

MEETING MINUTES



MINUTES OF: Arrow Surat Community Reference Group
 HELD AT: USQ Toowoomba
 DATE: 18 June 2015
 COMMENCEMENT TIME: 9.40am

PRESENT:	ASCRG ATTENDEES: Leisa Elder – Vice President External Relations and Tenure Management Simon Gossmann - Groundwater Manager Peta Tucker – Team Lead Community Engagement Tania Marshall – A/Senior Community Officer, Dalby Ian Hayllor – Landholder John Hughes - Project Officer CSG Compliance Unit; DNRM Cr Nancy Somerfield - Councillor, Toowoomba Regional Council Lyn Nicholson Chair, Basin Sustainability Alliance Trudi Bartlett , Member Services Manager, Dalby Chamber of Commerce Pat Weir MP , Member for Condamine Presenters: Dave Munro – Surat FEDM Carey Bradford – ATP Compliance Manager
	MINUTES: Tania Marshall (Secretary)
	APOLOGIES: Tony Knight - Vice President MGP Joint Venture Graham Clapham – Central Downs Irrigators Ltd Cr Charlene Hall - Councillor, Western Downs Regional Council Jordan Peach – Australian Lot Feeders Association, Mort & Co Matt Paul – Policy Director, APPEA Geoff Hewitt – Landholder Cr Ray Jamieson – Councillor, Western Downs Regional Council Mary O'Brien – Regional Manager, Cotton Australia Sarah Due – Regional Manager, Agforce
CHAIR:	Leisa Elder , Vice President External Relations and Tenure Management
DISCLOSURES	None recorded

		ACTION/SUGGESTIONS
ITEM 1	Joint Session with AIFL Committee Welcome – Leisa Elder	
ITEM 2	Safety moment – Heart of Australia – Peta Tucker Explanation of the Heart of Australia service and the partnership with Arrow. Statistics: <ul style="list-style-type: none"> • 55 regional clinics held • 1126 episodes of care • 49 urgent cases identified • 40 referred for other urgent procedures, including stents • 513km – average travel distance saved per patient visit • 30% indigenous cases • 237 patients require ongoing treatment • 9 referred for open heart surgery To attend the service a referral is required from a patient's GP. Further information is available at heartofaustralia.com Nancy Somerfield congratulated Arrow on their involvement with Heart of Australia John Hughes asked how the partnership came about. Leisa Elder advised that Dr Rolf Gomes met Peta Tucker approximately three years ago. After lengthy discussions on how Arrow could be involved, a partnership was formed. Other companies have provided in kind services to assist the program: <ul style="list-style-type: none"> • Medihearts – Cardiology practice • St Andrew's War Memorial Hospital • Bayer • Kenworth • iOR Petroleum 	

	<ul style="list-style-type: none"> • Telstra • Brown & Hurley • GTins • Medicare local – Darling Downs – South West Queensland • REX – Regional Express. 	
ITEM 3	Arrow Energy Update – Leisa Elder	
	<p>Royal Dutch Shell bid for BG Group</p> <ul style="list-style-type: none"> • Leisa Elder advised that the Royal Dutch Shell bid for BG Group was not connected to Arrow Energy. Shell is a 50% owner of Arrow Energy with PetroChina. • The proposal has to pass through approximately 20 jurisdictions before going ahead. 	
ITEM 4	<p>Development Update – Dave Munro Daandine Expansion Project (DDEXP) Update:</p> <ul style="list-style-type: none"> • Project scope provides a 60% increase in Daandine production capacity with increased gas compressors, safety upgrades, an export connection, brine dam replacement and additional field infrastructure such as additional wells, new wellhead skids and gathering systems. Facility shutdowns will also be required during the upgrade. • Dave Munro explained in detail some of the processes involved in such an expansion project. • John Hughes enquired about where the new well skids were going. Dave Munro advised they would be installed on existing wells. • Neville Wirth (IFL Committee) stated that there had been some bubbles in Wilkie Creek in the past however had stopped before he got round to reporting it. He stated it hasn't been an issue since. • Ian Hayllor stated that this could have been due to pipe settling also. • Neville Wirth asked if a plan of DDEXP was available. Chris Wicks will provide to Mr Wirth. • The current design of well skids does not have separators. Low point drains are used. On flood plains they are approximately 2km apart. These low point drains do not require pumping out as they are automatically drained to the water line. • Wayne Newton asked about how power was supplied to these well sites. Dave Munro advised there would be on pad skid generators that would be gas powered. On larger projects electric motors would be used. • Neville Wirth asked what Stratheden would look like when the field was opened up again. Neville advised he has a legacy well 100m from his house and the noise may be an issue. • Leisa Elder said Arrow would follow up the matter. 	<p>Chris Wicks (AIFL Committee) to provide plan to committee members</p> <p>Chris Wicks to provide an update.</p>
	ASCRG Committee business	
ITEM 5	Minutes of previous meeting & actions	
	<p>Committee approved minutes. Nancy Somerfield requested an update from the IFL committee be put on the ASCRG agenda.</p>	<p>TM to approach Darren Holmes (Chairman AIFL Committee) to request this. Minutes of February meeting to be uploaded to the website.</p>
ITEM 6	Arrow's Rehabilitation Program – Carey Bradford	
	<p>Full presentation of Arrow's rehabilitation process –</p> <ol style="list-style-type: none"> 1. Progressive rehabilitation <ul style="list-style-type: none"> • reducing the footprint • includes drilling pit clean out, landform stabilisation, seeding and commencement of monitoring. • to be undertaken within 6-9 months depending on the EA 2. Final rehabilitation (when tenure is relinquished) <ul style="list-style-type: none"> • all of the above • plus well must be plugged, cut and capped and infrastructure removed • site monitored until it meets the EA conditions <p>Pit rehabilitation – it is not Arrow's current practice to use pits. Pitless drilling is utilised. Explanation of plugging, cutting and capping provided. Landforms are smoothed out to original contours and some sites have a polymer sprayed to prevent soil erosion. Sites may also require seeding. Sites are also</p>	

	<p>monitored by ecologists until vegetation meets the EA requirements. This monitoring may be for several years.</p> <p>Nancy Somerfield asked what happens if there is subsidence after handover. Cary Bradford advised it is Arrow's responsibility to remediate the subsidence. Arrow place an open drill string 100m from the base. Cement is pumped into the hole for 100m then allowed to set. Then a further 100m pumped in and set, continuing until the entire hole is cemented. At approximately 1.5m below the surface the casing is cut off and a steel plate with hole details attached to the top and then soil is placed over the hole.</p> <p>Ian Hayllor asked if Arrow cleans the casing before cementing. Carey advised that casing is generally quite clean to the base.</p> <p>Pit rehabilitation – the historical method was to dig earth pits for drilling waste, however Arrow's current practice is to use pitless drilling methods. This is where large steel tanks are used to collect the drilling waste.</p> <p>Dam decommissioning process discussed –</p> <ul style="list-style-type: none"> • A site inspection is carried out, sampling undertaken and a rehabilitation plan developed • Produced water and sediment is removed and treated • Dam liner is removed and disposed of • Original landform reinstated • Site is seeded, fertilised and harrowed • Site may be fenced 	
<p>ITEM 7</p>	<p>Research and Innovation – Simon Gossman Soil Column Testing – deep drainage Drill Mud Spreading – New Zealand dairy milk concerns</p>	
	<ul style="list-style-type: none"> • This item is in response to question from the February meeting. • The column test study did not show flow through. With 100mm diameter cores, consideration for deep cracking was out of scope for the study, which was designed to establish the absorption coefficient (a measure of how chemicals bind to soils and one of the inputs for modelling). • Arrow acknowledges that deep cracking occurs in vertosols and would cause flow through the profile. The samples taken for the column tests did not have deep cracks and therefore did not show flow through. <p>What Arrow has measured to date:</p> <ul style="list-style-type: none"> • Arrow has eight telemetered groundwater monitoring bores on the Theten site which take water level, electrical conductivity and temperature data every 15 minutes. A full water chemistry suite is taken annually. • The results of irrigation impact of CSG treated water would show up as a change in water chemistry, moving towards the quality of the dam water. • To date, there is no change in groundwater quality to become more like dam quality. • Arrow will continue to monitor. <p>Drill cuttings:</p> <ul style="list-style-type: none"> • In April a tour for ASCRG and AIFL Committee members visited the site of the drill cutting trials. • These drill cuttings are solid cuttings created during the drilling process. • During the drilling process muds are used. These muds include water, potassium chloride (KCl- naturally occurring salt, commonly used as a fertilizer in the agricultural sector); muriate of potash (MOP) – at 2% concentration); Glutaraldehyde Biocide (to kill any bacteria – commonly used in disinfectants, used as 0.002% concentration by Arrow. NICNAS classifies it as non-hazardous when <0.1% concentration). • These products are used at very low concentrations and these products are widely used in the agricultural industry and in products we use at home eg potash, disinfectants sunlight dish soap and are designed to sterilise the well and rapidly breakdown. • Arrow does not use: <ul style="list-style-type: none"> • Oil based drilling fluids • Metals in our drilling fluids • Petroleum based drilling fluids • Persistent additives <p>Arrow has a 3rd party approved methodology for our trials – a Land Application Management Plan (LAMP).</p> <p>Land spreading is only conducted under the following conditions:</p> <ul style="list-style-type: none"> • At specific application rates • In areas where existing vegetation is not sensitive to salt or there are no concerns associated with erosion and sediment control. • Application is conducted on flat land with slopes of less than 5% to prevent 	

	<p>surface water runoff and overland flow to waterways.</p> <p>Application is conducted more than 100m from a surface water body to prevent direct entry into surface waters or infiltration and discharge into surface water. Ian Hayllor asked how much is spread per hectare. Simon Gossmann advised that it was 100m³ per hectare.</p> <p>John Hughes asked if this was just a trial at this stage. Carey Bradford advised that it was currently a trial and that it needed an Environmental Authority for this to be undertaken more widely.</p> <p>John Hughes asked what did Arrow think would be landholders concerns. Carey Bradford advised that it would be that Arrow needed to prove the science behind the trial. Simon Gossmann advised that cuttings and soil have been analysed prior to and after the spreading.</p>	
ITEM 8	Request for new items of interest from Committee members – Leisa Elder	
	<ul style="list-style-type: none"> • AIFL matters of interest 	TM to request from Darren Holmes (Chair of AIFL Committee)
ITEM 9	Any Other Business	
	<p>Accommodation and tours</p> <ul style="list-style-type: none"> • Trudi Bartlett asked where Arrow accommodates its workers. Local businesses would prefer motels be used which has a flow on effect to the town. Trudi also asked where Arrow's subcontractors are accommodated. • Leisa Elder advised that she had recently provided information to the FIFO enquiry. • Leisa Elder also spoke about social investment of companies in areas of impact needing to be sustainable and of benefit to both the community and to attract staff to live in the area. In Moranbah, as an example, Arrow assisted with a project to provide after school care programs, at the local High School using existing facilities and allowed students to undertake formal training in child care to facilitate the service. Endeavour Foundation was also able to provide services for children with a disability. Helping staff and the community. • Some drilling operations shifts are 24 hour shifts and camps are located close to these operations which is for safety reasons, as it reduces travel time as well as the hours worked by staff. • Trudi Bartlett asked for information on Arrow's accommodation policy. • Ian Hayllor commented that businesses need to not completely rely on the CSG industry. • Nancy Somerfield stated that there was always a prediction of a downturn in the workforce when a move from construction to production occurred, however many businesses did not take this on board. • Trudi Bartlett also suggested regular tourism tours as a way for the community and visitors to understand CSG operations. Leisa Elder advised Arrow would agree to run a monthly information session, on request by community groups, at the Community Information Centre. <p>Meeting calendar</p> <ul style="list-style-type: none"> • Ian Hayllor questioned if the committee needed to meet as frequently. It was suggested that three meetings per year would be adequate, with the next meetings in September and December to time with a possible request for a Christmas event for the two committees. <p>Fact Sheet on Rehabilitation</p> <ul style="list-style-type: none"> • Fact sheet to be forwarded to the committee out of session. • Ian Hayllor would like some takeaway information on drilling muds. 	Information to be provided at next meeting.
ITEM 12	Agreed Outcomes, Actions and Deliverables	
	Nil additional	
ITEM 13	2015 Meeting Dates	
	24 September in Dalby	TM to forward meeting reminder

There being no further business, the meeting was closed at 12noon

CONFIRMED AS A TRUE AND CORRECT RECORD.

Chairperson