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O/N H-1037722

**INDEPENDENT PLANNING COMMISSION**

**MEETING WITH APPLICANT**

**RE: ULAN COAL MINE MOD 4**

**PANEL:** **GORDON KIRKBY**  
**PROF CHRIS FELL**  
**PROF BRETT WHELAN**

**ASSISTING PANEL:** **JORGE VAN DEN BRANDE**  
**DAVID KOPPERS**

**APPLICANT:** **CHARLIE ALLAN**  
**ROBYN STONEY**  
**BRADLEY TRANSWELL**  
**TIM WALLS**  
**JOHN WATSON**  
**STEVE DOWNES**  
**RACHEL MURRAY**

**LOCATION:** **IPC OFFICES**  
**LEVEL 3, 201 ELIZABETH STREET**  
**SYDNEY, NEW SOUTH WALES**

**DATE:** **10.50 AM, WEDNESDAY, 12 JUNE 2019**

MR G. KIRKBY: So good morning and welcome. Before I begin I would like to acknowledge the traditional owners of the land on which we meet, the Gadigal people, and pay my respects to their elders past and present. Welcome to this meeting on development application 080184 MOD 4 in relation to the Ulan Coal Mine Project from Glencore Proprietary Limited. The proponent who seeks – who seek changes to the layout of the long wall panels in both Ulan no. 3 and Ulan West mining domains to recover additional coal.

I'm Gordon Kirkby, I'm the chair of this IPC panel. Joining me are my fellow Commissioners, Professor Brett Whelan and Professor Chris Fell AM. The other attendees of the meeting are Jorge Van Den Brande, who is planning officer here with the Independent Planning Commission. I might just, for the purpose of the microphone, get the Glencore team to introduce themselves, so when we do the transcript we can – it's clear who's who.

MR J. WATSON: Yes. I'm John Watson, environment and climate change manager at GCAA.

MR T. WALLS: And Tim Walls, I'm Glencore manager for approvals for New South Wales.

MR C. ALLAN: Charlie Allan. I'm the general manager of the Ulan complex.

MS R. STONEY: My name is Robyn Stoney. I'm the environment and community manager at Ulan Coal.

MR S. DOWNES: Steve Downes. I'm the water infrastructure manager for GCAA.

MR B. TANSWELL: I'm Brad Tanswell. I'm environment and community co-ordinator based at Ulan Coal Mine.

MS R. MURRAY: And I'm Rachel Murray, regional manager at Ecological Australia.

MR KIRKBY: Great. Thank you. So in the interests of openness and transparency, and to ensure full capture of the information, today's meeting is being recorded and a full transcript will be produced and made available on the Commission's website. This meeting is one part of the Commission's decision-making process. It is taking place at the preliminary stage of the process and will form one of several sources of information upon which the Commission will base its decision. It's important for the Commissioners to ask questions of attendees and to clarify any issues, whether we consider it appropriate. If we ask any questions and you're not in a position to answer today's meeting, please feel free to take the question on notice and provide any additional information in writing which we will then put up on our website. Okay, we can now begin. I note you have a presentation, so we might commence with that. Thank you, Robyn.

MS STONEY: Okay. Great. So the first slide just presents the agenda for today. You've asked us to provide a bit of a background on the project, and the proposed modification in particular. So we will give you an update as to where that project is up to at the current time. We will be fairly brief on those matters, and then I think  
5 hop straight into the clarification of specific matters requested by the IPC, and we've addressed each one of those questions and can delve into some detail about those things in the first instance. There's some more information that we would like to present to you as part of our presentation around some of the other questions that have been asked as part of the response to submissions, so we will present those and  
10 some other matters in relation to the MOD. And then any additional questions that you might have for us that we can either answer here in the here and now or move onto as we go forward.

MR KIRKBY: Sure.  
15

MS STONEY: So I won't dwell too much on the – slide number 2, which is with regard to their proposed modification in the context of the operations. Those yellow highlights are the modification itself, set amongst the context of the existing mine, and in fact those grey areas – shaded areas are where we're currently working within  
20 the mining area. So MOD 4 is going to provide us access to an additional 6.4 million tonnes of coal without significant changes to either the operational management, the infrastructure, and, in fact, the environmental cultural heritage and community impacts.

25 The additional coal is available partly due to additional works in the geology area, and also partly to do with our additional technical information about the ventilation that we can achieve in this part of the mine, particularly the extensions of Longwall 33 and 32. A coal barrier was removed as part of the existing project between Longwall 28 and 29 that was in the existing project approval, and that allowed us to  
30 just correspondingly extent out the panel so that we could take up that area that was originally in the project approval as part of an extension of Longwall 33, so it's just a simply adjustment in that part of the world.

MR KIRKBY: That's the widening of 33?  
35

MS STONEY: That's right, the widening, yes.

MR KIRKBY: Okay.

40 MS STONEY: So it's basically to take up where we made other changes further down, and it just sort of correspondingly stretches out, but it does allow us to optimise the coal resource there. Additionally, some extensions to Longwall West 7 and West 8 for the Ulan underground mine. So Longwall West 7 and West 8 we've identified their capacity to move that longwall in closer to the Mona Creek rock  
45 shelters, and in fact you've asked a question about that which I will go on to answer shortly, and just take up an additional 80 to 100 metres of coal in each of those panels.

5 Furthermore, some extension – and this is due to geological information for Longwall 7 and Longwall 8 – for the Ulan West Operations. In terms of the overall extent of change, the mine life, the limits on extraction, the operating hours, the workforce numbers, the mining method, the coal handling and preparation plant and infrastructure, the coal transportation and the conservation areas that we currently have would not change as a result of this proposal. It does extend the longwalls, and it does change the surface infrastructure, but we think the proposed surface infrastructure is actually a minimal disturbance compared to the previous proposed project.

10 Part of the reason for that is in our environmental assessment we were able to reduce the facilities from five, that were approved, to three. We also relinquished a previously approved infrastructure and that helped also to minimise the proposed disturbance. As part of the environment assessment, the National Parks and Wildlife Service provided their consent – the landowner consent – through a ministerial approval to apply. And we referred the project to the Department of Energy and Environment as not a controlled action, and they have in fact confirmed that it is not a controlled action under the EPBC Act.

15  
20 In our response to submissions there were further improvements to be made in terms of the disturbance area – the proposed disturbance area. Some to do with the infrastructure corridor within the Durridgere State Conversation Area itself, and that came from feedback from the National Parks and Wildlife Service. And the consultation with the OEH – they recommended a biodiversity offset. It's not compulsory, the way the legislation falls out for this project, but we've agreed that the area that will be disturbed can be subject to a biodiversity offset.

MR KIRKBY: Is that due to the fact that some of the old - - -

30 MS STONEY: Yes.

MR KIRKBY: - - - Threatened Species Conservation Act as opposed to .....

35 MS STONEY: Yes.

MR KIRKBY: So the offset is pretty much compliant with the new legislation even though technically you're under the old – okay.

40 MS STONEY: Yes.

MR KIRKBY: .....

45 MS STONEY: Yes. That's correct. The private property owner near the Mona Creek area had a number of questions for Ulan Coal and for Planning as part of Response to Submissions, although in the Response to Submissions their comments said these things to be considered and we've gone through some processes with Planning since then to consider those things in more detail and determine some

5 outcomes going forward as to how those things would be managed and provide more information to the process. So we will go into a bit more detail about those as we go through the presentation. Also just wanted to note that Ulan Coal Mines has acquired additional water licences which now cover the approved mine for the life of mine.

10 So we now hold all of the licence extraction that we need for the mine and that includes the MOD 4. So when MOD 4 comes into effect, we still have enough allocation to cover that; we don't need to purchase more water licences now to cover the rest of the mine life. Also an occupation licence is required, so this is a specific access permit with the National Parks and Wildlife Service to permit operations within the Durridgere State Conservation Area. They've provided an occupation licence in draft and we've responded to that occupation licence and have started preparing a review of environmental factors for that and so in consultation with the Department, focusing on what is their minimal disturbance, what's the minimal impact that we can have to install the infrastructure when the time comes. You've sent us some questions.

20 Thank you for – to present some answers for you that – to specific things that you were interested to know. The MOD 4 proposal will not increase the potential for cliff instability because mining and subsidence assessments from previous Longwall panels indicates that mining can be within 85 metres of the cliff line without causing any perceptible impacts, and this is in the position of Longwall West 8. So the reason for that is the angle of draw from the base of the panel itself and 85 metres is outside of any perceptible impact in terms of subsidence. The private landowner in the Mona Creek area also raised concerns in relation to potential impacts from subsidence and Aboriginal heritage.

30 And one of the things that they were particularly concerned about was some rock falls that occurred in 2014 and an earlier rock fall of around 1993 that they felt had somehow impacted on the heritage significance of that rock shelter and that potentially it may have been caused by mining impact. So our subsidence engineer reviewed the rock fall itself, looking at the patterns of the fracture, how it has occurred, when it has occurred, what was occurring in relation to mining nearby and determined that it was not caused by mining and in fact it was caused by natural erosion processes and that's most evident by in the photograph you can see where the tree root is all the way down into that sandstone fracture.

40 MR KIRKBY: Could you just go back to the figure – shows where currently you have mined? The next one. Yes.

MS STONEY: So we actually - - -

45 MR KIRKBY: So on that where are you exactly?

MS STONEY: I will just – we haven't – we haven't mined - - -

MR KIRKBY: Or more where roughly do you think you were when the rock fall occurred, just to give an idea of - - -

MS STONEY: Okay. So 2014, we were mining over in this part of the world. So  
5 I'm thinking twenty - - -

MR WALLS: 29.

MS STONEY: Yes, we would have been 29. So about here, mining across in that  
10 part of the world, and down here, we would have been - - -

MR WALLS: About 3.

MS STONEY: - - - in Longwall 1 in 2014 – we were mining Longwall 1. Yes.  
15

MR KIRKBY: Okay.

MS STONEY: And so in terms of – this includes areas that are in development.

20 MR KIRKBY: Yes. Okay.

MS STONEY: So those Longwalls haven't actually been extracted.

MR KIRKBY: Yes. Sure.  
25

MS STONEY: Longwall 6 hasn't been extracted. We're currently in the process of extracting Longwall 5 and we're down to about this sort of position at Longwall 5 at the moment so we're mining from the north to the south there. And in the Ulan Underground, we've mined Longwall West 3, West 4 and we're currently mining  
30 West 5 so that's this panel here.

MR KIRKBY: Yes.

MS STONEY: And we're mining away from – so we're mining in an easterly  
35 direction for the West 5 panel, and the Longwall West 6 panel – we're currently doing development there but we're not actually doing any subsidence so there would be no impacts – surface impacts from that mining in West 6 or in Longwall 6 in Ulan West.

40 MR WALLS: We could provide just those distances from that area to where .....

MR KIRKBY: Yes, just .....

MR KIRKBY: Yes, just .....

MR KIRKBY: Yes, just .....

45 MS STONEY: That's right. Yes.

MR KIRKBY: I just wanted to clarify that. Yes. Thanks.

MS STONEY: So the other question that was asked by the private landholder around that same issue was the heritage significance and the heritage significance of that area was identified quite early on – 1980s – Laila Haglund was the archaeologist at the time and then has become over time known by the local Aboriginal groups as  
5 being that area that – sort of set of sites together and Ulan gave a commitment to not impact on those sites because of the importance to the local people. It's not defined as a conservation area. It's defined in the project approval.

10 So the assessment by the archaeologist who is our current specialist archaeologist – South East Archaeology – found that the rock fall has not directly impacted the sites, so whilst being nearby to some of the sites, it hasn't impacted on the sites or the value of the sites. And the assessment updates earlier were finding that eight sites have low research potential and two have moderate to high research potential. So that's additional information to that – to that understanding of that site.

15 MR KIRKBY: Does the monitoring you do of these sites look at – say, would it, for example, be able to identify there is the potential for an issue that we've seen here – the roots on this photo – whether those sites actually have the potential to have a natural event? Can they – do they look at that?

20 MS STONEY: Not specifically.

MR KIRKBY: Okay.

25 MS STONEY: We do look at – as part of the Longwall mining for – under the other heritage sites, we identify which heritage sites are going to be monitored as part of Longwall extraction and then that's reported on. So once the Longwall goes through, then we will have pre photographs and then we will have post photographs of each rock shelter site. So in a sense, we're taking photos of them.

30 MR KIRKBY: Yes.

MS STONEY: We have lots of information about them. If we had to do a rock shelter salvage, then we certainly look at geotechnical stability because we want to  
35 keep people safe while they're working there to do the archaeological digs.

MR KIRKBY: Okay.

MS STONEY: You asked us how did subsidence that we've observed from the  
40 existing mine compare with subsidence which we predicted in our subsidence model. The diagram shows a H line and F line which – each of those subsidence monitoring lines are over the Ulan Underground site. For those sites and in recent Longwall areas, we've had only one example of not having subsidence that's consistent with predictions, and in fact in Longwall West 3, that H line was consistent with  
45 predictions when it was measured immediately after the Longwall, but once Longwall West 4 had also gone through and there was additional ..... that occurred

with that second Longwall – the subsidence increased to 1.62 which is slightly more than predicted.

5 I note also that that is reported to the departments within 24 hours of us becoming  
aware of the exceedance and we're then required to provide a follow-up report within  
seven days which explains exactly what occurred, why it occurred and what impact –  
surface impact there has been that resulted from that being not consistent with  
predictions. And that report found that essentially there was no surface impacts that  
10 are changed as a result of those predictions and that it was to do with an increase in  
mining height through that area that wasn't reported in that original Longwall 3 West  
3 models and that was a 20011 model. And as we go through the process of each –  
mining each Longwall, we update predictions to the current mining context and  
what's occurring there to make sure that we have, you know, the best available  
15 information for the predictions as we go forward. So we use that information into  
our subsidence model.

PROF B. WHELAN: Can I just clarify – these lines, are they – this – you're  
moving these. You're moving your monitoring space as we go through.

20 MS STONEY: No.

PROF WHELAN: No.

25 MS STONEY: Essentially, we install the monitoring wells – the monitoring  
positions.

PROF WHELAN: Right.

30 MS STONEY: And then they stay, and we just monitor those same positions after  
every Longwall. Yes, so as soon - - -

PROF WHELAN: Right.

35 MS STONEY: - - - it passes through, we monitor it.

PROF WHELAN: Okay. I'm just – I'm still a bit confused about where this line is  
going on this.

40 MS STONEY: So - - -

PROF WHELAN: The line of monitoring.

MS STONEY: - - - I will just take you back to – so on this diagram - - -

45 PROF WHELAN: Yes, brilliant

MS STONEY: - - - the H line goes through here, right through that entire section.



PROF WHELAN: Right, right. Great, great.

MS STONEY: And the F line goes through here, all the way to the top.

5 PROF WHELAN: Right.

MS STONEY: So it runs horizontally across - - -

PROF WHELAN: Yes.

10 MS STONEY: - - - that range of panels there.

PROF WHELAN: Great.

15 MS STONEY: For Ulan West, it's a little bit different. The lines run in the opposite direction, so they're horizontal across the panels as well.

PROF WHELAN: Sure.

20 MS STONEY: With the exception of this shorter line, the line A, which was operated just for panel 1, and that's in an area of very low depths of cover, so the depths of cover there are between 65 and 80 metres, and so there has been some additional monitoring through that area, and then the remainder of the lines have been set up across the panels and they're monitored for each site. So – and again, no

25 exceedance of predictions for the Ulan West mine, based on those monitoring lines. You asked us about the status and conclusions of the research studies on water discharge to the Talbragar River.

MR KIRKBY: Yes, we asked the department, and they indicated that, I think,

30 because you're not actually discharging yet – you can go on about it – that you hadn't done those studies or you were in progress of doing those studies.

MS STONEY: There have been studies done.

35 MR KIRKBY: Okay.

MS STONEY: So yes, we don't discharge to the Talbragar River, and the studies for MOD 4 show that water can be managed within the current water infrastructure that discharged to Ulan Creek.

40 MR KIRKBY: Yes.

MS STONEY: So there's no proposal to discharge to the Talbragar River. Nonetheless, project approval allows for a discharge of 17.5 megalitres per day to the

45 Talbragar. It's not approved in the Environment Protection Licence, so there's another step to happen before - - -

MR KIRKBY: Okay.

MS STONEY: - - - that could actually occur, and as part of that, we have undertaken some studies. The first one was in relation to discharging directly to the Talbragar River itself, so we did analysis of that in 2012. In 2013, we did a hydraulic assessment to see if it would be feasible to discharge to the Mona Creek rather than to the Talbragar River, so essentially similar to what we do discharging to the Ulan Creek, that then goes to the Goulburn River, and conclusions of those studies were provided in 2014 report to the EPA as part of a request from them in a PRP for the Environment Protection Licence in 2014.

So – and, essentially, the conclusions that were made was that discharge to the Talbragar would have an effect on the flow rating of the catchment. That was not considered to have a significant deleterious environmental impact, but the flow rating impacts would need to be managed. So our proposal as part of this modification is to continue discharge to the Ulan Creek within the current limits of the Environment Protection Licence.

You asked us to cover off on the water ecology monitoring for the Goulburn River and the nature of some of the ionic species within the discharge water. So I note that there are no changes to the discharge proposed as a result of MOD 4. Sorry I'm not keeping up with slides. A contaminant source study was undertaken as part of that 2014 report to the EPA, and the contaminant source study examined a broad range of constituents, found that contaminants were either not detected or below ANZECC guideline trigger limits for 80<sup>th</sup> percentile of samples. Also, that analysis of mixing zone samples collected from the Ulan Creek upstream of the confluence with the Goulburn River indicates that no samples exceed ANZECC guideline trigger limits.

Furthermore, no samples collected from the downstream gauging station exhibit constituents with higher than ANZECC guideline trigger limits. So our samples analysis includes metals and other ions each year, and that analysis is selected based on the findings of the 2014 study as part of the broader water monitoring strategy. It's not something that's required by licensing.

MR KIRKBY: Okay.

MS STONEY: We do macroinvertebrate sampling and have done since 2003, and all of this data shows that there has not been an impact on the treated water discharge. The sampling since 2011 has been collected in a manner that does allow direct statistical analysis of impacts. That statistical analysis shows that the macroinvertebrates upstream and downstream of the operations are not statistically different. The fluctuations in data over time are representative of seasonal fluctuations and not a result of discharge.

There is more detailed information that we can potentially present to you if you were interested to have further information on that. I'm going to hand over now to Steve Downes, who's going to ..... yes. Sorry. Steve is going to take you through some of

the water matters and into the next phase, which is talking to you about more than the questions that you asked but some things related to the impacts and the things that we've talked about as part of the response to submissions and so on.

5 MR KIRKBY: Sure. Thanks, Steve.

MR DOWNES: Thanks, Robyn. Yes, having a look at the – there were some questions about the predicted subsidence impacts on the stability of the creeks themselves. Given the distance from the MOD 4 areas to the Goulburn and  
10 Talbragar Rivers, we can't – there is no direct impacts from there. They're well outside the zero subsidence line and the zone of influence. The subsidence is based on about a – on 45 degree angle draw, and with the depth of the workings that that's between 160 and 330 metres from the end of the panels, well outside the area of the Talbragar.

15 The Ulan West extension panels – they do go under Mona Creek, and there is the potential for some impact on Mona Creek as they go under. There's about 200 metres depth of cover, so there – it's not direct connective cracking that we look at but there would – there is a potential for surface cracking and some enhanced vertical  
20 leakage as a result of that. They would be managed as we currently do with the subsidence management plan, so there's monthly inspections and then there's repair work that's actually done to any of the areas where those – the cracking develops.

MR KIRKBY: Have you actually mined under Mona Creek yet?

25 MR DOWNES: Not at this point.

MR KIRKBY: Not yet. No.

30 MR DOWNES: We are – MOD 3, the current approval, does actually have mining  
- - -

MR KIRKBY: Yes, I - - -

35 MR DOWNES: - - - Mona Creek.

MR KIRKBY: I see some of the panels but you're not actually there yet.

40 MR DOWNES: No.

PROF FELL: What do you do if you do find some untoward cracking of the creek bed?

45 MR DOWNES: Generally

PROF FELL: What do you do if you do find some untoward cracking of the creek bed?

MR DOWNES: Generally, with tensile cracking, it's localised and over the chain pillars. So we tend to rip that area and compact that area with a suitable clay material to seal it.

5 PROF FELL: Okay.

MR DOWNES: We directly fix those areas up. In some other areas of other operations, they look at the base sediment load but Mona Creek is just not well developed in here. It's right up at the top of the upper reaches of the catchment so  
10 it's not, you know, a well-defined water course. And that's the reason that it doesn't carry flow. It's very ephemeral in nature – doesn't carry flows for very long periods of time. We have – in addition to the direct impacts, it – the substance assessment was also undertaken – the water management component by Engeny Water Management. And they looked at potential impacts in terms of stream stability,  
15 changes to velocities, ponding patterns, bed and bank sheers and all those were below the threshold.

There could be localised scour and erosion which would be dealt with under the same substance management system for the creek line, itself. Just in terms of  
20 hydraulic conductivity to the Mona Creek alluvium, the – Mona Creek is – the alluvium is very much restricted to the channel. It extends up to about Longwall – the alluvium – colluvium – extends up to about Longwall six on there and then it's – the channel is too indistinct to have a line. It's fairly narrow at the top. So, you know, in the order of five to 50 metres wide, mainly, through the section that we're  
25 looking for things. It broadens out as you get toward the Talbragar as you would expect – as you get those fans and it can be up to 150 to 500 metres confluence with the Talbragar on those systems.

The alluvium – it's not a highly productive alluvium. So it's not clean sands and  
30 gravels. There's a lot of silts and clays mixed in. So it tends to be isolated pockets sitting on the Triassic bed material in there. But there can be some ponding on that because a lot of the Triassics is actually an aquitard, although some of the lower – you know, some sequences in the Triassics are actually an aquifer. You tend to get pockets of water sitting on the aquitard material underneath the creek. So around  
35 about three to five metres thick of – generally, as the photo shows there, it's, sort of, a valley infill. So you've got the sandstone outcropping on the edges and then you've had erosion of those slopes and that has washed into the bed material there along the creek.

40 Just in terms of the technical studies, there has been a fairly extensive groundwater study done by AGE. This has really built on the work – there has been a lot of groundwater work done at Ulan because it is – obviously groundwater make is significant to the mining operations as well as to the overall impact. So Col Mackey from Mackey Environment Research had done all the work previously and did the  
45 MOD 3 work in 2015. That very much formed the basis of this work. And there was a formal handover and Col assessed it in the transfer of the model and the data across to AGE so that work was consistent. AGE did look at – went back to

conceptualisation and had a look at how it was – how the model was set up – how it was calibrated.

5 Their conclusion was that there was no need to change the conceptualisation of the model – that it was more than adequate for this MOD. And also, there was no need to update the calibration. What has been done and, I suppose, some of the changes in the predicted inflows and one of the reasons there’s not an increase in the predicted inflows into the mine is the scheduling of the Longwalls has been delayed from what was assumed in the MOD 3 things. And that’s probably the one that’s - - -

10

PROF FELL: Now I think you showed that the effect of it on existing bores is actually quite small. I’m just interested what do you do for the current approval for handling make good?

15 MR DOWNES: Yes, we’re required to have a – to negotiate a make good - - -

PROF FELL: Yes.

20 MR DOWNES: - - - agreement. And we’ve got monitoring systems, actually, within our landholder bores to be able to determine if there is a draw down. Obviously, you know, you’ve got to do that in conjunction with what’s happening in the climate.

25 PROF FELL: Sure.

MR DOWNES: And look at your cumulative rainfall departures on there and just see whether it’s climate related impact or potential mining related impact. So we have the data in place. We also are in the process – and we’ve got term sheets with most of the landholders which are around our operations at the moment for compensating. And, you know, even if you’re in dispute it’s, sort of, our – there is a requirement for us to provide water to supplement that supply up to the point there’s a determination as to whether there has actually been a mining related impact or whether it was a climate related impact. So for this modification, we’re not picking up – there’s 12 landholder bores in our current area that are predicted to be impacted by draw down.

40 The draw down does extend, as you can just see on the map. So that’s layer four in the model which is the Triassics which is the main water source in the area. That’s where a majority of the bores are actually screened in. So on the right hand side is where it’s extended. You can see the draw down contours have extended out in there. But they don’t pick up any additional landholder bores. We have had a – sorry, I will just – so Fras – we have had the model peer reviewed. So Fras Kalf has actually undertaken peer review of the AGE model and he has done an assessment against the national groundwater modelling guidelines – the aquifer interference policy and the water sharing plans to make sure that the model is robust.

45

In our peer review process, we have the peer reviewer involved through the project. So his comments have been incorporated into the model. It has been done. In terms of the water trigger, we had undertaken an assessment for the environmental assessment and it was included in our report. So AGE had done an assessment  
5 against the guidelines. We had determined that to be not to a significant impact under the water treat so we hadn't referred. There was an issue raised during submissions. So we did refer through there and we got notice back, as Robyn mentioned earlier, that it's not a controlled action for water as well.

10 The predicted base flow losses are quite low – less than a megalitre a day – sorry, a megalitre a year, in each of the water sources in the Talbragar and the Goulburn and we hold significant surface water licences. And they are in a zone where the surface water is interchangeable with the alluvial. And as Robyn mentioned earlier, we have full licence for the predicted takes in both water sources from the hard rock aquifers.  
15 And the alternative water supplies is what we spoke about just a minute ago. The only one I might do is just stepping back – that's probably a little bit easier. Just on there, you can see on the right hand side, we just located the drip there so you can see where that's adjacent. And in terms of historical mining, that's closest to Longwall 11 which was mined in the 90s.

20  
PROF FELL: And no impact.

MR DOWNES: And no.

25 MR KIRKBY: Who monitors the drip? Is that you? Because it comes up at every mine in that area – the drip. Who's - - -

MR DOWNES: We have our own monitoring network within the area that we own. We've undertaken some follow up work in terms of grabbing some surface water  
30 samples. But as we outlined a little bit earlier, it's the – because it's a localised feature within the Triassics and it looks like it's directly recharged from a local area in there, any monitoring network would have to be within that National Park, very close to the thing. So we don't do any direct monitoring at the drip.

35 MR KIRKBY: No.

MR DOWNES: So in terms of the proposal, the closest we will get with the mod 4 is 7.5 kilometres from the drip, and through there, as we were saying, the closest was back in 1997. We have had some work done just looking at – in samples from drip,  
40 comparing – it definitely is a feature Triassics which is the main area that we dewater above our long walls, but the chemical characterisation indicates that the water in the drip is higher in magnesium rather than sodium which is characteristic of the gauze across the – over the top of the mine site area in the Triassics. It also indicates that it's – the – it has got lower chloride. Chloride is the ..... in the mining area whereas  
45 ..... tends to be in the major iron in the actual – the area of the drip. So the modelling indicates that there will be no impact on the drip.

MS STONEY: So that brings us to the end of the main points in that we wanted to be able to present today. We did have a couple more things around the subsidence assessment, the creation of minimal disturbance, our current water management practices and some stuff on the benefit of the project to the local economy, but if – it  
5 seems like we're coming to that point where it might be time to allow you the opportunity for some questions and I'm happy to forego some of that information to focus on the things that you are interested to know.

MR KIRKBY: Well, I've asked a few questions through – to my colleagues  
10 whether you have anything .....

PROF FELL: Maybe one.

MR KIRKBY: Sure.  
15

PROF FELL: I ..... biggest ..... surface water flow into the Goulburn River, 30 megalitres, whereas say .....

MS STONEY: Yes.  
20

PROF FELL: .....

MS STONEY: Yes.

PROF FELL: The EPA is moving on mines in the area to actually decrease the .....  
25 level from 900 to 685.

MS STONEY: Yes.

PROF FELL: I think you're operating within the ..... for the new quantification, but  
30 what would be the impact if the EPA, which is granting licence through a completely separate mechanism, were to suddenly say to you, "Hey, guys, 685 is the new norm?"

MS STONEY: It would be very significant. It's important to us to be able to  
35 continue to discharge as we currently do.

MR DOWNES: And, I suppose, we've made a significant investment in terms of  
40 putting in two very large water treatment plants and the most recent one, the ..... plant. It has been designed and particularly - - -

PROF FELL: I stress this is not our role.

MR DOWNES: Yes.  
45

PROF FELL: I'm simply interested - - -

MR DOWNES: No, no. Yes. I appreciate that. But I suppose we've designed our whole system – a fairly comprehensive existing system around the 900, and the idea is not only just to balance water, but to balance salt so that we don't end up with accumulating salt onsite and salt stores onsite. So, you know, the whole tens of  
5 millions of dollars investment in water treatment plans ..... reticulation systems – we would have to reconfigure those because it's not just the impact on water. It then becomes the impact on .....

10 PROF FELL: Okay.

MR KIRKBY: Brett, do you have any further - - -

MR .....: No, no. I think they've answered my questions on the substance.

15 MR KIRKBY: Okay. All right. Okay. Unless there's anything in particular you want to identify in this - - -

MS STONEY: I probably – I will just cover off on some of the key points.

20 MR KIRKBY: Yes.

MS STONEY: Since we have time. So the – in terms of the overall clearing reduction, I just wanted to have the opportunity to describe how and why that came about. So Parks, sort, of, said to us – well, does it really have to be that size? And  
25 that size allows for us to define a site. To do a feasibility design as part of the infrastructure process so that we could choose an appropriate site, make sure that it has sufficient, you know, room to make a bad and the barrowing area that's required to create that pad. And that part of the design work is ordinarily done when you get closer to the time. So – than choosing a site and trying to make a pad size correct to  
30 suit and so on and so forth.

So what we did in response to that query from Parks and Wildlife is to go and do some of that initial design work around the pads in those locations that are proposed to determine whether, actually, those pads needed to be 100 x 100 or they could be  
35 smaller. And in fact, they could be smaller and so we've put them in as 90 x 90 size pads. The other thing that changed was for the corridors that go into the Durridgere State Conservation Area to bury powerlines and pipelines. That's an expensive exercise and it's not ideal for us in terms of ongoing maintenance and so on and so forth. So we don't usually do that. But in this case, in consultation with Parks  
40 decided to make that change up front and commit to do that as part of the project. And that's how the infrastructure hearing came down. And it's really specific to the Durridgere State Conservation Area. We haven't made those sort of changes across the board.

45 MR KIRKBY: Okay.



MS STONEY: Also, the voluntary offsets. We've already talked about them. But they came about in consultation with OEH. So not as part of the submission, specifically, but in consultation with OEH at an agency meeting at the site. For our extraction plans and management of subsidence impacts, I just wanted the  
5 opportunity to mention the process of that secondary extraction approval. So the extraction plan being something that's developed post approval. Very specific to those surface features and potential impacts of that panel and relationships with the landholders, specifically.

10 A land management plan is required to be prepared under the current project approval. And that must have consultation with the relevant landowners. So that identifies specific surface features, potential impacts that are relevant for that person. And what we do with private owners is prepare them a separate private property subsidence management plan which is specific to them which is not made public  
15 which, then, contains all of the mitigations and management strategies that we intend to use. And in addition to that, we have a process where we develop an agreement for mitigation and compensation. So a written contract with the landowner that is separate to the private property subsidence management plan but contains – that's the mitigation. So that they have certainty about what to expect once that subsidence  
20 process actually starts.

PROF WHELAN: For my own benefit, then, can I ask how does that work with the land that you own? How does that - - -

25 MS STONEY: So we still have to prepare a land management plan. We don't need to prepare a private property subsidence management plan. So – yes. The land management plan contains the features that's relevant to property that we own as well as the private property – yes.

30 PROF WHELAN: And it's monitored, then reported back on?

MS STONEY: Yes

35 PROF WHELAN: Yes, thank you.

MS STONEY: Yes.

MR KIRKBY: And how many private agreements does Ulan have?

40 MS STONEY: One.

MR KIRKBY: One.

MS STONEY: Yes.

45 MR KIRKBY: And that's the property - - -

MS STONEY: The Mitchell – yes.

MR KIRKBY: Woodbury – yes, okay.

5 MS STONEY: And then I've just mentioned the reporting there. And – so there's  
end of panel reporting or annual reporting, depending on which mine you're talking  
about. And then there's also the incident reporting. So anything that's out of order  
with our expectations more than we've predicted impacts, then that's an immediate  
reporting requirement to Planning. In terms of current water management, I might  
10 just let Steve talk to this.

MR DOWNES: I suppose we've spoken about this before but it is comprehensive,  
here. It's one of the few sites where we have a site – a specific water management  
team on site that actually manages the water infrastructure. They are very, very  
15 careful about how they manage both water and salt. Their Bobadeen irrigation  
system has six centre pivots which grow pasture fodder in through there. And  
they're an integral part of the system as well. And the team are careful about how  
they blend the waters up so they're suitable for each of the sources.

20 PROF WHELAN: Where is that? I can't even see that on here?

MR DOWNES: I – it's probably – if we just flick over a couple - - -

25 PROF WHELAN: No – no, don't worry about it. I just - - -

MR .....: You can see the foam pivots.

PROF WHELAN: Can you?

30 MR DOWNES: Just a green - - -

MR KIRKBY: Buried under here.

35 MR .....: Circles in the .....

MR KIRKBY: Okay.

PROF WHELAN: I hadn't noticed them in any of the maps, actually.

40 MR DOWNES: Yes – no, there's – it's a fairly large component of the - - -

PROF WHELAN: Right – great.

MR DOWNES: - - - water management system itself.

45 PROF FELL: ..... greenhouse.

MR DOWNES: And all the discharges – there’s all real time controls on both the water treatment plants so we actually know when we’re releasing what water the quality is in that sort of tract. So that’s just the pivot arrangement in through there – one of the aerial views of the pivot with Bobadeen Dam in there which supplies back out to the pivots. And where the secondary water treatment plant is. And the picture that Robyn’s pointing to, there in the bottom left hand corner is – there was, as part of the looking at this scheme – there has been this – significantly these offset schemes actually deal with the issue of salt accumulating within the irrigation areas.

10 PROF FELL: How much amendment – I’m sorry, I should know this, but do you have much amendment of the water to actually use it for irrigation?

MR DOWNES: Not greatly. Ulan is some of our better water quality across the entire group. The – you know, we sort of sit around that – the worst of the water is around 13 to 1500. A lot of it’s around about 1100 EC.

MR ALLAN: We generally don’t do anything with the water - - -

20 PROF FELL: Okay, thanks.

MR ALLAN: - - - to crop it.

PROF FELL: That’s good. Chairman, if I might just ask a question from left field, if you like. Quite a few of the community submissions were about greenhouse gas and a general argument that coal mining brings greenhouse gas and it’s affecting the world at large. What’s your response to that? I know this is an incremental increase in the amount of coal mine but what would the company comment in response to the frequently offered view that coal mining brings increased greenhouse?

30 MR WALLS: We might – we might take that on notice and give you a, like, a written response back. It is a – like you said, it is a small change to Ulan. We’re not looking to extend the life of the approval. But we can come back with it, perhaps, with numbers and what we think .....

35 MR KIRKBY: Sure. Any further questions? Further requests? I just have one. Obviously, there’s some recommended conditions with the modification which you would have looked at. Do you have any comments on that? Are you comfortable with that? Or is there anything the Department is recommending that you have an issue with or would suggest we review?

40 MS STONEY: We’ve had the opportunity to comment on those and yes, we’re comfortable with those, you know.

MR KIRKBY: Okay.

45 MR ALLAN: May I just - - -

MR KIRKBY: No.

MR ALLAN: The only thing I would – sorry - - -

5 MR KIRKBY: Yes, sure.

MR ALLAN: Sorry, the only point I wanted to make if it was possible was - - -

10 MR KIRKBY: The last slide.

MR ALLAN: Just the last slide. I just draw your attention. It's slide 22. Ulan has a long history of environmental stewardship, land management and, certainly, sound water management practices. We also have been, you know, very good solid community members for far, far longer than the other operations in the area. And some of those numbers, as you can see there, that we, you know, we do directly between 550 and 600 people – indirectly over 1000. Without going through all the numbers there you can see the direct spend in the local community is significant and, you know, access to a further 6.4 million tonnes only serves to enhance that positive effect we do have on the economy in the local area. You know, notwithstanding the requirement to provide, I suppose, evidence that we will continue to manage the environment the way we have to date. I suggest that, you know, we really welcomed the site visit by the IPC so that we can show off what we do show off to plenty of people how well we do manage the area around us.

25 MR KIRKBY: Do you have a – it's, sort of, outside the scope of this direct MOD but do you have a – what sort of a voluntary planning agreement do you have with Mid-Western Council?

MS STONEY: Yes, we do. So we have a roads agreement.

30 MR KIRKBY: Yes.

MS STONEY: Which is continuing to the end of the mine life.

35 MR KIRKBY: Yes.

MR ALLAN: So we've upgraded the road from Mudgee to the mines, if you like, about a 45 kilometre stretch of road and then we have an ongoing commitment for the remainder of the life of the mine to maintain that road. So, you know, it's a significant improvement for the road compared to what it used to be.

MR KIRKBY: Yes – yes, I've driven on it a few times – yes.

45 MR ALLAN: And it's much improved and much appreciated. Now we turn our sights, obviously, to other areas that we can contribute. You can see the community contributions we've made over the life of the mine. They're significant. Over a couple of hundred million dollars.

MR KIRKBY: All good. Okay. Thank you very much for coming in. That was comprehensive. It has been very helpful. Thank you.

MS STONEY: Thank you.

5

MR KIRKBY: Thank you.

**RECORDING CONCLUDED**

**[11.46 am]**