MEETING MINUTES

11 August, 2014

| Minutes: | Santos Community Committee - Narrabri Shire Monday, 11 August 2014 Narrabri Golf Club, Narrabri |
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| Attendance: | David Ross (Chair), Tahnee Laycock (Secretary), Annie Moody (Santos), Branden Haywood (Santos), Terry Hynch, Victoria Hamilton, Ken Flower, Jon Maree Baker, Tony Pickard and Ian Duffy. |
| Apologies: | Ron Campey, Brendan Warnock, John Tough and Vesna Rendulic (Santos). |

| | | Discussion | Action/By Whom |
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| 1. | Welcome, apologies and introductions | The chair opened the meeting at 5:32pm. Chair welcomed committee. Introduced Santos Representative: Branden Haywood. | |
| 2. | Introduction to the Santos Water Portal by Branden Haywood | Branden Haywood introduced himself as the Environmental Data Coordinator for Santos. His role is to manage vital information and make sure Santos has all the systems in place to be able to train and provide software and processes to capture data and store it in a central system and also to make sure the data is available for various reporting and management needs. | |
| | | http://www.santoswaterportal.com.au/ | |
| | | Brief background: The Santos water portal was developed in 2011 by GLNG (Brisbane based area of the business) as a way of providing basic workable information to the public. The site is moving towards having more NSW information. At the moment we | |

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| have over 100 bores that we monitor in NSW. The next step for Santos will be getting more information out there. In terms of the EPL requirements under the EPA, Santos licensing will have a number of water monitoring points that will be uploaded into the system. Part of that requirement is to have water levels recorded though pressure senses. Santos will have a full list to analyse that the EPA requires Santos to report on, available for download. At the moment it is only available for windows users, however Santos are working to make it available on smart phones and tablets. | |
| See attachment 1: Water Monitoring Map <u>http://www.santoswaterportal.com.au/water-monitoring-map.aspx</u> Water portal diagram showing groundwater level monitoring (displayed in orange), groundwater quality monitoring (displayed in light blue) and surface water monitoring | |
| (displayed in red). Santos is moving towards having more information on the sample locations points. Information sharing is important so we encourage feedback to help make the information on the website more user friendly. | |
| At the moment the water samples information is updated every 3 months and the standing water levels information gets updated every week. | |
| Q. Committee member: When does your chemical or civil chemical analysis get updated? A. Santos: Every 3 months. | |
| Q. Committee member: With your chemical analysis of the water, is Santos going to physically go out to the site and take samples for analysis? | |

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| A. Santos: Yes. The senses installed don't do the full range of analysis. It only records EC's (electrical conductivity), standing water level, pH level and temperature remotely. | |
| The website is undergoing a new structure that will see more reporting and water monitoring for NSW. | |
| Q. Committee member: In regards to the readings you do, how often do you envisage the EC's, standing water level, pH level and temperature readings will be put up? A. Santos: It will be a full suite, put up biannually. This is the EPA requirement. | |
| Q. Committee member: What is mg/L? What does that work out to be per PPM's? A. Santos: Taken on notice Santos to respond to what the mg/L is per PPM. | Santos to respond to what the mg/L is per PPM. |
| Q. Committee member: Can I click into the Santos baseline bore monitoring purple dot? A. Santos: No. That information isn't owned by us. We can only display the location points. You can go onto NSW Office of Water site and get more information. | |
| Q. Committee member: Isn't that the bores you have tested on private property? A. Santos: Yes, but we can't release that information. Part of the relationship that we have with landholders is that we do withhold some private information. | |
| <i>Comment</i> You can bring up the Office of Water website and go to any one of those purple sites and find out what is the depth and quality of the water. You can find out the basic information that is available for each of those bores. | |

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| Q. Committee member: How many bores did Santos actually drill for the landholders? A. Santos: The purple bores are existing bores that are in place. The land access agreements that we have with landholders in PEL 238 are aqua monitoring bore agreements with landholders. However, landholders can't use these bores for their own purposes; they are only on their property for the purposes of Santos. We haven't drilled any bores in PEL 238 for any other purpose than that. | |
| Q. Committee member: You said you have over 100 bores that you monitor in NSW, but I can't see that many. A. Santos: I've zoomed in on Narrabri. Not all are in the Narrabri area. If you extend the map further out, you can see more. | |
| Q. Committee member: Will there be a function in time that allows the data to be exported? A. Santos: Yes. | |
| Navigating the portal is pretty straightforward. You can zoom in and zoom out. The legend allows you to see monitoring location, and general and advanced layers. | |
| Q. Committee member: Do you have any information on the dams? A. Santos: We do. We have been monitoring Dewhurst for a while but it's not part of our groundwater monitoring network. We do however, report on its water levels and as we start monitoring it for full suite it will be available. | |

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| There is an FAQ which explains a lot of the map and the information itself. In terms of NSW and Queensland information on the one site, Santos want a brand 'Santos Water Portal' and one point of truth. We have reached the limitations of this current framework and moving on to something more extensive. | |
| Q. Committee member: One of the questions from the community is understanding usefulness. The information is only useful if you can interpret it based on what it is, one that you modelled is an impact and what it is the government is legislating as an impact. It needs to be provided in a way that tells us if it's good, bad or otherwise. Will it be interpreted like this? It's a broader question than Santos, I understand that. A. Santos: Other systems we have in place are looking at the variance, so any changes other than flat will be reported. I have often spoken with the ground water staff asking how we can bring in ground water modelling into this as well. | |
| Q. Committee member: Do the EPA or Office of Water do their own monitoring? A. Santos: They don't do as much as we do. The Office of Water own 170 bores. http://www.water.nsw.gov.au/ | |
| Q. Committee member: We talked about draw down but we haven't talked about draw up or addition of water to it from rain or other sources is this going to be monitored as well? A. Santos: GLNG do have climate data. I would like to have weekly rainfall averages published on the new structure. It would be good to see graphs with average water level with average rain level. | |

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| Q. Committee member: How long do you keep your recorded data? A. Santos: Always. Q. Committee member: How many years of data have you accumulated already? A. Santos: Eastern Star Gas did a fair bit of stuff which is maintained in a historical database. The groundwater monitoring bores were installed last year so from installation Q. Committee member: Do you have a ball park of when the new system will be in use? A. Santos: We are already in discussion with various vendors to see how we can utilise the technology to make it more user friendly. By the end of the year we will have more systems in place. Sections will transition all the time. You won't be waiting for one transition. | |
| information? | |
| Action for Santos to explore the option of formalising the committee – No response from DRE as yet. Ongoing. | |
| and associated questions within 10 days – Complete | |
| | Q. Committee member: How long do you keep your recorded data? A. Santos: Always. Q. Committee member: How many years of data have you accumulated already? A. Santos: Eastern Star Gas did a fair bit of stuff which is maintained in a historical database. The groundwater monitoring bores were installed last year so from installation Q. Committee member: Do you have a ball park of when the new system will be in use? A. Santos: We are already in discussion with various vendors to see how we can utilise the technology to make it more user friendly. By the end of the year we will have more systems in place. Sections will transition all the time. You won't be waiting for one transition. Q. Committee member: Are there any systems in place to control users from misreading information? A. Santos: We try to use graphics to help interpretation. 1. Action for Santos to explore the option of formalising the committee – No response from DRE as yet. Ongoing. 2. Santos to respond to questions raised regarding recent aquifer contamination |

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| transportation of water from the exploration phase to production phase – Complete | |
| Santos to respond to questions raised in Appendix 1 and 2 regarding the Produced Water Management Plan Document and & also Tintsfield Water Management Plan – Complete | |
| Santos to respond to whether they can provide a copy of the Bibblewindi Hydrological Assessment – Complete | |
| Santos to provide the most recent data on water quality concentrations across Narrabri Gas Development – Complete | |
| 7. Santos to provide explanation as to how they are going to ensure, in the forest and other areas, that erosion doesn't happen down the disturbed earth corridor, where the gas lines are put including slopes, creeks and gullies – Complete | |
| 8. In relation to the tampering of minutes the Chair and Secretary will look over previous meeting and respond accordingly – Complete. It is to be noted in the minutes that a committee member is not comfortable with the final draft of the May minutes. | |
| 9. Santos to respond to whether the pipelines are compacted – Ongoing | |
| 10. Santos to respond to why the irrigation method to flush the salts was used and approved – Ongoing | |

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| 11. Santos to provide a copy of the natural and unnatural uranium levels from the produced water spill at Bohena – Complete | |
| Santos to provide why & what soils two people out on Moore's Rd were testing – Complete | |
| 13. Santos to provide an analysis of how the 3,000 tonnes of solid waste was transported to Newcastle – Ongoing | |
| 14. Santos to provide a soil analysis of the soil that was contaminated at the Bibblewindi treatment facility – Ongoing | |
| 15. Santos to respond to whether the pumps associated with the insides of the water containers are all water proof – Complete | |
| 16. Santos to respond to the how many ML of treated water is expected to be produced per year in the existing project – Complete | |
| 17. Santos to respond to whether they are going to bring down the pH level of water back to the pH level of the existing soil – Complete | |
| 18. Santos to respond to whether they environment insurance – Ongoing | |
| 19. Santos to respond to what their control is for the bacteria – Complete | |
| 20. Santos to respond to whether Nyora bore as a shallow aquifer monitoring bore goes through the Great Artesian Basin – Complete | |

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| | Comment There were some answers to questions that were completely unsatisfactory. There was no real answer. For example the pH level of the existing soil question. July minutes: Committee agreed that July minutes were an acceptable reflection on what we talked about at the July meeting. June minutes: The word 'Bohena' was replaced by 'Bibblewindi' in the action column on page 11. Change has been made and sent to Chair for distribution to committee members. Committee agreed that June minutes were an acceptable reflection on what we talked about at the June meeting. | |
| | May minutes: Chair advised how discussions had been held between a committee member and Santos on the May minutes, as each party held differing views on these. The discussions had been held to reach a reasonable compromise between the committee member's concerns and Santos. It is to be noted in the minutes that committee member is not comfortable with the final draft of the May minutes but the rest of committee members who reviewed the minutes believed that they were an acceptable reflection of the discussion. | |
| 4. General Business• Next meeting and issue to discuss | It was agreed that the time allocated to reviewing the minutes has been extended to 7 days. | |
| | Q. Committee member: When are we going to advertise for more committee members? A. Santos: I haven't received a response back from DRE. Which I am assuming means the | |

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| committee won't be formalised. The discussions regarding the Narrabri Dialogue haven't included us which I am assuming is going to be something separate from the CCC. Based on that I am happy to have a chat next week about getting the forms and start advertising for more members to join the committee. | Action on Santos and Chair to organise and start advertising for more members to join the committee. |
| Q. Committee member: In regards to alternates, do they need to fill in paperwork as well?A. Santos: There will be a process that the Chair and I will need to sort through. We will basically be advertising and calling for expressions of interest and people to participate in the committee. As part of that we will review the terms of reference. We have discussed at a prior CCC meeting that we don't have a problem with having proxies. | |
| Q. Committee member: How many members have resigned from the committee? A. Chair: Ball park, 5. So we have about 5 positions to fill. | |
| At the next meeting the form, advertising and terms of reference will be ready to be reviewed by the committee. | |
| Q. Committee member: Could a CCC member be a representative on the Narrabri Dialogue? A. Committee member: That is a very good suggestion. And if that was put to the council, I would welcome it. | Action on Chair to provide |
| Q. Committee member: Could you please send the committee a copy of the original terms of reference that we are currently operating under so we all have an understanding of what you're suggesting as a change? A. Chair: Sure. | committee members a copy of the original terms of reference that the committee is currently operating under. |

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| Comment Narrabri Shire Council is not receiving CCC minutes.Comment The Chair should write to the Council suggesting that you were aware that the Narrabri Dialogue was being discussed at Council and if it were to proceed it would be of benefit to the Narrabri CCC to have representation on the committee to reflect the discussions that happen at the CCC to avoid duplication and share information.Q. Committee member: With regards to an action that I had asked about the EPA possibly coming to Narrabri, what's happening with that?A. Santos: I followed up on that and they said you can refer the committee to the fact sheet that was prepared in relation to that. If you have questions, I am happy to follow them up for you. | Action on Chair to write to the General Manager of the Council requesting that there be CCCC representation on the Narrabri Dialogue. |
| Comment I find the EPA answers inadequate. Q. Committee member: Who in the EPA did you actually contact? A. Santos: I spoke to the manager of the compliance unit. The Leewood Phase 2 REF goes on exhibition this week. It was lodged on Friday August 8 to The Office of Coal Seam Gas. However, it isn't up on their website yet. If anyone wants a hardcopy of anything, I am happy to load a copy onto a USB stick and give it to them. | |

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| The Dewhurst 32-37 fourspot pilot and the Bibblewindi 34 core hole is being lodged mid- August. A process of Santos writing a letter to the Chair will be done for all future assessments and submissions that are being lodged by Santos. This forward notice to the committee will hopefully be done at the meeting before we lodge them and if the committee wants a specific presentation on that actual activity, Santos are happy to arrange for somebody to come along and talk about it. | |
| The EIS is still some months away. The preliminary assessment was lodged in March and the Director General Requirements (DGR's) were received on 24 th July and they are now up on The Planning and Assessment website. The link is in the monthly update. Based on a delay in the DGR's coming back, the EIS won't be lodged until later in the year. The specific date is unknown. | |
| Committee confirmed that although this meeting was on a Monday for August, the normal chosen day of Wednesday will resume from now on. | |

Date of next meeting: 17th September 2014

Meeting Closed: 7:17pm

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Attachment 1: Water Monitoring Map

Attachment 2: Actions

| Action Raised | Date Raised | Progress Made |
|--|-------------------------|---------------|
| Action for Santos to explore the option of formalising the committee. | | Ongoing |
| Santos to respond to whether the pipelines are compacted. | | Ongoing |
| Santos to respond to why the irrigation method to flush the salts was used and approved. | | Ongoing |
| Santos to provide an analysis of how the 3,000 tonnes of solid waste was transported to Newcastle. | | Ongoing |
| Santos to provide a soil analysis of the soil that was contaminated at the Bibblewindi treatment facility. | | Ongoing |
| Santos to respond to whether they environment insurance. | | Ongoing |
| Santos to respond to what the mg/L is per PPM. | | |
| Action on Santos and Chair to organise and start advertising for more members to join the committee. | | |
| Action on Chair to provide committee members a copy of the original terms of reference that the committee is currently operating under. | | |
| Action on Chair to write to the General Manager of the Council requesting that there be CCCC representation on the Narrabri Dialogue. | 11 th August | |