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NB: These minutes are paraphrased to an extent and may not exactly match actual statements.

Project	Gloucester Coal Seam Gas Project	From	Michael Ulph
Subject	Community Consultative Committee	Tel	4910 7788
Venue/Date/ Time	Thursday 20 February 2014 Gloucester Country Club, 10.10am – 12.00noon	Job No	21/17714
Copies to	All attendees		
Attendees	Ian Shaw – AGL Lands Officer Karyn Looby – AGL Community Relations Manager Toni Laurie – AGL Land and Approvals Manager Ed Robinson – Lower Waukivory Residents Group Dr. Gerald McCalden – The Gloucester Project Rod Williams – Community Representative Jerry Germon – Community Representative Gary Smith – Barrington Gloucester Stroud Preservation Alliance (for Ray Dawes) Kirsty Hughes – Mid Coast Water (for Anna Kaliska) David Mitchell – Avon Valley Landcare Clr Karen Hutchinson – Great Lakes Council Michael Ulph – GHD (Chair) Lilen Pautasso – GHD (Minutes)	Apologies	Clr Aled Hogget – Gloucester Shire Council Anna Kaliska – Mid Coast Water Clr Tony McKenzie – Dungog Shire Council Ray Dawes – Barrington Gloucester Stroud Preservation Alliance Lisa Schiff – Great Lakes Council Graham Gardner – Gloucester Shire Council
	Observers / Presenters Sarah Jardine – Department of Resources and Energy	Others not present	Clr David West – Mid Coast Water Lee McElroy – Port Stephens Council Dan Rose – CEO, Forster Local Aboriginal Land Council



Notes	Action
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Michael Ulph (Chair)

*Welcome and Acknowledgement of Country
Introductions for new committee attendees and observers*

Meeting commenced at 10:10 am

2. Meeting agenda

- Welcome, apologies and introductions
- Action items from previous meetings and acceptance of last meeting minutes
- Project Update (Toni Laurie)
- Community Engagement update (Karyn Looby)
- General business
- Next meeting and close of formal proceedings
- Lunch

3. Action items from the last meeting

Action items from the previous CCC were reviewed. Michael asked the CCC if there were any other questions in relation to the action items or previous meeting minutes. A summary document for the action items was distributed to the CCC by email and in hard copy.

1. AGL to provide the Camden preliminary methane monitoring report to the CCC once reviewed by CSIRO

Details provided in summary sheet. Fact sheet also distributed to the CCC. Action complete

The AGL Fugitive Methane Emissions Monitoring Program – the first of its kind in NSW – was conducted by air quality specialists Pacific Environment using the Picarro, one of the world’s most sensitive, state-of-the-art instruments for this type of testing.

- The 12 week monitoring program measured the methane concentration typically experienced within and around the Camden Gas Project. In consultation with the community, 20 sites within the Camden Gas Project and five background locations were selected.
- The twenty-five locations in the Macarthur region were monitored weekly, at different times of the day and night, with 75 hours of measurements for analysis and reporting.
- Over the 12 week monitoring program the average methane concentration was 2.1 parts per million (ppm). This value is just above the global average of 1.8 ppm and in line with methane concentrations measured in urban areas, commonly ranging



Notes	Action
<p>between 1.8 ppm and 3.0 ppm.</p>	
<ul style="list-style-type: none">For your information the following documents are available on the AGL website: http://www.agl.com.au/about-agl/how-we-source-energy/natural-coal-seam-gas/camden-gas-project/environment<ol style="list-style-type: none">AGL Fugitive Methane Emissions Monitoring Program – Technical Report; Pacific Environment Limited; 2014AGL’s Fugitive Methane Emissions Monitoring Program community reportAGL’s Fugitive Methane Emissions Monitoring Program fact sheet	
<p>2. Toni to get back to CCC on the technical details of how the workover rig is being utilised in Gloucester</p>	
<ul style="list-style-type: none">The workover rig is used when a hole needs to be plugged and abandoned.The workover rig is also used for maintenance activities on the well. <p>Toni offered for an operations representative to present on the technical details. CCC agreed that this would be a good idea.</p>	<p>AGL to arrange for an operations representative to present at the next CCC meeting</p>
<p>3. AGL to fix any links not working on the project website</p> <p>Complete.</p>	
<p>Alison contacted Bede (our Digital Content Coordinator) during the last CCC meeting. Bede checked the website at the time and all was working.</p>	
<ul style="list-style-type: none">The website has also had a complete redesign which includes more imagery and graphics, less text heavyAll documents now moved to a document library so pages aren’t as crowded or as longAll documents and links have been checked and are all workingIntuitive design/layout – easier to find what you are looking for and figuring out the logical next stepCommunity Updates section now features the latest update from the local newspaper/sNew and more recent photosNow a Maps sectionVideos now embedded on pages so more interactive and visually appealingExclusive sections on our Irrigation Trial and Water Management	
<p>4. AGL to issue a copy of John Ross’ water update to the CCC</p> <p>Complete.</p>	



Notes	Action
<p>Incorporated into the minutes, available online and issued via email to CCC.</p> <p>Three reports will be available to review at the GCCC on Thursday 20 February 2014. The reports will also be posted on the AGL website on Thursday 20 February 2014.</p> <ul style="list-style-type: none">The reports are:<ul style="list-style-type: none">Tiedman fault reportSix monthly water report for irrigation trialSix monthly soils report for the irrigation trialThe Q2 monitoring report was released in January and is posted on the AGL website	
<p>5. Toni to investigate why WKMB04 was plugged and abandoned</p> <p>Complete.</p> <ul style="list-style-type: none">The monitoring bore was being converted to vibrating wire piezometers because the existing borehole could not properly monitor water levels. This process involved drilling out the casing and cementing the instruments in place. The casing could not be fully removed and the borehole had to be abandoned by cementing the hole back to surface.	
<p>6. AGL to investigate the possibility of having maps on the project website that identify well sites</p> <p>Available in REF addendum report. (also on web – referred to in summary sheet) AGL continuing to look at this as maps become available. Ongoing as the project progresses. Action complete.</p> <p>Locality maps are available in the WK REF and the Addendum REF report which are located on the website.</p> <p>AGL will continue to look at posting maps on the website as updated maps become available. These maps are also located in the document library.</p>	
<p>7. AH to forward the email issued to Gloucester Council to MU for distribution to the CCC</p> <p>Michael has followed this action up but has not received a response yet. Both Council representatives have been unavailable to attend the CCC for the past two sittings so this action will be carried over until next meeting in April. Michael will also follow up and distribute any information that is forthcoming.</p>	<p>Michael to follow up on the email issued to Gloucester Council</p>
<p>8. AGL to provide a response regarding the hydraulic fracturing of the Waukivory pilot wells</p> <p>Complete.</p>	



Notes	Action
<p>The Rick Evan's commentary on Waukivory was in relation to faults and their hydraulic importance and understanding of groundwater flow processes that it would provide for the basin.</p> <ul style="list-style-type: none">• There are two sources of quotes listed below (i) his Peer Review report of May 2012, and (ii) his public Powerpoint presentations of June 2012.• Field work – High Priority “The currently planned investigations be undertaken to assess the hydraulic significance of faults in the study area. It is understood that there are two proposed programs to assess faults in the area: (and) Regarding the Waukivory Flow Testing Program, as described in the AGL report (8 March 2012) and supplementary information provided by email from AGL (email from John Ross to Rick Evans on 13 March 2012). This program appears suitable for assessing fault characteristics,• The quotes from Rick Evans Public Presentation Slides were more direct and supportive of the pilot program: “Two investigation programs are underway to improve understanding of the faults program outlined in Section 7.3 of PB (2012), involving investigation of fault between S4MB and S5MB. The Waukivory Flow Testing Program, as described in AGL report (8 March 2012) and supplementary information by AGL (13 March 2012). Importantly, both of these programs involve examination of fault behaviour under stress. Broadly agree with the proposed programs – some changes or additions to the method have been recommended”. (quote located under Characterisation of Faults).• Currently insufficient information to characterise hydraulic behaviour of faults. Given potential importance to groundwater flow, the two proposed programs are important activities to fill this knowledge gap. (Located under Conclusions).	
<p>CCC: Is AGL still standing by the claims made in the advertisement published a few weeks ago? I refer to the advert that suggests Rick Evans' report recommended fracturing.</p>	
<p>TL: Yes, we're standing by the ad. We haven't explicitly said that he recommended fracturing. The ad says that there are three reasons why AGL is planning to fracture, but it is based on recommendations by Rick's report where he has said that there are gaps and that fracturing is necessary to fill in those gaps.</p>	
<p>CCC: What's your concern with this advert?</p>	
<p>CCC: I'm concerned about misleading advertising of what Rick Evans actually said.</p>	
<p>9. <i>AGL to respond to the query regarding the residual methane level found in produced water and how much methane can be combusted when flared.</i></p> <p>Complete.</p>	



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- Levels of dissolved methane in produced water cannot be provided until the gas wells are fracture stimulated and flow tested.
- As a guide, please refer to the irrigation trial reports where the dissolved methane concentrations in the stored produced water at Tiedmans are tabulated. Typically for the stored produced water (not the blended water for irrigation) the levels are below detection (<10 ppb).
- All methane is combusted when flared

10. AGL to consider including a summary on rig movements in adverts published in the newspaper

Details provided in summary sheet. Complete.

- AGL will continue to engage with people who will be directly impacted by rig movements
- AGL will consider providing general information on rig movements in the local newspaper

The last meeting minutes were moved by Jerry Germon and seconded by Rod Williams as a true and correct record.

3. Project update:

Toni Laurie provided an update of the Gloucester project to the CCC. A hard copy document summarising recent activities was also provided to the CCC. Some key points are summarised below:

AGL issue all project summary documents to CCC

- WKMB04 has been completely plugged and abandoned. The relevant authorities have also been advised and it will not be used again. WKMB05 is now integrated into the exploration activities in the same formation area to get the information originally being collected at WKMB04. As such WKMB05 will completely replace WKMB04.
- The workover rig has completed the maintenance on the Craven 6 well which is located near the entry to the Yancoal mine. The flow of gas should be back soon to continue with the pilot testing.
- Geotechnical studies have been happening along the pipeline route from Gloucester to Tomago and the Central Processing Facility site. Front End Engineering Design (FEED) is still ongoing and the geotechnical investigations will feed into this design process.
- We are still working to ensure we are meeting our conditions of approval. We are on track for meeting the State and Federal conditions.
- The results of the emissions monitoring from our Camden site



Notes	Action
<p>have been positive so we will review the planned monitoring programme for Gloucester. This is still to come.</p> <ul style="list-style-type: none">AGL received one complaint in relation to the truck travelling on a Sunday afternoon in Gloucester. We provided a response and also passed on the details of our investigation to the relevant authorities, as is our standard process.	
<p>CCC: How many landowners have not agreed to have the pipeline on their land?</p>	
<p>TL: So far only 5 landowners have not agreed to the pipeline going across their properties. There are a total of 137 landowners affected.</p>	
<p><i>Toni Laurie provided a water update on behalf of John Ross. A summarised copy of the water update was issued to the CCC.</i></p>	
<p>Groundwater Investigation Program:</p>	
<ol style="list-style-type: none">Groundwater monitoring program:<ul style="list-style-type: none">Ongoing quarterly monitoring program across whole network.Brief Q2 monitoring update report completed and released in January.Waukivory Pilot Testing Program:<ul style="list-style-type: none">Nearby monitoring bores are part of quarterly monitoring program – <i>another baseline WQ sampling event is proposed in advance of proposed fracture stimulation and flow testing program in February/March.</i>Drilling and completion report (with baseline data sets) in preparation.Drilling of WKmb05 (as a geophone monitoring location) complete. <i>Conversion of the hole to a water monitoring location proposed for immediately after the fracture stimulation program (additional intervals are being proposed to replace the loss of WKmb04).</i>New drilling program and monitoring network expansion:<ul style="list-style-type: none">New monitoring bores (3 out of 4) at Wards River completed early December. <i>Last remaining monitoring bore will be completed in Q1/Q2 2014.</i><i>New monitoring bore site towards Weismantels planned for drilling and completion in Q2 2014.</i>Other water studies:<ul style="list-style-type: none">Tiedmans fault study report completed in 2013. Report released February 2014.Study on produced water quality at WK03 and CR06 completed. <i>Report completed and due for release in March.</i>Surface water hydrology studies are almost complete. <i>Report due for completion in February and for release in March.</i>	<p>AGL to provide a link to the soil and water report to the CCC after it is uploaded on to the website</p>



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- 5. Numerical modelling
 - Phase 3 numerical groundwater modelling commenced – two models: local scale (fault) model and regional model (whole basin) under way.
 1. *Local scale modelling mostly complete (Final draft report expected June after Waukivory testing program).*
 2. *Regional model under way.*

Irrigation Trial Program:

- Lucerne and forage sorghum planted and irrigation program underway.
- Summary soil and crop performance report released in December.

Latest monitoring programs completed in November (both soil and water). 6-monthly compliance reports completed and submitted to OCSG with reports released in February.

CCC: With regard to the WKMB05 – will the distance from the abandoned well impact on the data that you need?

TL: No, it will be the same because the WKMB05 will completely replace WKMB04. Therefore the data required will be sufficient for the groundwater monitoring currently happening.

IS: Another thing to note is that the advantage of WKMB05 is that it is deeper so the piezometers installed will collect better data.

CCC: What's the depth there?

TL: 1100 metres.

CCC: You mentioned that WKMB04 was never supposed to have geophones installed. So where do you plan to do this geophone monitoring?

TL: AGL made a decision to plug and abandon WKMB04 because they knew that they had WKMB05 for geophones and water monitoring. WKMB05 has always been the one for geophones. WKMB04 was only designated for water monitoring.

CCC: I assume that you are not proceeding with the wells in Wards River?

TL: We have some water monitoring wells there for groundwater testing, but we haven't determined the location of the other wells yet. We are still working on these potential locations.

CCC: Can we get clarification on the PPLs that you have divided in



Notes	Action
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two. I did ask the question as to why AGL divided the PPL into two areas and the answer I received was that “it is to clarify exploration”. Can you explain a little bit more?

TL: We originally applied for a complete PPL license for the whole area. We can't hold a Petroleum Exploration Licence (PEL) and a Petroleum Production Licence (PPL) over the same area at the same time. As you are aware we were held up with policy changes and so on during the exploration stage, and have more exploration to do in some areas, so we have split the original PPL area into two. We hoped that the Waukivory pilot exploration program was to be completed by now, however the policy changes held us up so this is why we've had to adjust our approach.

CCC: So the first stage will be the smaller map?

TL: Yes, that's correct.

CCC: What's the timeframe for the PPL?

TL: We can apply for a range of different timeframes, but it is up to the government what we actually obtain. The maximum production licence you can obtain is 21 years so we will be applying for that one.

CCC: So, for the other area, have you had to withdraw the license?

TL: No, it's just on hold for the moment. The small area is progressing.

CCC: Considering it is a reasonably small area, how many wells are you putting in there?

TL: Unfortunately I can't provide that information because we don't know yet. It's part of the Front End Engineering Design (FEED) process.

CCC: How is the FEED progressing?

TL: My understanding is that it is tracking really well. The design has been broken down into key areas; for example pipeline, Central Processing Facility, surface infrastructure and water. Each stage is tracking well and is all currently to schedule.

Morning tea break 10:56

4. Community Engagement Update – Karyn Looby

Karyn Looby provided an update to the CCC recent community engagement events. KL introduced herself to the CCC and provided some background on her experience.

- Local community investment fund is a key priority for AGL. In the coming months there will be opportunities for the CCC to provide input into this. At the moment, AGL are developing the



Notes	Action
<p>guidelines and governance for the fund.</p> <ul style="list-style-type: none"> • A member of AGL’s retail sector is currently working in Gloucester to look at energy saving. The CCC will be issued with this representative’s contact details if they are interested in getting in touch with him to find out more, and passing the information to others. • AGL are looking to coordinate a volunteer day before the end of the financial year. The CCC can provide suggestions to AGL if they like. • Another opportunity has come up for members of the Gloucester CCC and community to visit Camden for a site tour. Camden has regular site tours and the next one will be held on Tuesday 4th March. Currently there are spaces available (the tour is from 9:30am to 2:30pm. Please contact Karyn if you are interested. If enough local people are interested then AGL will support the organisation of travel arrangements from Gloucester. • AGL is currently looking for new ideas for the distribution of information. To start with, AGL are increasing the number of community updates that will appear in the local paper. AGL will also be publishing 3-4 more updates. 	<p>AGL to issue information about the energy saving scheme currently happening in Gloucester</p>

6. General Business

CCC: At the last meeting there was an issue with the telephone survey. AGL didn’t release the information due to, what they claim, is a result of privacy and commercial confidence. AGL did release some details on how the sample was achieved but they didn’t provide any further details. AGL is making free use of the findings, so I would like that the questions be released. Can AGL release this or, if they will not, at least cease using the information?

KL: We can ask the consultant that carried out the survey to attend the next meeting to discuss this with you.

CCC: I don’t think that would help. My view is that this information shouldn’t be confidential if the outcomes are being used publicly. The perception in the community is that the public can make assumptions about this information so I agree that the methodology by which this was obtained must be public.

CCC: I think it would be worthwhile.

NB: Several CCC members held similar views.

KL: I will take all of your comments back and will have a response to you at the next meeting or sooner, if possible.

CCC: Faulkland 3 has been plugged and abandoned and APPEA states that that means it has been cemented from bottom to top. Is that what has happened on this well?

TL: That’s correct. It has been cemented.

AGL to arrange for a representative of the research company to attend to discuss the research.

AGL to provide a response to the CCC’s concern about the telephone survey conducted in 2013.



Notes	Action
<p>CCC: In relation to the Review of Environmental Factors (REF), there is an addendum available on the AGL website. Can it be linked to the original REF and can we get more information on the government response and the issues they raised?</p> <p>TL: Because we had a number of options in the original REF, the approvals would have needed to cover each option. We had a meeting with the Departments over those options and they asked us to clarify and nominate the preferred option for assessment. As such, it's a Preferred Activity Report, rather than an issues report. I'll investigate how it appears on the website.</p> <p>CCC: There was a CSG incident (not related to AGL) that involved a spill in a state forest. Can AGL please provide some information as to how something like this might be avoided in Gloucester?</p> <p>TL: I will take that back as an action for the next meeting.</p> <p><i>No further business was raised.</i></p>	<p>AGL to investigate how to best publish the REF on the AGL website.</p> <p>AGL to provide information on the management of potential spills as a result of exploration and operational activities.</p>

8. Next meeting

Meeting closed at 11:30am

Next meeting to be held in Thursday 17 April 2014 at 10am, at the Gloucester Country Club.

Michael Ulph

GHD – Stakeholder Engagement



ACTION ITEMS			
Action	Responsibility	Complete	Outcome
AGL to arrange for an operations representative to present at the next CCC meeting	Karyn Looby		
Michael to follow up on the email issued to Gloucester Council	Michael Ulph		
AGL issue all project summary documents to CCC	Karyn Looby		
AGL to provide a link to the soil and water report to the CCC after it is uploaded on to the website	Karyn Looby		
AGL to issue information about the energy saving scheme currently happening in Gloucester.	Karyn Looby		
AGL to provide information on the management of potential spills as a result of exploration and operational activities.	Toni Laurie		
AGL to investigate how to best publish the REF on the AGL website.	Toni Laurie		
AGL to arrange for a representative of the research company to attend to discuss the research.	Karyn Looby		
AGL to provide a response to the CCC's concern about the telephone survey conducted in 2013.	Karyn Looby		