# RIX'S CREEK COMMUNITY CONSULTATIVE COMMITTEE MEETING

## MEETING 27/5/2014

**PRESENT:** Councillor - Val Scott.
Community Representatives – Reg Eveleigh, Michelle Higgins (phone).

Company Representatives - Garry Bailey, Luke Murray, Jason Desmond (Minutes).

NSW Planning & Infrastructure – Ann Hagerthy

**APOLOGIES:** Patricia Bestic, John Hindmarsh.

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Meeting commenced 10:04 am.

**1 AGENDA**

Nil.

**2 APOLOGIES**

Patricia Bestic (Community) and John Hindmarsh (The Bloomfield Group).

**3 PECUNIARY INTERESTS**

None reported.

**4 PREVIOUS MINUTES**

Minutes of meeting 3/09/2013 Accepted. Moved Reg Eveleigh, Seconded Luke Murray.

**5 BUSINESS ARISING FROM PREVIOUS MINUTES.**

Nil.

**6 PRESENTATION OF ENVIRONMENTAL MONITORING REPORT.**

**SUMMARY**

- Presentation of 2013 Annual Environmental Management Report (AEMR);
- Highlight any variations; and
- Proposed operations for 2014 and future plan/s.

## OVERVIEW OF LAST THREE YEARS OF MINING

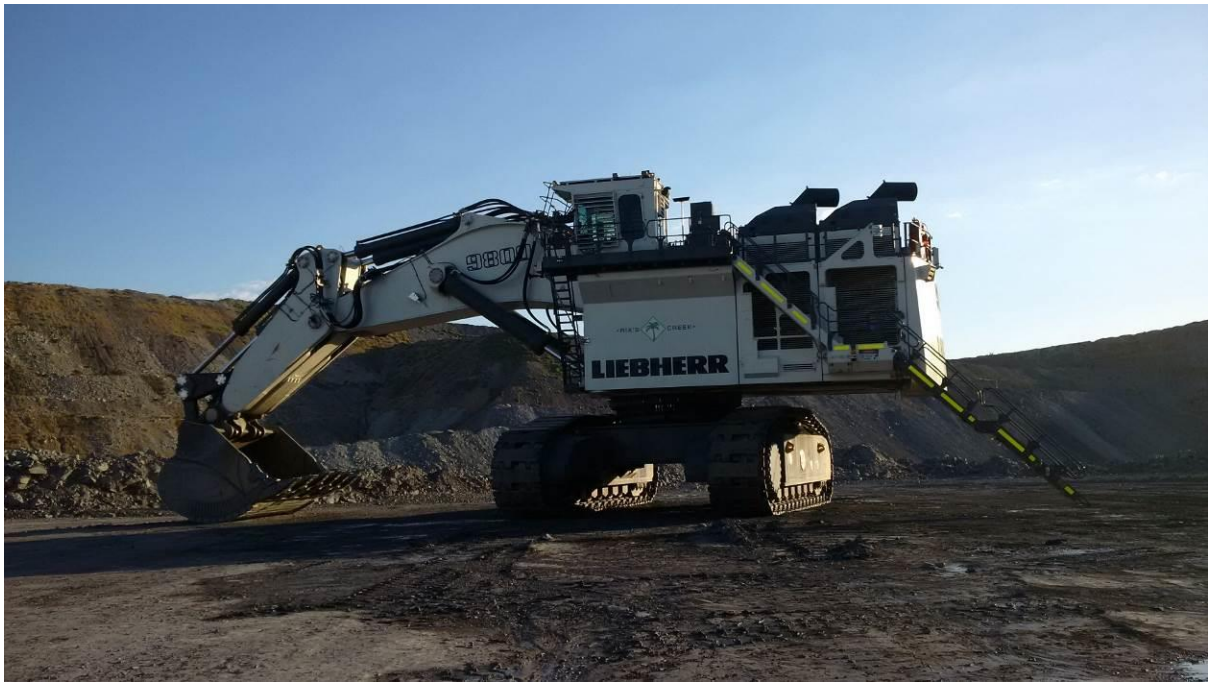
To bring everyone up to speed with the changes to the operation over the last three years….
2012 aerial image – Operations were within Pits 1 (North) and 3 (West) with majority of work/s in Pit 3 until Cut & Cover tunnel completed June 2012. Tailing's emplacement area #3 main tailing's area and still capping Tailing's Dam #2 (TD#2).

2013 aerial image – Majority of operations shifted from North Pit to West Pit – operation progressing in Pit 3 whilst dumping / rehab in Pit 1. Still some coal in the North Pit (Camberwell end). ROM Pad constructed around ROM Pad to minimise truck noise. TD #4 approved and ready for use after TD#3 reaches maximum capacity end of 2013. West Pit Clean Water Diversion has been realigned ahead of operation to minimise clean water in this catchment being termed dirty water if it reaches Pit 3 mining areas.

2014 aerial image – Operations taking place in Pit 3 with mining of coal in North Pit complete. Clean water diversion under tunnel haul road to feed clean water off-site completed. Still rehabilitating TD #2. Highway bunds created along New England Highway on Pit 3 side of the road and rehabilitated with various tree's and grasses.

## CURRENT OPERATION

Operations continued in Pit 3 (West Pit) with Hitachi 5500 excavator, Hitachi 3600 excavator and Marion 305 dragline. Moving into the future (2014 and beyond) Rix's Creek to operate two excavators in the West Pit (new Liebherr 9800 – commenced January 2014) and current Hitachi 5500 excavator with the Marion 305 dragline being decommissioned (sold and removed from site during April 2014) and the Hitachi 3600 excavator is uncertain (Rix's Creek standby unit at present).




Multi-seam bench style sequence of mining will continue in 2014. During 2013 rehabilitation was carried out to any area's shaped to final landform design – this ensured rehabilitation is as close as possible to the active mining areas.

## CONSENTS, LEASES & LICENCES

Mining Operations Plan (MOP) completion 15/9/2012 with extension granted until 15/3/2013 submitted and approved early 2013.

Section 100 for Tailing's Emplacement Area 4 approved August 2012. Tailing's begun entering emplacement May 2014.

QUESTION:- Is the reject from the washing plant mixed with water (tailing's) or course material to be disposed in-pit?

Both at this stage – since the Solid Bowl Centrifuge (SBC) is only at third-scale capacity it's rejects are mixed with course reject and disposed in-pit (preferential), however, other two-thirds are processed similar to the past with reject being disposed via a tailing's line. Over the next year or two another two solid-bowl centrifuge units will come on line hopefully removing the need for a tailing's dam facility i.e. material to be co-disposed in-pit as per overburden material.

A map was presented with company owned land highlighting land purchased ahead of the mining operation Pit 3 to secure future of mining.

## LAND PREPARATION

32 sites were drilled to determine depth of coal ahead of the resource in land previously not owned by the company.

QUESTION:- Were the drill sites core drilled via a contractor company or internally?

Drill sites were done via internal drill's to determine depth of coal seams. Secondary drilling will take place during 2014 to determine cores, coal measures, coal quality, geology, etc by a suitably qualified contractor.

Area cleared during 2013 approximately 62.1 ha pre-stripping ahead of West Pit operation. In 2014 approximately 12.7 ha will be pre-stripped ahead of the operation.

Pit 1 surface disturbance complete with rehabilitation to follow dumping infill. Pit 3 surface disturbance to be increased into future with rehabilitation to also increase in linear fashion in Pit 1.

## MINING OPERATIONS

Overburden – 11.502 million BCM ~10% increase from 10.342 m last year – 13.3 m next year estimated.

ROM coal – 2.747 million t ~3%increase from last year 2.690 Mt - planned 2.4 Mt 2014

Clean coal – 1.525 million t – slight decrease from 1.573Mt - planned 1.4-1.5 Mt 2014

There has been no major change to mining methods on site during the year. Lower resource recovery 55.5% compared to long-term average of 61%. This is likely to be due to different coal quantities washed from the Pit 3 area i.e. high ash, sulphur, moisture.

## WATER MANAGEMENT

Self sufficient no water from regulated sources used during 2013. Potable water minimal usage brought to site for bathhouse and amenities – total used included in 2013 AEMR.

All water on site stored and recycled as best as possible – mine water runoff from disturbed and active mining areas as well as tailings dam reused for CHPP (coal washing).

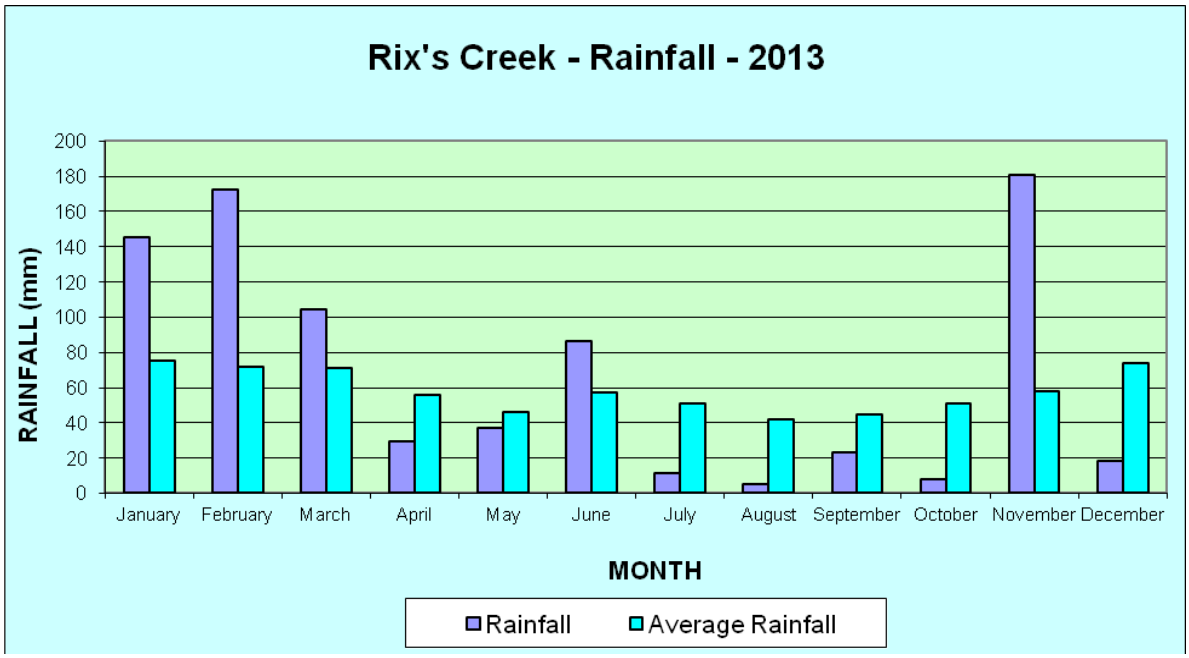
Flow meters installed across site as part of Minerals Council Australia Water accounting framework – water usage will be recorded and provided to public, regulators, etc and validate site water models.

## METEOROLOGICAL

Rainfall for 2013 was 823.5 mm which was 125.5 mm above average for the year compared to 2012 where rainfall was 617 mm or 81 mm below average. Although there was some above average months (Jan/Feb/Mar/June/November), however these were short-lived rain events and the dry year in 2012 didn't help conditions for rehabilitation success and air quality.

Wet start to the year followed by prolonged dry periods until November 2013.

**Figure 1 Annual Rainfall 2013**



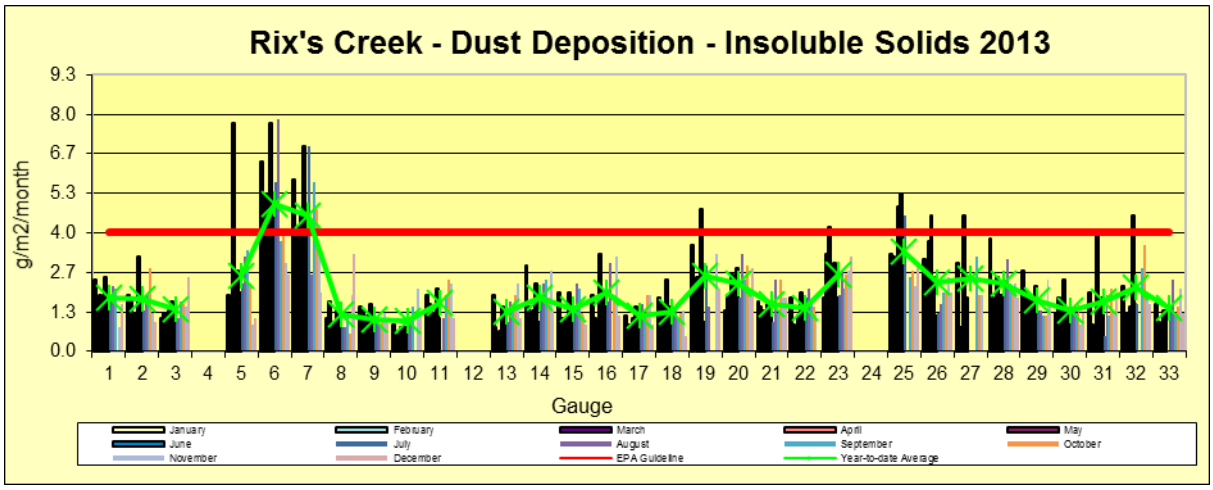

The maximum temperature of 44.2°C occurred on 13th January 2013 and the minimum temperature of 2.6°C was recorded on 16th August 2013.

## AIR QUALITY

**Insoluble solids deposition results**.

- No gauge has an average > 4 g/m$^2$/mth.
- Insoluble solids deposition results 2.0 g/m$^2$/mth overall yearly average slightly decreased from last year (2.3 g/m$^2$/mth).
- 11 gauges or 37% > 2 g/m$^2$/mth compared with 17 gauges or 50% > 2 g/m$^2$/mth during 2012. Difficult to pick up any major trends in increasing dust levels – Rix's Creek site yearly averages have remained fairly constant pre and during current mining.

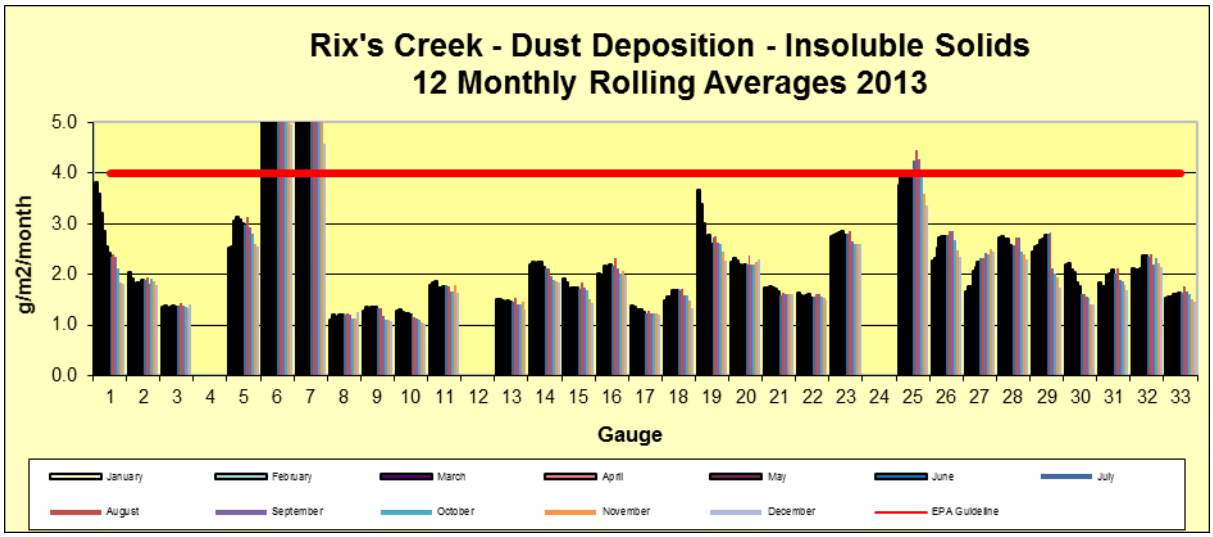
**Figure 2 Rix's Creek Insoluble Solids Dust Deposition 2013**



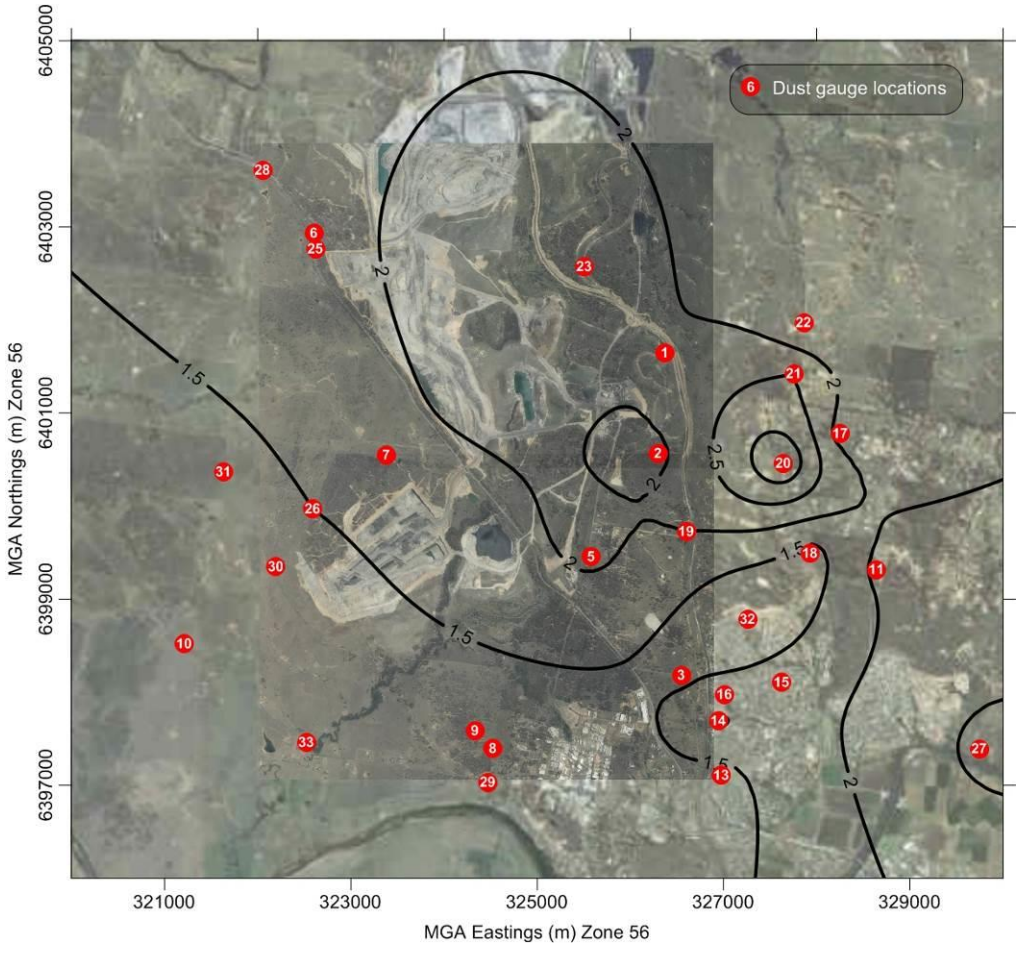

Most noticeable readings are Gauges 6 and 7. Gauges 6 and 7 are close to operation.

- Rolling twelve monthly averages show an increase for gauges 6 and 7 which are located in close proximity to the operation.
    - Gauge 6 – Results high due to gauge being within close proximity to Pit 1 operations and next to New England Highway; and
    - Gauge 7 – Results high due to gauge being on the West Pit pre-strip 2012 and relocated 200 m away from Pit 3 operation (still close proximity). Relocated November 2013 slightly further from 2014 pre-strip area.

**Figure 3 Insoluble Solids Dust Deposition 12 Monthly Rolling Averages 2013**



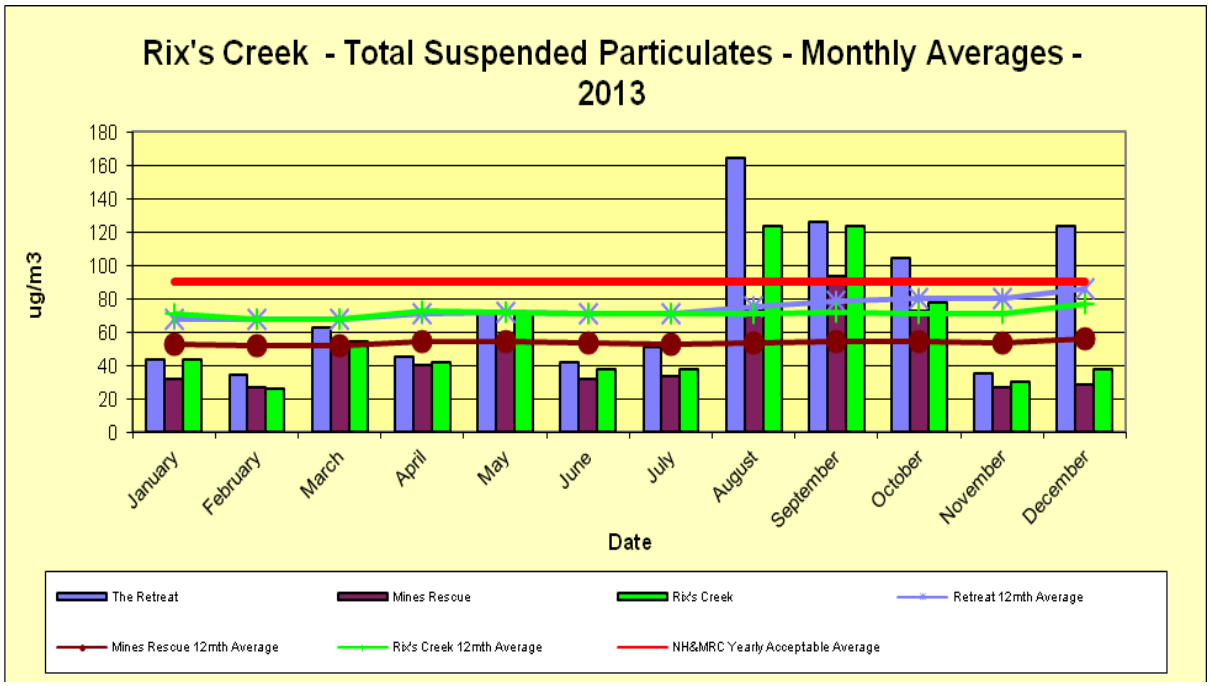

- 2013 average of all gauges 2.0 g/m$^2$/month
- 2012 average of all gauges 2.3 "
- 2011 average of all gauges 2.1 "
- 2010 average of all gauges 1.7 "
- 2009 average of all gauges 2.0 "
- 2008 average of all gauges 1.6 "
- 2007 average of all gauges 1.6 "
- 2006 average of all gauges 1.9 "
- 2005 average of all gauges 1.7 "



**Total Suspended Particulates**.

- All sites below annual limit
- All 3 sites increased from last year
- 60 out of 183 results (33%) > annual limit of 90 *u*/m3 compared to 32 out of 183 (17%) in 2012. Hard to explain as wetter year in 2013 than 2012, however, results slightly higher in 2013. This is opposite to depositional dust results that were lower in 2013 to 2012 (expected as slightly wetter year).

**Figure 4** **Total Suspended Particulates Monthly Averages & 12 Monthly Rolling Averages 2013**




- Overall average result increased by 12.6 *u*g/m$^3$ from last year. Main factor was high August/September/October results. August was particularly cold – maybe combustion smoke played a factor in those month's results.

Consistent trends seen over the last several years:

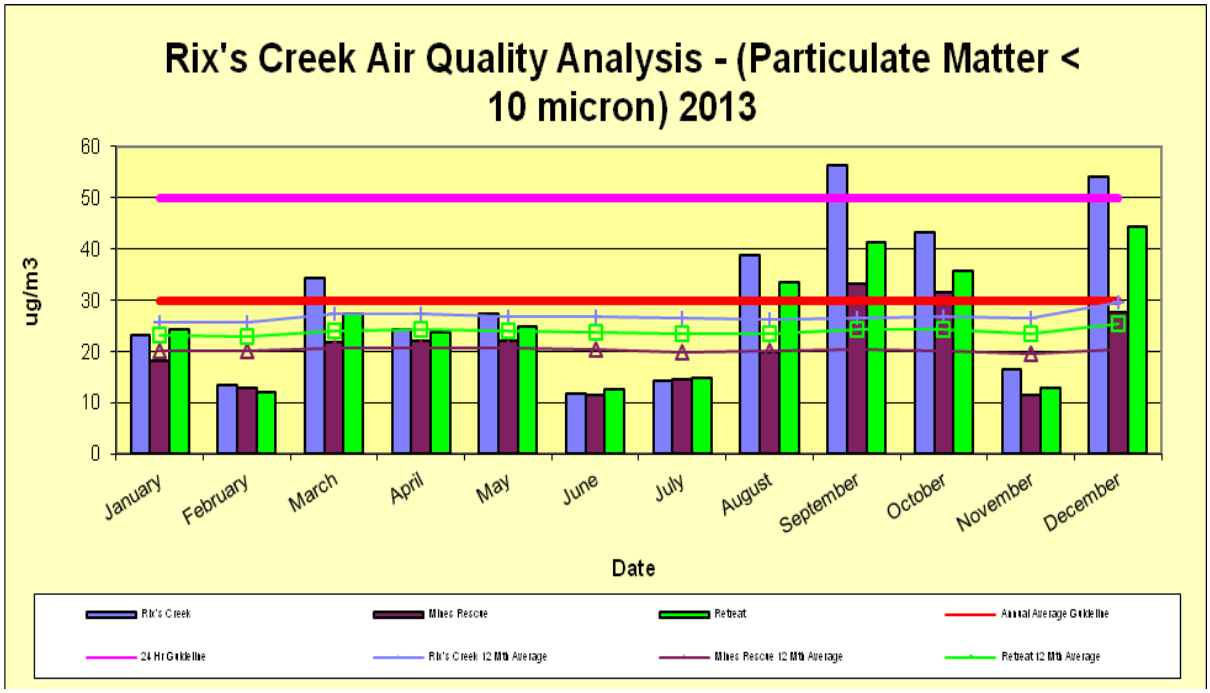
- 2013 yearly average all results 73 *u*g/m3
- 2012 yearly average all results 60.4 *u*g/m3
- 2011 yearly average all results 60.5 *u*g/m3
- 2010 yearly average all results 59 *u*g/m3
- 2009 yearly average all results 68 *u*g/m3
- 2008 yearly average all results 61 *u*g/m3
- 2007 yearly average all results 65.5 *u*g/m3
- 2006 yearly average all results 67 *u*g/m3
- 2005 yearly average all results 60 *u*g/m3

2013 standout – strange result and unexpected. Will be interesting to compare 2014 results.

**Particulate Matter less than 10 micron**.

- No data loss across all sites during 2013 – 100% results capture.
- Yearly averages across all sites slight increase to last two years – 25 ug/m³. Again will be interesting to compare 2014 results.

**Figure 5** **Particulate Matter < 10 Micron Monthly Averages & 12 Monthly Rolling Averages 2013**




- 2013 average of all results 25 *u*g/m$^3$
- 2012 average of all results 22.5 *u*g/m$^3$
- 2011 average of all results 22.5 *u*g/m$^3$
- 2010 average of all results 22.5 *u*g/m$^3$
- 2009 average of all results 24.4 *u*g/m$^3$
- 2008 average of all results 32.1 *u*g/m$^3$
- 2007 average of all results 23.4 *u*g/m$^3$
- 2006 average of all results 22 *u*g/m$^3$
- 2005 average of all results 19 *u*g/m$^3$

**Further Improvements on Air Quality**.

- Glycerine trial for dust suppression on haul roads on-hold due to some anomalies during 3-month exemption period – Rix's hopeful to be reusing 2014 for more indepth trial.
- MineSafe automated system used on ROM Pad bin for minimising dust from coal deposited into ROM Hopper from haul trucks / ROM Loader. Aside to MineSafe system Rix's also have added sprinkler's to the clean-coal haul road to minimise road trucks effect on dust lift-off from the haul road.

QUESTION:- What were the anomalies in the glycerine trial sampling?

Initially metals and secondly hydrocarbons – minute differences shown from Rix's Creek experimental results conducted 2012. These results had no effect on the environmental monitoring conducted across site on a regular basis.

## SURFACE WATER QUALITY

- Throughout 2013 Rix's Creek was dry from subsequently low rainfall as well as dry conditions the second half of 2012. The high rainfall month's experienced in 2013 was sporadic not allowing for constant rain and flow conditions for prolonged periods with flows only short lived.
- pH showed no change.
- Total Dissolved Solids (TDS) decrease down the catchment under flow conditions and mirrors salinity results. Total Suspended Solids (TSS) high at Railway Underpass – presumably from pump in place providing water to rail corridor works (third line project). Should decrease in 2014 – pump removed.
- Salinity levels similar to previous years.

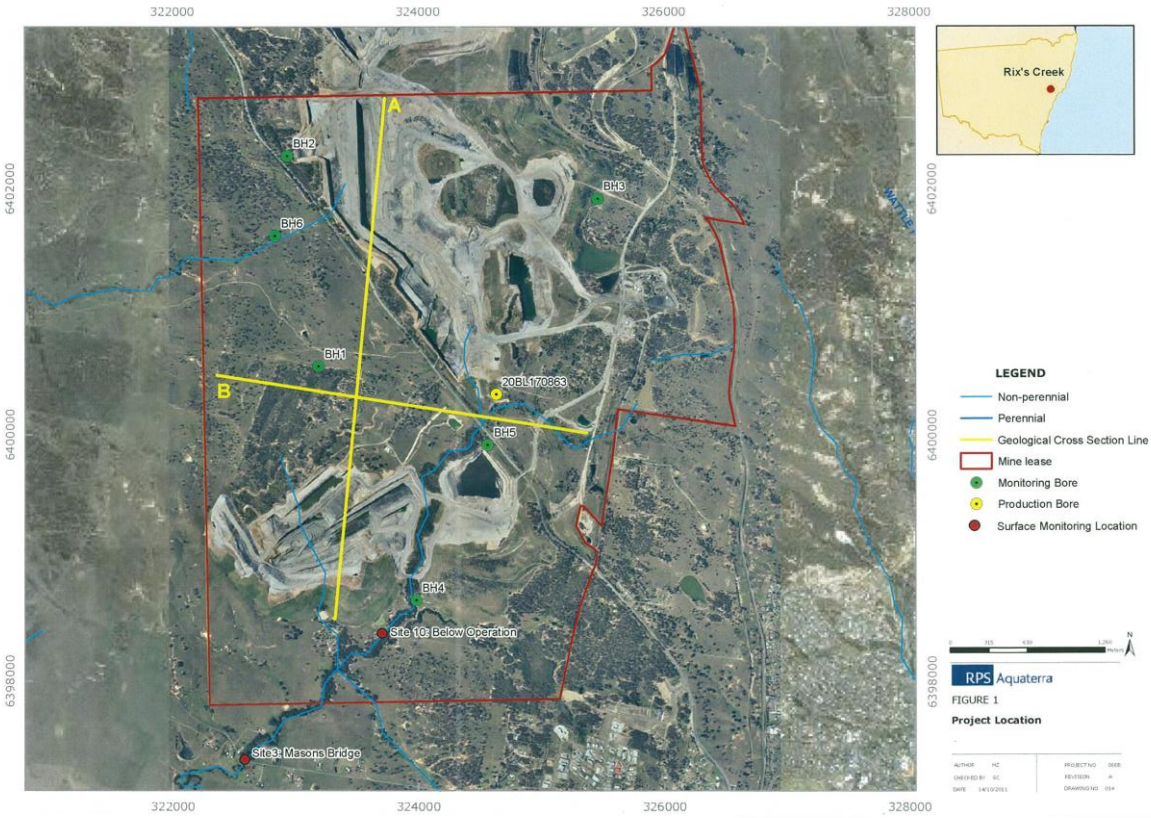
- No water incidents

- No complaints received in relation to surface water.

## GROUND WATER QUALITY

A ground water monitoring program was initiated during the 2010 reporting period with the installation of 5 piezometers across the site. The program was a condition when Rix's Creek submitted a modification for the Cut & Cover tunnel under the New England Highway. The location of the groundwater monitoring sites is presented in Figure 8. Currently 3 peizometers and one production bore are accessible.

**Figure 8 Groundwater Monitoring Network**

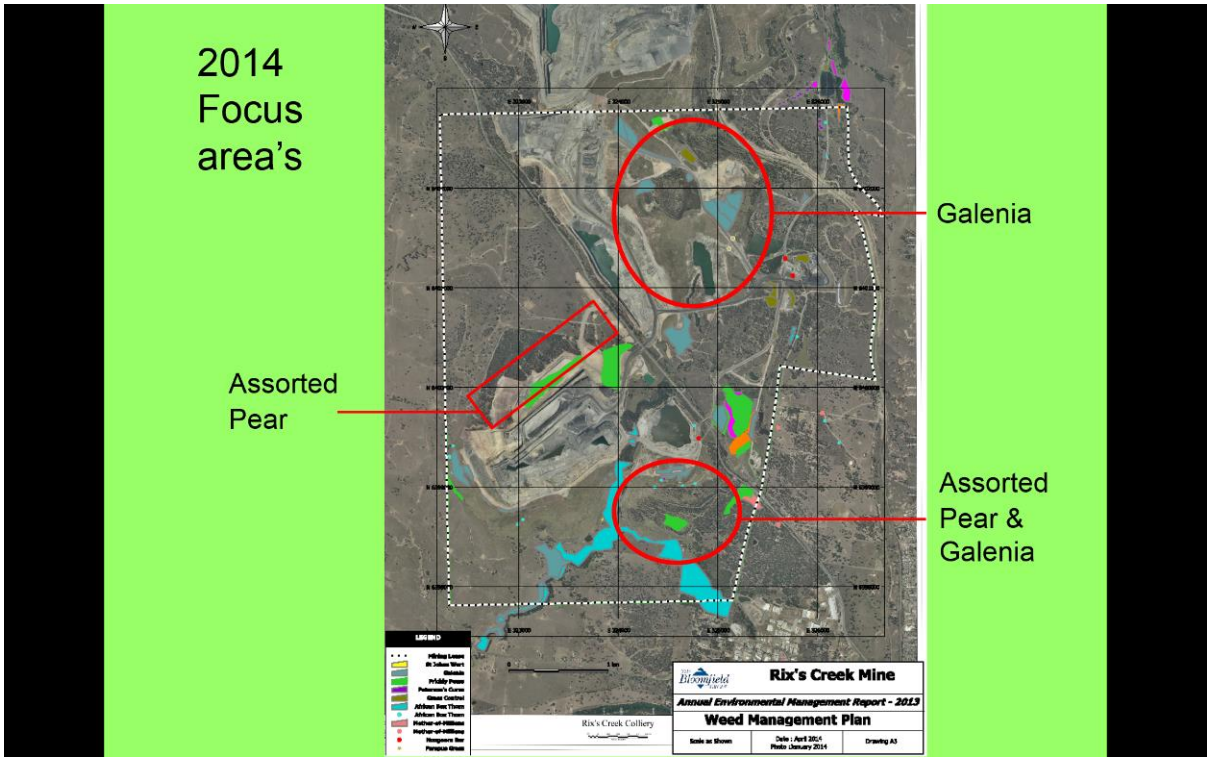



- BH6 seen in Figure not installed – access prevented by landholder in 2010.
- BH1 now deemed dry and unable to purge/pump. BH2 damaged due to ground movement in area.
- Two new piezometer's to be installed ahead of Pit 3 in 2014.
- BH 4 logger for groundwater levels compared against surface water flows in Rix's Creek – no contribution of GW into Rix's Creek.

The commencement of routine groundwater monitoring including groundwater levels and quality has shown consistent data with previous year's results. Reason for monitoring to be amended from monthly to quarterly.

## WEEDS AND PEST

Weed control undertaken across site throughout 2013 – focus on African Boxthorn, Mother of Millions and Assorted Pear. 2014 focus on Assorted Pear and Galenia.




Wild dog baiting undertaken throughout May and October.

Roo culling took place with allocation of 200 tags from NPWS – meat from 170 roo's culled was provided to WDA's annual aerial baiting program which was run in May 2013.

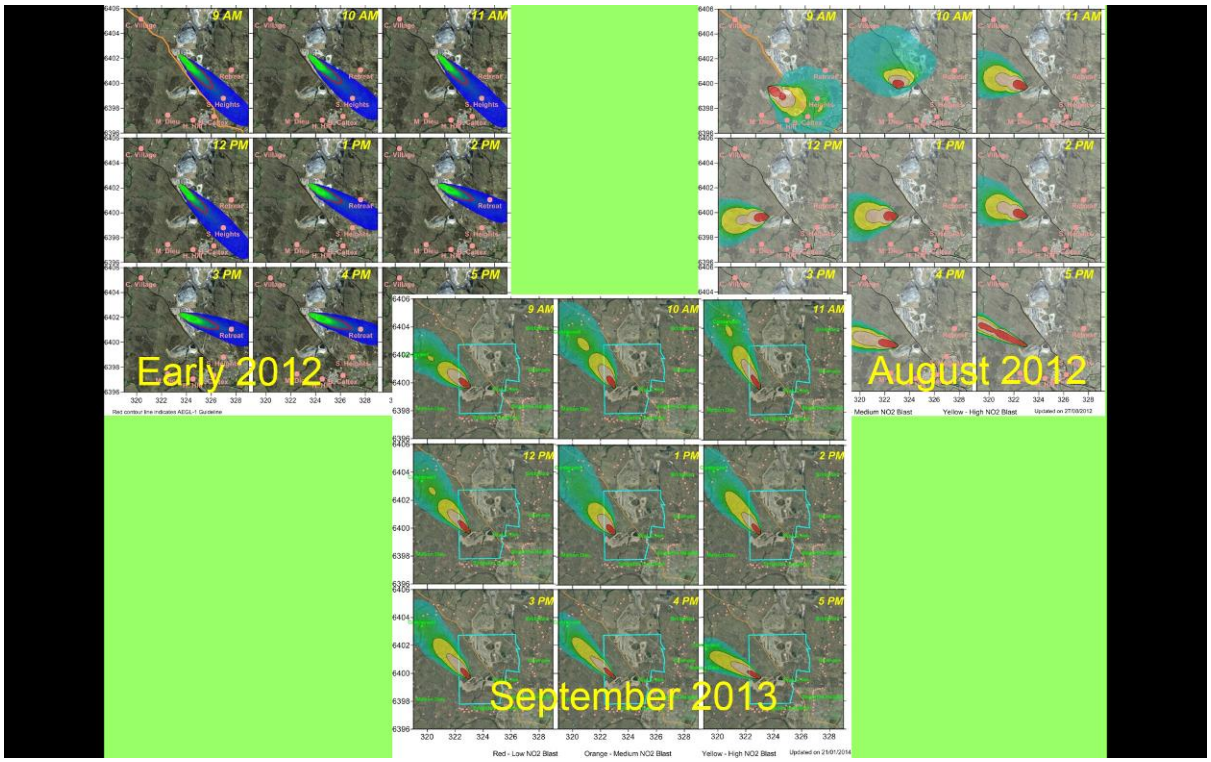
Weed control, dog baiting and kangaroo culling to continue throughout 2014. Meat from kangaroo culling 2014 to be provided to Wild Dog Association's and LHPA for wild dog control programs: aerial and ground.

## BLASTING

- 96 production blasts. 27 Pit 1 and 69 Pit 3 West Pit. 92 blasts during 2012.
- No blast exceeded the 5 mm/sec vibration.
- One blast (1.04%) recorded overpressure > 115 $dB_{Linear}$ however blast reviewed by consultant and recorded as 108.0 $dB_{Linear}$
- This can be a credit to Rix's Creek overpressure and dust/fume models.

**Complaints.**

- During 2013 eight (8) complaints and three (3) enquiries were received by the Company relating to seven (7) blasts. Most complaints relating to dust/fume – Rix's Creek has continued to minimise these impacts through their dust/fume model and use of expert advice to maintain best practise blasting practises.




**NOISE MONITORING**

Machine noise levels monitored quarterly and tables contain results for individual machines. Operational noise heard several occasions throughout the year but mostly this is below the background noise and during the night time monitoring period. Operational noise under specific weather conditions above background levels particularly in the Maison Dieu area under a north-westerly wind influence.

Environmental noise monitoring undertaken on a quarterly basis. In addition to the site logging attended monitoring is undertaken monthly by a noise consultant at several sites to better determine the extent of operational noise levels at the various sites.

Atmospheric conditions are highly dependent on results achieved.

Ten complaints and one enquiry. It was noted complaints were in the Maison Dieu area under a NW wind influence and with a temperature inversion in most cases. During 2012 there was three complaints and one enquiry received throughout the year. Again, all from the Maison Dieu area under a NW wind influence.

**Further Improvements on Noise Monitoring**.

- Creation of noise bund around ROM Pad / Washery area to limit noise towards Retreat and Singleton Heights areas – more tree's planted 2014 and further upgrades near CHPP feed bin;
- Adjusting pit shape in Pit 3 to limit noise emitted towards Maison Dieu area continuing;
- New plant such as Liebherr 9800 noise attenuated;

- Noise consultant still trialling several options to decrease noise on existing plant – mostly old machinery at Rix's Creek so the most cost-effective options to be defined before modifications take place; and
- 3D Predictive noise model being developed for Rix's Creek to assist operations.

## VISUAL, STRAY LIGHT

No incidents recorded during the reporting period in relation to lighting.

## SECURITY DEPOSIT REVIEW

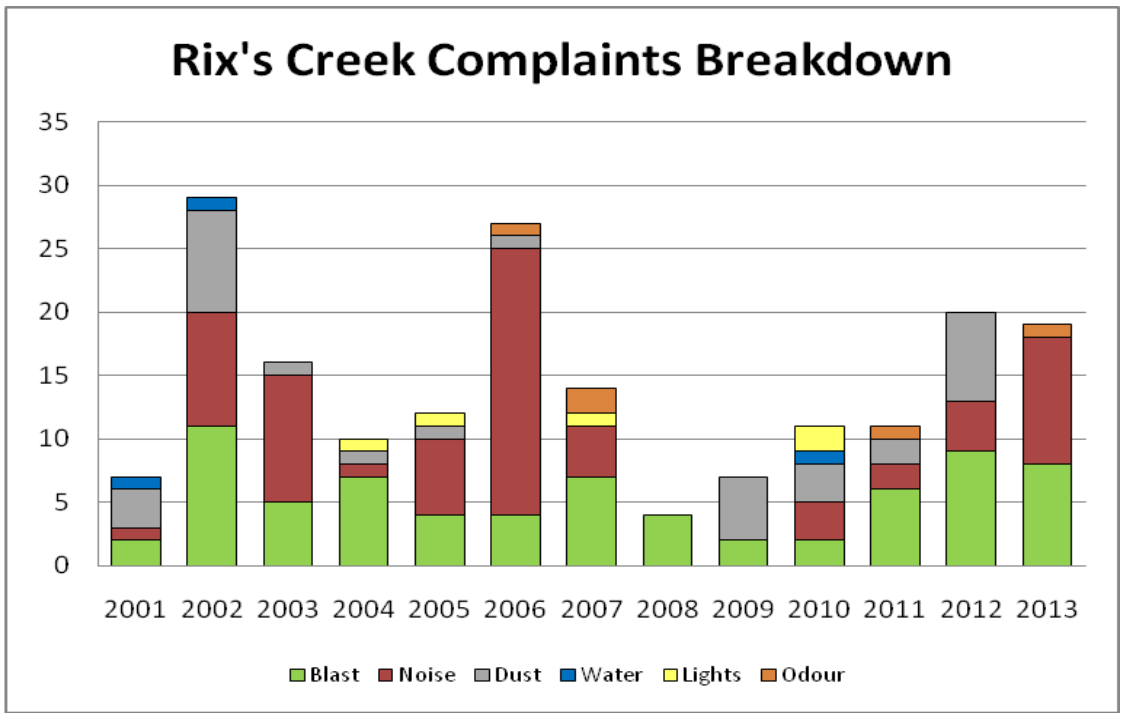
Security deposit held is $23,123,189 and previously calculated as at 31st December 2012 was $23,868,209.

## ENVIRONMENTAL COMPLAINTS

Nineteen (19) complaints and five (5) enquiries were received by the Company during the year. Complaints were mostly relating to blasting and noise with one odour complaint also recorded.

Twenty complaints received in 2012. Preferential no complaints but company works with each complaint on an individual basis to eliminate or minimise areas of concerns.

**Figure 10 Complaints history 2001-2013**

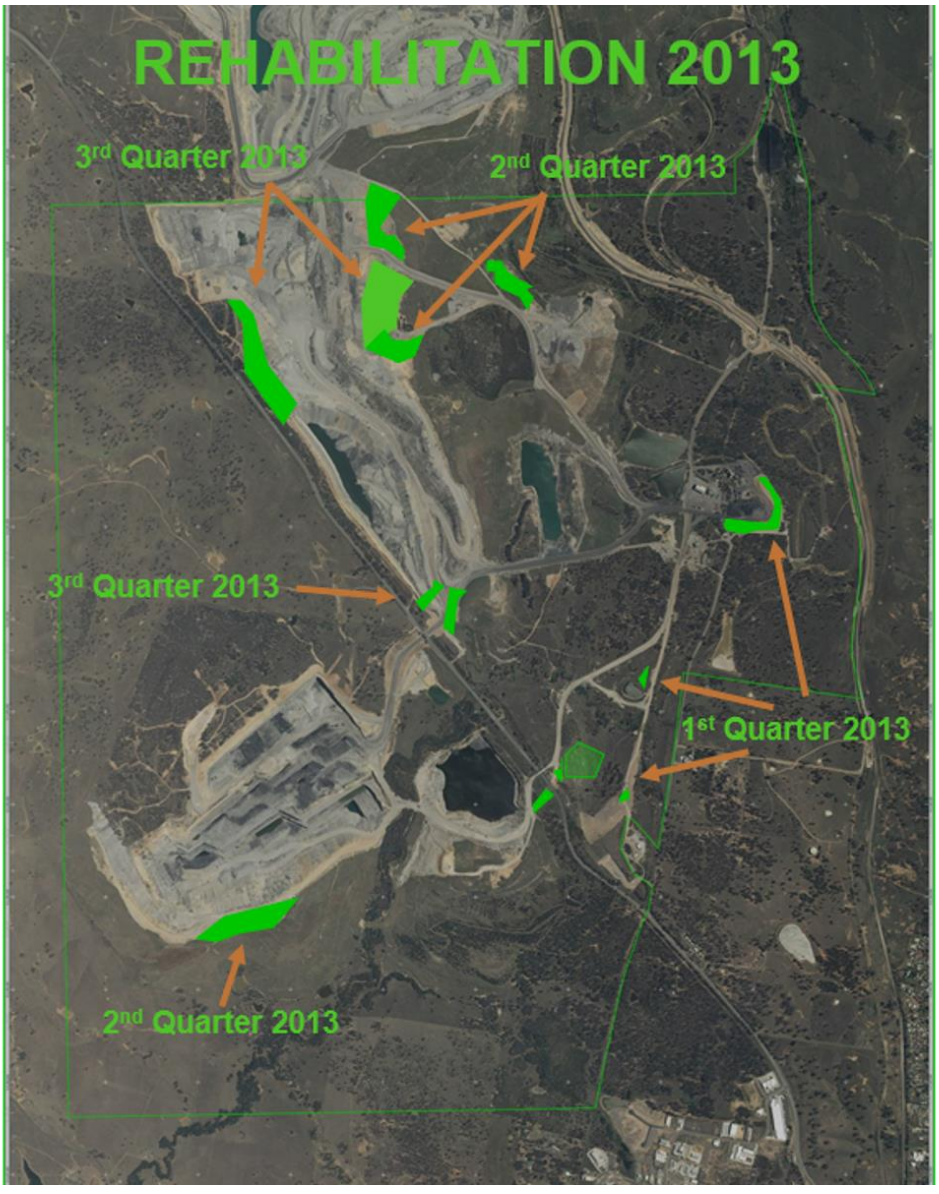


## REHABILITATION

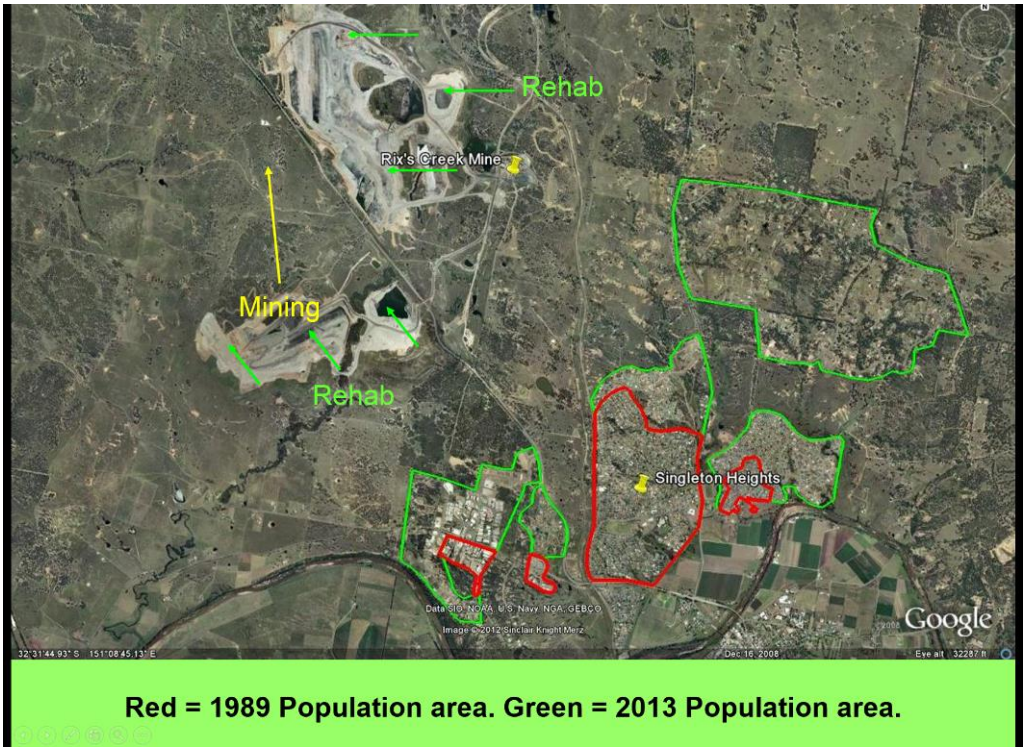
- During the reporting period a total of 37 ha were rehabilitated. This was a considerably larger area than 2012 where 16.8 ha were completed. 34.3 ha rehabilitation North Pit and 2.8ha rehabilitation in West Pit. West Pit rehabilitation restricted at present due to pit advancement i.e. coal needs to be removed before overburden can infill pit voids.

- 26 ha planned for 2014 with large areas becoming available during 2014 as Pit 1 (North Pit) begins to be infilled with overburden from Pit 3 and area's become available. Rehabilitation focus for 2014 is Tailing's Dam #2.

- Early 2014 area focus will be West Pit visual bunds which will be a tree screen of native species and cover crop to 'green' the batters.



Rehabilitation has been designed to shield the operation from nearest residences / townships and to move away aligned to production rates.

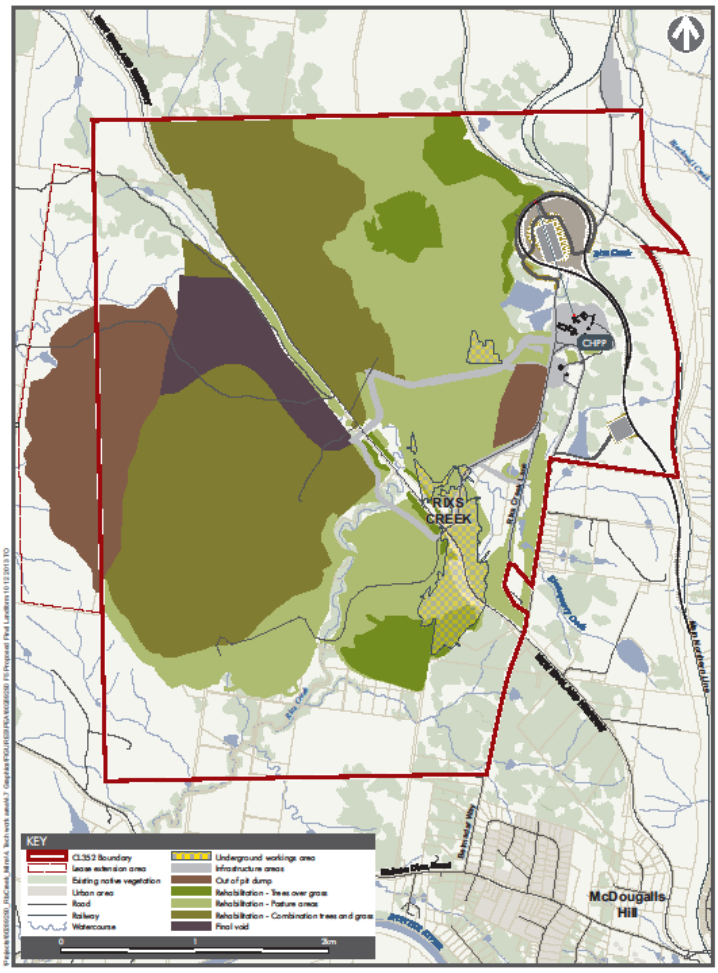



**Continuation of Mining**

Since January CCC regarding Continuation of Mining project there has been a letterbox drop to local residents during April/May 2014. Everyone currently busy with consultants compiling relevant information for EIS – Hopeful for EIS completion July 2014.

**Final Landform Design**

Original landform plan submitted in letterbox has been modified because it is so close to the New England Highway at the end of mining and public access regarding safety.




This has since been changed four times with Rix's Creek getting closer to a final design which will be approved by relevant government authorities. All dumps however will be done under current RL set limits whereas original would have required dump heights to increase. There will also be a smaller void and no steep high walls with steepest rehabilitation slopes being 18° with trees.

QUESTION:- Will Rix's Creek plan on installing another bridge / tunnel across the New England Highway?

Yes – near Dead Man's Hill to assist future production rates and shorter haul road distances.

QUESTION:- Will Rix's Creek continue to use Camberwell (Vale – Integra) rail-loop or construct their own?

Hopefully continue to use Camberwell's as it is already set-up – Rix's Creek approved to build own if required.

QUESTION:- Rix's Creek spoke about coal resources left in North Pit that could be mined via underground methods? Why wasn't this removed via open-cut?

Correct – Barrett and Hebden coal seams still remain. This was due to restricted RL Dump height's in the early 1990's preventing coal to be removed in the North Pit. This isn't the same in the West Pit as dump RL heights are higher i.e. not as visible from Singleton township.

QUESTION:- In the Waste management section in the AEMR there is no mention regarding storm-water?

Correct – Any water collected on-site is stored within dirty water dams and grey-water from on-site facilities is passed through the septic tank / maturation pond / evaporation and land irrigation.

QUESTION:- Are the sediment dams on-site tested for contamination?

No – several dams are monitored on a monthly basis regarding water quality but dams are essentially created from in-pit materials, same for roads constructed of pit material so dams collect this same material. Sediment dams cleaned regularly internally and cleaned on a 12-month basis by relevant long-arm excavator contractor.

QUESTION:- Has Rix's Creek ever traded / used their HRSTS 5 credits before?

Yes – with Xstrata they used Rix's allocated credits and paid rental fee's etc.

QUESTION:- Rix's Creek mentioned they don't have Spontaneous combustion issues with their coal once stockpiled, how does Rix's Creek manage fire-prone material such as compost, wood heaps, etc?

Rix's Creek has a slashing program, this is along rehabilitation / site boundaries, have conducted back-burning activities with RFS, weed and grass spraying around infrastructure, minimising stockpile time of any compost if used on site (mostly biosolids used with 70% moisture eliminates this) and minimising any stockpiling of coal for prolonged periods i.e. coal is usually brought out of pit and into washing plant then stockpiled for rail in a short time-frame aligned to marketing demands.

**GENERAL BUSINESS**

Nil.

**NEXT MEETING:-** **Tuesday 26th August 2014 or Tuesday 2nd September 2014 - TBC.**

**9.00 am at Rix's Creek.**

**Site Inspection followed by presentation of Six monthly Environmental Monitoring Report.**

Meeting Closed 12.34 pm.