Julie asked if there was an alert system?</i></p> <ul style="list-style-type: none"> - Ben said testing starts from 9am until 4pm. There are many teams involved in this process and controls will be in place to make sure we don't exceed the maximum limit under the clean air regulation. - Ben noted that the data will be monitored in real time and alerts will be implemented as per the management plan and Trigger Action Response Plan that has been prepared for the calibration testing. <p><i>Julie asked if it was to exceed would there be a community alert?</i></p> <ul style="list-style-type: none"> - Ben said the EPA would be notified. <p><i>Jim added the general public is not going to go looking for it and a couple of weeks would not make a difference.</i></p>	
11.	<p>Lake Lyell Pumped Hydro Energy Storage</p> <p>Stuart gave an overview of the Lake Lyell Pumped Hydro Energy Storage Project.</p> <ul style="list-style-type: none"> - Since the last meeting a town hall briefing session was conducted. - EnergyAustralia is in the process of seeking funding from the NSW Government via the Pumped Hydro Recoverable Grant Program <p><i>Julie asked about the feasibility of the project.</i></p> <ul style="list-style-type: none"> - Stuart confirmed that technically the project was feasible. The studies being undertaken will provide an evidence base for Energy Australia to make an informed decision on taking the project forward. - EnergyAustralia will work with environmental and heritage specialists to survey the subject land undertake geotechnical investigations and assess a range of impacts. - The project is waiting for a decision assessment on its funding application, noting there are several renewable energy projects ongoing in NSW, so it has taken a while. - Towards the end of last year, geologists were out on site to map the different rock types in the area and understand what the geology is on the surface. This will assist in finalising the drilling program. - The next focus is the environmental and cultural impacts of the program. Once the drilling is understood, a specialist assessed the environmental impact and prepared a Statement of Environmental Effects. - The Geotechnical conditions are fundamental to determining the feasibility of the upper reservoir. - Stuart referenced slide 38, noting the upper reservoir, powerhouse cavern and intake pipe. <p><i>Aunty Helen noted it will be important that local Aboriginal stakeholders are involved in cultural assessments</i></p>	

Item	Discussion Point	Actions
	<ul style="list-style-type: none"> - EnergyAustralia agreed <p><i>Julie asked if the intake pipe is exposed?</i></p> <ul style="list-style-type: none"> - Stuart said the intake pipe will likely be exposed, but will depend of final design requirements. <p><i>The Chair asked what was the diameter of the pipes?</i></p> <ul style="list-style-type: none"> - Stuart confirmed the pipes would be approximately 5m in diameter. - The transmission infrastructure around the lake built for the coal fire power station can be leveraged for the Project. <p><i>Julie asked if the assessments are going through council?</i></p> <ul style="list-style-type: none"> - As the whole program is a state significant development, the Department of Planning and Environment will need to be responsible for assessment of the application. Council will determine the application to undertake geotechnical assessment. <p><i>Julie asked how long will the Development Application take with Council?</i></p> <ul style="list-style-type: none"> - Ben said approximately 2 to three months. - Stuart referenced slide 39, highlighting the top dam on the upper reservoir, boreholes, and the Farmers Creek arm of Lake Lyell, noting that is where the water comes into the system. - The central bore holes are to assess the rock type, with a total of nine boreholes across the system. - The highest impact activity will be the drilling but even then, the rigs are quite small and only a small area is disrupted. The remaining tasks are superficial, with most testing occurring within the boreholes themselves. <p><i>Julie noted there is a lot of quartzite around the dam, and this makes for some quite unique habitat.</i></p> <p>Stuart clarified geologists believe there is quartzite based on their above-ground assessment of the area.</p> <ul style="list-style-type: none"> - Stuart referenced slide 40, noting the boreholes in different locations are selected to optimise the existing fire trails. There will be a new trail from Mt Walker. - The Statement of Environmental Effects (SEE) has been prepared according to the requirements of the Lithgow City Council DA Guideline. - The survey approach has been to establish an envelope around the drill pads and the required access track, referred to as an investigation envelope. This will allow flexibility to move to the left or right of drilling points to avoid any sensitive locations. <p><i>Julie asked if this was for all nine boreholes?</i></p> <ul style="list-style-type: none"> - Ben confirmed it was for all nine boreholes, - The disturbance footprint for the drilling program within the investigation envelope will not exceed 0.97 ha. <p><i>Julie noted the riparian corridor along the Farmers Creek streamline.</i></p> <ul style="list-style-type: none"> - Stuart confirmed that most of the drilling will take place well in from the line of the creek. There will be one drill pad located in close proximity to Farmers Creek <p><i>Jim asked if the dam must be at a certain level all the time?</i></p> <ul style="list-style-type: none"> - Stuart confirmed a minimum water level must be maintained. - The location is ideal as there are two other bodies of water nearby that can help to keep Lake Lyell at a minimum level of around 80%. <p><i>Julie asked if any private land was involved?</i></p> <ul style="list-style-type: none"> - Stuart stated there are access arrangements with three private landowners. A portion of the Mt Walker Road crosses through the National Park, which is currently awaiting approval. EnergyAustralia has received approval from Council and Crown Lands and National Parks is the last remaining agency to provide access. 	

Item	Discussion Point	Actions
	<ul style="list-style-type: none"> - It is possible to enter the site elsewhere, but it will be much safer taking drilling equipment along Mt Walker Road. - Technical Environmental Surveys and Assessments have been completed for the SEE including Flora and Fauna and Aboriginal Cultural Heritage. - Ben referenced slide 44, noting the purple line is the indicated survey area. <p><i>Julie asked what is the distance of the purple and yellow surveyed area?</i></p> <ul style="list-style-type: none"> - Stuart noted 400-500m based on the scale of the image. - Field surveys were in December 2021 by a highly experienced ecologist. <p><i>Julie asked if analysis will be seasonal for the flora and fauna assessments?</i></p> <ul style="list-style-type: none"> - Ben said for the bigger EIS it will be seasonal, but for this assessment it was just in December 2021. - No targeted surveys were undertaken, however vegetation mapping and floristic plot surveys provided ample opportunity to detect conspicuous threatened plant species. - No field surveys were performed for aquatic ecology as there is no proposed work within the waterway. - Two plant community types were identified, including the Snow Gum and Red Stringybark. - No threatened species were recorded in the investigation envelope during inspections conducted to date. However, five threatened flora species and 36 threatened fauna species have been assessed as having the potential to occur in the area. <p><i>Julie noted most ground orchids will be southern and should not be removed as ground Orchids are found on all aspects throughout the year.</i></p> <p><i>The Chair asked, pending approval, when will work commence?</i></p> <ul style="list-style-type: none"> - Stuart noted this is subject to two things including funding and the Development Application. If the DA is approved, the drilling will likely take place about Spring 2022. <p><i>Julie asked if Aunty Helen was involved in the Aboriginal Heritage?</i></p> <ul style="list-style-type: none"> - Ben said not yet, but her expertise will be needed in the future. - Noting the Aboriginal Heritage assessments, the proposed borehole locations lacked evidence of any form of stone outcrops or overhangs in which cultural materials may be present. - In summary the proposed drilling program is considered to provide a low residual risk to the local environment and the community. <p><i>Jim asked where all the stone will go once the drilling starts?</i></p> <ul style="list-style-type: none"> - Stuart said if the rock can be used in the construction of the dam wall, that is the preference, noting it costs a lot of money to truck it out, so the more used on site, the better. Crushing the stone is an option to use in making concrete. Drilling cores will likely be kept at Mt piper for future reference. <p><i>The Chair asked what were the major issues raised at the community townhall and what do you feel is the level of community understanding of the project?</i></p> <ul style="list-style-type: none"> - Stuart said the two main concerns were visual impacts of the upper dam and the effect of regular water pumping and discharge on the recreational use of Lake Lyell. Many people use the Lake for fishing and water sports and requested confirmation that it will still be opened to the public, noting concerns if the water level drops. - Stuart clarified that pumped hydro doesn't consume water itself but merely shifts water between two reservoirs on different levels. <p><i>Julie asked if this process was slow?</i></p> <ul style="list-style-type: none"> - Stuart confirmed it takes 12 hours to pump and 8 hours to empty. It will only be noticeable to overnight campers. 	
	<p>What next</p>	

Item	Discussion Point	Actions
	<p>Mick gave an update on upcoming work.</p> <ul style="list-style-type: none"> - EnergyAustralia will continue to work with Government with funding. - An application will be submitted for development consent and associated SEE to LCC. - Contracts will be signed with design and engineering partner (Acciona and McConnell Dowell). - Environmental assessments will take place to support the planning approval process. - EnergyAustralia will continue to engage the broader Lithgow community including public information sessions, library sessions and engagement with community groups. <p><i>The Chair noted if any community groups require a presentation, they should reach out to Energy Australia.</i></p> <ul style="list-style-type: none"> - Mick added any community session will be advertised <p><i>Jim said a letterbox drop is the best way to spread the word.</i></p>	
12.	<p>Next steps</p> <ul style="list-style-type: none"> - The Chair proposed the next meeting to be held in late June and the following meeting in December. - The Chair provided the CCC report, noting it is a general summary of the committee. The report will be handed to the Department towards the end of the week and be included in the meeting minutes. <p><i>Julie mentioned colleagues on other CCC's were asked to review their guidelines and noted people in the community may want to contribute.</i></p> <ul style="list-style-type: none"> - The Chair will clarify this process. <p><i>Jim asked if there would be any conflict of interest if he is on the Centennial CCC.</i></p> <ul style="list-style-type: none"> - The Chair confirmed that would not be a problem, however, it should be noted. - The Chair will also ask members to fill out conflict of interest forms. <p><i>Julie asked whether EnergyAustralia is looking at any other energy recovery projects in the area?</i></p> <ul style="list-style-type: none"> - Steve confirmed EnergyAustralia was not looking at other energy recovery projects in the area. <p><i>Julie asked what the area and boundaries are for the special Energy from Waste precinct?</i></p> <ul style="list-style-type: none"> - Michelle noted there are plans for four regional precincts as locations for Energy from Waste generation. <p><i>Julie asked if this has been passed?</i></p> <ul style="list-style-type: none"> - The Chair noted he understood the precincts were just identified as potential regions with no specific locations decided upon. <p><i>Michelle asked about the CCC members' review of membership?</i></p> <ul style="list-style-type: none"> - The Chair will speak with every member of the CCC as part of the review, noting it would be good to have representation by a group associated with Lake Lyell. <p><i>Michelle asked whether Alex Preema could nominate an alternate member during his protracted illness?</i></p> <ul style="list-style-type: none"> - The Chair said Alex could nominate an alternate. The CCC cannot comprise more than seven community members. - The Chair would discuss this with Alex directly. - Next meeting is tentatively scheduled for Monday 20 June 2022. - The meeting closed at 7.03pm. 	<p>Brendan to clarify revision of CCC guidelines by community members.</p> <p>Brendan to email an updated conflict of interest form.</p> <p>Brendan to contact CCC Members regarding their continued membership preferences.</p>

EnergyAustralia Lithgow Region

Community Consultative Committee

28 March 2022

Steve Marshall – Acting Head of Mt Piper



EnergyAustralia
LIGHT THE WAY

Acknowledgement of Country

EnergyAustralia acknowledges the Wiradjuri people as the traditional custodians of the land on which we are meeting. We recognise and respect their connection to culture, land and unity.

Artwork done by Wurundjeri Traditional Owner, Mandy Nicholson

Agenda

1. Welcome and introductions
2. Review of Notes from Previous Meeting
3. Site Update from EnergyAustralia
4. Project Updates
5. Project in Focus – Lake Lyell Pumped Hydro
6. General Discussion
7. Meeting Close



Welcome and Introductions

Review of Notes from Previous Meeting

Actions from Previous Meeting

Willowstick Method – Further Information

The Willowstick Method uses a low voltage, low amperage, alternating electrical current to directly energize the groundwater by way of electrodes placed in the dam reservoir. Since groundwater is typically a better conductor of electrical current than the surrounding rocks or earthen materials, the electric current follows the water bearing features that help to complete the circuit between the two electrodes. This electric current generates a magnetic field. This magnetic field is then measured and recorded at the surface of the ground using patented instruments.

What classification is the Dam? 1, 2 or 3?

Lyell Dam is classified as High Consequence category and Thompsons Creek Dam is classified as Extreme Consequence category.

Dams are classified Very Low, Low, Significant, High or Extreme. To establish a dam classification a comprehensive assessment is undertaken by specialists whose findings are then independently reviewed. The assessment identifies all hazards and an estimation of risks from all failure modes, whether obvious or not. The outcome informs our Dam Safety Management System.

Actions from previous meeting

EnergyAustralia to provide further information on survey markers

Dams are monitored by a precise survey system which has been established with a high degree of accuracy. A network of survey pins or bolts are placed on dams and set in concrete at time of dam construction. Surveys of these are made by using high precision instruments to take observations and compare those observations back to one or more concrete survey monuments. Our dams use a network of several concrete survey monuments which are also surveyed for accuracy by taking precision survey triangulation observations between each. Observations are then recorded on a database and over time dam movements are revealed and monitored. No movement of concern has been detected at either of our dams.

What depth does the Willowstick measure to?

Both dams were measured into the dam foundation, which was at least 25m below the base of the dam.

What is the thickness of the membrane lining at Lamberts North?

The geomembrane will be a nominal 2.0mm thick Linear Low-Density Polyethylene (LLDPE) material

Actions from previous meeting

Provide a description of Community Leave scheme offered by EnergyAustralia (in relation to staff assisting in installation of air conditioning at the native plant nursery)

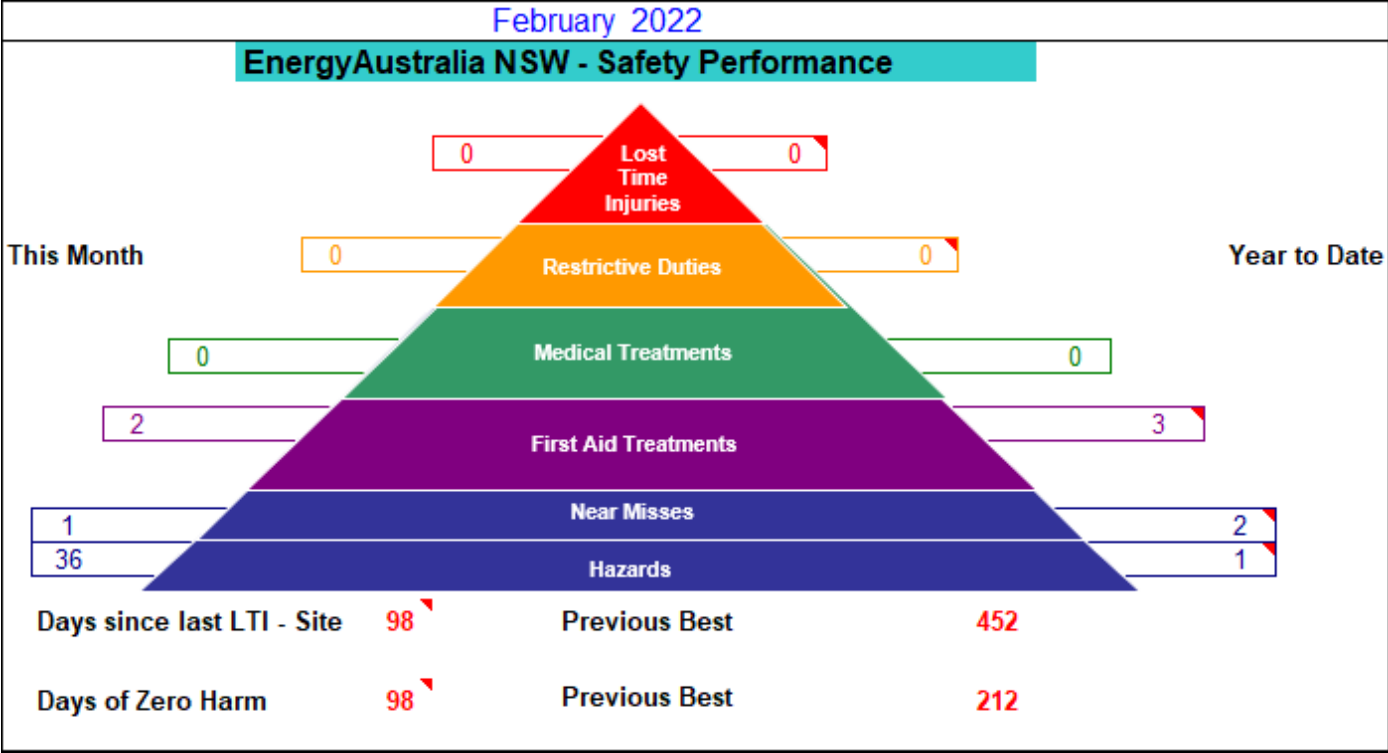
Community Service Leave – up to 10 days for eligible community service activities such as defence force, emergency response or jury service

Cultural and Ceremonial Leave – up to 3 days to participate in cultural obligations such as NAIDOC activities

Volunteer Work Leave – up to 2 days to complete volunteer programme that is supported by EnergyAustralia such as Food Bank

Site Safety

Site Safety – 2022

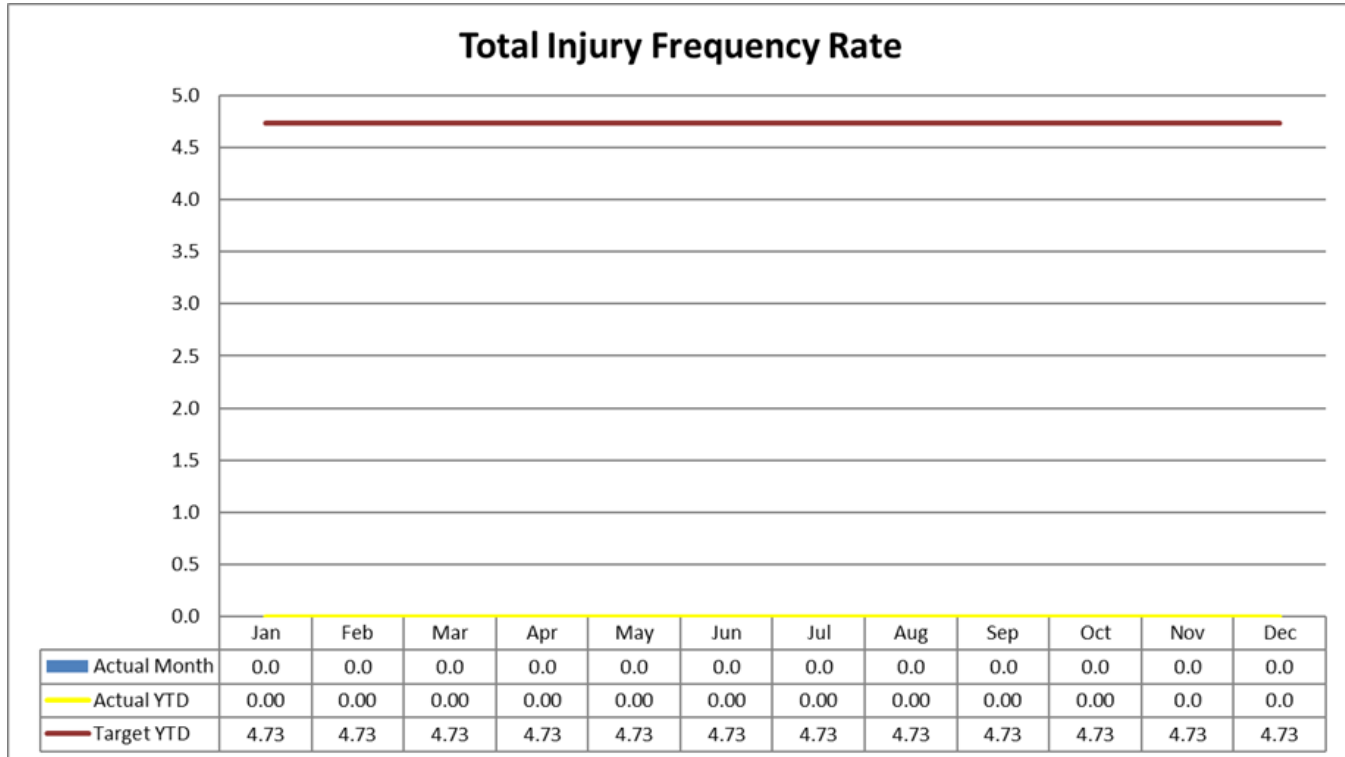


Site Safety

YTD – TIFR (As of 16th March)

Actual = 0.00

Target = 4.73



Water Management

Update on Water Management

- Oberon Dam level is at 100%
- Total Active Storage is at 98.3% with:
 - Lake Lyell at 100%
 - Lake Wallace at 106.5%
 - Thompsons Creek Dam at 97.2%
- Amber algae alert for Lake Lyell
- Controlled release from TCR is ongoing for level management



Pine Dale Mine and Enhance Place

Pine Dale Mine and Enhance Place

- No non compliances at the Pine Dale Mine
- No community complaints recorded for Enhance Place nor Pine Dale Mine
- Monthly reports as required under the Pine Dale EPL have been uploaded onto the EnergyAustralia website
- Annual site rehabilitation surveys were completed in November 2021
- Continues in care and maintenance
- Future mining activities continue to be evaluated
- EA intention is to submit an application to relinquish Mining Leases associated with the former Enhance Place Mine in Q2 2022.
- The Pine Dale Mine Rehabilitation Management Plan is being revised and updated in accordance with the requirements under the Mining Act and Regulations
- Higher rainfall has been beneficial to support growth on the visual bund over the period
- Photos show rehabilitated area under drought conditions in 2019 and following rainfall in 2021, strong resilience of these areas to regenerate and stabilise



fransect 2 looking southeast 2019

Community Update

Community

- Round 1 of the Community Grants closing Thursday 31 March.
- Portland Art Show – staff attended and voted on which paintings to buy as part of our sponsorship of the event. This year we were able to purchase 5 paintings.



Community

Upcoming Events:

- Dignity Drive – initiative to end period poverty.
 - Dignity drives are held every March and August. Sanitary and period products are collected and donated to Dignity Drive’s registered charities across the country.
 - Mt Piper is supporting this initiative with a collection box in the foyer for staff to drop off products.
- Lithgow Show
- Lithglow

People

- 3 New Apprentices have started with us – 1 Electrical trade and 2 Mechanical trade. They also take part in the Skill Centre program provided by TAFE.
- We have appointed an Ash and Dust Engineer, External Plant Engineer and a Planner & Scheduler
- We currently also have an Electrical Engineering vacation student doing his placement with us.

Project Updates



Lamberts North Ash Placement Project

Lamberts North Ash Placement Project

October 2021 to February 2022

- No complaints received
- No material environmental incidents reported
- Operations Environmental Management Plan pending approval by DPE
- Leachate Management System Water Balance Assessment for Modification 1 (Mod 1) pending approval from DPE
- High rainfall has created an emergency situation that required further action by EA
- EA has extended its operating hours of the LNAR as provided for under emergency provisions the Project Approval.
- No uncontrolled releases of water have occurred due to the current emergency situation

	Brine Conditioned Ash (ton)	Water Conditioned Ash (ton)
Mt Piper Ash Repository	117,084	0
Lamberts North Ash Repository	0	33,247



Lamberts North Ash Placement Project

Leachate Barrier Management System

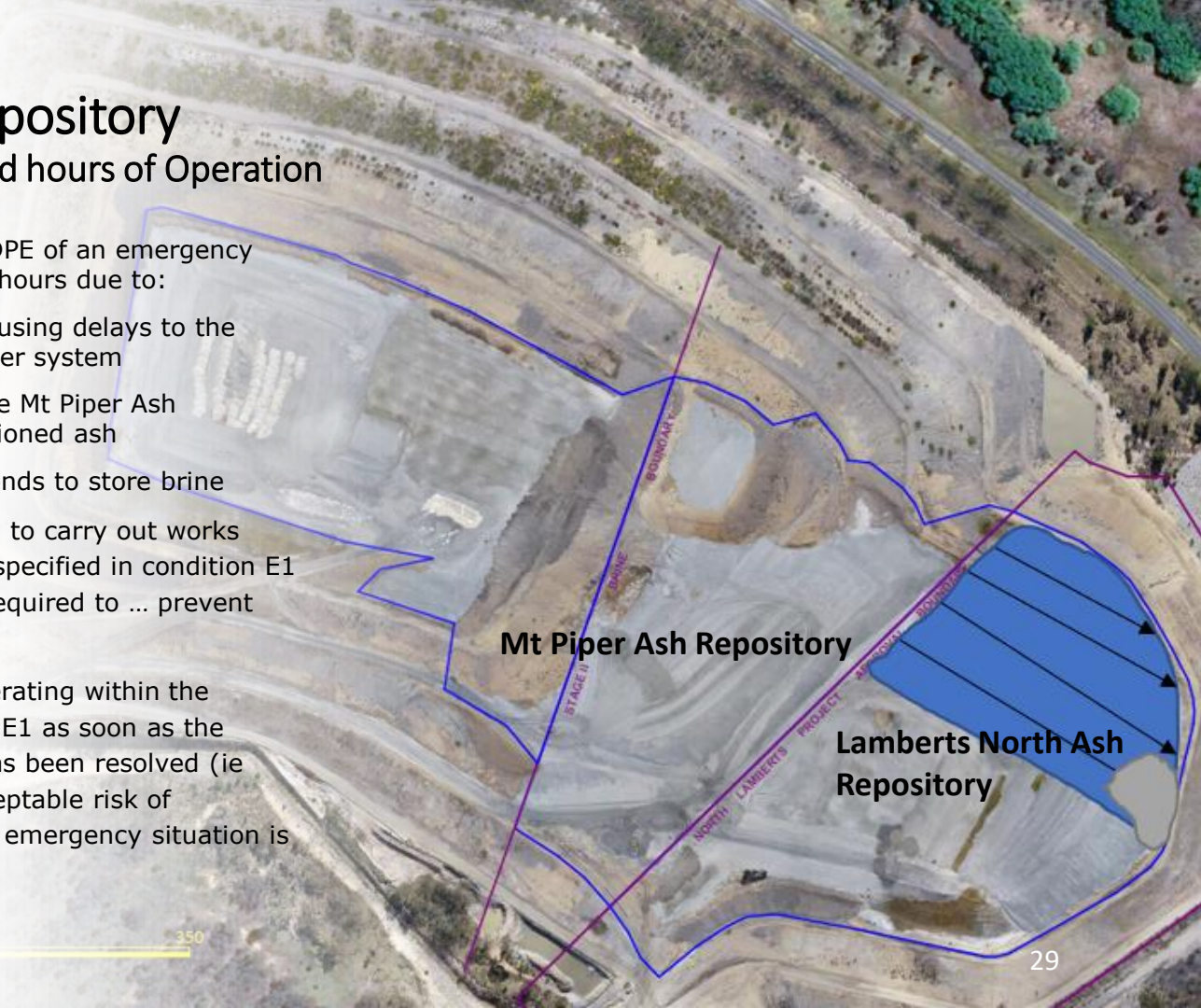
Lamberts North Ash Repository

Emergency situation and extended hours of Operation

- 4 March 2022 EA notified the EPA and DPE of an emergency situation and need to extend operating hours due to:
 - heavy rainfall being received causing delays to the installation of the leachate barrier system
 - limited capacity remaining in the Mt Piper Ash Repository to store brine conditioned ash
 - limited remaining capacity in ponds to store brine

Condition E2(a) permits EnergyAustralia to carry out works outside the standard operational hours specified in condition E1 in an emergency situation "where it is required to ... prevent environmental harm"

EnergyAustralia intends to return to operating within the standard operational hours in Condition E1 as soon as the emergency situation described above has been resolved (ie when brine levels do not pose an unacceptable risk of environmental harm). At this stage, the emergency situation is expected to be resolved by 1 May 2022





Lamberts North Ash Placement Project
impact from heavy rainfall on LNAR

Particulate Matter Continuous Emissions Monitoring System

PM-CEMS Background

- Mt Piper Environment Protection Licence was varied in July 2020 for the purpose of:
 - Developing Air Pollution Monitoring Plan;
 - CEMS QA/QC procedures;
 - Undertaking a feasibility study for installing a PM CEMS
- Condition E5 required preparing a feasibility study for installing a continuous particle matter monitoring system (PM-CEMS)
- The feasibility report was submitted to EPA in March 2021 which found that it wasn't feasible to install a PM CEMS for compliance monitoring against USA standards with the current configuration of Mt Piper Power Station.
- The PM-CEMS QAL260 monitors were installed on all four ducts in December 2021
- Correlation activities are required to commission the PM-CEMS

PM-CEMS Calibration

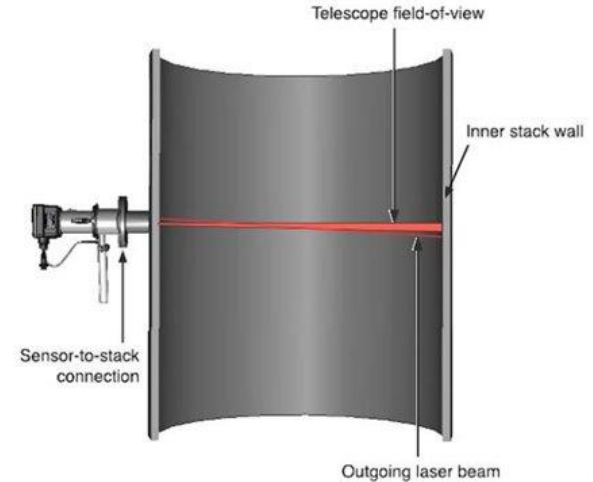
The correlation testing for Unit 1 is scheduled to commence on Tuesday 29 March and is planned to take two weeks.

QAL260 Monitoring Units

- The monitors shoot a laser beam of light into the duct, and it bounces back to the sensor. The amount of light returned to the sensor indicates the concentration of particles in the duct.
- The monitors are connected to the Digital Control Screen that can provide Shift Leaders real time information on the particle concentration and performance of the fabric filter baghouse plant.

Correlation Requirements – US EPA Performance Specification 11 (PS-11)

- PS-11 requires the PM-CEMS measurements to be correlated against stack testing concentrations up to the EPL13007 licence limit of 50 mg/m³. 15 stack tests per duct are required to compare the PM CEMS response with;
 - 5 stack tests at low dust concentration (0 – 50% of licence limit);
 - 5 stack tests at medium dust concentration (25% - 75% of licence limit);
 - 5 stack tests at high dust concentration (50% - 100% of licence limit).
- There is a total of 30 tests required for each power station Unit.



PM-CEMS Licence Variation

- EA submitted a licence variation to the EPA on Monday 21 March 2022. The variation considered requirements for the PM-CEMS correlation testing. This included the requirement to achieve a range of particle concentrations up to the licence limit
- Specifically, the variation seeks to include a condition that *'The air concentration limit for solid particles contained in condition L3.2 may be temporarily exceeded during commissioning or calibration of the Particulate CEMS in accordance with condition E5.2 where manipulation of the baghouse is required'*
- Commitments in the licence variation application outlines EA will:
 - Install and commission PM-CEMS on both Units 1 and 2
 - Undertake commissioning in accordance with the 'PM-CEMS Correlation Testing Risk Management Plan'
 - Provide a report on the outcome of the testing work to the EPA by 31 August 2022
 - Update CEMS Quality Assurance and Control Procedures

PM-CEMS Testing Control Measures

EA has developed a Risk management Plan and Trigger Action Response Plan (TARP) to manage risks associated with elevated emissions during the testing

The PM-CEMS Correlation Testing Risk Mitigation Plan, specifically includes the following control measures

- Stack testing will be completed on one duct at a time
- Selection of cells in the outer edge of the baghouse that will influence the testing duct only
- Testing at low particle concentration ranges
- Incremental increases of the inlet damper opening in each test cell
- Estimation of PM concentration after each test before moving onto another test
- Ensuring the baghouse is in optimal condition prior to the start of testing
- Baghouse inspections to be completed during testing
- Continually monitoring the PM-CEMS output via the pi database
- Modelling and calculating the approximate number of bags to be removed in each cell

Project in Focus:

**Lake Lyell Pumped Hydro
Energy Storage**

Background

- EnergyAustralia has been investigating the potential for a Pumped Hydro Energy Storage facility at our Lake Lyell Dam
- Pre-feasibility studies conducted by Arup have found that a 335MW, 8 hour PHES is technically feasible
- EnergyAustralia is in the process of seeking funding from the NSW Government via the Pumped Hydro Recoverable Grant Program
- Since we last presented to council, EnergyAustralia has:
 - Conduct further site visits to better understand surface geology
 - Worked with engineers at Arup to refine the geotechnical investigation program and design trails needed to conduct the geotechnical investigations
 - Worked with environmental and heritage specialists at EMM to survey the land around the geotechnical investigations and assess any impacts
 - Prepared a Statement of Environmental Effects which will be submitted to council shortly
 - Conducted a town hall briefing session and continued to meet with community members and groups



MARRANGAROO NATIONAL PARK

MT WALKER TRIG POINT

EXISTING 330KV
TRANSMISSION LINES

LITHGOW CITY

ENERGYAUSTRALIA
PROPERTY BOUNDARY

UPPER RESERVOIR

ACCESS ROAD

PENSTOCK

FARMERS CREEK

POWERHOUSE CAVERN

COXS RIVER

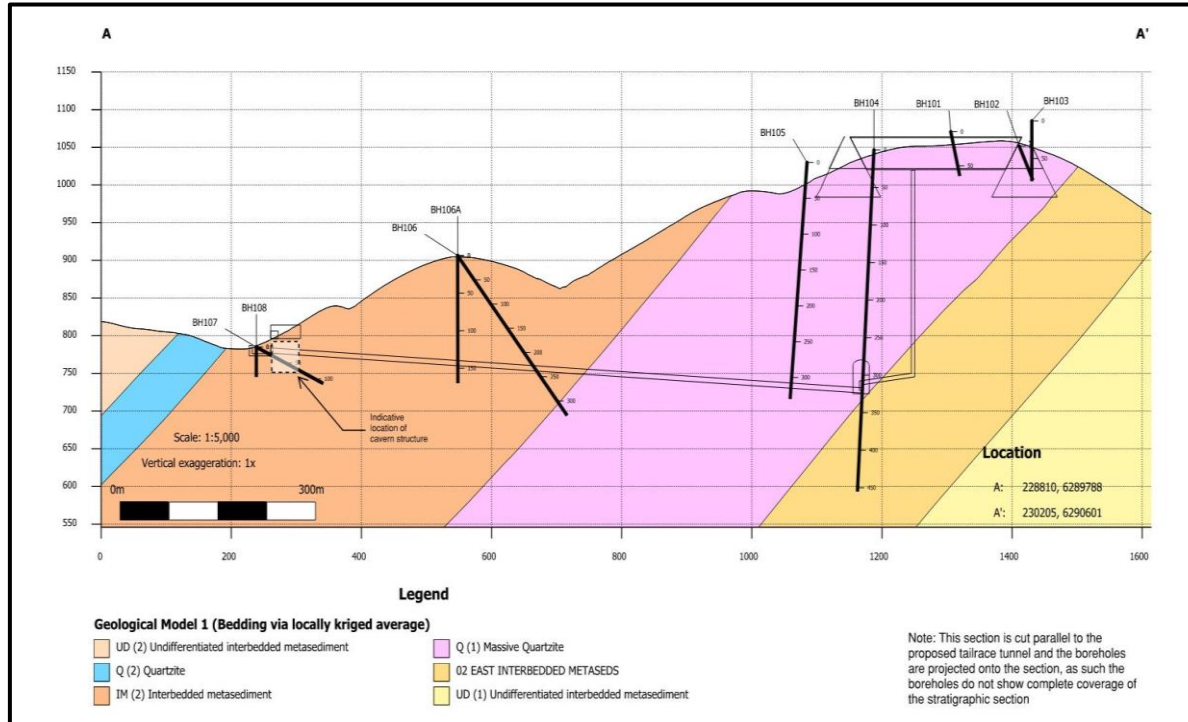
INTAKE

LAKE LYELL

HV SWITCHYARD

[Lake Lyell PHEs Video](#)

The geotechnical investigation program



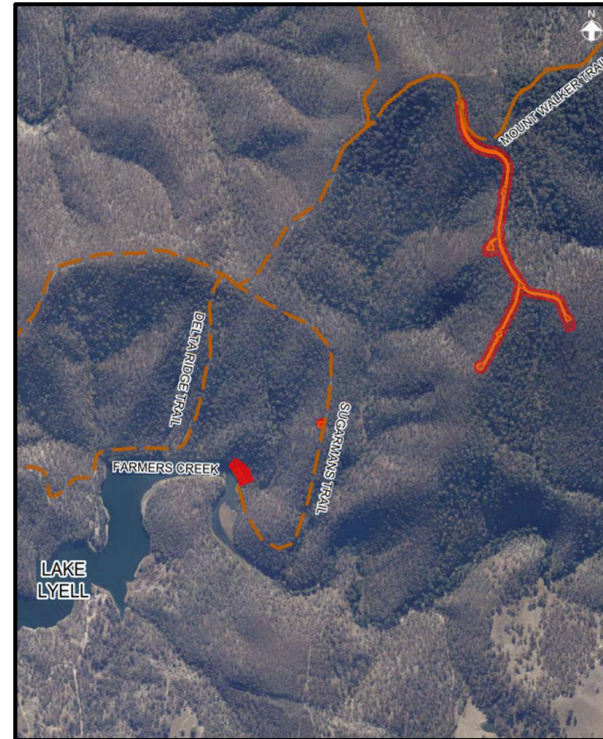
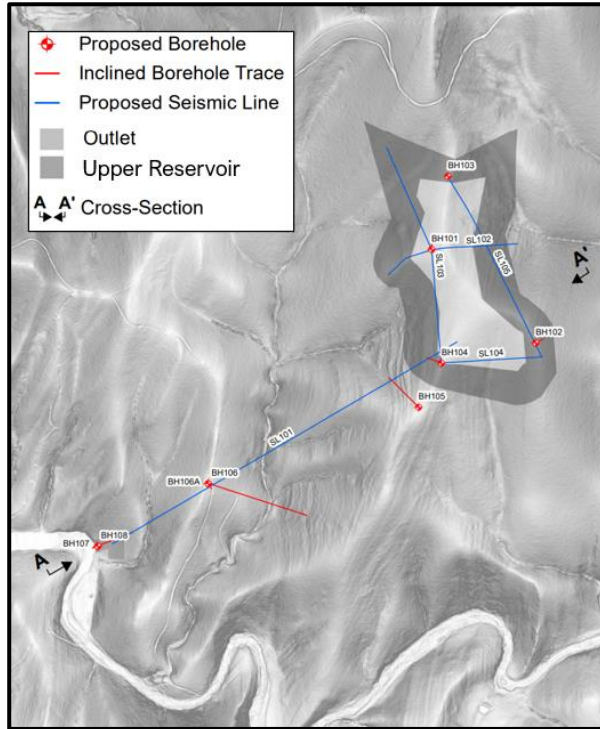
Why?

Geotechnical conditions are fundamental to determining upper reservoir feasibility

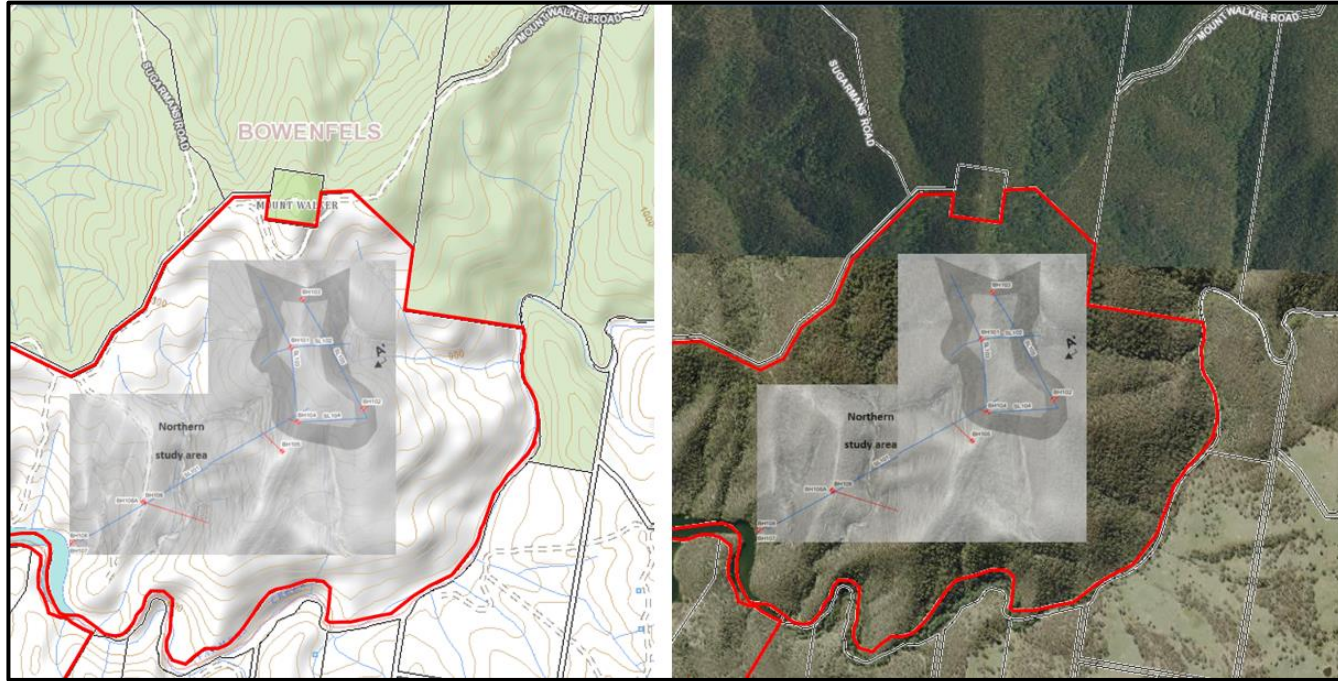
Key activities:

- Bore holes (x 9)
- HQ Coring
- Point load testing
- Downhole imaging
- Packer testing
- Thermal and Gamma logging
- Stress tests
- Ground water sampling
- Seismic survey

The geotechnical investigation program



The geotechnical investigation program

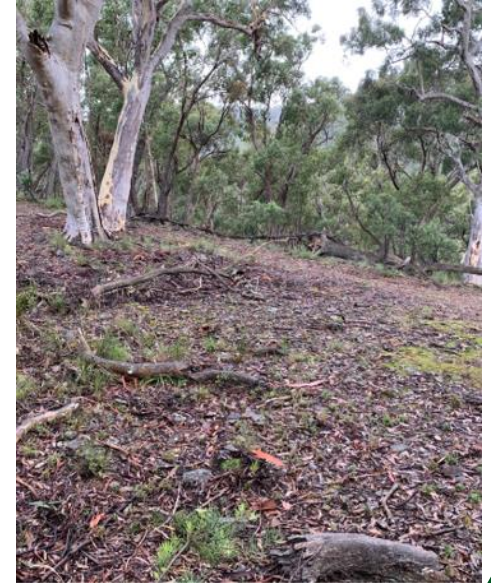


Drilling Program - Statement of Environmental Effects (SEE)

- The SEE has been prepared according to the requirements of the Lithgow City Council DA Guideline. The SEE provides a full analysis of all environmental, physical and social implications of the proposed development
- The survey approach has been to establish an envelope around the drill pads and the required access track, referred to as an investigation envelope'. The investigation envelope is the subject of the SEE
- The environmental constraints identified and assessed within the investigation envelope will inform the location of the final disturbance footprint. The disturbance footprint for each drill pad and the site access track will be located to avoid any identified environmentally sensitive areas or features
- The disturbance footprint for the drilling program within the investigation envelope will not exceed 0.97 ha
- The SEE is scheduled to be submitted to Lithgow City Council for assessment by **28 March 2022**

Drilling Program - Statement of Environmental Effects (SEE)

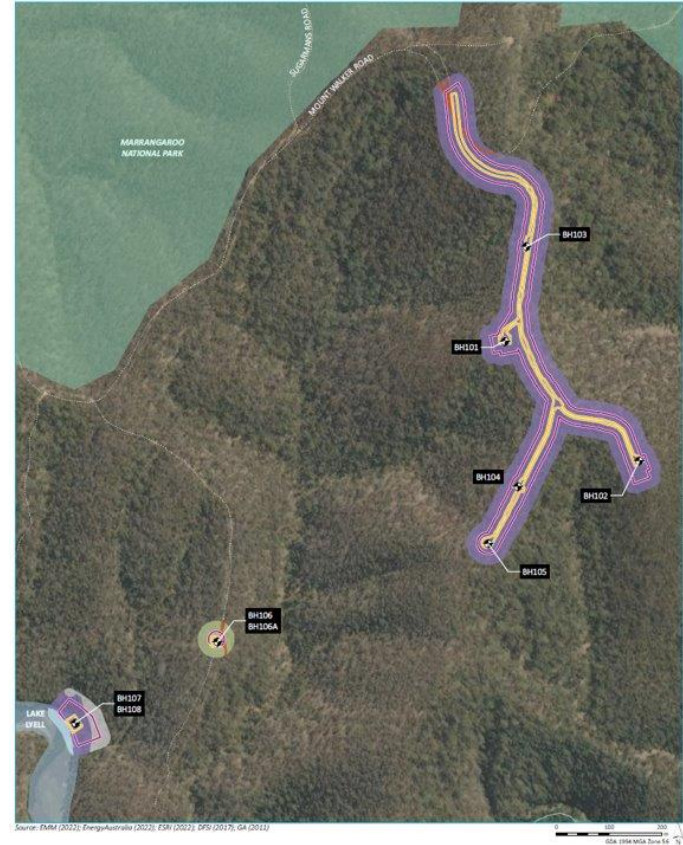
- Technical Environmental Surveys and Assessments completed for the SEE include:
 - Flora and Fauna; and
 - Aboriginal Cultural Heritage
- Other Environmental Aspects considered in the SEE include:
 - Surface water, flooding and drainage;
 - Groundwater;
 - Soils;
 - Air quality;
 - Visual;
 - Public Safety & Access;
 - Social; and
 - Waste Management



Drilling Program - Flora and Fauna

Methodology

- Database analysis to identify biodiversity values of the investigation area, including search of relevant databases, vegetation mapping and aerial photography.
- Field surveys were in December 2021 by a highly experienced ecologist and included:
 - vegetation mapping and condition assessment; and
 - habitat assessments for threatened species.
- No targeted surveys were undertaken, however vegetation mapping and floristic plot surveys provided ample opportunity to detect conspicuous threatened plant species.
- The findings of the desktop analysis and field surveys were used to assess the likelihood of threatened flora, fauna and ecological communities to occur within the investigation envelope. No field surveys were performed for aquatic ecology as no work within the waterway is proposed.



Drilling Program - Flora and Fauna

Key Findings

- Two plant community types (PCTs) identified:
 - Snow Gum - Mountain Gum tussock grass-herb forest of the South Eastern Highlands Bioregion (PCT 1197); and
 - Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest of the tablelands; South Eastern Highlands Bioregion (PCT 1093).
- The two community types comprise about 0.93 ha of the vegetation within the investigation envelope. The remaining area (0.02 ha) comprises cleared or disturbed non-native vegetation.
- No threatened species (flora or fauna) were recorded in the investigation envelope during inspections conducted to date. However, five threatened flora species and 36 threatened fauna species have been assessed as likely to occur within the investigation envelope based on available potential habitat and species distribution.




Drilling Program - Aboriginal Heritage

Key Findings

- The Aboriginal Heritage Information Management System (AHIMS) provides a database of previously recorded Aboriginal objects, sites and places. An AHIMS search of study area was undertaken on 6 December 2021 which identified 81 sites within an area of approximately 380 km² centred on the study area. Of the 81 sites identified within the search, none are within the investigation envelope. A site inspection was undertaken in December 2021.
- Proposed borehole locations lacked evidence of any form of stone outcrops or overhangs in which cultural materials may be present, nor do they exhibit environmental characteristics where stone artefacts may be expected.




Drilling Program - SEE Key Findings

- The proposed drilling program is considered to provide a low residual risk to the local environment and the community.
 - EA will continue to consult with Lithgow City Council and relevant stakeholders in ensuring the proposed development can proceed subject to the conditions of consent.
- 

What next

Our next focus will be:

1. Continue through government funding process
 2. Submitting application for development consent and associated SEE to LCC
 3. Sign contracts with design and engineering partner (Acciona and McConnell Dowell)
 4. Conduct geotechnical investigations (subject to approvals)
 5. Kick off engineering design to further refine the concept and layout
 6. Environmental assessments which support the planning approval process
 7. Continue to engage the broader Lithgow community
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Thank you



EnergyAustralia
LIGHT THE WAY