Meeting note

EnergyAustralia Lithgow CCC

Date	1 June 2020	**Time**	5:00pm – 7:00pm
Chair	Brendan Blakeley, Elton Consulting	**Recorder**	Alexandra Krautil, Elton Consulting
Attendees	Jamie Giokaris, CCC member Julie Favell, CCC member Alex Preema, CCC member James (Jim) Whitty, CCC member Aunty Helen Riley, CCC member Robert Cluff, CCC member Clr Joe Smith, Lithgow Council CCC Representative Lauren Stevens, Lithgow Council Andrew Telfer, McMahon Services Michael Atkinson, McMahon Services Gavin Powell, ERM Consulting Tamie Weaver, ERM Consulting Michelle Blackley, EnergyAustralia Ben Eastwood, EnergyAustralia Greg McIntyre, EnergyAustralia Mick Hanly, EnergyAustralia	**Apologies**	Jill Cusack, CCC member

Item	Discussion Point
1.	**Welcome and introductions** » The meeting commenced at 5:10pm. » Brendan welcomed all participants, including an acknowledgement of country and noting EnergyAustralia has been celebrating National Reconciliation Week.
2.	**Review of notes from previous meeting** » Brendan called for comments on the previous notes. » There were no additional comments noted. The meeting notes were adopted. <u>Answers to questions/actions arising from March meeting:</u> *Q – Julie: Requested EnergyAustralia provide feedback to government bodies to consider the area's emergency plan for the next crisis.* » A: Michelle highlighted EnergyAustralia have liaised with the RFS and will continue to do so with the aim to improving response. This includes the items noted below and emergency texting neighbours. » Also working closely with the RFS on what they can do on site and surrounds, vs. EnergyAustralia's abilities and responsibilities in an emergency – working through how they relate and work together. » Brendan noted outside of this any further concerns are for individuals to take up with the RFS or their local political representatives.

Q – Group: update to be provided to CCC about any changes to approach and results of review of Bushfire Management Plan.

- A: Michelle highlighted after the bushfires a review of Mt Piper's Bushfire Management Plan was undertaken. The plan stood up quite well although some implementation was identified as requiring improvement:
- As mentioned, EnergyAustralia are looking to build a close relationship with the RFS and are working to get an area of respite available within the site for them – the Energy Expo has toilets, can offer coffee, tea with controlled space to rest, and will provide showers adjacent to this area. The tennis court area was also identified as an option for RFS parking.
- The team found the fire tanker fill point could be made safer and more efficient by creating a concrete pad around it. During these bushfires the area faced some mud issues.
- The team are working through reduction of fuel loads in the buffer zones around the station as noted.
- EnergyAustralia are investigating second access point to the site for staff – will take some clearing and crosses Centennial Lands so will need consultation.
- The review identified the potential for sheltering on site would be safe and secure if required – would need to consider management of smoke but expect flames would not bring risk.

Q – Julie: Requested update on the surrounding neighbour notification system and timeframes.

- A: Michelle noted EnergyAustralia have a stakeholder management system called Darzin, which contains contact information for a variety of stakeholders, including immediate neighbours. Within Darzin, there is an SMS capability that can be used to send a group text message to specific contact lists. A test message was sent out to the CCC members last week to demonstrate this functionality.
- Part of EnergyAustralia's responsibility under the Protection of Environment Act is to notify immediate neighbours if anything on site could be affecting the community or if they become aware of an issue emanating from site. The team have a list of anyone who has nominated they would like to receive a text.

Q – Aunty Helen and Julie: noted they did not receive the test text.

Q – Rob: asked whether measures have been taken in regards to the pine plantations and their risk of contributing to bushfires?

- A: Michelle highlighted an answer to this question was ready on a later slide – EnergyAustralia have contacted the Department of Forestry regarding the removal of trees to create a fire break. EnergyAustralia will advise neighbours and the CCC when this work is scheduled. In discussions with Forestry, spoke particularly about the trees near Maddox Lane, and this discussion is ongoing – as they are owned by Forestry, EnergyAustralia can only liaise and will be guided by Forestry as to when, how, the extent of pruning etc as the trees are their property.
- In response to the concerns raised with the pines offering habitat and food for the native Yellow-tailed black cockatoos, Michelle noted if the pine trees are cleared, only the minimum number of trees would be worked on, preserving as much habitat as possible.

Q – Group: How was the money provided to the Lithgow Lions Club by EnergyAustralia for bushfire recovery dispersed?

- Michelle explained the Lithgow Lions Club received $95,190 from local businesses and community donations. The Club's Bushfire Relief Committee were contacted by members of the local community and 20 individuals and families were eligible for $4,759.50 each to

support their bushfire recovery. All money has been deposited directly into the bank accounts of those eligible community members.

3. **Site update from EnergyAustralia**

» Ben and Greg provided a general site update, covering a range of topics.

Pinedale Mine update:

» Ben indicated Pinedale Mine remains in care and maintenance with desktop feasibility work continuing.

» The Biodiversity Conservation Division of the Department of Planning, Industry and Environment (DPIE) have been on site assessing the impact on known threatened species within the region.

> One species identified with a known population in the area is the Purple Copper Butterfly (*Paralucia spinifera*) – the team have been on site looking at populations determining the impact after the bushfires. This included photographing Black Thorn (*Bursaria spinosa subspecies lasiophylla*), which is required in a symbiotic relationship between the butterfly, plants and ants.

> Some of these trees survived the fires, although one was badly affected.

Site Safety:

» Greg highlighted there was one lost time incident since the last meeting, as someone walking on ground with uneven coal injured their back.

» Other figures have remained positive – hazards are being identified which is a positive as the identification allows the reduction of risk to people on the site.

> Refer to pg. 13 of the attached presentation for the detailed Safety Performance graphic.

» There has been a steady reduction in the Total Injury Frequency Rate.

> Refer to pg. 14 of the attached presentation for the graph indicating this rate – the blue line shows the 15-month rolling average indicating a clear downward trend.

» There have been no COVID-19 cases on site, and many protocols have been implemented to ensure the protection of staff and the community.

Update – Water Management:

» Ben noted EnergyAustralia is currently in a strong position regarding water capacity/availability.

» Oberon Dam level is at 24.75%.

» Total active storage is at 96.4% with:

> Lake Lyell at 98.9%.

> Lake Wallace at 105.3% and continues to spill.

> Thompsons Creek Dam at 92.8%.

» The previous Red Blue-Green algae alert present at Lake Lyell has been lifted and it has been re-opened for recreational activities.

> The amber alert remains present at Lake Wallace.

» EnergyAustralia will be completing an end of channel maintenance flow mock flood event, which is required every 12 months depending on the flows in Coxs River. This will occur over a four day period commencing on 15 June, with a total 1000 megalitres of water released.

> There will be notifications in the paper and via radio to inform the community.

Q – Jim: with the extent of water being released, are downstream properties notified of the event?

» Greg responded individual properties are not notified but the public notice as mentioned above acts as their notification. To manage any safety risk the water is released incrementally – it is slowly increased over two days, then decreased slowly over the next two days, they do not just send a large wall of water.

Q – Julie: after technical difficulties joining the meeting, asked to clarify the purpose of the water release?

» Greg responded the release was designed to simulate a high flow event. This is required as part of river management when only a small amount of water has been received in Coxs River below Lake Lyell. Due to dry conditions up until January, Coxs River has not received the high flows needed – under EnergyAustralia's license it is required to make up an event to ensure the continued health of the river.

Market Update:

» Greg discussed the 12-month rolling average demand and Mt Piper in the NSW market graphs – refer to p. 18 of the attached presentation.
  > The market is a strange place at the moment due to COVID-19 with many businesses in hibernation – in rolling average demand graph can see peak demand (red line) has dropped slightly, and average demand (blue line) is starting to drop away.
  > EnergyAustralia are expecting many of those businesses may not recover from COVID-19, so expect the marketplace for 2021 will create a tough year.
  > The Mt Piper in the NSW Market graph indicates the peaks and troughs of demand – can see late last year the Station was conserving coal so the green bar lines were low, now this is completed the numbers have moved up slightly, within the limitations of COVID-19.

» Greg discussed the gas and energy future in the current climate, explaining members may have seen cheaper petrol prices at the moment, and gas prices have also reduced to very low levels – refer to graph on p. 19 of the attached presentation.
  > It is currently much cheaper to operate gas-fired generation, which is down as low as $3 when it is usually around $7 - $10.
  > As a result of these prices, EnergyAustralia expect shortages in 24 – 36 months as there will be a reduced investment in development and exploration. Pressure will therefore be increased on coal-fired electricity.

» Greg provided further analysis of the impact of COVID-19 on the markets. Refer to p. 20 of the attached presentation for graphs showing the impact on NSW and QLD.
  > During the pandemic, the general daily shape of electricity has remained the same – see the peaks and troughs caused with renewables. However, demand is greatly decreased – the red line indicates the reduction of demand across the states, with a 10% reduction for morning peaks and 5% for evening peaks.
  > VIC/SA/TAS seeing less clear reductions in demand. On gas side, early indications suggest higher winter demands in Victoria as increased household requirements will override the commercial decline.
  > Members may have heard of hardship provisions where people are able to freeze their electricity bills if they are in financial duress. This creates challenges for the energy retailer as they still need to pay the transmission and distribution fees, which make up 75 – 80% of an electricity bill.

» Greg discussed the 'renewable tsunami' showing the wave of renewables is continuing. Refer to p. 21 of the attached presentation for the graph indicating where the renewable market is in 2020, projects that are under construction and in service across Australia.

- This shows a large potential investment over the next three years, although some investment may fall off if prices of electricity do not re-group.
- Noted graph does not include behind the meter solar.

Q – Julie: asked to confirm what generation is not included in the graph?

» Greg responded behind the meter solar is not included, meaning solar panels and batteries that are off the grid, stored personally in households. This cannot be measured, but its existence is reflected in reduced demand on sunny days.

Operations (Site) Update – Mt Piper Operations:

» Greg noted there are currently no coal constraints impacting operations, MP1 is operating at a steady load.
- The coal volumes have recovered with Springvale recommencing mining, as well as some Airly deliveries.
- The team are continuing planning for the MP1 outage in October.
- During March, EnergyAustralia invested $2.2 million in MP2 to rectify an anticipated latent defect – after these reliability works MP2 is operating well and is expected to see through winter, the MP1 outage and Summer.

» Greg talked through the availability graph – refer to p. 24 of the attached presentation.
- The green line shows where the station would expect to be, and the yellow indicates the current availability. The blue indicates availability with coal constraints removed.
- This shows Mt Piper was well down on availability but is now moving back up – the site still expects to dive back down in October during the MP1 outage and major turbine upgrade, as indicated.

4. **Project updates from EnergyAustralia – existing and planned**

Wallerawang Sale:

» Greg explained the process is still moving along with Bettergrow and the team is looking to complete execution of the sale within the coming months.
- The sale completion is subject to Conditions Precedent.
- The team is dealing extensively with Treasury for the Ash Dams Hand Back negotiations. These are progressing well, and on completion Treasury will re-acquire the KVAR and SSCAD.

Q – Julie: are Bettergrow still expected on site in June?

» Greg confirmed 30 June is still the target date to have the sale completed. The Conditions Precedent and Ash Dams Hand Back are the items that need to be completed before the contract is finalised and Bettergrow assume control.

» The Ash Dam Hand Back is tied to the hand over to Bettergrow – once the sale is completed the Ash Dam Hand Back can also be completed.

» Ben displayed the map of the Wallerawang Sale area, indicating the ownership areas – refer to p. 27 of the attached presentation.
- Lake Wallace, WPS and Buffer Land will be owned by Bettergrow as indicated in red, the ash dam area will be owned by Treasury as indicated in blue and the yellow subdivisions are where EnergyAustralia retain and neighbours.

Q – Julie: will the areas currently leased to Council around the lake remain so?

» Greg confirmed the lease of the whole area will be novated across to Bettergrow as it stands with no changes, meaning the lease to Council will remain as is.

Q – Jim: once the ash dam site is handed back to treasury, will it be their responsibility to look after management including environmentally, security etc?

» Michelle noted EnergyAustralia is advising treasury on pre-existing issues but once handed over the responsibility will be Treasury's.

» Greg added when referring to Treasury and the ash dams, EnergyAustralia is working with the government owned operation GPM, and they will be responsible for the site once handed over. GPM complete these activities on a regular basis and have been involved in the rehabilitation of a range of other infrastructure projects so they are well equipped to take over and are aware of all requirements.

  > Steve Saladine, the previous General Manager for EnergyAustralia in NSW, is now the General Manager of GPM, so knows the area well.

Q – Julie: will the community be advised of the process and progress with their management of the ash, any removal etc?

» Greg confirmed they will need to deal with stakeholders in the same way as EnergyAustralia would. They are bound by the same rules and will have their own Environment Protection License, giving the same requirements for negotiation and communication with the community and stakeholders.

Lamberts North Ash Placement Project:

» Ben explained since February 2020, approximately 2000 tonnes of ash has been placed on Lamberts North water conditioned ash area.

» There have been no complaints received or incidents recorded since the last meeting.

» The Revised Water Management Plan was submitted to regulatory authorities and approved by the Department of Planning, Industry and Environment in April 2020.

Rail Unloader Project:

» Greg offered a general recap of the project, noting all members have been briefed on the project multiple times. The project is wrapped up in the long term future of Mt Piper considering Springvale Mine is expected to close in 2024 and questions remain around Angus Place.

» EnergyAustralia has made solid progress over the first half of the year, and are preparing to release an invitation to tender to market with a number of potential suppliers.

» The team have been working through a range of site works and studies at Mt Piper and Piper's Flat, including the below. Results are expected within the coming weeks, and these outcomes will go into the final specification of the tender going to market.

  > Geotech investigation

  > Topographical survey

  > Heritage survey

  > Environmental survey.

» Based on the outcomes of the tender process, EnergyAustralia expects to make a final financial investment decision in Q4 2020. This will determine whether to proceed to the next stage of construction.

» Refer to p. 33 of the attached presentation for an overview of the project and layout of the rail loop – there has been some redesign so it is smaller than originally planned. The design shows the overland conveyer and infrastructure needed to operate rail in a safe and responsible manner.

Q – Aunty Helen: as the first assessments with the Aboriginal Lands Council were completed back in 2009, should this be updated before the tender is finalised as lots has changed?

- Michelle confirmed the site assessments currently being undertaken in partnership with the Aboriginal Lands Council are the update of these earlier assessments. Due to the large amount of time passed, these assessments are a repeat of what happened in 2009, to take into account any changes, ensuring all data is correct and up to date.

Q – Julie: asked to clarify that the Mingaan Wiradjuri Aboriginal Corporation had been included in assessments as the area is Wiradjuri land?

- Michelle confirmed the Mingaan Wiradjuri Aboriginal Corporation were included in these assessments.
- Aunty Helen agreed, noting the Aboriginal Lands Council reached out to Mingaan for site investigations, and they have been out on site.
- Mick reiterated it was ensured as part of local consultation that Mingaan were included.

Q – Julie: with an understanding that Springvale is expected to close in 2023, is the project still connecting with Centennial for coal supply via return train? Have the team confirmed the source supply will be able to come the long way around from Dubbo? Will construction start on the rail unloader by the end of the year?

- Greg confirmed EnergyAustralia is in constant discussions with Centennial in relation to the project and they remain aware of any progress – Mt Piper's preference remains to source coal locally as much as possible, however there needs to be a back up for if Angus Place does not go ahead.
- The project team have confirmed the source supply will be able to come the long way around from Dubbo.
- In relation to construction, the financial investment decision will be completed by the end of year, after this the team will need to tender to build, operate and maintain the plant and once they have a contractor, construction will commence.

<u>Water Treatment Project:</u>

- Greg noted the project is coming along well, with the R.O. Plant, OPUS and Brine Crystalliser plants now treating mine waters.
- The team are currently running 36Ml/day on a reliable basis, meaning they have reached the stage of commercial acceptance and the project element will soon be coming to a close.
- Now need to carry out the final full load test which requires the plant to run at 42Ml/day for a minimum of 24hrs.
- Final optimisation and trimming of the plant is ongoing.

<u>Energy Recovery Project Update:</u>

- Greg noted there have been no changes in the project, so this will be mostly recapping information. For background information on the project and EIS, refer to pp. 37 – 38 of the attached presentation.
- Over the last few months key items have included a forensic review of all data to ensure the project is viable and makes sense.
- The project will go to a financial investment decision late this year or early 2021.
- Mick has been continuing community engagement where possible with COVID-19 restrictions.
    - Informal briefings held with Industry Bodies, Council, community groups, organisations and individuals have continued remotely where possible. The team have met with various government agencies to discuss and clarify issues raised in their submissions and begun exploring a Voluntary Planning Agreement (VPA) with Lithgow City Council.
- EnergyAustralia is now preparing the Response to Submissions document from the EIS.

- Ben noted this document is expected to be submitted back to DPIE by 30 June, and it will be a public document so all interested parties can access the responses.
- Once DPIE receive this document, they will continue working through the assessment process, and advise on the project.

Q – Clr Smith: has there been an update on consideration of taking Lithgow's waste back to Sydney as part of the project?

- Greg responded it has been requested for inclusion in the project.

Q – Julie: has the project triggered assessment by the Independent Planning Commission (IPC) due to the number of submissions received? Is there a date on a decision?

- Ben responded the advice as to the planning pathway will be included in the assessment received from DPIE after the Response to Submissions document is submitted. This is a departmental decision so EnergyAustralia are not able to provide timings.

Q – Rob: pleased to hear the station continues to aim to source coal locally, there is concern amongst locals about outside coal coming into the area. The community understand the reasoning of commercial viability and certainty for Mt Piper, but would like to emphasise there remains a need to source coal locally.

- Greg confirmed the aim will remain to source local where possible, but as noted Mt Piper also needs to remain competitive and have a contingency plan if required.

<u>Community Engagement Program:</u>

- Michelle noted the first round of $30,000 grants that were available are now being dispersed amongst the six successful applications:
  - Communities & Kids – Good Start Speech Therapy
  - Lithgow Bears RLFC – Purchase of Defibriliator
  - Lithgow Men's Shed – Purchase of Tools & Equipment
  - LithGrow Community Garden – LINC – Purchase of greenhouse and irrigation system
  - Mingaan Wiradjuri Aboriginal Corporation – Bush Fire Recovery Rock Art Restoration – Maiyingu Marragu
  - Wallerawang Branch Central Acclimatisation Society – Building of Fishing Pontoon for Limited Ability Persons at Lake Wallace.
- There were nine applications received, including one for bushfire recovery, which was the additional criteria for this round.
- COVID-19 limited the amount of engagement that could be completed with the community through sponsorships, and many events or programs have now been deferred or cancelled. However, where possible events were still completed:
  - Portland Art Show – purchase of artwork as pictured on p. 42 of the attached presentation
  - Daffodils @ Rydal – postponed
  - Memorial Garden for Graeme Edwards, Yallourn staff member who died in workplace accident – EnergyAustralia staff collected money and Mt Piper contributed from the community fund to implement a plaque and tree in commemoration
  - Mt Piper Golf Day – unsure whether this will go ahead at this stage
  - Anzac Day Wreath – laid wreath at the Anzac memorial although there was no ceremony held on the day.
- The team is waiting to see what happens with COVID-19 for the remainder of events and sponsorships, but there are funds available for later in the year so if restrictions ease contributions may be able to be made quickly to get events back on track.

» Mt Piper will also still offer the second round of Community Grants in the second half of 2020.

Q – Rob: thanked the team on behalf of the community for these contributions – prior to this program such opportunities weren't available, and the frequency of grants and donations is helping a wide variety of charities, clubs and groups.

Q – Clr Smith: reiterated Rob's thanks from the community. Asked whether the Mt Piper Golf Day alternates between the Lithgow and Portland courses, as Portland is experiencing a challenging time at the moment and could use a golf day?

» Michelle responded EnergyAustralia would note the comment and look into holding a golf day at Portland when the COVID-19 restrictions ease.

» **ACTION:** EnergyAustralia to consider holding golf day at Portland Golf Course and alternating between them and Lithgow in the future.

» Michelle noted as COVID-19 restrictions grew, the team were conscious some community members had trouble connecting due to a lack of technology, particularly in retirement villages.

> EnergyAustralia asked around the local retirement villages and determined only Tabulum Cottages Retirement Village did not have something set up to manage this isolation, so as part of the Community Engagement Program donated two iPads to assist residents with staying connected with family during restrictions.

> The team also donated a defibrillator to Friends of St John.

» The Workplace Giving program continues across all EnergyAustralia sites, and so far $500,000 has been donated to charity partners across NSW, VIC and SA. Refer to p. 44 of the attached presentation for the full list of partners.

> Mt Piper's local charity partner in the program is the Lithgow branch of CanAssist, and $29,161.04 has been donated since the program's launch.

> Mick has been working closely with the CanAssist team where possible for fundraising, however with COVID-19 activities have been cancelled so the EnergyAustralia donations are greatly necessary.

> CanAssist have been working to operate remotely during this time to continue to provide vital financial assistance to those going through cancer treatment.

» Lithgow City Rangers Soccer Club (LRSC) is currently celebrating its 50th Anniversary year. The club was affected by the closure of Wallerawang.

> EnergyAustralia have funded LRSC's independency so they are able to operate in their own right without the Power Station supplying water and sewerage services, to ensure they can continue operating sustainably into the future. Works included:

> new connection to town water supply

> construction of new Environmentally Friendly septic system

> assistance with Development Approvals and environmental assessments to allow sub-division of land from Wallerawang

> new Septic Tank

> new Evaporation Mound

> turf covering of evaporation mound

> associated Plumbing and electrical work.

» EnergyAustralia continue to work through building local employment opportunities – four first year apprentices have been recruited for 2020, and an engineering trainee.

- COVID-19 has added challenges to adhere to training on site, but Mt Piper is working closely with TAFE to support their apprentices and trainees. There is particular difficulties for first-years as they usually have more TAFE training which cannot be held.

Q – Jim: can online training be completed by first-years to keep their progress going?

- Michelle confirmed TAFE is trying to build their online classes and training capabilities, and EnergyAustralia is trying to help where possible.
- In the period February 2020 to June 2020, two new starters were welcomed to Mt Piper in Assets team and the Purchasing team.
  - The site continues to host two vacation students to further their studies with practical industry exposure.
  - Mt Piper have also added one People Team max term role as a Parental leave assignment to give exposure to site issues in her HR career.

5. **Projects in focus:**

COVID-19 Response

- Michelle highlighted COVID-19 has forced a change for every community member and business in terms of life and operations. Members would have seen the changes implemented when coming on site for this meeting – they have centred around ensuring people are separated on site, and distinguishing workers from externals.
- EnergyAustralia has been proactive in its response to the risks of COVID-19 and has taken many actions, including:
  - international and domestic business travel was restricted in late February, including restrictions on overseas visitors attending EA workplaces.
  - isolation requirements for people returning from personal travel to high-risk countries and for those who have been in contact with confirmed or suspected cases
  - anyone with cold or flu symptoms requested not to attend work
  - additional cleaning of workplaces and supplies of hand sanitiser and additional cleaning products
  - transition to work from home commenced 16 March
  - meetings to be held via audio and video conferencing rather than face-to-face
  - COVID-19 declarations completed by all visitors and staff working from home who attend site
  - Pre-Start Wellness questionnaires are completed by staff and contractors daily
  - social distancing maintained where possible
  - risk based protocols developed and implemented for those activities which must be carried out on site, primarily PCR and maintenance
  - protocols developed for other activities, e.g. if employee becomes sick at work. All protocols are regularly being reviewed and modified as required
  - split shifts implemented for maintenance staff
  - peggy system introduced for canteen orders
  - single serve, pre-wrapped tea, coffee and sugar implemented.
  - signs installed at entry turnstiles to provide information about Mt Piper's COVID-19 response
  - extra equipment installed at the Gatehouse to segregate the staff from visitors.

Q – Jim: has Mt Piper looked into getting units of UV lights for cleaning?

- Michelle confirmed EnergyAustralia is investigating this option, as particularly for electronic equipment it is not ideal to spray clean, so other options are being investigated.
- Refer to p. 51 of the attached presentation for images of the new systems and protocols.
- EnergyAustralia are now planning for recovery and slowly integrating staff back to site.
  - Mt Piper is taking a risk based and consultative approach as individual teams know more about how they work and use their allocated areas.
  - Prioritisation of Return to Working from Site is based on the below requirements:
    - work that can't be done off site
    - work that is less efficient when done from home
    - office layouts that provide good social distancing.
  - Success is reliant on behaviours, social distancing, hand hygiene and some additional controls put in place.
  - EnergyAustralia has accepted working lives will not be the same and more flexibility is anticipated into the future.

Q – Aunty Helen: interesting that hand hygiene has been around for everyone's whole life and should have been practiced, but now habits are changing to a greater uptake of hygiene.

- Michelle agreed noting a lot of the work is around changing habits developed over a lifetime such as the amount of hand washing, standing close to people when talking and in groups etc.
- Overall the shift to working from home has gone better than anticipated, IT has completed a huge body of work to ensure systems are on track and people are able to work as comfortably and efficiently as possible.
  - Greg noted as an example, there are 9, 800 people working for EnergyAustralia in call centres in VIC – the business has moved 6000 of them to work from home which is a big achievement. They have been dispersed comfortably and that has allowed the business to remain capable of responding to customer needs.
- Greg provided an overview of the business impact of COVID-19. As mentioned earlier, market demand and prices are very depressed, and many customers and businesses are freezing payments on electricity due to financial duress, placing pressure on the EnergyAustralia business.
  - The evening peak price is usually around the 5-minute spot mark of $300/megawatt, currently $46.94. The cost of production alone is $50-55 – this makes for tough going but EnergyAustralia is aiming to look after retail and business customers through hibernation of bills and zero cost for disconnect or reconnect.
- To respond, EnergyAustralia has had to increase financial control on expenditure and projects, limiting discretionary spending but working to continue providing operational excellence.
  - EnergyAustralia have also asked all staff to assist in reducing liabilities by taking at least 20 days of leave in 2020.

Bore D10 – Ash Repository Groundwater Management

- Ben provided an overview of the Bore D10 project – this relates to the Lamberts Ash Area where it was noted through environmental monitoring that there was potential for environmental impact. To counter this EnergyAustralia hired consultancy ERM in 2017 to complete a detailed assessment of the groundwater readings and movements to determine the best response. McMahon Services have since assisted in the development of a concept design to respond to the elevated conditions.

- Bore D10 refers to the name of the groundwater bore where elevated readings were first identified.

» This is the opportunity for CCC members to ask questions as specialists with a depth of experience in ground water assessment are available.

» Gavin, ERM project manager of the ground water investigation since 2017, presented an overview of the process and findings of ERM's independent groundwater assessment. Tamie Weaver was also present in the meeting to contribute to discussion if required, and has been involved with management of the project since 2017.

» Gavin provided background information on the project, noting the history of placing water conditioned ash and the co-placement of brine conditioned ash (BCA), within Mt Piper Ash Repository. He explained the groundwater and surface water monitoring requirements that have been undertaken in accordance with approvals indicated BCA placement activities may have influenced groundwater conditions in the vicinity of the ash repositories.

» In relation to project updates since commencing in 2017, Gavin noted monthly groundwater and surface water data has been collected and reported, then annually posted on EnergyAustralia's website. The team have been engaging with key regulators including the EPA, DPIE and Water NSW with workshops every six months, and a media release was provided to the broader community in Q3 2018.

» The objective of the project was to investigate the groundwater and surface water conditions in the vicinity of the ash repositories, assess the potential for groundwater to interact with the surface water of Neubecks Creek, and identify reasonable and feasible management and mitigation options to implement.

» Gavin noted the team have been working on this project for two and a half years but would try and give as much detail as possible in the time available.

» Gavin presented an overview of the site area – refer to p. 61 of the attached presentation. This indicates the Mt Piper Ash Repository with a purple boundary and Neubecks Creek is shown with a blue line in the top-right corner.

- The blue circles indicate the existing ground water monitoring network – this has been in place for an extended period prior to this assessment. These were part of the initial review of results which indicated ash placement activities were influencing groundwater conditions. As a result, ERM recommended expansion of the groundwater monitoring network.
- The green circles indicate the groundwater monitoring installed as part of this assessment after ERM recommendation to expand the network.
- The green stars indicate surface water assessments that have been implemented along Neubecks Creek.
- The orange circles indicate the drilling locations implemented in early 2020.
- During 2018, ERM also completed a detailed survey of Neubecks Creek – the 2km stretch shown in the map was surveyed and sampled for elevation, water quality, formation and condition.
- Also during 2018, the blue and green locations undertook aquifer testing and water level monitoring over an extended period, as well as completing a detailed review of all available historical environmental data for the site – Mt Piper Power Station, Western Coal Services and the associated mining operations.
- In 2019/20, ERM undertook further investigations for additional outstanding pieces of information from 2017/18 data review and field work, including creek survey works and a detailed review of Mt Piper Power Station and adjacent Western Coal Services water management practices. Additionally, the team reviewed data from approximately 50

bores in neighbouring areas with assistance of private landowners to develop a conceptual model of site and local study area.

  - In early 2020, the team undertook a drilling program within the footprint of the Mt Piper Ash Repository – drilled from the surface of the ash composition to the base and underlying ground water. All information has been used to transition to a numerical ground water model.

- Refer to p. 62 of the attached presentation for a timeline of the power station and ash repositories development with open cut and underground mine operations in the immediate footprint of the ash repository area.
- Gavin presented an overview of the historical mine workings in the area – refer to p. 63 of the attached presentation. This indicates open cut mining in Neubecks Creek and the historical diversion of the Creek around Pinedale open cut mine.
  - When looking at the current site setting, there is a fairly disturbed picture of the landscape.
  - In the image the team have overlayed Mt Piper Ash Repository (purple outline) and the Lamberts North Ash Repository (yellow outline), while the hashed areas indicate underground workings, and solid blocks indicate open cut operations.
  - It is important to consider the natural setting of the site – the significant historical ground disturbance in the area is likely to have influenced the current hydro-geological conditions of the area.
- Refer to p. 64 of the attached presentation for an overview of the Conceptual Site Model (CSM). This brings together the consolidation of all available information to show how the ground and surface water behaves at the ash repositories.
  - This is completed to develop a number of to-scale cross sections of the study area, as shown on p. 65 of the attached presentation.
  - The faded cross-section diagram has been overlayed with written descriptions of the various processes – refer to slide.
  - The review of information to date has shown vertical migration of salts and metals through the ash profile at the Mt Piper Ash Repository, which is derived from brine placed with the BCA.
  - The seepage of water from beneath the base of the Mt Piper ash repository, and migration of this seepage water along the topography is indicated.
  - The seepage of groundwater typically enters voids that resulted from mining activity, and in many locations the spoil resultant from the mining activity.
  - This leads to the transport of impacted ground water through the disturbed and undisturbed ground in the vicinity of the repositories, and then the subsequent discharge of impacted ground water into mined out voids and some discrete areas of Neubecks Creek.
  - Overall, the monitoring indicates groundwater impacted by salts and metals from the BCA placement has migrated from Mt Piper Ash Repository primarily to the east, and somewhat to the north and north east.
  - The historical mining activity has had a significant influence on the pathways of the water migration in the area, and you can see some of the impacted groundwater migrating into discrete locations of Neubecks Creek.
- The team then transitioned the real-world data into a 3D geological model – refer to p. 66 of the attached presentation.
  - On the slide, can see the natural geological sequence as noted by the descriptions in the top right, and the bottom left of the image the disturbed areas.

- The colours shown are coded to the geological formation – large area of purple mark the footprint of the ash repositories and surroundings, while the ash repositories themselves are marked in the grey areas.
- These models also include water level information and can be adjusted based on the conceptualisation of the site.

» This was used to transition into a numerical groundwater model – refer to p. 67 of the attached presentation.

- The numerical groundwater model was calibrated to 2013 conditions, after the development of Lamberts North but prior to EnergyAustralia taking over operations at Mt Piper.
- The numerical model has six layers, each with a complex mix of hydraulic conductivity properties that represent the various geological units and fill within the footprint of the study area.
- The purpose of the model is to inform discussion, development and design of mitigation options for consideration.
- The slide indicates one output of the calibrated steady-state model – using this the team can place particles within the footprint of the Mt Piper Ash Repository in the saturated zone to see where the model suggests the water will track.
- The model indicates that the vast majority of groundwater from beneath the repository tracks east, and daylights at DML Dam (dark blue). However, a small portion of the groundwater, as indicated in light blue, tracks east then north and leaves the model via discharge to Neubecks Creek.
- The slide shows Northern Transect 1 and 2 (NT1/NT2) and three Southern Transects, which have been the focus of further assessment and consideration for mitigation options including flow estimates and potential pumping volumes for mitigation solutions.

» Refer to p. 68 of the attached presentation for the full key findings for the field work and modelling – overall the research indicated groundwater to the east and north-east is impacted by seepage from BCA. BCA has been occurring since 2000.

- The results show solute migration occurs vertically through the ash and down with groundwater through the disturbed spoil within the footprint of the ash dams.
- Through this, the research identified localised discharge to Neubecks Creek leading to the need to develop mitigation options.
- These model outcomes are consistent with field observations completed using the Creek survey and ground and surface water modelling data. DML Dam and Cooks Dam are playing key roles in capturing groundwater within the site. Flow paths and rates indicate groundwater interception system feasible along discrete and targeted areas in Neubecks Creek.

» Andrew, project manager of the McMahon Services team providing the Groundwater Interception Concept Design, explained his experience and the project objective to determine control measures that can feasibly be put in place to manage the identified discharge.

- The concept design is based on the data collected by ERM, which was thoroughly reviewed over 12 months to determine the most appropriate concept design to address the immediate objective, and also considers longer term objectives.

» Andrew presented a map and data indicating the locations and amounts of groundwater entering Neubecks Creek – refer to p. 71 of the attached presentation.

- The map on the right of the slide shows Neubecks Creek in blue.

- The letters within the red circles – D and G – indicate the two locations in the stream where data highlights groundwater is entering the Creek in sufficient volumes to be worthwhile addressing.
- The graph on the left hand side of the slide has the red circles indicating the same areas, relating to D and G on the map. The graph measures salinity levels between A and H as shown on the map – locations within the creek are the x axis and salinity is the y axis.
- With yellow indicating the salinity, you can see clear spikes at D and G, highlighting where saline groundwater inflow is occurring. Through data and assumptions, the team can determine at D there is 0.5L/s discharge, and at G there are 6L/s.
- You can also see an additional spike at H, however this is where LDP6 comes out meaning it discharges into the creek downstream of the EnergyAustralia site.

» Andrew provided an overview of the proposed groundwater interception solution and layout – refer to p. 72 of the attached presentation.

- The team are proposing to address the saline groundwater inputs at the sites indicated by the red circles (the same locations as D and G on the previous slide).
- Starting at D (first circle with yellow box on the slide), the team will undertake in-stream pumping to remove instream saline groundwater. Saline groundwater entering the creek would usually sit to the bottom as it is denser than surface water. The team will place the pump in the bottom of the creek to pump out water and remove the volume of salt, stopping it from being pushed down by surface water.
- In addition to this, the main action being taken is at G (second red circle), as this was the highest point of input. In addition to the red circle, there are also smaller white and red circles along the Creek shown on the map. These are the proposed pumping wells – these will intercept groundwater entering the creek and causing salinity spikes, and the saline water will be picked up and moved by the blue pipeline into a lined storage pond in the Lamberts North Ash Repository area. Once there it will be managed within EnergyAustralia's site Water Management Plan.
- In pumping groundwater from the bores, the team expect the first two bores within the red circle to pick up the majority of saline groundwater, while the other three are a backup to ensure all the impacted groundwater is gathered and gives flexibility if required.
- The pipeline will be created through an under road crossing, using directional drilling under the highway to get the pipeline from the north-east side to the south-west side.

» Andrew summarised the key outcomes of the process:

- A range of options were considered, and this design gave the best overall outcome.
- The design will provide a significant reduction in the saline groundwater inputs into Neubecks Creek, and this is anticipated to be a rapid reduction once pumping commences. Within days to one week, the team expect to have effective control over the groundwater impacts to the Creek.
- This will provide significant improvement to the quality of the water.
- The team is expecting pumped groundwater quality in the range of 5000 to 20000 EC, and pumping volumes up to 2Mg/L per day are anticipated.
- Andrew noted ERM have been working on groundwater model concurrently, while McMahon prepared the design of the interception system. Instream data determined the figures of 6L/s and 0.5L/s at each point.
- The results have been consistent with those found by the groundwater model completed by ERM, meaning two independent approaches to quantifying a problem

came up with the same sort of magnitude of flux that required treatment, building confidence in the results and proposed concept design.

» Refer to p. 74 of the attached presentation for next steps – detailed design will include additional monitoring of surface water and groundwater, collecting additional data and more subsurface investigations at and between the red circle locations. Will then need to construct the elements – will activate D area first, then G which requires more testing.

> Once the project is operational, it will be monitored, and its performance reviewed. Augmentations to the interception borefield or fine tuning of the design will be completed if required, based on if any ground water is left to pick up in the creek – this is not anticipated.

» Andrew indicated the success of his previous salt interception schemes in the Murray River – refer to p. 75 of the attached presentation.

> On the top-left of the map the many small red dots are bores, each pumping very large volumes of salt – they are together moving over 0.5 million tonnes of salt/year and the project has been very effective in reducing salinity – it has picked up around 25% of salt with the borefields.

> In this way, the project team has extensive experience in designing and implementing successful groundwater management systems to pick up saline and stop salt getting into rivers. They are comfortable with the data collected and design and are looking to implement inside the next 12 months.

» Ben provided an overview of the regulatory approvals, actions and timeline for the mitigation measures to now be put in place.

> Refer to p. 77 of the attached presentation for an indicative project timeline. ERM are expecting to finalise groundwater modelling by late June/July, and are assessing long term options for the ash repositories.

> Mt Piper Ash Repository is now towards the end of its life span so the team is looking to develop an overarching closure and rehabilitation process. Lamberts North will continue to operate into the future to support ash disposal for the Power Station going forwards.

> The interception bore project will ideally be put in place prior to Christmas, however this is dependent on receiving the relevant environmental approvals – the project requires an EPA license modification and project approval, so timelines are guided by DPIE in that regard.

> The team is working hard to move forward as quickly as possible with the proposal presented by Andrew, and as soon as those approvals are in place, the team will move to have the borefield implemented.

> The assessment does bring into question the future of combined ash and brine disposals. EnergyAustralia are now working through a process of looking at different options of what the future looks like for disposing brine and ash at Mt Piper. There is acceptance that the way co-disposal has happened will need to change, and EnergyAustralia are investigating all options available.

> EnergyAustralia are actively engaging with, and are committed to working alongside, regulators to ensure ash disposal is completed properly and responsibly, and the community and broader stakeholders will be kept informed on the project as it progresses.

Q – Julie: are you monitoring for heavy metals in all of the bore locations shown, and if so, what are the details of those being monitored and results, can these be accessed? Julie also expressed concern that now we know there has been discharge over a long term period, why were questions not responded to in relation to putting health notices along Neubecks Creek?

It is disappointing as there is concern people access the water for their bore water, cattle and agricultural grazing. Has NSW Health been included in discussions?

» Gavin confirmed that a broad and targeted suite of heavy metals are monitored for as part of independent groundwater assessment and routine management of the area.

» The data associated with this monitoring is available in EnergyAustralia's Annual Environmental Monitoring reports for both Mt Piper and Lamberts North ash repositories, which can be accessed at their website – https://www.energyaustralia.com.au/about-us/energy-generation/mt-piper-power-station/mt-piper-brine-ash-co-placement.

» Ben responded that the project has not involved consultation with NSW Health to date, as such consultation would only occur where there is a health concern. Triggers and levels set to monitor water quality take into account health considerations and these have not been reached.

» There is additionally no evidence the leaching has been happening for a long period of time or entering Neubecks Creek for an extended period, only that there were elevated results within the ash repository.

» EnergyAustralia is trying to anticipate concerns and completed these assessments prior to the leaching reaching its full potential of groundwater meeting Neubecks Creek.

Q – Jim: in relation to the leaching in the area generally, there is also an ash dam at the back of the area still active – what action is being taken in this location? Has this area (near Wallerawang at the back of Wolgan Rd) also been monitored and is there any understanding of leaching there? Concern as Sawyers Swamp Creek is in the area and it runs into the Sydney Catchment.

» Ben confirmed the area is subject to similar monitoring requirements as the Mt Piper ash repository, with annual reports prepared of the ground water monitoring results publicly available at https://www.energyaustralia.com.au/about-us/energy-generation/wallerawang-power-station-closure/wallerawang-ash-dam-areas.

» Ben responded Sawyers Swamp Creek was largely dominated by LDP9 discharge from Springvale over the last few years, now has limited flow when the discharge point stopped in June 2019 – it will be interesting to see the impact of this lack of flow over the coming year – it is a changing space but it is being monitored.

Q – Julie: asked to clarify if the management approach presented today will only be implemented once the DA is approved, so would be commencing at the end of the year? If so, what is happening in the interim, as we have salinity and heavy metals flowing through and people potentially accessing that water? Neubecks flows into and joins up at Maddox Lane where Jim referred to, so there is a double impact. Additionally, thinking about the sediment, if this has been flowing through for years, what is in the sediment that can be stirred up and how long would it take to remove this? Once salinity levels exceed 350 EC aquatic life starts first in the chain to die, then ovine and bovine, are the levels higher than what they should be for grazing animals? Have a neighbour who may be watering their trotting track everyday with water from the creek. Reiterated Health NSW should be involved.

» Ben confirmed the project will commence at the end of the year if the approvals are received within this timeframe.

» Ben noted that to put the levels found in monitoring in context – sea water is around 30,000 microSiemens and above, and in this situation we're talking about conductivity levels in the hundreds, and sea water is not deadly or poisonous. There is no large or immediate health risk with results seen.

» There is also the licensed discharge point from Western Coal Services putting similar quality water directly into Neubecks Creek - this is a small percentage of the overall flow of this type of water into the creek.

- With this in mind, he reiterated there is little immediate or urgent health risk – the guidelines for agriculture state cattle can still drink water with salinity in the order of 5000 microSiemens.
- Gavin added the environmental goals for surface water monitoring in the downstream extent of this location have been developed considering irrigation and stock water trigger values, so downstream water users have been considered.

Q – Julie: LDP6 Centennials Report said the discharge was at 7000 microSiemens. Asked to clarify there will be nothing done in the interim to stop what is going into the creek now until there is an approval?

- Ben responded EnergyAustralia is aware of Centennial's discharge levels, and the water discussed here is no where near this level.
- There is not a lot that can be done immediately to change the current situation. To intercept any additional groundwater would require approval, so have to wait for this.
- Gavin added that the surface water is sampled and monitored at many locations on a monthly basis, and this has presented a steady picture for a long time. Recent rainfall has also helped the situation.

Q – Julie: as we've been in heavy drought and then rains, LDP6 could have an overnight consistent flow for 12 hours which may not be picked up in a monitoring report. She asked in relation to the process of intercepting the water and turning it back to a line filled pond at the ash repository, how will ongoing works and end of life be managed to ensure leaching does not occur from here? Will there be consideration and requirements in the Development Application for the future maintenance of this intervention system.

- Ben responded as discussed earlier in the presentation, the team is currently working through the closure and rehabilitation plan for the Mt Piper Ash Repository, including longer term control measures to minimise the legacy of the Mt Piper ash. This would be considered as part of the development plan.
- Additionally, he noted infiltration of surface water has been the main driver of the salt leaching into groundwater so capping the repository with an impermeable barrier where the surface water cannot filter through is expected to help the situation immensely. There is also a long term option of the ash being reused down the track.

6. **General discussion**

- Brendan called for any urgent questions, as the meeting had reached closing time after the detailed groundwater assessment presentation.

Q – Rob: in relation to Lake Wallace, 18 months ago an idea was tabled of how to control weeds on the edge of the Lake to improve tourism of the area. This growth is now at the stage where cannot get near the water from most areas. Rob expressed disappointment that there has not been progression in these discussions and would like an update and some action on the problem. He stated understanding that there are multiple bodies involved so it may be a complex discussion, however something should be done.

Q – Alex: noted there are complex waterbird species that need to shelter in the areas described so consideration should be taken of their habitat and perhaps this is a reason action has not been taken. Additionally, would think the water quality in Lake Wallace is not good enough for public health so recreational swimming should not be encouraged. There should be a focus on conserving the bird life.

Q – Rob: noted the Lake could be used recreationally not just for swimming, but also fishing, walking around, boating and canoeing.

- Brendan noted this is an important issue and he understands there are multiple people in the Committee working through this issue. Given the different views about this matter

within the CCC he suggested an update from Council and EnergyAustralia occur at the next meeting to enable more time to consider this matter.

Q – Clr Smith: confirmed Council is working very closely with EnergyAustralia on this matter. Understand the bird life, however the reeds as they are now present a hazardous area which is catching odour in the lake which will drive both people and birds away, having a negative impact on the community. Council and EnergyAustralia are working with an environmental group to investigate the issue.

Q – Alex: reiterated he disagreed with the removal of the weeds due to the impact on birdlife and fish.

» Brendan confirmed we will have an agenda item at the next meeting of the Council perspective update from Clr Smith and Lauren, as well as an update from EnergyAustralia's actions at the next meeting. This will enable discussion to ensure the range of views from this group are considered.

Q – Lauren: noted when this item was originally raised, there was correspondence forwarded from Council to EnergyAustralia for consideration. Will ensure the new environmental team is aware of this and provide an update.

» **ACTION:** Lake Wallace update to be included as an agenda item at the next meeting.

» Brendan noted there will also be a call for other agenda items and issues to be discussed – prior to the next meeting and encouraged members to get in touch with any issues.

» Mick Hanly is the primary point of contact for any community issues.

» For items raised as part of the CCC, contact Alex or Brendan. Please provide any questions by two weeks prior to the next meeting to give EnergyAustralia time to prepare responses.

» *Addendum:*

> *In opening the meeting, the Chair overlooked a request from Julie Favell that the Lithgow Environment Group's correspondence with CEO of EnergyAustralia regarding disappointment with the lack of renewable investment in the Lithgow area be noted. EnergyAustralia noted discussions have occurred with the group outside of this forum.*

7. **Meeting close**

» The next CCC meeting is scheduled for Monday 7 September 2020.

» Meeting was closed at 7:15pm.

1 June 2020

Energy*Australia* Lithgow Region

Community Consultative Committee

Greg McIntyre
Head of Mt Piper

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Agenda

1. Welcome and introductions
2. Review of Notes From Previous Meeting
3. Site Update from EnergyAustralia
4. Project updates from EnergyAustralia – existing and planned
5. Projects in focus:
   - Bore D10
   - COVID-19 Response
6. General Discussion
7. Meeting Close

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Welcome and Introductions

Review of Notes from Previous Meeting

Response to Questions

Response to Questions

EnergyAustralia to provide feedback to government bodies to consider the area's emergency plan for the next crisis.

- EnergyAustralia have liaised with the RFS and will continue to do so with the aim to improving relations

Update on surrounding neighbour notification and timeframes

- We have a Stakeholder management system called Darzin, which contains contact information for a variety of stakeholders, including immediate neighbours. Within Darzin we have an SMS capability that we can use to send a group text message to specific contact lists. A test message was sent out to the CCC members last week to demonstrate this functionality.

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Response to Questions

Bushfire Relief: How money was dispersed.

- Lithgow Lions Club received $95,190 from local businesses and community donations
- The Lithgow Lions Club Bushfire Relief Committee were contacted by members of the local community
- 20 individuals and families were eligible for $4,759.50 each
- All monies have been deposited directly into the bank accounts of those eligible

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Response to Questions

EA to provide update to CCC about any changes to approach, fire management plans once the internal review of the experience is completed and

Update CCC with results of review of Bushfire Management Plan

Review identified the following points:

- Provision of showers adjacent to the Energy Expo Centre
- Use of tennis courts area for RFS parking
- New concrete pad for fire tanker fill point safer and more efficient
- Reduction in fuel loads in the buffer zones around the station
- Investigating secondary access point to site for staff
- Staff sheltering onsite were in a very safe and secure position. If the situation deteriorated, we would have been ordered to seek shelter onsite as RFS assessed as being quite secure due to good clearings around the site.

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Response to Questions

EnergyAustralia to provide response to question regarding pine trees

- We have contacted Department of Forestry regarding removal of trees to create a fire break. Will advise neighbours and the CCC when this work is to be scheduled.

Possibility of Cleaning up/trimming the area of pines, which is also native habitat/food for Yellow-tailed black cockatoos who have suffered habitat loss due to the fires.

- If the pine trees are cleaned up, only the minimum number would need to be touched, preserving as much habitat as possible.

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Pine Dale Mine Rehabilitation

Pinedale Mine Update

- Remains in care and maintenance while future resource utilisation options are assessed
- Desktop feasibility work continuing
- No environmental incidents or monitoring no-compliances have been recorded
- Maintaining existing mining and exploration leases
- The DPIE – Biodiversity Conservation Division inspected known populations on Black Thorn to assess any impacts from the bush fires

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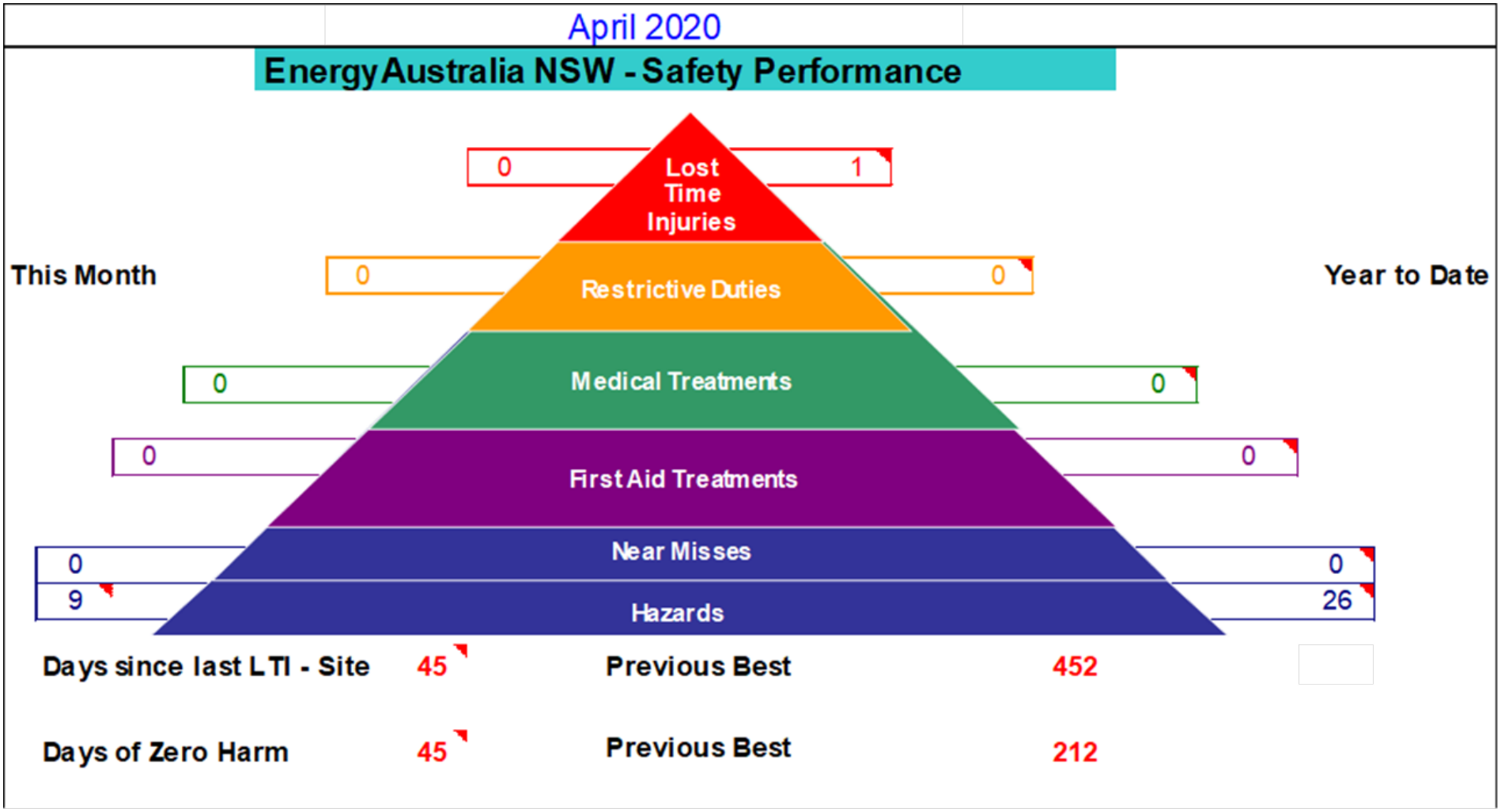
Site Safety

Site Safety – April 2020



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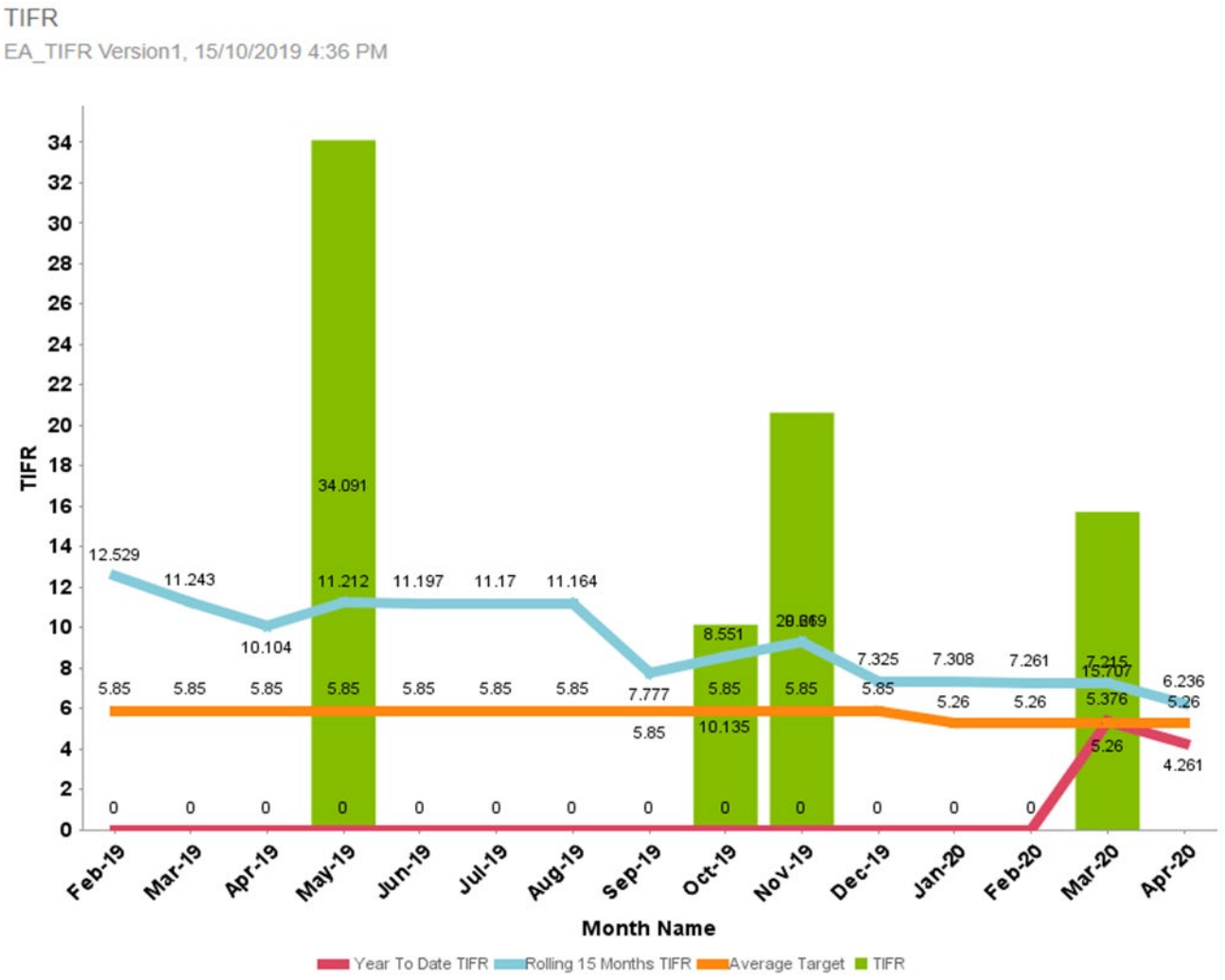
Site Safety – April 2020

Total Injury Frequency Rate



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Update - Water Management

Update on Water Management

- Oberon Dam level is at 24.75%
- Total Active Storage is at 96.4% with:
  - Lake Lyell at 98.9%
  - Lake Wallace at 105.3%
  - Thompsons Creek Dam at 92.8%
- Lake Wallace continues to spill
- The previous Red Blue-Green algae alert present at Lake Lyell has been lifted. Recreational activities can recommence.
- Amber alert present at Lake Wallace.

As at 22 May 2020

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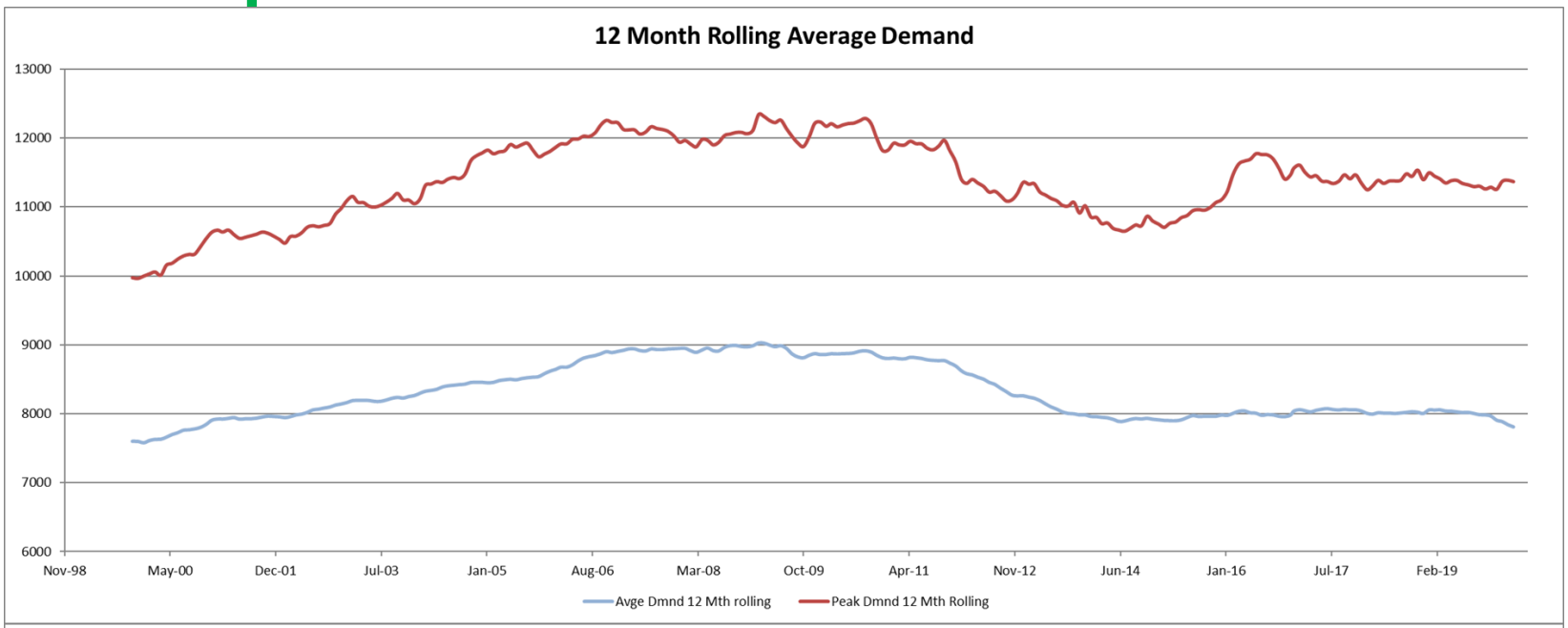
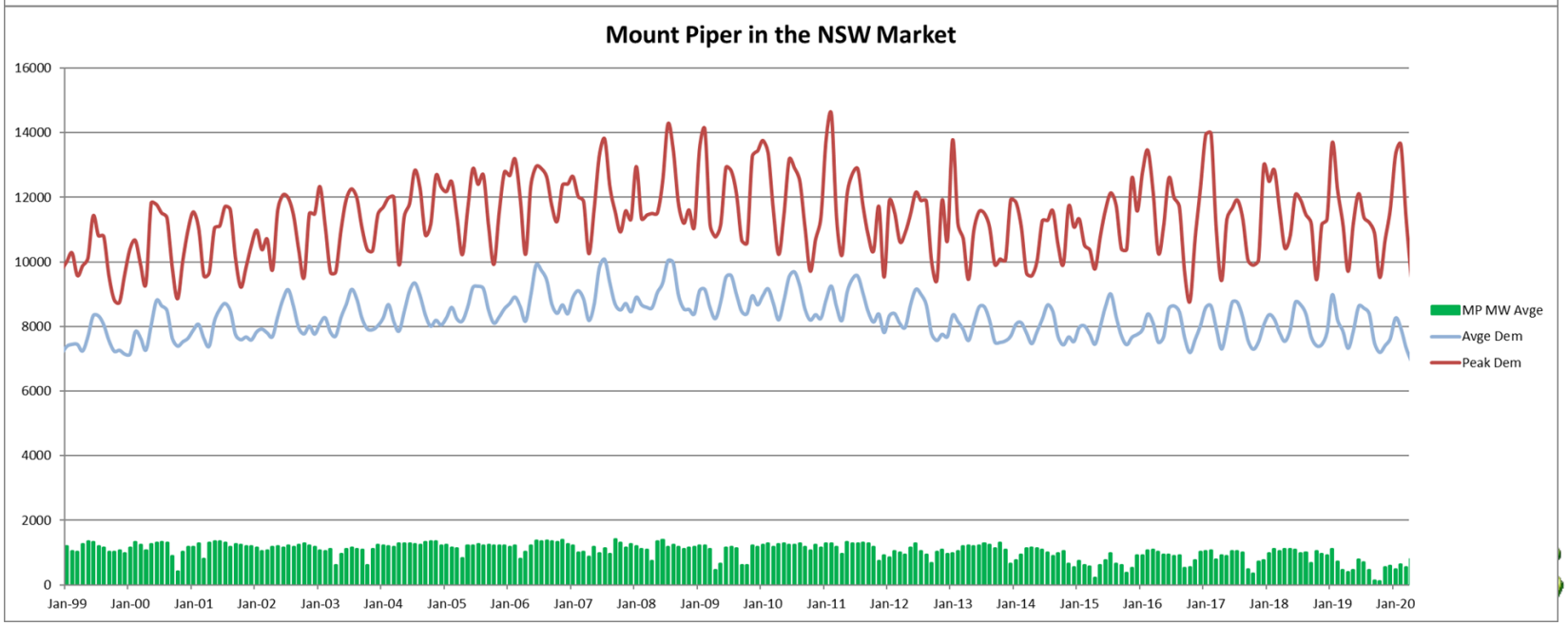
Market Update

Market Update





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Gas and energy future ???

- Gas and oil prices depressed
  - -ve oil futures prices (paying people to store it virtually)
  - Putting further pressure on coal fired electricity.
  - Reducing investment in development and exploration.

- Anticipated that this will result in new shortages in 24-36 months time.

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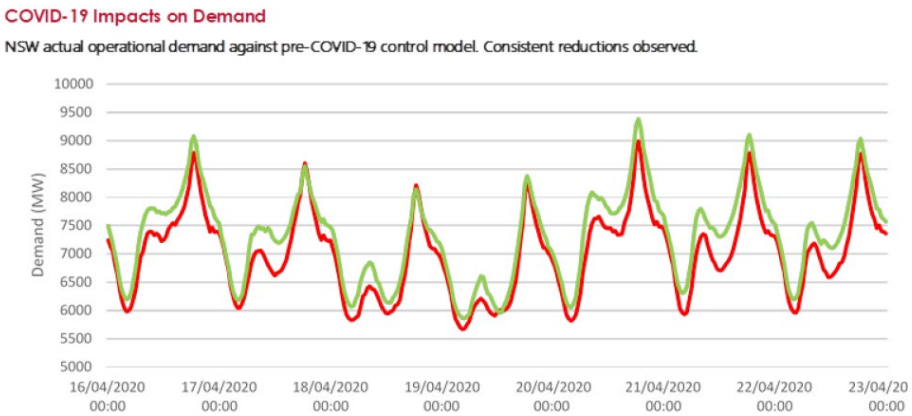
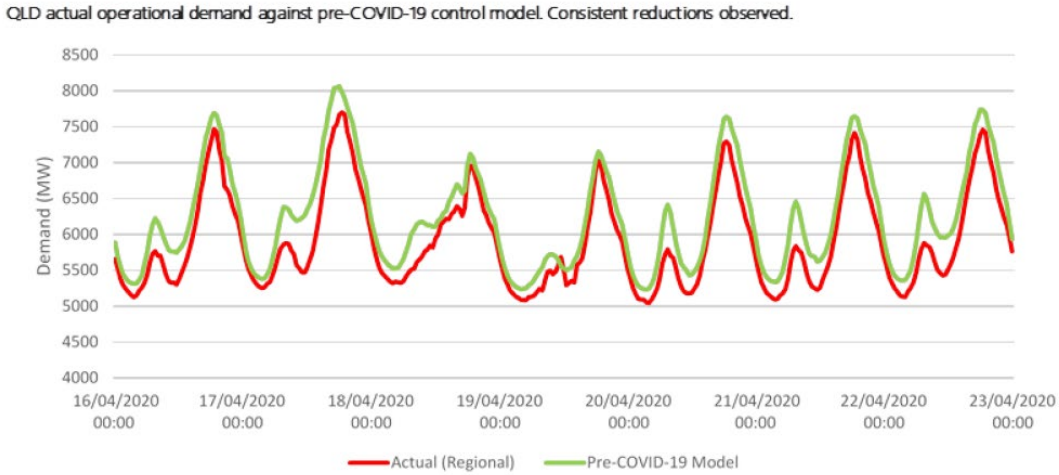
COVID Demand Impacts – main impact NSW & Qld





- NSW and Qld similar reductions ~ 10% for morning peaks and ~ 5% for evening peaks
- Vic/SA/Tas interestingly not showing discernible reductions allowing for standard weather / sunlight variations
- On the gas side early indications are higher winter demands in Victoria with increased household overriding commercial decline

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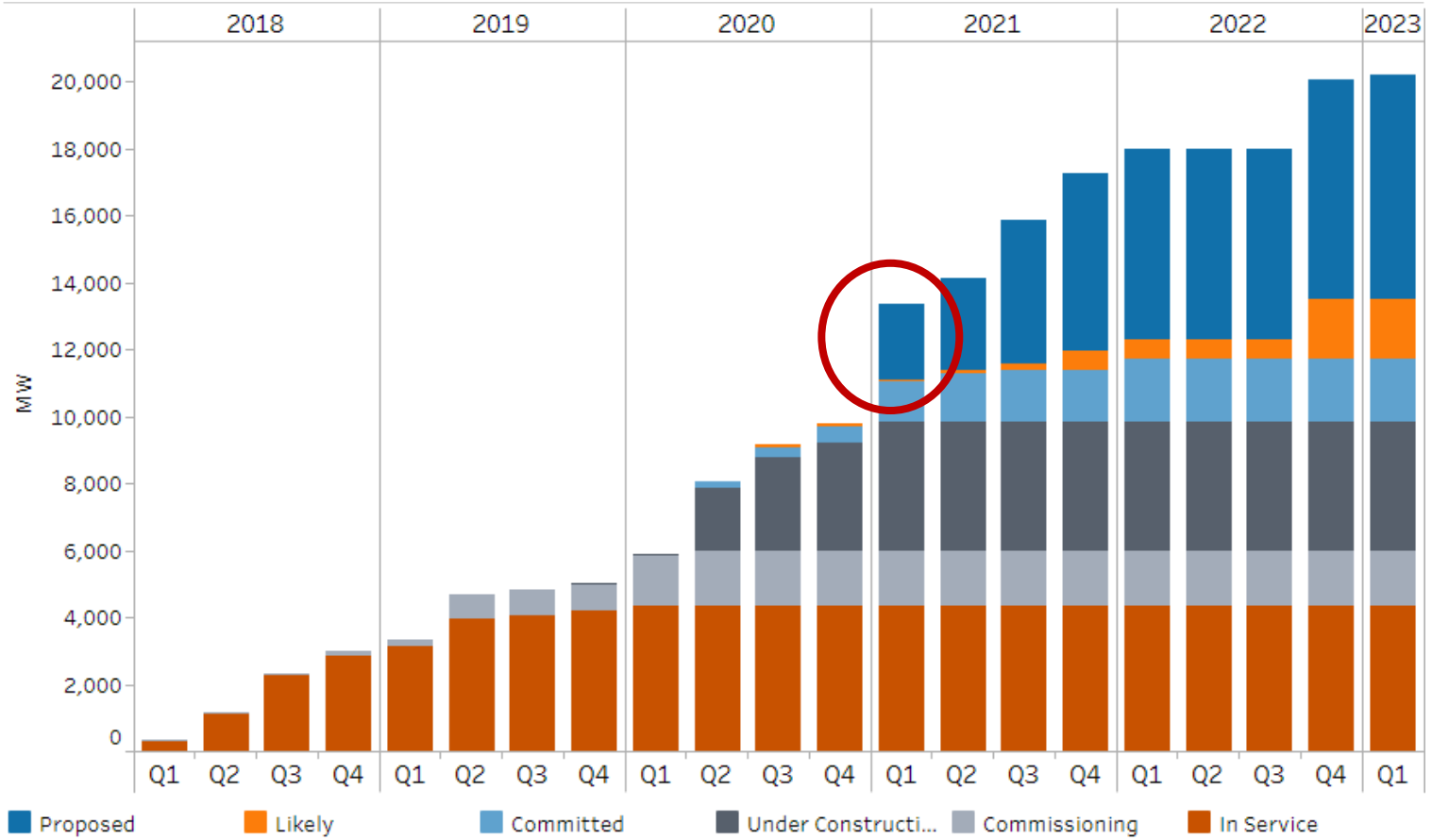
Renewable Tsunami yet to be halted



Significant Large Scale Renewables under construction ~ 4GW plus further potential

Note this doesn't include behind the meter solar

2021 surge in renewables.

Operations (Site) Update

Mt Piper Operations

- No coal constraints.
- Springvale recommencing mining and some Airly deliveries have recovered the stockpile level.
- MP1 Outage planning in progress.
- MP2 had extensive reliability works in March/April to see through winter, the MP1 outage, and Summer.

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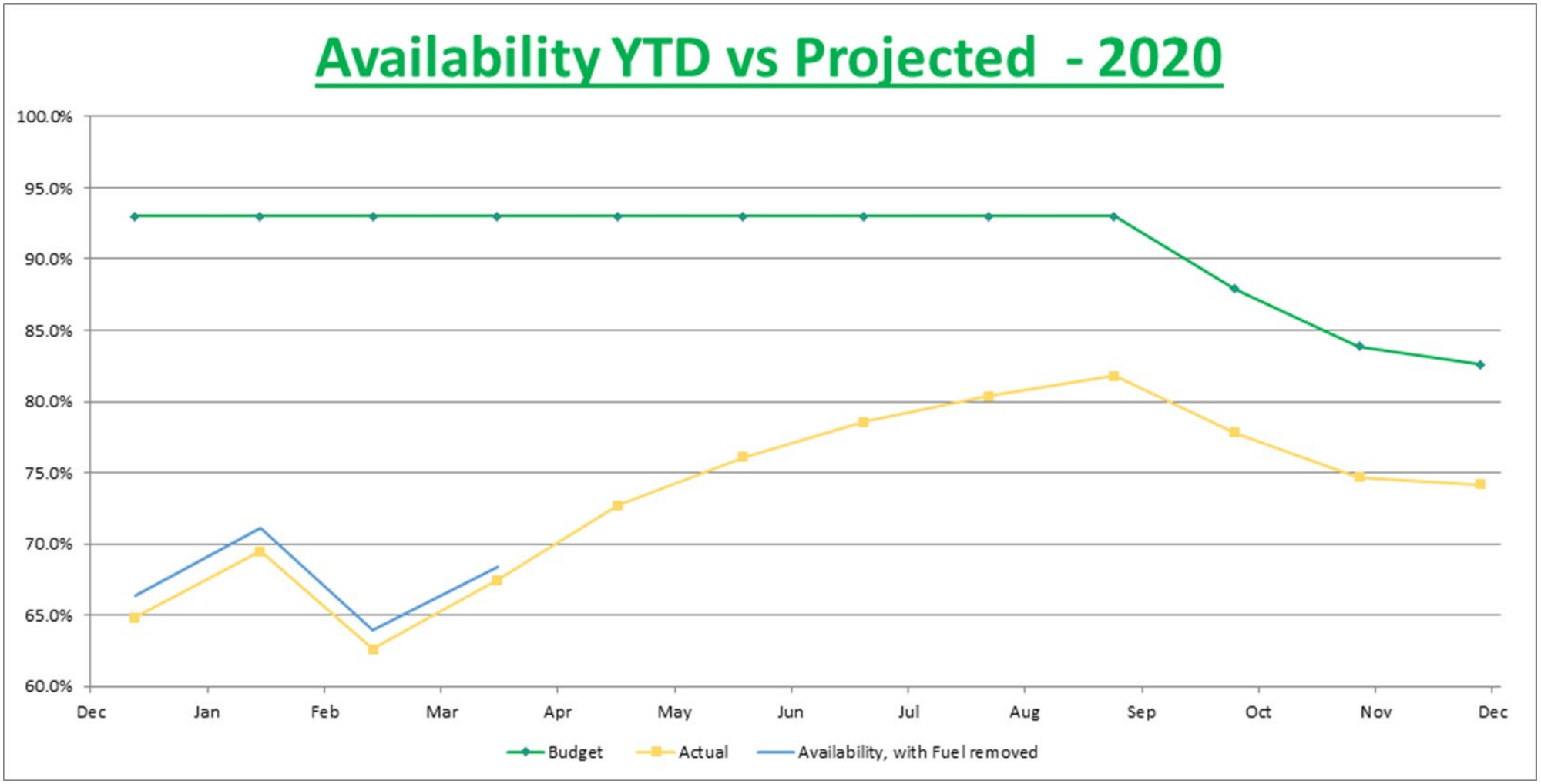
Mt Piper Operations



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Wallerawang Sale

General Update

Wallerawang Sale

BetterGrow

- Bettergrow Sale Agreement executed on 30 January 2020, on completion the Power Station Lands and the Buffer Lands will have a new owner (see map next slide).

- Completion is subject to Conditions Precedent

Treasury

- Ash Dams Hand Back negotiations progressing well, on completion Treasury will re-acquire the KVAR & SSCAD (see map next slide).

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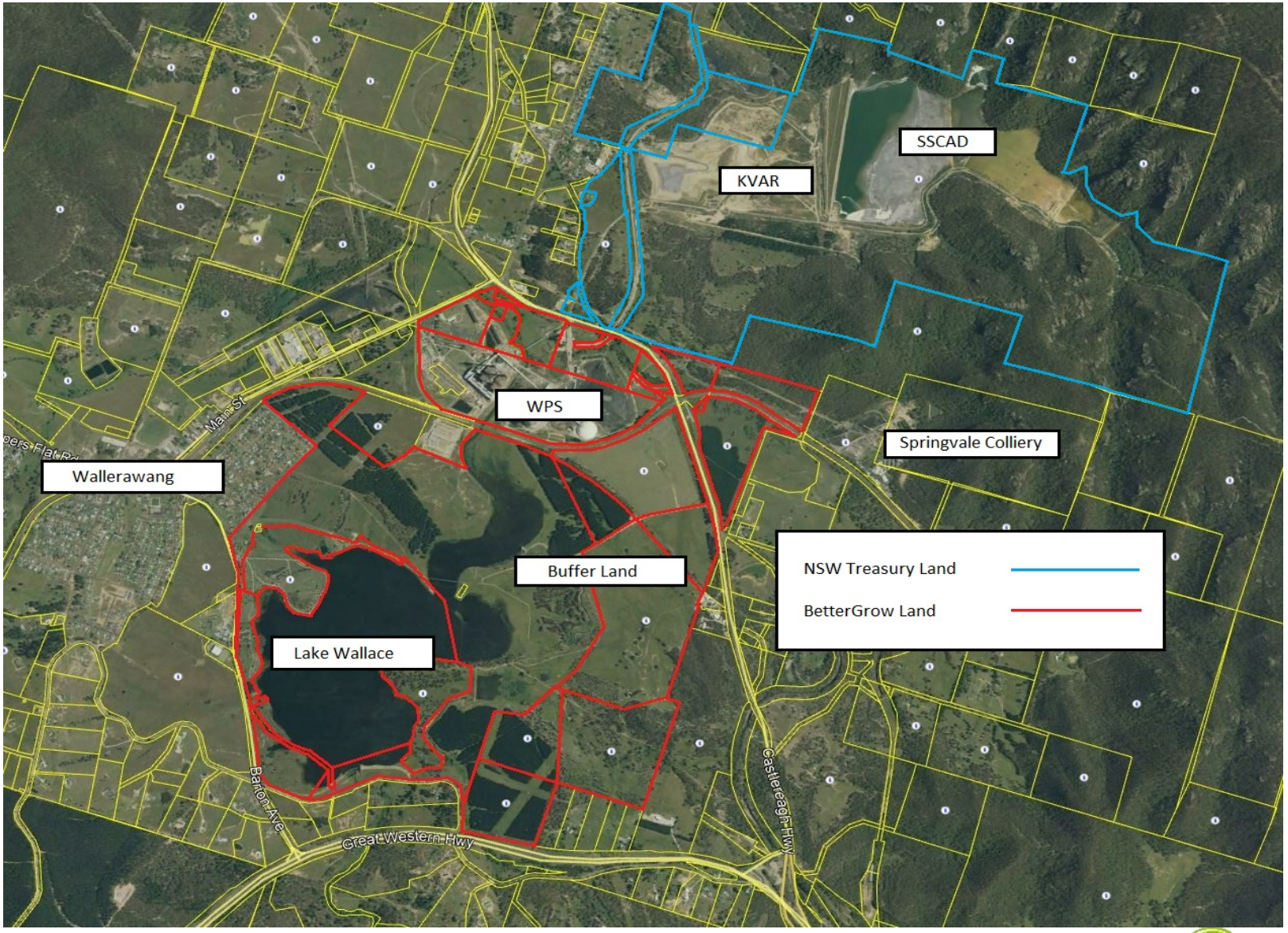
Wallerawang Sale



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Update – Lamberts North Ash Placement Project

Lamberts North Ash Placement Project Update

- Ash Placement Volume
  - Since February, approximately 2,000 tonnes has been placed on Lamberts North water conditioned ash area.
    - No complaints received
    - No incidents recorded
    - Revised Water Management Plan submitted to regulatory authorities and approved by Department of Planning in April 2020.

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Update Rail Unloader Project

Rail Unloader Project

Recap

- Mount Piper has a key role in NSW's electricity market and in the transition to a clean energy future
- EnergyAustralia is undertaking a multi-faceted coal sourcing project to underpin the long-term future for Mt Piper once Springvale mine closes in 2024
- A rail coal unloader at Pipers Flat is a core part of the project's objectives to ensure fuel security for Mt Piper

Current

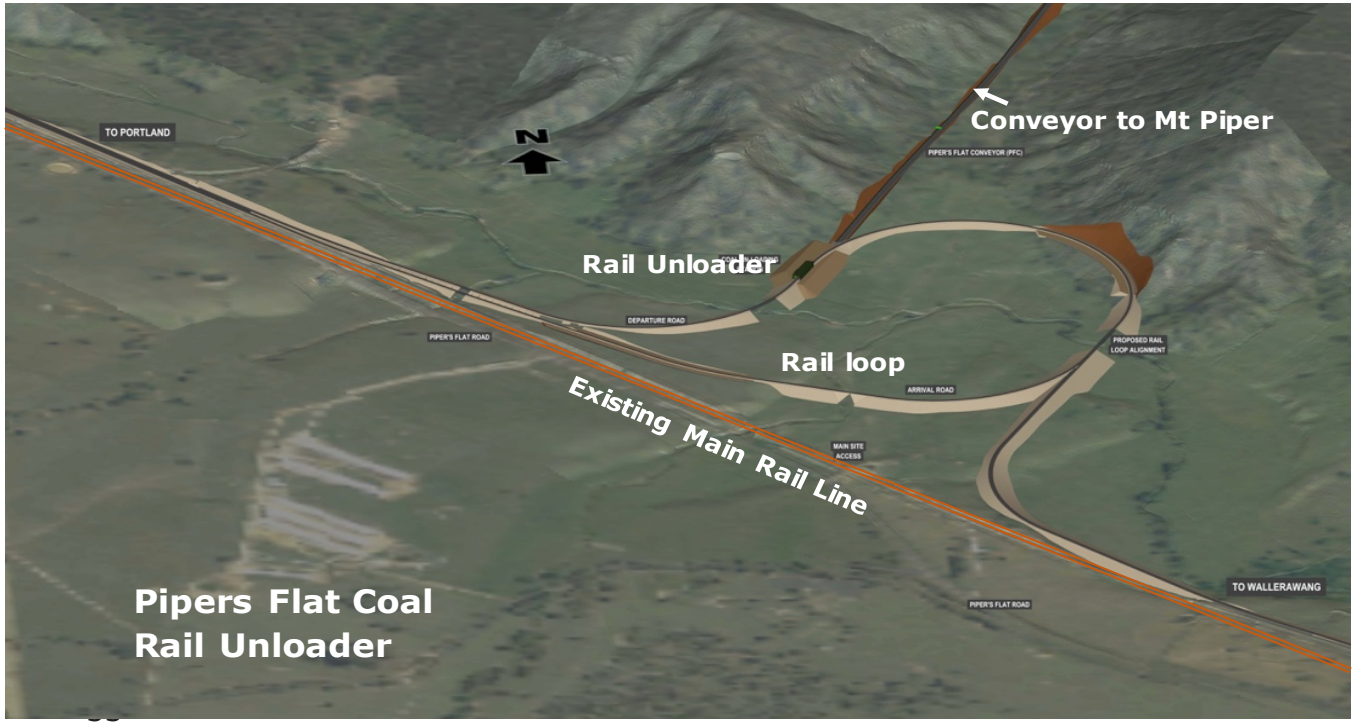
- EA has made solid progress with the rail unloader this quarter
- We are preparing to release an invitation to tender later this year

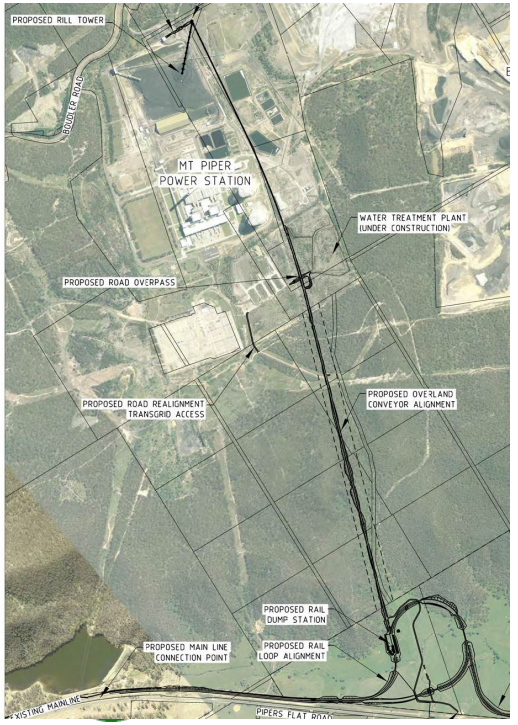
Rail Unloader Project

- The following site works and studies have been undertaken at Mt Piper and Pipers Flat:
  - Geotech investigation
  - Topographical survey
  - Heritage survey
  - Environmental survey
- The results of these surveys are expected to be known in the next few weeks
- Based on the outcome of the tender process, EnergyAustralia expects to make a final investment decision as soon as late 2020

Rail Unloader Project

- Rail loop at Pipers Flat and eastern siding
- Two major bridges over Pipers Flat Creek
- A rail unloading station and amenities area
- A dump hopper and loadout to the overland conveyor
- An overland conveyor
- A transfer station at Mt Piper Power Station
- A new rill tower on the coal stockpile
- An extension to conveyor C14 for direct feed to the plant





Update – Water Treatment Project

Joint EANSW/Centennial Water Treatment Project

- R.O. Plant, OPUS and Brine Crystalliser plants are now treating the mine waters.
- The next test will be to carry out the full load test which requires the plant to run at 42Ml/day for a minimum of 24hrs.
- Final optimisation and trimming of the plant is on going.

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Mt Piper Energy Recovery Project

CCC Update

June 2020

Background

- EnergyAustralia and Re.Group are developing a refuse derived fuel (RDF) energy from waste (EfW) plant to improve environmental outcomes and efficiency of coal usage at Mt Piper Power Station.
- EfW is a common technology and has been used in many locations worldwide including Europe, US and Asia.
- $170 million project which will produce steam equivalent to 30 MW of electricity
- We have completed the Environmental Impact Statement (EIS) for the project. The Department of Planning, Industry & Environment (DPIE) put the EIS on public exhibition between 13 January and 28 February 2020.

The Rudersdorf EfW Plant in Germany uses the same technology, similar fuel and is of similar size to the proposed Mt Piper ERP.

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Stages of EIS

Explain concept and ask about concerns/need for further information	Discuss draft information and seek feedback on results	Discuss proposed changes in concept	Explain information presented in EIS

In response to the EIS, DPIE received:

- 97 submissions from the public (including 4 duplicates)
- 6 submissions from organisations
- 10 submissions from Councils and government agencies

Common themes for the public submissions were similar to those raised in previous consultation – for example air quality, health concerns and waste/recycling.

We are preparing a response to the submissions made during the public exhibition process.

After the Response to Submissions, DPIE will prepare an assessment report.

A decision will then be made, either by DPIE or the Independent Planning Commission as appropriate.

We are here

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Community Information (since last CCC meeting)

- Covid-19 risks have prevented face-to-face updates, however informal briefings to Industry Bodies, Council, Community groups, Organisations as well as individual members of the community have continued remotely where possible.

- We met with various government agencies to discuss and clarify the issues raised in their submissions.

- We have begun exploring a voluntary planning agreement (VPA) with Lithgow City Council.

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Community Engagement Program

Community Engagement Program 2020

Community Grants Round 1

- $30,000 available
- 9 applications were received, including 1 for a bushfire recovery project
- 6 applications were successful:
  - Communities & Kids – Good Start Speech Therapy
  - Lithgow Bears RLFC – Purchase of Defibriliator
  - Lithgow Men's Shed – Purchase of Tools & Equipment
  - LithGrow Community Garden – LINC – Purchase of greenhouse and irrigation system
  - Mingaan Wiradjuri Aboriginal Corporation – Bush Fire Recovery Rock Art Restoration – Maiyingu Marragu
  - Wallerawang Branch Central Acclimatisation Society – Building of Fishing Pontoon for Limited Ability Persons at Lake Wallace

Community Engagement Program 2020

Sponsorships

- Portland Art Show – Purchase of artwork
- Daffodils @ Rydal
- Memorial Garden for Graeme Edwards, Yallourn staff member who died in workplace accident
- Mt Piper Golf Day
- Anzac Day Wreath
- Many events and programs have been deferred or cancelled due to COVID-19 Restrictions

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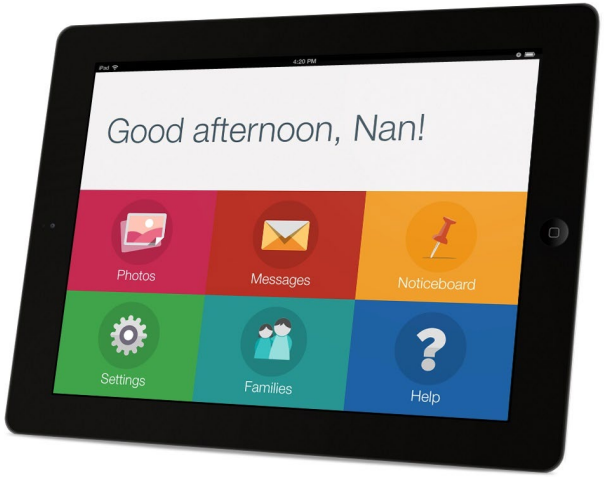
Community Engagement Program 2020

Donations of Equipment

- 2 iPads were donated to Tabulam Cottages Retirement Village to assist their residents to stay connected with family during restrictions put in place due to COVID-19



- Defibrillator donated to Friends of St John

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WorkPlace Giving Program

- Launched in October 2018
- EnergyAustralia has donated $500,000 to our charity partners:
  - Australian Cancer Research Foundation
  - Berry Street Schools
  - Launch Housing
  - Reach Out.com
  - Friends of Jamestown Ambulance
  - Illawarra Cancer Carers
  - Interchange Gippsland
  - Wombat's Wish
  - CanAssist

WorkPlace Giving Program

- A total of $29,161.04 has been donated to our local charity partner, CanAssist since its launch
- COVID-19 has meant all their fundraising activities have been cancelled, so our donations make all the difference.
- They are operating remotely and continue to provide vital financial assistance to those going through cancer treatment.

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Lithgow Rangers Soccer Club

- Lithgow City Rangers Soccer Club is currently celebrating its 50th Anniversary year
- EnergyAustralia funded LRSC independency on Wallerawang Power Station for the supply of water and sewerage services.
- Work carried out was:
  - New connection to town water supply
  - Construction of new Environmentally Friendly septic system
  - Development Approvals and environmental assessments
  - New Septic Tank
  - New Evaporation Mound
  - Turf covering of evaporation mound
  - Associated Plumbing and electrical work

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Employment Opportunities

Apprentice Program

- EnergyAustralia have recruited 4 first year apprentices for 2020.
  - 3 x Mechanical;
  - 1 x Electrical and;
  - 1 Engineering Trainee
- Current COVID-19 situation is difficult to adhere to training on site, but we are working closely with TAFE and our on-site leaders, to not disadvantage apprentices in their course completion.

New Employees

- In the period February 2020 to June 2020 two new starters were welcomed to Mt Piper in Assets team and the Purchasing team.
- We continue to host 2 x Vacation Students to further their studies with practical industry exposure.
- We also have 1 x People Team max term role as a Parental leave assignment to give exposure to site issues in her HR career.

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PROJECTS IN FOCUS –

- COVID-19 Response & Recovery

COVID-19 – Response - Project in Focus

- EnergyAustralia has been very proactive in its response to the threat of COVID-19. Some of the actions taken include:
- International and domestic business travel was restricted in late February, including restrictions on overseas visitors attending EA workplaces.
- Isolation requirements for people returning from personal travel to high-risk countries and for those who have been in contact with confirmed or suspected cases
- Anyone with cold or flu symptoms requested not to attend work
- Additional cleaning of workplaces and supplies of hand sanitiser and additional cleaning products
- Transition to work from home commenced 16 March.
- Meetings to be held via audio and video conferencing rather than face-to-face

COVID-19 – Response - Project in Focus

- COVID-19 declarations completed by all visitors and staff working from home who attend site.
- Pre-Start Wellness questionnaires are completed by staff and contractors daily
- Social distancing maintained where possible
- Risk based Protocols developed and implemented for those activities which must be carried out on site, primarily PCR and maintenance.
- Protocols developed for other activities, eg if employee becomes sick at work. All protocols are regularly being reviewed and modified as required.
- Split shifts implemented for maintenance staff
- Peggy system introduced for canteen orders
- Single serve, pre-wrapped tea, coffee and sugar implemented.
- Signs installed at entry turnstiles to provide information about Mt Piper's COVID-19 response.
- Extra equipment installed at the Gatehouse to segregate the staff from visitors

COVID-19 – Response - Project in Focus

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COVID-19 – Recovery - Project in Focus

- Team planning for the recovery of Mt Piper site staff to return to working from site.
- Risk based and consultative approach as individual teams know more about how they work and use their allocated areas
- Prioritisation of Return to Working from Site
  - Work that can't be done off site
  - Work that is less efficient when done from home
  - Office layouts that provide good social distancing
- Success is reliant on behaviours, social distancing, hand hygiene and some additional controls put in place
- Our working lives will not be the same, more flexibility is anticipated

COVID-19 – Business Impact - Project in Focus

- EnergyAustralia is vertically integrated, being both a generator, commercial and industrial market participant and retailer.
  - Market demand and price very depressed
  - Retail customers suffering potential loss of income & bill shock/inability to pay
- Business customers closing doors, either temporarily or permatently
  - EA allowing customers to “hibernate” their business, either reduced use, or full disconnect/reconnect at zero cost.
- Pressure on bottom line is from both ends. While still strong, EnergyAustralia is asking for
  - Increased financial control on expenditure and projects
  - Request for staff to assist in reducing liabilities by taking leave in 2020.

PROJECTS IN FOCUS –

- Bore D10

Mt Piper Power Station

Ash Repository Groundwater Management

Community Consultation Committee meeting

Monday 1 June 2020

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Agenda

- Update by Specialist Consultants
  - ERM – Independent Groundwater Assessment
  - McMahon Services – GW Interception Concept Design
- Regulatory Approvals
- Further Actions and timeline
- Future Ash and Brine Disposal

Independent Groundwater Assessment

ERM Australia Pty Ltd

Background

Mt Piper Ash Repository

- Placement of water conditioned ash commenced in 1993.
- Co-placement of brine conditioned ash (BCA) commenced in 2000.

Lamberts North Ash Repository

- Commissioned in 2013. Has to date received only water conditioned ash

EnergyAustralia commenced operation of Mt Piper Power Station in 2014

Monitoring

- Routine groundwater and surface water monitoring is undertaken in accordance with approvals to assess potential effects from ash placement
- Results indicate that BCA placement activities may have influenced groundwater conditions in the vicinity of the Mt Piper Ash Repository and the Lamberts North Ash Repository (the Ash Repositories)
- EnergyAustralia engaged ERM (2017 on) to undertake Independent Groundwater Assessment in response to these findings, this is the Bore D10 study

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Project Updates

- Monthly groundwater and surface water data is collected and reported (posted annually on the EnergyAustralia website).
- EnergyAustralia has been engaging with key regulators, including the EPA, DPIE and WaterNSW, in relation to the independent investigation since it was first initiated in 2017.
- EnergyAustralia provided a media release to the broader community in Q3 2018.
- EnergyAustralia has provided regular updates and reports on the independent investigation and proposed mitigation measures to key regulators since 2017.

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Objectives of the Independent Groundwater Assessment

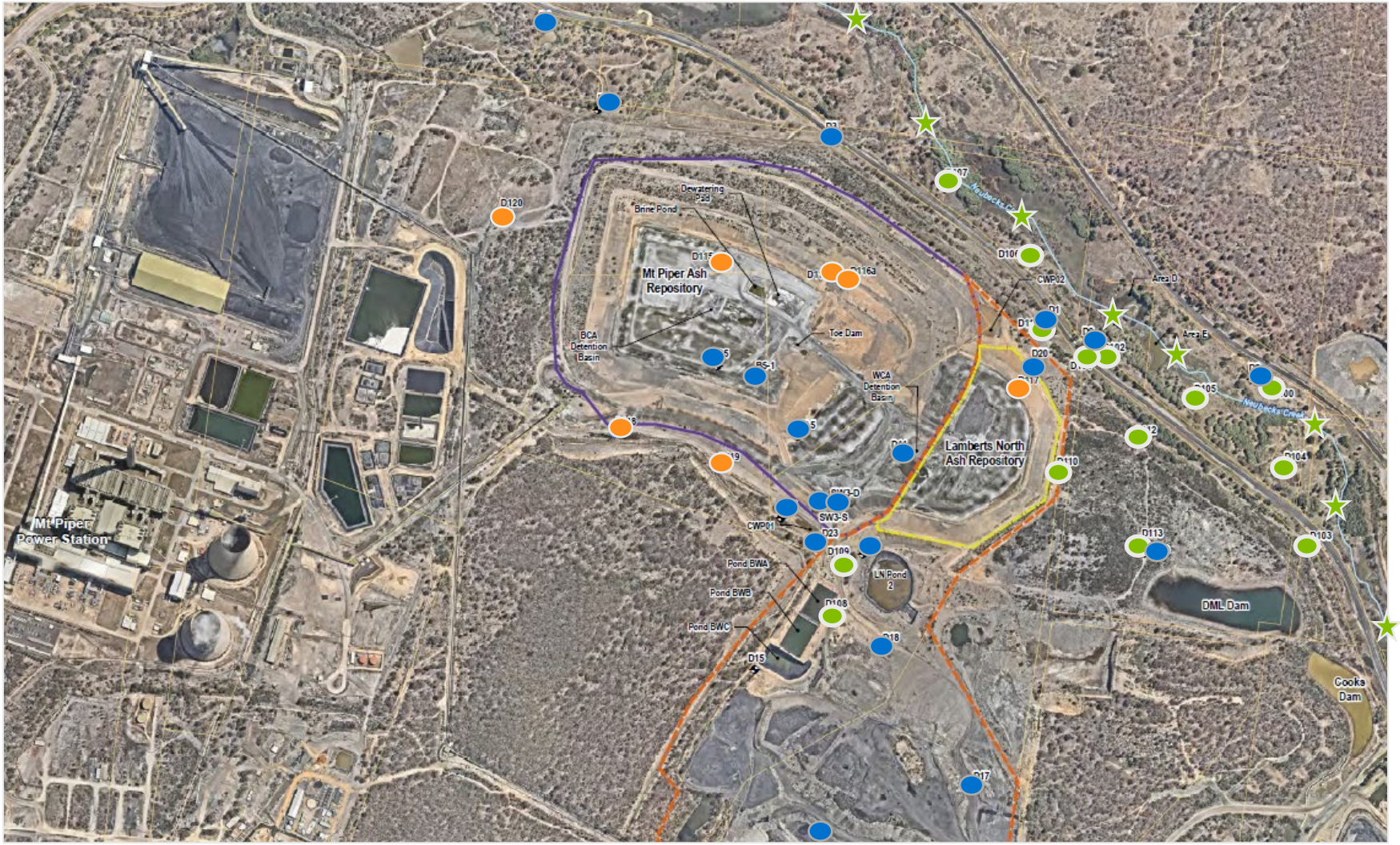
Project:

- Investigate groundwater and surface water conditions in the vicinity of, and down gradient from, the Mt Piper Ash Repository and Lamberts North Ash Repository (the Ash Repositories)
- Assess the potential for groundwater to interact with the surface water of Neubecks Creek
- Identify reasonable and feasible management and mitigation options to implement

CCC Meeting:

- Present an overview of findings from the Independent Groundwater Assessment since commencement

Independent Groundwater Assessment



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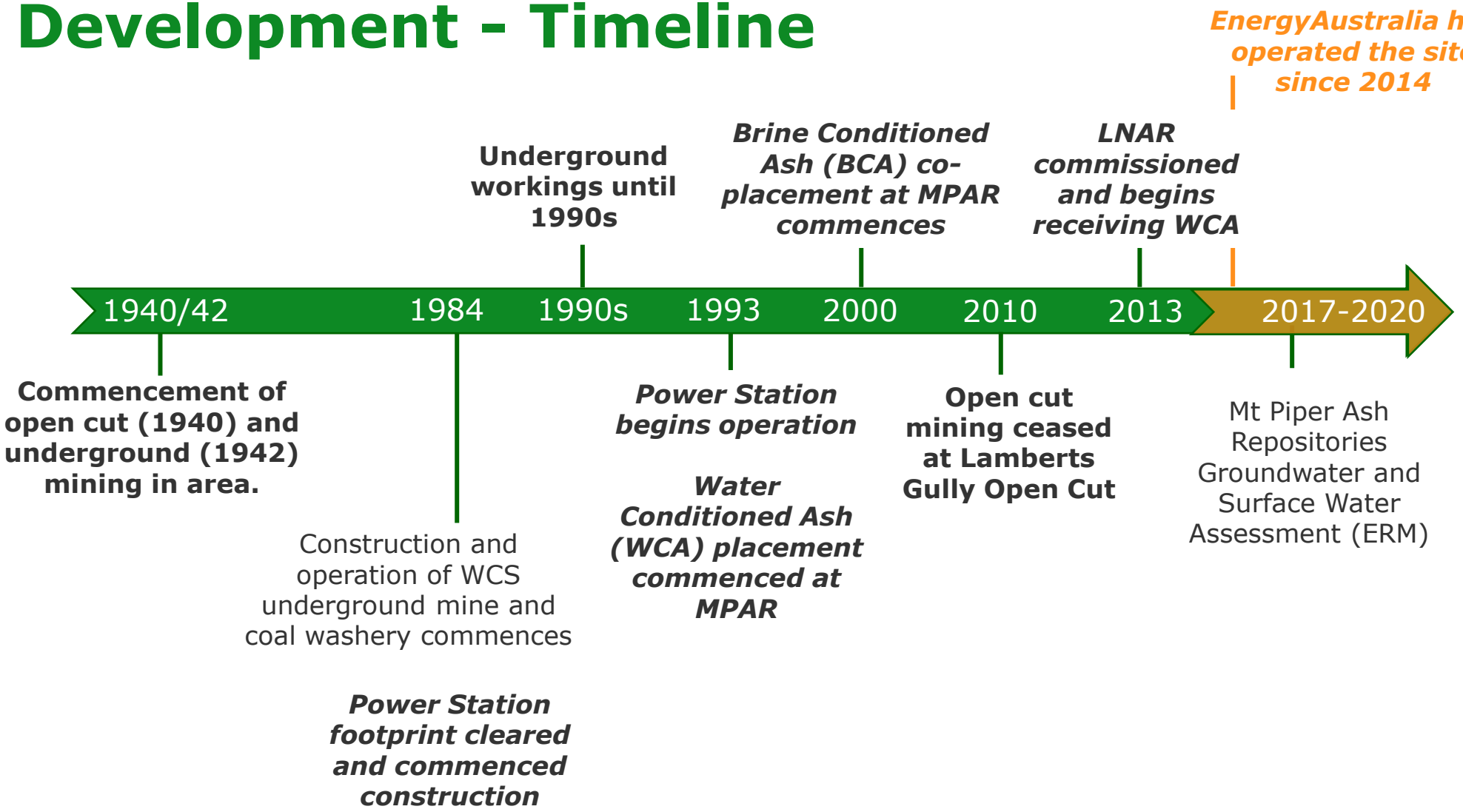
Power Station and Ash Repositories Development - Timeline



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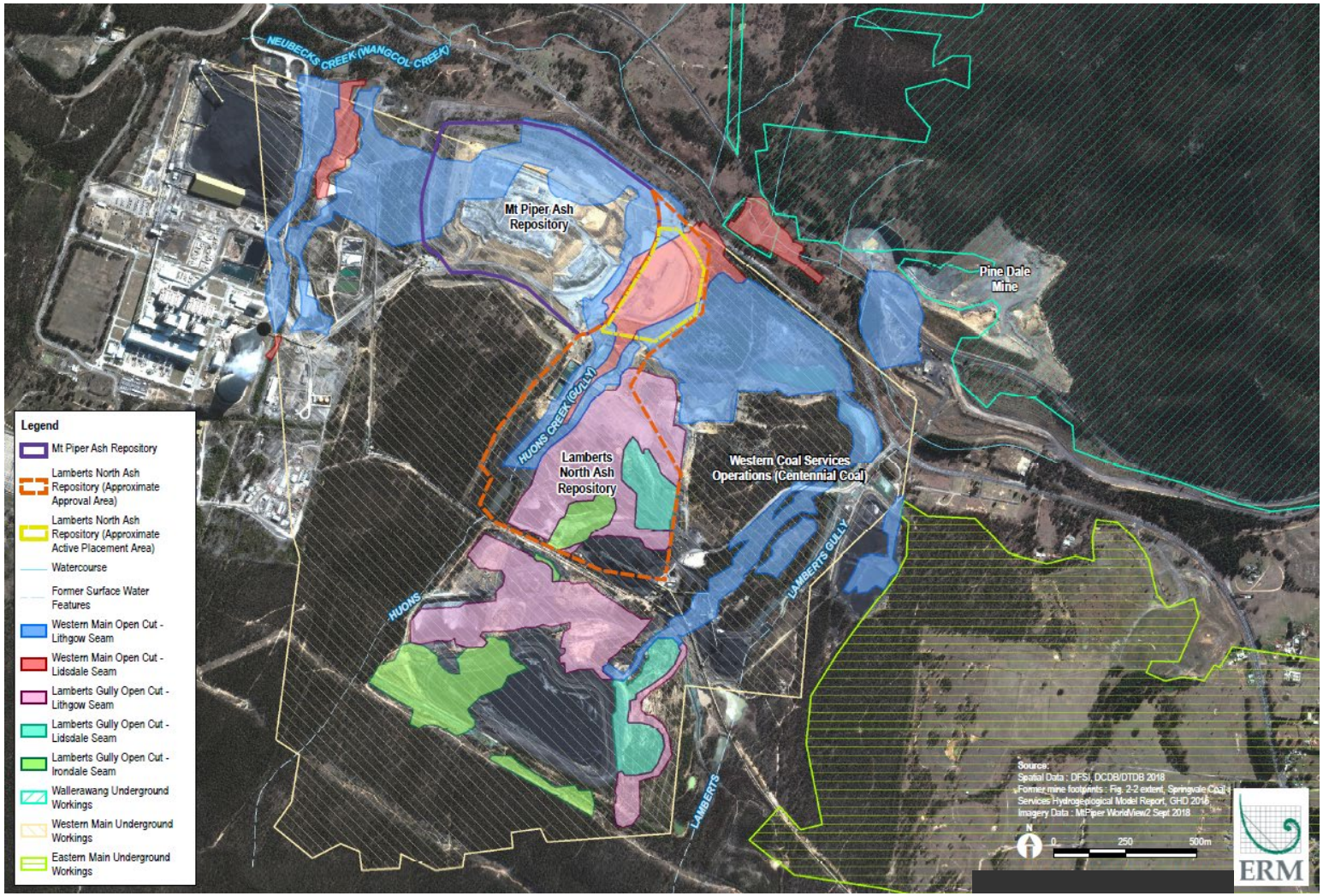
Historical Mine Workings



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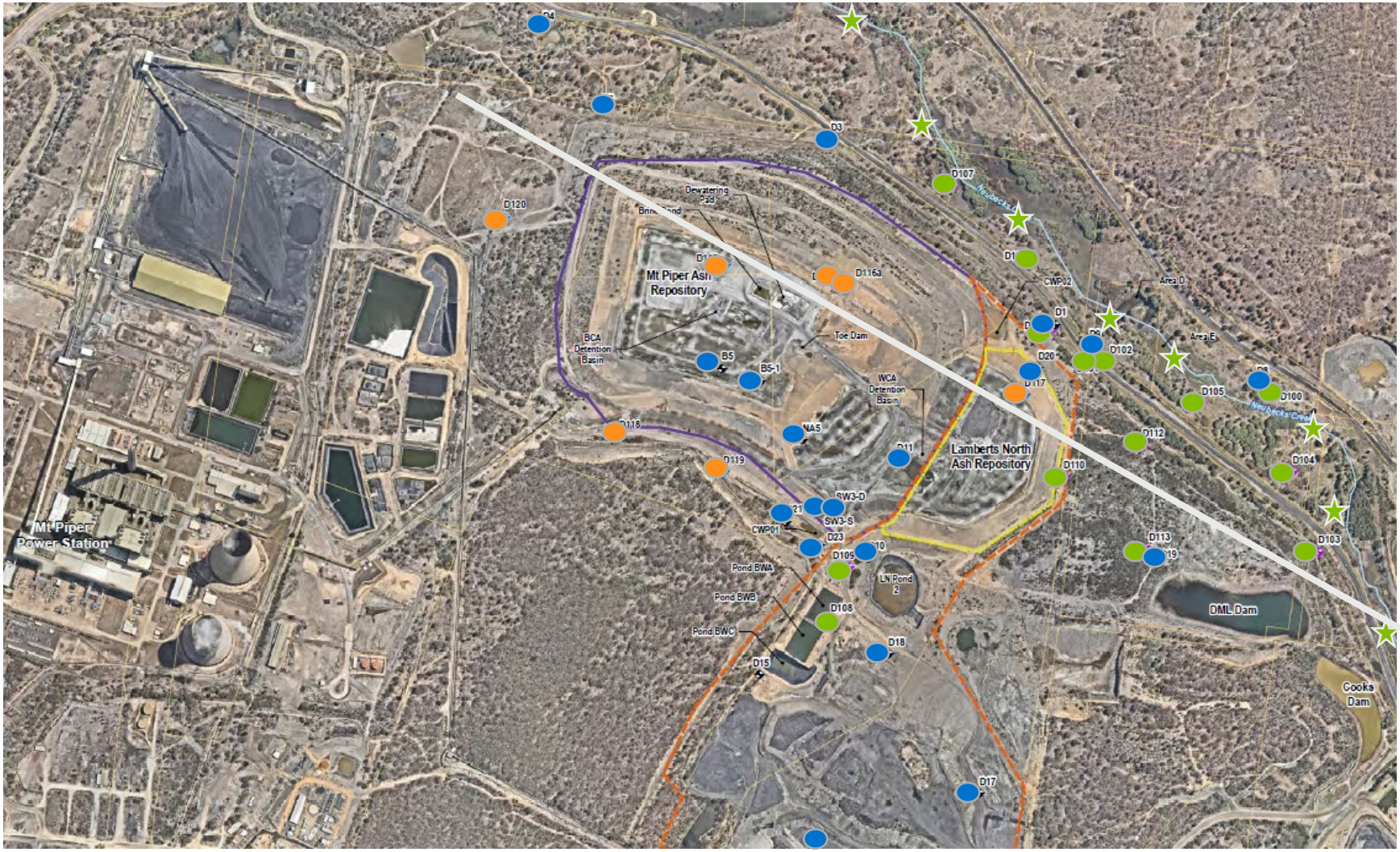
Conceptual Site Model (CSM) – Cross Sections



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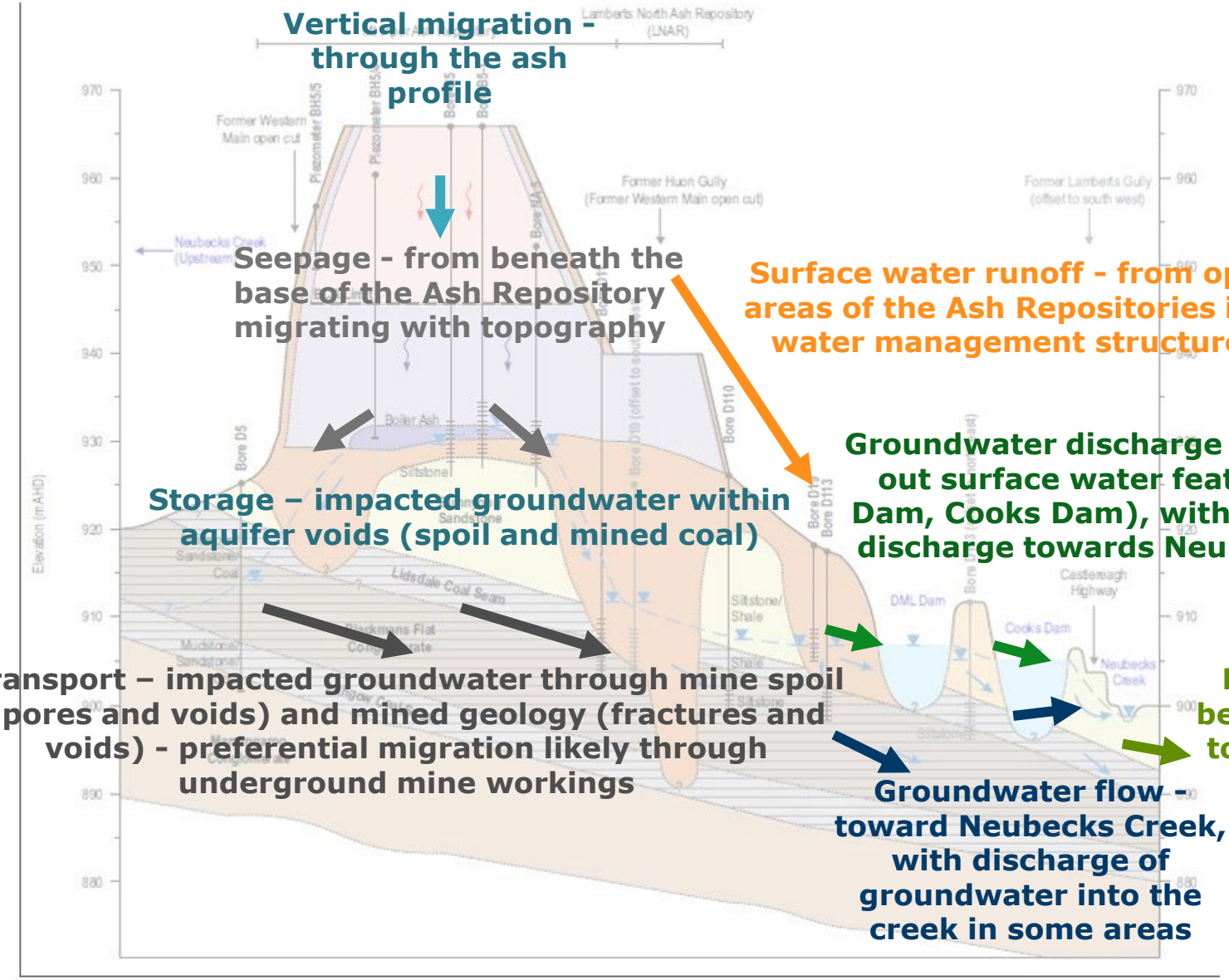
Summary of Conceptual Site Model



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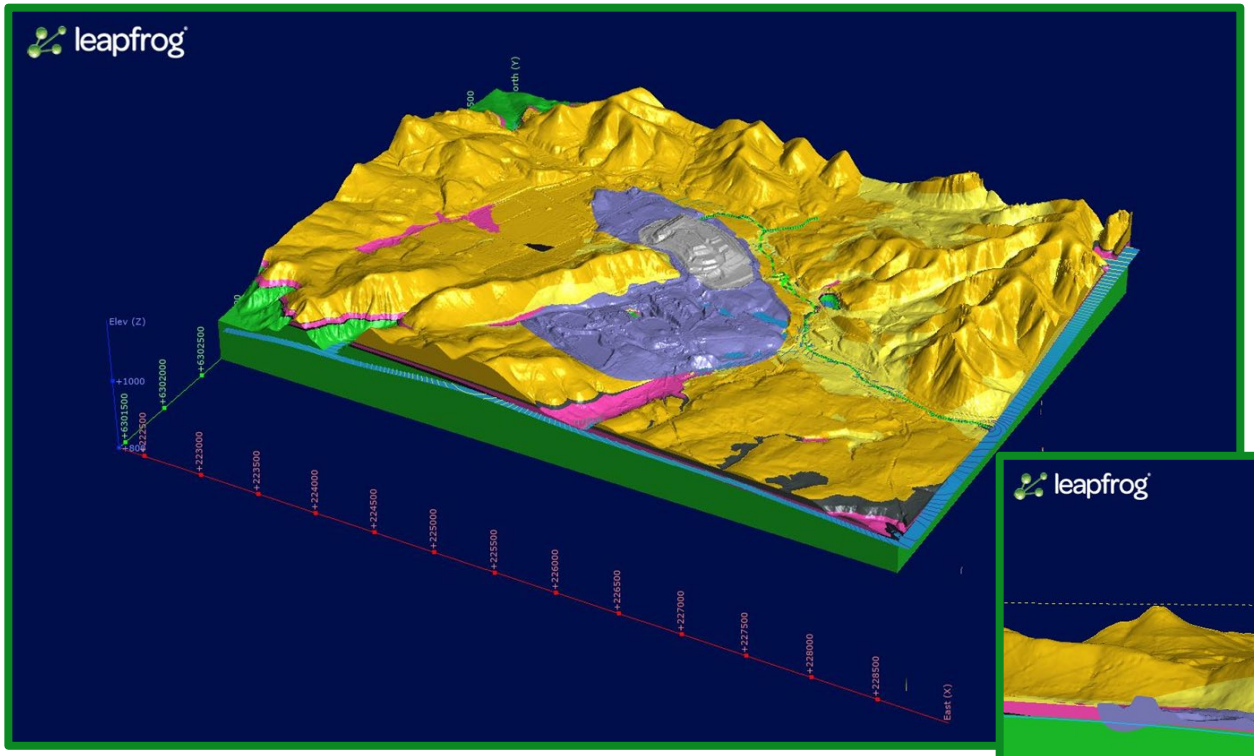
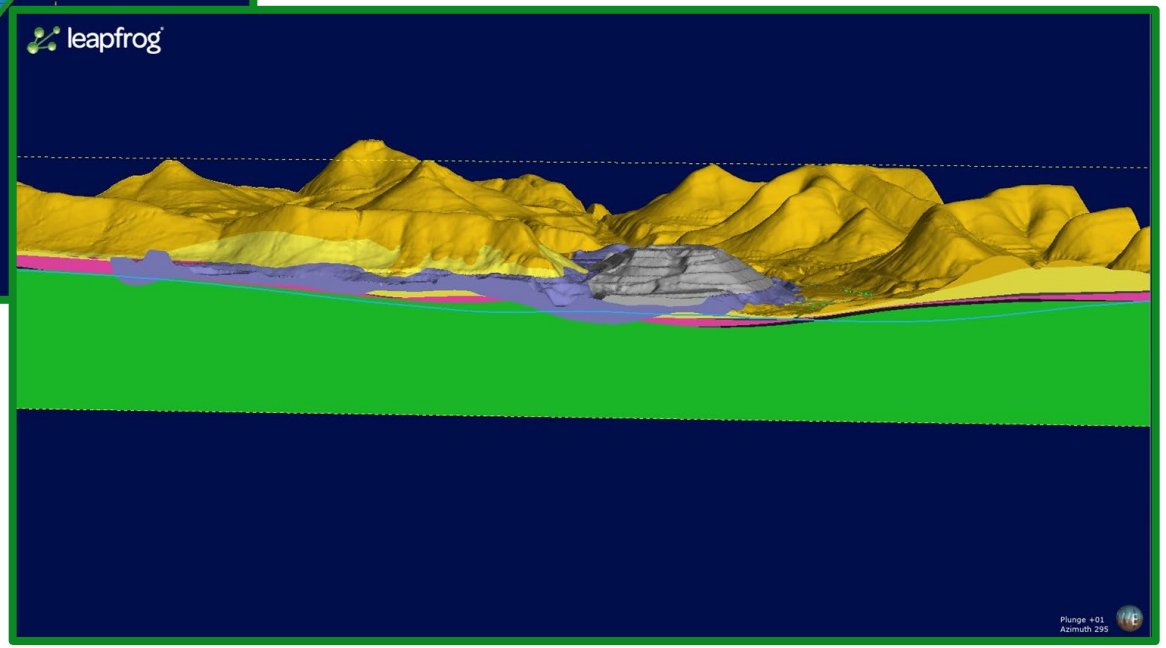
3D Geologic Model





- Bunnyong Sandstone
- Lidsdale Coal Seam
- Blackmans Flat Conglomerate
- Lithgow Coal Seam
- Marrangaroo Conglomerate

- Fill / mine overburden / spoil
- Goaf – collapsed workings

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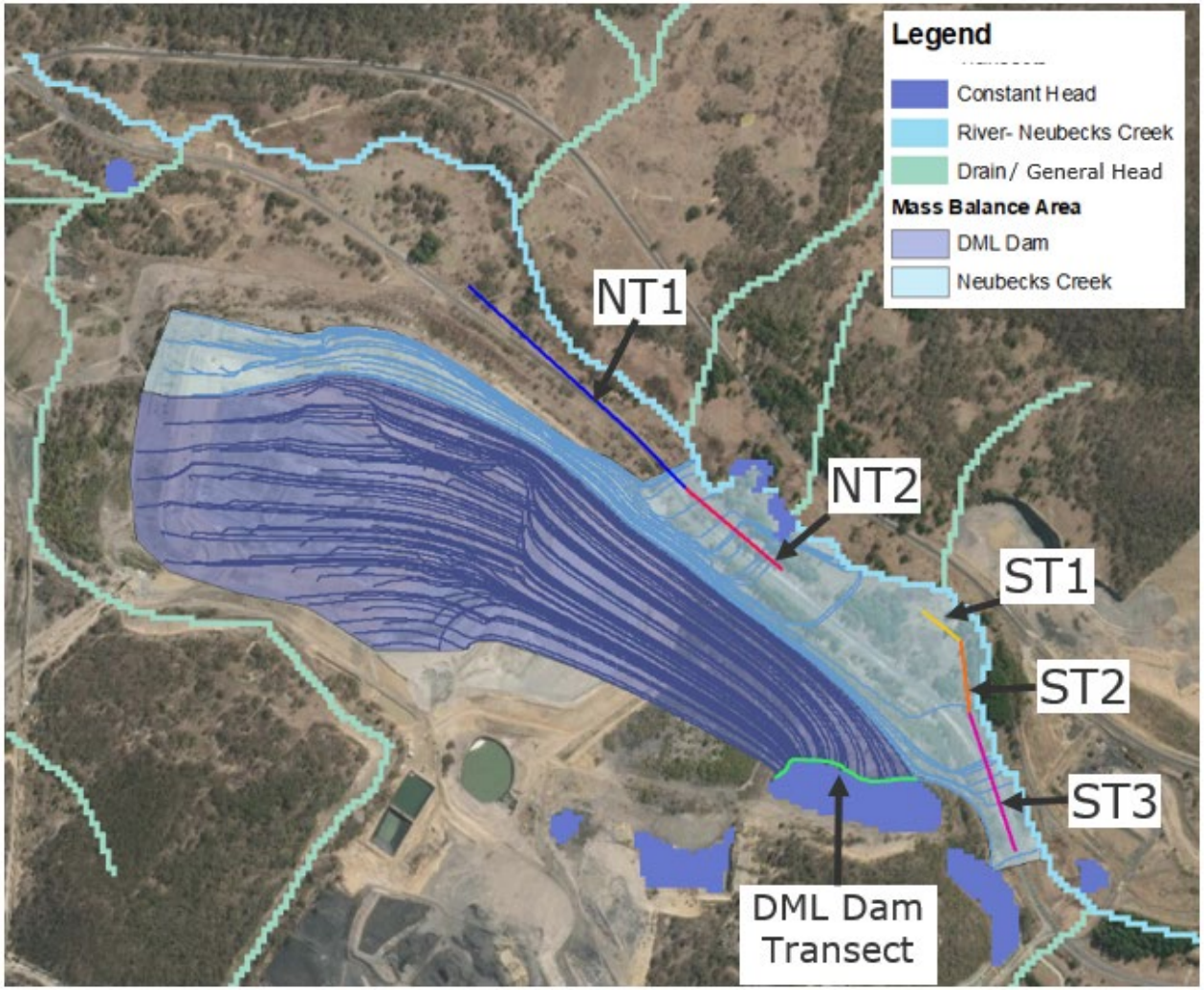
Numerical Groundwater Model – Calibrated Steady State Model Outputs



Proposed areas of mitigation – Southern Transects and Northern Transects

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Key findings from field work and modelling

Field work

- Impact to groundwater from BCA in vicinity of the Ash Repositories.
- Identified a need to conduct further groundwater and surface water monitoring and install additional groundwater monitoring bores.
- Solute migration vertically through the ash profile from BCA at the Mt Piper Ash Repository.
- Migration of impacted groundwater toward Neubecks Creek led to assessment of groundwater mitigation options.

Model Outcomes

- Modelled groundwater flow paths are consistent with field observations along Neubecks Creek.
- DML Dam and Cooks Dam are playing key roles in capturing groundwater within the site.
- Modelled flow paths and flow rates indicate an interception system is feasible along discrete areas of Neubecks Creek.

Groundwater Interception Concept Design

McMahon Services / Water Technologies

Concept Design

Objective

'The primary objective of the Concept Design is to materially reduce the migration of ground water with chemical composition exceeding environmental goals into Neubeck's Creek and the mitigation of associated environmental impacts evident in Neubeck's Creek.'

Scope

- McMahon Services and Water Technology have developed a Concept Design specifically focused on receptor control at Neubeck's Creek.
- The Concept Design has been developed based on available data and analysis performed by Environmental Resources Management (ERM).
- The Concept Design addresses the immediate objective and considers longer term objectives.

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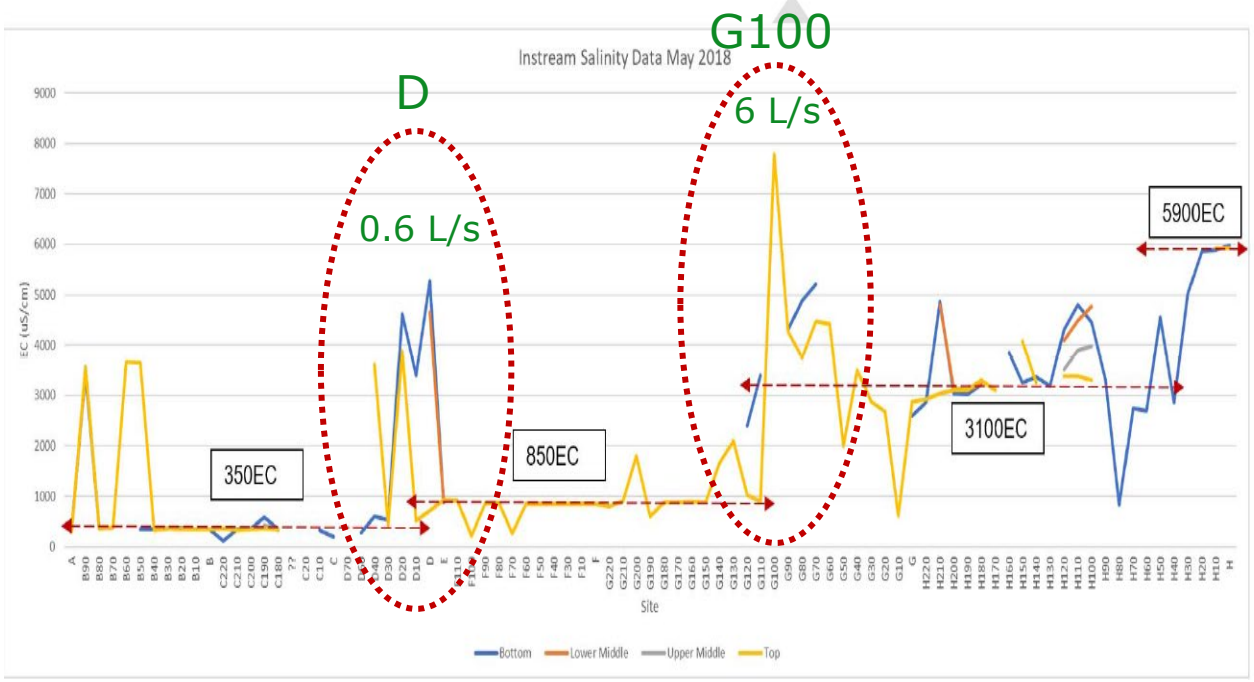
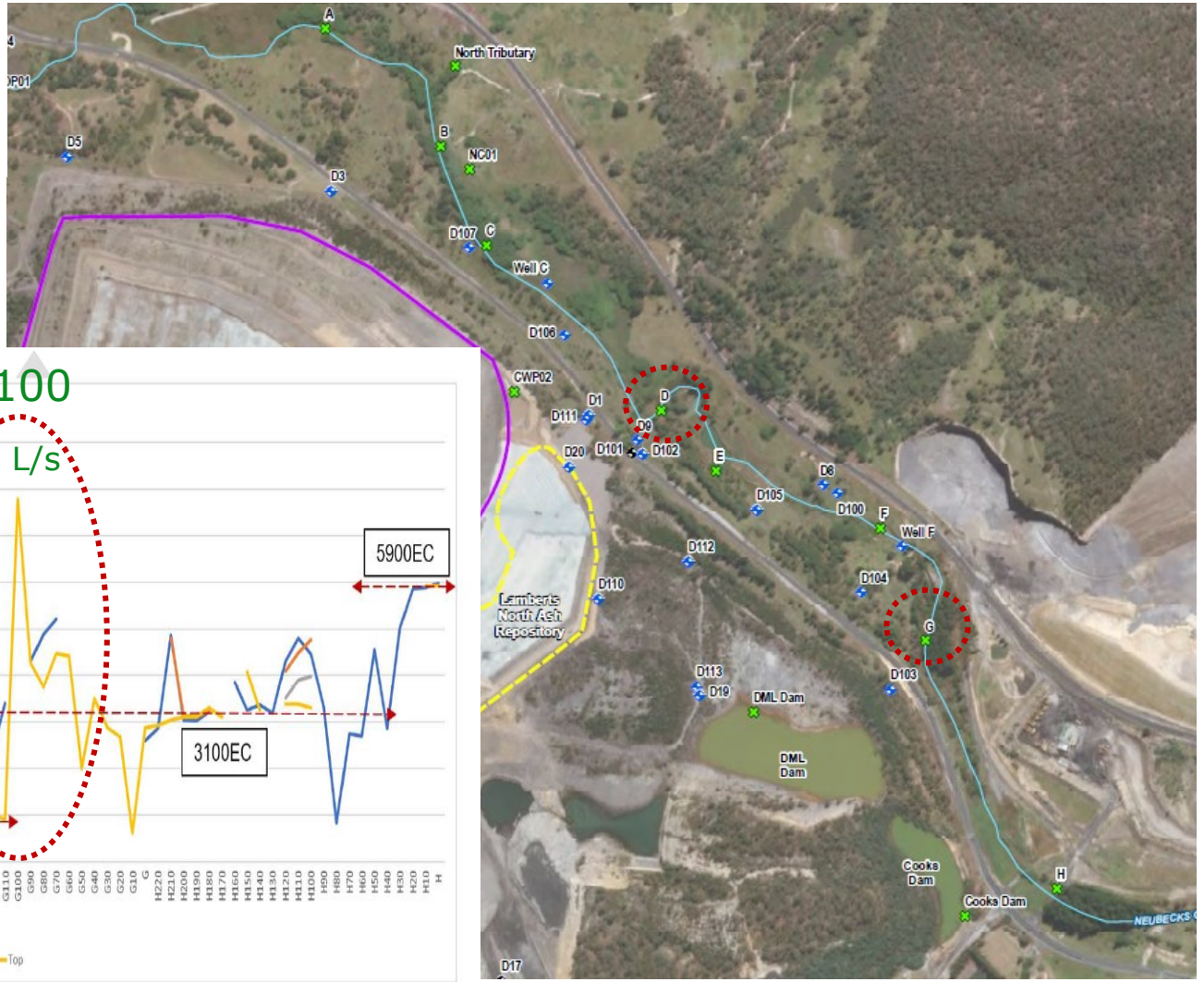
Where is the Groundwater Entering the Creek?

- Saline groundwater inflows occur at:
  - D, and
  - between F & G.
  - Input at H from is surface water from LDP6





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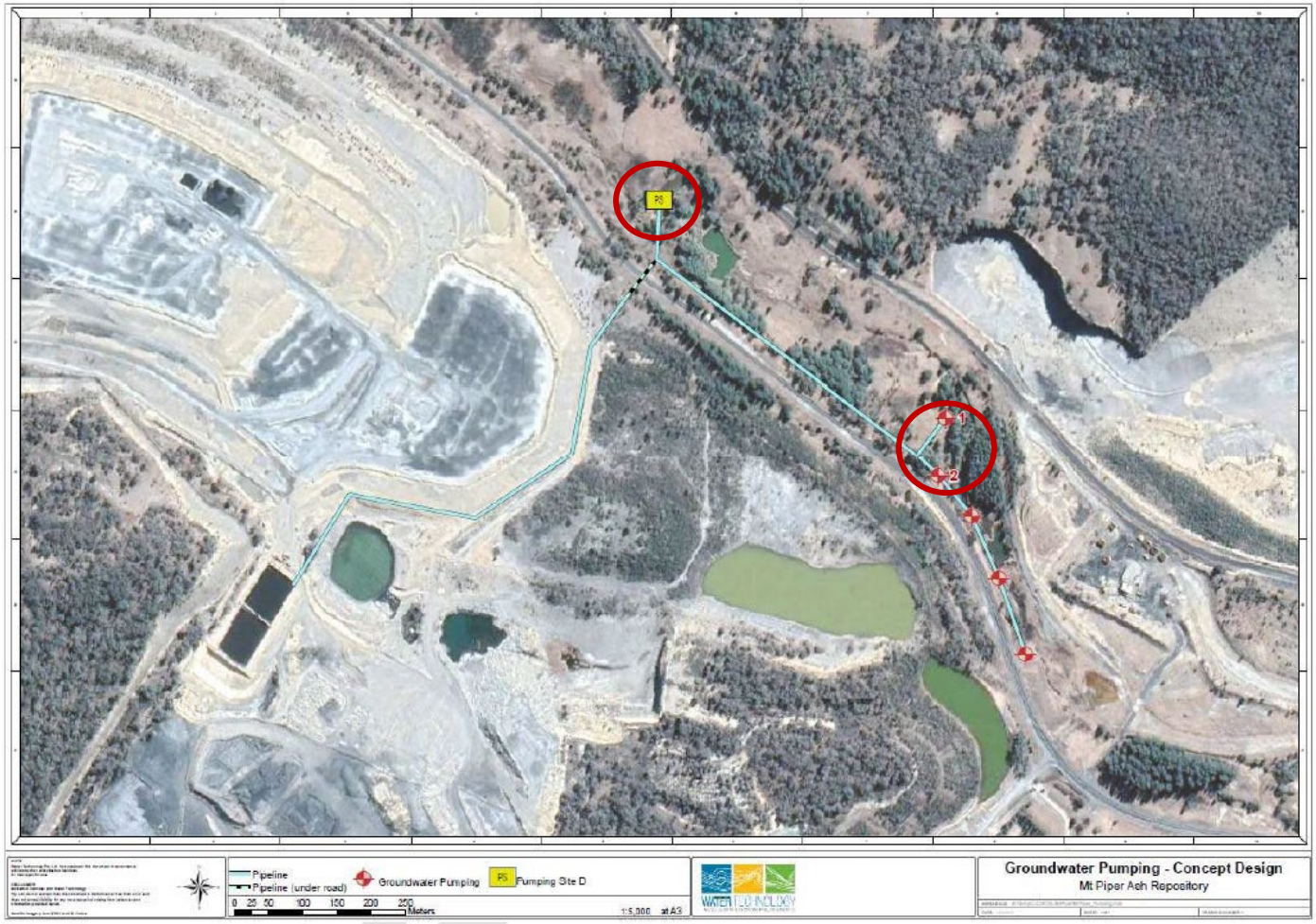
Groundwater Interception Solution and Layout

- Groundwater pumping bores (red and white dots) to intercept groundwater
- In-stream pumping at D (yellow square) to remove instream saline groundwater
- Pipeline (blue line) to transfer groundwater to
- on-site lined ponds for storage
- Via under-road crossing (black and blue dashes)
- Treatment.



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Outcomes

- Key outcomes are:
  - Significant reduction of saline groundwater inputs to Neubecks Creek
  - Rapid reduction once pumping commences (i.e. within days to weeks of pumping commencement).
  - Significant improvement in Neubecks Creek water quality
  - Pumped groundwater quality is likely to be in the order of 5,000 to 20,000 EC,
  - Pumping volumes up to 2 ML/d are anticipated.
- **Design informed by all data collected to date, but constrained principally by the instream data.**
- **The modelling, conducted after the concept design was documented, is consistent with the instream data and supports the choice of concept.**

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Detailed Design and Construction Program

- Additional detailed monitoring (surface water and groundwater) data collection around D and G100
- Additional subsurface geology and groundwater investigations at same locations
- Construct Production wells 1 and 2 near G100 and test.
- Implement instream pumping at D
- Construct pipelines, power
- Operate and monitor
- Review interception performance, and augment interception borefield if required.

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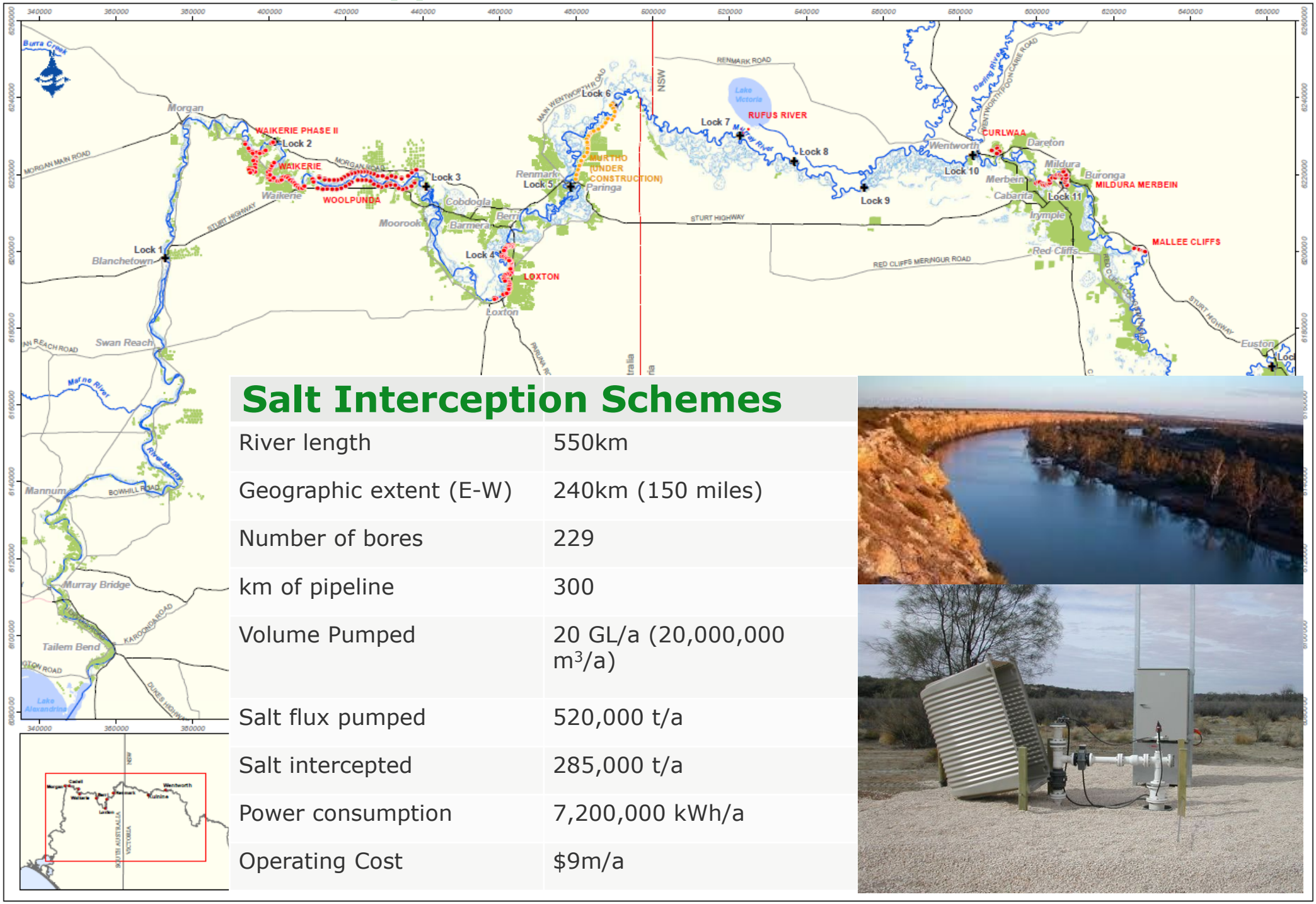
Tried and Tested Approach



Salt Interception Schemes

River length	550km
Geographic extent (E-W)	240km (150 miles)
Number of bores	229
km of pipeline	300
Volume Pumped	20 GL/a (20,000,000 m^3/a)
Salt flux pumped	520,000 t/a
Salt intercepted	285,000 t/a
Power consumption	7,200,000 kWh/a
Operating Cost	$9m/a

Job No. 10166 - 027
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FIGURE A4

Regulatory Approvals , Further Actions and Timeline

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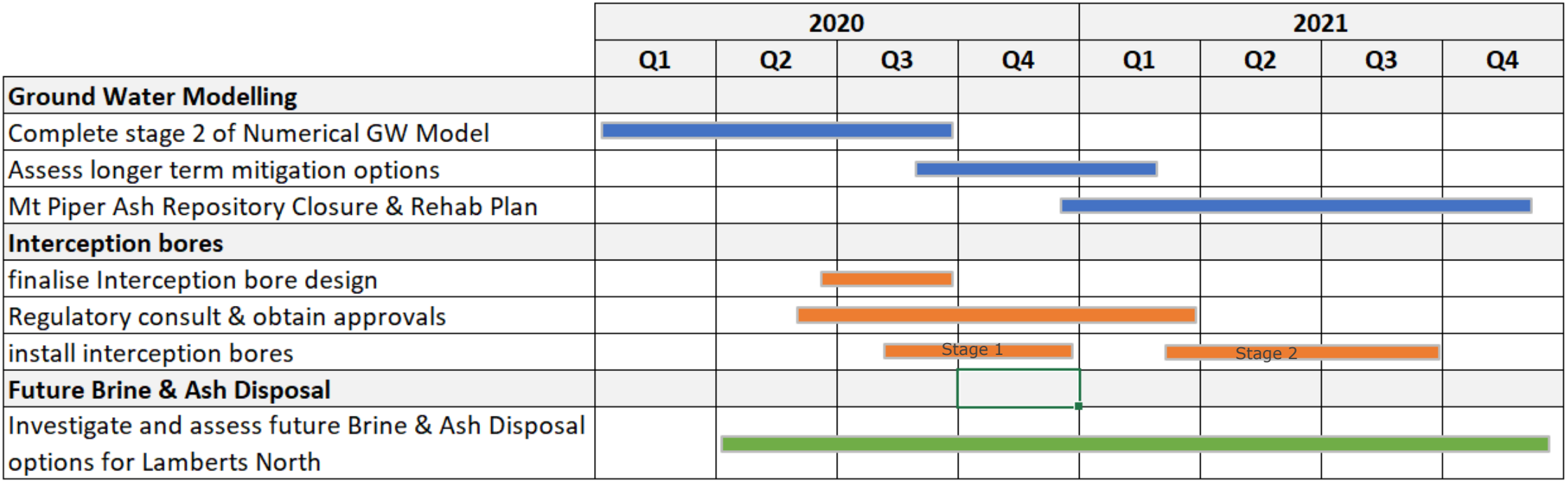
Regulatory Approvals, Actions and timeline

- **Indicative timeline**



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Key Messages

- EA is continuing to give its highest priority to completing the independent groundwater investigation and implementing reasonable and feasible management and mitigation options
- EA is currently engaging with EPA, DPIE and WaterNSW regarding the proposed mitigation solution. EA are committed to ensuring all regulators are satisfied the proposed works are appropriate
- EA is working to confirm approval requirements, which may include formalising the extraction bores and related actions via an environmental study condition on the Environment Protection Licence
- EA is strongly committed to continuing to work cooperatively with the EPA, DPIE and WaterNSW and other relevant stakeholders to address the legacy issues resulting from the design of the ash repositories in a way which meets regulator and community expectations; and
- EA will continue to keep the CCC updated.

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Q&A