

Minutes

Meeting:	Bowdens Silver Project CCC – Meeting 14
Date:	Wednesday 4 May 2022
Location:	Aden Hotel, Meeting Room, 1 Sydney Street, Mudgee
Time:	5.00 – 7.00pm (Scheduled) 5.03 – 7.58 (Actual)
Independent Chair:	Darryl Watkins
Attendees:	Blake Hjorth, Bowdens Silver (BH) Tom Purcell, Bowdens Silver (TP) Cr Robbie Palmer, Mid-Western Regional Council (RP) Tom Combes, Community Member (TC) Sally Dryburgh, Community Member (SD) Bradley Bliss J.P, Wellington Valley Wiradjuri Aboriginal Corporation (BB) Mick Boller, Lue Action Group Representative (MB) Phillip Freeman, Community Member (PF) Sonia Christie, Community Member (SC) John Lydiard, Community Member (JL) Anthony Pooley, Independent Minute Taker (AP) Nick Warren, R.W. Corkery and Co (NW) Guest Speaker
Apologies:	Nil

Action Items	Responsibility
NW to review possible influence of exclusion of 2019 rainfall data on outcomes.	NW
NW to provide justification for rainfall level used in low rainfall scenario assessment in the Surface Water Assessment.	NW
NW to review impacts to water users under low rainfall scenario assessment.	NW
NW to review extreme high rainfall scenario and what level of rainfall would be needed to cause overflow.	NW
DW to follow up with DPE regarding the deciphering of the submissions on the DPE website.	DW

Minutes	Action
<p>Welcome and meeting rules (DW)</p> <p>DW welcomed all members and particularly new CCC member Cr. Robbie Palmer as the representative of the Mid-Western Regional Council. DW went around the room and asked CCC members to introduce themselves.</p> <p>DW also discussed the meeting agenda</p> <p>DW requested that CCC members refrain from asking questions during the presentation and that as per the usual procedure they raise their hands and an ongoing list of names to ask questions will be worked through in an orderly fashion.</p> <p>DW tabled correspondence from the Mid-Western Regional Council regarding the appointment of Cr Robbie Palmer as the Council representative for the CCC.</p> <p>DW also tabled correspondence from Cr Alex Karavas stating he is not renominating to be a part of the CCC and his resignation from the CCC. Alex also thanked the CCC for the good work they do.</p>	
<p>Code of Conduct & Pecuniary / non-pecuniary interests (DW)</p> <p>DW reinforced the Code of Conduct and emphasised that the CCC members and guest speakers should respectfully engage with each other. DW indicated that we want an atmosphere of open and constructive discussion.</p> <p>There were no pecuniary or non-pecuniary interests identified for the meeting.</p>	
<p>Previous meeting 13 – Action Items (DW)</p> <p>DW reported back to the meeting that he is regularly talking to CCC members in between meetings on how best to improve the CCC meetings to ensure feedback on the project is provided to the community. These discussions are ongoing with CCC members, the proponent, and the Department.</p>	
<p>Bowdens Silver Project Water Supply Amendment – Response to Submission update (NW)</p> <p>Nick Warren from RW Corkery and Co provided a detailed 20-slide presentation to the CCC.</p> <p>NW stepped through the assessment behind the decision to be reliant on onsite water sources. Rainfall data used in the modelling assessment was based on data provided by SILO, an accepted source of rainfall data for</p>	

modelling assessments used by Government, CSIRO and surface water consultants. A key question from DPE was how viable is the project in periods of low rainfall, which was addressed in the assessment.

The presentation covered the following areas.

A Submissions Summary

- ❖ Rainfall data and modelling
- ❖ Water Security
- ❖ Water Availability to Users
- ❖ Groundwater drawdown
- ❖ Groundwater Licensing
- ❖ Water Management
- ❖ Other Matters
- ❖ Koala Survey Update
- ❖ Next Steps

A copy of the slide presentation is at Attachment A

Q&A and Discussion

The Chair thanked NW for the detailed and informative presentation. It was very technical so we will take time to get through everyone's questions.

MB In reference to the map in slide 17 –how many recorded koalas have been in the mine site in the last 5 years?

TP 6 within the mine site. 2 outside of the mine site from the survey and 3 from the public (not part of the survey).

BB – Koalas are now an endangered species whereas before they were vulnerable.

DW – I want to bring this meeting back to order. I have a list of CCC member's names here who have been patient through NW's presentation so I will abide by this list before we have any further discussion. I will now proceed in order of those questions from CCC members

BB - Why was the public exhibition period so short? Meetings with my stakeholders to obtain their feedback are hard to organise, why such a short timeframe?

NW – This decision is made by the Department of Planning and Environment (DPE) - we have no influence on this decision. DPE representatives have already stated in previous CCC meetings 'if you provide a submission, we will consider it' – right up to the end of their

assessment and include it in the DPE assessment report that is presented to the IPC.

BB – some people have lost confidence in the assessment process.

MB – The brochure from Bowdens was received 24 hours before submissions were closed. How do the community get to make a submission and only receive information 24 hours before they closed?

TC – The brochure was posted on 4 April – 2 days before submissions closed on 6 April.

TC - I know you had ‘virtual meetings’ but some people didn’t know about the process and then your brochure arrived.

BH – we sent over 1500 brochures out, but the Post Office had logistical problems with the mailouts and sent over 130 to the entire Botobolar run, missing areas we wanted it to go to. I take your point we could have got it out earlier, but the Post Office let us down. In the end, we had no luck with the Australian Post Unaddressed Mailout team or the Mudgee Branch and had to get Rylstone Post Office to save us and we sent another lot out. The role of people in this room is to access community members and notify us of any problems before it gets to this forum. Ultimately, this committee has known about the amendment since December 2021 and our role is to share that information.

DW – advised that this committee can’t resolve issues with the post office and delivery of mail. Therefore, we should move on.

PF – stated that he only got his brochure 3 days before submissions were due and asked why Bowdens doesn’t delay the date that submissions are due?

BH - advised that it is not up to Bowdens to change the date of submissions as the Department sets the date. Bowdens have no control or input into the public submission process.

PF - stated that you acknowledge the error but no action to resolve the matter.

DW - explained that it is not the proponent’s responsibility rather it is the Department’s responsibility to inform the community of the exhibition process.

PF - felt there should be some form of communication from Bowdens to the Department saying there were problems with the delivery of brochures, and we need an extension of time.

BH – added that Bowdens also put advertisements in the local paper advising the community – though they were not required to under the exhibition process.

TC - said he had spoken to the departmental representative, and they had stated the proponent are under no obligation to respond to public

submissions after submissions closed, but he appreciated that BH had made the commitment to respond to all submissions and that should solve the problem.

NW - said he was unaware of a project in which proponents wouldn't respond to submissions.

BB - asked about the mentoring program mentioned in the presentation – we gave a response to mentoring – where is the program in relation to aboriginal groups?

BH - we are still waiting on some feedback from registered Aboriginal groups regarding our request to feedback on the program. There have been suggestions to have a roundtable meeting while another group gave us feedback that the programs sounds great. Indigenous Technical Mentorship program – in broad terms the proposal is two young aboriginal people who are interested would work with aboriginal elders and site project staff and archaeologist to curate items of cultural significance as part of the retrieval process. We have received some submissions and we are waiting for others. We think the next steps are to sit down and work out a way forward.

BB - indicated concern about non-Wiradjuri people accessing our heritage.

BH - once we have all the feedback we will sit down with relevant representatives, and the Project archeologist and agree on a plan for a way forward.

SC- stated that the elephant in the room is the water amendment and the change from pipeline to on-site – everyone has submission fatigue. Ever since Kingsgate the problem has been water. Pipeline is not so bad. Now the amendment has been put forward everyone is concerned. There has been a breakdown in communication from a pipeline to now no pipeline. A new Environmental Impact Statement (EIS) is required to alleviate the concern regarding water.

DW - stated that this matter has arisen before in CCC meetings and clarified with the department at previous meetings and the Department stated that there was no need to re-do the EIS.

SC - stated that she understood that, but the big issue was water and now with this amendment, it has changed from a pipeline to onsite water.

SC - further complained that in the response to the submissions the company uses personal names, and most companies don't use names. As in 'Tom Combs said' ... and then a response.

NW - the Departments now require a list of names and a register of how their comments had been addressed.

SC - some people wouldn't like to have their name mentioned and then a dismissive response straight after the submission.

NW - is a matter of process. We don't use names in that manner. First time I've had that feedback.

BB - the aboriginal community also finds the use of names inappropriate.

Rainfall Data

SC - questioned the assessment data for the water amendment.

Mudgee and Rylstone actual rainfall data is not reflected in your rainfall data.

NW – we use SILO data – that is the accepted industry standard. SILO is a database of climate data from 1889 to the present.

SC - yes but you state that over the summer months there is an average of 75 MLs a month. You have to question the data. We are saying only it is only 45 MLs. a month in this area. Also, why did you not include 1888 and 2019 data -these were two of the driest years?

NW – we didn't use 2019 because the assessment was concluded by then and we did not have that data. We look at the data from the lowest % years – so we conclude that even in the low years there will be sufficient water for 95% of the time.

SC - missing out on those two dry years skews the data. You state that there are no more than 3 years with less than 400 MLs but our grazing charts indicate that is not the case. There is value in on-the-ground local data.

MB - I have data from 1987- 2019 and my data indicates that during that period in 14 years there have been less than 450 MLs over the summertime. 66% of the time we are under your average. My rainfall data shows that we have severe winter shortfalls.

DW - suggested MB to put those figures into a submission and then the company to address them.

MB – I have already done that.

NW - what we are modelling is the full range of rainfall levels across 100+ years so we can understand the risk to the community and Lawsons Creek but also constraints to operations in any dry year. Would Bowdens be able to continue to operate the mine?

If we get a low amount of water, could we operate? Yes – we are aware of the risks of relying on rainfall. We have contingency plans/security for water. We can operate – the assessment is based on modelling that suggests impacts to the broader community will be minimal – we are using the best information and modelling available. The risk is limited.

Modelling is a complex process that has been tested.

DW - to be fair, this discussion is important, water security has been the major concern of this group from the time I have been involved since 2017.

TC – on SILO figures – has anyone used rainfall records provided by local landowners as part of this modelling?

NW - No.

TC - the rainfall collection points you are using are too far away from the site up 30 or 40 kms away (refer to slide 6). Why won't you incorporate local information?

DW – they are using the SILO information which is what the Department recommends and bases its assessment report on. I assume there is a process you need to go through to adjust the SILO information.

TC - it is the process and modelling people are concerned about.
DW – That is a matter for the independent arbitrator, and I am sure you have put forward a submission regarding this matter, and further the Department have also confirmed they will be conducting a Peer review of the water pipeline amendment.

TC – Yes, we have put that into a submission.

SC - the water amendment information says during dry periods – Lawson’s creek pools will dry up. There is platypus down there. They will be affected.

NW - it doesn’t say they will dry out.

SC – no studies have been done on the platypus. The last meeting, I quoted directly from the amendment. It said the holes will dry out.

NW – no it said there will be reduced water, not dry out.

SC – is it magnetic imaging that you have used that has led to creating the maps?

NW - Yes

SC - Moving on to Koalas? What is the total area of the on-site offsets?

NW - 795 hectares

SC - the problem is the proximity of those on-site offsets, fauna will be affected by noise, vibrations, light impacts - has that been factored in?

NW - all impacts are considered. These offsets will be secured for conservation purposes in perpetuity.

SC – you are going to clear critically endangered box gum, if you are a koala or a possum do you want to be near this mine with the dust and noise and vibrations etc?

JL - if you knock out a hectare, why don’t you have to replace it with a hectare?

DW - again in fairness the company is working with the system as outlined in the assessment process regarding offsets.

NW - offsets do not operate on a one-to-one basis. There is a complex calculation required depending on the site conditions that would be impacted.

MB- how many Koalas have been identified on site?

TP - 6 on the mine site, 2 on the property, 3 nearby.

TC - included a detailed koala table in his submission.

TC - what is going to happen to the koalas?

NW – The surveys we have done indicate that Koala are present in low densities. During operations there would be a process to ensure that no koalas were hurt in any mine clearance or construction. Koala will follow the vegetation corridor established to either side of the Mine Site.

Water

JL - Does your water licensing include carryover provisions?

NW - depends on what the nature of the licence is, whether it is high security or general security license.

JL - the big figure in the table is that you are using 856 MLs a year from rainfall and runoff but your rainfall estimate and harvestable rights are much lower.

NW- Water captured within disturbed areas such as the open cut pit or a sediment dam do not require a licence as the purpose of the storage is for pollution control. Water that falls on undisturbed land is clean water and is treated differently. That would normally flow to natural environments and in most cases needs to be licensed.

JW - how much water would a wet year deliver in a tailings dam?

NW - I don't know those figures off the top of my head.

JL - what happens in a dry year? The surface water figures you have used seem too high for a dry year.

NW – WRM (Consultants) have modelled surface water in a dry year.

JL - what would 2019 look like on your modelling? The problem is that the figures do not reflect a dry year because most of your water is supposed to be coming from rain.

Action Item

NW – I will determine the justification for a low water scenario and come back to you.

JL - I would like to see a 2019 low rainfall year result compared to your data. TC – my question is if you fill your dam 180 MLs. Then you pump it up to the tailings dam and then refill the dam with another 180MLs. That is where people get worried. You need 856 MLs – you are going to use all of that 856 and prevent it from going to the creek.

NW– These dams would have a spillway like any farm dam on your properties. If the dam is full, you are at capacity – then any excess water overflows from the dam to the creek.

JL - but you can intervene with a pump and the water will never get offsite.

NW- no, you are not continually pumping it into the system. The process uses a certain amount of water during the day. But you can't use more water than you need.

Discussion ensued on harvestable rights for water use.

Action Item

NW to review impacts to water users under low rainfall scenario.

NW to review rainfall levels that would cause containment dams to overflow

DW – interrupted the discussion to obtain agreement from the CCC members to extend the meeting time to continue the discussion.

TC - circulated two photos.

'Brown' one from September 2019. That year we only received 120 MLs of rain in 9 months.

'Green' one is from 6 March 2020. It had started to rain in mid-January – but because of all the dams we will never see the runoff.

You are planning to capture 740 MLs in a low rainfall year.

NW – we are taking the low rainfall years and the modelling question on notice.

TC - it will destroy Lawson's creek. won't you have less rainfall available for dust suppression in a wet year?

NW- The application of water for dust suppression is based on a rate of application over a given surface area. This is an accepted industry standard.

JL - there is a problem with the figures.

NW - if we don't need the water, the clean water will overflow and return to the creek.

JL- is the tailings dam going to have a bituminous liner over the entire surface?

NW – The process described in the Submissions Report is that during detailed design for the Project. We will start with a clay lining and the use of bituminous geomembrane will be considered depending on seepage estimated in detailed assessment. If we don't need to layer the whole tailings dam with a bituminous geomembrane in order to achieve acceptable seepage rates, we won't. This is the standard process. EPA said it was acceptable. We need to satisfy our seepage targets.

SC – In regard to the Tailings Storage Facility (TSF) thickening in the TSF must increase seepage. Is that correct?

NW – As tailings are deposited, they will settle and consolidate. This process causes the moisture in the tailings to rise to the top. Paste thickening removes the water earlier, so there is less water within the TSF. In addition to this we have nominated to manage the depth of water in the TSF at 0.5m. It was previously 2.0m. More water will be taken from the TSF for use in processing and there will be less seepage occurring.

NW to expand and respond accordingly

DW – Due to time constraints as it is now 7.30 pm, I'm going to invite CCC members to put further questions on notice. Please send them to me via email. Please also remember BH is always available to answer questions at any time.

SC- I might save my questions to ask in person.

DW – if you send me the questions - we will get the answers for you.

MB - when I looked at the DPE website all of the questions, answers, submissions and responses are all jumbled up.
DW – Yes, I agree. I spent quite a bit of time researching the submission responses. I will take this up with DPE

Action Item

DW to follow up with DPE regarding the deciphering of the submissions on the DPE Major Projects website.

BH - questions on notice would be valuable as the process is at a progressed stage.

TC - most of the questions are in the submissions. People are concerned about the water issue, and we await the response to submissions. We think there are errors in the water plan and the input into modelling has been incorrect. We are concerned.

TP - that is why we do peer reviews.

JL - there is a statement in there that we get 75 MLs per month. We only get 55MLs.

Bowdens Community Consultation Update

BH – Due to time constraints, I want to reiterate that we are always available to answer questions in between CCC meetings.

DW - also noted that the virtual community consultation is on the Bowdens website and is a good resource so please pass this on to your stakeholders/contacts.

BH - we are always available to provide information, answer any questions, or clarify any concerns.

CCC Member Communication with the Broader Community - Feedback

DW - as is custom and practice at this forum I will go around the table and ask what feedback you have received from your stakeholders/contacts/community regarding the project, the previous minutes etc.

JL - It's all to do with water. There is none in the village. So, everyone sinks a bore. Most aren't registered but lowering water levels in bores is a major problem.

TC - you are not using us as neighbours, we want to get this right. External water source was the original plan – now you have changed the game. If we lose the water, we are bugged.

BB - there has been a loss of confidence about the whole submission response process.

MB – whether the fault is with the department or the proponent, 1500 people responded to a pipeline proposal and we have been duded because that is not what we are looking at now.

PF– we were given false security with the pipeline proposal, I think it was a calculated view to change the proposal. I don't think they were ever going to build the pipeline. The company needs to be open and transparent.

SC - I'm hearing mixed responses, brochures in the mail arrived late, the bonsai guy was moved out of that building and now it is empty. Glossy brochures make people think 'oh the mine is going ahead' and it is not approved yet. Then there is the issue with the pub.

DW – No the pub is not relevant to this process.

SD – Mudgee's business perspective is that farmers need water and then they spend money in Mudgee. Water is the big issue. People are very concerned about water; it is the big issue.

RB - Generally, a lot of people don't know I'm on this CCC. What I hear is support for jobs the mine will create versus water, impact on farming, koalas, and the environment. What I'm taking back to the council is the water issue, going from a pipe to onsite water, concerns regarding data and benchmarking, that locals would like their data to be considered, concerns about the submission process, and the small amount of time people had to respond to the amendment.

DW - Robbie, good thanks for your time – you and anyone else can get information and also, I understand that you recently had a site visit.

NW – We have reached a point where most NSW government agencies are satisfied with the project. What we have proposed now is what we want to build. I'm looking for feedback on the issues that Bowdens should, in your view, be managed carefully should the project go ahead. Can we go around the table?

JL - Water

TC - It is too close to the village within 2kms. Water is a major problem. Destruction of Lue. Because you can't change the location of the project.

DW - it might improve Lue or change it for the better?

TC - people live in Lue because it is like Lue. Put in a mine like that it changes. I don't want it to change. If it could go for 60 or 100 years maybe it might be different but this project only lasts 16 years.

JL - because of the suspect modelling that equals uncertainty, more dust, vibrations, changes to water, and light.

BB - if it does get over the line, the end of life of the mine but what we are left with is a big hole in the ground, fill it in.

MB - I've witnessed towns like Bylong, Ulan, and Wollar all the promises of new shops and businesses won't happen, can't see the village surviving, the school will have problems, I'm worried about dust, I have a bore 3 kms from the mine and no one from SVL has asked to look at my bore, without it I wouldn't have survived 2018 and 2019 and I think your water assumptions are not accurate.

<p>PF - if everyone has a castle and the castle is devalued because of Bowdens then everyone is a loser. You must take local water figures to resolve water concerns.</p> <p>SC - mental health issue for the community, after the drought another burden for people, Woodlawn, Sunny Corner, Captains Flat – abandoned mines, there will be seepage from the TSF. Is the bond enough? mining companies go bust and get bought and I worry about the people in Lue.</p> <p>SD – I note the time difference, TC’s family has been there for generations, and this is a short timeline mine - seems a disproportionate impact.</p> <p>RP– rehabilitation, what is the plan? that is very important, for the medium and longer term plus water and dust.</p>	
<p>General Business</p> <p>DW thanked everyone for their time and patience this evening. We have gone over time however I believe these have been important discussions. As is the usual process I will contact you all regarding the possible next meeting. I note your feedback that we should meet sooner rather than later. I will have discussions with the proponent, the Department, and you as CCC members and come back to you with a clear way forward on the next CCC meeting date.</p> <p>The meeting closed 7.58pm.</p>	

BOWDENS
SILVER



R.W. CORKERY & CO. PTY. LIMITED

Community Consultative Committee

Bowdens Silver Project

State Significant Development SSD 5765

Water Supply Amendment Report Submissions

4 May 2022



- ❖ Submissions Summary
- ❖ Rainfall data and modelling
- ❖ Water Security
- ❖ Water Availability to Users
- ❖ Groundwater drawdown
- ❖ Groundwater Licensing
- ❖ Water Management
- ❖ Other Matters
- ❖ Koala Survey Update
- ❖ Next Steps



Overview of Amendment

- ❖ The proposed amendment involves:
 - removal the previously proposed water supply pipeline as a Project component;
 - amendment to the Mine Site layout to support the proposed integrated water management and supply strategy; and
 - amendment to the alignment of the 500kV transmission power line to reduce the visual impact of the infrastructure.

- ❖ Outcomes of the amendment include:
 - removal of the water supply pipeline and reliance upon on-site water sources;
 - reduced water use requirements by on average 390ML per year; and
 - better environmental outcomes in terms of land disturbance, construction activities and environmental management.



Government Agency Submissions

- ❖ Biodiversity Conservation and Sciences – Noted that we have incorporated their comments and recommended matters for conditions of consent.
- ❖ Environment Protection Authority – No further comments apart from previously recommended conditions of consent.
- ❖ DPE Water (NRAR) – Noted that Project will have water supply security including during low rainfall years. Recommended matters for conditions of consent.
- ❖ Resources Regulator – No further comments.
- ❖ Heritage NSW – Agreed with approach proposed for mentorship program.
- ❖ TfNSW – No further comments apart from previously recommended conditions of consent.
- ❖ Council – Noted the strategy to address water supply and management as a positive outcome and water supply and quality remains a high priority for the region.



Public Submissions Summary

- ❖ Final submissions were received today and are being reviewed.
- ❖ A total of 261 submissions (public and organisation) were received that are split as follows
 - 33 supporting (3 in Lue / 4 in Lue and Surrounds)
 - 217 objections (24 in Lue / 49 in Lue and Surrounds)
 - 1 commenting (Monivae)
- ❖ Many submissions did not comment on water supply amendment but reiterated previous objection themes.
- ❖ Matters raised that relate to the water management and supply amendment focus on issues such as water supply reliability, water availability to existing users, Lawsons Creek, water management for dust suppression and the TSF amongst other matters.
- ❖ Additional feedback on the powerline alignment was also provided in some submissions.



Rainfall Data & Modelling

- ❖ Scientific Information for Landowner's (SILO) that utilises observational data provided by the Bureau of Meteorology (BoM).
- ❖ Interpolates observational data to generate a continuous daily time series of rainfall data at grid points across Australia (5km x 5km grids).
- ❖ Industry standard source for daily climate data used by hydrological consultants, research agencies (CSIRO, MDBA) and State agricultural agencies.
- ❖ SILO provides a robust and valid dataset that is used across a range of applications and provides accurate reflection of conditions that may be expected.
- ❖ SILO dataset used for the Surface Water Balance Modelling utilised (where available) observational data from:
 - Lue (Bayly Street)
 - Rylstone (Ilford Road).
 - Mudgee (George Street).



Rainfall Data & Modelling

- ❖ SILO is a scientifically robust dataset that reflects Lue's rainfall distribution using all available information.
- ❖ SILO interpolation methods remove errors arising from data substitution or assumptions based on incomplete observation datasets.
- ❖ SILO data closely matches recorded low rainfall years.
- ❖ DPE Water has reviewed the assessment for the Project and has no concerns regarding the use of SILO data.



Water Security

- ❖ Site water balance modelling provides the most accurate reflection of conditions that may be experienced at the Mine Site.
- ❖ Outcomes are tested under low rainfall scenarios.
- ❖ Supply security has been further tested assuming low rainfall outcomes in any given year. For example, for a 95th percentile low rainfall year what water would be available and what does this mean for the Project?
- ❖ Lowest water supply reliability (worst-case) would meet 94.5% of production demand and 99.5% of dust suppression demand.
- ❖ Site water balance predicts high water supply reliability for the Project, even in extended periods of low rainfall.
- ❖ Project remains economic, even if water supply affects production rate.



Availability of Water to Users

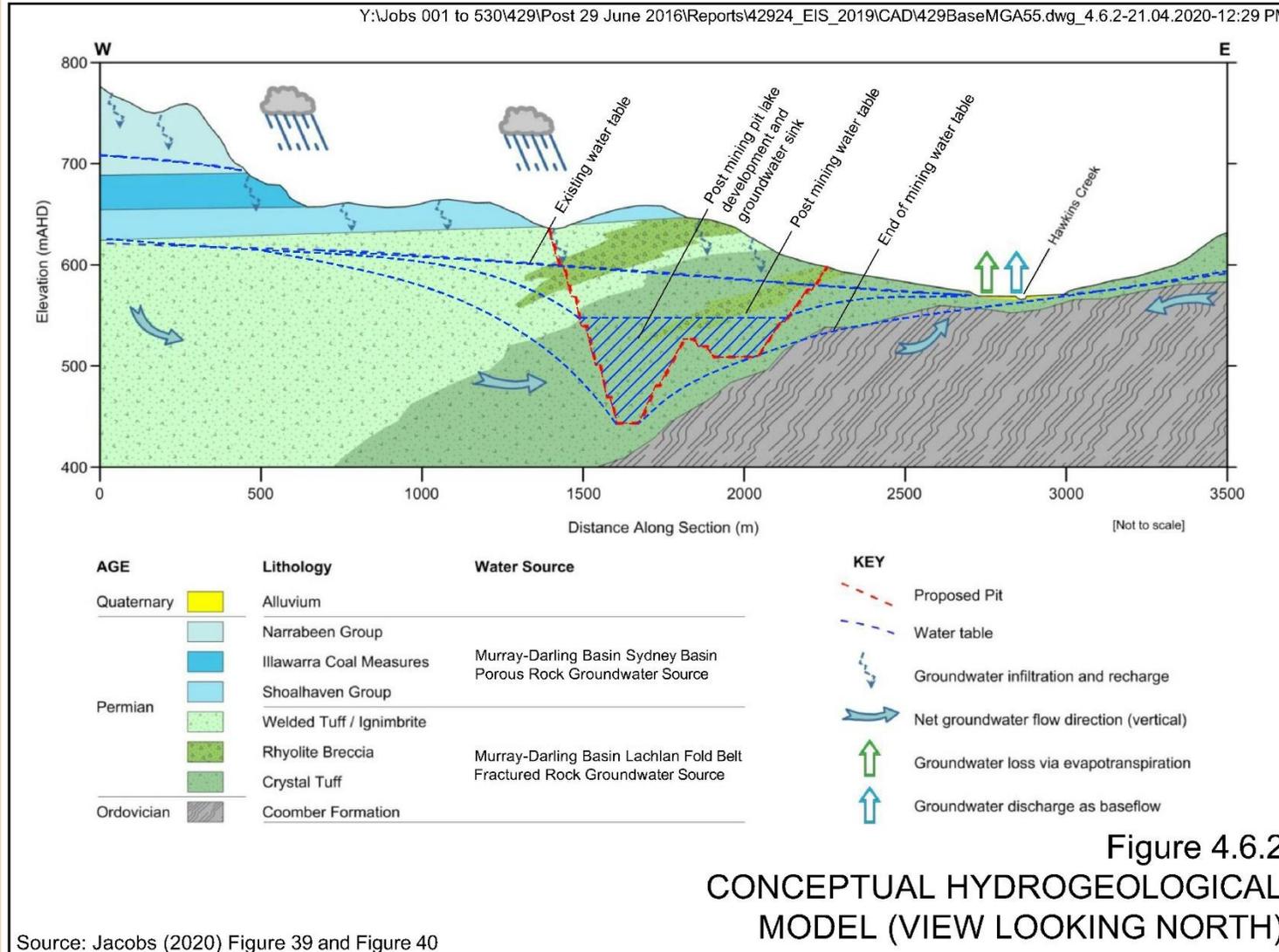
- ❖ **Water will remain available to downstream surface water and groundwater users.**
 - The Lawsons Creek catchment area, downstream of Hawkins Creek would be reduced by a maximum of 2.0% during operations and 0.2% post-mining.
 - Cease to flow conditions (flows less than 0.1ML/day) may increase by 2 days per year (post-mining).
 - There would be negligible reductions in Lawsons Creek flows downstream of the Mine Site (2.2% during and 0.4% post mining)
 - Negligible decrease in Lawsons Creek flows greater than 1ML/day (2 days per year).
 - Peak baseflow reduction (19.3ML/a) may be compared to average stream flow (7,136ML/a). Change of 1% or less in both creeks.
 - Groundwater drawdown at privately owned bores is predicted at two locations but is not considered to be a significant impact.



Groundwater Drawdown

- ❖ There will be a minor reduction in the volume of water entering the creeks from groundwater.
- ❖ However, it does not directly take streamflow away and does not stop groundwater flow to the stream.
- ❖ The reduction is not equivalent to the groundwater drawdown. That is, the predicted drawdown of 1 m does not mean creek levels are reduced by 1 m.
- ❖ Project impacts are acceptable as the reduction is minor and accounted for by water licenses held in the Lawsons Creek water source.

Groundwater Drawdown at the Creeks



Source: Jacobs (2020) Figure 39 and Figure 40



Groundwater Licensing

Sydney Basin Murray Darling Basin Porous Rock

Groundwater Source

and

Lachlan Fold Belt Murray Darling Basin Fractured Rock

Groundwater Source

Water Licences are **not** being moved up or downstream

as suggested in some submissions.

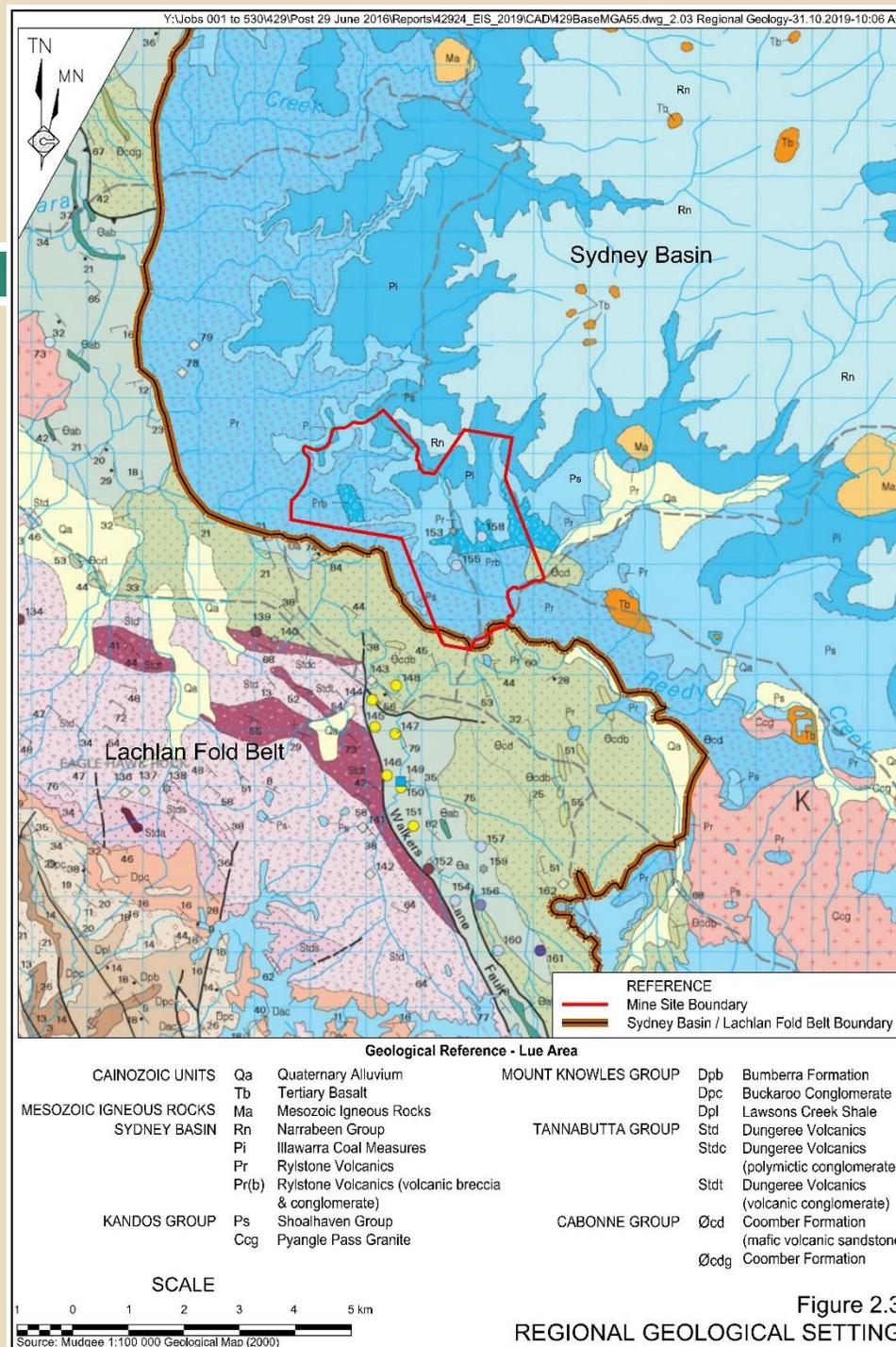


Figure 2.3
REGIONAL GEOLOGICAL SETTING



Water Management

- ❖ There will be no compromise on water availability for dust suppression.
- ❖ Dust suppression will include all disturbed components of the site including the TSF.
- ❖ The use of harvestable rights dams as a water source is common and acceptable under NSW law. The construction of a farm dam in accordance with these rights does not need to be approved.
- ❖ Dams would be removed and others constructed as per the plans presented to ensure that the system is balanced and water is being captured, stored and used efficiently.



Other Matters

- ❖ Consultation – Bowdens has presented information to the CCC and directly to the community in information sessions. Community members are welcome to contact Blake and the team for an update or to ask questions.
- ❖ Biodiversity – The detailed Biodiversity Assessment Report and Offset Strategy has been reviewed and accepted by BCD. There will be biodiversity impacts, however these will be avoided, mitigated and offset in accordance with the NSW guidelines.
- ❖ Agricultural Impacts – There is no indication of impacts occurring to agricultural land outside the Mine Site that would interrupt farming practices.
- ❖ Aboriginal Heritage – Our position remains that the ACHA has been thorough and undertaken in accordance with the relevant guidelines. This was agreed by NSW Heritage.



Other Matters

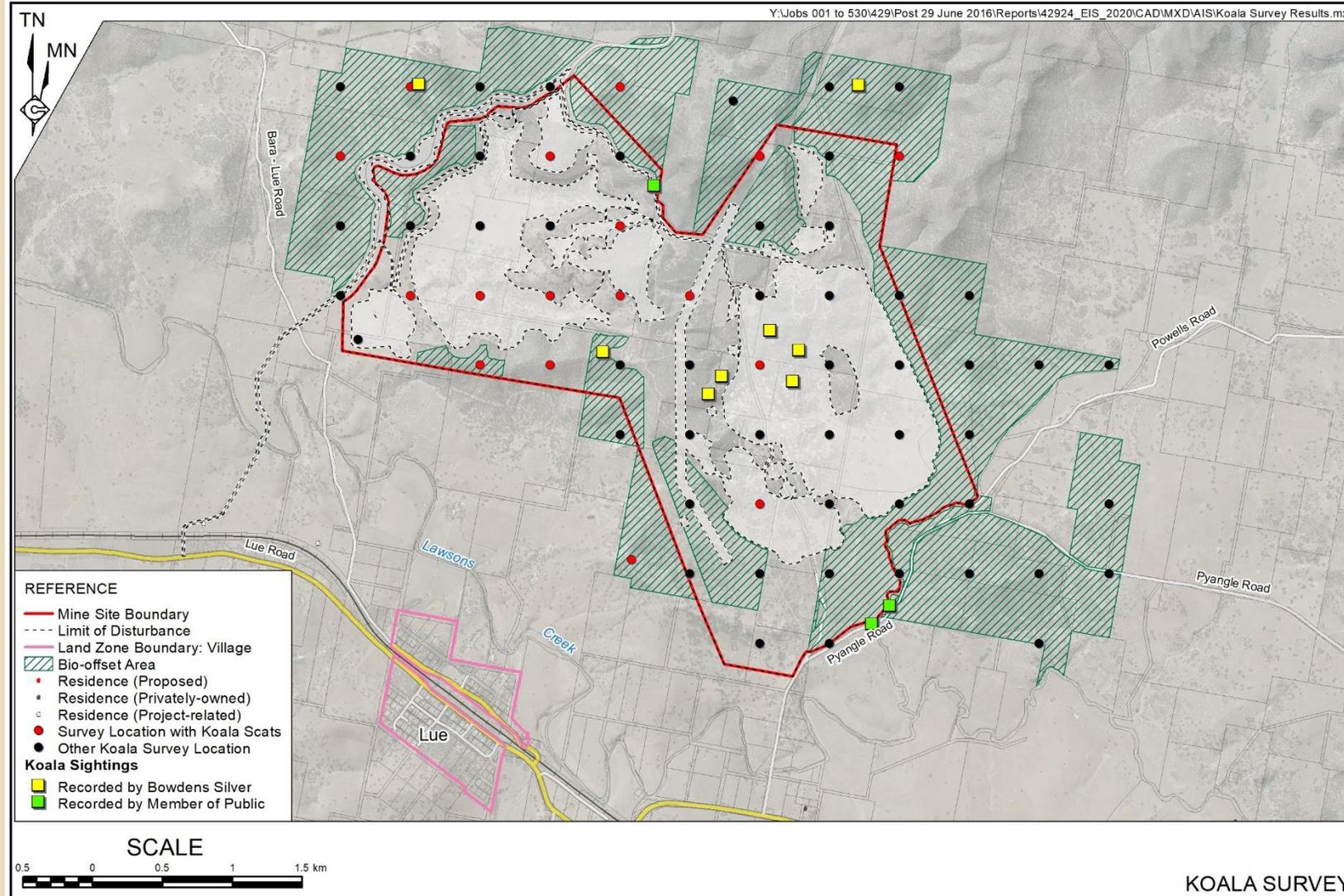
- ❖ Planning Process – All amendments to the Project have been made in accordance with the planning legislation and in discussion with DPE.
- ❖ Amenity Impacts – All amenity impacts have been assessed comprehensively and presented to the NSW Government and the community. Residual impacts are expected, however these would be managed, monitored and regulated. The EPA has indicated it is satisfied that the assessment has been competent and could be managed under conditions of consent.
- ❖ Social Impact – Our position remains that removal of the water supply pipeline and associated land use and vegetation clearing is on balance a better social outcome. Technical assessment demonstrates that water can be sourced within the Mine Site with only minor changes to predicted impact.



Koala Survey

- ❖ Detailed survey undertaken using Spot Assessment Technique (SAT) methodology.
- ❖ Grid pattern applied with single Koala feed tree identified and then 29 other trees surveyed within a 100m radius.
- ❖ 67 points surveyed across the site and offset area covering 2,010 trees.
- ❖ 17 points had evidence of Koala scats and 33 trees in total.
- ❖ Single Koala sighted within the Mine Site and then another Koala identified on Pyangle Road. These add to our existing records.

Koala Survey





Koala Survey

- ❖ Outcomes are consistent with the Biodiversity Assessment Report.
- ❖ Koalas are present in low density and likely using the land as a corridor to access better quality habitat.
- ❖ All vegetation disturbance is considered Koala habitat (381 ha considered impacted).
- ❖ Records indicate that the Koala prefer Blue and Red Stringybarks on the land surveyed.
- ❖ Biodiversity offset area maintains corridor for Koala movement.



Next Steps

- ❖ Response to matters raised in submissions is underway.
- ❖ No further government agency responses required.
- ❖ Queries raised by DPE are addressed as they arise during its final assessment.
- ❖ Once the DPE assessment is complete the Assessment Report and draft conditions of consent will be provided to the IPC.
- ❖ The IPC will commence the processes to determine the Project.



Questions?