





NB: Note that 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 21 August 2014	Job No	21/17714
	Gloucester Country Club, 9.00am – 12.00noon		
Copies to	All attendees		
Attendees	Ian Shaw [IS] – AGL Lands Officer	Apologies	David Mitchell – Avon
	Karyn Looby [KL] – AGL Community Relations Manager		Valley Landcare Clr Tony McKenzie [TM] – Dungog Shire Council
	Toni Laurie [TL] – AGL Land and Approvals Manager		
	Ed Robinson – Lower Waukivory Residents Group		
	Jerry Germon – Community Representative		
	Rod Williams – Community Representative		
	Ray Dawes – Barrington Gloucester Stroud Preservation Alliance	Others not present	Lisa Schiff – Great Lakes Council
	Michael Ulph [MU] - GHD (Chair)		Clr David West – Mid Coast Water
	Kaycee Simuong – GHD (Minutes)		
	Clr Karen Hutchinson [KH] – Great Lakes Council		Lee McElroy – Port Stephens Council
	Graham Gardner [GG] – Gloucester Shire Council		Dan Rose – CEO, Forster Local Aboriginal Land Council
	Clr Aled Hogget [AH] – Gloucester Shire Council		
	Anna Kaliska [AK] – Mid Coast Water		Dr. Gerald McCalden – The Gloucester Project
	Observers / Presenters		Larry Brown [LB] – AGL
	Alex Kennedy-Clarke – AGL		Operations Manager
	John Ross [JR] – Manager Hydrogeology		
	James Duggleby [JD] – AGL Senior Hydrogeologist		
	Michael Logan [ML] – Dairy Connect		

Notes Action

1. Michael Ulph (Chair)
Welcome and Acknowledgement of Country





Notes Action

Introductions for new committee attendees and observers

Meeting commenced at 9:10 am

2. Meeting agenda

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

3. Action items from the last meeting

Action items from the previous CCC meeting were reviewed. Michael asked the CCC if there were any other questions in relation to the action items or previous meeting minutes.

Jerry Germon was not present at the last meeting as recorded on previous minutes.

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

Ask if Michael Logan can attend and present at next meeting Michael is here and will be presenting today.

Send around link for Gloucester Water Project on Councils website

Graham has sent around the link.

Find minutes/details for the meeting which discusses the selection of Independent Peer Reviewer Rick Evans and detail around the selection process.

Michael has hard copy of information. Will discuss with Gerald present if/when he arrives to meeting.

Ask Sarah Jardine if she would be interested in having a webpage/link about all the information for the works being conducted in the basin. Include the process and where we are now (possibly on flow chart diagram)

MU: Will follow up with Graham, this has not been done yet. Possibly for Council to follow up. MU has started a flow chart for the project. This includes history, activity and time frames. Has sent to KL. KL has





Notes Action

informed Sarah Jardine.

KL: Under the impression it was not just AGL projects, the wider projects around the basin.

MU: Two forms here; one for the wider projects across the basin and one for just the AGL project. Will discuss further with Graham.

Get list of coordinates of wells and distribute to CCC. Bring coordinates to next meeting.

Toni Laurie has not followed up well locations yet as she has been on leave since last meeting. Will do this afternoon.

CCC: We wanted a link for the Gloucester Dialogue? This is last action in minutes.

MU: Ok I will chase this up.

ACTION: Toni Laurie to distribute well coordinates.

Action: MU to distribute link for Gloucester Dialogue

4. Project update - Toni Laurie

Toni Laurie provided an update of the Gloucester project to the CCC. Key points are summarised below:

TL: Apologies, as she has been on leave since last meeting, and also had a computer glitch this morning so could not distribute the project update, will do this later today.

- Approvals: Petroleum Exploration Licence (PEL) 285 was renewed earlier this month. New regulations meant the renewal was linked to all activities that they do.
- Received pilot approval on 6th August. Working through different conditions of approval. All conditions are intertwined and they are working through them.
- Working on Waukivory pilot. Getting it underway.
- Craven 6 was on flow test near Stratford mine. Program has been completed and shut in. The well is no longer an active site.
- Commenced planning for pilot programs further south. Working on them at the moment, more information to come.
- Still on Front End Engineering Design (FEED) phase of project, this
 is still underway and progressing.

Graham Gardner arrived at 9.20

CCC: How long was the Stratford well running for?

TL: Has been on flow test for about 6 months. We have all the data needed and have shut it down.

CCC: How can we get details from this?

TL: Information should be on AGL website and the Office of Coal Seam Gas website.

ACTION: Toni Laurie to distribute project update.





Notes Action

CCC: What are the conditions of the EPL?

TL: All conditions are interlinked; conditions are an update of PEL conditions. All standard conditions. Also address conditions put forward in REF. Can distribute this.

ACTION: Toni will find and distribute link for EPL conditions

5. Presentation on Dairy Connect - Michael Logan

Introduction by Michael Logan of himself and Dairy Connect.

Shows presentation:

- Discusses dairy industry in NSW, political issues, changes to trading. Trying to get investors on board to build powdered milk plants which will export to China.
- Introduces Board of Directors of company. Trying to engage with people that are committed to a secure supply of high quality product for a sustainable business.
- Shows diagrams in relation to dairy market. Low consumption in China, but growing on average at 1L per head per year.
- Milk formula market overview. Shows stats for milk formulas and milk powder. Demand growing by 38% per year. Enormous demand that is not being met. Shows largest companies.
- New laws in China; whoever sells the formula is responsible for its quality, e.g. supermarkets. Dairy connect will offer quality control process so that supermarket doesn't have to control product. Work together.
- Two phases to investment; build powder plants and build a canning plant.
- Need more than one plant to supply demand, bring plants to work together. Discussion regarding largest dairy farm (18,000 cows) to be built in Hay, Riverina area.
- 'Blue' is the name of the company that the powder plant is owned by. Canning facilities will be owned by this company. Chinese will own this. This will allow certification to Chinese standards.
- It is crucial to get a free trade agreement (FTA) with China that includes milk.

Aled Hogget arrived at 9:55

CCC: Who signs off on the FTA? Is it State or Federal?

ML: Federal.

- Discusses the value of doing this in NSW;
 - NZ has no room left, property prices rising. Enormous environmental pressure.
 - NSW still cheap, high productive capacity. Gloucester can

Logan to send Michael Ulph copy of presentation

ACTION: Michael





Notes Action

grow feed well.

- Problem in NSW is that farmers do not have capital to invest in new technology. Many dairies have shut down in the past.
- Our strategy will allow them to modernise for the future.

MU: How far off do you think an FTA might be?

ML: Early next year. Critical time right now. We want exactly the same deal as NZ has.

 Discusses Chinese market for formula, the rate of change, major brands in the market, statistics on Powdered Milk Plants and major players in NSW Dairy Industry Value Chain.

Rod Williams: Discusses dairy farming conditions in Gloucester and being part of Murray Goulburn and productivity in NSW.

Group discussion around the proposal.

ML: Discusses potential dairy plant in Hay, artificial insemination. Discusses how this proposal will work well with beef farmers.

Rod Williams: Discusses technology for dairy farming.

MU: Why is Gloucester the ideal place for this?

ML: Energy. High gas input is needed to heat and dry milk.

CCC: So having the gas facilities here are beneficial even if it's getting piped down to Newcastle?

ML: Yes transportation of milk is a key issue here. It is bulky and expensive to transport. Processing here is ideal.

CCC: Council controls the roads - if there are huge loads and increased road use, this becomes dangerous. This would be a huge issue for council.

ML: Discusses statistics for potential road use of trucks in the area.

CCC: What sort of time frame are we looking at for building infrastructure? When does this work need to be done? Thoughts on when to start planning for this (for regional development framework)?

ML: Getting community to understand on a deeper level is important. Politicians listen, not lead. They will support if community is supporting it already. Drive your own solutions.

CCC: Low investment entry into production for small farming families is crucial in this region.

ML: Has entire strategy on this. Australians are needed to farm Australia. Foreign farming operations are rarely successful here. Has looked at many models, NZ are doing this – share milking and coinvesting. Very modern and successful.

CCC: How reliable is China? Has a reservation about it due to bad experiences of friends.

ML: Discusses needing to have partners with aligning values. He is





Notes Action

using company Riverstone who are very good with Chinese relations and reliability.

CCC: Still has a reservation about working with Chinese.

CCC: Shares example of a friends' negative experience working with Chinese re patents.

ML: Shares example of Monsanto and China in cotton industry. Shares experiences selling cotton to China.

CCC: Is there a gap in the Australian industry for milk powder?

ML: Big gap between what Australia and NZ produces and what China uses. Australia can fill this gap and create our own future.

CCC, **ML**: Discussion around dairy farming and transportation costs of milk for dairy farmers in the area.

Morning tea break.

MU: As it appears that Gerald is not attending, I'll discuss the action item from the last meeting in which Gerald asked for information on the process of selecting Rick Evans for study

MU Discusses process of selection; national advertising for expressions of interest of which ten were received, the selection of four after an online survey of CCC opinions, establishment of questions, telephone interviews, selection criteria and scoring.

Shows timetable for selection process, and notes from meeting. Shows scores given to candidates, showing Rick Evans with the highest scores. Gives copies of all paperwork to Ed to give to Gerald.

Rod: It was a transparent and involved process.

Graham: AGL came to meeting with preferred list. But CCC demanded national advertising for the position.

6. Water update - Extracted Water Management Strategy - John Ross

John Ross provided a Water Update Report for the project. Key points are summarised below.

A fact sheet on catchment water quality and trace/heavy metals is about to be released.

Groundwater Investigation Program:

- 1. Groundwater monitoring program:
 - Ongoing quarterly monitoring program across whole network.
 - Quarterly report published on the website in July.
 - Telemetry being installed at all groundwater and surface

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water sites at Waukivory

 Next (regional) monitoring bore water sampling program will be in March 2015 (and reporting in September 2015)

2. Waukivory Pilot Testing Program:

- Monitoring bores are part of the quarterly monitoring program – a third 2014 baseline WQ sampling event is proposed in advance of proposed fracture stimulation and flow testing program.
- Drilling and completion report for monitoring bores (with baseline data sets from 2013) published in August.
- Drilling of WKmb05 (as a geophone monitoring location) is complete. Conversion of the hole to a water monitoring location is proposed for immediately after the fracture stimulation program.
- 3. New drilling program and monitoring network expansion:
 - New monitoring bore completed at Wards River in June (awaiting perforating and installation of logger).
 - New monitoring bore site towards Weismantels is planned for drilling and completion in Q2 2015.

4. Other water studies:

No new investigations.

5. Numerical modelling

- Phase 3 numerical groundwater modelling has commenced

 two models: local scale (fault) model and regional model
 (whole basin) under way.
 - Local scale modelling is mostly complete (Final draft report expected early 2015 after initial Waukivory testing program results).
 - Regional model under way (Draft report expected mid 2015 after additional work programs).

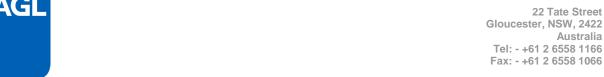
Tiedman Irrigation Program:

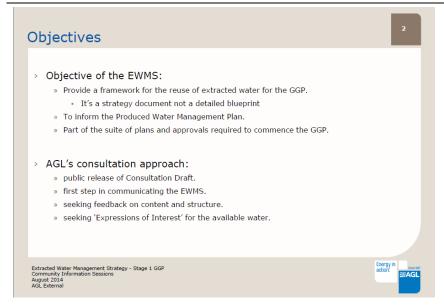
- Approval to extend the program to 30 April 2015 granted.
- No blended water irrigation planned at present.
- Water and soil monitoring programs are ongoing (latest 6-monthly sampling complete and 6-monthly reports (to 4 July 2014) to be completed by end of August).

Extracted Water Management Strategy

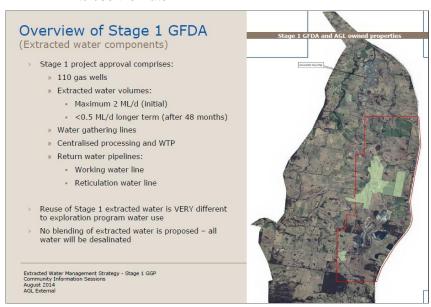
- Desalination strategy for the GGP announced in late July.
- Consultation Draft completed and agencies/Council have been briefed (13 August)
- Public release at the GCCC on the AGL website as of this afternoon; community information sessions happening 21 August PM; other sessions possible but not timetabled
- On exhibition until 19 September

Shows presentation on Extracted Water Management Strategy:





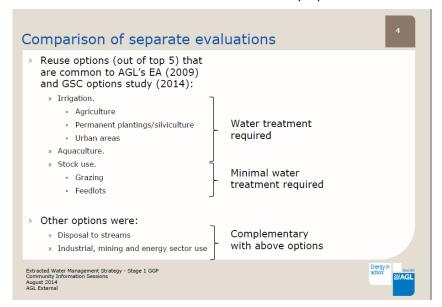
- Required under Part 3A project approval a framework document.
- Extracted water = both flow-back water and produced water (describes each).
- Strategy document does not contain technical designs or maps.
- Will form input into the expected Produced Water Management Plan for the Stage 1 development.
- Describes consultation process.
 - The current document is the first draft to be used to seek input
 - Will seek expressions of interest for people that might want to use the water.







- Overview of stage 1 (extracted water components); shows map and discusses stage 1 area and statistics. Shows water treatment plant location, pipelines (to reduce use of trucks), gathering lines and working lines.
- 75% drop-off in water production within a year or two due to tight permeability/expected low water
 - Leaving behind blended water program (from trials).
- Discusses options for using water (irrigation, aquaculture, stock use). Concluded that a combination of uses is ideal. Council went through a similar process – with similar results.
 - Water needs to be treated for these purposes.



CCC: Why can it not be put through one system or another? Why a combination of uses?

JR: Because of the fall off of amount of water over the years. A lot of money for infrastructure and set up to put it all into one industry.

CCC: Can you describe the process of disposal to the streams?

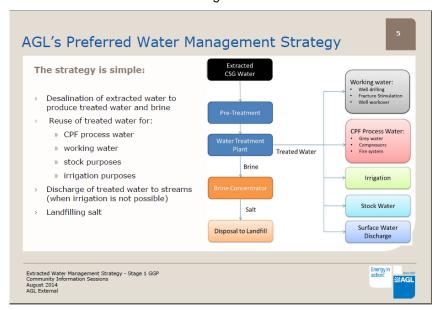
JR: Only under extreme wet weather conditions (high rainfall events). Will show graphs.

Continues with presentation:

- · AGL's preferred Water Management Strategy Treatment process
 - Extract water
 - o Pre-treatment
 - o Water treatment plant
 - Brine concentrator
 - Disposal of residual waste to landfill
- 5 uses for treated water:



- Working water (drilling, fracture stimulation)
- CPF Process Water (grey water, compressors, fire system)
- Irrigation
- Stock Water
- Surface water Discharge



CCC: What's the cost involved for using for stock? Will there be an extra cost on top passed on to consumer?

JR: Haven't looked into that. Not looking for a return on investment for water. Only gas. Very minimal cost, if any cost at all for delivering stock water. Not in business for making money off water. We want the best benefit for the water.

CCC: Where is the treated water stored? Does a third party have to have their own storage?

JR: We will have our own substantial storages; the current plan allows for 3 x 25ML ponds at the Central Processing facility (CPF). Will store and send down line on demand.

MU: Gerald represents The Gloucester Project, which has the aim of developing a vegetable bowl in area – perhaps this is a possible use for water. I'm bringing this up on behalf of Gerald.

JR: We will use an expression of interest process with a form to apply, this water is aimed at small or niche industries.

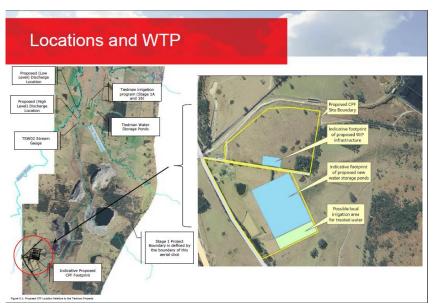
- Discusses locations and WTP plant itself within very small footprint.
 - Storage tanks make up most of infrastructure
 - o Conceptual design, not yet finalised.
 - Close to 96% or 98% recovery, and exporting salt out of the catchment

CCC: So map is to scale?





JR: Yes



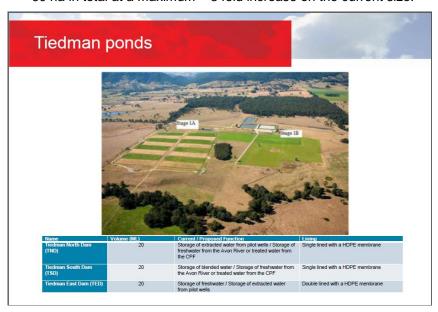
CCC: Who provides development consent for WTP?

JR: It's part of the Part 3A approval

CCC: Not a new approval, the existing approval covers extracted water management.

JR: Discusses Tiedman ponds – dams and irrigation on AGL properties

• 60 ha in total at a maximum – 3 fold increase on the current size.



CCC: So the 60 ha is if you were to do it all in-house?

JR: Yes, after 4 years when water production decreases, the land needed will decrease significantly and we would be retiring some of it.

CCC: When you were doing the Tiedmans irrigation program you were using diluted untreated water. Will this water be treated same as other





irrigation water that someone might draw from a river. Will there be restrictions, will the water be tested?

JR: We are proposing testing right through the treatment plant, before treatment to get the conditioning right before it goes through the plant, and it will be extensively tested after treatment for a variety of uses.

CCC: If private landholder uses water, is there a responsibility for them to test the water or will it be ready to use?

JR: This is currently unknown, will depend on discussions with EPA.

CCC: Probably will have to do water/soil testing for the Office of Water. We have to test water on an annual basis in every paddock.

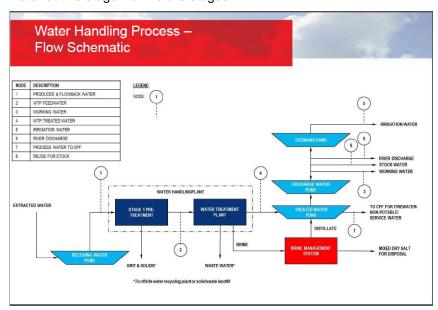
JR: There is currently a sodium hazard with the water. It is very important that we get this adjustment right. We want no trace metals or minerals. The water quality will essentially be a raw water source for drinking water.

CCC: If you have 60 ha for designated irrigation, if someone wants more water will you reduce the 60 ha?

JR: Yes we would reduce our 60 ha. There would be a lot of water in first 4 years. Controlling factor is the water withdrawn.

CCC: Is this dependent on stages 2 and 3? Could there be additional water in these stages?

JR: There could be additional water, but I can't ever see any more water than that being produced in the early years of Stage 1. Figures will jump around over 15 years. Very early days, can't predict future water at this stage from future stages.



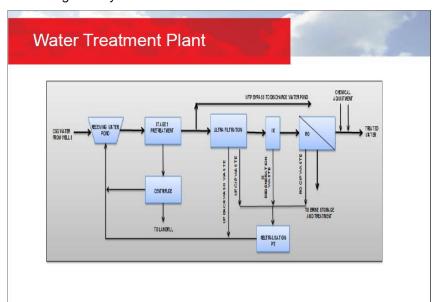
- Discusses water handling process flow schematic
- All water must go through the central processing facility in order to be sent back out for reuse. (even first 10 – 20 ML for drilling and fracture stimulation will go via the CPF)
- 3 water treatment ponds, discusses process of water moving





through the ponds

- Reduce turbidity, brine management system
- Condition needs to be right prior to treatment for appropriate use
- Water treatment plant components discusses movement of water through the system



 Approximately 4 portable shipping containers for the water treatment plant. Each 1 ML Reverse Osmosis plant is one container. That's a fairly small footprint.



CCC: Do the containers include the actual plant?

JR: Yes they include all of that.

MU: Is this new technology? Compared to Sydney (desal plant), or has it been around for a while?

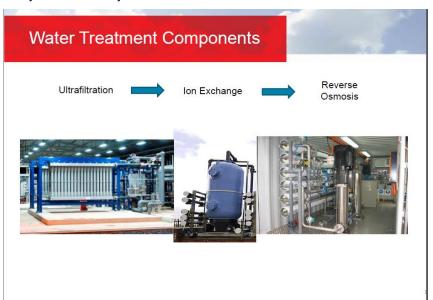




JR: Pretty stock standard technology now. The only new technology is better membranes and getting them to last longer. The real innovations come earlier in the process (pre-process technologies).

CCC: Technical question regarding fracking – Is there a high variation between flowback water?

JR: Yes. Up and downs in water quality. Pre-processing stages are really critical as they will treat the water first.



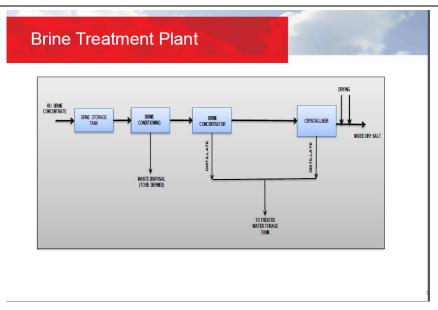
CCC: After treatment; will the additives (lime, etc.) be added outside the WTP?

JR: Yes in a dosing shed or separate plant near the ponds

- Brine Treatment Plant discusses stages of brine processing.
- Water Production and Use figure showing water production 0 700 weeks. But this is all depended on each location, that's why Waukivory is so crucial.



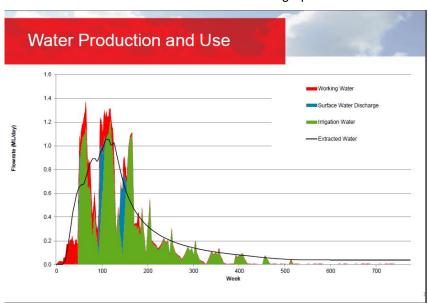




CCC: What influences the concentrations?

 $\ensuremath{\mathsf{JR}}\xspace$: Wells over time, seasonality, climate.

CCC: What climate conditions are used in that graph?

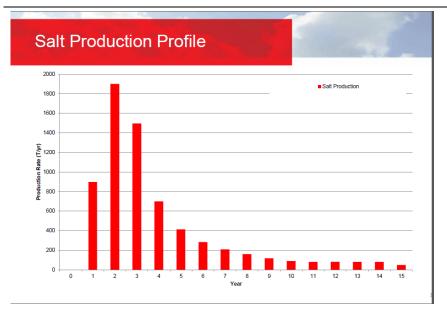


JR: Average conditions. Will discuss on another graph.

Salt production profile – shows decrease in salt production (t/year) over 15 years. Average of 400 t per year, 1.1 t per day. Drops significantly in future. At peak production this is 2 trucks per week on the road, dropping down to 1 per month.



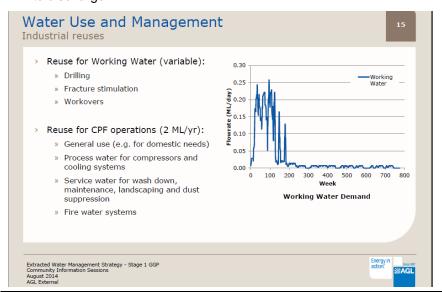




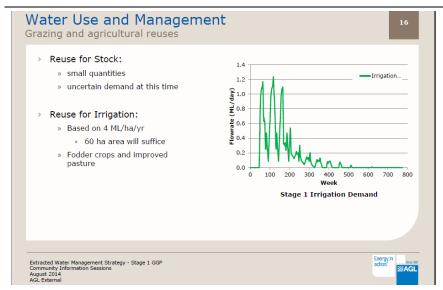
CCC: Are you confident of those estimates? Or will Waukivory give you additional data?

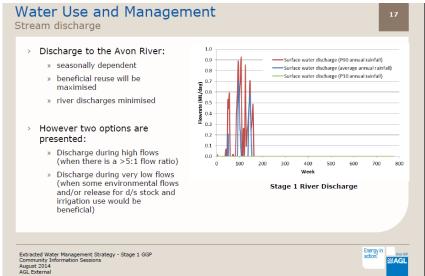
JR: Extracted water volumes will determine quantities.

- Water use and management grazing and agriculture reuses
- Water use and management stream discharge discusses figure and climate. Discharge will only occur in the first few years, even if there are high rainfall events later on. Enough storage to not need to discharge.









CCC: So your current approvals allow for river discharge?

JR: Yes, but the EPA will be the final determinant on what we can discharge. Picked a few locations on Dog Track Creek. Another proposal is to look at discharging water into the stream during drought cycles.

CCC: 2 ML a day; would that really have any effect during drought periods?

JR: Unsure yet. Volumes for discharge are likely to be less than 1 ML/d

CCC: In dry times, there will be a drawdown of the river?

JR: We have no modelling to suggest that.

CCC: Interest groups want a no discharge policy.

AK: It's not drinking water, its treated effluent. May be a similar quality, but it is treated waste. Drinking water needs further treatment.

JR: Challenges that, water is no different to water generated from the





Sydney Desalination plant.

AK: This water is generated through an industrial process. The health department would not allow classification as drinking water.

JR: Disagrees, just needs final fluoridation and disinfection.

AK: I don't think the health department would not allow that, discusses current issue regarding using treated sewage effluent.

JD: There are 20 million people in London drinking recycled effluent.

CCC: What will happen with waste salt?

JR: Have no sample for salt analysis, will get this from Waukivory. It's mixed salt, not pure sodium bicarbonate. More processing is needed for pure salt. There may be opportunities for feeding to cattle (as a salt lick). Looking for other opportunities, landfill is last option, but even so if it is placed into a separate cell it could be reused in the future.

Close of submissions is 19th of September

7. Community Engagement update - Karyn Looby

Karyn Looby provided an update to the CCC about recent community engagement events, and issued a document that outlines these activities. Key points are listed below.

Extracted Water Management Strategy

- As part of the Gloucester Gas Project (GGP), AGL has confirmed that it is going to adopt desalination as the preferred water treatment technology for the extracted water generated from Stage 1 of the GGP. The Consultation Draft of the Extracted Water Management Strategy (EWMS) will be released for public comment today.
- A copy of the Consultation Draft of the EWMS can be downloaded via the Gloucester Gas Project webpage. Comments on the Draft EWMS are invited through 19 September and can be sent to us at either of the following addresses:
 - AGL Upstream Investments Pty Ltd
 Submission Gloucester Gas Project EWMS
 Locked Bag 1837
 St Leonards NSW 2065
 - o Via email: gloucester@agl.com.au
- We are hosting community information sessions today as AGL values the comments of the Gloucester community on the proposed strategy and potential users of this new water. We encourage people to have their say on the options and opportunities that are presented, and invite expressions of interest if you want to know more about obtaining high quality water for reuse.
- AGL has launched the Gloucester Community Investment Program.
 There are two funding rounds August and February. Donations, sponsorships or community development programs must benefit the community, develop local capacity and be sustainable into the future.

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CCC: Why is community investment run separate to CCC? **KL:** It allows for other people in the community to contribute **CCC:** How many applications have you had from the community?

KL: A handful.

CCC: Still looking for more?

KL: Yes.

- AGL has engaged Creating Communities to work with AGL to deliver a Social Impact and Opportunities Assessment (SIOA) for the Gloucester Gas Project. The SIO will support and inform our community development programs to meet the needs of the community in the Gloucester Project area prior to the Final Investment Decision by the AGL Board.
- The SIOA includes desktop analysis but a large component of the work is community consultation. We will be holding Dialogue Café's (consultation workshops) in September, along with a community survey and one-on-one interviews. The Dialogue Café's are planned for 8 September.
- AGL community partners' activities, programs and AGL hosted events for the months of July and August:
 - Gloucester Dialogue meetings
 - NSW Energy Minister visit
 - Stroud Brick-throwing event
 - NAIDOC Day
 - o Glowmalman Gloucester Junior Rodeo
 - NSW Farmers Annual Conference 2014
 - Tour for Local Land Services
 - Dairy Connect meetings with local dairy farmers
 - o Gloucester Chillout Festival
 - Gloucester Business Chamber meeting key note speaker AGL Head of Economic Policy & Sustainability
 - o AGL Extracted Water Management Information Sessions
 - o Stroud Road Bush n' Bash
- AGL hosted a visit by members of the NSW Dairy Connect Farmers Group this week. This group represent dairy farmers from regions across NSW. The visit took in the Tiedeman Irrigation Trial, the Maslen's dairy farm and a presentation on CSG at the Office. The group expressed their appreciation for the opportunity to expand their knowledge on the processes used, the utilisation of produced water and the coexistence of agriculture and CSG production."

KH: In regards to Great Lakes Council, can you organise a presentation by AGL at a council meeting.

KL: Sure. We will follow this up with you after the meeting.

8. General Business

GG: In regards to creating a library for the Gloucester Gas Project, of all the information and documents. It is a much harder task than expected. The challenge is who will manage links? Intention is to do it on council webpage, have page with links to all information and relevant documents.

Action: Graham to progress the 'library project'.

Also a discussion with AGL - program of activities, related to layers of







activities – to see what's happening and when, in the future. Complex process as so much is happening. Susie has done some work. We need more comment from the CCC.

MU: Has started a similar thing for just the AGL project. Suggests page with links to all information. Leaves this task with Graham.

CCC: Re: Campground application. There was a meeting last night regarding it. It was highly emotional. As the landholder is in the room, should this be addressed?

CCC: Issues within Gloucester are no longer just for the local community, it is now a NSW issue. Doesn't like what he sees, will do his best to prevent it from occurring.

MU: Acknowledges right to protest.

CCC: Thanks Graham for turning up to the meeting last night. A lot of people in his organisation are upset (re campground).

CCC: I also have many people upset in my organisation.

CCC: Thinks campground is a great idea. Will make money off

campground.

CCC: Just wait until Rocky Hill gets approved.

No further business was raised.

9. Next meeting

Meeting closed at 12:15pm

Next meeting to be held on October 16th at 10am, at the Gloucester Country Club.

Michael Ulph

GHD - Stakeholder Engagement





ACTION ITEMS				
Action	Responsibility			
Toni Laurie to distribute well coordinates.	Toni Laurie			
Michael to distribute link to Gloucester Dialogue	Michael Ulph			
Toni Laurie to distribute project update.	Toni Laurie			
Toni will distribute link for EPL conditions.	Toni Laurie			
Michael Logan to send Michael Ulph copy of presentation	Michael Logan			