

Minutes of the 6th Meeting of the Vickery Project Community Consultative committee

Meeting held: 6 August 2018 – 11.30am-1.00pm

Venue: Whitehaven Office Gunnedah Conadilly

Present:

Roberta Ryan (RR)	Independent Chair
Sandra Spate (SS)	Minute taker
Robert Hook (RH)	Gunnedah Shire Council (GSC)
Keith Blanch (KB)	Community Representative
Grant McIlveen (GM)	Community Representative
Barry Thomson (BT)	Community Representative
Brian Cole (BC)	Executive General Manager, Project Delivery, WHC
Tim Muldoon (TM)	Group Manager Community Relations and Property, WHC
Emily Clements	Environmental Officer WHC
Steve O'Donoghue	Department of Planning and Environment
Dee Elliott	Observer via teleconference

Apologies:

Ron Campbell (RC)	Narrabri Shire Council (NSC)
Ron Fuller (RF)	Community Representative

Item	Description	Action/ Responsibility
1	Present, introductions and apologies	
1.1	RR outlined the oversight of the CCC in the approvals process. RR was appointed as independent chair. The minutes are required to be available to the public within a month but are formally approved the following meeting.	
1.2	Apologies are as listed above.	
2	Declaration of pecuniary or other interests	
2.1	KB reported Whitehaven had acquired his property which he leases back from Whitehaven.	RR to email pecuniary interest declaration forms to new members.
3	Previous minutes	
3.1	<p><u>Matters arising</u></p> <p>GM asked in relation to a question at the last meeting whether automated trucks will reduce numbers of jobs for drivers. Whitehaven said at the last meeting there would be opportunity for truck drivers (replaced by rail spur operations) to be employed in mining operations. On the same day at a BMO Metals and Mining Conference 2017 Whitehaven said they would use autonomous trucks. Will these stop drivers from getting jobs?</p> <p>BC replied indicating that a pilot program at Maules Creek is potentially looking to move to automation but there is a long process to go through. His experience is that automation doesn't reduce job numbers. Benefits are generally increases in productivity as the machinery can be used for longer. The pilot project is in the early stages. Whitehaven may look at this for Vickery.</p>	

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	<p>GM said Whitehaven stated at the conference they would look at use of an autonomous truck fleet at Vickery early in the process. If so, how did Whitehaven respond at the previous meeting by saying drivers may get jobs at the mine.</p> <p>BC confirmed work is being done on autonomous fleets. These may be used in Vickery as the project unfolds. Job numbers don't change as a result of automation. There will be other jobs on site. There won't be less employment opportunities overall.</p> <p>GM asked for confirmation that there would still be 400 to 500 jobs at Vickery with an autonomous fleet.</p> <p>BC expects numbers employed to be the same. Coal would still be moved between Tarrawonga and Vickery. Numbers of people employed in the region by Whitehaven has increased dramatically over the years.</p> <p>RR suggested employment numbers will be picked up in the Social Impact Assessment (SIA) as part of the Environmental Impact Statement (EIS). There will be opportunities for comment as part of that process.</p> <p>TM said a current challenge is to find workers for Maules Creek. There are vacancies there. Truck drivers referred to are contractors. There should be opportunities at the new mine even without the same amount of trucks.</p> <p>GM asked how it reduces costs if this is the case.</p> <p>BC replied the benefits of automation are equipment being run for longer hours. Delays such as shifts start or during breaks are eliminated. Equipment is in better condition.</p>	
3.2	Acceptance of the minutes was moved by GM and seconded by BT. The minutes were accepted.	
4	Canyon Environmental Monitoring Update	
4.1	<p>BC presented the Canyon Monitoring Update (attached to minutes)</p> <p>The mine operated between 2000 and 2009 and had a CCC. After closure it was agreed with Department of Planning and Environment that their function be rolled into Vickery CCC's. Part of the approval for Vickery is a requirement that monitoring updates are presented here.</p> <p>The presentation included:</p> <ul style="list-style-type: none"> • Mine Closure Plan • Air quality • Surface water • Groundwater • Pest Management • Waste Management • Rehabilitated land including flora and fauna • The Canyon Mine layout <p>The Mine Closure Plan and monitoring will continue until 2022. Measurements for air quality, surface and are below thresholds. There is a slight upward trend for EC readings. Groundwater levels are generally stable. Water quality is stable. There have been no complaints in 2018.</p>	
4.2	<p>KB asked whether members of the Canyon CCC had been notified the Vickery CCC would take on its function.</p> <p>SO replied it was discussed at the final Canyon CCC meeting.</p>	
4.2	<p>KB noted minimal runoff around Canyon works due to catchment dams.</p> <p>BC said monitoring continues in the lower void. If issues emerge they will be investigated.</p>	
4.3	<p>RH asked if baselines studies were done in the surrounding area for comparison. He expects studies here to be similar to non-mined areas.</p> <p>BC replied studies were done pre-mining. If there was discharge this would be managed but there is a closed system (for surface water) with no regional impact. Regional aquifers don't exist on Canyon or Vickery sites. Modelling of groundwater shows negligible impacts.</p>	

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	KB said the mine was designed to have no run off which is a big issue here. Monitoring was done before the mine opened and on existing bores.	
4.2	GM asked how much of the Canyon site is covered by the Vickery dump. BC replied the void will be covered in. Four of the voids will be backfilled in the Vickery footprint but Blue Vale will be stepped around.	
4.1	KB noted the beautiful rehabilitation on Canyon which is alive and healthy. But there have been a couple of fires. There is a fire break around and through it but there are government restrictions on further firebreaks. He would hate to see the rehab area destroyed.	EC will follow up on regulations around firebreaks in the rehabilitated area.
5.0	Vickery Environmental Monitoring Update	
5.1	BC presented the Vickery Environmental Monitoring Update (attached to minutes). There is currently no requirement to undertake monitoring until operations recommence. However data is being collected as baseline monitoring. Samples are collected from groundwater bores, surface water and air quality. Samples from bores showed stable levels generally with a downward trend for one. There have been no complaints in 2018.	
5.2	GM asked the location of the one bore. BC replied it was at South Vickery EC said the reason for the trend is uncertain given it is in a similar proximity to the other three.	
7.0	Vickery Extension Project – EIS Update	
7.1	SO, from the Department of Planning and Environment's (DPE) Resource and Energy Assessment team reported on the EIS process. The team gets advice from agencies during the assessment stage and the Resources and Energy Assessment team undertakes an all of Government assessment. The Department also undertakes the assessment on behalf of the Commonwealth under a bilateral agreement. This is triggered under the Commonwealth EPBC Act due to impacts on water resources and biodiversity. If the project were to be approved by NSW Government it would then be referred to the Commonwealth for its determination. The assessment process started with the issue of the Secretary's Environmental Assessment Requirements (SEARs) a couple of years previously. This covers key issues such as ground and surface water, social impacts, noise, amenity. The SEARs have been revised to require the assessment to apply recent DPE guidelines for Social Impact Assessment and changes by the proponent around the rail corridor alignment and reference to the water bore field. Whitehaven have advised that lodgement of the application and EIS is now imminent. The EIS is usually put on public exhibition within around three weeks of lodgement. DPE will review the EIS against the SEARs before accepting the EIS. BC reported Whitehaven expects to lodge this month. Assessments are advanced with a lead consultant and specialists with reputations for credible reports. Reports are then peer reviewed. SO advised that expert advice will be provided from key agencies such as EPA, Department of Primary Industries – Water, OEH and the likely engagement of a groundwater and flood experts. The Department notes key concerns around groundwater and flood modelling of the rail spur will have input from agencies and experts.	
7.2	GM asked who neighbours could go to if they have doubts about the Whitehaven modelling. Can they go to DPE for advice? SO said the statutory exhibition period for EIS is a minimum 28 days however the Department will exhibit for 42 days for more complex	

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	<p>projects. Hard copies and USB copies will be available at local exhibition centres such as libraries. DPE consults closely with councils. During the exhibition period there will be a community information session early during the exhibition period to explain the assessment process with opportunity for feedback. The Department will also consult with special interest groups and landowners. The community has the opportunity to make formal submissions on the project during the exhibition period which must be made prior to the end of the exhibition period.</p> <p>After exhibition DPE collates submissions and provides them to Whitehaven for a response to issues raised. In March the Environmental Planning Assessment Act changed. The Planning Assessment Commission (PAC) was previously delegated to make a decision on behalf of the Minister. The Independent Planning Commission of NSW (IPCN) is now the consent authority if there are 25 or more objections, political donations or the Council objects. The Minister can direct the IPCN to hold a public hearing.</p>	
7.3	<p>RH asked who makes the recommendation to the Minister to hold a public hearing.</p> <p>SO replied it is the Minister's decision. However, there are often public hearings for larger / complex mining projects as part of the assessment process.</p>	
7.4	<p>TM asked what happens if there are 30 objectors but 40 supporters.</p> <p>SO said it is based on the number of objectors - 25 or more, or if council objects, or if there are political donations. Timing of the assessment process will depend on the length of the exhibition period, the quality of the EIS, time for the applicant to respond to submissions, whether there is a public hearing held.</p>	
7.5	<p>BC sought clarification that a public hearing is not necessarily the case with the IPC.</p> <p>SO said it is only if the Minister decides so. The IPC would likely undertake a public meeting at the end of a determination process to hear final views before determination if a public hearing was not held.</p> <p>BC asked how a public hearing is conducted.</p> <p>SO replied it is more formal under the new system. People can be directed to attend the hearing and the IPC has used legal counsel.</p> <p>GM asked who conducts the public hearing.</p> <p>SO replied it is usually a chair and two or three Commissioners. A range of skills can be brought in e.g. a hydrologist.</p> <p>RR reported the names of Commissioners are on the DPE website.</p> <p>Public meetings as opposed to hearings are more relaxed with people being able to speak from the floor.</p> <p>TM asked if public hearings have the ability to call expert witnesses.</p> <p>SO confirmed this is the case.</p> <p>BC asked does the prosecutor represent the Minister in hearings with legal counsel.</p> <p>SO replied legal counsel assist the IPC</p> <p>BC asked whether the proponent has legal counsel.</p> <p>SO replied as the first one has just been held the process may be change.</p> <p>TM asked about the timeframe of the first hearing.</p> <p>SO replied it was held more than a month ago over half a day.</p> <p>GM asked whether anyone could attend a hearing or if they are closed.</p> <p>SO said they aren't closed but people who want to speak have to register.</p>	
7.6	<p>GM asked how accurate Whitehaven has to be with modelling e.g. for the rail line. Do they have to provide detailed plans?</p> <p>SO said there has to be a reasonable level detail for flood monitoring.</p>	

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	<p>BC replied while not the detailed design it includes critical elements for modelling. The superstructure is generally above flood level and spacing between supports is relevant.</p> <p>GM questioned the accuracy of reports on flood levels provided at the last meeting with Whitehaven saying levels were only 19 cm deep when they were two foot deep on his farm.</p> <p>BC replied levels vary across the flood plain.</p> <p>RR noted technical assessments have to check these issues as part of the assessment process.</p> <p>SO said DPE is likely to engage flood experts as well as using OEH expertise for flood modelling. DPE realises it is one of key issues for the project.</p> <p>GM said farming techniques and topography have changed since the last flood 20 years ago. His biggest worry is how accurate experts are given the changes.</p>	
7.7	<p>A presentation delivered by BC is attached to the minutes.</p> <p>Background to the project is:</p> <ul style="list-style-type: none"> • Rocglen is expected to finish next year. • Maules Creek, Werris Creek and Narrabri are continuing. • There is Asian demand for high quality coal with the Gunnedah Basin a prime supplier of quality coal. • The improved rail system and increased port capacity has presented opportunities. <p>Other key points covered are:</p> <ul style="list-style-type: none"> • Whitehaven's contribution to the community, the region, the state. • Employment opportunities, in particular Whitehaven's record of employment of members of the Indigenous community. • Actively encouraging workforce and their families to live in the community. • Support of local businesses. • Community surveys indicating increased support for coal mining over time. <p>Original approval for 4.5m tons per annum was predicated on trucking. There are limits to what trucks can do and Whitehaven wanted to take trucks off the road. They looked at running the rail spur across the Broadwater property, across the river and the Milchengowrie property. Consultation since with landowners and councils resulted in changes to the project scope. While modelling indicated Blue Vale pit could be successfully mined without impacts on the river or groundwater there were community concerns around water resources. Under the approved model Mirrabinda fell in acquisition territory but the owners have expressed a preference to stay. Whitehaven decided to not reopen the Blue Vale pit and have moved the western dump further away from the river.</p> <p>The previous south west option has been selected over the western option based on community feedback.</p> <p>Changes have triggered the need to redo modelling. There have been no major changes to the overall groundwater, surface water, noise or air quality results although noise and air quality impacts have been reduced at Mirrabinda.</p> <p>The project is not on high value agricultural land.</p> <p>There are no further properties that fall into the acquisition on request zone based on current criteria but that is the call of Planning.</p> <p>Air quality will be within established thresholds.</p> <p>Rigorous rail spur assessment has been done.</p> <p>The site has previously been cleared but there is remnant vegetation.</p>	

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	<p>Flood modelling for the rail spur has been undertaken which replicates historical floods. The structure has been adjusted to operate within the Floodplain Management Plan (OEH and DPI).</p> <p>The area to the west of the river is a prime groundwater area and there are rules around what groundwater can be taken. The geology at the mine site suggests there will be little impact on groundwater resources.</p> <p>Issues for surface water: is there enough water for dust suppression and can water be contained on site in a big rainfall event. There is a regime of sediment dams, water quality is measured and surface water is reused for dust suppression. Modelling takes into account 125 years of rainfall records and climate change.</p> <p>Noise policy has changed. Noise modelling looks at a reasonable and feasible approach including seeking manufacturers of equipment to minimise noise impacts.</p> <p>Air quality projections are below the recognised criteria. Whitehaven has a history of managing these issues. Maules Creek has six or seven water trucks on site for air quality purposes. BC tabled an article from the Northern Daily Leader saying community concerns are lessened if Blue Vale pit is set aside.</p>	
7.8	<p>KB indicated an intention to seek a portion of the \$3.5m Whitehaven community contribution over the year for the Boggabri Lion's Club.</p>	
7.9	<p>GM asked whether the 75% of the workforce reported to live locally includes those who spend 3 or 4 nights or are those who have moved families in.</p> <p>BC replied it is based on those who give the local postcode as their home. Whitehaven tries to encourage people to move their families here. Increasing tariffs over time to live at the Boggabri camp discourages people from using this as a long term arrangement.</p> <p>TM gave the example of the office staff here. Only two of 28 staff have their home elsewhere. The figure of employees living locally is at least 75%. Whitehaven targets locals for employment for retention reasons.</p>	
7.10	<p>GM asked in relation to Indigenous employment whether Whitehaven offers apprenticeships.</p> <p>TM replied they do. They also offer cadetships and participate in programs such as Clontarf which aims to keep kids at school through sport. Cadetships will increase. The range of career opportunities includes accountants, scientists and geologists. It is harder to attract professional staff but a high proportion stay. Unemployment in the Aboriginal community was at 25% in Gunnedah compared to 4% to 5% for non-Aboriginal people. This has dropped to 20% and TM likes to think Whitehaven has had a role in that. Retention rates for Aboriginal employees is higher than for other employees.</p>	
7.11	<p>GM asked why the local community doesn't get a slice of the \$171m in royalties to pay for such things as the overpass in Gunnedah. He finds it hard to accept people not involved in mining have to pay for this.</p> <p>RH noted the complicated procedure around distribution of royalties. Royalties for the regions is a misnomer as anyone can apply. He will find out more about the process and report to the CCC.</p> <p>TM noted other contributions to infrastructure in addition to royalties e.g. paying for rail line passing lanes benefitting grain producers sending produce to port.</p>	
7.12	<p>GM asked how many diggers and how many trucks are expected at the mine.</p> <p>BC replied there would be about 8 or 9 diggers and 40 to 45 trucks.</p> <p>GM asked if autonomous trucks would cut employment from 500 to 450.</p> <p>BC said work elsewhere suggests labour benefits aren't sought through automation. Other tasks and roles are created. The benefit is that equipment operates more hours in a year. It is a productivity benefit.</p>	

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	<p>GM asked whether drills are autonomous. BC replied not at this point. They have been looked at but would still have a controller. They will look at this as technology improves.</p>	
7.13	<p>GM sought clarification on the statement that there are not further properties in the acquisition zone. BC clarified that there are no additional properties in the acquisition zone based on current criteria. The noise policy changed recently and Whitehaven's consultants had to undertake additional analysis. Landholders at Mirrabinda have advised that they want to stay if they can. Whitehaven will wait and monitor the situation. GM questioned acquisition of property at the northern end due to infrastructure 3.5km away when he and neighbours are within 2.5km of the crushing plant. He questioned consultants' knowledge of wind directions compared to the understanding of long standing locals. He also asked why if properties to the north have been bought, does Whitehaven now want the rail spur in the south within 2.5km of six or seven properties. BC indicated that the properties to the north of the mine were part of the acquisition on request zone for the Approved mine. The acquisition had nothing to do with the western rail spur. TM replied assessment for acquisition zones is based on modelling which aims for operations to have the least impact. SO said rather than a fixed distance, acquisition rights are based on noise contours from noise modelling, which includes consideration of wind directions and inversions. BC said noise modelling assumes distribution of equipment and changes of noise sources over the course of the operation, predominant wind directions and inversions. Data about wind direction comes from continuous weather station monitoring. Infrastructure was not a factor in acquisition of properties to the north. As coal is coming from the south why take it north to the rail? KB asked how acquisition on request works. TM replied monitoring contours are done over a number of years. Over the life of the approval those in the acquisition zone can trigger discussions with Whitehaven about mitigation or acquisition. If these negotiations are unsuccessful they go to the Director General. All are advised they have right to talk about mitigation of acquisition. Properties purchased prior were at risk. Noise monitoring is required in each direction to ensure modelling is accurate. If not, independent assessments are done and changes in operations are required to ensure impacts stay under levels of criteria. SO reported with the Voluntary Land Acquisition and Mitigation Policy under the current approval the company still has to demonstrate they have tried all reasonable and feasible measure to reduce noise. For the existing operations, there is a requirement to monitor at receptors around the mine to ensure that it is not exceeding noise limits during operations. Under the Noise Policy, 30 decibels is taken as the lowest background noise level and this can be adopted for the noise assessment without undertaking background noise monitoring.</p>	
7.14	<p>GM reported a working flood model done in the mid-1980s worked beautifully till rubbish put into it hindered flows. BC said the SMEC model was a physical model. Today's model is a mathematical model used widely by industry. Discussion have been held with OEH who have expert knowledge. When lodged OEH will look at the report which contains various scenarios such as one in 5 years, one in 20 years, one in a 100 years. RH asked what the distance between stanchions is. BC replied that it had been modelled at 30m.</p>	

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	<p>GM asked if the rail spur is viaduct all the way. BC replied it crosses the river and traverses to the west of the highway. Most is elevated. There may be some embankment on the eastern side of the river depending on the results of the modelling. The clearance over the highway is no less than RMS requirements for the Maules Creek spur. Whitehaven understands it crosses paddocks and is mindful of the impact GM said with changes to topography Whitehaven have to make sure they get it right.</p>	
7.15	<p>RH asked if the rail spur will be would be dismantled when the mine closes. BC replied it would assuming that property owners had no other use for it. GM suggested after the life of this mine there is a further 200 to 300 tons under Vickery Forest so there is potential to keep it longer.</p>	
7.16	<p>GM asked whether noise modelling includes dumping of coal into the coal hopper which is a big issue for neighbours. BC said this hasn't been the experience at Maules Creek. GM asked what distance the nearest neighbours are from Maules Creek infrastructure and what is the size of the infrastructure? BC said the Noise Policy for industry relates to mining and infrastructure. Rail has separate guideline and noise limits. These are based on worst atmospheric conditions and include acceptable and maximum levels. Whitehaven is working within these. The Voluntary Land Acquisition and Mitigation Policy sets levels which require mitigation or acquisition on request. Noise criteria governed by the Noise Policy for industry is above 38 decibels and triggers mitigation measures such as double glazing or changes to structure while over 40 decibels triggers discussions about acquisition. GM asked what the length of time for maximum noise is. BC said it is the average over 15 minutes but assumptions are based on worst case. GM is not opposed to the mine but is worried about impacts on neighbours 400m to 500m away. Some moved here for the quiet life. RR noted there will be opportunities for people to have their say and acquisition rules take into account affected people. RH noted acquisition triggers may not be a satisfactory outcome for people who have been on properties for generations.</p>	<p>TM to respond to the question proximity of neighbours to Maules Creek in relation to coal into hoppers.</p>
7.15	<p>DE reported the Social Impact Assessment (SIA) has been done in accordance with accordance with SEARS looking at impacts on surrounds, culture including Aboriginal culture, heritage, community cohesion, personal and property rights, amenity, size of population, ways of life, housing and employment, health and safety and cumulative impacts with other projects. Impacts of construction include for example community connectivity, noise modelling, Saturday and Sunday afternoons. The SIA integrates all effects related to the community - visual amenity, traffic, air quality. They have talked to people in the project area including 14 landholders nearest the rail spur and CCC members as well as councils. The SIA looks at the baseline and changes at local and regional levels. RH asked in relation to increases in employment and a limited local base whether people from outside the region would stay over time potentially creating issues with availability and cost of housing, education, child care and associated medical services which are currently stretched. DE anticipates a population increase of 1.4% for Gunnedah and an increase in Narrabri. It is hoped people would bring families and stay. This would create demand for housing stock and with not a lot of affordable housing available. There is residential land and capacity to</p>	

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	<p>grow but the market doesn't keep up with demand. Boggabri is keen for families to move in. There are schools across Gunnedah and Boggabri. Increased population may help make up recently lost enrolments in Boggabri. Medical services and emergency services were looked at. Whitehaven will need to advise agencies of the workforce ramp up and who is likely to move to the area.</p> <p>TM asked what the Gunnedah LGA population is.</p> <p>DE said population projections are based on NSW Government projections for 2021 which indicate slow growth rates in both LGAs. 2021 projections indicate a population of 12,900 up from 12,750 currently and from 12,500 in 2011.</p> <p>TM noted a Gunnedah population closer to 13,500 prior to the abattoir closure. Now people have different lifestyles, smaller families and are relatively older. Have those things been considered?</p> <p>DE said social impacts and benefits are viewed differently by stakeholder groups. The SIA focuses on Boggabri which is closer to the mine and there are opportunities for people to move in there.</p> <p>TM asked whether councillors and business chambers have been consulted.</p> <p>DE said conversations have taken place with Boggabri Progress Association, Gunnedah Chamber of Commerce and the Narrabri Chamber.</p>	
8	General Business	
8.	<p>GM asked if there is scope for more people to join the CCC. People have asked how to join. Most members have been involved in mining and there should be a greater range of people.</p> <p>RR said there is scope for more members. People wishing to join should speak to her.</p> <p>SO noted there can be up to seven community members.</p>	
8.3	<p>GM asked about the process for the minutes. Are they edited by Whitehaven?</p> <p>RR outlined process: the draft minutes go out to all members who have the opportunity to suggest changes. RR makes the final decision on what goes into the minutes.</p>	
9	Date and agenda for next meeting	
9.1	<p>Based on the likelihood of the EIS being on exhibition in late September it is suggested the next meeting be held late October or early November. RH requests late November due to other commitments. Date TBC.</p>	
	<p>These minutes have been endorsed by the meeting Chair</p> <p>Signed: </p> <p style="text-align: right;">Date: 23.8.2018</p>	

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ENVIRONMENTAL MONITORING

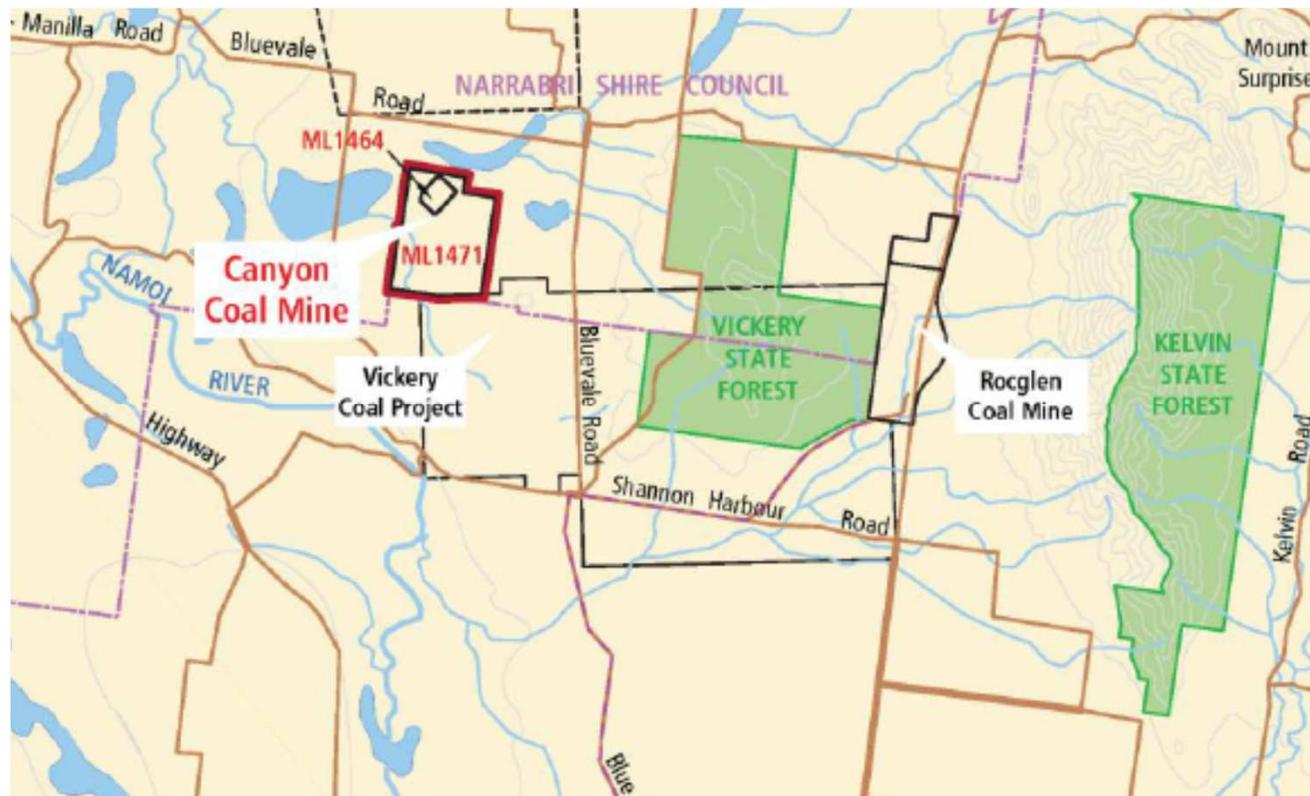
VICKERY PROJECT CCC MEETING - AUGUST 2018

GUNNEDAH, AUSTRALIA
AUGUST 2018



VICKERY AND CANYON MINES

MINING AT VICKERY CEASED IN THE 1990'S AND IN 2009 AT CANYON.



CANYON COAL MINE



CANYON MINE CLOSURE

MINING CEASED IN 2009 AND THE SITE HAS UNDERGONE SIGNIFICANT REHABILITATION. MAJORITY OF INFRASTRUCTURE HAS BEEN REMOVED FROM SITE

- **Activities on site controlled by Mine Closure Operations Plan 2015-22, DA 8-1-2005, and ML's 1464 and 1471.**
- **There was a Canyon Mine CCC in operation, but due to status of the mine, it has been decided to fold the Canyon CCC into the Vickery CCC.**
- **The scope of reporting to the CCC has encompassed:-**
 - air quality
 - surface water
 - groundwater
- **Given that mining ceased some eight years ago and the site is closed it is planned to discontinue air quality reporting at the CCC meetings.**



MAINTENANCE ACTIVITY

Pest Management –

Feral pig trapping onsite starting 18th June 2018 – 31st July 2018.

Waste –

Old timber, oil pods and batteries found onsite removed by waste contractor at the beginning of July.



REHABILITATION CONT.

SPRING 2017

Flora –

- Woodland zones rehabilitated in 2004 and 2005 continue to increase in structural complexity.
- Other plots also continue to increase in structural complexity but at a slower rate.
- Canopy layers are yet to develop
- Higher native groundcover species richness in 2017 than any previous year.
- Exotic groundcover species richness varied between plots with both increases and decreases.
- Mean cover of native species notably increased from 2016 and exotic species cover decreased, though exotic cover still remains greater in all zones except Wood_04 and the Control Zones.

Fauna –

- The rehabilitated zones showed higher or comparable bird species richness to Control Wood 1, though Control Wood 2 still holds the highest bird species richness.
- The vulnerable Grey-crowned babbler has been seen for the 3rd consecutive year.
- The Rabbit, Fox and Pig recorded. Pig trapping undertaken from 18/6/18-31/7/18.
- Seven mammal species observed.



CANYON MINE LAYOUT

THE REMNANTS OF THE MINE INCLUDE AN UPPER AND LOWER VOID.



SURFACE WATER

DISCHARGES FROM CANYON REPORT TO DRIGGLE DRAGGLE CREEK. TO MINIMIZE DISCHARGES OF DIRTY WATER SEDIMENT DAMS ARE REGULARLY INSPECTED AND MAINTAINED AS REQUIRED TO RETAIN DESIGN CAPACITY

The surface water management system at Canyon includes:

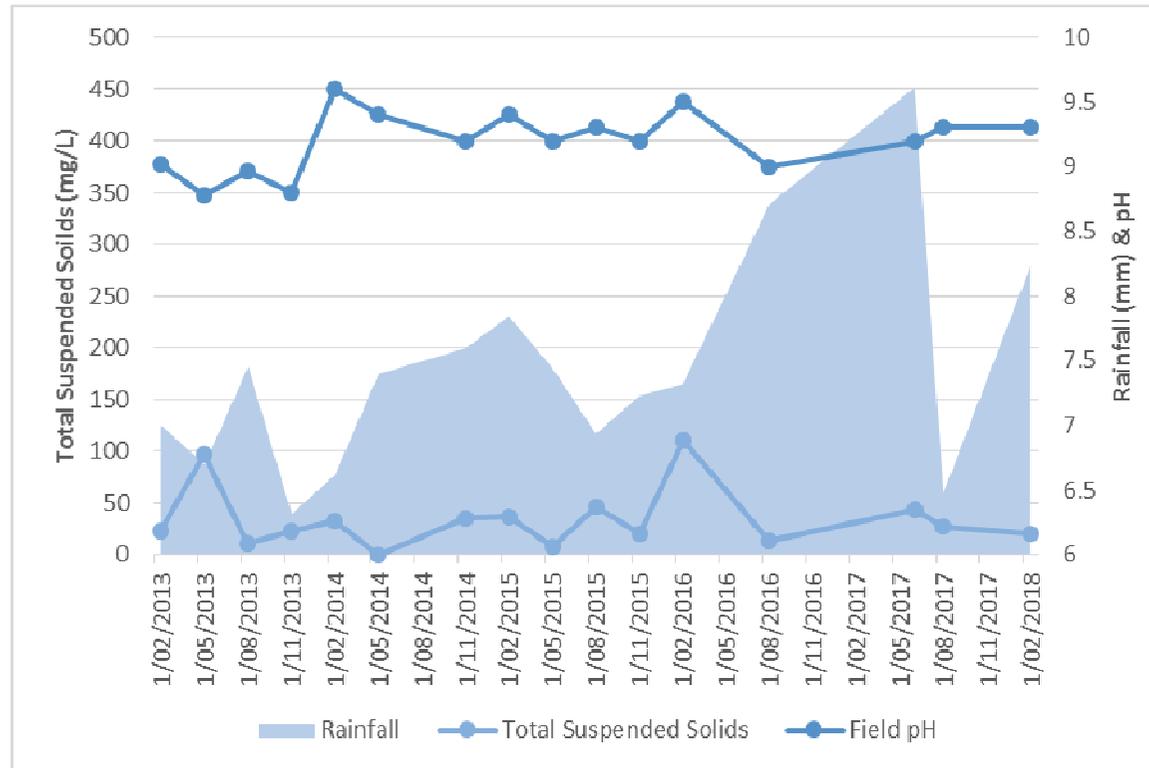
- Diversion banks to divert clean water flows away from disturbance areas to clean water storage dams;
- Catch drains to collect and direct potentially sediment-laden water generated from the existing mining operations to sediment basins;
- Sediment basins to detain potentially sediment-laden water and the controlled release of clarified water;
- Contour banks and rock lines waterways on, or to direct water from, the post-mining landform to the natural surface; and
- Agricultural contour banks and farm dams.

SURFACE WATER

DISCHARGES FROM CANYON REPORT TO DRIGGLE DRAGGLE CREEK. TO MINIMIZE DISCHARGES OF DIRTY WATER SEDIMENT DAMS ARE REGULARLY INSPECTED AND MAINTAINED AS REQUIRED TO RETAIN DESIGN CAPACITY

- **Surface water monitoring is limited to the lower void and wet weather monitoring as required.**
- **Long term water test results show slight upward trend in pH and EC readings.**

SURFACE WATER



No wet weather discharges have occurred during FY18
 pH has remained relatively stable
 Fluctuations in TSS looks to be linked to rainfall.

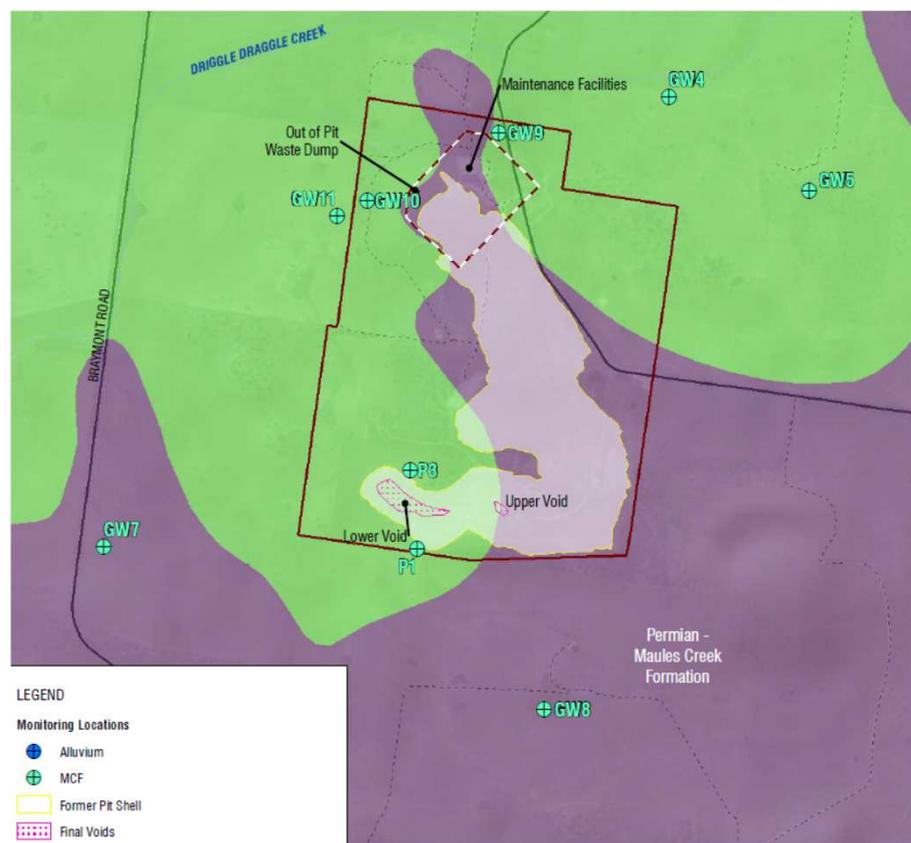
GROUNDWATER

There are two principal groundwater resources within the vicinity of Canyon, being:

- Consolidated coal measures and basement rocks; and
 - Unconsolidated colluvial / alluvial surficial sediments.
-
- **The coal measures and basement rocks have low permeability (ability to pass water).**
 - **Groundwater storage and flows are low.**
 - **The unconsolidated sediments form aquifers but they do not exist within the immediate vicinity of the mine and instead are largely in areas north of the mine.**

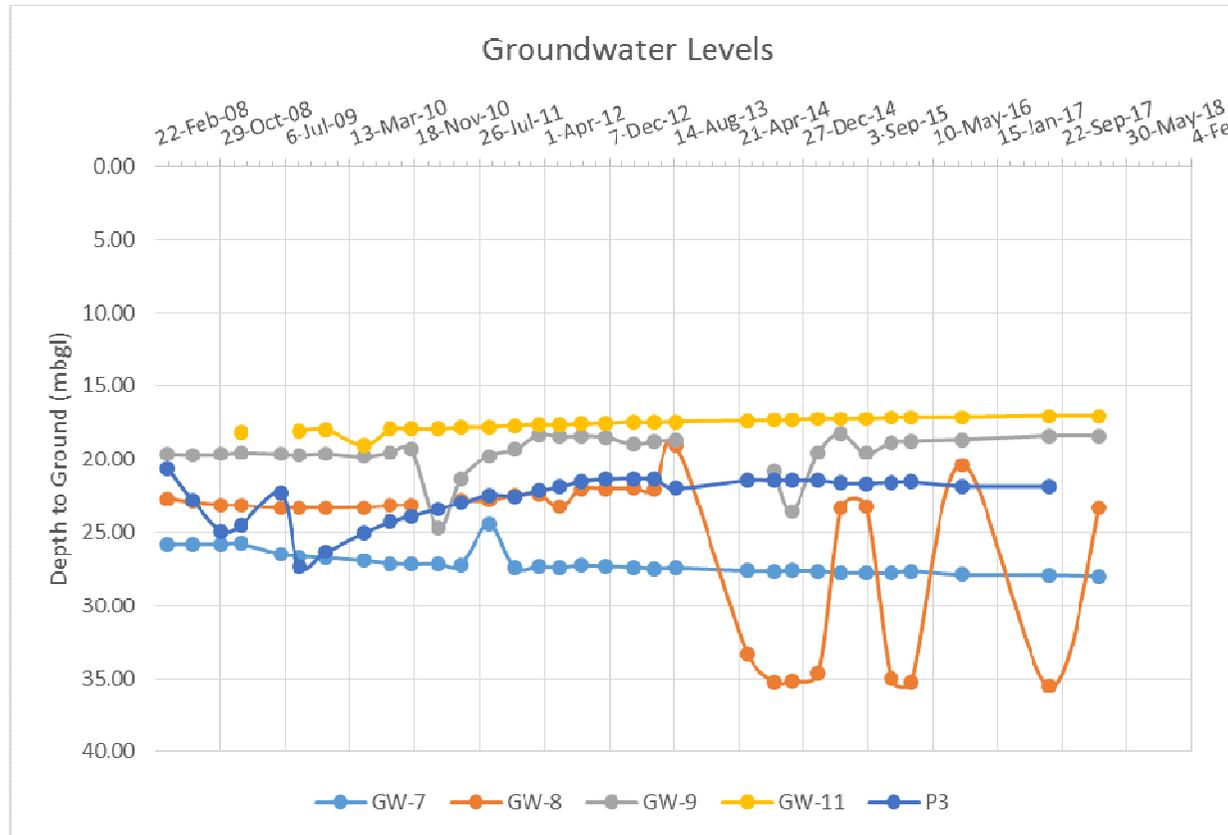
GROUNDWATER

GROUNDWATER MONITORING BORES ARE LOCATED AROUND THE FORMER MINE SITE.

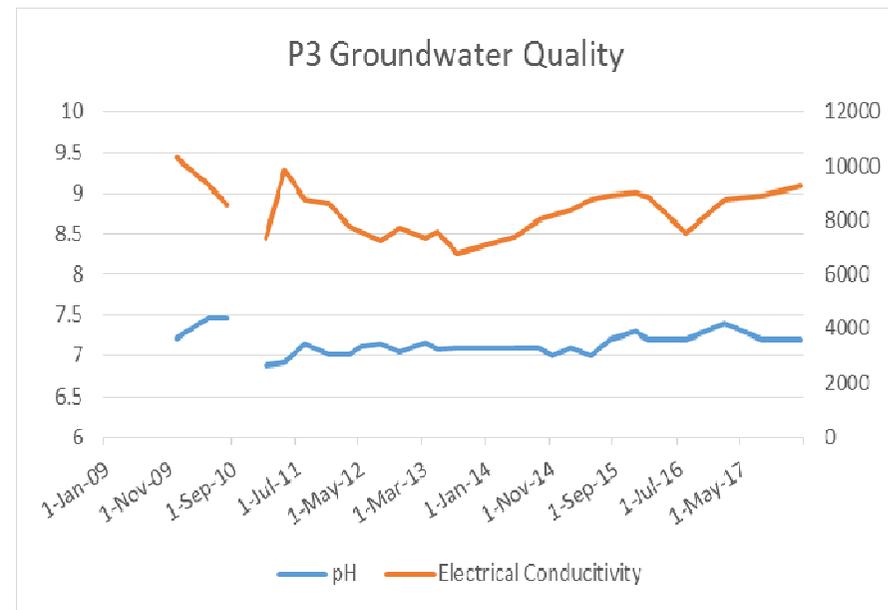
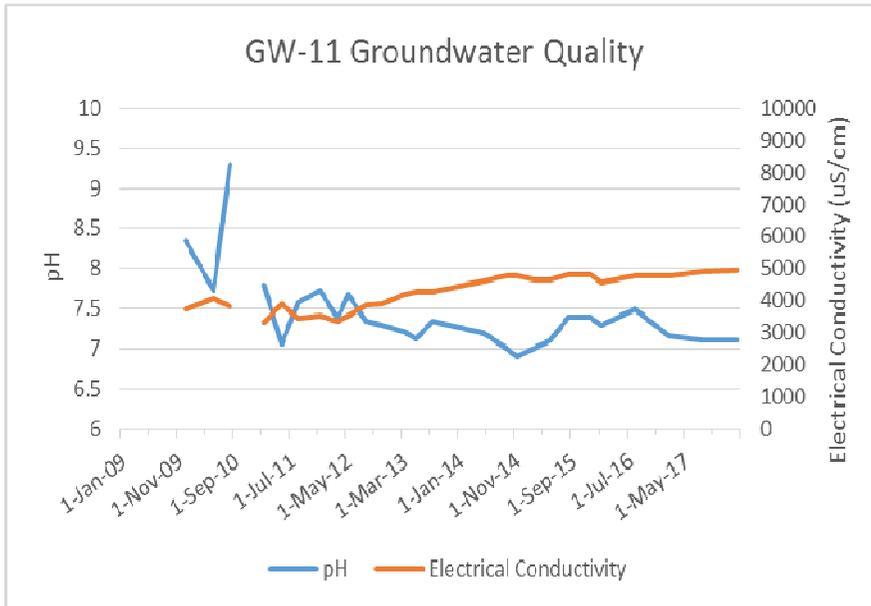


GROUNDWATER

GROUNDWATER LEVELS ARE LARGELY STABLE



GROUNDWATER CONTINUED...



GROUNDWATER MONITORING

MONITORING IS CONDUCTED AT 6 MONTHLY INTERVALS AND INCLUDES STANDING WATER LEVEL AND WATER CHEMISTRY.

- **Water quality results and standing water levels are relatively constant.**
- **GW11 indicates a slight increase in EC .**
- **Considered to be the result of water percolating through waste rock and into the groundwater system.**
- **The groundwater system is a closed system which flows to the voids on site which act as a sink.**
- **This limits any impact of leachate from waste rock on the regional groundwater system.**
- **The water level fluctuations observed at GW8 are considered to related to pumping of groundwater for farm use.**

COMPLAINTS

FY18

No complaints were received during the 2018 financial year.



VICKERY COAL PROJECT

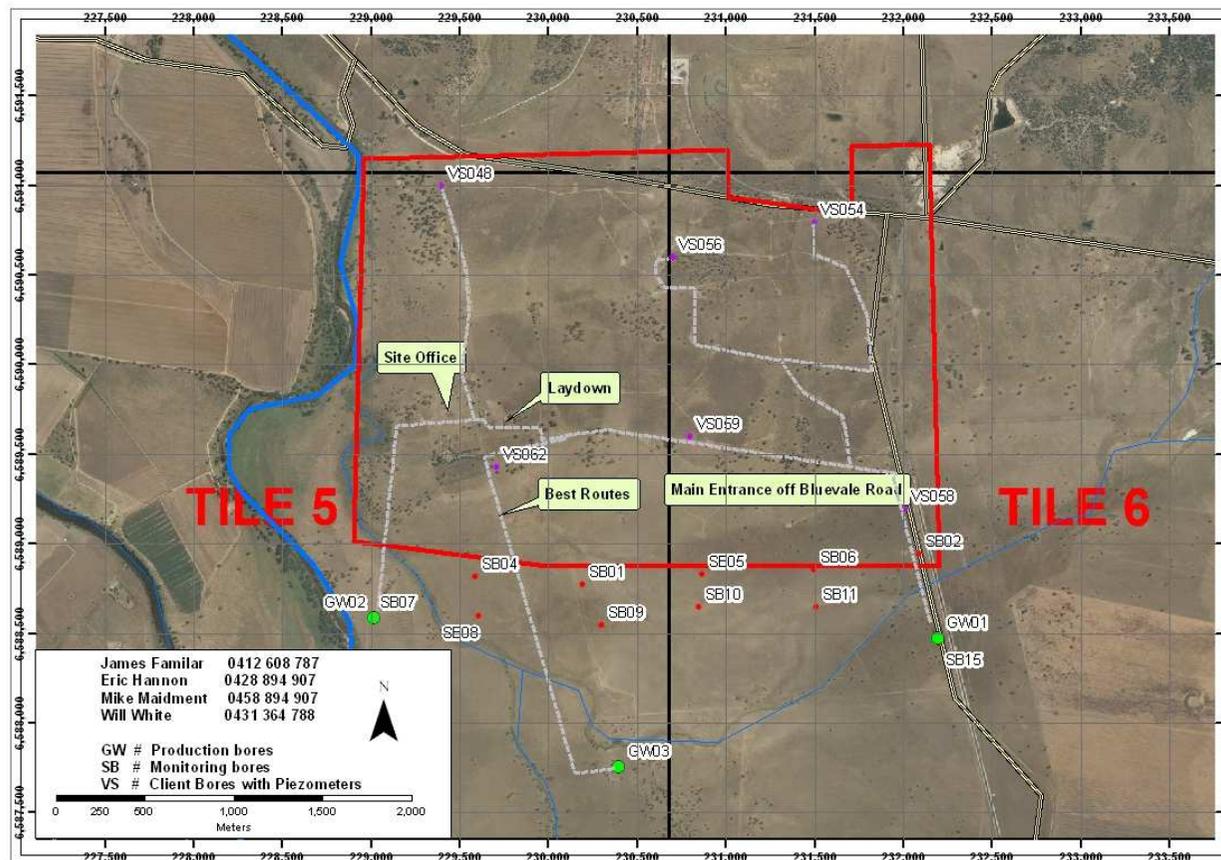


MONITORING

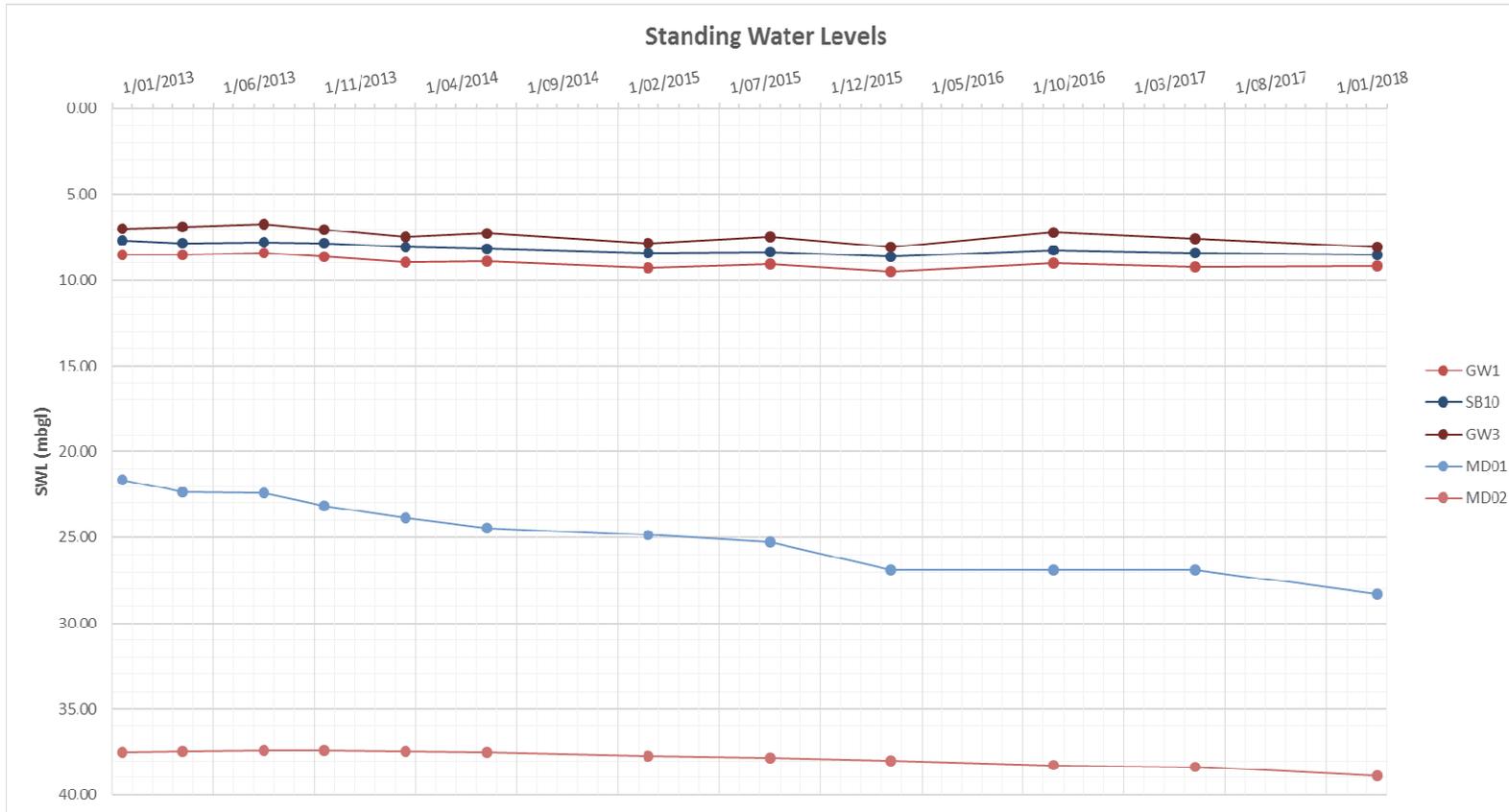
There are no requirements to undertake environmental monitoring until operations commence at the Vickery site. Whitehaven Coal does however, continue to collect surface water, groundwater, meteorological, and air quality baseline data.

GROUNDWATER BORES

VICKERY SOUTH LOCATIONS



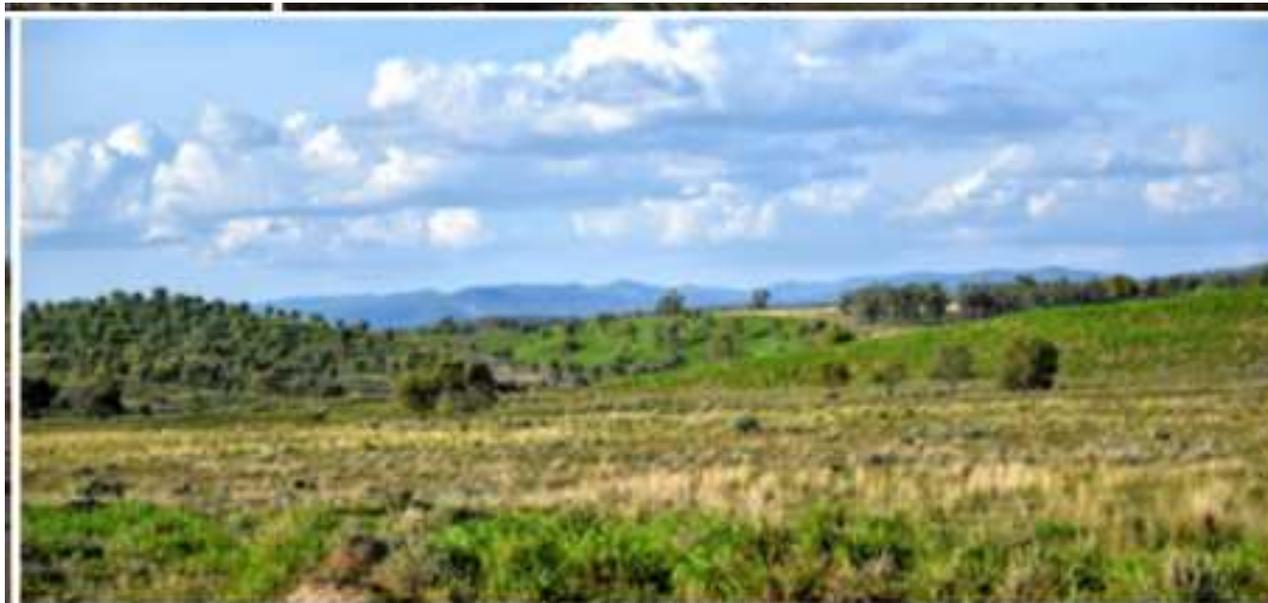
GROUNDWATER LEVELS



COMPLAINTS

FY18

No complaints were received during the 2018 financial year.



SR 17 Narrabri 35

17 Maules Ck SR 11 Boggabri 18

THANK YOU

www.whitehavencoal.com.au



Whitehaven Coal Limited

VICKERY EXTENSION PROJECT | EIS BRIEFING

August 2018



About Whitehaven Coal

Whitehaven Coal has a proud history in the Gunnedah Basin where our mines, local investments, workforce and community contributions are centred.

We are the largest non-government employer in the region with a workforce of approximately 1,500, 75% of whom live locally.



Community Contribution

We have invested

\$1bn

in the North West NSW economy since 2012



\$12m

in annual salaries to Indigenous workforce flowing back into communities



We made payments in FY2017 of

\$159.4m

to our employees in wages and superannuation



\$3.5m

in voluntary planning agreements payments last year for local community infrastructure



In the past year we made

90

donations to community groups



\$171.9m

in royalties paid to the NSW Government in FY2017



We worked with more than

350

local suppliers during the past year



75%

Around three quarters of our workforce live in the area of our operations, supporting the local economy



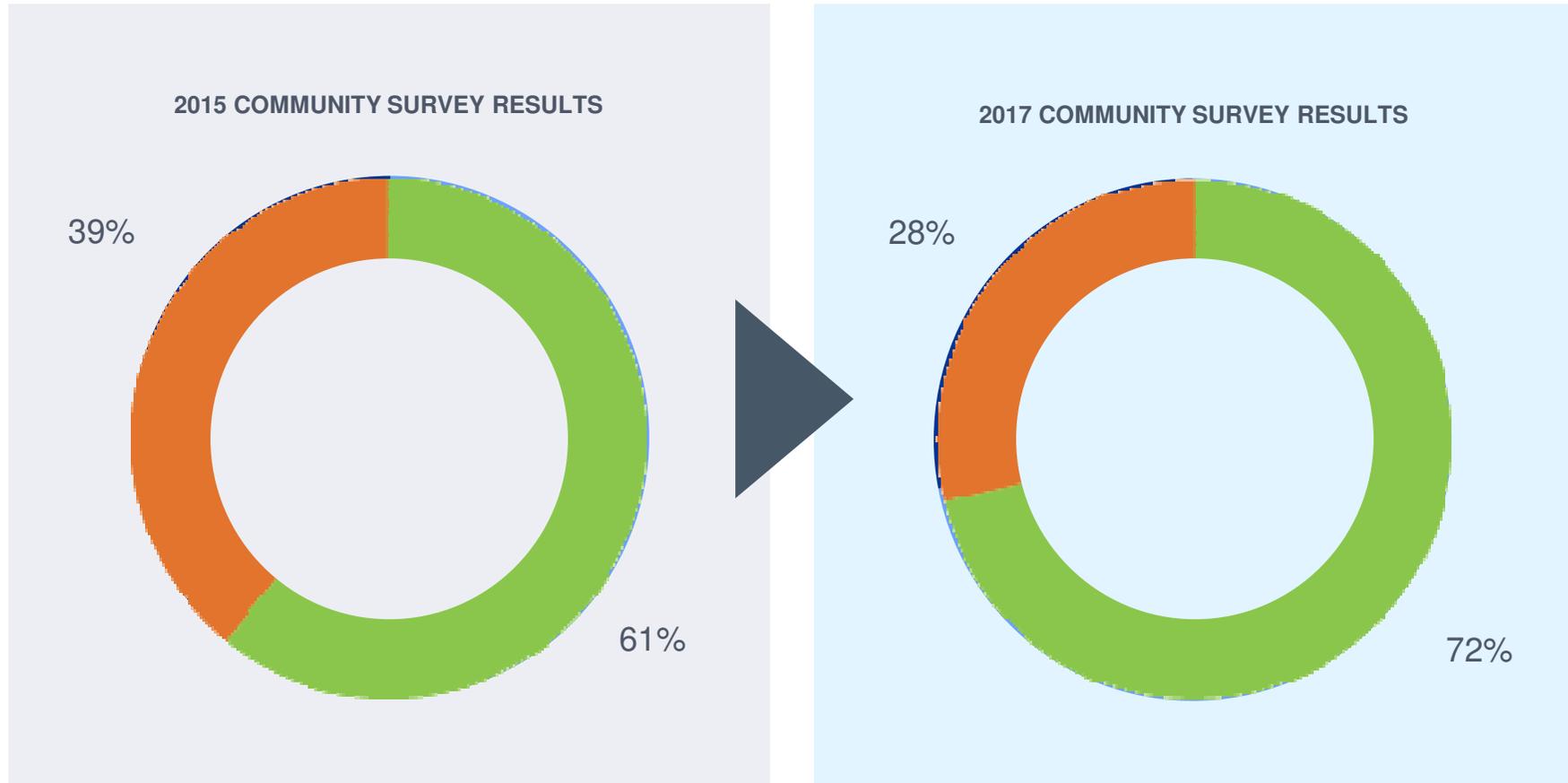
11%

of employees self-identify as Aboriginal or Torres Strait Islander people



Community Views of Whitehaven

SINCE WHITEHAVEN BEGAN INDEPENDENT COMMUNITY RESEARCH IN 2015, LOCAL SUPPORT HAS GROWN SUBSTANTIALLY



Source: Newgate Communications Pty Limited Research

Background - Vickery Extension Project

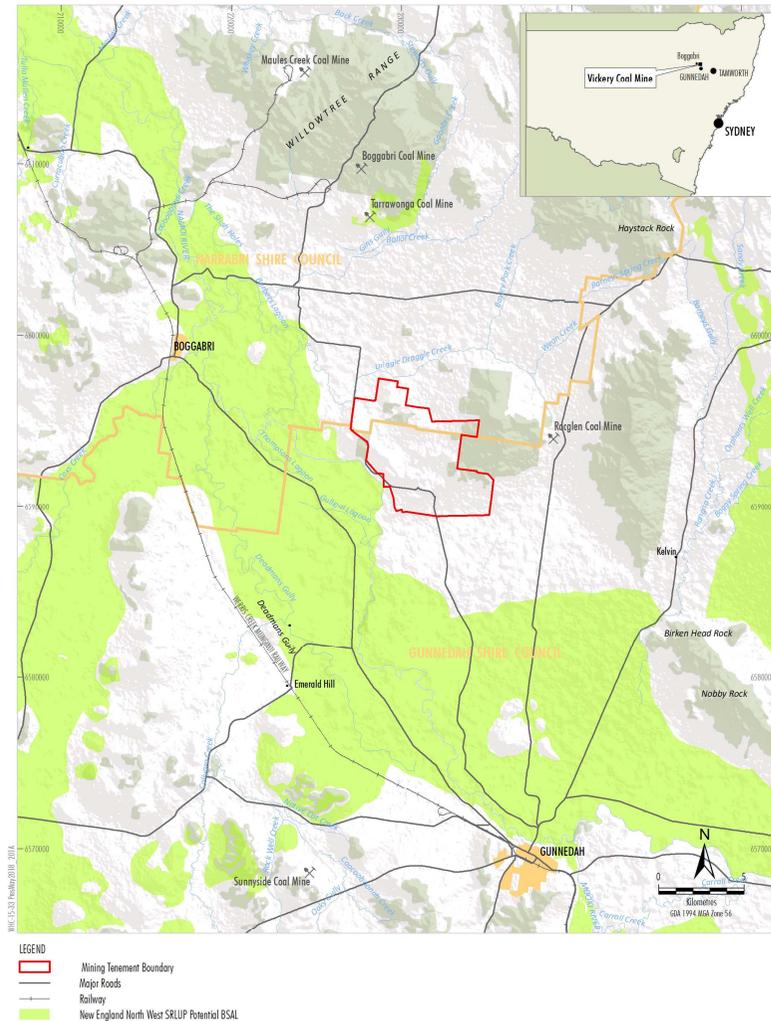


- **The Vickery Coal Mine is already approved** as a 4.5Mtpa open cut coal mining operation, located approximately 25 km northwest of Gunnedah
- **The Project site has previously been extensively mined and there is no high value agricultural land on the site**
- Whitehaven is seeking approval for increased average run rate of 7.2Mtpa over 25 years.
- The Project involves the construction and operation of an on-site CHPP, train load-out facility, rail loop and rail spur.
- The Gunnedah Basin produces some of the highest quality coal in the world.

Agriculture

NO SIGNIFICANT IMPACT

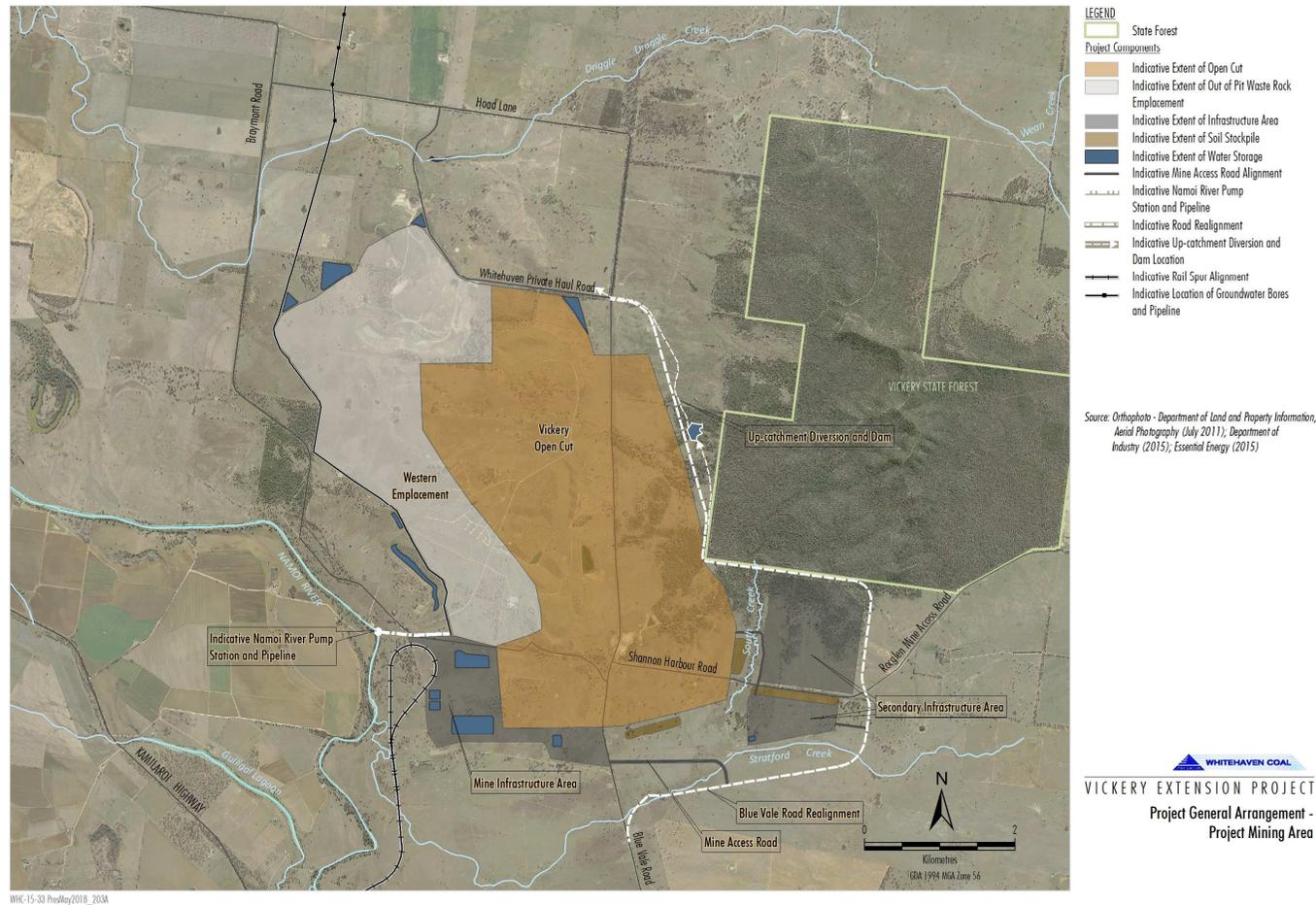
- No regionally mapped Biophysical Strategic Agricultural Land (BSAL) within Project area
- Much of the land within the footprint has been previously mined and rehabilitated
- Project area consists of lower quality grazing land



WHITEHAVEN COAL
VICKERY EXTENSION PROJECT
Regional Location and
Regionally Mapped BSAL

Vickery Extension Project

THE EXTENSION PROJECT FOOTPRINT IS MARGINALLY LARGER THAN THE CURRENTLY APPROVED PROJECT.



Project Benefits

Local region

- The project will generate approximately:
 - 500 jobs during the construction phase, and
 - 450 jobs during operations.
- It will deliver significant financial benefits to the local economy, including:
 - \$230m incremental disposable income benefit to local communities
 - Over \$4m in incremental shire rates
 - Flow on benefits of \$80m and 170 FTE jobs in the local community

NSW

The project will deliver significant net benefits over the 25 year life of over \$1.3billion to NSW including:

- More than \$1b in royalty payments for the people of NSW
- Incremental company tax benefit of over \$190m
- Incremental disposable income payments of \$260m
- Flow on benefits in excess of \$400m

Environmental Impact Statement findings

Based on some sixteen independent specialist assessments including groundwater, surface water, flood, noise and blasting, air quality and greenhouse gas, ecology and biodiversity, cultural heritage, traffic, **the EIS shows Whitehaven can operate and develop the project safely with minimal impact on the environment.**

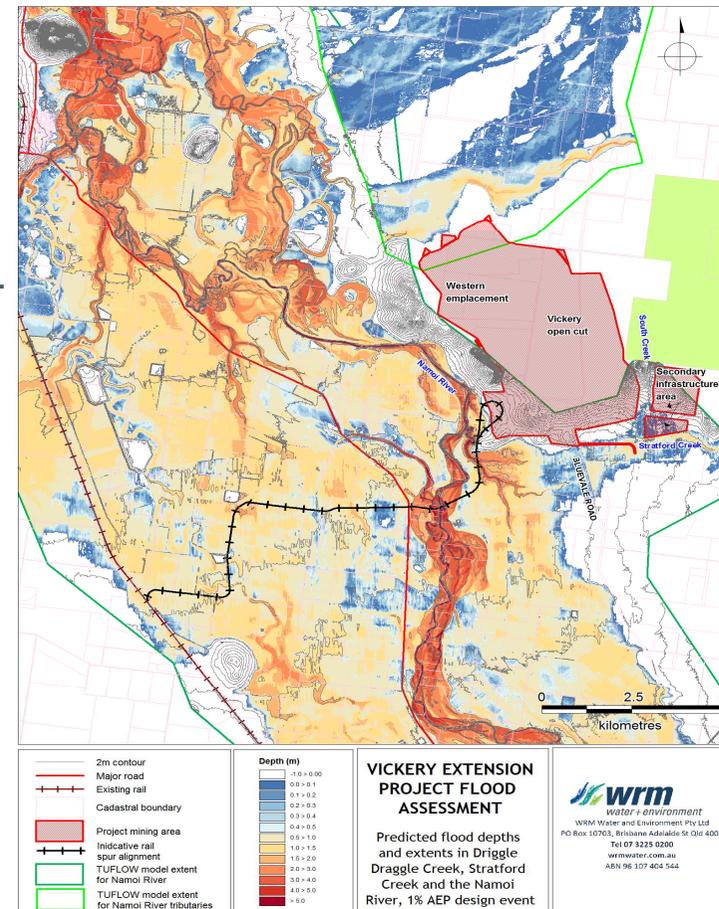
- The Project will not impact high value agricultural land
- Coal trucks will be taken off Blue Vale Road and Kamilaroi Highway when Vickery CHPP begins operating
- No further property acquisition is required
- Imperceptible impacts on groundwater and surface water on the Namoi River
- Air quality impacts are within established thresholds
- Rail line is consistent with the provisions of the Namoi Floodplain Management Plan (FMP)
- Biodiversity impacts are modest and can be offset

All assessments will be made available to the public on the [Whitehaven Coal website](#)

Rail Spur - flooding

Traversing the floodplain brings with it strict obligations to not impact flood flow. The Floodplain Management Plan imposes set criteria to be met.

- There is considerable experience of flooding across the floodplain.
- Several large floods have been recorded and the experience provides a basis for sound projections.
- It is a requirement of the FMP that large floods are considered.
- Modelling has been discussed with OEH.
- Much of the rail spur will be designed to be elevated to pass through flood flow.



Floodplain and Rail Spur

ASSESSMENTS FLOOD BEHAVIOUR INCLUDING MODELLED RAIL SPUR AND PEER REVIEW

Rail Spur

- Coal railed from the project site has positive environmental and community impacts compared with trucking coal on public roads
- The proposed rail spur is consistent with the provisions of the draft FMP
- Modelling shows that the distribution of water flow across the floodplain is not significantly altered
- Forecast noise levels under noise enhanced weather conditions at nearby residencies are well below the recommended maximum

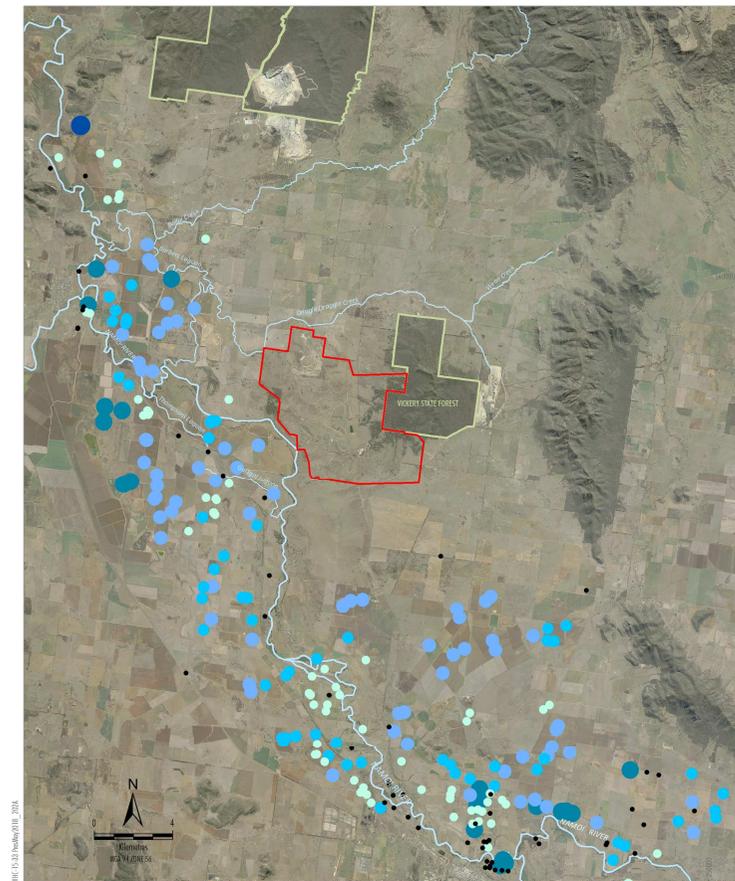
Floodplain Management

- Structures across the Namoi floodplain will be regulated by the FMP
- Independent assessments of the potential impacts have been extensively modelled
- These assessments indicate that any potential impacts are within allowable levels set out in the FMP

Groundwater

Water is a significant natural resource in the Gunnedah Basin. Water resources include groundwater and surface water in the Namoi River

- Whitehaven commissioned a rigorous, robust, independent and peer reviewed ground water assessment as part of the EIS
- The Vickery Extension Project (VEP) is located within a hard rock “island” of the Maules Creek Formation, encircled by alluvium that provides the source of most of the groundwater utilised in the Vickery area
- Impacts on groundwater are regulated by the NSW Government’s Aquifer Interference Policy (AIP)
- The modelling predicts that no privately owned bores surrounding the VEP will experience greater than “minimal impact” as defined in the AIP during mining operations
- There is a small predicted increase in river leakage to the reach of the Namoi River to the immediate west of the VEP mining area which would be imperceptible compared with normal river flow



Note: WAs 12422, 12625, 12645, 12651, 12653 and 12714 are owned by Whitehaven Coal and are not shown.
WAs 36547 and 36548 are owned by Idemitsu and are not shown.
Source: Geoscience Australia (2006), DP Water (2016), Whitehaven (2016)

WHITEHAVEN COAL
VICKERY EXTENSION PROJECT
Groundwater Licences in the Vicinity
of the Project

Surface Water

- No mine water will be released to downstream watercourse
- A water balance model has been created to permit an assessment of the risk of a water shortfall or discharge at any point in the mine life.
- The water balance model utilises 125 years of rainfall records.
- The modelling considers the progressive development of the mine over the mine life combined with 100 climate scenarios representing all the different sequences represented in the historic climate record.
- Sediment dams designed and operated to manage sediment-laden runoff in accordance with best practice management and EPL requirements
- The proposed water management systems for the mine are not expected to result in any change in water quality in neighbouring creeks
- Water extraction from Namoi River in accordance with access licenses

Noise Impacts from Mining

Noise impacts are one of the areas that must be assessed..

- Because of the passage of time the EIS has been in play, the noise policy has changed.
- When the SEAR's were updated, compliance with the Noise Policy for Industry was applied.
- Modelling was repeated in line with the Policy.
- More complex than under the previous Industrial Noise Policy.
- Lessons from other mines have been applied.
- No additional properties within noise affected zone.



Noise Policy for Industry

Noise Impacts from Rail

Noise impacts relating to the rail spur also need to be assessed.

- Noise impacts for rail lines assessed using the Rail Infrastructure Guidelines.
- Noise limits for private rail sidings are much stricter compared with mainlines.
- Noise projections based on worst atmospheric conditions.
- All closest residences within acceptable noise levels.



Rail Infrastructure Noise Guideline

Noise Impacts

Government policy establishes guidelines for dealing with impacts on landholders.

- The Voluntary Land Acquisition and Mitigation Policy establishes noise and air quality thresholds.



Blue Vale



Vickery coal mine extension moved away from Namoi River

December 7 2017

- Original Vickery Extension Project proposed scope included reopening the previously mined Bluevale pit.
- Blue Vale Pit's proximity to Namoi River and private residences meant that environmental assessments focused on potential impacts.
- Detailed modelling confirmed that impacts on Namoi River were minimal.
- Nevertheless there were some community concerns expressed to Whitehaven.
- After careful consideration, Whitehaven chose to exclude reopening Blue Vale pit from the Vickery Extension Project scope to mitigate community concerns.

Summary

The Project will bring the following benefits to the local community and NSW:

- Generate 950 new jobs with about 500 jobs during the construction phase and around 450 jobs during operations
- Deliver significant net benefits of over \$1.3 billion to people of NSW
- Create fresh opportunities for Whitehaven to support local businesses and contractors
- The project when fully operational is likely to lead to decommissioning of the Gunnedah Plant and will reduce coal trucks on public roads.

EIS findings:

- No impact on high value agricultural land
- No measurable impacts on groundwater and the Namoi River
- Incremental noise and air quality impacts are within established thresholds
- Rail spur impact within allowable levels on the Namoi River floodplain

SR 17 Narrabri 35

17 Maules Ck 18 Boggabri 18

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