

GLENCORE

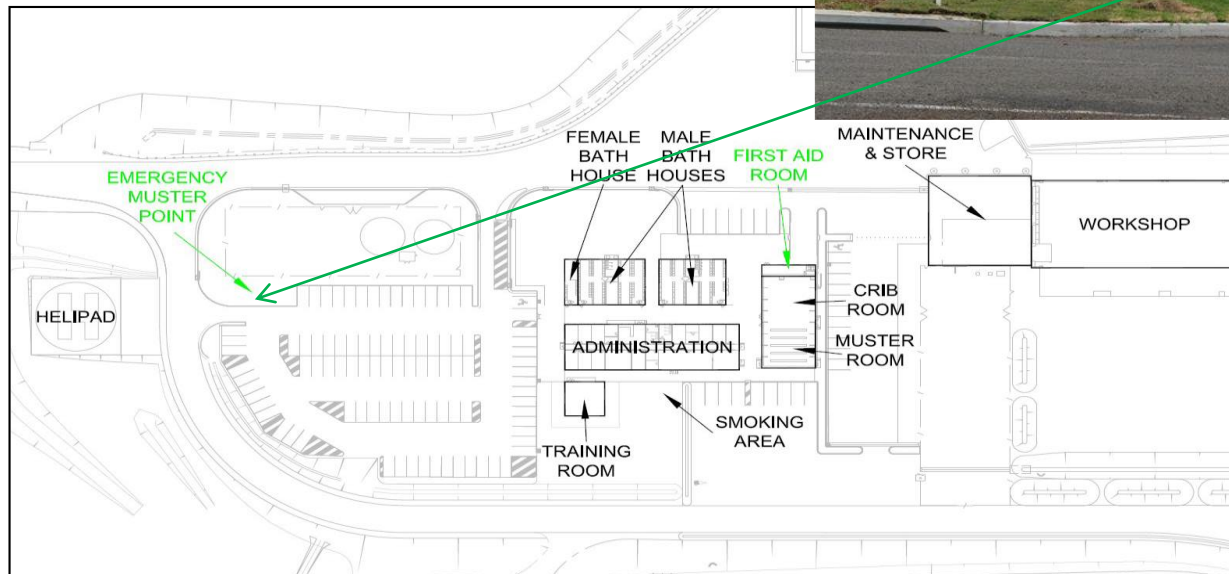


CCC Meeting
11th Oct 2018

Mt Owen / Glendell Operations and Integra Underground

Housekeeping

- Introductions
- Conveniences (tea/coffee)
- Toilets
- Emergency Muster Area
- Mobile phone usage
- Lunch will be provided



In the event of an emergency, obey instructions from the site emergency personnel and go to the designated evacuation point.

Previous Minutes and Actions

- Can we finalise the previous minutes?
- Actions from the previous CCC

Item	Responsibility	Status
Speak with the Glennies Creek Rural Fire Service regarding funding.	Melanie Dillon	Information to be provided at CCC meeting
Provide all CCC members with a summary of complaints from 2017	Melanie Dillon	Hard copy made available CCC meeting
Review private agreements in relation to water tank cleaning and provide response to CCC members	Melanie Dillon	Information to be provided at CCC meeting
Approach Rix's Creek and ask them to contact GCh about supplying water records.	Chloe Piggford	CP contacted Environment and Community Manager at Rix's Creek on a number of occasions and informed GCh of this.
Organise a meeting with GCh and DM to further discuss mining impacts and operating plans	Catherine Fenton	A meeting with GCh on 21 June and a meeting with DM on 12 June. These meetings were also attended by Shane Lakmaker.
Report back to CCC when meetings have been held with GCh and DM	Catherine Fenton	Information to be provided at CCC meeting
Engage an air quality expert to present training at the next CCC meeting.	Mike Pereira (formerly Sam Palmer)	Information to be provided at CCC meeting

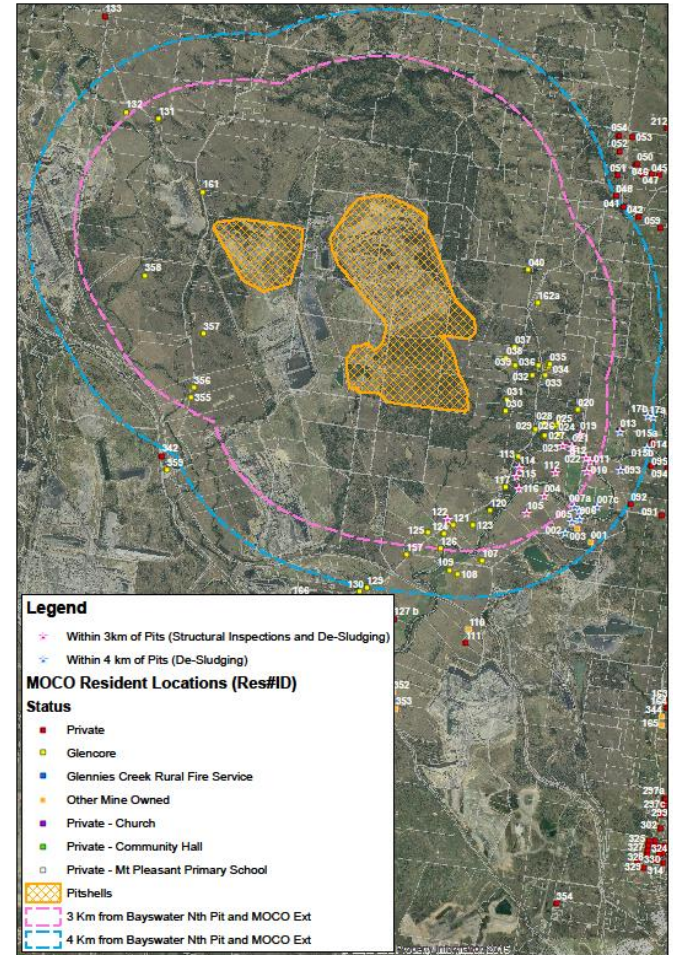
Glennies Creek Rural Fire Service

- Mt Owen E&C approached Glennies Creek RFS to discuss the Community Investment Program
- RFS highlighted the need for blowers to assist with fire control
- Glennies Creek Rural Fire Service - Group 2
 - Glennies Creek
 - Albano-Bowmans Creek
 - Mt Royal
 - Goorangoola
 - Mirranie
- Petrol operated blower \$300 - \$400
- Total Community Investment \$1500 - \$2000



Water tank inspections and cleaning

- Glendell consent does not require inspections or cleaning (old consent, not considered in assessments)
- Mt Owen is a recent consent. Tanks and cleaning were considered in PAC response to submissions (26 properties entitled).
- Mt Owen is required to inspect the tanks biennially. Cleaning will also be offered if it is necessary.
- First campaign (2017) tank inspections and cleaning at 16 residential locations. 10 properties chose to not participate.
- Next campaign (2019) all 26 residents will be offered this service again.
- Four residents outside the required inspection and cleaning zone are receiving regular filter replacements. Another three have received tank cleaning as an act of good will.



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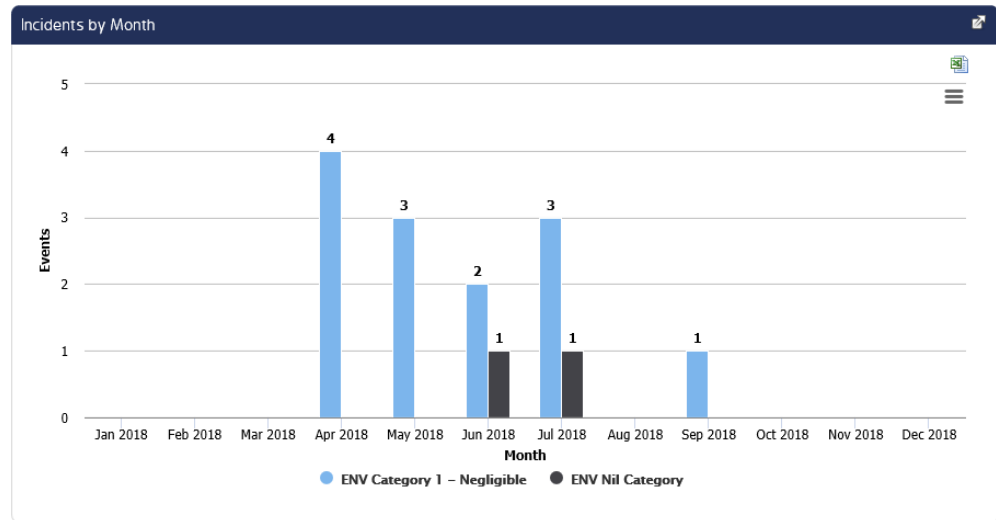
CCC Meeting
11th Oct 2018

Mt Owen / Glendell Operations Update

Incidents 2018 YTD

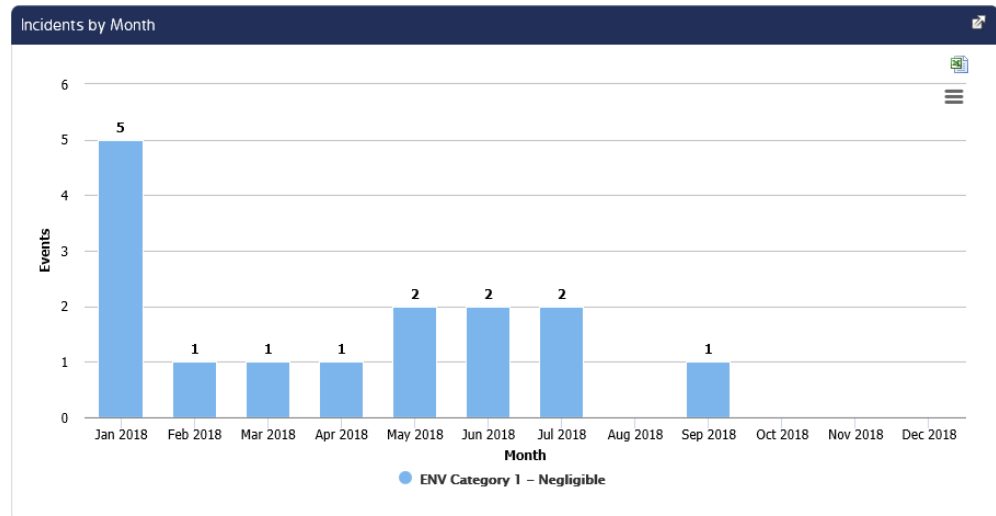
Glendell

- Increase (↑7) in hydrocarbon spills. All within mining areas and from hydraulic hoses
- Two cases of trespass (one leading to arson)



Mt Owen

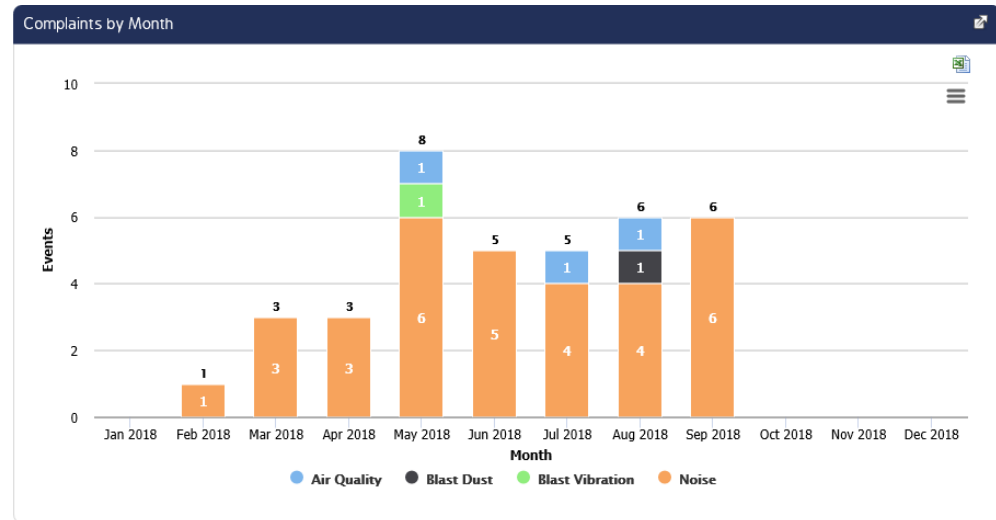
- Less (↓5) than last year because of improvements in hydraulic hose maintenance



Complaints 2018 YTD

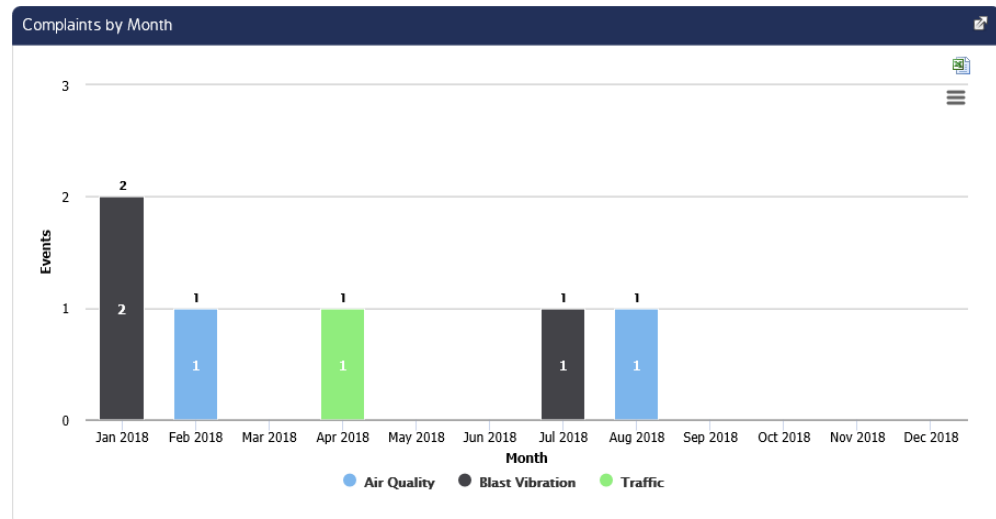
Glendell

- Similar numbers and themes as last year
- Noise remains the primary annoyance



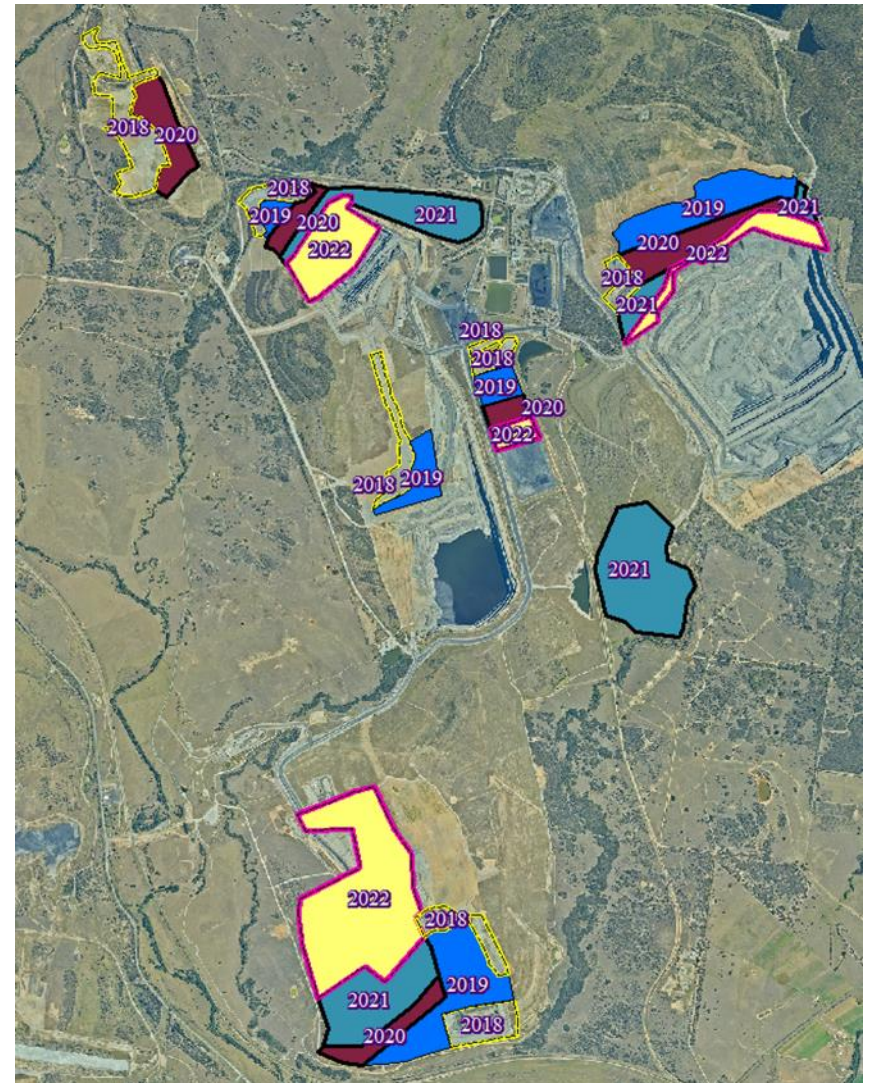
Mt Owen

- Similar numbers and themes as last year



Rehabilitation Works

- 103 ha of planned rehab for 2018 which includes
 - 66ha at Glendell (mix of pasture and treed habitat corridors)
 - 31 ha open woodland a Mt Owen North Void former tailings storage facility.
 - 7ha open woodland at Mt Owen North Pit
- Continued use of municipal compost products. Varying application rates and substrates to optimise use going forward.
- Use of ameliorants is important to reduce pressure on topsoil resourcing for LOM.
- Talking with DPI Agriculture at Tocal to improve our pasture species composition an ensure we are using the most suitable species for our site.



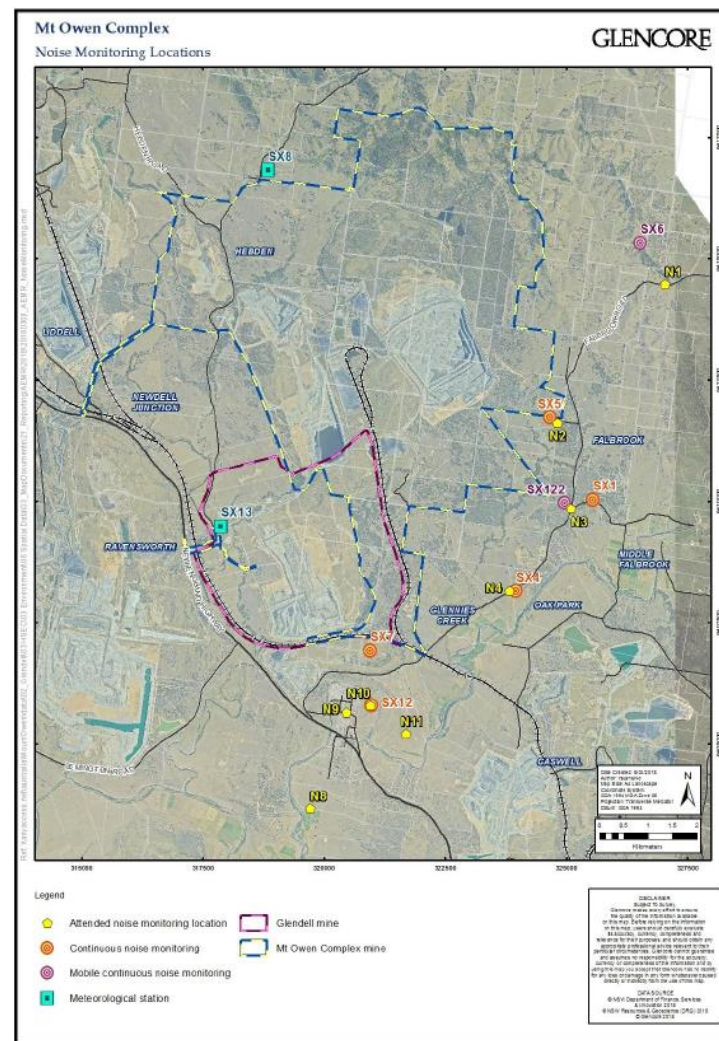
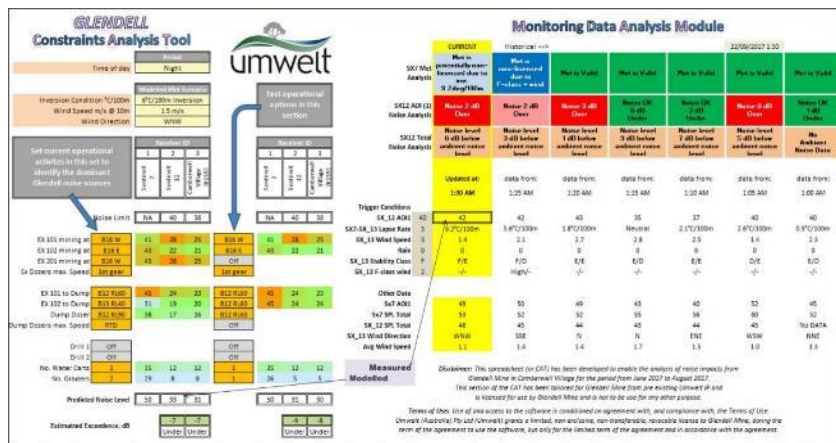
Rehabilitation Monitoring

- Rehabilitation monitored at 1,2,5 and 10 years of age.
- Monitor a range of attributes critical to rehabilitation success and in line with final land use of that area. Such as erosion, weeds, species richness, stem counts, vegetative cover, pasture biomass etc
- Use of traffic light system for quick reference on status of rehab areas.
- Currently working on the addition of remote sensing data to rehabilitation monitoring. Benefits include easier data capture and the ability to assess entire areas, rather than use plot based monitoring.
- Monitoring for 2018 will be carried out in Q4
- In addition to annual monitoring, quarterly inspections are also carried out to assess rehabilitation and pick up any issues early.



Noise

- No non-compliances for the year
- Continued to refine a new noise tool to assist the mining supervisors with the management of real-time noise.
- System uses the network of noise monitors to calculate the mine contribution
- System is being introduced to Mt Owen as well, which will include the purchase of another directional noise monitor between the mine and Middle Falbrook
- Equipment sound attenuation testing



Air Quality

- A single non-compliance at Mt Owen, 24hr PM10 exceedance 24th Jul (50.6µg/m³). Reported to DP&E
- Application of Polymer product to TP1 to reduce dust emissions
- Development of Dust Training Package for CHPP Personnel
- Increased air quality inspections by the EPA and DP&E

NSW EPA to crack down on Hunter coal dust

HUNTER Valley coal mines have been warned to keep dust under control, as the New South Wales Environment Protection Authority mounts a special operation to monitor dust levels in the area.



- The EPA used Spring 2017 total tonnes mined and dust results to make a dust prediction model.
- This Spring the EPA is using the model to predict whether a day will be a low, medium or high rating.
- “High” is when the difference between the Merriwa and Singleton monitors is 25 micrograms or greater

Media release



Tuesday, 10 April 2018

Unannounced night-time inspections a response to community concerns

The Department of Planning and Environment's compliance team is planning to undertake unannounced night-time inspections at mines across NSW as a response to community concerns about mine's poor environmental management at night, specifically noise and dust management.

These inspections are aimed at ensuring that mines continue to undertake best practice environmental management during night time operations to minimise impacts on local communities.

Director of Compliance (Operations), Ben Harrison, said the Department has listened to community concerns about night time dust and noise management and is responding with a series of unannounced night time inspections.

"Our night-time operations are an extension of our extensive proactive monitoring efforts," Mr Harrison said.

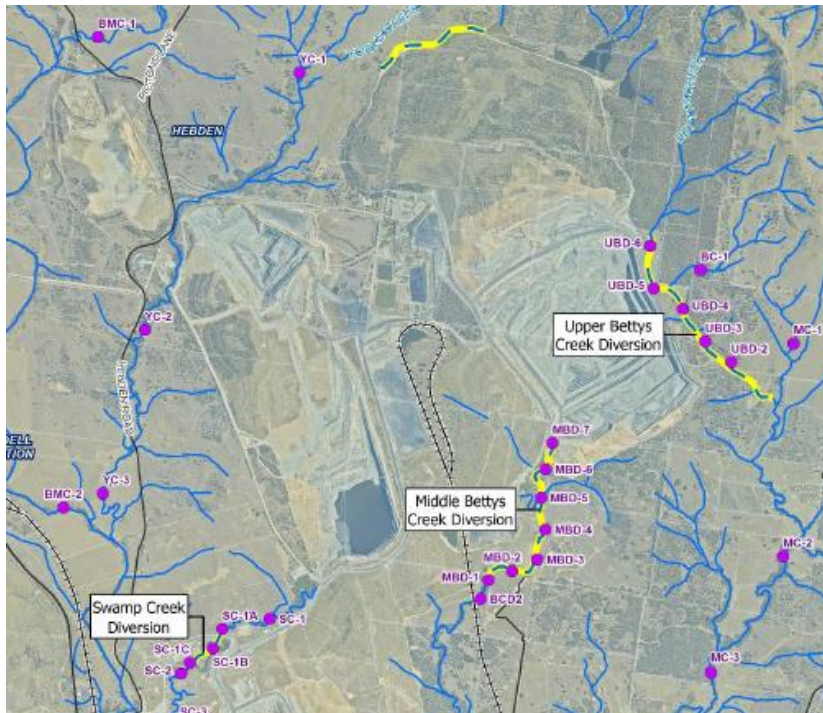
"During these unannounced inspections we will be undertaking our work under the cover of darkness."

"Mines that are found to be non-compliant can face a range of enforcement outcomes including written warnings, statutory directions, penalty notices, prosecution."

- Mangoola was inspected on the 31/8 at 3:20am.
- They started with monitoring noise from public locations outside the mine.
- Then they entered the mine, and with the OCE, inspected the operations.
- They were looking for dust control on roads and around diggers, as well as what noise alarms the OCE had received and what had been done about them.

Water Management

- Improvements in 2018 to our water accounting and licencing.
- Remedial works to the Upper Betty's Creek diversion

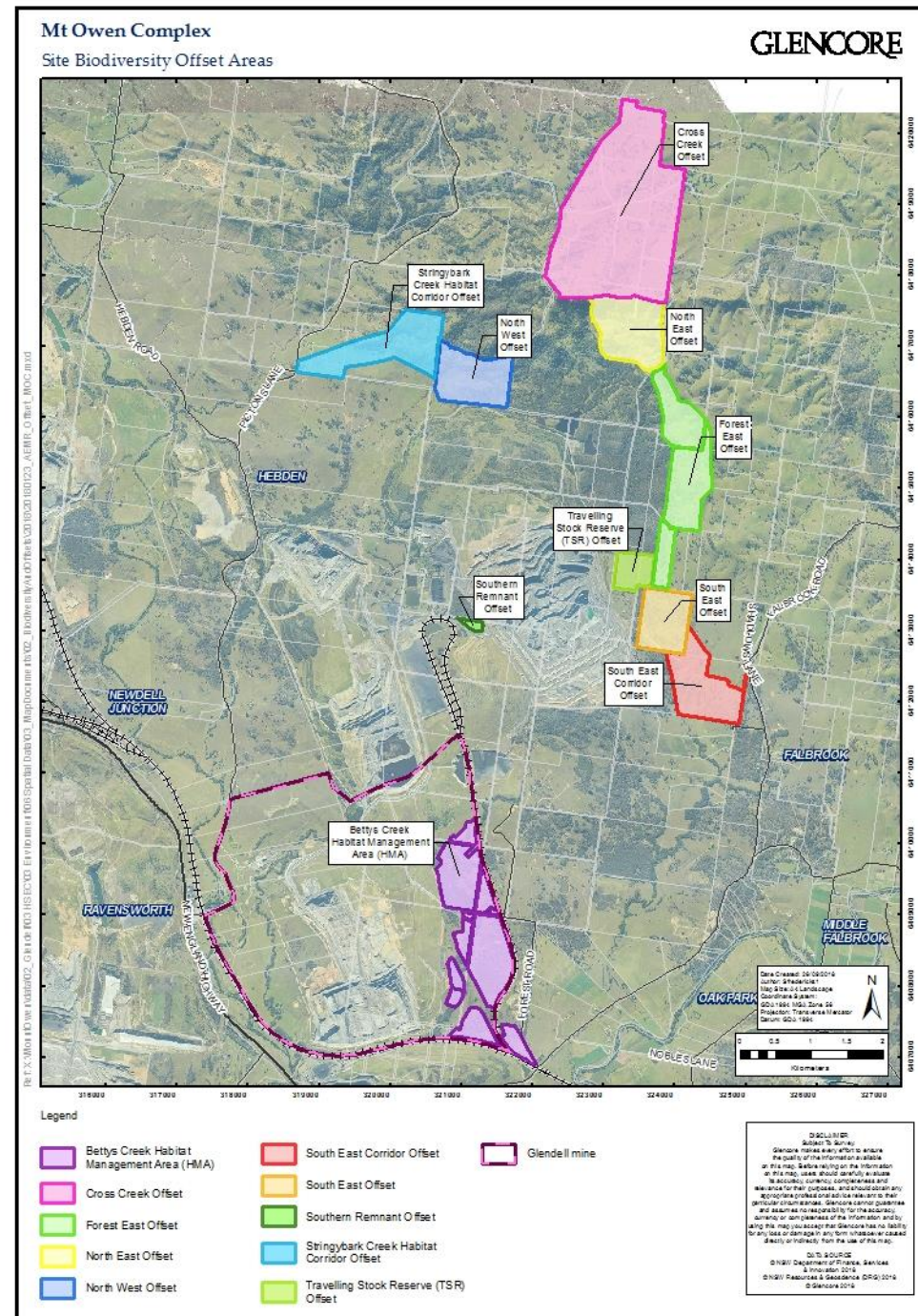


Offset Properties

- Supplementary planting of native species within Southeast Corridor and East West Corridor to take place
- Conservation Agreements nearly finalised
- Autumn Fox and Dog baiting program results:
 - 26 Wild Dog takes
 - 40 Fox takes
- Spring baiting program and pig cull is currently underway



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Community Contributions – Wildlife Aid

\$3000 was provided to Wildlife Aid to assist

- Specialised Native Wildlife Food
- Veterinary Treatments



Gertie the Wombat



Community Contributions – Charity Rugby League Game

- \$1,500 in sponsorship was provided to the Westpac Rescue Helicopter service to sponsor the Glendell team participating. The charity competition brings together over 350 coal mining employees.



Community Contributions

Singleton PCYC

\$506 in sponsorship was donated for a new light box to assist the PCYC in their beautification project



Singleton Fire Brigade Social Club

\$2000 in sponsorship was provided to support the SFBSC in their annual Christmas Lolly Run



Community Contributions – Mt Pleasant Public School

\$5000 in sponsorship was provided to the Mt Pleasant PS to support a healthy kids sporting program and the purchase of representative sports uniforms.



The uniforms will be used when representing the school at local sporting events.



Community Contributions – Rotary MHERV

A total of \$2000 in sponsorship was provided to the Rotary Men's Health Education Rural Van. This was a joint donation between the Greater Ravensworth Mines including Integra and Mt Owen donating \$500 each.

mherv

men's health education rural van
saving men's lives in rural australia



a rotary project
District 9670

FREE men's health checks!



Before you hit off .. consider your family, your mates... Too many rural blokes drop dead in the pub because nobody saw it coming... If you don't remember when you last had a check-up ... it's time! (See you in the club car-park, all welcome!)

Get checked ... see mherv! ... its FREE **mherv**
men's health education rural van
saving men's lives in rural australia a rotary project
District 9670

Free health checks at the Men's Health Education Rural Van include:

* Blood pressure just to check the heart isn't too stressed. * Blood sugar levels ... just a pin-prick in the finger, to make sure there's no type two diabetes ... which is manageable even if there is. * Cholesterol ... just another pin-prick to see if levels are high and need attention.

Sponsored by:

Mt. Owen Glendell, Ravensworth, Liddell & Integra mines ... GLENCORE



GLENCORE

Community Contributions – Upcoming Events

\$2000 in sponsorship was provided to the Cancer Council on behalf of the annual McInerney Relay for Life fund raising drive.



\$1000 was donated to the Mt Olive Community Hall to support their annual fund raising event



Community Contributions – Upcoming Events

\$2000 is being invested in an Stream Health Education Program for the Mt Pleasant Public School

Stream Health Education Program

- Introduction session to rivers and their importance. Different management practices.
- Introduction to aquatic macroinvertebrates, types and what they indicate in a river system
- Walk down to Glennies Creek to conduct dip netting
- Undertake sorting and identification of specimens using magnifying glasses
- Categorising macroinvertebrates to assess stream health



Community Investment Program

We have an online system for accepting community contribution applications:

<https://glencore.smartygrants.com.au/MtOwenComplex>

Community Investment Categories include capacity building (education/economic), health, environment and local identified needs.

Start a submission by clicking this button

The screenshot shows the Glencore website's online grant application interface. At the top is the Glencore logo on an orange background. Below it is a navigation bar with a 'HOME' button. A status bar indicates 'Not logged in' with a 'Log in' link and 'Current Rounds'. The main heading is '2018 Mt Owen/Glendell Community Investment Program'. Below this are two buttons: 'Start a submission' (with a document icon) and 'Preview the form' (with a magnifying glass icon). A message states 'Submissions are now being accepted. Submissions close at midnight 31 December 2018 (AEDT)'. An important note says 'IMPORTANT: Please read information below to assist you in completing your application online.' The page is divided into sections: 'BEFORE YOU BEGIN' (welcome message, save instructions, contact info, and help links), 'NAVIGATING (MOVING THROUGH) THE APPLICATION FORM' (instructions on using the navigation box and page buttons), and 'SAVING YOUR DRAFT APPLICATION' (instructions on saving, logging out, and downloading drafts).

Community Gathering

Community gathering is being planned for November 21st at the Mt Olive Hall.



The purpose of this gathering is to facilitate an event which allows the local community to meet and mingle with their neighbours.

Finger food and refreshments will be served. Starting at 4.30pm

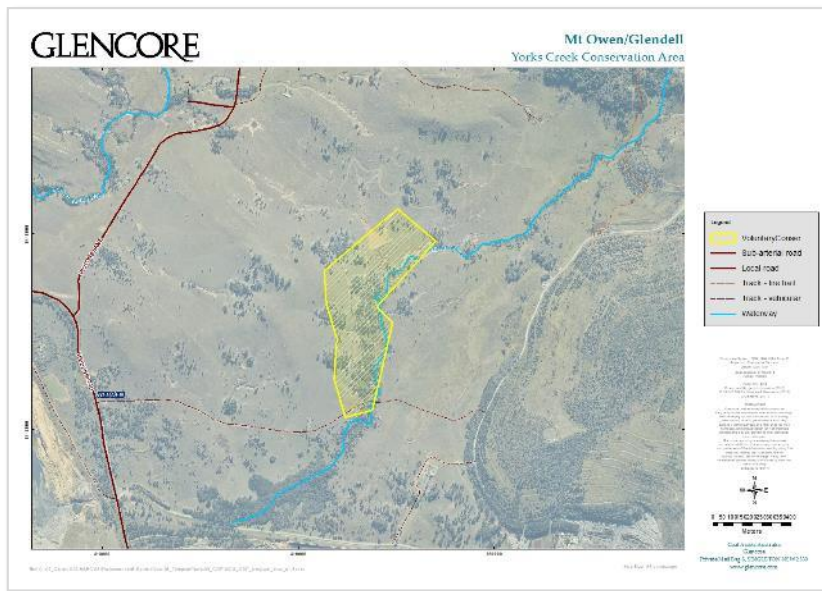


Yorks Conservation Area Open Day

An Aboriginal Cultural Heritage Working Group meeting is being planned for the Yorks Creek Conservation Area during November.

RAPs will be consulted on the following projects:

- Acknowledgement of country signage for mine entrances
- Access tracks into the conservation area
- Artefact management
- Story boards
- Infrastructure such as logs, lean-to or open shed
- General land management practices including erosion, weeds, fencing and supplementary planting



GLENCORE



CCC Meeting
11th Oct 2017

Glendell Mod 4

Approved Glendell Mine Operations Vs Proposed Modification

Issue	Approved Operations	Proposed Minor Modification
Limits on Extraction	4.5 Mtpa	No Change
Mine Life	30 June 2024	No Change
Operating Hours	24 hours per day, 7 days per week	No Change
Number of Employees	100 to 150	No Change
Mining Methods	Excavator and truck	No Change
Mining Sequence	From north to south of the project area	No Change
Mining Depth	Approximately 200 metres	No Change
Final Void	Approximately 65M cubic metres	No Change
Overburden Emplacement Height	160 mAHD	No Change
Total Disturbance Area	Approximately 834 hectares	824 (reduction of 10 ha)
Infrastructure	Glendell MIA (Offices and Bathhouse, Workshop and associated infrastructure) and shared Complex infrastructure (coal processing and transport)	No change with exception of water management infrastructure
Coal Processing/transport	Continued use of approved internal haul road to transport ROM coal to existing Mt Owen CHPP/crushing plant for processing	No Change
Tailings Management	Mount Owen Complex tailings/water management strategy	No Change
External Coal Transport	Via Mt Owen rail loop (coal export) or conveyor for domestic coal	No Change
Creek Diversions	Approved diversions of Swamp Creek and Bettys Creek	No Change
Site Access	Access to mine facilities off Hebden Road	No Change

Approved Glendell Mine Operations Vs Proposed Modification

Issue	Assessment Approach
Ecology	The proposed additional disturbance area is largely cleared of native vegetation and the majority has been subject to previous ecological survey. BAM assessment of proposed disturbance area is being undertaken.
Heritage	The Glendell Mine site (incorporating the entire development consent area) has been subject to multiple survey and salvage works, including in the vicinity of the proposed additional disturbance area. Notwithstanding, a targeted assessment of potential Aboriginal Archaeological impacts has been undertaken in accordance with the Due Diligence Code.
Noise	A review of the potential noise impacts of proposed mine plan changes will be undertaken and addressed in the SEE.
Air Quality	A review of the potential air quality impacts of proposed mine plan changes will be undertaken and addressed in the SEE.
Groundwater	The proposed mine plan change will move mining marginally closer to the alluvials associated with Swamp Creek. Groundwater Assessment currently being undertaken. Consultation with DoI has commenced (initial briefing and site visit)
Surface Water Management	No assessment. All controls established in accordance with existing approval and water management plan (WMP). WMP will be amended to reflect additional disturbance area pending approval of the modification.
Blasting	No assessment. No significant changes to mining operations proposed
Greenhouse Gases	No assessment. No significant changes to mining operations proposed
Waste	No assessment. No changes to mining operations proposed
Visual	No assessment. No changes to mining operations proposed
Hazard and Risk	No assessment. No changes to mining operations proposed
Traffic	No assessment. No significant changes to mining operations proposed
Social	No assessment. No significant changes to mining operations – the social impacts associated with the Proposed Modification are not new or significantly different (in terms of scale and/or intensity) to those approved under the original consent (as modified)
Economic	No assessment. No significant changes to mining operations proposed

Approved Glendell Mine Operations Vs Proposed Modification

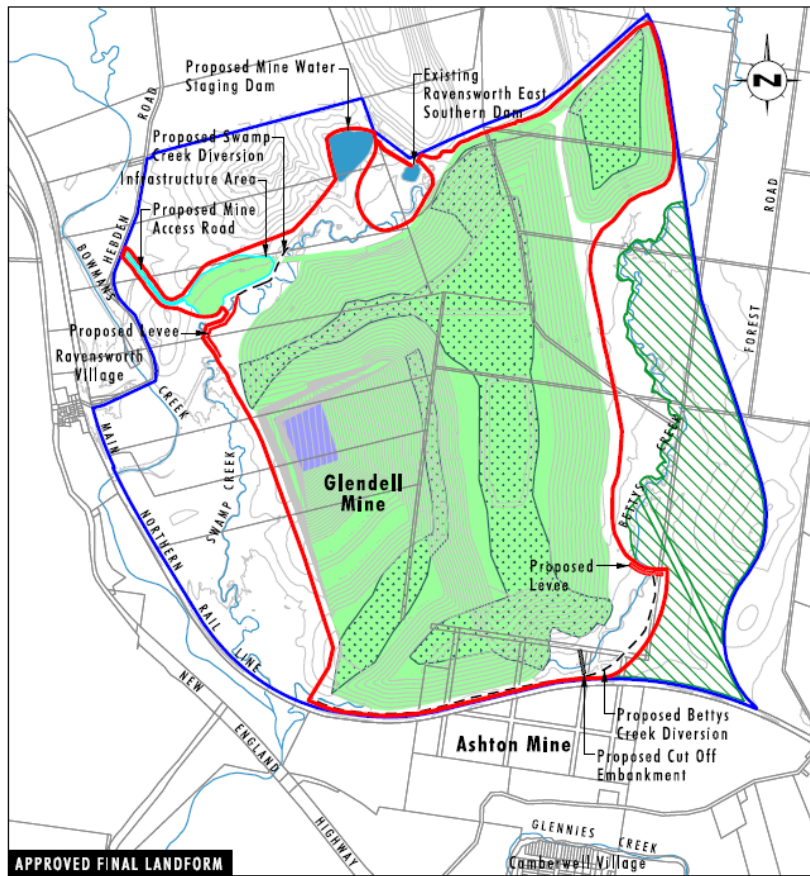
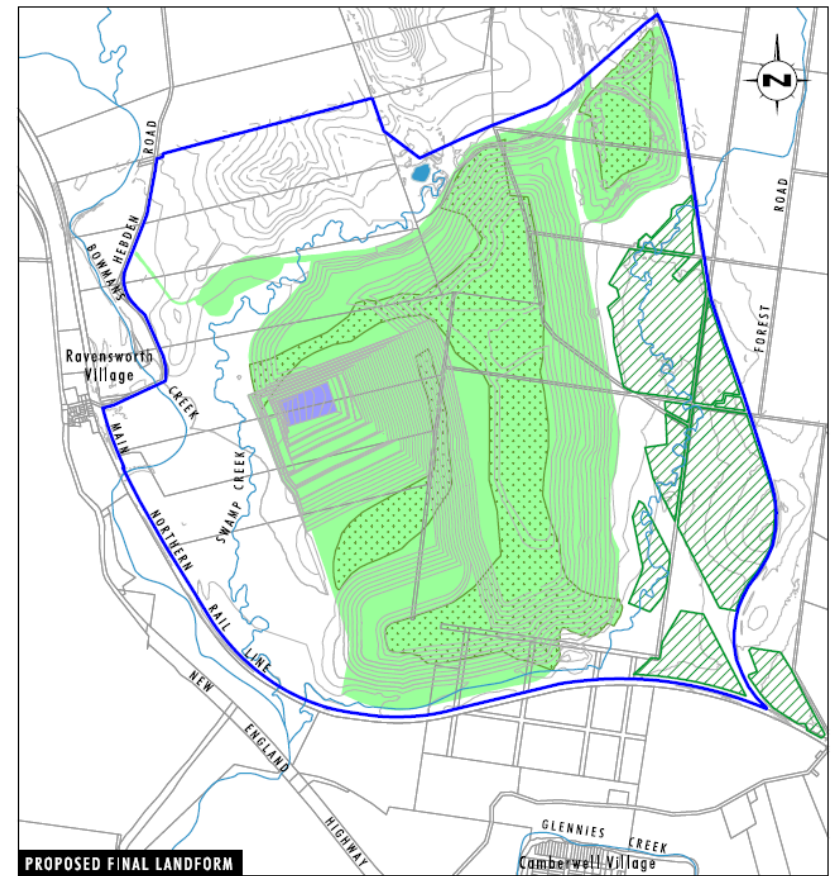


Image Source:
Data Source:

Legend

- Glendell Consent Boundary (DA 80/952)
- Approved Disturbance Area (DA 80/952)
- Glendell Infrastructure Area
- Rehabilitated Area
- Final Void
- Proposed Habitat Management Area
- Treed Rehabilitated Area
- Creek Diversion



0 0.5 1.0 2.0 km
1:40 000

Legend

- Glendell Consent Boundary (DA 80/952)
- Offset Area

FIGURE 2.4

Approved and Proposed
Final Landform

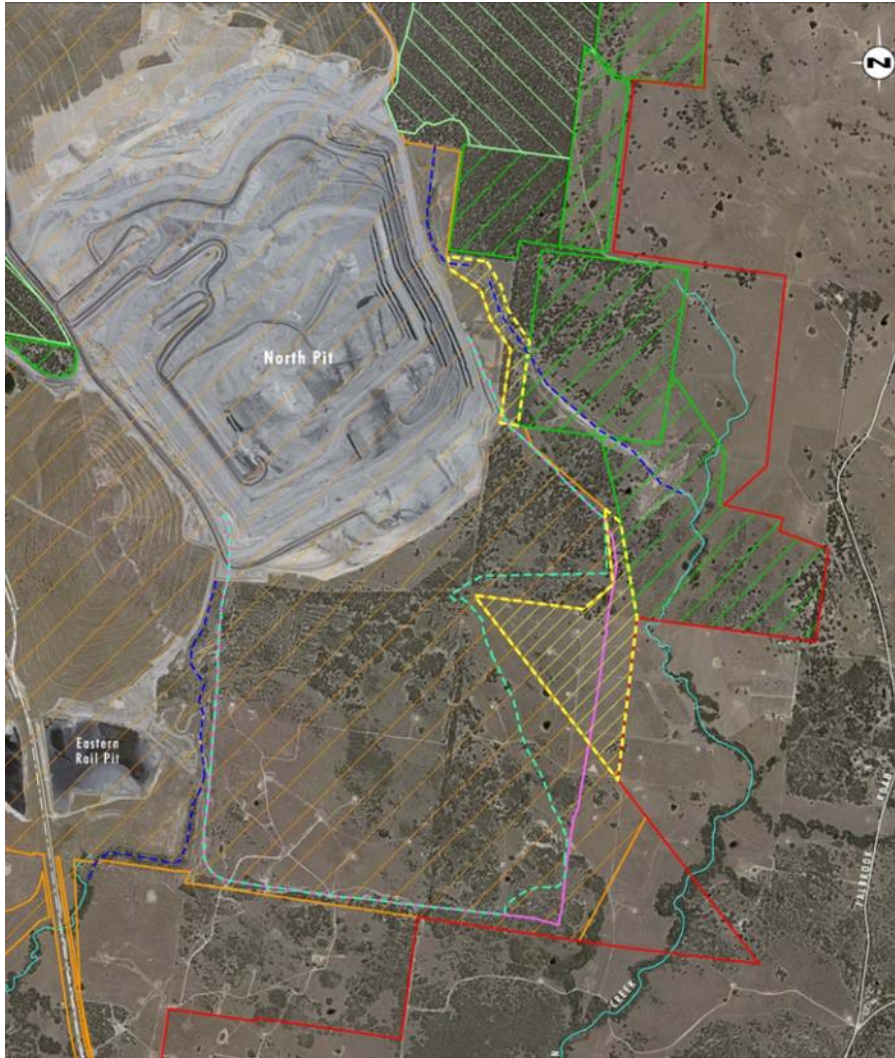
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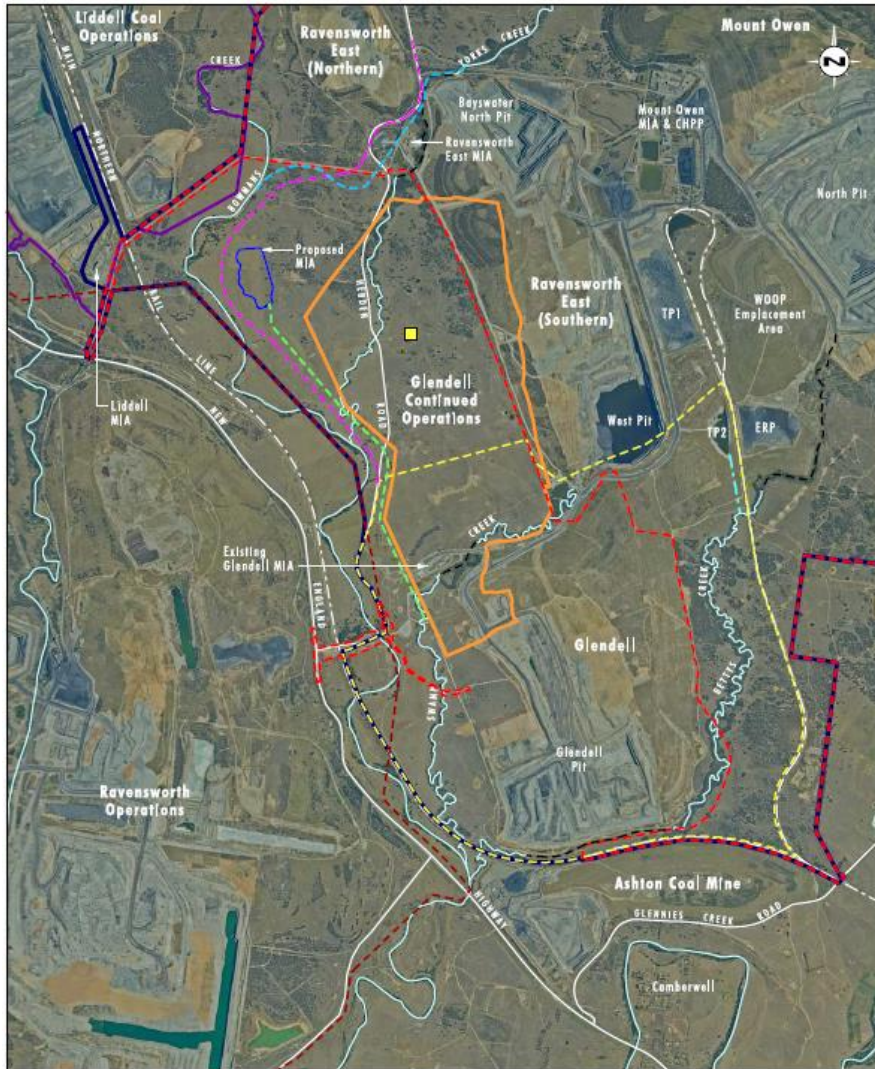
Mt Owen Complex Projects and Exploration Update

Mount Owen Continued Operations – Modification 2



- The Development Application and Statement of Environmental Effects (SEE) has been submitted and placed on public exhibition
- The results of those studies within the SEE demonstrated that the impacts associated with the modification are in accordance with the currently approved operations
- Submissions were received from government departments, Singleton Council, community members and special interest groups
- All submissions are currently being reviewed with the aim to respond to the submissions in late Oct/early Nov 2018
- The Department of Planning would need to be satisfied with the responses before approval is granted

Glendell Continued Operations Project



- A Preliminary Environmental Assessment has been submitted and SEARs received in June 2018
- Mine pit footprint has been refined and all technical studies have commenced
- Technical design of the Yorks Creek and Hebden Road realignments are being prepared
- Investigating relocation logistics and end-use options for Ravensworth Homestead continues.
- Public consultation in relation to the relocation options is scheduled for late Nov/early Dec 2018
- Lodgement of EIS, previously earmarked for late 2018/early 2019, now scheduled for Quarter 2 of 2019

Exploration Update

- **Mt Owen Exploration**
 - Drilling complete in this area
- **Integra Underground Exploration**
 - 2018 exploration complete
 - Drilling planned for 2019
- **Glendell Exploration**
 - 22 holes drilled to date
 - Drilling to be completed this year



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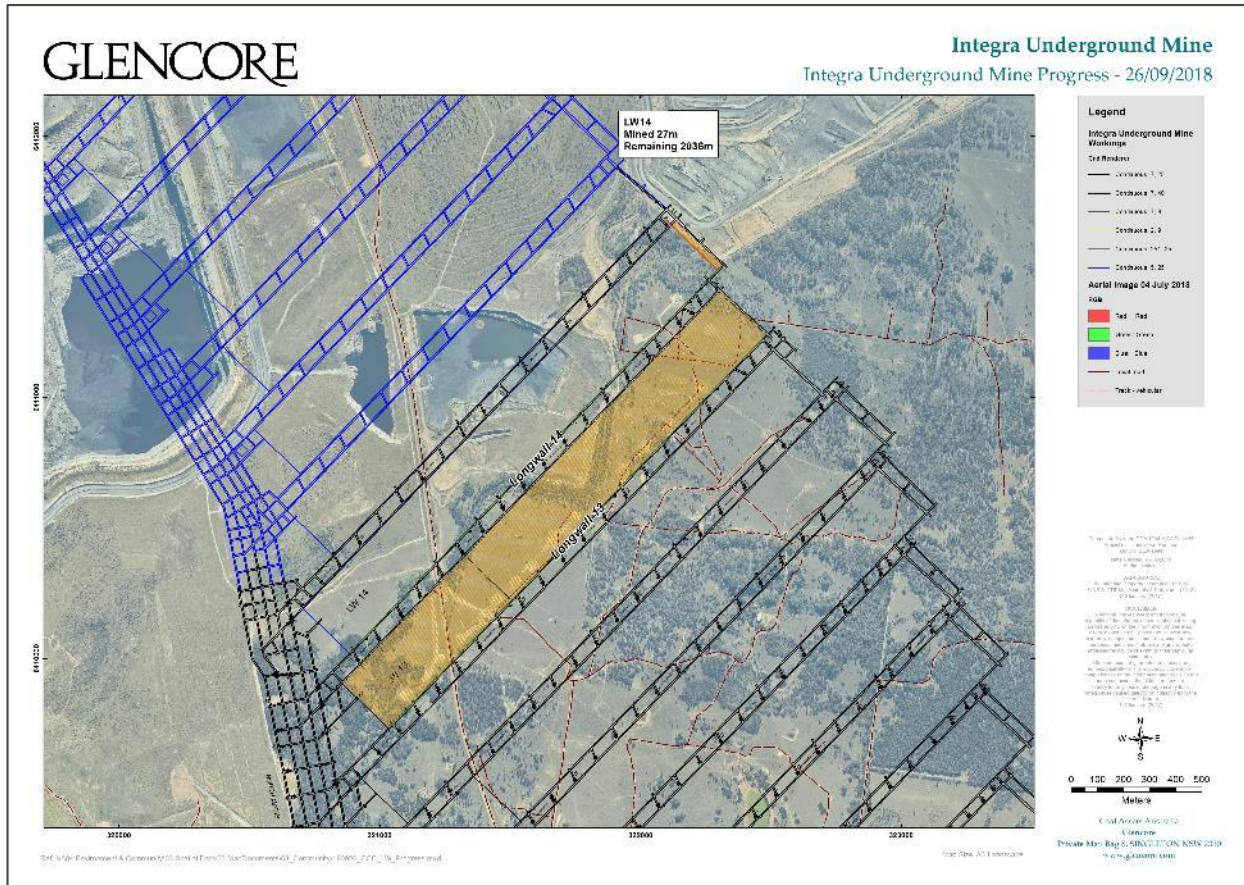


CCC Meeting
11th Oct 2018

Integra Underground Update

Mine Progression

- Longwall 13 was completed in August 2018
- Longwall 14 mining commenced in September 2018
- First workings underway in preparation for Longwall 15



Land Management

- Weed management
 - Quarterly campaigns
 - Targeted existing rehabilitation areas, Glennies Creek and mine surface areas
 - Key species targeted include Galenia, Acacia Saligna and African Boxthorn
- Bushfire management
 - Bushfire Plan in place and under review
 - Inspections completed in September 2018

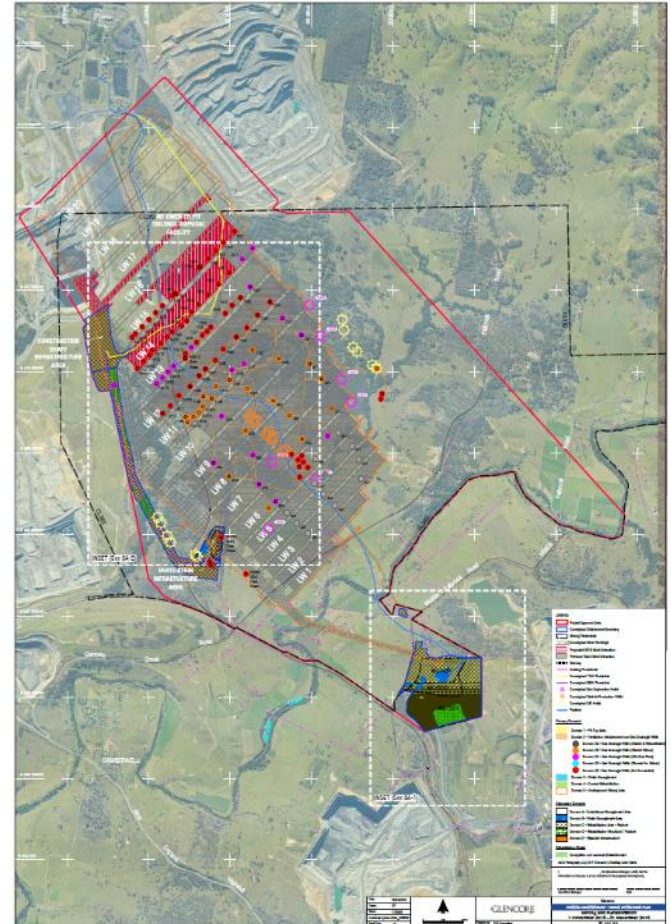


Environmental Monitoring

- Noise
 - Attended noise monitoring has indicated that Integra Underground operations are inaudible during monitoring
- Air quality
 - Annual average air quality monitoring on track to be within consent limits
 - Exceedances of 24-hour PM10 data on 48 days in 2018 YTD – due to regional events and not attributable to Integra Underground
- Surface and groundwater
 - Majority of results within trigger limits
 - Some samples outside trigger limits. Investigations found they were not attributable to Integra Underground, and still within historic levels.
- Subsidence
 - Within predictions

Mining Operations Plan

- Current MOP includes Longwalls 13 and 14 only and expires in 2018.
- New MOP required for future mining (LW15-20) and associated infrastructure.
- New MOP
 - November 2018 to December 2023
 - Longwalls 15 to 20
 - Surface disturbance as approved by Project Approval 08_0101 (as modified)
 - Rehabilitation plan for Life of Mine
 - Annual reporting will continue as part of Annual Review process and detail disturbance and rehabilitation undertaken in previous year and planned for year ahead



Environmental Management Plans

Management Plan	Approval Date	Status
Environmental Management Strategy	10/09/2018	Current Recently approved by DPE
Mine Operations Plan	18/05/2017	Current New MOP prepared for future mining and associated infrastructure
Pollution Incident Response Management Plan	12/04/2018	Current
Air Quality and Greenhouse Gas Management Plan	10/09/2018	Current Recently approved by DPE
Noise Management Plan	10/09/2018	Current Recently approved by DPE
Water Management Plan	10/09/2018	Current Recently approved by DPE
Extraction Plan	06/04/2017	Current for LW14 mining New EP being prepared for future mining
Biodiversity Management Plan	10/09/2018	Current Recently approved by DPE
Aboriginal Heritage Management Plan	10/09/2018	Current Recently approved by DPE
Historic Heritage Management Plan	10/09/2018	Current Recently approved by DPE
Exploration Activities and Minor Surface Infrastructure Management Plan	10/09/2018	Current Recently approved by DPE

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CCC Meeting
11th Oct 2017

General Business

General Business

- Next meeting date